COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT
CURRENT PLANNING DIVISION

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Hearing Date: November 7, 2019

To: Humboldt County Planning Commission

From: John H. Ford, Director of Planning and Building Department

Subject: **Humboldt Wind Energy Project Conditional Use Permit and Special Permit**
Record Number: PLN-13999-CUP

Assessor Parcel Numbers (APNs): 102-132-004 et al.
Monument and Bear River Ridges, Scotia, Shively, and Bridgeville areas

The attached staff report has been prepared for your consideration of the Humboldt Wind Energy Project Conditional Use Permit and Special Permit at the continued public hearing on November 21, 2019. The staff report includes the following:

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The Agenda Item Transmittal, Draft Environmental Impact Report, and Final Environmental Impact Report were provided previously.

Please contact Steve Werner, Supervising Planner at 268-3726 if you have any questions about the scheduled public hearing item.

Humboldt Wind Energy Project Conditional Use Permit and Special Permit
Record Number: PLN-13999-CUP
Assessor's Parcel Numbers (APNs): 102-132-004 et al.

Recommended Planning Commission Action

1. Describe the application as a continued public hearing.
2. Open the public hearing receive testimony from speakers who did not get a chance to speak due to time constraints at the hearing on November 14, 2019.
3. Receive response to testimony and introduction to revolutions from staff. 4.
4. Reopen the public hearing and allow testimony limited to comments on the newly presented information; and
5. Close the public hearing and take the following action:

   "Move to make all the required findings, based on the evidence in the staff report and after receiving public testimony, certify the Environmental Impact Report, adopt Statements of Overriding Considerations for the indicated project, adopt findings that the project is consistent with applicable policies and regulations, adopt a mitigation monitoring and reporting plan and approve the project as revised in the FEIR, *subject to the conditions of approval."*

1. Executive Summary

The Humboldt Wind Energy Project is a continued public hearing from the November 7, and November 21, 2019 Planning Commission hearings.

A Conditional Use Permit to allow for electrical generation and transmission facilities in the Timber Production Zone (TPZ) and Agricultural Exclusive (AE) zoning designations is required. A Special Permit to allow for work within streamside management areas (road crossings) and wetlands is also required.

Staff has reviewed the proposed project and supporting materials and believes the project is in compliance with all required findings. Therefore, staff prepared resolutions to approve the project, certify the Environmental Impact Report (EIR), adopt a Statement of Overriding Considerations, and a Mitigation Monitoring and Reporting Plan.

In this staff report there is a discussion of additional mitigation the applicant has considered and agreed to and responses to some of the questions raised at the last two public hearings that were not previously responded to.

2. Revised Mitigation Measures

During the public hearing on November 14, 2019, the applicant agreed to look at additional mitigation measures that were suggested.

Based on recommendations from CDFW and other commenters on the DEIR and FEIR the Humboldt County Planning & Building Department, proposes formation of a project-specific Bird Technical Advisory Committee (TAC). The applicant has expressed agreement to the formation of the Bird TAC.

The TAC will evaluate post construction monitoring data for the project on an annual basis to determine whether project-related mortality of raptors and nonraptor birds poses a risk of significant adverse effects that could cause local and regional special-status bird populations to drop below self-sustaining levels if left unabated.

Based on a review of the post-construction mortality data the TAC may make additional recommendations beyond the mitigation measures included in the Mitigation and Monitoring Plan (MMRP) for the project to further avoid, minimize, or compensate for bird mortality. The TAC's duties would include but not be limited to:

- reviewing protocols for post-construction bird fatality monitoring and making recommendations for refinements, if appropriate;
- reviewing and interpreting post construction fatality data on an annual basis for years in which monitoring is conducted;
- assessing whether bird mortality attributable to the project may pose the potential for any bird population, particularly special-status birds, to drop below self-sustaining levels if left unabated, despite implementation of all mitigation in the project-specific MMRP;
- strategically identifying operational minimization measures that will most efficiently minimize impacts on special-status raptors and other special-status bird populations while recognizing the operational needs of the facility, and based on evidence in the annual monitoring report that the threat for such impacts exist; and
- identifying compensatory mitigation that would offset operational impacts on local or regional populations of special-status raptors and other special-status bird species. This mitigation would be recommended for implementation by the project applicant, as enforced by the Humboldt County Planning and Building Department and would be in addition to mitigation identified in the project specific MMRP. Additional mitigation would only be necessary if clearly linked to post construction mortality data trends that point to a threat to local and regional populations to fall below self-sustaining levels, and if the mortality causing these trends is clearly linked to operation of the project

The TAC will be established at least four months before operation of the project begins, will review and approve the proposed post-construction fatality monitoring protocols, and will have the ability to identify necessary changes of the protocols in subsequent years to address changing circumstances related to operation or monitoring of the project. The TAC will operate under the authority of the Director of the Humboldt County Planning and Building Department and all actions/recommendations of the TAC will be implemented as a requirement of the Department, if the recommendations are clearly linked to the impacts of the project. The TAC will be actively engaged during the first year of operational data collection to evaluate the mortality monitoring results. Year 1 of monitoring will begin immediately following the start of operations and will continue for 12 months.

Thereafter the TAC will meet annually within a month of receipt of the annual fatality monitoring reports and will provide recommendations in the form of a technical memorandum to the Humboldt County Planning & Building Department Director within one month of the annual meeting. The TAC may meet more frequently as deemed necessary by the County or as unexpected trends are detected in the monitoring data. The TAC will be maintained and will provide technical memoranda for a minimum period of five years after submittal of the first annual monitoring report. If the TAC is unable to meet or unable to provide the memoranda in a timely

manner prior to the start of the next monitoring period, the original protocols will maintain in place to ensure continued collection of data.

The TAC will remain active until the Humboldt County Planning & Building Department Director, in consultation with the TAC, concludes that operational impacts of the project do not pose a risk of reducing the population of any bird species below a self-sustaining level. Operation of the TAC may be extended for as long as deemed necessary by the County in consultation with the TAC.

The County may appoint an independent TAC Facilitator whose duties include disseminating project data, setting up and moderating meetings, preparing agendas and meeting summaries, and preparing technical memoranda. The decision-making process for the TAC recommendations will be by majority vote. The rules for TAC assembly and function shall be based on the recommendation in this measure and shall be memorialized after the first meeting of the TAC in a memorandum.

The TAC will provide a report of its findings to the Humboldt County Planning & Building Department Director on an annual basis, or at less frequent intervals if determined by the TAC that annual reporting is not necessary. TAC findings for implementation of mitigation actions will be submitted to the Humboldt County Planning & Building Department Director, who will evaluate the recommendations against mitigation already implemented as part of the project MMRP. The Director will then communicate those findings and recommendations to the project applicant and who will be responsible for carrying out the measures recommended by the TAC.

If the TAC determines that mortality monitoring results indicate that bird mortality attributable to the project poses a risk of causing local and regional special-status bird populations to drop below self-sustaining levels, the TAC will recommend adaptive management actions (e.g., vegetation management around turbines to reduce prey populations, operational modifications, installation of camera-based detection systems [e.g. Identiflight ©] and/or compensatory mitigation to offset impacts (e.g., riparian habitat acquisition or conservation easements, retrofitting of high-risk power lines). The TAC shall provide evidence of how proposed adaptive management actions directly relate to findings made based on the monitoring reports, how the recommended measures were developed, how they will result in reduction of the impacts and what the newly established criteria for success and monitoring are. These findings shall be documented in the annual memorandum to be prepared by the TAC or in special memoranda if the TAC meets off-cycle to address specific events.

The project applicant will provide sufficient funding to establish and maintain the TAC for the duration of monitoring. The TAC will consist of at least three (3) and no more than seven (7) appointees and will consist of an odd number of voting participants. New appointees will be recommended to the Humboldt County Planning Commission for ratification as needed to fill vacancies based on recommendations from CDFW, USFWS and the Humboldt County Planning and Building Department.

The TAC will be composed of individuals who are recognized subject matter experts with expertise in bird biology and ecology, knowledge of local bird populations, and knowledge of wind-wildlife interactions. The TAC will include eagle and raptor experts, and scientists with expertise in the

biology and ecology of local non-raptor birds. The TAC may include but not be limited to representatives from the following organizations:

- CDFW
- USFWS
- Research organizations or agencies with staff dedicated to bird research or other individuals who are recognized experts on special-status bird species occurring in the project area
- Any other member determined to be necessary by Humboldt County to provide additional understanding of the impact of the project on local and regional bird populations.

A representative from the operator of the facility and a representative from the Humboldt County Building & Planning Department will participate in the meetings to provide technical information (operator) and oversight (County) as needed, and to ensure that the original purpose of the TAC is implemented as outlined. The County and operator representative will not be voting members.

The bird TAC described above has been add to Mitigation Measure 3.5-11 (Avoid, Minimize and Compensate for Operational Impacts to Raptors). Mitigation Measure 3.5-14 (Avoid and Minimize Operational Impacts on Nonraptor birds) has been revised to include reference to the Bird TAC.

CDFW and others recommended the project use a lower bat mortality threshold to trigger operational adaptive management. This mitigation measure has been revised to allow the BAT take to use a lower mortality threshold if it is deemed necessary to prevent population level decline.

3. CEQA in Relation to Other Required Permits

Questions were raised at the last public hearing about why permits such as an Incidental Take Permit or Timber Harvest Plan have yet to be secured. It is not unusual for subsequent permits to be issued after certification of an EIR nor is it considered deferral of mitigation. Rather, it is the expected order of operations under CEQA. This relates to the Lead Agency concept under CEQA and how subsequent permits are granted by responsible agencies.

The County is the Lead Agency under CEQA. The Lead Agency, as defined by CEQA, is the public agency that has the primary responsibility for approving a project (State CEQA Guidelines Section 15367). To be a CEQA Lead Agency, the public agency must have discretionary authority over the proposed project, such as the case with the Conditional Use Permit and Special Permit which have been applied for. Responsible Agencies on the other hand are a public agency with some discretionary authority over a project or a portion of it (State CEQA Guidelines Section 15381). Table 2-6 of the DEIR contains a list of anticipated permits and approvals needed to carry out the project. Some are ministerial, such as building permits. Others involve the discretion of a Responsible Agency such as the issuance of an Incidental Take Permit from the California Department of Fish and Wildlife. CEQA allows Responsible Agencies to rely on a CEQA document prepared by the Lead Agency to meet their CEQA compliance requirements. However, Responsible Agencies must independently review and approve the CEQA document, and not rely automatically on the Lead Agency's judgments. A Responsible Agency complies with CEQA by considering the EIR prepared by the Lead Agency and reaching its own conclusions on

whether and how to approve the project involved (State CEQA Guidelines Section 15096(a)).

Because the County has the primary responsibility for approving the project it is appropriate that it is the Lead Agency and the first to consider permits approvals. The DEIR and FEIR present the full range of impacts and offer mitigation to reduce those impacts. Where the County found that an impact could not be feasibly reduced, significant unavoidable impacts have been disclosed. To determine and analyze the range of impacts the County has engaged with a third party EIR consultant with experience in wind projects and experts in the variety of biological resources present on the project site. Multiple meetings with responsible agencies have also been held.

Responsible Agencies will need to review the EIR and reach their own conclusion on whether and how to approve the project. If additional mitigations or requirements are added to the project through issuance of other permits the applicant must comply with the most stringent of the requirements. The mitigations contained in the Mitigation Monitoring and Reporting Plan represent the minimum the applicant will need to do.

4. Responses to Comments Raised During the Public Hearing

Wind Energy Effects on Fog

Commenters have expressed concern that the rotating turbines could change fog patterns in a way that would negatively affect the redwood forest. It is unlikely this wind farm will have any effect on the local temperature and humidity regimes proximate or downstream of the turbines given its location on a ridgeline, that ridgelines' orientation, and the turbines proximity to the ocean and the resultant land and sea breeze interactions.

A sea breeze usually penetrates inland about 25 miles without onshore synoptic flow, but can reach 200 miles inland with onshore synoptic flow. Land breezes are strongest along the immediate coastline but weaken considerably further inland. Sea breezes carry the abundant moisture from the cold ocean water inland at the lower levels in the atmosphere. This can be seen visually as fog and stratus (very low and flat) clouds. These can form and dissipate regularly in daily fair weather patterns, and also can be amplified or disrupted as weather systems transit the area.

Lenticular clouds (as one speaker mentioned) and fog are formed when air masses are still. When these features are present on the project site the turbines will not be operational. As the wind picks up to cut in speed of 3.0 – 3.5 mps lenticular clouds and fog will dissipate; not from turbines, but from increased wind speeds. Turbines will not remove humidity from the air at the wind farm. They will mix the air mass that is present. This mixing will not affect fog formation in the valleys outside of the project site.

Oil Spill Prevention

Several speakers have noted concern over the fluids used in the nacelle and other machinery in the event of a spill.

Section 3.9 "Hazards and Hazardous Materials" of the DEIR evaluates potential for project to handle, store, and transport hazardous materials. The DEIR notes that the project is subject to the Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) which requires preparation of hazardous materials business plans and disclosure of hazardous-materials inventories to the local enforcement agency (Humboldt County Public Health Services Department). The business plan includes an inventory of hazardous materials handled, facility floor

plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1).

If the project stores more than 1,320 gallons of oil and there is a reasonable expectation of an oil discharge into or upon navigable waters of the U.S. or adjoining shorelines then a Spill Prevention, Control, and Countermeasure (SPCC) plan must be prepared and implemented. This requirement applies to oil-filled equipment such as hydraulic systems, lubricating systems (e.g., those for pumps, compressors and other rotating equipment, including wind turbine lubrication systems), gear boxes, machining coolant systems, heat transfer systems, transformers, circuit breakers, and electrical switches; or manufacturing equipment.

The regulation covers "…contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines…" The project would be considered a regulated "facility" that must prepare and implement an SPCCC. Depending on the nature and location of the facility secondary containment such as berms can be required at bulk storage facilities along with good housekeeping practices that cover proper storage, handling, transport and application. Security may also be a component of an SPCC.

5. Alternatives to Approval

Staff has reviewed the proposed project and supporting materials and believes the project is in compliance with all required findings. If your commission finds that there are not compelling reasons to override the significant unavoidable impacts that have been identified in the EIR, or the required findings cannot be made, then the Planning Commission could elect not to approve the project, or to select a project alternative. Alternatives are described in Chapter 6 of the DEIR for the Planning Commissions consideration. Note that Alternative 2 Realigned Gen-tie and Access Road, has already been incorporated into the project. Additionally, Alternative 4 Reduced Turbine Count, has been partially incorporated. Alternative 4 would have reduced the turbine count to 31, the applicant has proposed 47 turbines, reduced from the 60 turbines originally proposed. The applicant has indicated other alternatives are not financially feasible.

If the "No Project" alternative is selected by the Planning Commission a resolution for project non-approval should be considered.

RESOLUTION OF THE PLANNING COMMISSION
OF THE COUNTY OF HUMBOLDT
Resolution Number 19-

Case Number CUP-18-002
Record Number PLN-13999-CUP
Assessor's Parcel Numbers: 102-132-004 et al.

FINDINGS FOR CERTIFICATION OF EIR AND ADOPTION OF STATEMENTS OF OVERRIDING CONSIDERATIONS

1. FINDING: **CEQA (EIR) -** The County of Humboldt has completed an Environmental Impact Report (EIR) in compliance with CEQA.

EVIDENCE: a) The California Environmental Quality Act (CEQA) requires preparation of an environmental impact report if there is substantial evidence in light of the whole record that the project may have a significant effect on the environment.

b) A Notice of Preparation (NOP) was prepared on July 31, 2018, in accordance with CEQA Guidelines Section 15082 to inform interested parties of the County's determination that an EIR would be required for the project, solicit input about the desired content and scope of the DEIR, announce the dates and times of two public scoping meetings, and provide information on where documents about the project were available for review and where comments could be sent on the project. The NOP was posted at the County Recorder's office; mailed to property owners and tenants of parcels within project area and parcels adjacent to/just outside of the project area boundary, all property owners/tenants within the Town of Scotia, and to relevant agencies within the region; circulated through State Clearinghouse; and published in the Times Standard on August 2, 2018. The NOP was circulated for a period of 30 days, ending on August 30, 2018.

c) Pursuant to CEQA Guidelines Section 15083, prior to completing the Draft EIR, the County of Humboldt held two scoping meetings on August 14 and 15, 2018, to solicit input from the regulatory agencies and public. Appendix A of the Draft EIR includes a summary of the public scoping process and summarizes the comments received in writing and during the scoping meetings.

Areas of potential controversy known to the County include the following:

- Visual impacts, including effects on views from Rio Dell and Scotia and generation of light pollution;
- Potential take of at-risk species such as the marbled murrelet and northern spotted owl, risks of bird and bat fatalities from collisions with wind turbine generators (WTG or turbines), displacement from nesting habitat, and other project effects on critical habitats;

- Effects on cultural resources, including tribal cultural resources;
- Noise effects from WTG operation;
- Potential traffic congestion during construction and effects of oversize loads on area roadways; and
- Effects on the environment related to the ultimate decommissioning of the project.

These issues were considered during preparation of the Draft EIR and, where appropriate, are addressed in the environmental impact analyses of the Draft EIR.

d) The Planning and Building Department engaged in early consultation with state and federal agencies, in accordance with CEQA Guidelines Section 15083, including the development of the project has included active consultation with the United States Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW) and California Coastal Commission (CCC). The National Oceanic and Atmospheric Administration (NOAA) also received notice regarding the project. CDFW and USFWS participated in multiple meetings regarding biological resource concerns. CDFW has provided recommendations regarding project design and project mitigation measures and these recommendations have been considered in the final design and mitigation measures.

e) The Draft Environmental Impact Report ("DEIR") for Humboldt Wind's Application PLN13999-CUP was prepared in accordance with CEQA and circulated for public review initially from April 15, 2019 through June 5, 2019 (SCH#: 201872076), a 50 day review period, in compliance with CEQA guidelines section 15105 which requires a minimum of 45 days and a period which does not exceed 60 days. In an effort to facilitate public understanding of the project and comment on the DEIR the comment period was extended to June 14, 2019.

f) For purposes of the findings contained in this resolution, the "project" refers to the revisions submitted by the applicant which include:

- up to 47 WTGs (capable of generating 2–5 MW of electricity each) erected on tubular steel towers set on concrete foundations, as well as the associated WTG pads, temporary staging areas, and transformers;
- temporary construction access roads and permanent service roads, as well as temporary improvements to public roads at two locations along U.S. 101 to facilitate the delivery of WTGs from the Fields Landing Drive delivery site to the staging yard at Jordan Creek;
- an up to 22-mile, 115 kV gen-tie that extends north from Monument Ridge, crosses Eel River via the Richard Fleisch Memorial Bridge, and

ultimately connects to the existing PG&E transmission system at the Bridgeville substation;

- Bridgeville substation expansion of up to 3 acres for switchyard modifications;
- a project substation located on-site (approximately 2.5 acres);
- an underground electrical collection system linking WTGs to each other and to the project substation;
- an underground communication system (fiber optic cable) adjacent to the collection system;
- a Supervisory Control and Data Acquisition (SCADA) system between each WTG and the substation and between the project substation and the Bridgeville substation to monitor and control project output and the transmission of energy into the system;
- an up to 5-acre operations and maintenance facility, including an operations building, a parking area, and an outdoor storage area with perimeter fencing;
- a 10-acre temporary staging area and a construction trailer and parking area located within the operations and maintenance facility;
- a component offloading location at Fields Landing;
- two temporary bypasses off U.S. 101 (Hookton Overpass and 12th Street Bypass) for transporting oversize loads;
- up to six permanent meteorological towers;
- three 5-acre, temporary staging areas distributed throughout the project site, one of which would include one temporary concrete batch plant on Monument Ridge; and
- up to 17 miles of new 24-foot wide access roads.

The project site represents an approximately 2,218-acre area study corridor within which the WTGs and associated infrastructure would be placed. Within that study corridor, a representative project footprint was developed that conservatively includes approximately 655 acres of temporary or permanent impacts. The study area was defined based on a 1,000-foot-wide corridor centered on the representative locations of WTGs; a 200-foot-wide corridor centered on project roadways, the electrical collection line, and the generation transmission line (gen-tie); and a 500-foot-wide buffer around proposed staging areas, temporary impact areas, and the project substation.

The exact footprint of individual WTGs within the project site would be determined during final engineering design but would generally be placed along Monument Ridge and Bear River Ridge. Turbine heights could reach up to 600 feet, with a rotor diameter of 492 feet. The gen-tie would be generally located along Shively Ridge.

g) SUMMARY OF IMPACTS

Issues that were analyzed in the Draft EIR include aesthetic resources, agricultural and forestry resources, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gas emissions, hazards hazardous materials, land use and planning, mineral resources, hydrology/water quality, noise, paleontological resources, population and housing, public services, recreation, transportation and traffic, utilities, wildfire and cumulative impacts. Land use and planning, population and housing, utilities, recreation, public services, energy, mineral resources and paleontological resources were impacts found not to be significant and not discussed further in the DEIR. The DEIR identified potential significant impacts that are either less than significant or can be mitigated to less than significant levels on aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology/ water quality noise, transportation and traffic, wildfire. The DEIR identified significant impacts on aesthetics, air quality, biological resources, cultural and tribal resources, and cumulative effects on these same resources that cannot be mitigated to less than significant levels.

h) All project changes required to avoid significant effects on the environment have been incorporated into the project and/or are made conditions of approval. A Mitigation Monitoring and Reporting Plan has been prepared in accordance with Humboldt County regulations and is designed to ensure compliance during project implementation and is recommended to be adopted in conjunction with project approval. The applicant must enter into an "Agreement to Implement a Mitigation Monitoring and Reporting Plan as a condition of project approval (Condition of Approval No. 2)

i) Evidence that has been received and considered includes: the application, technical studies/reports that have been peer reviewed and reflect the County's independent judgment and the FEIR, and information and testimony presented during public hearings before the Planning Commission. These documents are on file in the Planning and Building Department (PLN-13999-CUP) and are hereby incorporated herein by reference.

j) DEPARTMENT OF FISH AND GAME FEES.

For purposes of the Fish and Game Code, the project will have a significant adverse impact on the fish and wildlife resources upon which the wildlife depends. State Department of Fish and Game reviewed the DEIR to comment and recommended necessary mitigations to protect biological

resources in this area. Therefore, the project will be required to pay the State fee in effect at the time of the recordation of the Notice of Determination to the Humboldt County Clerk/Recorder for processing said fee and posting the Notice of Determination (NOD).

k) FINAL EIR -- RESPONSE TO COMMENTS.
The County prepared a FEIR including responses to comments on the "Humboldt Wind Draft EIR". The Responses to Comments respond to comments that were received during the Draft EIR circulation period. The Responses to Comments document (FEIR) was released to the public on November 1, 2019 and responded to all environmental points raised by persons and organizations that commented on the DEIR. The FEIR was introduced to the Planning Commission on November 7, 2019, but in order to comply with CEQA Guidelines Section 15088(b) the Planning Commission was not scheduled to act on the FEIR prior to November 14, 2019. The Planning Commission continued the hearing to the meeting of November 14, 2019 and subsequently to November 21, 2019.

Electronic copies of the FEIR were provided to all agencies that provided comments and were provided a minimum of 10 days to review the document (November 4, 2019 to November 14, 2019). The County received extensive public comment letters (389 letters consisting of over 1,000 pages) on the DEIR. The FEIR considered the comments received during the public review period for the Draft EIR and provided appropriate responses. In order to better address repetitive comments, the FEIR used Master Responses to address 11 different topics. The Master Comment allows a more complete response to the comments made rather than individually responding to all the comments. The FEIR also included a refined project description to clearly identify where changes had been made to more clearly demonstrate how impacts were being addressed. The refinements included a reduction in the number of wind turbines from 60 to 47 and a realignment of the Gen Tie line. Together, the DEIR, the Responses to Comments, the Revisions to the DEIR, the References, the FEIR Errata, and the Appendices constitute the Final EIR on the project.

l) During the course of the Public Hearings on November 7, 14, and 21, 2019 the Planning Commission listened to testimony of over 100 speakers.

m) The Humboldt County Planning and Building Department, located at 3015 H Street, Eureka, CA 95501 is the custodian of documents and other materials that constitute the record of proceedings upon which the decision to certify the EIR is based.

2. FINDING: The EIR was presented to the Planning Commission in its entirety and the Planning Commission reviewed and considered it before approving the project.

EVIDENCE: a) The Planning Commission received a copy of the DEIR on April 15, 2019 and was provided a copy of the FEIR on November 4, 2019.

b) The Planning Commission considered the entire EIR at public hearings on November 7, November 14, and November 21, 2019 where the Planning Commission considered the contents of the EIR and received over 150 public and by public agency comments prior to rendering a decision on the FEIR.

3. FINDING: The Final EIR reflects the County of Humboldt's independent judgment and analysis.

EVIDENCE: a) The EIR (DEIR/FEIR) was prepared by AECOM under contract to the County of Humboldt. Technical studies were provided by the applicant which were peer reviewed by the county's consultant prior to incorporation into the environmental analysis.

b) The Planning Commission considered the information presented in the record relative to the FEIR and considered the public comment on the FEIR prior to rendering its decision. The Planning Commission considered all public comments, including those made by subject manner experts. Based on the evidence in the public record, the Planning Commission finds that the FEIR adequately addresses all potential environmental impacts and presents adequate feasible mitigation to reduce impacts to a less than significant level.

4. FINDING: **RECIRCULATION of the DEIR IS NOT REQUIRED**. While new information was included in the FEIR as part of responding to the comments on the DEIR, the new information has not changed the impact identification or mitigations in such a way that the public would be deprived of a meaningful opportunity to comment on a substantial adverse environmental effect of the project or a feasible way to mitigate such effect because no new information has been added that identifies a new significant environmental impact not previously disclosed, no substantial increase in the severity of the identified environmental impacts would result from implementation of the approved project or implementation of the mitigation measures, no feasible project alternative or mitigation measures considerably different from those analyzed in the DEIR have been identified and the DEIR is adequate allowing meaningful public review and comment. The new information added in the FEIR merely clarifies and amplifies and did not make significant modifications to an adequate DEIR (CEQA Guidelines 15088.5).

EVIDENCE: a) The applicant's proposed project refinements reduce the overall ground disturbance, realigning and shortening the gen-tie, reducing the number of turbines, crossing the Eel River overhead at the Highway 101 overcrossing, and realigning access roads to decrease the overall impacts. The reduced

size and scale of the project and altered the location of the gen-tie, do not pose any new impacts not already addressed in the EIR.

b) The information submitted after completion and circulation of the DEIR has been incorporated into the FEIR and fully disclosed to the public. The FEIR was made available on the County Planning and Building website on November 1, 2019, was made available to commenting public agencies and other interested citizens on November 4, 2019.The public had an opportunity to review and comment on the information before and during public hearings on the project. No action was scheduled before November 14, 2019 to allow time for review of the FEIR. The hearing was continued to November 21, 2019 and over 100 speakers addressed the Planning Commission during the public hearing. Therefore, the public has not been deprived of a meaningful opportunity to review and comment on the information. (CEQA Guidelines 15088.5(a)(4))

c) Northern Spotted Owl:
The project has been refined to protect Northern Spotted Owl based upon information which clarifies the environmental context and the mitigation has been clarified from the DEIR. The areas of Northern Spotted Owl habitat in the project area have been studied and monitored as a component of the Humboldt Redwood Company HCP and Timber Harvest Plans for the other affected properties. The DEIR identified nesting, roosting and foraging habitat for Northern Spotted Owls. For the FEIR, this information was supplemented by northern spotted owl surveys were conducted in all suitable habitat within 0.25-mile of the project area between March and August of 2019. The 2019 surveys, were compared to existing survey data about activity centers on land managed by HRC, activity centers documented in the California Department of Fish and Wildlife's (CDFW's) Spotted Owl Observations Database (the database query included reported data between 1996–2018) to present a complete record of where all activity centers are located in relation to the project.

The 2019 surveys identified 23 northern spotted owls attributed to 12 activity centers. Ten (10) of the 12 activity centers were pre-existing, and two are identified in 2019.

The gen-tie alignment has been refined to co-locate with existing roads wherever possible and to maintain a 1,000-foot buffer around activity centers except the Goat Rock activity center. No construction work will occur during the northern spotted owl breeding season (March 1–August 31) within the 1,000-foot buffer; the closest work outside of the breeding season would occur approximately 800 feet from this activity center. The 1,000 foot buffer was used to be consistent with the HRC HCP and was used for both survey purposes and buffer purposes.

Project refinements since circulation of the DEIR have resulted in a 26 percent reduction in the total acreage of northern spotted owl habitat area affected by the project.

Mitigation Measure 3.5-7 has been refined to include a detailed mitigation ratio for foraging, roosting, and nesting habitat in relation to permanent, temporary, and edge effects. The gen-tie is classified as a permanent effect requiring compensatory mitigation. Compensatory mitigation was modified to include the gen-tie habitat loss and the edge effects associated with placing the gen-tie line within Northern Spotted Owl habitat. The mitigation has been modified to encourage barred owl management. As pointed out by commenters including CDFW the barred owl is the biggest threat to Northern Spotted Owl habitat. If determined feasible a provision has been included for this mitigation measure to be satisfied through barred owl management.

The impact conclusion continues to be less than significant with mitigation incorporated. The project refinements and more precise mitigation measure provide increased clarity that the impact to Northern Spotted Owl will be less than significant consistent with the findings of the DEIR. No new significant environmental effects have been identified in relation to the northern spotted owl and there is not a substantial increase in the severity of an identified effect to the northern spotted owl based on the new information provided.

d) Marbled Murrelet

The modeling completed for the marbled murrelet impact assessment in the DEIR was from a single year of radar surveys showing the number of marbled murrelets flying over the areas where wind turbines are proposed. Prior to preparation of the FEIR, a second year of marbled murrelet radar surveys were completed between October 25, 2018 and September 6, 2019 from seven radar stations located along Bear River Ridge and Monument Ridge. Marbled murrelet activity and flight patterns in 2019 were similar to those observed in 2018. The radar data shows 55 marbled murrelet ridge crossing events in 2018 and 82 in 2019.

The 2018 and 2019 radar data were used to identify passage areas frequently used by marbled murrelets and the project was refined to remove 5 turbines from these locations reducing the total number of turbines from 60 to 47. Based upon the revised project and in consultation with CDFW, the applicant prepared both a “deterministic” and “probabilistic” model to determine the likely mortality of marbled murrelet from the revised project.

The updated modeling indicated 7.77 marbled murrelets would collide with the wind turbines over the life of the project. This is reduced from the 20.86 murrelets that were identified in the DEIR.

The applicant submitted the *Supplement to Compensatory Mitigation Strategy for Marbled Murrelets Impacted by Operation of the Humboldt Wind Project* prepared by H.T. Harvey & Associates and Stantec Consulting, Inc., dated October 3, 2019 after the publication of the DIER. This report provides a calculation of the benefits of corvid management to the number of marbled murrelets. The corvid management program is projected to result in reproductive success for 48 to 97 murrelets over the life of the project, resulting in a net benefit to the species. Because overcompensation is anticipated as a result of the proposed corvid management efforts at Van Duzen County Park, additional mitigation measures are not anticipated to be necessary. However, in the unlikely event that impacts on murrelets far exceed model predictions, or if the proposed mitigation strategy fails for unforeseen reasons, other feasible mitigation options as outlined in the DEIR remain to be implemented as part of an adaptive management approach.

The new information related to marbled murrelets has shown that impacts will be reduced from what was contemplated in the DEIR and the new details related to mitigation strategies demonstrate the effectiveness of the proposed mitigation. However, because any loss of such a rare species is considered significant, and because of the uncertainty in confirming the actual take of marbled murrelets and the numbers of marbled murrelets produced by the mitigation, the conservative conclusion of significant unavoidable effects remains unchanged.

e) BATS

The DEIR identified that Hoary bats are particularly susceptible to wind generation facilities. Swarming bat behavior is documented in Redwood National Park, but it is unknown whether that behavior extends to the ridgetops where the wind turbines will be. In order to preclude an impact to the population of this unlisted species the DEIR identified a Technical Advisory Committee to review the monitoring reports and provide guidance for addressing potential impacts. In the FEIR, the mitigation measure requiring the TAC was expanded to identify the TAC formation, how it would operate and provided an additional mitigation measure that included adaptive operational modifications to be taken in the event that the bat mortality exceeds the national average associated with wind farms.

f) Raptors

The DEIR raptor impact analysis presented a broad range (between four and 114 fatalities/year) and, based on information presented in the DEIR, suggested conservatively that the actual number of annual raptor fatalities could be near the upper end of this range. Revisions to the raptor impact assessment in the FIER incorporates new information to develop a more refined fatality estimate. The applicant contracted Western Ecosystems

Technology (WEST) to conduct an assessment of potential operational impacts to raptors at the Humboldt Wind Project. In their analysis, WEST concluded that the number of annual raptor mortality rate at the project would be closer to 25 raptor fatalities per year.

The additional analysis was based on a large raptor mortality dataset and information about rates of raptor use at the project site relative to other sites where both raptor use rates and mortality rates were known. Although raptor use rates alone do not predict operational impacts, the weight of evidence based on habitat, climate, and observed rates of raptor use at the project site suggest the number of annual raptor fatalities resulting from operational impacts would likely be closer to the lower end (4-29 fatalities/year) than the upper end (114 fatalities/year) of the ranges stated in the DEIR. The fact that no single wind energy site can be considered an ideal proxy to predict risk to raptors at the project site, a conservative estimate would be to predict up to 50 raptor fatalities per year. The FEIR also included two added mitigation provisions including undergrounding of 6 miles of overhead transmission lines which removes an existing collision and electrocution hazard and payment of $600.00 per raptor mortality to a raptor rehabilitation facility and the addition of a bird Technical Advisory Committee to monitor mortality of birds including raptors and to provide guidance when unanticipated mortality occurs.

The reduction to the estimated raptor fatality rate is documented in the FEIR. Although the impact is less than what was anticipated in the DIER the conclusion of a significant unavoidable effect has not been changed.

g) Eelgrass
The DEIR contained a mitigation measure requiring avoidance of eelgrass habitat during project component offloading. The applicant has since submitted *Eelgrass Avoidance Recommendations for the Humboldt Wind Energy Project* by Merkel & Associates, Inc., dated June 2019. This document contains specific recommendations for eelgrass impact avoidance. Implementing these recommendations will avoid impacts to eelgrass will be avoided. This information has been incorporated into Mitigation Measure MM3.5-22c.

By incorporating the new information received related to eelgrass the mitigation measure requiring avoidance will be more effective, but no new mitigation is required and no increase of the severity of an impact has occurred.

h) Bridgeville Substation – Archaeological Impacts
Archaeological impacts are avoided in the DEIR by not excavating known archaeological sites. There is a known archaeological site at the Bridgeville substation site. Since the release of the DEIR, the applicant

has determined that excavation will be required at the Bridgeville substation within the footprint that was identified in the DEIR. Because of this change, the site has been subjected to surface and subsurface investigations to determine whether significant cultural resources are present in the area of expansion. These studies resulted in data that indicated that while significant cultural resources are present at Bridgeville, the portion of the site that occurs in the expansion area lacks integrity and is not eligible for inclusion in the California Register of Historic Resources/National Register of Historic Places. Mitigation Measure 3.6-1b has been revised to strike the reference to the Bridgeville substation expansion area because with the additional study that has been undertaken, it is determined conclusively that eligible resources are not present.

No new impacts have been identified and the severity of an identified impact has not been increased.

i) REVISED MITIGATION MEASURES.
Mitigation Measure Nos. 3.5-1b, 3.5-2a, 3.5-2b, 3.5-2c, 3.5-3, 3.5-5a, 3.5-5b, 3.5-5c, 3.5-7, 3.5-11, 3.5-12, 3.5-13, 3.5-14, 3.5-18a, 3.5-19e, 3.5-21e, 3.5-22c, 3.5-23a, 3.5-23d, 3.5-22e, 3.5-25a, 3.6-1a, 3.6-1b, 3.6-4, and 3.13-2a have been revised as described below. The revised measures are equivalent or more effective in mitigating or avoiding potential significant effects and themselves will not cause any potentially significant effect on the environment:

i. MM-3.5-1b has been revised to require a biological monitor be present to ensure compliance with marbled murrelet nesting buffers and provide that the high and very high noise buffers are not applicable where marbled murrelet nesting habitat is separated from construction activity by Highway 101 or directly adjacent to Highway 101. Alternative buffers are presented for these areas. The monitor will ensure buffers are maintained, and the areas adjacent to Highway 101 are already impacted by noise from the freeway;

ii. MM 2.5-2a has been revised to clarify high passage rate areas for murrelets are as shown in the *Marbled Murrelet Collision Risk Assessment Associated with the Humboldt Wind Project Proposed for Humboldt County, California: 2-Year Repor*t, and to require the gen-tie be designed to increase visibility to marbled murrelets in addition to the other siting criteria contained in the mitigation measure rather than only being required if the other criteria were found infeasible. This change defines areas where turbines will not be placed to minimize impacts to murrelets;

iii. MM 3.5-2b has been revised to clarify how the post construction mortality monitoring plan will meet minimum detection probability standards;

iv. MM 3.5-2c has been revised to modify the expected marbled murrelet mortality and establish the compensatory mitigation strategy including performance standards and to require adaptive mitigation if the primary mitigation strategy does not accomplish the required results;

v. MM 3.5-3 has been revised to clarify the timing of surveys and monitoring during construction and operation activities;

vi. MM 3.5-5a has been revised to eliminate the requirement of a prey management program which is unnecessary as the project is required to maintain the area around the turbines to keep rodent populations at a low level;

vii. MM 3.5-5b has been revised to clarify post construction mortality detection probability for eagles and the methods for estimating project related loss which brings greater clarity to the mitigation measure;

viii. MM 3.5-5c has been revised to include details of undergrounding 5 miles of distribution line within the project footprint, this further mitigates impacts;

ix. MM 3.5-7 has been revised to specify mitigation ratios for impacts to permanent and fragmentation of Northern Spotted Owl foraging, roosting, and nesting habitat. Revisions to the mitigation also include incentives to encourage barred owl management as a component of the mitigation or the primary mitigation. This clarifies the compensatory mitigation requirement;

x. MM 3.5-11 has been revised to require formation of a TAC to review protocols for post-construction bird fatality monitoring, assess whether bird mortality attributable to the project may pose the potential for any bird population, particularly special-status birds, to drop below self-sustaining levels, strategically identify operational minimization measures, and identify compensatory mitigation that would offset operational impacts on local or regional populations of special-status raptors and other special-status bird species and to include the compensatory mitigation of undergrounding 5 miles of distribution line within the project footprint, and paying $600 per raptor to a raptor rehabilitation center for operational impacts on raptors;

xi. MM 3.5-12 has been revised to clarify that compensatory mitigation would include grassland habitat impacts where the grassland qualifies as a sensitive natural community and to clarify the horned lark impact avoidance plan timing (prior to issuance of grading permits);

xii. MM 3.5-13 has been revised to clarify that a qualified biologist may modify the construction exclusion zone for nesting birds in consultation with CDFW and USFWS;

xiii. MM 3.5-14 has been revised to include a requirement that if USFWS or CDFW requires actions that involve compensatory mitigation for operational impacts to non-raptor birds, it shall occur within 1 year of documented take. The reference to horned lark mitigation timing was deleted as the horned lark is not a listed species;

xiv. MM 3.5-18a has been revised to clarify the timing of formation and composition of the bat technical advisory committee, their reporting structure, and thresholds for implementing operational minimization measures;

xv. MM 3.5-19e has been revised to delete the sentence that states if restoration is selected as a mitigation strategy, and simply state that the applicant shall implement the mitigation measure;

xvi. MM3.5-21e has been revised to clarify that migration for other sensitive habitats such as riparian and wetlands can be counted towards fulfillment of mitigation for impacts on aquatic and upland habitat for foothill yellow legged frog;

xvii. MM3.5-22c has been modified to include specific avoidance and monitoring measures to ensure avoidance of impacts to eelgrass. The timing of the eelgrass monitoring, and protection plan was also changed to be 90 days prior to component delivery;

xviii. MM3.5-23a has been revised to require a qualified biologist be present during construction activities to ensure special-status plants are flagged for avoidance during pre-construction surveys;

xix. MM3.5-23d has been revised to include reference to the Humboldt Wind Revegetation, Reclamation and Weed Control Plan;

xx. MM 3.5-22e has been revised to update the reference to the Humboldt Wind Revegetation, Reclamation and Weed Control Plan, and clarify that the applicant shall incorporate agency comments addressing permit requirements into the plan;

xxi. MM 3.5-25a has been revised to delete the reference to MM 3.5-22e which will no longer be required due to project design revisions;

xxii. MM3.6-1a has been revised to delete the reference to previously recorded site P-12-003314 needing to be identified in the field. After publication of the DIER this site has been identified in the field.

xxiii. MM 3.6-1b has been revised to delete the reference to the Bridgeville substation expansion area. After publication of the DIER the expansion area has been subject to further investigation and found

not to contain resources eligible for listing in the California Register of Historic Resources.

xxiv. MM3.6-4 has been revised to include more specific details about condor transmitters and to remove the 6 month timeframe for implementation of the condor curtailment plan instead requiring it for the duration of project operations; and

xxv. MM3.13-2a has been revised to add more detail to fire prevention strategies and to add sections related to using metrics to track system performance related to the number of elevated fire danger days, conducting an annual review of industry practices that reduce the likelihood of fire and vegetation management standards.

The revised mitigation measures are incorporated into the mitigation measures contained in the FEIR and the Mitigation Monitoring and Reporting Plan implemented as part of project approval.

j) ADDITIONAL MITIGATION MEASURES
New Mitigation Measure Nos. 3.5-18d and 3.5-18e have been added as follows to better mitigate potentially significant impacts:

i. MM 3.5-18d has been added to specify a stepwise adaptive management strategy that the Bat Technical Advisory Committee will implement if hoary bat mortality exceeds 1.7 bats /MW within a one-year period;

ii. MM 3.5-18e has been added to require the project to implement the American Wind Energy Association best management practices for feathering below normal cut in speeds to reduce the chance of bat collisions with blades.

The new mitigation measures are incorporated into project approval or made a condition of project approval.

k) IMPACT REDUCTION IN PROJECT REFINEMENT.

The applicant has proposed project refinements for the wind energy project in response to comments on DEIR. These refinements reduce potential environmental impacts. The revisions to the project include:

- A reduction in ground disturbance from approximately 900 acres to 655 acres. The reduction in project footprint correlates to a reduction in impacts to habitat area impacts, less earth work, and a reduction in other related.
- The gen-tie alignment has been reduced from 25 to 22 miles long. The gen-tie has been re-aligned to avoid northern spotted owl activity centers and nesting and roosting habitat. Where possible, the realigned gen-tie corridor has been co-located with existing access roads to avoid and minimize site disturbance.

- Reduction in the number of turbines from 60 to 47. Turbines on Bear River Ridge are reduced from 23 to 20 and on Monument Ridge from 37 to 27. The reduction in turbines allows avoidance of known cultural resource sites, avoidance of known high passage areas for marbled murrelet high passage areas, and elimination of significant noise impacts on sensitive receptors.
- The gen-tie line crossing of the Eel River overhead corresponding to the height of the Highway 101 Bridge eliminating the need for horizontal directional drilling under the Eel River and the potential impacts associated with directional drilling and does not constitute a hazard to birds flying up the Eel River Valley.
- Realignment of access roads. Since publication of the DEIR, the applicant has agreed to incorporate into the project the "realigned Jordan Creek access" at the Jordan Creek staging area that is described in Alternative 2 in the DEIR, which will completely avoid northern spotted owl activity centers and minimize impacts on northern spotted owl nesting, roosting, and foraging habitat.
- Reduced project substation footprint from 5 to 2.5 acres which reduces overall site disturbance.

These design changes eliminate the need for Mitigation Measures 3.5-22d and 5.5-22e which were intended to mitigate potential effects from horizontal directional drilling. As a result, these mitigation measures are not included in the Mitigation Monitoring and Reporting Plan Matrix.

l) MITIGATION MEASURES REMOVED
As noted in item (l), Mitigation Measures 3.5-22d and 5.5-22e were removed because they address horizontal directional drilling which is no longer proposed. As a result, these mitigation measures are not included in the Mitigation Monitoring/Condition Compliance Matrix.

5. FINDING: **EIR-ENVIRONMENTAL IMPACTS MITIGATED TO LESS THAN SIGNIFICANT –** The EIR identified potentially significant impacts to biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, noise, transportation and traffic, and wildfire which could result from the project as originally submitted. Changes are incorporated into the project which avoid or substantially lessen the potentially significant environmental effects identified in the Final EIR. The applicant's proposed changes to reduce the overall ground disturbance, realign and shorten the gen-tie, reduce the number of turbines, cross the Eel River overhead, and realign access roads, and the incorporation of mitigation measures from the EIR (as modified in the FEIR) into the conditions of project approval will reduce these impacts to a less that significant level. (15091(a)(1)

EVIDENCE: a) Potentially significant impacts on biological resources, with the exception of operational impacts on marbled murrelets and operational impacts on raptors have been mitigated to less than significant levels with incorporation of mitigation measures as refined in the FEIR and project changes proposed by the applicant including to reduce the overall ground disturbance, realign and shorten the gen-tie, reduce the number of turbines, crossing the Eel River overhead, and realignment of access roads. Proposed project changes have resulted in avoidance of some impacts such as avoiding spotted owl activity centers, and high passage areas for marbled murrelets. Mitigation includes pre-construction surveys and avoidance where feasible, post construction mortality monitoring, and where necessary compensatory mitigation to offset potential impacts. Those mitigated to a less than significant level can be summarized as follows:

i. Construction impacts on Marbled Murrelet Nesting is mitigated through a prohibition on removal of any old growth forest, establishment of auditory buffers, and implementation of a worker awareness program.

ii. Construction impacts on Bald and Golden Eagle Nesting Activity is mitigated through preconstruction surveys to determine if nests are present, and establishment of avoidance buffers.

iii. Operational impacts on Bald and Golden Eagles are mitigated through avoidance and minimization measures which require design components to not attract eagles, post construction mortality monitoring, and implementation of compensatory mitigation for eagles which are lost due to operation of the project.

iv. Disturbance of roosting and nesting of Northern Spotted Owl by construction activities has been mitigated through project design which avoids all but one identified activity center and maintains auditory and visual buffers from activity centers.

v. Removal, fragmentation and modification of Northern Spotted Owl habitat has been mitigated by requiring compensatory mitigation which may also include a Barred Owl Management Plan.

vi. Operational impacts on Northern Spotted Owl have been mitigated through mitigation previously identified for mitigation of eagles including design to minimize rodent activity and mortality monitoring.

vii. Construction impacts on nesting raptors are mitigated through not removing vegetation in potential nesting habitat during nesting season, conducting preconstruction surveys, and maintaining exclusion zones to occupied nests.

viii. Construction impacts on avian and nesting habitat are mitigated by measures requiring minimization of impacts to riparian and wetland habitats and implementation of a worker awareness program.

ix. Construction impacts to nesting birds are mitigated through implementation of the worker awareness program, conducting preconstruction surveys and maintaining construction buffers around nests.

x. Operational impacts to nonraptor birds are mitigated through formation of a bird TAC, and minimizing the construction footprint, mortality monitoring.

xi. Construction impacts on Bat Maternity Roosts or Hibernacula and loss of essential roost habitat is mitigated a habitat assessment prior to construction to identify potential roost sites, avoidance of all significant roost sites, only conducting tree removal during the fall season, providing compensation for loss of essential Townsend's big-eared bat roost habitat and avoiding temporary impacts on roost sites during construction

xii. Operational impacts on bat are mitigated through formation of a TAC which will monitor bat mortality and as necessary adaptively require operational modifications to minimize bat mortality. Mitigation is also included to require design and operation considerations to avoid attracting bats into the rotor path.

xiii. Construction impacts on special status mammals will be mitigated through having a biological monitor on site, closing excavation areas to preclude mammal entrapment and limiting vehicle speeds. Other mitigation including worker awareness plan, minimizing construction footprint, implementation of the reclamation plan and conducting preconstruction surveys will all mitigate this impact.

xiv. Construction impacts on Special-Status amphibians and reptiles will be mitigated through a worker awareness plan, minimizing construction footprint, implementation of the reclamation plan and conducting preconstruction surveys voiding impacts to riparian and other wet areas.

xv. Impacts of project construction on Special-status fish will be mitigated worker awareness plan, minimizing construction footprint, implementation of the reclamation plan and implementation of wet weather BMPs.

xvi. Impacts on Special-Status plants during project construction will be mitigated through conduction preconstruction surveys, flagging special status plants prior to construction activities, compensating for removal of special status species including Siskiyou Checkerbloom and preparation of a reclamation and revegetation and weed control plan.

xvii. Loss or disturbance of sensitive natural community and riparian habitat is mitigated through developing a worker awareness program. Minimizing the construction footprint, minimizing construction footprint, implementing a reclamation plan and compensating for loss of habitat area.

xviii. Loss of wetlands and other wet areas is mitigated through developing a worker awareness program. Minimizing the construction footprint, minimizing construction footprint, implementing a reclamation plan and compensating for loss of habitat area.

xix. The project's potential inconsistency with the Humboldt Redwood Company Habitat Conservation Plan is mitigated by implementing performance standards either contained in the project description or in mitigation measures.

b) Under the cultural resources section potentially significant impacts were identified to archaeological resources. This potential impact was mitigated through requiring avoidance of known deposits, capping known deposits and requiring a monitor on site during all excavation activity. Subsequent to release of the DEIR the known site at the location of the Bridgeville Substation expansion was surveyed to determine of there was the potential to disturb intact deposits. It was determined that this area does not contain deposit which could be listed with the CRHR. In addition, if any unexpected resources or human remains are found, all work in the area must stop until it can be adequately examined.

c) Potentially significant impacts on hazards and hazardous materials associated with the project's possible need to use explosive devise to move rock have been mitigated to a less than significant level through a mitigation measure which provides performance standards for preparation of a required blasting plan to be developed in the event blasting is necessary.

d) Potentially significant impacts on hydrology and water quality have been mitigated to a less than significant level through mitigation measures that require implantation of wet weather construction best management practices consistent with the Humboldt Redwood Company Habitat Conservation Plan. Additional protections to water quality and hydrology will be required as part of the grading permit issued in compliance with the County grading ordinance.

e) Potentially significant impacts to noise have been mitigated to a less than significant level through applicant proposed changes to reduce the number of turbines and mitigation measures that require noise reducing construction practices and a setback from sensitive receptors.

f) Potentially significant impacts on transportation and traffic have been mitigated to a less than significant level through mitigation measures that require the applicant to rehabilitate and reconstruct county maintained roads damaged by truck traffic, and to create a traffic control plan and notify the public of anticipated roadway obstructions during construction.

g) Potentially significant impacts on fire protection services and wildfire have been mitigated to a less than significant level through mitigation measures which require preparing and implementing a fire services financing plan in coordination with the Humboldt County Fire Chiefs' Association and the Rio Dell Fire Protection District, a fall protection and rescue plan and provides performance criteria for a fire safety management plan to reduce the risk of wildfire.

6. **FINDING:** **EIR-ENVIRONMENTAL IMPACTS NOT MITIGATED TO LESS THAN SIGNIFICANT –** The proposed wind energy project would result in significant and unavoidable impacts that would not be mitigated to a less than significant level even with incorporation of mitigation measures from the EIR into the conditions of project approval, as further described in the evidence below. There are specific economic, legal, social, technological or other considerations which make infeasible mitigating these impacts to a less than significant level. (15091(a)(3)

EVIDENCE: a) The DEIR found that project impacts to aesthetic resources could not be mitigated to a less than significant level. Bear River and Monument Ridges are highly visible. Bear River Ridge in particular can be seen from locations around Humboldt Bay. The WTGs would be visible from Scotia, Rio Dell, areas of Fortuna, Hydesville, the Ferndale bottoms, Highway 101, and Mattole Road. Mitigation is required to reduce the impacts, such as ensuring that turbines will be painted off-white or grey and have low reflectivity, which will assist in muting the visual impacts, but they cannot be avoided. The turbines will require lighting compliant with the Federal Aviation Administration (FAA) standards. It is expected that each of the WTGs will have lights on them. No feasible mitigation has been identified.

b) The DEIR found that the project will result in an exceedance of the daily threshold of NO_x (oxides of nitrogen) established by the North Coast Unified Air Quality Management District (NUAQMD). The threshold is 50 pounds of NO_x per day and during the construction phase, the project could emit as much as 321.42 pounds per day. However, this is for a short duration and the annual threshold of 40 tons of NO_x per year would not be exceeded. Mitigation has been required to have all heavy-duty diesel engines used during construction be compliant with Air Resources Board current-phase equipment standards. This mitigation would reduce construction-related emissions and NO_X, but would still exceed NCUAQMD daily threshold of significance. No other feasible mitigations have been identified. NO_x is an ozone precursor which can have health

effects associated with reduced lung function. Ozone is a regional pollutant that affects large areas and it takes a large amount of NO_x with other ozone precursors to result in an increase in ambient ozone levels over a region. This level to be produced by this project may not even be detectable in regional air quality monitoring and is thus not at a level to result in adverse health effects.

c) The DEIR found that operational impact to the marbled murrelet could not be mitigated to a less than significant level. Since circulation of the Draft EIR, the project footprint was refined to reduce the total number of turbines from 60 to 47 and to eliminate turbines from the areas of the project with the highest marbled murrelet passage rates. With these revisions, the project is anticipated to result in the loss of 7.77 marbled murrelets over the life of the project (reduced from 20 found in the DIER). Compensatory mitigation is required and will come in the form of a corvid management plan at Van Duzen County Park. The corvid management program is projected to result in reproductive success for 48 to 97 murrelets over the life of the project, resulting in a net gain in marbled murrelets. Once the project is operational, post construction mortality monitoring would occur along with monitoring for the success of the corvid management plan. In the unlikely event that the mortality monitoring indicated higher take levels than anticipated or the corvid management plan is not as successful as anticipated, additional mitigations such as relocation of recreational facilities out of murrelet habitat, habitat enhancement on buffer forests, and removal of derelict fishing gear would be implemented.

Curtailment was proposed by DEIR commenters as way to further mitigate impacts to marbled murrelet. The reduction in turbines from high passage areas is considered a higher level of mitigation than curtailment because it completely removes a potential obstruction from an identified passage area.

The County is not requiring curtailment as an additional avoidance measure, above and beyond the avoidance achieved by eliminating high-risk turbines, because it would render the project economically infeasible. A project such as this is expected to have a rate of return of 7.5 percent as shown in the Financial Feasibility Analysis of Proposed Humboldt Wind Energy Project prepared for the applicant by Economic and Planning Systems. This feasibility analysis identified three different price points for Power Purchase Agreement scenarios (low: $45/MWH; Mid: $50/MWH, and High: $55/MWH.) At the High PPA the project would produce a 7.55 percent rate of return. The 2019 pricing for power is equivalent to the Mid PPA studied. Because it is likely that any PPA will be in the mid-range and not a high PPA, the rate of return is expected to be below 7.0 percent which renders the project marginal with respect to financial feasibility. Curtailment would reduce the number of hours the project has to produce electricity which would reduce revenue and thus adversely affect the rate of return making

the project financially infeasible.

With the avoidance, minimization, compensatory mitigation, and adaptive management discussed above, the overall benefit to the marbled murrelet is expected to be positive. However, because the marbled murrelet is an extremely rare species that is hard to monitor because of its remote habitat (open ocean and old-growth canopy high above the ground) and elusive habits (flying at high speed at dawn and dusk), verifying the estimate of operational take predicted by the model is therefore difficult, as is verifying the number of marbled murrelets produced as a result of implementing corvid management. Because any loss of such a rare species is considered significant, and because of the uncertainty in confirming the actual mortality of marbled murrelets and the numbers of marbled murrelets produced by the mitigation, there is a conservative conclusion of significant unavoidable effects.

d) The DEIR found that operational impacts to raptors could not be mitigated to a less than significant level. The DEIR provided an analysis of operational impacts to raptors. The analysis included looking at raptor mortality data from other operating wind farms and concluded that the low range of impacts would be 4-29 raptor fatalities per year and the high range could be up to 114 raptors per year.

During the FEIR process, the applicant submitted additional information relating to the potential mortality rates of raptors. This additional analysis indicated that the actual mortality rate would likely be approximately 25 raptors per year. However, due to remaining information gaps and the fact that no single wind energy site can be considered an ideal proxy to predict risk to raptors at the project site, a conservative estimate would be to predict up to 50 raptor fatalities per year.

Feasible mitigation is included to avoid, minimize, and ultimately compensate for operational impacts to raptors including eagles. This includes implementing specific WTG tower and gen-tie design guidelines that reduce the impacts to raptors, and compensatory mitigation in the form of pole retrofits or pole reframing, or a donation to raptor rehabilitation center, to reduce potential impacts. Additionally, the project now includes undergrounding of 5 miles of existing PG&E distribution lines occurring within the project site that poses a hazard to raptors and other birds. Even with the feasible mitigation measures and the reduced estimate of raptor fatalities, the impact still has the potential to be significant and unavoidable.

e) The DEIR found that impacts to the Bear River Ridge and Valley Historic Landscape could not be mitigated to a less than significant level. The proposed project would construct access roads and WTGs within the Bear River Ridge and Valley Historic Landscape, which is assumed eligible for

the California Register of Historic Resources. None of the historic-age ranching properties within the historic landscape would be directly adversely affected by the project, although, of the identified historic-age ranching properties, the existing historic-age hay barn on the R. M. Ranch is sited in close proximity to a proposed WTG, and a new access road would be cut through two existing dirt roadways leading into the property from the north side of Bear River Road. Construction of the WTGs would negatively affect the design, setting, feeling, and association of the rural agricultural setting of the historic landscape during the 30-year life span of the project, and possibly longer if a separate repowering permit is approved, at which time the WTGs, cables, and other infrastructure support facilities would be removed.

Section 15064.5 of the State CEQA Guidelines defines "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings. No proposed components of the wind generation facility would directly affect individual resources within the Bear River Ridge and Valley Historic Landscape; however, as designed, construction of the WTGs and access roads would result in a significant impact on the immediate surroundings and setting of the historic landscape.

Feasible mitigation includes preparing an Historic American Landscape Survey Report to fully document the resource prior to construction. However, preparing this report does not fully mitigate for the impact and no other feasible mitigation is available. Therefore, this impact was found to be significant and unavoidable.

f) The DEIR found that impacts to the identified Tribal Cultural Resource of Bear River Ridge area could not be mitigated to a less than significant level. Bear River Ridge is understood to have been a sacred high prayer spot to the Wiyot People. The ridgeline itself is now in private ownership but is visible from all of the ancestral Wiyot territory. The Wiyot Tribe has expressed that placing WTGs on the ridge will impact this resource. Project refinements since the release of the DEIR have resulted in a reduction in the number of turbines that would be placed on Bear River Ridge and have reduced the project's disturbance area on the ridge, but they do not eliminate the impact.

Alternative 5 which would avoid placement of turbines on Bear River Ridge was found to be infeasible. The DEIR alternative suggested that 37 turbines could be placed on Monument Ridge, however based on micro-siting efforts only 27 turbines can be placed on Monument Ridge. This would not be enough turbines to finance and operate the project and therefore it was found to be infeasible. (Please see financial feasibility discussion above under Marbled Murrelet.) The impact is significant and unavoidable and no feasible mitigation has been identified.

The property owner for on Bear River Ridge testified in the November 14, 2019 hearing that this large area has remained intact under one ownership for over 100 years. There is the ability to break the parcels up after cancelation of existing Williamson Act contracts due to underlying patent parcels but the lease income from the wind turbines will make keeping the site under common ownership more desirable and feasible.

g) The DEIR found that impacts to the identified Tribal Cultural Resource of Bear River Ridge ethnobotanical area could not be mitigated to a less than significant level. The ethnobotanical area has evidence of historic Wiyot land management. Feasible mitigation includes incorporating plants from the "Wiyot List of Plant Species of Environmental and Cultural Concern" into the Reclamation, Revegetation, and Weed Control Plan for the project. The Reclamation, Revegetation, and Weed Control Plan contains language that the Wiyot Tribe will be able to select up to 100 plants to be salvaged and placed into 1-gallon containers and/or up to 200 cuttings or plants less than 3-feet in height to be salvaged and remain bare rooted during transfer to a location designated by the Wiyot Tribe. Even with feasible mitigation incorporated, the impact to the ethnobotanical area remains significant and unavoidable.

h) The DEIR found that impacts to the identified Tribal Cultural Resource of the California condor could not be mitigated to a less than significant level. Although condors do not currently occupy the project area, the National Park Service, USFWS, and Yurok Tribe are partnering to reintroduce California condors in the Bald Hills region of Redwood National Park. Condors released from this location will have a range that includes the Humboldt Bay region and the project location. Although the condors have not yet been released, the reintroduction program is reasonably foreseeable in the near future, and certainly within the 30-year project time frame. To minimize the impact to condors, mitigation is required to detect the presence of condors and curtail operations to avoid collision. The original mitigation measure in the DEIR allowed for a 6-month period to initiate the curtailment regime after the release. In the Final EIR this mitigation measure has been refined to require that the curtailment be in place for the duration of the project. This detection and curtailment system has been used successfully at other wind farms in California, and to date no condors fatalities have occurred. With implementation of this curtailment program, the potential collision risk to condors will be very low, and this potential impact will have been reduced to the extent feasible. Nonetheless, the DEIR identifies the impact on condors as significant and unavoidable due to the spiritual significance of the species.

7. **FINDING:** **EIR-CEQA ALTERNATIVES TO THE PROPOSED PROJECT** - In compliance with CEQA Guidelines section 15126.6, the DEIR considered

several alternatives to the 60 turbine wind energy project originally proposed. The EIR considered the alternatives described below which are more fully described in the DEIR. There are specific economic, legal, social, technological or other considerations which make infeasible the project alternatives identified in the EIR for reasons discussed below. The applicant's proposed changes to reduce the overall ground disturbance, realign and shorten the gen-tie, reduce the number of turbines, cross the Eel River overhead, and realignment of access roads, incorporates portions of Alternative 2 Realigned Gen-Tie and Access Road and Alternative 4 Reduced Turbine Count.

EVIDENCE: a) Alternative No. 1: No Project Alternative.
The No Project Alternative assumes that the proposed project would not be implemented and that the project site would remain in its existing condition and used primarily for timber production. If Alternative 1 were selected, no change from existing conditions would occur.

The No Project Alternative would not meet any of the basic project objectives:

- Contribute to a diversified statewide energy portfolio that will reduce exposure to price volatility associated with electricity and natural gas, while assisting the state in meeting the renewable-energy requirements established in SB 350 and SB 100, including assisting in directly achieving the state's Renewable Portfolio Standard of 100 percent zero carbon energy by 2045.
- Develop a wind project that is feasible to finance, construct, and operate.
- Develop a wind energy project that can meet the criteria to achieve the maximum federal tax credit requiring placement into operation by December 30, 2020, which is intended to decrease the cost of renewable energy generation and delivery, promote the diversity of energy supply, and decrease the dependence of the United States on foreign energy supplies.
- Promote sustainable energy and utilization of alternative energy systems throughout the county in compliance with the Open Space and Conservation Element of the *Humboldt County General Plan*.
- Develop a wind energy facility as near as possible to existing transmission infrastructure.
- Develop a wind energy facility in Humboldt County that supports the economy by creating short- and longterm employment opportunities and increasing tax revenue.
- Displace emissions of approximately 372,000 metric tons per year of carbon dioxide (a greenhouse gas) that would otherwise be required to generate the same amount of electricity as this 155-megawatt (MW) project.

Alternative 1 would result in greater use of nonrenewable energy than the proposed project. The no project alternative would also not support

Humboldt County General Plan policies which encourage wind energy and increased local energy production.

b) Alternative 2- Realigned Gen-Tie and Access Road
Under this alternative, the number and location of WTGs would be the same as the proposed project, but the gen-tie line would be rerouted to an alternative ridge directly above the town of Stafford, the line would continue overhead as it crosses the Eel River at a height equal to or less than the deck of the Richard Fleisch Memorial Bridge. Once on the east side of the river the realigned gen-tie route of Alternative 2 would be consistent with the proposed gen-tie corridor until Alderpoint Road. At Alderpoint Road, the realigned gen-tie route would proceed northeast, while the proposed line would deviate south before rejoining the proposed gen-tie 0.3 mile south of the Bridgeville Substation.

Alternative 2 also includes an alternate access road alignment at the Jordan Creek staging area (the "realigned Jordan Creek access") to avoid impacts on a northern spotted owl flyway near Jordan Creek. From the Jordan Creek laydown area, the access road would continue in an easterly direction, roughly paralleling Demonstration Forest Road Left (DEMO-Left) and a PG&E service road. About 0.16 mile east of the junction of DEMO-Left and the PG&E service road, the alignment would turn south along a new alignment up Monument Ridge. This new alignment would continue for 0.4 mile before rejoining DEMO-Left. The alignment would follow DEMO-Left for an additional 1.5 miles before rejoining the proposed alignment. The access road would be slightly longer (approximately 1 mile) but would follow an existing road in places, reducing the impacts of creating new access roads.

Alternative 2 would reduce the risk of frac-out during boring under the Eel River, make better use of existing roads (minimizing timber harvesting), and increase the distance of project infrastructure from Scotia. This alternative would meet project objectives to the same extent as the proposed project. With the applicant's proposed changes to the project description portions of Alternative 2 are being implemented. Including placing the gen-tie Eel River crossing overhead, realigning the Jordan Creek access and overall realigning the gen-tie to make better use of existing roads and infrastructure.

c) Alternative 3- Reduced Turbine Footprint- Avoidance of Monument Ridge
Alternative 3 would reduce the total number of WTGs from 60 to 23 and would avoid placing WTGs on Monument Ridge. Based on a marbled murrelet risk assessment, this alternative would also likely reduce impacts on known marbled murrelet flyways although it would not eliminate all murrelet risk and the impact would remain significant and unavoidable. Alternative 3 would result in less ground disturbance and related impacts

than the proposed project, and fewer visual impacts although it would not reduce the visual impact to a less than significant level. This alternative is also expected to reduce mortality of birds and bats from collisions with rotor blades, relative to the proposed project simply due to a reduction in the number of turbines.

Alternative 3 would not go as far as the proposed project toward meeting the project objectives because it would not be capable of generating 155 MW of energy. Alternative 3 would likely result in greater use of nonrenewable energy than the proposed project. At 23 turbines the alternative was also found to be financially infeasible to construct and operate. (Please see financial feasibility discussion above under Marbled Murrelet.) For this reason the alternative is found to not be technically or financially feasible.

d) Alternative 4- Reduced Turbine Count (31 total) would place 31 WTGs within the same study corridor as the proposed project. Access to the WTG site would be provided from the planned road at the Jordan Creek Staging Area and the gen-tie would extend to the Bridgeville Substation using the same alignment as under the proposed project. Because the turbine count would be reduced, the WTGs selected for installation would be the largest (600-foot maximum height). Based on a marbled murrelet risk assessment, this alternative would likely reduce impacts on known marbled murrelet flyways. Compared to the proposed project, Alternative 4 would result in less ground disturbance during the placement of individual WTGs and fewer related impacts, and would place fewer WTGs in areas visible from surrounding lands. This alternative is also expected to reduce the mortality of birds from collisions with rotor blades by avoiding areas with high concentrations of birds. Alternative 4 would also reduce but not eliminate direct impacts to historic cultural landscapes and tribal cultural resources identified along Bear River Ridge.

Alternative 4 would not go as far as the proposed project toward meeting the project objectives because it would not be capable of generating 155 MW of energy. Alternative 4 would likely result in greater use of nonrenewable energy than the proposed project. At 31 turbines the alternative was also found to be financially infeasible to construct and operate. (Please see financial feasibility discussion above under Marbled Murrelet.) For this reason, the alternative is found to not be technically or financially feasible.

e) Alternative 5- Reduced Turbine Footprint- Avoidance of Bear River Ridge
Alternative 5 would reduce the total number of WTGs from 60 to 37 and would avoid placing WTGs on Bear River Ridge. Because the turbine count would be reduced, the WTGs selected would likely be the largest (600 foot maximum height). Fewer WTGs would provide greater spacing from sensitive areas identified in the project corridor. This alternative would

avoid impacts on Bear River Ridge, which is considered a tribal cultural resource, and would reduce indirect effects on the Scotia historic district. Alternative 5 would result in less ground disturbance and related impacts than the proposed project, and fewer visual impacts. Relative to the proposed project, this alternative is also expected to reduce mortality of birds and bats from collisions with rotor blades.

Alternative 5 would not go as far as the proposed project toward meeting the project objectives because it would not be capable of generating 155 MW of energy. Alternative 5 would likely result in greater use of nonrenewable energy than the proposed project. At 37 turbines the alternative was also found to be financially infeasible to construct and operate. (Please see financial feasibility discussion above under Marbled Murrelet.) For this reason, the alternative is found to not be technically or financially feasible.

f) Alternative Location CEQA Guidelines section 15126.6(2)(A) discusses that the key question in an alternative location analysis is whether any of the significant effects of the proposed project would be avoided or substantially lessened by placing it in an alternative location need be considered for inclusion in the EIR. If the lead agency concludes that no feasible alternative location exists it must disclose the reasons for this conclusion. California has a limited number of suitable sites for wind energy development. Prior to application submittal the applicant's completed an analysis across Rainbow Ridge, Long Ridge, Bear River Ridge, Monument Ridge, Shively Ridge, and north of Bridgeville. The other sites were ruled out because they would not reduce impacts or they were not feasible. The fundamentals that drove the selection of Monument and Bear River Ridge as the Proposed Project Site include 1) the availability of high-quality wind resources in comparison to other sites in Humboldt County, 2) the ability to deliver turbines and other project components to the project site via Highway 101, 3) the accessibility of the site via existing access roads or after improvements are made to those roads, 4) the existing use of the property and associated disturbance given ongoing timber operations, 5) the ability to access transmission capacity at the Bridgeville Substation, and 6) the ability to obtain site control over a sufficiently large area. Because of the limited nature of wind resources and uncertainty that other locations would reduce impacts, an alternative location was not selected as an alternative in the DEIR. In fact other locations were rejected prior to application submittal based upon consultation with resource agencies.

DEIR commenters suggested that offshore locations should have been an alternative however, this alterative was not considered because off-shore wind development remains speculative in California. Offshore wind projects are more expensive to build and operate than those on land,

requiring considerably greater capital outlays per MW installed. This is particularly true in California where deeper water requires additional design considerations. No off-shore wind projects are operational in California and the environmental impacts of such a facility are unknown.

g) Environmentally Superior Alternative. Each of the alternatives either avoided or minimized to a greater extent the impacts associated with the proposed project. When all the alternatives were considered, Alternative 5- Reduced Turbine Footprint- Avoidance of Bear River Ridge is considered to be the Environmentally Superior Alternative in the EIR. As noted above this alternative is not feasible.

However, impacts to Tribal Cultural Resources, the Bear River Ridge and Valley Historical Landscape would remain significant and unavoidable as compared to Alternative 5- Reduced Turbine Footprint- Avoidance of Bear River Ridge, where these impacts would be avoided. Reducing the turbine count would also have incrementally less environmental impacts to aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and traffic and transportation. Although there may be incremental reduction to many impacts only Tribal Cultural Resource (Bear River Ridge and ethnobotanical area) and the Bear River Ridge and Valley Historical Landscape would be fully avoided. All other impacts would still require the proposed mitigation. It would somewhat reduce aesthetic impacts but not to a level that was less than significant.

Since the release of the DEIR, the project applicant conducted micro-siting efforts and found that only 27 turbines could feasibly be located on Monument Ridge. The chief reasons for this are wake effect, interference with existing microwave beam paths, and the steepness of the terrain.

In order to harness the free flow of wind on Monument Ridge, which is strong but inconsistent in direction, WTGs must be spaced at a greater distance apart to avoid waking and the loss of energy. In assuming 37 WTGs, Alternative 5 did not take wake effect into account.

This alternative would fail to meet the project objective to produce 155 MW of power. It would also, at the 37 turbines originally contemplated, and certainly the reduction to 27 turbines, be too few turbines to feasibly implement the project.

The applicant's proposed changes to reduce the overall ground disturbance, realign and shorten the gen-tie, reduce the number of turbines, cross the Eel River overhead, and the realignment of access roads, further reduce some impact including impacts to Northern Spotted Owl Habitat, and operational impacts to Marbled Murrelet.

8. FINDING **EIR-STATEMENT OF OVERRIDING CONSIDERATIONS**

In accordance with Section 15093 of the CEQA Guidelines, the County has evaluated the economic, legal, social, technological, or other benefits, including regionwide or statewide environmental benefits, of the project against its unavoidable environmental risks in determining whether to approve the project, and has determined that the specific economic, legal, social, technological, or other benefits, including regionwide or statewide environmental benefits, of the project outweigh its unavoidable, adverse environmental impacts so that the identified significant unavoidable impact(s) may be considered acceptable. The proposed project will result in a net environmental gain and will provide benefits described herein to the surrounding community and the County as a whole. Each benefit set forth below constitutes a separate, independent, and severable overriding consideration warranting approval of the project, despite the unavoidable impact. Substantial evidence in the record demonstrates that the County would derive the following benefits from the project:

EVIDENCE a) ENVIRONMENTAL BENEFITS

Statewide Environmental Benefits:

The Legislature passed the California Global Warming Solutions Act of 2006 (AB 32) creating a multi-year program to reduce greenhouse gas emissions in California. The California Air Resources Board (ARB) was delegated the task of developing a Scoping Plan to develop the approach to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. In 2016, the Legislature passed SB 32 and adopted a GHG reduction target of 40 percent below 1990 levels by 2030. Senate Bill 350, signed into law in 2015, requires a statewide portfolio standard to ensure that renewable resources account for 50 percent of California's electrical load by 2030. The recently enacted SB 100 moves up the deadline for reaching the 50 percent milestone to 2026, stepping to 60 percent by 2030. Further, the state has a goal of reducing GHG emissions by 80 percent below 1990 levels by the year 2050. ARB established a Scoping Plan detailing the requirements for renewable energy targets. (California Air Resources Board, AB 32 Scoping Plan, available at https://ww3.arb.ca.gov/cc/scopingplan/scopingplan.htm, Accessed: 6 November 2019; California Climate Policy Dashboard, BerkeleyLaw, University of California, https://www.law.berkeley.edu/research/clee/research/climate/climate-policy-dashboard/, Accessed: 6 November 2019.)

California's Renewables Portfolio Standard (RPS) requires all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators, to adopt RPS goals of obtaining 50 percent of the state's electricity from eligible renewable energy resources by 2030. (RPS

Eligibility Guidebook, (Ninth Edition, Revised), available at California Energy Commission, https://www.energy.ca.gov/programs-and-topics/programs/renewables-portfolio-standard (Accessed 6 November 2019).) Wind facilities that generate electricity may qualify for RPS certification. (*Id.*)

Wind energy is a renewable energy source. (*See, e.g.*, American Wind Energy Association, https://www.awea.org/wind-101/benefits-of-wind, Accessed: 6 November 2019.) The project will assist California in meeting the ambitious RPS goals of 50 percent of the state's electricity from eligible renewable energy resources by 2030.

The project would contribute to a diversified statewide energy portfolio that will reduce exposure to price volatility associated with electricity and natural gas. The California Independent System Operator (CAISO) balances supply versus demand and prioritizes supply by costs. Pursuant to law, wind energy is ordered dispatched first and ordered curtailed last, thus it is able to bid into the grid at a lower price and will directly displace fossil fuel generation.

Further, the project would replace outdated energy sources such as the Potter Valley Dam and the Klamath River Dam which are being decommissioned.

The project would displace emissions of approximately 384,068 metric tons per year of carbon dioxide that would otherwise be required to generate the same amount of electricity as this 147 MW project.

The Project would provide the following benefits:

- The project will result in $13,912,000 in local grid improvements paid for by the applicant; and
- $5 million undergrounding of high-risk PG&E distribution lines; and
- The project will improve and update old infrastructure in Humboldt, Cottonwood, and Bridgeville; and
- The transmission lines from Bridgeville to Cottonwood will be updated; and
- The project will result in a $2.2 million decoupling Humboldt Wind from Cottonwood and the broader grid; and
- The project would reduce use of and reliance on local natural gas; and
- The project is sufficient to power 70,000 households; and
- Assuming the turbines operate at a net capacity factor of 40%, the project could remove the equivalent of:
    - Greenhouse gas emissions from: 81,543 passenger vehicles driven for one year or 939,041,201 miles driven by an average passenger vehicle; or

- CO2 emissions from 43,216,817 gallons of gasoline consumed or 37,727,687 gallons of diesel consumed, or 419,872,936 pounds of coal burned; or
- 2,095 railcars' worth of coal burned, or 889,198 barrels of oil consumed, or 15,700,582 propane cylinders used for home barbeques; or
- .099 power plants in one year or 48,973,382,083 smartphones charged; or
- Greenhouse gas emissions avoided by: 133,961 tons of waste recycled instead of landfilled, or 19,136 garbage trucks of waste recycled instead of landfilled, or 16,757,618 trash bags of waste recycled instead of landfilled, or 81.4 wind turbines running for a year, or 14,588,364 incandescent lamps switched to LEDs; or
- Carbon sequestered by: 6,350,643 tree seedlings grown for 10 years, or 452,018 acres of U.S. forests in one year, or 3,117 acres of US forests preserved from conversion to cropland in one year.
- (Greenhouse Gas Equivalencies Calculator, US EPA printout, https://www.epa.gov/sites/production/files/widgets/ghg-calc/calculator, Accessed: 12 November 2019.)

Local and Regional Environmental Benefits:

Approval of the project will aid the County in meeting energy needs in an efficient and environmentally sound manner, as provided in the County General Plan, which encourages utilization of renewable energy resources. Specifically, the project would allow the County to further the following Policy Goals as stated in Chapter 12, Energy Element, of the General Plan:

Policy E-G3, Supply of Energy from Local Renewable Sources, which calls for increased local energy supply from a distributed and diverse array of renewable energy sources and providers available for local purchase and export. The project would increase local energy supply for a distributed and diverse array of renewable energy sources and providers available for local purchase and export. The project will increase locally produced renewable energy for local consumption and export. The project will be privately owned and operated, and although it will feed into the PG&E grid, it will be controlled by a separate energy provider.

The Project would further Policy E-P3, Local Renewable Energy Supply, which calls for the County to support renewable energy development projects including biomass, wind, solar, "run of the river" hydroelectric, and ocean energy that increases local energy supply. This is a renewable energy wind project that increases local energy supply.

This Project would also further Policy E-P13, Incentives for Using

Alternative Energy which calls for the County to encourage the use of renewable energy and environmentally preferable distributed energy generation systems in the county. The Project would produce 147 MW of renewable energy in the County.

The Redwood Coast Energy Authority (RCEA), a local government Joint Powers Agency whose members include the County of Humboldt, the Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, and Trinidad, and the Humboldt Bay Municipal Water District, has set a target of 100% clean and renewable electricity by 2025. (Stephenson, Nancy, 100% Clean and Renewable Electricity by 2025, Redwood Coast Energy Authority, April 8, 2019, https://redwoodenergy.org/100-clean-and-renewable-electricity-by-2025/, Accessed: 8 November 2019.) This Project would help RCEA and its members to achieve that goal.

According to Michael Winkler, Chair of the Board of RCEA, in statements made to the Planning Commission on November 14, 2019, producing a similar amount of solar energy would cost at least $800 million dollars (and possibly up to 1.5 billion dollars), more than four times the cost of this project. Further, solar production peaks in the summer, six months out of sync with maximum local demand which occurs in winter. Mr. Winkler also stated that RCEA staff is concluding negotiations with Terra-Gen for three quarters of the output of the project. If approved, the Terra-Gen project will produce more than 60% of the electricity used by RCEA's customers who represent more than 90% of the electricity customers in Humboldt County.

Jim Zoellick, an Energy Research Engineer with Humboldt State University, Department of Environmental Resources Engineering, provided testimony at the November 14, 2019 Planning Commission hearing that the proposed power project would help meet local energy demand. The RCEA carbon free energy portfolio would allow power to be produced locally at the time when the County is islanded from the rest of the state's energy grid and could operate independently. As it currently stands, the major transmission lines coming from the Central Valley cannot meet average, let alone peak, demands of the County. Mr. Zoellick also stated that if the power is contractually sold, the physics are such that most of the power will be consumed locally. He also stated that rooftop solar cannot realistically supplant wind energy.

b) ECONOMIC BENEFITS

The project would develop a wind energy facility in Humboldt County t supports the local and regional economy by creating short- and long-t employment opportunities and increasing tax revenue. The project anticip creating 15 full-time employment positions and approximately 300 construct jobs. The project will provide economic benefits to the County and its reside by increased spending in the community as a result of construction

development related work.

The project would result in an estimated 50 million dollars in tax revenue to County over 30 years. The project would result in property taxes in approximate amount of $50,554, unlike solar.
(Humboldt Tax Estimate.)

c) RESOURCE BENEFITS:
The Project will allow the Russ Ranch to be kept as contiguous prairie grasslands surrounded by forest in a large tract that is not fragmented or subdivided. (Testimony of Lane Russ, Planning Commission hearing November 14, 2019.) The land is held in patent parcels and would not need to be formally subdivided to be developed; it could be developed with building permits during the life of the project after cancellation of Williamson Act contracts. Lane Russ testified that the Project would provide the landowners with an alternative source of income and allow them to maintain the current character of the property as grazing and agricultural land instead of developing it as residential units. The Project is more protective of the resources than the no project alternative because it would provide the landowners with the economic ability to preserve the integrity of the landscape and to avoid the fragmentation caused by housing development.

d) BENEFITS TO THE KNOWLEDGE BASE:

Mitigation Measure 3.5-18a calls for the formation of a Technical Advisory Committee to minimize the risk of bat mortality and to preclude the project's contribution to significant impacts on local and regional bat populations. The TAC is tasked with evaluation of postconstruction monitoring data to determine whether bat mortality attributable to the project poses a potential for significant impact on the local and regional bat population if left unabated. The formation and operation of the TAC will allow the local (and national) scientific community to study specific populations of bats known to occur in the region, including the hoary bat, and to understand population trends in general, as well as the impacts of the project on the population. This will contribute to the greater scientific knowledge base and support future environmental analyses and mitigations.

In addition, MM 3.5-11 calls for formation of a bird TAC which will provide a similar level of scientific knowledge for avian species.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Humboldt County Planning Commission does hereby:

1. Adopt the finding set forth in this resolution; and

2. Certify that the Final Environmental Impact Report for the Humboldt Wind Energy Project (SCH#: 201872076) has been completed in compliance with CEQA, that the Final EIR was presented to the Planning Commission and the Planning Commission has reviewed and considered the information contained in the FEIR before approving the project, and that the FEIR reflects the County's independent judgment and analysis; and

3. Adopt the Statement of Overriding Considerations; and

4. Adopt the Mitigation Monitoring and Reporting Program.

Adopted after review and consideration of all the evidence on November 21, 2019.

The motion was made by COMMISSIONER _____and second by COMMISSIONER _____ and the following ROLL CALL vote:

AYES: COMMISSIONERS:
NOES: COMMISSIONERS:
ABSENT: COMMISSIONERS:
ABSTAIN: COMMISSIONERS:
DECISION:

_____
Robert Morris, Chair

I, Suzanne Lippre, Clerk to the Planning Commission of the County of Humboldt, do hereby certify the foregoing to be a true and correct record of the action taken on the above entitled matter by said Commission at a meeting held on the date noted above.

_____
Suzanne Lippre, Clerk

RESOLUTION OF THE PLANNING COMMISSION
OF THE COUNTY OF HUMBOLDT
Resolution Number 19-

Case Number CUP-18-002
Assessor's Parcel Numbers: 102-132-004 et al.

Resolution by the Planning Commission of the County of Humboldt conditionally approving the Conditional Use Permit and Special Permit for the Humboldt Wind Energy project.

The project proposed by Humboldt Wind, LLC (PLN-13999-CUP) came on for public hearing before the Humboldt County Planning Commission on November 7, 2019, remained open and was continued to November 14, 2019 and November 21, 2019. Having considered all the written and documentary evidence, the administrative record, the staff report, oral testimony, and other evidence presented, the Planning Commission finds and approves as follows:

FINDINGS

FINDINGS FOR APPROVAL OF THE CONDITIONAL USE PERMIT AND SPECIAL PERMIT

Section 312-17.1 (Required Findings for All Discretionary Permits) of the Humboldt County Code specifies the findings that are required to grant a Conditional Use Permit and Special Permit:

1. The proposed development is in conformance with the County General Plan, Open Space Plan, and the Open Space Action Program (CO-IM5);

2. The proposed development is consistent with the purposes of the existing zone in which the site is located;

3. The proposed development conforms with all applicable standards and requirements of these regulations;

4. The proposed development and conditions under which it may be operated or maintained will not be detrimental to the public health, safety, or welfare; or materially injurious to property or improvements in the vicinity; and

5. The proposed development does not reduce the residential density for any parcel below that utilized by the Department of Housing and Community Development in determining compliance with housing element law (the mid point of the density range specified in the plan designation) unless the following written findings are made supported by substantial evidence:

    a. The reduction is consistent with the adopted general plan, including the housing element, and

    b. The remaining sites identified in the housing element are adequate to accommodate the County's share of the regional housing need pursuant to Section 65584 of the Government Code, and

    c. The property contains insurmountable physical or environmental limitations and clustering of residential units on the developable portions has been maximized.

In addition, pursuant to Standard E-S3(C) (Wind Generating Facilities) of Chapter 12 (Energy Element) of the 2017 Humboldt County General Plan, additional findings necessary for the project shall be:

1. The proposed use is not detrimental to the public health, convenience, safety, and welfare;

2. That the use of the property for such purposes will not result in material damage or prejudice to other property in the vicinity; and

3. Within the Coastal Zone, the project will not have a significant adverse effect on coastal resources, including wildlife qualities.

The below information provides evidence in support of the required findings:

1.	**FINDING:**		**PROJECT DESCRIPTION AND OBJECTIVES** This project would construct and operate up to 47 wind turbine generators (WTGs) and associated infrastructure with a nameplate generating capacity (i.e., theoretical maximum energy generation) of up to 155 megawatts (MW). In addition, the project would include ancillary facilities such as temporary staging areas, access roads, 34.5-kilovolt (kV) collection lines (collection system), an operations and maintenance (O&M) building, a substation with energy storage infrastructure, utility switchyard modification, and a 115-kV General Transmission (gen-tie) line connecting the project with the existing PG&E transmission system. The stated objectives of the application are to contribute to a diversified energy portfolio that will reduce exposure to price volatility associated with electricity and natural gas, while assisting the state in meeting the renewable-energy requirements established in Senate Bill (SB) 350 and SB 100; develop a wind project that is feasible to finance, construct, and operate; develop a wind energy project that can meet the criteria to achieve the maximum federal tax credit requiring placement into operation by December 30, 2020; promote sustainable energy and utilization of alternative energy systems throughout the County; develop a wind energy facility as near as possible to existing transmission infrastructure; develop a wind energy facility in Humboldt County that supports the economy by creating short- and long-term employment opportunities and increasing tax revenue; and displace emissions of approximately 372,000 metric tons per year of carbon dioxide that would otherwise be required to generate the same amount of electricity as this 155-megawatt project.
	EVIDENCE:	a)	**Evidence in File** Evidence that has been received and considered includes: the application, technical studies/reports, public comment, staff reports that reflect the County's independent judgment, and information and testimony presented during public hearings before the Planning Commission. These documents are on file in the Planning Department (PLN-13999-CUP) and are hereby incorporated herein by reference.

2.	**FINDING:**		**CONFORMANCE WITH 2017 HUMBOLDT COUNTY GENERAL PLAN, OPEN SPACE PLAN, AND THE OPEN SPACE ACTION PROGRAM (CO-IM5)** As conditioned, the project is in conformance with the Humboldt County General Plan, Open Space Plan, and the Open Space Action Program.
	EVIDENCE:	a)	CHAPTER 4 – LAND USE ELEMENT • **Timberland (T) Land Use Designation** *The designation is utilized to classify land that is primarily suitable for the growing, harvesting, and production of timber. Prairie and grazing land may be intermixed. Density range is 40-160 acres/unit.* As provided in the General Plan, Utilities and Energy Facilities, such as the project, is considered an allowable use type within the T land use designation. • **Agricultural Grazing (AG) Land Use Designation** *The designation applies to dry-land grazing areas in relatively small land holdings that support cattle ranching or other grazing supplemented by timber harvest activities that are part of the ranching operation, and other non-prime agricultural lands. Residential uses must support agricultural operation. Density is 20-160 acres/unit.* As provided in the General Plan, Utilities and Energy Facilities, such as the project, is considered an allowable use type within the AG land use designation. • **Policy AG-P3: Support the Williamson Act Property Tax Incentive Program.** *The County shall support the continuation, enhancement and growth of the County Williamson Act program.* Portions of the project are located within Agricultural Grazing Preserves [Russ (Forest Home), Gabrych and Barnwell] and subject to a Williamson Act contracts. The Williamson Act Advisory Committee reviewed the project on February 14, 2019 and determined that the proposed use was compatible with the Williamson Act contracts. • **Policy AG-P6: Agricultural Land Conversion – No Net Loss.** *Lands planned for agriculture (AE, AG) shall not be converted to non-agricultural uses.* Approximately 27 acres of lands within the Agricultural Grazing (AG) land use designation will be permanently impacted by the project. This area is comprised primarily of roads and turbine pads. This does not constitute a conversion because the surrounding lands will continue to be used for grazing and qualify for enrollment in the Williamson Act program. Allowing for a diversification of income sources on working ranches supports the continued agricultural use of the site.

			• **Policy FR-P8: Protection of High Quality Timberlands** *Timberlands planned and zoned for timber production should be retained for timber production, harvesting and compatible uses, and reclassification of the Timberland Production Zones (TPZ) shall be done in accordance with the statutory requirements.* The majority of the project site is managed timberland and will continue to be used for such with the project. Construction of the turbines, meteorological towers, gen-tie, substation, and access roads would permanently convert approximately 230.39 acres of forestland, which equates to a reduction of approximately 0.00007 percent of the total private timberlands in the County. Although a small portion of timberland would be permanently converted, the overall project is compatible with continued timber production. Roads used for the project will also serve a benefit during timber harvest and other project infrastructure will be developed in such a way that it will not impede continued timber production. • **Policy FR-P20: Fire Safety Hazards.** *The County shall continue to implement the State Responsibility Area Fire Safe Standards and Wildland-Urban Interface Building Codes for new development and support voluntary programs for fuels reduction, dwelling fire protection and creation of defensible space for existing development.* The project site travels across land containing a High or Very High Fire Hazard Designation. The project site is within the jurisdiction of the Carlotta Community Services District, Bridgeville Fire Protection District, Fortuna Fire Protection District, and a majority of the project lies within State Responsibility Areas (SRA), which are served by CAL FIRE. The project EIR examined the hazards of permitting wind energy activities in areas of wildland fire risk, in addition to the potential for construction and operation of the project to increase demands on local firefighters, and provides mitigation as necessary to minimize potential hazards. Mitigation measures have been included which require the applicant to prepare and implement plans related to fire safety and emergency response (3.13-2a and b), fall management (3.13-1b), and financing (3.13-1a) to ensure local fire responders are equipped to respond to fire and accident conditions. The project does not have components that will interfere with the implementation the County's Fire Safe Regulations. • **Policy GP-S2: Designation of Community Plan Areas** *Community Planning Areas are established for the following communities:* *D. Fortuna* *Q. Rio Dell-Scotia"* The project is not within a designated community planning area.

		b)	CHAPTER 9 – ECONOMIC DEVELOPMENT ELEMENT • **Goals of the Economic Development Element under the Heading "Energy"** *Energy strategies that move the county from an energy importer to an energy exporter could build significant economic wealth.* The proposed project would contribute to the County's ability to be an energy exporter in the future. Given state requirements to shift energy production away from carbon-based energy sources, only renewable energy sources will contribute to the County's ability to export energy in the future.
		c)	CHAPTER 10 – CONSERVATION AND OPEN SPACE ELEMENT • **Goal CO-G1: Conservation of Open Space** *Open spaces that distinguish and showcase the county's natural environment, including working resource lands while not impacting the ability to provide livelihoods, profitable economic returns and ecological values.* The lands within the project site will continue to operate as working resource lands under the project both for timber production and agricultural use and will continue to contribute to open space within the County. The project will allow for profitable economic returns that support the resource lands and diversified income. • **Policy CO-P4: Support for Working Lands** *The County shall support policies that maintain profitable resource production on timber and agricultural lands as a means to secure long-term protection and sustainability of open space lands through programs such as the Williamson Act and Timber Production Zone programs.* A portion of the project, including the majority of the project area on Bear River Ridge, will be located on Russ Ranch (Forest Home), which is enrolled in a Williamson Act contract. The Russ Ranch is a Class B agricultural preserve (grazing) and is approximately 6,064.5 acres in size. Class B requires that the majority of land area under contract be devoted to grazing. The project would permanently impact up to 27 acres of Williamson Act contract lands within the project site that are used for livestock grazing. Twenty-seven (27) acres is a small portion of the overall enrolled lands and would not disqualify or interfere with the Williamson Act contract terms. Additionally, this project went before the Humboldt County Williamson Act Advisory Committee on February 14, 219 and was recommended for approval and the use found compatible with continuing the lands in the contract. Additionally, the gen-tie transmission line will cross two other Class B agricultural preserves (Gabrych and Barnwell) in the eastern area of the project near Bridgeville. Government Code Section 51238(a)(2) designates electrical transmission facilities as a compatible use on land under a Williamson Act contract.

- **Goal BR-G1: Threatened and Endangered Species**
  Sufficient recovery of threatened and endangered species to support de-listing.

  Section 3.5 (Biological Resources) of the DEIR analyzed the potential impacts on special-status plant and wildlife species and sensitive habitats that are afforded consideration or protection under CEQA, the California Fish and Game Code, the California Endangered Species Act (CESA), the federal Endangered Species Act (ESA), the Clean Water Act (CWA), the Migratory Bird Treaty Act (MBTA), the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and the Bald and Golden Eagle Protection Act.

  Species currently listed as threatened or endangered within the project area include the marbled murrelet, northern spotted owl, and the bald eagle.

  Marbled Murrelet
  The project site is located within the range of the marbled murrelet, which is federally listed as threatened and state listed as endangered. Designated critical habitat for the marbled murrelet is located near the site, immediately east of Highway 101 in Humboldt Redwoods State Park along the northern end of Avenue of the Giants.

  The project has been revised to eliminate WTGs in areas characterized by high passage rates for marbled murrelets. There are also multiple mitigation measures in the DEIR and refined in the FEIR that serve to reduce impacts to the marbled murrelet.

  Construction impacts would be minimized by avoiding the removal of any nesting habitat (old growth redwood or mature coniferous forest). Indirect impacts would be avoided by providing buffers from marbled murrelet nesting habitat to the construction areas during the nesting season.

  Based on the analysis provided in the DEIR and refined in the FEIR, approximately 7.77 marbled murrelets are expected to be taken over the life of the project. Compensatory mitigation is required for this take and will come in the form of a corvid management plan at Van Duzen County Park. The corvid management program is projected to result in reproductive success for 48 to 97 marbled murrelets over the life of the project, resulting in a net benefit to the species. Once the project is operational, post construction mortality monitoring would occur along with monitoring for the success of the corvid management plan. In the unlikely event that the mortality monitoring indicated higher take levels than anticipated or the corvid management plan is not as successful as anticipated, additional mitigations such as relocation of recreational facilities out of marbled murrelet habitat, habitat enhancement on buffer forests, and removal of

			derelict fishing gear would be implemented. With the avoidance, minimization, compensatory mitigation and adaptive management discussed above, the overall benefit to the marbled murrelet is expected to be positive. ***Northern Spotted Owl*** The northern spotted owl is federally listed as endangered and state listed as threatened. The biological study area is located within the range of the northern spotted owl, but not within critical habitat that was designated for this species in 1992 and revised in 2008. Designated critical habitat for the northern spotted owl is located near the project site to the north and east of the gen-tie corridor. The northern spotted owl habitat assessment survey determined that 404.6 acres of northern spotted owl suitable habitat occurs in the project area, including 27.6 acres of functional nesting habitat. Auditory and visual disturbance analyses conducted by Stantec Consulting Services Inc. (Stantec) also found that if construction activities were to occur during the northern spotted owl nesting season (February to mid-July), then auditory and/or visual harassment could occur if northern spotted owls were nesting within 100 meters of the disturbance. Mitigation is required to reduce the impact to northern spotted owls. The mitigation includes minimizing construction disturbance during the nesting season by providing buffers from spotted owl activity centers. Mitigation is also in place to avoid, minimize, and compensate for construction impacts. Compensation includes off setting impacts to nesting, roosting, and foraging habitats. Compensation for loss of habitat would include habitat acquisition and/or barred owl management. The net result of the mitigation would be a benefit to the species. The risk of take of northern spotted owl during operation is considered low. However, if post construction mortality monitoring indicates take, the compensatory mitigation would be increased to account for the take. ***Bald Eagle*** The bald eagle is federally protected under the Bald and Golden Eagle Protection Act and is state listed as endangered. No active bald eagle nests were detected in the survey area during the aerial eagle and raptor nest survey. Four bald eagle observations were documented during the eagle use count surveys conducted by Stantec. No bald eagle nesting locations were found in the survey area. The applicant will be undergrounding 6 miles of existing ridgeline overhead transmission lines within the project site. To off set a single instance of take, pole retrofits at a rate of 32 poles per take or pole reframing at a rate of 14 poles per take would be requried. All reframed or retrofitted poles would be located within the Pacific flyway.

			• **Goal BR-G2: Sensitive and Critical Habitat** *A mapped inventory of sensitive and critical habitat where biological resource protection policies apply.* Stantec prepared numerous biological resource surveys designed to support project planning. Based on the results of the literature and database review and field surveys, a thorough inventory of sensitive and critical habitat within the project site has been mapped. This inventory is found in the Draft EIR and refined in the Final EIR. • **Goal BR-G3: Benefits of Biological Resources** *Fish and wildlife habitats protected on a sustainable basis to generate long-term public, economic, and environmental benefits.* Numerous mitigation measures are included in the DEIR and refined in the FEIR in order to minimize potential impacts on fish and wildlife habitats. These mitigations measures are primarily found in the biological resources section and hydrology and water quality section. The project has been revised to eliminate the horizontal directional drilling under the Eel River in favor of an above ground crossing at the same height as the U.S. Highway 101 Richard Fleisch Memorial bridge. The change was instituted to eliminate potential water qualify and fisheries impacts in the event of frack-out during the drilling process under the Eel River. Where impacts could not be avoided or mitigated, they were deemed significant and unavoidable and there are specific economic and environmental benefits of the project which are included in a statement of overriding considerations. • **Policy BR-P1: Compatible Land Uses** *Area containing sensitive habitats shall be planned and zoned for uses compatible with the long-term sustainability of the habitat. Discretionary land uses and building activity in proximity to sensitive habitats shall be conditioned or otherwise permitted to prevent significant degradation of sensitive habitat, to the extent feasible consistent with California Department of Fish and Wildlife guidelines or recovery strategies.* The project site does not contain combining zones for the protection of habitat. Through mitigation measures the project is conditioned to prevent significant degradation of sensitive habitats. With implementation of Mitigation Measures 3.5-24a (Avoid and Minimize Impacts on Sensitive Natural Communities and Riparian Habitat), 3.524b (Compensate for Loss of Sensitive Natural Communities and Riparian Habitat), and 3.5-24c (Restore Sensitive Natural Communities and Riparian Habitat), impacts on sensitive natural communities and riparian habitat either would be avoided or would be compensated on a per-acre basis at a 1:1 ratio, except for riparian habitat, which would be replaced at

			a 3:1 ratio in accordance with the project's Fish and Game Code Section 1600 Lake or Streambed Alteration Agreement (LSAA). Wetland impacts are mitigated through Mitigation Measures 3.25a (Avoid and Minimize Impacts on Wetland and Other Waters of the United States) and 3.5-25b (Compensate for Impacts on Wetlands and Other Waters). Mitigation and conditions are also in place to prevent project related erosion and runoff to receiving waters. Through mitigation and conditions, the project will not degrade sensitive habitats. • **Policy BR-P2: Critical Habitat** *Discretionary projects which use federal permits or federal funds on private lands that have the potential to impact critical habitat shall be conditioned to avoid significant habitat modification or destruction consistent with federally adopted Habitat Recovery Plans or interim recovery strategies.* The project is anticipated to require federal permits. A Clean Water Act Section 404 Nationwide Permit for wetland fill and work within riparian areas and an Incidental Take Permit for the potential take of the marbled murrelet will likely be required. No critical habitat for the marbled murrelet is going to be removed or modified. Development within the stream channels and wetland areas have been minimized through project refinements. Mitigation for these habitats is described above under Policy BR-P1. The project as conditioned and mitigated will not be inconsistent with adopted habitat recovery plans or interim recovery strategies. • **Policy BR-P4: Development within Stream Channels** *Development within stream channels shall be permitted when there is no lesser environmentally damaging feasible alternative, and where the best feasible mitigation measures have been provided to minimize adverse environmental effects. Development shall be limited to essential, non-disruptive projects which include road crossings where erosion control measures are implemented.* Development within stream channels will be limited to road crossings, a permitted development activity with incorporation of the standards for erosion control in BR-S9. A storm water pollution prevention plan (SWPPP) is required to be developed and implemented for the project, and will address and specify erosion control measures to be utilized. Further, there is a mitigation measure (Mitigation Measure 3.5-28: Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan or Equivalent BMPs) related specifically to controlling erosion during the wet weather season. With the SWPPP and the mitigation measure, erosion will be controlled.

			• **Policy BR-P5: Streamside Management Areas** *To protect sensitive fish and wildlife habitats and to minimize erosion, runoff, and interference with surface water flows, the County shall maintain Streamside Management Areas, along streams including intermittent streams that exhibit in-channel wetland characteristics and off-channel riparian vegetation.* Project construction activities occurring within riparian habitat would include clearing and grading for access roads and the gen-tie alignment. The project will adhere to the prescribed Streamside Management Areas (SMAs) buffers of 100 and 50-feet from the edge of riparian vegetation or top of bank for perennial and intermittent streams, whichever is greater. The EIR has identified 1.78 acres of riparian habitat that would be affected by construction activities. To protect sensitive fish and wildlife habitats and to minimize erosion, runoff, and interference with surface water flows, development within SMAs shall only be permitted where mitigation measures (Standards BR-S8 – Required Mitigation Measures, BR-S9 – Erosion Control, and BR-S10 – Development Standards for Wetlands) have been provided to minimize any adverse environmental effects, and shall be limited to uses as described in Standard BR-S7 – Development within Streamside Management Areas. Various project components have the potential to affect SMAs, primarily access roads and the gen-tie. However, where potentially significant impacts may occur, mitigation measures have been identified in the DEIR and refined in the FEIR to reduce potential impacts on SMAs (see Mitigation Measures 3.5-25a and 3.5-25b). • **Policy BR-P6: Development within Streamside Management Areas** *Development within Streamside Management Areas shall only be permitted where mitigation measures (Standards BR-S8 – Required Mitigation Measures, BR-S9 – Erosion Control, and BR-S10 – Development Standards for Wetlands) have been provided to minimize any adverse environmental effects, and shall be limited to uses as described in Standard BR-S7 – Development within Streamside Management Areas.* Various project components have the potential to affect Streamside Management Areas (SMAs), primarily access roads and the gen-tie. However, where potentially significant impacts may occur, mitigation measures have been identified in the DEIR and refined in the FEIR to reduce potential impacts on SMAs (see Mitigation Measures 3.5-25a and 3.5-25b). • **Policy BR-P7: Wetland Identification** *The presence of wetlands in the vicinity of a proposed project shall be determined during the review process for discretionary projects and for ministerial building and grading permit*

			applications, when the proposed building development activity involves new construction or expansion of existing structures or grading activities. Wetland delineation by a qualified professional shall be required when wetland characterization and limits cannot be easily inventoried and identified by site inspection. A wetland delineation has been conducted by qualified individuals for the entire project area [*Humboldt Wind Energy Project Aquatic Resources Survey Report (Stantec 2018) and Wetland Delineation for Activities in the Coastal Zone* (Stantec 2018)]. As identified in Table 3.5-17 of the DEIR and as refined in the FEIR, a total of 6.25 acres of wetlands would be impacted by the project. However, where potentially significant impacts may occur, mitigation measures have been identified in the DEIR and refined in the FEIR to reduce potential impacts on wetlands to a less-than-significant level (see Mitigation Measures 3.5-25a and 3.5-25b). • **Policy BR-P10: Invasive Plant Species** *The County shall cooperate with public and private efforts to manage and control noxious and exotic invasive plant species. The County shall recommend measures to minimize the introduction of noxious and exotic invasive plant species in landscaping, grading and major vegetation clearing activities.* In order to control invasive/noxious weeds, Mitigation Measure 3.5-23c of the DEIR requires the project applicant to develop and submit a Reclamation, Revegetation, and Weed Control Plan before construction begins. • **Policy BR-P11: Biological Resources Maps** *Biological resource maps shall be consulted during the ministerial and discretionary permit review process in order to identify habitat concerns and to guide mitigation for discretionary projects that will reduce biological resource impacts to below levels of significance, consistent with CEQA.* Stantec prepared numerous biological resource surveys designed to support project planning. Prior to preparing these reports, available resource maps were consulted, including but not limited to the National Wetlands Inventory (NWI), California Natural Diversity Database (CNDDB), and Humboldt County General Plan Resource Maps (publicly available on the County's GIS website). Based on the literature and database review and field surveys, a thorough inventory of sensitive and critical habitat within the project site has been mapped. This inventory is found in the Draft EIR and refined in the Final EIR. This information was used to refine the project and develop mitigation measures that reduce biological impacts to a level that is less than significant. Consistent with CEQA, all feasible mitigation to reduce impacts have been required. Even so, the EIR conservatively concluded that there will still be significant and unavoidable impacts to

			marbled murrelets and raptors. • **Policy BR-P12: Agency Review** *The County shall request the California Department of Fish and Wildlife, as well as other appropriate trustee agencies and organizations, to review plans for development within Sensitive Habitat, including Streamside Management Areas. The County shall request NOAA Fisheries or U.S. Fish and Wildlife Service to review plans for development within critical habitat if the project includes federal permits or federal funding. Recommended mitigation measures to reduce impacts below levels of significance shall be considered during project approval, consistent with CEQA.* The development of the project has included active consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW). The National Oceanic and Atmospheric Administration (NOAA) also received notice regarding the project. CDFW has provided recommendations regarding project design and project mitigation measures and these recommendations have been considered and, where feasible, incorporated into the project. • **Goal CU-G1: Protection and Enhancement of Significant Cultural Resources** *Protected and enhanced significant cultural resources, providing heritage, historic, scientific, educational, social and economic values to benefit present and future generations.* To the greatest extent feasible, the project applicant seeks to reduce potential project impacts on cultural and tribal cultural resources. Mitigation measures are included in the DEIR and refined in the FEIR to reduce such impacts. In addition, project refinements since the release of the DEIR have resulted in a reduction in the number of turbines that would be placed on Bear River Ridge, an identified Tribal Cultural Resource and ethnobotanical/cultural landscape, and have reduced the project's disturbance area on the ridge. • **Policy CU-P1: Identification and Protection** *The potential for impacts to significant cultural resources shall be identified during ministerial permit and discretionary project review, impacts assessed as to significance, and if found to be significant, protected from substantial adverse change per California Public Resources Code (PRC) Section 5020.1.* The project's potential impacts on both cultural and tribal cultural resources were analyzed and addressed in Section 3.6 (Cultural Resources, Including Tribal Cultural Resources) of the DEIR, with appropriate and feasible mitigation identified (and refined as necessary in the FEIR) in order to reduce potential impacts.

			• **Policy CU-P2: Native American Tribal Consultation** *Native American Tribes shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural resources. At their request, Tribes shall be afforded the opportunity to review and provide comments to the County early in project review and planning (screening) about known or potential Tribal cultural resources located in project areas within their respective tribal geographical area of concern.* The following Tribes were contacted regarding the project: • Wiyot Tribe • Big Lagoon Rancheria • Hoopa Valley Tribe • Bear River Band of the Rohnerville Rancheria • Cher-Ae Heights Indian Community of the Trinidad Rancheria The above Tribes were contacted as part of the referral process as soon as the project was submitted to the County. At their request, formal tribal consultation took place with the Wiyot Tribe and the Bear River Band of the Rohnerville Rancheria. This consultation allowed for information sharing related to cultural resources at the site. The concerns raised during the consultation process have been considered in the design of the project and in the preparation of the EIR. • **Policy CU-P3: Consultation with Other Historic Preservation Agencies and Organizations** *Historic preservation agencies and organizations shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural resources. These include, but may not be limited to, the County's Cultural Resources Advisory Committee, Humboldt County Public Works Department and the Planning and Building Divisions, the Northwest Information Center of the California Historical Resources Information System (NWIC), the California Office of Historic Preservation, the Native American Heritage Commission, local historical societies, museums, colleges and universities, and incorporated cities historic preservation commissions or committees for their respective LAFCO sphere of influence, and local historians, cultural resources consultants and historic preservation staff affiliated with various state and federal agencies.* As discussed in Section 3.6 (Cultural Resources, Including Tribal Cultural Resources) of the DEIR, cultural resource investigations for the proposed project consisted of a staged approach that included pre-field research, field surveys, resource documentation, and Native American consultation. A records search was conducted by the Northwest Information Center (NWIC) of the California Historical Resources Information System

			(CHRIS) on June 20, 2018 (NWIC File No. 17-2847), to obtain and review previous cultural resource records, cultural resource studies, and any additional documentation pertaining to properties within 0.25 miles of the project site. The County initiated Assembly Bill (AB) 52 consultation via letter on July 13, 2018, with five (5) local Tribes. Government-to-government tribal consultation was held between the County and the Bear River Band of the Rohnerville Rancheria Tribal Council on March 26, 2019. A sacred lands search was requested by Stantec from the Native American Heritage Commission (NAHC) on September 6, 2018, which yielded negative results. • **Policy CU-P4: Avoid Loss or Degradation** *Projects located in areas known, or suspected to be archeological sites or Native American burial sites shall be conditioned and designed to avoid significant impacts to significant sites, or disturbance or destruction to Indian burial grounds. Preserving Native American remains undisturbed and in place shall be selected as the preferred alternative unless substantial factual evidence is presented demonstrating that no alternative(s) are feasible. Conditions of approval shall include standard provisions for post-review inadvertent archaeological discoveries and discovery and respectful treatment and disposition of Native American remains with or without funerary objects in accordance with state law (Health and Safety Code (HSC) Section 7050.5 and PRC Section 5097.98).* In accordance with this policy, the DEIR includes measures to avoid potential impacts, have an archaeologist and Native American Tribal monitor during ground-disturbing activities, and protocol in the event cultural materials or human remains are inadvertently discovered, including preserving resources in place (Mitigation Measures 3.6-1a through 1d and 3.6-2). • **Policy CU-P5: Findings Necessary for Loss or Destruction** *Substantial adverse changes to significant cultural resources shall not be allowed through a ministerial or discretionary action unless:* *a. The cultural resource has been found not to be significant based on consultation with culturally affiliated Native American Tribe(s) and other historic preservation agencies and organizations as required by CU-P2 and CU-P3; or* *b. There is an overriding public benefit from the project, and compensating mitigation to offset the loss is made part of the project.* According to the recently completed archaeological study for Bridgeville, there will not be substantial adverse changes to significant cultural resources as the study determined that these were not present in the expansion area and the identified

			resources eligible for listing will be protected. Consultation was performed and NWIC was contacted. • **Policy CU-P6: Mitigation** *Mitigation measures shall be required for any permitted project or County action that would adversely impact significant cultural resources.* As noted during the Tribal Consultation process and evidenced by site specific cultural resource surveys that covered the extent of the project area, a large number of archeological sites exist within the project area. Mitigation calls for avoidance of potential impacts and where they cannot be completely avoided, improvements shall be constructed such that no excavation is undertaken. The intact resources shall be preserved in place by capping. No excavation was originally planned at the Bridgeville substation. However, since the release of the DEIR, the applicant has determined that excavation will be required within the footprint that was identified in the DEIR. Because of this change, the site has been subjected to surface and subsurface investigations to determine whether significant cultural resources are present in the area of expansion. These studies resulted in data that indicated that while significant cultural resources are present at Bridgeville, the portion of the site that occurs in the expansion area lacks integrity and is not eligible for inclusion in the California Register of Historic Resources/National Register of Historic Places. Under the FEIR, Mitigation Measure 3.6-1b has been revised to strike the reference to the Bridgeville substation expansion area because with the additional study that has been undertaken, it is determined conclusively that eligible resources are not present at this location. • **Standard CU-S4: Conditioning, Designing, or Mitigating Projects to Avoid Loss or Reduce Impacts to Archaeological Resources.** As noted during the Tribal Consultation process and evidenced by site specific cultural resource surveys that covered the extent of the project area, a large number of archeological sites exist within the project area. Mitigation calls for avoidance of potential impacts and where they cannot be completely avoided, improvements shall be constructed such that no excavation is undertaken. The intact resources shall be preserved in place by capping. • **Standard CU-S6: Assessment and Treatment of Impacts to Significant Historic Structures, Buildings, and Districts** *This standard specifies the protocol for evaluating historic resources during ministerial and discretionary permit review.* The project's potential impacts were evaluated in compliance with the protocol established for discretionary permits. Bear River

			Ridge and Valley Historic Landscape is a resource that is assumed eligible for listing under the California Register of Historic Resources. As a mitigation measure, n Historic American Landscape Survey Report will be prepared following the National Parks Service's standards. • **Goal SR-G1: Conservation of Scenic Resources** *Protect high-value scenic forest, agriculture, river, and coastal areas that contribute to the enjoyment of Humboldt County's beauty and abundant natural resources.* As stated in the Humboldt County General Plan, the County has vast and beautiful natural resources, areas of incomparable ecological value, and a wealth of outdoor recreational opportunities. Although the project would have a significant unavoidable effect on scenic resources, the project area would continue to support high value scenic forests and agriculture. Energy facilities and utilities are use types that the GP finds compatible with timber and agriculture. Also, only a small percentage of these lands will see new development. Lastly, the most protected views are those associated with state parks and coastal views, which the project will not impact. • **Policy SR-P1: Working Landscapes** *Recognize the scenic value of resource production lands.* The project will occur within lands used for resource production (timberlands and grazing lands). The wind project represents a diversification and another form of resource production on these lands. • **Policy SR-P2: Development in Mapped Scenic Areas** *In mapped scenic areas, new discretionary and ministerial development shall be consistent with and subordinate to natural contours, hilltops, tree lines, bluffs and rock outcroppings. Visible disturbance and interruption of natural features shall be minimized to the extent feasible.* To date, the County's scenic resources have not been mapped. The project does not occur in a mapped scenic area. • **Policy SR-P3: Scenic Highway Protection** *Protect the scenic quality of designated Scenic Highways for the enjoyment of natural and scenic resources, coastal views, landmarks, or points of historic and cultural interest.* There are no highways in the County officially designated as California State Scenic Highways; however, the entire segments of State Route 36 and Highway 101 in the project vicinity are eligible for State Scenic Highway designation (Caltrans 2018). Humboldt County General Plan Policy SR-S6 establishes that Humboldt County highways eligible for listing should be

			considered to be Scenic Highways. Scenic highway standards are described in General Plan Standard SR-S2, described and addressed below. • **Standard SR-S2. Scenic Highway Standards** *A visual buffer width not to exceed 200 feet shall be applied to mapped Scenic Highways. Within the visual buffer permitted uses shall be allowed except for billboards. Within the visual buffer considerations must be given for site development and grading to create a harmonious visual relationship with surrounding development and the natural terrain, retaining scenic views, screening unsightly features, developing access roads that don't detract from scenic quality, and undergrounding or co-locating utilities where feasible.* The turbines will not be within the 200-foot scenic buffer. The portion of the project that will be within the buffer is a portion of the staging area and O&M facility at Jordan Creek, the access road to these facilities, and the gen-tie crossing the Eel River at the Richard Fleisch Memorial Bridge near Stafford. The Jordan Creek staging area (and location of the permanent O&M facility) is accessed from the southbound Avenue of the Giants/Pepperwood exit. The area is currently a gravel yard used for staging of timber activities. The yard is screened by mature vegetation and is only briefly visible to those traveling southbound or exiting. The mature vegetation would remain intact and would continue to provide visual screening. The gen-tie will cross above ground at the same height as the deck of the Richard Fleisch Memorial Bridge. The crossing will be similar to the Pacific Gas and Electric Company's (PG&E's) existing three transmission lines located on the east side of the bridge. The conductors will be placed within the profile of and near the existing Richard Fleisch Memorial Bridge. This location is equivalent to collocating the utilities and meets the intent of the scenic highway standards. • **Standard SR-S4: Light and Glare** *New outdoor lighting shall be compatible with the existing setting. Exterior lighting fixtures and street standards (both for residential and commercial areas) shall be fully shielded, and designed and installed to minimize off-site lighting and direct light within the property boundaries.* In accordance with FAA Advisory Circular AC 70/7460-1K, safety lighting would be required on WTGs 200 feet or taller, to reduce potential hazards to aircraft traveling to nearby airports. General FAA guidance indicates that unless an exception is granted, two red lights would be installed on each turbine nacelle and they would flash simultaneously. Because the lighting is for safety purposes and under the direction of the FAA, the County does not have the ability to approve different lighting. The other permanent lighting associated with the project would

			be at the operations and maintenance facility. This facility will have lights that are fully shielded and designed and installed to minimize off-site lighting and direct light within the property boundaries.
		d)	CHAPTER 11- WATER RESOURCES ELEMENT • **Goal WR-G1: Water Supply, Quality, and Beneficial Uses**. *High quality and abundant surface and groundwater water resources that satisfy the water quality objectives and beneficial uses identified in the Water Quality Control Basin Plan for the North Coast Region.* Water for dust suppression, backfill compaction, and cement mixing is estimated at 62 acre-feet over the duration of construction (Stantec 2019). The project is in the Pepperwood Town Area Groundwater Basin, which is designated as very low priority" under the Sustainable Groundwater Management Act (SGMA) and this basin is not subject to a groundwater plan or adjudication of resources. The amount of water necessary to supply potable water for 15 employees at the O&M facility and meet standards for fire flow pressure and duration is 1.74 acre-feet per year (afy) (Stantec 2019). The project's demand for water during operation can be considered a de minimis use and sufficient supply is available to meet existing and future demands with the project on the Pepperwood Area Groundwater Basin, including municipal and industrial uses. Erosion control measures, which will be implemented and are discussed further below, will prevent the project from interfering with water quality objectives. • **Goal WR-G2: Water Resource Habitat.** *River and stream habitat supporting the recovery and continued viability of wild, native salmonid and other abundant cold-water fish populations supporting a thriving commercial, sport and tribal fishery.* Perennial aquatic habitats within the project site, such as Humboldt Bay near Fields Landing and the Eel River and its tributaries, are known to support several species of fish, including listed salmonids. While grading, clearing, and other activities associated with project construction could result in indirect impacts on special-status fish species and their habitat from project runoff and sedimentation, Mitigation Measures 3.5-22a through 3.5-22c included in the project's EIR, in addition to the project's required SWPPP, would ensure potential impacts on special-status fish and river and stream habitats would be reduced to a less-than-significant level. • **Goal WR-G9: Restored Water Quality and Watersheds.** *All water bodies de-listed and watersheds restored, providing high*

			quality habitat and a full range of beneficial uses and ecosystem services. The Eel River and associated tributaries including the Van Duzen River are on the 303(d) list for sedimentation/siltation and temperature in the Lower Eel River Hydrologic Area, the subwatershed in the Eel River Hydrologic Unit encompassing the portion of the project area in that hydrologic unit. Sediment and temperature of the surface water in the Lower Eel River are associated with salmonid decline and impairment of beneficial uses (North Coast RWQCB 2018). Mitigation Measures 3.5-22a (Avoid and Minimize Impacts on Aquatic Resources), 3.5-23e (Develop and Submit a Reclamation, Revegetation and Weed Control Plan), and 3.10-1 (Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan), along with the required SWPPP and grading permit requirements, will ensure that the project does not further impair the Eel River and associated tributaries. • **Goal WR-G10: Storm Drainage.** *Storm drainage utilizing onsite infiltration and natural drainage channels and watercourses, while minimizing erosion, peak runoff, and interference with surface and groundwater flows and storm water pollution.* No municipal storm drain systems are in place within the project area (with the exception of some areas of the haul route). The project does not contain elements that would lead to concentrated runoff once operational. Storm drainage for the O&M building will be infiltrated on-site. Similarly, runoff from WTGs will be infiltrated on-site. • **Policy WR-P1: Sustainable Management.** *Ensure that land use decisions conserve, enhance, and manage water resources on a sustainable basis to assure sufficient clean water for beneficial uses and future generations. Policy WR-P35: Implementation of NPDES Permit. Implement and comply with the National Pollutant Discharge Elimination Systems (NPDES) Permit issued by the State Water Resources Control Board to the designated portions of the County.* A substantial amount of water would not be required for construction and operation of the project, and the project would be required to prepare a SWPPP, which requires identification and implementation of BMPs to prevent soil erosion and discharge of other construction-related pollutants, such as petroleum products, solvents, paints, and cement, that could contaminate nearby water resources. • **Policy WR-P2: Protection for Surface and Groundwater Uses** *Impacts on Basin Plan beneficial water uses shall be considered and mitigated during discretionary review of land use permits that*

			are not served by municipal water supplies. Construction-related water demands would be met by treated wastewater discharged from the Scotia Community Services District's wastewater treatment facility to Humboldt Redwood Company's log pond in the town of Scotia and would be delivered to the project site via water truck. As a result, construction-related water use would not constitute a groundwater extraction or a surface water diversion. One new potable groundwater well would be constructed to meet the potable water supply demands of the proposed project. As shown in Table 3.1-1 (Projected Water Supply and Demands) in Section 3 (Environmental Setting, Impacts, and Mitigation Measures) of the DEIR, adequate supplies are available to serve the proposed project as well as existing and planned future uses, including agricultural and manufacturing uses, under all water year conditions. • **Policy WR-P10: Erosion and Sediment Discharge** *Ministerial and discretionary projects requiring a grading permit shall comply with performance standards adopted by ordinance and/or conditioned to minimize erosion and discharge of sediments into surface runoff, drainage systems, and water bodies consistent with best management practices, adopted Total Maximum Daily Loads (TMDLs), and non-point source regulatory standards.* As the project would disturb more than one acre of land, the project would require preparation of a SWPPP that identifies specific actions, specifications, and BMPs for pollution prevention and control. The project applicant must prepare and submit the appropriate notices of intent and prepare the SWPPP at the time final grading and engineering plans are completed and submitted to the County for review. The project would implement all measures contained in regulatory plans, programs, and policies adopted for protection of the environment. Nonetheless, the potential exists for construction-related spills of hazardous materials or fuels to reach receiving waters and degrade water quality and potentially violate a water quality standard or waste discharge requirement. Mitigation Measure 3.10-1 is required in the DEIR to implement wet-weather BMPs consistent with the Humboldt Redwood Company Habitat Conservation Plan (HCP) to protect water quality during wet-weather construction and protect anadromous fish by avoiding the potential for downstream sedimentation. • **Policy WR-P12: Project Design** *Development should be designed to complement and not detract from the function of rivers, streams, ponds, wetlands, and*

			their setback areas. The project as mitigated and conditioned is not expected to interfere with the functions of rivers, streams, ponds, or wetlands. For the activities that will be occurring within these areas and their setbacks, which is limited primarily to road construction activities, mitigation is required minimize the construction footprint and to restore the habitat that cannot be avoided. Monitoring of the restoration is required to ensure functional habitat is created. • **Policy WR-P14: Groundwater Quality Protection** *Commercial and industrial discretionary uses shall be evaluated for their potential to contaminate groundwater resources, and mitigated as necessary.* The project's potential to contaminate groundwater resources was analyzed under Section 3.10 (Hydrology and Water Quality) of the DEIR. There are several construction-related activities that have the potential to degrade surface water and groundwater quality, including but not limited to excavation, cutting/filling, stockpiling, and grading. In addition, project implementation would be anticipated to alter the permeability of surfaces that could increase runoff from the project area, thereby increasing the potential for transport of pollutants from the project area to local surface waters. However, the proposed project would not generate pollutants that could be transported in the runoff, except potentially for small quantities of oils or greases from the generation components (e.g., turbines). Accidental spills of oils, grease, or other pollutants during project operations could cause pollutants to be transported to local surface waters or groundwater. Potentially hazardous materials used in the operation and maintenance of the WTGs would be stored in an O&M facility in approved aboveground containers with appropriate spill containment features. In addition, a spill prevention, containment, and countermeasure plan and a hazardous materials management plan would be developed before hazardous materials are transported, used, or disposed of and before construction. The project would be required to prepare and implement a SWPPP, which may include, at a minimum, the use of erosion and sediment-control BMPs, including construction techniques, to reduce the potential for runoff and the release, mobilization, and exposure of pollutants, and other measures to be implemented during construction. Only one mitigation measure (Mitigation Measure 3.10-1) is required under Section 3.10, which requires implementation of wet-weather BMPs consistent with the Humboldt Redwood Company HCP to minimize the project's potential temporary, short-term construction-related drainage and water quality effects. • **Policy WR-P35: Implementation of NPDES Permit**

			Implement and comply with the National Pollutant Discharge Elimination Systems (NPDES) Permit issued by the State Water Resources Control Board to the designated portions of the County. The SWRCB and the North Coast RWQCB have adopted specific NPDES permits for a variety of activities that have the potential to discharge wastes to waters of the state. The project would be subject to the NPDES General Permit for construction activity, as the project would disturb more than one acre of land. In addition, the project is subject to North Coast RWQCB requirements, as the site is located within this agency's jurisdictional area. The project will require preparation of a SWPPP, which must identify the BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants, such as petroleum products, solvents, paints, and cement, that could contaminate nearby water resources. The project applicant must prepare and submit the appropriate notices of intent and prepare the SWPPP at the time final grading and engineering plans are completed and submitted to the County for review. • **Policy WR-P36: Natural Stormwater Drainage Courses.** *Natural drainage courses, including ephemeral streams, shall be retained and protected from development impacts which would alter the natural drainage courses, increase erosion or sedimentation, or have a significant adverse effect on flow rates or water quality. Natural vegetation within riparian and wetland protection zones shall be maintained to preserve natural drainage.* The only work within natural drainage courses will be road crossings. These crossings will be designed in accordance with the County's Streamside Management Area (SMA) policies and the Department of Fish and Wildlife's (CDFW) Streambed Alteration (1602) Permits. Any stream crossings will include properly sized culverts as required and vegetation replacement at a 3:1 ratio. Natural drainage will be preserved. • **Policy WR-P37: Downstream Stormwater Peak Flows.** *Peak downstream stormwater discharge shall not exceed the capacity limits of off-site drainage systems or cause downstream impacts. New development shall demonstrate that post development peak flow discharges will mimic natural flows to watercourses and avoid impacts to Beneficial Uses of Water.* The project does not involve permanent elements that will create excessive concentrated runoff that would exceed the capacity of off-site drainage systems. Drainage will be infiltrated on-site. • **Policy WR-P38: New Drainage Facilities** *Where it is necessary to develop additional drainage facilities, they shall be designed to be as natural in appearance and*

			function as is feasible. All drainage facilities shall be designed to maintain maximum natural habitat of streams and their streamside management areas and buffers. Detention/retention facilities shall be managed in such a manner as to avoid reducing streamflows during critical low-flow periods. As discussed in Section 3.10 (Hydrology and Water Quality) of the DEIR, the site contains several named and unnamed drainages that cross the site and may discharge into the Eel River. Under the project, new stormwater drainage facilities would be constructed at the project site. These stormwater drainage facilities would include upgrades at existing drainage crossings to reduce erosion and increase drainage capacity, introduction of swales along newly constructed access roads, and other stormwater controls where cuts and fills are of a certain volume. Constructing project access roadways could alter existing drainage patterns in the project area if the crossings are not designed with sufficient capacity to accommodate stormwater flows in on-site drainages. Further, localized erosion could occur on the steeper slopes during project operation. However, the project will require approval of final design and specifications to assure the project could convey upstream, off-site runoff and detain project-related on-site runoff in an appropriate manner to meet stormwater management criteria. In addition, the project applicant must also develop and implement a SWPPP that outlines structural and treatment controls for runoff. • **Policy WR-P42: Erosion and Sediment Control Measures.** *Incorporate appropriate erosion and sediment control measures into development design and improvements.* A storm water pollution prevention plan (SWPPP) must be developed and implemented, and will address and specify erosion control measures. Further, there is a mitigation measure (Mitigation Measure 3.5-28: Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan or Equivalent BMPs) related specifically to controlling erosion during the wet weather season. With the SWPPP and the mitigation measure, erosion will be controlled. • **Standard WR-S6: Total Maximum Daily Loads (TMDLs) Implementation.** *Discretionary development within watersheds containing impaired water bodies as defined under Section 303(d) of the federal Clean Water Act and governed by TMDL implementation plans shall be conditioned to reduce or prevent further impairment consistent with applicable TMDLs.* There is an Eel River Watershed Elevated Temperature Action Plan with the goal to establish actions that achieve the Eel River watershed temperature TMDLs and are consistent with the Policy for the Implementation of the Water Quality Objectives for

			Temperature. Actions pertinent to project-related activities are described below. o Road construction and maintenance: This action applies to newly constructed roads or road maintenance on Humboldt County (County) land. As part of that activity, the project applicant must comply with Order No. R1-2013-0004, Waiver of Waste Discharge Requirements and General Water Quality Certification for County Road Management and Activities Conducted Under the Five Counties Salmonid Conservation Program In the Counties of Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity in the North Coast Region, and any future revisions. This action requires that road construction and maintenance be conducted in compliance with this order. o Dredge or fill in waters of the state: This action applies to activities that would disturb the bed, bank, or channel of a drainage that is a water of the state, such as road crossings at drainages. This action requires that measures be incorporated to meet the temperature allocations in CWA Section 401 water quality certifications. o Timber harvest activities on nonfederal lands: This rule applies to parties conducting timber harvest activities that discharge waste or have the potential to discharge waste. This action requires implementation of riparian management measures that meet the riparian shade allocations and water quality standards. Where the Forest Practice Rules are not sufficient to meet the TMDL allocations or water quality standards, additional measures are to be implemented as directed by North Coast Regional Water Quality Control Board (RWQCB) staff during the timber harvest review process. RWQCB staff shall make recommendations for additional measures to ensure that the TMDL load allocations and water quality objectives for temperature are achieved during the timber harvest review process, as necessary. Through mitigation measures and conditions of approval, ***further*** impairment consistent with applicable TMDLs is reduced or prevented. • **Standard WR-S7: *Erosion and Sediment Discharge.*** *Ministerial and discretionary projects shall conform to grading ordinance standards for erosion and sediment control.* The project will comply with the grading ordinance through the issuance of grading permits for the road construction and building and grading permits for the WTGs. • **Standard WR-S9: Projects in Proximity to Wild and Scenic Rivers.** *Projects located within state designated wild, scenic, or recreational river basins shall be consistent with the guidelines in the State Wild and Scenic Rivers Act as amended.*

			The main stem of the Eel River, from 100 yards below Van Arsdale Dam to the Pacific Ocean, is designated as a State wild, scenic, and recreational river. This designation prohibits the construction of dams or diversions on the river. No such facilities are proposed with the project. • **Standard WR-S13: Storm Water Management.** *All commercial, industrial, shall, whenever possible, provide stormwater treatment for parking lot runoff using bio-retention areas, filter strips, and/or other practices that be integrated into required landscaping areas and traffic islands. During construction stromwater shall be controlled.* The project includes the following measures in compliance with this standard: A. Soil exposure will be minimized during the rainy season by implementing Mitigation Measure 3.10-1 (Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan); B. Natural vegetation will be retained where feasible; C. Denuded areas will be re-vegetated and mulched to protect them from winter rains; D. Runoff will be diverted from steep denuded slopes and critical areas with barriers or ditches; E. The length and steepness of slopes will be minimized by benching, terracing, or constructing diversion structures; F. Sediment-ladened runoff will be trapped in basins to allow soil particles to settle out before flows are released to receiving waters; and G. Inspect sites prior to significant rain events to ensure control measures are working properly and correct problems as needed.
		e)	CHAPTER 12 – ENERGY ELEMENT • **Goal E-G3: Supply of Energy from Local Renewable Sources** *Increased local energy supply from a distributed and diverse array of renewable energy sources and providers available for local purchase and export.* The project directly contributes to the goal of increased local energy supply from a distributed and diverse array of renewable energy sources and providers available for local purchase and export. The project will increase locally produced renewable energy for local consumption and export. The project will be privately owned and operated and, although it will feed into the PG&E grid, it will be a separate energy provider. • **Policy E-P3: Local Renewable Energy Supply** *The County shall support renewable energy development projects including biomass, wind, solar, "run of the river" hydroelectric, and ocean energy, consistent with this Plan that increases local energy supply.*

			The project directly supports this General Plan policy. The project is for a 155 MW wind facility that will increase the local energy supply. Redwood Coast Energy Authority (RCEA) is Humboldt County's Community Choice Energy program. RCEA has approved an agreement with the project applicant to purchase 60 percent of the electricity purchased for use locally. • **Policy E-P13: Incentives for Using Alternative Energy** *Encourage the use of renewable energy and environmentally preferable distributed energy generation systems in the county.* This project directly supports this General Plan policy to encourage the use of renewable energy and would provide 155 MW of renewable energy. • **Policy E-P15: Land Use Planning and Compatibility** *Coordinate with local agencies, communities, and landowners to assess potential wind and offshore renewable energy development. Such an assessment shall consider site suitability, energy potential, and potential impacts to biological and cultural resources.* Potential wind resources in Humboldt County and throughout the state of California are limited. The project site was chosen because of the availability of high quality wind resources; ability to access the site and deliver project components; ability to access the transmission grid via the existing Bridgeville Substation; and ability to obtain site control. The original pre-application proposed to place up to 149 WTGs and related access roads on five ridges within the project area: Monument Ridge, Bear River Ridge, Shively Ridge, Long Ridge, and Rainbow Ridge. Working with the landowners and with input from the USFWS, CDFW, and the County, the project site was reduced due to concerns related to biological resources and cultural resources. Both USFWS and CDFW commented that, in their view, Shively Ridge has higher potential than both Monument and Bear River Ridges to be a flyway for marbled murrelets, given its position between the Eel and Van Duzen Rivers. They also commented that construction of turbines on Shively Ridge would have the potential to affect special status fish species and riparian habitat because it would require construction of a bridge over Stitz Creek. Similar concerns were expressed regarding Rainbow Ridge. Preliminary feedback from the USFWS and CDFW also suggested that Rainbow Ridge may have higher potential to support raptors than either Monument or Bear River Ridges. Rainbow Ridge also is a prominent feature on the landscape and has heightened importance to local tribes. A desktop analysis showed a higher potential for the discovery of cultural resources on Rainbow and Long Ridges. The project site was chosen after coordination with agencies and

			landowners and was further refined based on continued coordination. • **Standard E-S3: Wind Generating Facilities** *Unless allowed by right pursuant to California Government Code, Section 65892.13(f) as amended, wind generating facilities shall be a conditionally permitted use in all land use designations except "resource dependent" (MR).* The project application includes a request for a Conditional Use Permit, in addition to a Special Permit. *The following shall be considered in reviewing proposed wind generating facilities: parcel size, relationship to other structures, effect on potential down-wind sites, compliance with Uniform Building Code and national Electrical Code, rotor and tower safety, noise, electromagnetic interference, utility notification, height, liability insurance, and appearance and design.* The project site comprises sufficiently large parcels to accommodate the wind project. The WTGs will be located on TPZ- and AE-zoned parcels and on working landscapes. There are few other structures within the vicinity of the proposed turbines. The project will comply with the Uniform Building Code (UBC) and National Electrical Code (NEC). A maintenance plan will be implemented for rotor and tower safety. Also, mitigation measures are included to address hazards. These include Mitigation Measure 3.13-1a: Prepare and Implement a Fire Services Financing Plan; Mitigation Measure 3.13-1b: Prepare and Implement a Fall Protection and Rescue Plan; Mitigation Measure 3.13-2a: Prepare and Implement a Fire Safety and Management Plan to Minimize the Potential for Wildland Fires; and Mitigation Measure 3.13-2b: Prepare an Emergency Response Plan. CPUC's Opinion on Commission Policies Addressing Electromagnetic Fields Emanating from Regulated Utility Facilities (Rulemaking 04-08-020) was released in 2006 to update policies and procedures related to electromagnetic fields emanating from regulated utility facilities. This opinion included 22 findings of fact, among them the following: • A direct link between exposure to EMFs and human health effects has not been proven, low-cost/no-cost policies should be used as mitigation. The proposed project would comply with CPUC policies, including those concerning EMF exposure reduction. Noise impacts have been considered and a mitigation measure (Mitigation Measure 3.11-2: Implement Noise-Reducing Wind Turbine Generator Operators) to avoid a sensitive receptor is in place.

			The WTGs will be up to nearly 600 feet in height. Their appearance has been considered and feasible mitigation has been provided (Mitigation Measures 3.2-1a: Design the Project to Avoid Aesthetic Impacts, and 3.2-1b: Implement Operational Measures to Reduce Aesthetic Impacts) to reduce the project's potential visual impacts. This includes keeping the WTGs in good working order and limiting the color to an off-white or uniform light-grey color, per manufacturer's requirements. However, the visual impacts are still found to be significant and unavoidable. *Findings necessary for project approval shall be:* 1. *The proposed use is not detrimental to the public health, convenience, safety, and welfare.* 2. *That the use of the property for such purposes will not result in material damage or prejudice to other property in the vicinity.* 3. *Within the Coastal Zone, the project will not have a significant adverse effect on coastal resources, including wildlife qualities."* The project meets the above-listing findings, based on the following: 1. No evidence has been submitted that the project as conditioned and mitigated will be detrimental to public health, convenience, safety, and welfare. 2. No evidence has been submitted that the use of the property for such purposes will not result in material damage or prejudice to other property in the vicinity. 3. Other than the offloading location at Fields Landing and portions of the haul route, the project is not within the Coastal Zone. The project will not have an adverse effect on coastal resources. • **Standard E-S5: Electrical Transmission Lines** *Electrical transmission lines should be sited and routed to minimize visual impacts and avoid areas that are near habitat, recreational or archeological resources where feasible.* The project will comply with Standard E-S5, based on the following justification: A. The gen-tie would not be visible from an area that is designated as highly scenic in the coastal zone. Since circulation of the DEIR, the applicant has revised the proposed gen-tie alignment to completely avoid all northern spotted owl (NSO) activity centers located in the vicinity of the gen-tie and to avoid NSO nesting and roosting habitat to the maximum extent possible. The gen-tie avoids recreational and archaeological resources by being co-located with existing access roads whenever feasible. This also minimizes ground disturbance and vegetation removal to the extent feasible. B. Underground placement is not feasible or preferable.

			Compared to placing the gen-tie overhead, undergrounding of the gen-tie would result in greater overall site disturbance and pose practical difficulties. A wider corridor would need to be cut and maintained to allow for the construction of new roads along the entire length of the gen-tie corridor in a fairly remote area of the County, and would result in additional impacts to biological and cultural resources. These roads would be necessary to provide access for various heavy machinery, including among other things an excavator, during construction and maintenance vehicles over the life of the project. A 115kV gen-tie line would need to be vaulted (i.e., contained in a concrete box underground), resulting in more intensive use of the roads, greater potential site disturbance, and placement of additional underground material. Undergrounding would also be financially prohibitive. The design of the support towers would be wooden H-frame structures, wood poles, or metal monopole structures that will be compatible with the surroundings to the extent safety and economic considerations allow. C. The gen-tie is sited so as to minimize visual impacts by being co-located with existing access roads whenever feasible. D. The siting of transmission lines avoids the crests of roadways. E. There will not be new major steel tower electrical transmission facilities associated with the project. F. Existing rights-of-way are being used to the extent feasible by being co-located with existing access roads. This is not a PG&E transmission line and it is not feasible to locate the gen-tie in a consolidated corridor with PG&E facilities. G. Access and construction roads shall be located to minimize landform alterations. Road grades and alignments will follow the contour of the land with smooth, gradual curves where possible.
		f)	CHAPTER 13 – NOISE ELEMENT • **Policy N-P4: Protection from Excessive Noise** *Protect persons from existing or future excessive levels of noise which interfere with sleep, communication, relaxation, health or legally permitted use of property.* The use of heavy equipment and power tools during construction of permitted structures when conforming to the terms of an approved permit is not subject to General Plan noise standards. After construction the primary noise source from project related activities will be the WTGs. Stationary noise sources and associated noise levels were evaluated based on information provided in the *Humboldt Wind Energy Project Noise Technical Report* (Illingworth & Rodkin 2018a) and supplemental *Humboldt Wind Energy Project—60 Turbine Layout Noise Assessment* technical memorandum (Illingworth & Rodkin 2018b), both prepared for the project. Land use compatibility between conflicting land uses were determined based on proposed project land uses, adjacent parcels, and existing zoning. Based on the results of the noise studies it was determined

			that one sensitive receptor (a residence noted as "R-5") could potentially experience an increase in ambient noise levels in excess of 5 decibels. Therefore a mitigation measure has been imposed (Mitigation Measure 3.11-2: Implement Noise-Reducing Wind Turbine Generator Operations), which requires that the applicant relocate, eliminate, or impose operational modifications on WTGs within 1,200 feet of receptor R-5 to reduce the permanent increase in ambient noise levels from 24-hour-per-day operation of WTGs to less than 5 dBA. No other receptors were found to be significantly impacted by the operation of the project. With the mitigation incorporated, the project would not interfere with *sleep, communication, relaxation, health or legally permitted use of property,* and a less than significant impact would occur. **Standard N-S3: Environmental Review Process** *For noise sensitive locations where noise contours do not exist, the environmental review process required by CEQA shall be utilized to generate the required analysis and determine the appropriate mitigation per Plan and state standards. Future noise levels shall be predicted for a period of at least 10 years from the time of building permit application.* Noise contours do exist for the project site. The DEIR fully analyzes potential noise impacts. As noted above, a mitigation measure (Mitigation Measure 3.11-2: Implement Noise-Reducing Wind Turbine Generator Operations) has been added to the project to avoid impacts to the only receptor that was found to be potentially affected by project related noise. • **Standard N-S4: Noise Study Requirements** *When a discretionary project has the potential to generate noise levels in excess of Plan standards, a noise study together with acceptable plans to assure compliance with the standards shall be required.* The DEIR fully analyzes potential noise impacts. Project specific noise studies have been prepared. Based on the studies and analysis, a noise impact would occur if the project would exceed 65 dBA Lmax during daytime hours (6:00 am to 10:00 pm), 60 dBA Lmax during nighttime hours (10:00 pm to 6:00 am), and/or 60 dBA CNEL at noise sensitive uses (residences). As noted above, a mitigation measure (3.11-2: Implement Noise-Reducing Wind Turbine Generator Operations) has been added to the project to avoid impacts to the only receptor that was found to be potentially affected by project related noise. • **Standard N-S5: Noise Standards for Habitable Rooms** *Noise reduction shall be required as necessary in new*

			development to achieve a maximum of 45 CNEL (Community Noise Equivalent Level) interior noise levels in all habitable rooms per California building standards. The project site is currently in timber production with minimal surrounding development. The project will be subject to the standards established in the California Building Code (CBC). The O&M facility proposed under the project will be designed and constructed in compliance with the CBC, including required interior noise standards, to assure a maximum interior noise level of 45 CNEL. As provided in Section 3.11 (Noise) of the DEIR, sensitive receptors have been identified at 10 locations near the project area and along the delivery route. The proposed project would not be anticipated to result in noise levels exceeding established noise standards during construction or operation of the project, although long-term exterior noise from wind turbine operation would be a potentially significant impact. However, the project would implement noise-reducing WTG operations within 1,200 feet of receptor R-5 under Mitigation Measure 3.11-2 to reduce the potentially significant impact to a less-than-significant level. Although all other noise-related impacts [including generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local General Plan or noise ordinance or applicable standards of other agencies (Impact 3.11-1); temporary and short-term exposure of sensitive receptors to, or temporary and short-term generation of, excessive groundborne vibration (Impact 3.11-2); and long-term increases in project-generated noise associated with the project substation, overhead transmission lines, and long-term low-frequency and infrasonic noise from WTG operation (Impact 3.11-3)] were found to be less than significant, the project applicant has voluntarily agreed to implement noise-reducing construction practices (Mitigation Measure 3.11-1) to further minimize potential noise impacts on nearby sensitive receptors during project construction.
		g)	CHAPTER 14 – SAFETY ELEMENT • **Goal S-G1: Minimize Loss** *Communities designed and built to minimize the potential for loss of life and property resulting from natural and manmade hazards.* The project DEIR provides an analysis of many potential hazards and includes multiple mitigation measures in the DEIR (and as refined in the FEIR) that serve to reduce potential impacts associated with natural and manmade hazards. In addition, the project will be required to comply with the California Building Code (CBC), site specific recommendations made in geologic reports prepared for each turbine location, and comply with FAA lighting requirements to reduce risk to aircraft. With incorporation of mitigation and compliance with required regulations and standards, the project will not have a significant potential for loss of life and property resulting from natural and manmade hazards.

- **Goal S-G2: Prevent Unnecessary Exposure**
  Areas of geologic instability, floodplains, tsunami run-up areas, high risk wildland fire areas, and airport areas planned and conditioned to prevent unnecessary exposure of people and property to risks of damage or injury.

  The project DEIR provides an analysis of many hazards. Portions of the project haul route are within the tsunami run up area, but no permanent facilities will be located in this area. The project staging area and O&M building at Jordan Creek will be located near a floodway, and must comply with the County's Flood Hazard Prevention Ordinance. The project is not within an Airport Land Use Compatibility Plan; however, given the height of the WTGs, FAA lighting will be required to reduce risk to aircraft. The project will be located in areas of high and very high fire hazard. No residences are proposed and mitigation related to fire hazard reduction is required. The project is within an area of low to moderate geologic instability. The project will be required to comply with the California Building Code (CBC) and site specific recommendations made in geologic reports prepared for each turbine location.

  With mitigation incorporated and compliance with existing regulations, the project will not create unnecessary exposure of people and property to risks of damage or injury.

  Goal S-G4: Fire Risk and Loss
  Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.

  The project EIR examined the hazards of permitting wind energy activities in areas of high and very high wildland fire risk, in addition to the potential for construction and operation to increase demands on local firefighters. Mitigation measures have been included, which require the applicant to prepare and implement plans related to fire safety, fall management, and financing to ensure local fire responders are equipped to respond to fire and accident conditions. With mitigation in place, the project is designed to reduce the risk of structural and wildland fire.

- **Goal S-G5: Airport Safety**
  Land use and development in the vicinity of airports that minimizes exposure to unsafe levels of noise and aircraft hazards consistent with the applicable Airport Land Use Compatibility Plan.

  Humboldt County has nine public-use airports. Of these nine airports, Rohnerville and Dinsmore Airport are the most relevant to the project. The project is consistent with the respective Airport

			Land Use Compatibility Plans and does not fall within the airport compatibility zones. The project proposes the wind turbines to be a maximum height of 591 feet from base to highest point of blade rotation, set on concrete foundations. Federal law requires that the FAA determine whether a structure that is proposed to be built or altered, 200 feet above ground level or higher, or near an airport, does not pose a hazard to the airspace. Under the requirements of FAR Part 77, the project is required to notify the FAA by completing FAA Form 7460-1, Notice of Proposed Construction of Alteration. *An object constitutes an obstruction to navigation if:* • If 200 ft. above ground level or 200 ft. above the airport elevation (whichever is greater) up to 3 miles (for runway lengths > 3,200 ft.) from the airport. • Increase 100 ft. every mile up to 500 ft. at 6 miles from the ARP (airport reference point) All FAA requirements will be implemented. • **Policy S-P11: Site Suitability** *New development may be approved only if it can be demonstrated that the proposed development will neither create nor significantly contribute to, or be impacted by, geologic instability or geologic hazards.* Geologic instability and geologic hazards were analyzed in Section 3.7 (Geology and Soils) of the DEIR. All potential geological impacts were determined to be less than significant with no mitigation required. • **Policy S-P19: Conformance with State Responsibility Areas (SRA) Fire Safe Regulations** *Development shall conform to Humboldt County SRA Fire Safe Regulations.* The project will be designed in accordance to the Humboldt County SRA Fire Safe Regulations. These standards primarily apply to residential development but also apply to all structures developed within the State Responsibility Area (SRA), such as the proposed project. The O&M building shall have proper access, turnaround areas, and vegetation clearance. • **Standard S-S9: Fire Safe Regulations** *"Development within SRA shall conform to SRA Fire Safe Regulations (Humboldt County Code, Division 11 of Title III as amended)."* As discussed above, the project is compliant with Fire Safe Standards. These standards primarily apply to residential development but also apply to all structures developed within

			the State Responsibility Area (SRA). The O&M building shall have proper access, turnaround areas, and vegetation clearance. • **Standard S-S11: California Fire Code** *"The California Fire Code shall be applied to all applicable development."* As required, the project will be designed in accordance to the California Fire Code (CFC).
		h)	CHAPTER 15 – AIR QUALITY ELEMENT • **Goal AQ-G1: Improved Air Quality** *Air quality that meets state and federal ambient air quality standards.* The impacts to air quality have been analyzed in the EIR. Based on modeling, emissions associated with construction of the proposed project would exceed the NCUAQMD maximum daily thresholds of significance for NO_X during construction only. Implementing Mitigation Measure 3.4-1 (Use Current-Phase Equipment for All Construction Off-Road Vehicles and Equipment) to use Air Resources Board Current-Phase Equipment for all construction off-road vehicles and equipment would reduce construction-related emissions and NO_X, but would still exceed NCUAQMD daily threshold of significance. All other pollutants would remain within daily thresholds. Annual thresholds are not exceeded for any pollutant. The impact to air quality would be temporary during construction. **Goal AQ-G2: Particulate Emissions** *Successful attainment of California Ambient Air Quality Standards for particulate matter.* The impacts to air quality have been analyzed in the EIR. Based on modeling, California Ambient Air Quality particulate matter thresholds will not be exceeded on the daily or annual basis. This is true for both construction and operations phases of the project. • **Goal AQ-G3: Other Criteria Pollutants** *Maintain attainment of Ambient Air Quality Standards for ozone and other criteria pollutants which may be subject to tightening standards.* The impacts to air quality have been analyzed in the EIR. Based on modeling, the VOC and NO_X emissions (which are precursors to ozone) associated with project operation could make a minimal contribution to regional ozone concentrations and the associated health impacts. Because the project's emissions contribution during operation would be minimal, the project would not exceed state or national thresholds, and would not result in significant health impacts. • **Policy AQ-P4: Construction and Grading Dust Control**

			"Dust control practices on construction and grading sites shall achieve compliance with NCAQMD fugitive dust emission standards." The project will comply with NCUAQMD's Rule 104 for fugitive dust control measures. Activities associated with decreased air quality from project activities are temporary. Construction activities are expected to last between 16- and 18-months total. The sequence of construction activities would generally be as follows: site preparation/grading, tree clearing, access road construction, turbine foundation construction, collection system installation, substation construction, gen-tie installation, switchyard installation, turbine installation, final testing and turbine commissioning, O&M facilities installation, and cleanup and restoration. • **Policy AQ-P5: Air Quality Impacts from New Development** *During environmental review of discretionary permits, reduce emissions of air pollutants from new commercial and industrial development by requiring feasible mitigation measures to achieve the standards of the NCAQMD.* The impacts to air quality have been analyzed in the EIR. Mitigation (Mitigation Measure 3.4-1: Use Current-Phase Equipment for All Construction Off-Road Vehicles and Equipment) is proposed to control emissions during construction to the extent feasible. Operation of the wind energy facility will have minimal emissions. **Policy AQ-P6: Buffering Land Uses** *"During environmental review of discretionary commercial and industrial projects, consider the use of buffers between new sources of emissions and adjacent land uses to minimize exposure to air pollution."* The project location is largely vacant land with very little development except for a few residences. The temporary decline in qir quality will not significantly affect any sensitive receptors. • **Policy AQ-P11: Review of Projects for Greenhouse Gas Emission Reductions** *The County shall evaluate the GHG emissions of new large scale residential, commercial and industrial projects for compliance with state regulations and require feasible mitigation measures to minimize GHG emissions.* Greenhouse gas emissions have been evaluated in the EIR. The generation of electricity from wind energy is consistent with the state GHG reduction goals. The GHG emissions associated with the project will be primarily created during construction. The

			project represents an overall benefit and provides reduced GHG emission over the life of the project. • **Policy AQ-P17: Preservation and Replacement of On-site Trees** *Projects requiring discretionary review should preserve large trees, where possible, and mitigate for carbon storage losses attributable to significant removal of trees.* No old growth redwood habitat or mature coniferous forest will be removed for the project. Although there will be tree removal, this is largely off-set by replanting of any areas temporarily disturbed, including riparian areas at a 3:1 ratio. Additionally, carbon storage losses are further mitigated by the operation of a non-carbon based renewable energy source, which will be operational for the life of the project. • **Standard AQ-S1: Construction and Grading Dust Control** *Ground disturbing construction and grading shall employ fugitive dust control strategies to prevent visible emissions from exceeding NCAQMD regulations and prevent public nuisance.* Fugitive dust control strategies to prevent visible emissions from exceeding NCAQMD regulations, per Rule 104, will be implemented throughout project construction and would reduce construction-related emissions of PM_{10} and $PM_{2.5}$ to levels that are below adopted thresholds. • **Standard AQ-S2: Evaluate Greenhouse Gas Emission Impacts** *During environmental review of large scale residential, commercial and industrial projects, include an assessment of the project's GHG emissions and require feasible mitigation.* Short-term construction activities and long-term operations for the proposed project would emit GHGs. These GHG emissions were modeled using the California Emissions Estimator Model (CalEEMod). The project represents a net benefit in reducing GHG emissions over the life of the project, assuming that the project will offset energy currently created by carbon-based sources. No mitigation is required. • **Standard AQ-S3: Evaluate Air Quality Impacts** *During environmental review of discretionary projects, evaluate new commercial and industrial sources of emissions using analytical methods and significance criteria used, or recommended by, the NCAQMD.* Emissions from short-term construction activities and long-term operations of the proposed project were modeled using the California Emissions Estimator Model (CalEEMod) and then compared to the NCUAQMD daily and annual standards. As discussed above, construction and operation of the project would not exceed NCUAQMD thresholds of significance and no

			mitigation measures are required. • **Standard AQ-S6: Preservation and Replacement of On-Site Trees** *Large scale residential, commercial and industrial projects which remove a significant number of large trees (for example, more than 50 trees of greater than 12 inches DBH) shall plant replacement trees on-site or provide offsetting carbon mitigations."* No old growth redwood habitat or mature coniferous forest will be removed for the project. Although there will be tree removal, this is largely off-set by replanting of any areas temporarily disturbed, including riparian areas, at a 3:1 ratio. Additionally, carbon storage losses are further mitigated by the operation of a non-carbon based renewable energy source, which will be operational for the life of the project.
3.	**FINDING:**		**CONSISTENCY WITH THE PURPOSE OF THE EXISTING ZONE** The proposed development is consistent with the purposes of the existing zone in which the site is located.
	EVIDENCE:	a)	The project is primarily located in the Timber Production Zone and the Agriculture Exclusive Zone. The purpose of the Timber Production Zone is to provide standards and restrictions for the preservation of timberlands for growing and harvesting timber. The project is compatible with this purpose because it does not detract from the ability of the forest lands to grow and harvest timber. Road infrastructure will be shared to the extent feasible with the ongoing harvest operations of Humboldt Redwood Company. The purpose of the Agricultural Exclusive Zone is to be applied to fertile areas in which agriculture is and should be the desirable predominate use and in which the protection of this use from encroachment from incompatible uses is essential to the general welfare. Agriculture will continue to be the predominate use within the lands zoned AE. Permanent impacts are limited to no more than 27 acres and the use is not incompatible with continued agricultural use on the AE lands.
4.	**FINDING:**		**CONSISTENCY – HUMBOLDT COUNTY ZONING REGULATIONS** The project conforms with all applicable standards and requirements of the Humboldt County Zoning Regulations.
	EVIDENCE:	a)	The project has been determined to be consistent with the following requirements contained in the Zoning Code: • **Section 312-18.1: Conditionally Permitted Uses in an AE Zone** *"18.1.1. The proposed use will not impair the continued agricultural use on the subject property or on adjacent lands or the economic viability of agricultural operations on the site."* The policy allows for conditionally permitted uses in an AE zone, including wind electrical generating facilities. The project applicant filed for a Conditional Use Permit (CUP) and Special Permit (SP) on May 29, 2018, and the Commission finds the project would not impair the continued agricultural use on the subject

property or on adjacent lands or the economic viability of agricultural operations on the site, as supported by project documents and the DEIR prepared for the project.

- **Section 312-21.1: Uses Permitted with a Conditional or Special Permit in TC and TPZ Zones**
  "21.1.1. The proposed use will not significantly detract from, or inhibit the growing and harvesting of timber on the site or on adjacent properties."

  The project applicant filed for a Conditional Use Permit (CUP) and Special Permit (SP) on May 29, 2018, and the Commission finds the project would not significantly detract from or inhibit the growing and harvesting of timber on the site or on adjacent properties, as supported by project documents and the DEIR prepared for the project.

- **Section 314-7.1: AE: Agriculture Exclusive Zone**
  "Uses Permitted with a Use Permit: Utilities & Energy Facilities: The erection, construction, alteration, or maintenance of gas, electric, water or communications transmission facilities, and wind or hydroelectric solar or biomass generation, and other fuel or energy production facilities. Any use not specifically enumerated in this Division, if it is similar and compatible with the uses permitted in the AE zone."

  The WTGs, which will generate electricity, will be located in the AE zone. General Plan Standard E-S3 specifies that unless allowed by right, pursuant to California Government Code Section 65892.13(f), as amended, wind generating facilities shall be a conditionally permitted use in all land use designations except "resource dependent" (MR). The applicant has applied for a Conditional Use Permit and Special Permit and the required findings for the permits have been made.

  Development Standards:
  - Minimum Lot Area: 60 acres -Complies
  - Minimum Lot Width: 100 feet – Complies
  - Minimum Lot Depth: None specified - Complies
  - Lot Coverage: None specified -Complies
  - Setbacks: Front:20 feet; Rear: 30 feet; Side: 30 feet- - Complies – (per definition of Building Site Section 314-137)
  - Maximum Ground Coverage: Two acres maximum - Complies
  - Maximum Building Height: None specified - Complies

- **Section 314-7.4: TPZ: Timberland Production Zone**
  "Principal Permitted Uses: The erection, construction, alteration, or maintenance of gas, electric, water, or communication transmission lines."

  "Uses Permitted with a Use Permit: Utilities and Energy Facilities:

			The erection, construction, alteration, or maintenance of wind or hydroelectric, solar or biomass generation, and other fuel or energy production facilities." The WTGs, which will generate electricity, and the gen-tie, which will transmit electricity, will be located in TPZ-zoned areas. General Plan Standard E-S3 specifies that unless allowed by right, pursuant to California Government Code Section 65892.13(f), as amended, wind generating facilities shall be a conditionally permitted use in all land use designations except "resource dependent" (MR). The applicant has applied for a Conditional Use Permit and Special Permit and the required findings for the permits have been made. <u>Development Standards</u>: • Minimum Parcel Size: 160 acres or 40 acres with a Joint Timber M Management Plan -Complies – (per definition of Building Site section 314-137) • Lot Coverage: None specified -Complies • Building Height: None specified -Complies • Setbacks: Front:20 feet; Rear: 30 feet; Side: 30 feet- -Complies – (per definition of Building Site section 314-137) • **Section 314-61.1: Streamside Management Areas and Wetlands Ordinance** *"All developed as defined in the General Plan within or affecting SMAs, wetlands or other wet areas not exempted under Section 314-61.1.4 shall require a permit pursuant to an application for development within SMAs, wetlands and other wet areas and processed as a special permit pursuant to the Humboldt County Zoning Regulations (Section 312-3.1.1 et seq.)."* Work within the Streamside Management Area (SMA) is proposed. This is limited to stream crossing for road improvements, which is an allowed use in the SMA. A Special Permit has been added to the application. Work within riparian areas will require a Lake or Streambed Alteration Agreement (LSAA) from CDFW and replanting of impacted areas at a 3:1 ratio. • **Section 312-1: General Provisions** **"1.1.2: Legal Lot Requirement.** *Development permits shall be issued only for a lot that was created in compliance with all applicable state and local subdivision regulations."* A Determination of Parcel Legal Status was performed for the parcels that comprise the project. The attached underlying legal parcel map depicts legal parcel status. All parcels were determined to be in compliance with the State Subdivision Map Act and local subdivision regulations.
5.	**FINDING:**		**HEALTH, SAFETY, or WELFARE –** The proposed development and

			conditions under which it may be operated or maintained will not be detrimental to the public health, safety, or welfare or materially injurious to properties or improvements in the vicinity.
	EVIDENCE:	a)	The project was reviewed by the Humboldt County Planning Division, County Building Inspection Division, County Department of Public Works, County Division of Environmental Health (DEH), County Department of Health and Human Services, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), California Department of Forestry and Fire Protection (CalFire), California Department of Transportation (Caltrans), California Highway Patrol (CHP), City of Eureka, Department of Navy, Department of Defense, North Coast Unified Air Quality Management District (NCUAQMD), Pacific Gas and Electric Company (PG&E), California Coastal Commission (CCC), Bear River Band of the Rohnerville Rancheria, InterTribal Sinkyone Wilderness Council, Wiyot Tribe, City of Eureka, City of Fortuna, City of Rio Dell, Regional Water Quality Control Board (RWQCB), Agricultural Commissioner, California State Parks, and Humboldt Redwoods State Parks. The respective departments/agencies have recommended conditions, where appropriate, to ensure that the project will not have an adverse effect on the health, safety, and welfare of persons either residing or working in the neighborhood. No evidence has been submitted that the project as conditioned and mitigated will be detrimental to public health, convenience, safety, and welfare. Furthermore, no evidence has been submitted that indicates that properties within the vicinity will be physically damaged by the proposed development
6.	**FINDING:**		**NO REDUCTION IN THE RESIDENTIAL DENSITY FOR ANY PROJECT PARCEL -** The proposed project will not reduce the residential density for any parcel below that utilized by the Department of Housing and Community Development in determining compliance with housing element law (the mid-point of the density range specified in the plan designation).
	EVIDENCE:	a)	None of the 88 individual parcels comprising the project site are included in the County's Housing Inventory, and, as a result, no reduction in residential density will occur.
7.	**FINDING:**		**COASTAL RESOURCES –** The project will not have a significant adverse effect on coastal resource, including wildlife qualities.
	EVIDENCE:	a)	Other than the offloading location at Fields Landing and portions of the haul route, the project is not within the Coastal Zone. The project will not have an adverse effect on coastal resources. The applicant will apply for a consolidated CDP through the California Coastal Commission.
8.	**FINDING:**		**CEQA –** The County has complied with the California Environmental Quality Act.
	EVIDENCE:	a)	Prior to the approval of this Conditional Use Permit and Special Permit, the Humboldt County Planning Commission adopted Resolution No. ##### to certify the Final Environmental Impact Report prepared for the project, adopt Statements of Overriding Considerations, make the required CEQA findings prior to approving the project, and adopt the Mitigation Monitoring and Reporting Plan for implementation of the mitigation measures contained in the EIR.
9.	**FINDING:**		**APPEALABILITY –** The decision on this project may be appealed to the Board of Supervisors.
	EVIDENCE:	a)	The approval of the Conditional Use Permit and Special Permit by the

			Planning Commission is appealable to the Board of Supervisors per Section 312-13.1 of the Humboldt County Zoning Ordinance.

DECISION

NOW, THEREFORE, based on the above findings and evidence, the Humboldt County Planning Commission does hereby:

- Adopt the findings set forth in this resolution; and
- Conditionally approval of the Conditional Use Permit and Special Permit for development of the Humboldt Wind Energy Project, based upon the Findings and Evidence and subject to the conditions of approval attached hereto as Attachment 1 and incorporated herein by reference; and

Adopted after review and consideration of all the evidence on DATE.

The motion was made by COMMISSIONER _____and second by COMMISSIONER _____ and the following ROLL CALL vote:

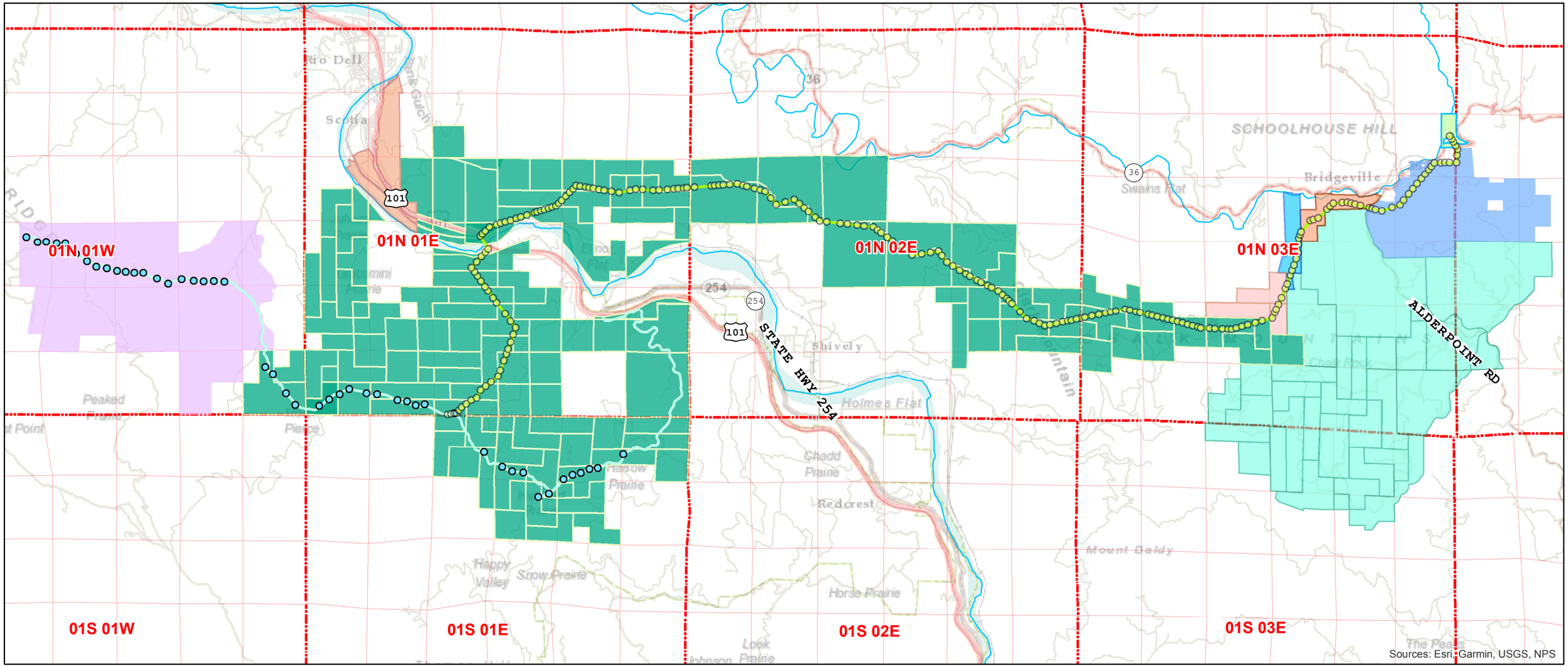
AYES: COMMISSIONERS:
NOES: COMMISSIONERS:
ABSENT: COMMISSIONERS:
ABSTAIN: COMMISSIONERS:
DECISION:

_____
Robert Morris, Chair

I, Suzanne Lippre, Clerk to the Planning Commission of the County of Humboldt, do hereby certify the foregoing to be a true and correct record of the action taken on the above entitled matter by said Commission at a meeting held on the date noted above.

_____
Suzanne Lippre, Clerk

Humboldt Wind Farm Legal Parcel Configurations



Legend

- Gentie Pole Locations 20190821
- Turbine Array WW 20190806
- Access Road Centerline 20190821
- Gentie Alignment 20190821
- Ag Preserve RID 211 (Forest Home/Russ Ranch)
- Humboldt Sawmill Company LLC
- Humboldt Redwood Legal Parcels
- Sierra Pacific
- Miller - one parcel
- Saler - one parcel
- Kay Brown Trust - one parcel
- Ag Preserve RID 213 (Gabrych) - one parcel
- Ag Preserve RID 102 (Chalk Mtn. Ranch / Barnwell)

ATTACHMENT 1

RECOMMENDED CONDITIONS OF APPROVAL

Development Requirements:

1. The project shall be developed and conducted in accordance with the Project Description in the FEIR and the Mitigation Monitoring and Reporting Plan in Attachment 4.

2. The applicant shall enter into an Agreement to Implement a Mitigation Monitoring and/or Reporting Plan with the County to compensate the Planning and Building Department for all costs associated with the implementation of the approved Mitigation Monitoring and Reporting Program (MMRP), to include on-site construction and mitigation monitors. The Planning Director may retain the services of qualified professional engineers, biologists or other specializations, as needed, to ensure that the measures are fully carried out. A deposit for the estimated cost of services under this agreement shall be on deposit with the Planning and Building Department.

3. Prior to clearing or grubbing or other vegetation removal, the applicant shall secure approval of all required building permits from the Building Inspection Division. As part of the building permit application(s), the applicant shall provide engineered plans for all grading, pad foundations, turbines, O&M facility, and access roads to the Building Division for review and approval.

4. Prior to occupancy the O&M building, the applicant shall install an on-site wastewater treatment system to the satisfaction of the Division of Environmental Health (DEH). A letter or similar communication from DEH stating that they have approved installation of the on-site wastewater treatment system shall satisfy this requirement.

5. During construction and operation of the project, the O&M building wastewater disposal field and reserve area shall remain undisturbed and must not be paved, driven over, or otherwise developed.

6. Prior to initiating transport of oversized project components, the applicant shall secure and encroachment permit and transportation permit from the California Department of Transportation (Caltrans) These permits would be used to determine the final trailer configuration, clearance requirements, temporary off-ramps, emergency service access, lane closures (if required), California Highway Patrol (CHP) escort (as required), and transportation times.

7. The applicant shall secure an encroachment permit from the Department of Public Works for any work done on (or under) county-maintained roads.

8. The applicant shall secure a Transportation Permit for oversized and/or overweight loads using county maintained roads from the Department of Public Works. Damage to any County maintained road from overweight vehicles shall be repaired by the applicant to the satisfaction of the County.

9. Once construction of the project is complete, the applicant shall reconstruct that portion of Bear River Ridge Road, South Bay Depot Road and Fields Landing Road used for construction the project. Until such time as the roads are reconstructed, the applicant shall be responsible for maintaining the roads in working order.

10. Prior to transporting oversized components, the applicant shall secure an encroachment permit from the City of Fortuna for the temporary off ramp to be constructed between the

northern terminus of Dinsmore Drive and US 101 to create a temporary detour for the 12 Street overpass. The applicant shall also secure as necessary encroachment permits from the City of Fortuna to transport oversized loads within the City limits.

11. Prior to transporting oversized components, the applicant shall secure a Special Permit from the Humboldt Bay Wildlife Refuge for the temporary off ramp to be constructed between and Visitor Center Access Road and US 101 to create a temporary detour for the Hookton Road overpass.

12. The applicant shall submit from FAA 7460-1 to the FAA for comments. Comments from the FAA shall be incorporated into the project's conditions of approval.

13. Only the proposed access route from Jordan Creek shall be used for the construction of the project. Construction related traffic shall not use Monument Road (from Rio Dell city Limits to Bear River Ridge Road) or Mattole Road to access the project site. Once construction of the project is completed, light weight maintenance vehicles may access the site from US 101 via Monument Road to Bear River Ridge Road; all other vehicles shall use the Jordan Creek access.

14. **Within five (5) days of the effective date of this permit,** the applicant shall submit a check to the Planning Division payable to the Humboldt County Recorder in the amount of $3,321.00. Pursuant to Section 711.4 of the Fish and Game Code, the amount includes the Department of Fish and Game (DFG) fee plus a $50 document handling fee. This fee is effective through December 31, 2017 at such time the fee will be adjusted pursuant to Section 713 of the Fish and Game Code. Alternatively, the applicant may contact DFG by phone at (916) 651-0603 or through the DFG website at www.dfg.ca.gov for a determination stating the project will have *no effect* on fish and wildlife. If DFG concurs, a form will be provided exempting the project from the fee payment requirement. In this instance, only a copy of the DFG form and the $50.00 handling fee is required.

15. The Applicant shall obtain a consolidated Coastal Development Permit from the California Coastal Commission. A copy of the approved and executed permit or CDP waiver shall be submitted to the Planning Division to satisfy this condition.

16. Prior to the commencement of offloading and staging of wind turbine generators and component parts at Fields Landing, the applicant shall provide 48-hour advance written notification of planned night time operations (10PM to 6AM) to owners/occupants located within 500 feet of the Fields landing complex and the compacted gravel storage yard area.

17. Prior to the issuance of construction permits, the applicant shall provide to the County Financial Assurances in a form and amount the County deems sufficient to guarantee the faithful performance of the decommissioning and restoration of the facility at the conclusion of the 30 year permit term, or in the event of facility abandonment, considered to be the discontinuance of operations for a period of one year or longer. The Financial Assurance Cost Estimate shall be prepared by California Licensed Professional Engineer and shall cover the work as described in the Draft EIR Section 2.5, Project Decommissioning and Restoration, to include the following elements: removal of all above grade structures and facilities from the project site(excepting the addition to the Bridgeville substation); the decompaction and recontouring to return the site to preconstruction and operational condition; and revegetation commensurate with the vegetative cover, composition and diversity of the ecological setting, pre-development.

    The Financial Assurances shall:

    a. take the form of surety bonds, irrevocable letter of credit, trust funds, certificates

of deposit, or other mechanisms determined acceptable by the Planning Director;
   b. remain in effect for the duration of the permit term and any additional period until decommissioning and restoration is completed;
   c. be adjusted annually to account for to account for changes in the costs of decommission and restoration due to inflation;
   d. based on standard time and material current construction costs adjusted to reflect state prevailing wages, be adequate for the purposes of performing all decommissioning and restoration in accordance with the approved decommissioning and restoration plans; and
   e. be made payable to the County of Humboldt.

18. New development shall demonstrate that post development peak flow discharges will mimic natural flows to watercourses and avoid impacts to Beneficial Uses of Water. An engineer's statement to this effect submitted to the Planning Division prior to issuance of building or grading permits shall satisfied this requirement.

19. The applicant shall obtain a permit from the North Coast Unified Air Quality Management District (NCUAQMD) for of the use of internal combustion engines (for emergency generators).

20. To operate the cement batch plant during construction, the applicant must ether obtain a local operating permit from the NCUAQMD or a portable equipment registration from the California Air Resources Board.

21. Development within Streamside Management Areas shall, at a minimum, include:

   a. Retaining snags unless felling is required by CAL-OSHA, by CAL FIRE forest and fire protection regulations or for public health and safety reasons. The felling must be approved by the Planning Director. Felled snags shall be left on the ground if consistent with fire protection regulations and the required treatment of slash or fuels.
   b. Retain live trees with visible evidence of current or historical use as nesting sites by hawks, owls, eagles, osprey, herons, kites or egrets.
   c. Erosion control measures (as per Standard BR-S9- Erosion Control).
   d. Maximum feasible retention of overstory canopy in riparian corridors.

22. Erosion control measures for development within Streamside Management Areas shall include the following:
   a. During construction, land clearing and vegetation removal will be minimized, following the provisions of the Water Resources Element and the standards listed here.
   b. Consistent with BR-S8, construction sites with at least 100 square feet of exposed soil will be planted or seeded as appropriate per mitigations as recommended in writing by the lead agency with native or non-invasive vegetation and mulched with natural or chemical stabilizers to aid in erosion control and ensure revegetation.
   c. Long slopes will be minimized to increase infiltration and reduce water velocities down cut slopes by such techniques as soil roughing, serrated cuts, selective grading, shaping, benching, and berm construction.
   d. Concentrated runoff will be controlled by the construction and continued maintenance of culverts, conduits, non-erodible channels, diversion dikes, interceptor ditches, slope drains, or appropriate mechanisms. Concentrated runoff will be carried to the nearest drainage course. Energy dissipaters may be installed to prevent erosion at the point of discharge, where discharge is to natural ground or channels.
   e. Runoff shall be controlled to prevent erosion by on-site or off- site methods. On-site methods include, but are not limited to, the use of infiltration basins, percolation pits, or trenches. On-site methods are not suitable where high groundwater or slope stability

problems would inhibit or be aggravated by on-site retention or where retention will provide no benefits for groundwater recharge or erosion control. Off-site methods include detention or dispersal of runoff over non-erodible vegetated surfaces where it would not contribute to downstream erosion or flooding.

f. Disposal of silt, organic, and earthen material from sediment basins and excess material from construction will be disposed of out of the Streamside Management Area to comply with California Department of Fish and Wildlife and the North Coast Regional Water Quality Control Board requirements.

On-Going Requirements to be satisfied for the life of the project

1. The project shall be developed, operated and maintained in accordance with the Project Description contained in the Final EIR, the mitigation monitoring and reporting program, and these conditions of approval. Changes shall require modification of this permit except where consistent with Humboldt County Code Section 312-11.1, Minor Deviations to Approved Plot Plan.
2. This permit expires thirty (30) years from the date of issuance. No later than two (2) years prior to expiration of the permit the applicant must apply for project decommissioning or repowering.
3. The applicant shall adhere to all of the mitigation measures in the certified Final EIR and incorporated hereby reference. The applicant and successor's in interest are required to pay for mitigation monitoring on a time and material basis as set forth in the schedule of fees and charges as adopted by ordinance of the Humboldt County Board of Supervisors. The Department will provide a bill to the applicant. Any and all outstanding Planning fees to cover the mitigation monitoring shall be paid to the Humboldt County Planning Division, 3015 "H" Street, Eureka.

Informational Notes:

1. To reduce costs the applicant is encouraged to bring in written evidence of compliance with all of the items listed as conditions of approval in this Attachment that are administered by the Planning Division. The applicant should submit the listed item(s) for review as a package as soon as possible before the expiration date. Post application assistance by the Planner on Duty, or by the Assigned Planner, with prior appointment, will be subject to a review fee for Conformance with Conditions billed at the County's current burdened hourly rate with an initial deposit as set forth in the Planning Division's schedule of fees and charges (currently $95.00). Please contact the Planning Division for copies of all required forms and instructions.
2. Under state planning and zoning law (CGC §66000 *et seq*.), a development project applicant who believes that a fee or other exaction imposed as a condition of project approval is excessive or inappropriately assessed may, within 90 days of the applicable date of the project's approval, file a written statement with the local agency stating the factual basis of their payment dispute. The applicant may then, within 180 days of the effective date of the fee's imposition, file an action against the local agency to set aside or adjust the challenged fee or exaction.
3. If buried archaeological or historical resources are encountered during construction activities, the contractor on-site shall call all work in the immediate area to halt temporarily, and a qualified archaeologist is to be contacted to evaluate the materials. Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, dietary bone, and human burials. If human burial is found during construction, state law requires that the County Coroner be contacted immediately. If the remains are found to be

those of a Native American, the California Native American Heritage Commission will then be contacted by the Coroner to determine appropriate treatment of the remains. The applicant is ultimately responsible for ensuring compliance with this condition.

4. The applicant is responsible for receiving all necessary permits and/or approvals from other federal, state and local agencies.

5. The applicant is required to pay for permit processing on a time and material basis as set forth in the schedule of fees and charges as adopted by ordinance of the Humboldt County Board of Supervisors. The Department will provide a bill to the applicant after the decision. Any and all outstanding Planning fees to cover the processing of the application to decision by the Hearing Officer shall be paid to the Humboldt County Planning Division, 3015 "H" Street, Eureka

6. This permit approval (CUP/SP) shall expire and become null and void at the expiration of one (1) year from the date of the approval of the associated Use Permit and Special Permit ("Effective Date"); except where construction under a valid building permit or use in reliance on the permit has commenced prior to such anniversary date. The period within which construction or use must be commenced may be extended as provided by Section 312-11.3 of the Humboldt County Code.

7. If any trees located within the right of way of a County maintained road require removal or trimming, the trees must be made available to the underlying property owner. It is the responsibility of the applicant to coordinate all tree removal and trimming with underlying property owners.

8. Underground utility lines crossing a County maintained road laterally can be permitted through and Encroachment Permit from the Department of Public works when the lines are installed in sleeves that extend the entire width of the right of way. The applicant must be the property owner on both sides of the road where the crossing is proposed, or the applicant must have an easement. Underground utilities lines that run along the road longitudinally can only be permitted through an Encroachment Permit if the applicant is a public utility. If the applicant is not a public utility the applicant may wish to explore acquiring a private utility easement adjacent to the public right of way and installing the proposed lines there.

ATTACHMENT 2

Applicant's Evidence in Support of the Required Findings

The Humboldt County Planning and Building Department, located at 3015 H Street, Eureka, CA 95501 is the custodian of documents submitted by the applicant as evidence in support of the proposed project.

These materials include:

- Application form
- Site plan
- Numerous special studies

ATTACHMENT 3

Referral Agency Comments and Recommendation

The project was referred to the following referral agencies for review and comment. Those agencies that provided written comments are checked off.

Referral Agency	Response	Recommendation	Attached	On File
County Building Inspection Division	✓	Conditional Approval		✓
County P/W, Land Use Division	✓	Comments		✓
Department of Environmental Health	✓	Comments		✓
County Counsel				
County Agriculture Commissioner				
California Coastal Commission				
California Department of Fish and Wildlife	✓	Comments and Conditions		✓
CalFire	✓	Comments and Conditions		✓
CalTrans District 1	✓	Comments and Conditions		✓
California Highway Patrol	✓	Approval		✓
City of Eureka	✓	Approval		✓
City of Fortuna				
City of Rio Dell				
Department of Defense	✓	Comments		✓
Department of Navy	✓	Comments		✓
Bear River Tribe				
Sinkyone Tribe				
Wiyot Tribe				
North Coast Unified Air Quality Management District	✓	Comments		✓
PG&E	✓	Comments		✓
Regional Water Quality Control Board				
U.S. Fish and Wildlife Service				
Humboldt Redwoods State Park				
California State Parks				

ATTACHMENT 4

Mitigation Monitoring and Reporting Plan

MITIGATION MONITORING AND REPORTING PROGRAM

Humboldt Wind Energy Project

SCH No. 201872076

Prepared by:

Humboldt County
Planning and Building Department
3015 H Street
Eureka, CA 95501

Contact:

Steve Werner, Supervising Planner

With Assistance from

AECOM
2020 L Street, Suite 400
Sacramento, CA 95811

Contact:

Petra Unger, Project Director

AECOM

NOVEMBER 2019

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MITIGATION MONITORING AND REPORTING PROGRAM

CALIFORNIA ENVIRONMENTAL QUALITY ACT REQUIREMENT

Section 21081.6 of the California Public Resources Code and Section 15091(d) and Section 15097 of the State CEQA Guidelines require public agencies "to adopt a reporting or monitoring program (MMRP) for changes to the project which it has adopted or made conditions of project approval to mitigate or avoid significant effects on the environment." A MMRP is required because the Environmental Impact Report (EIR) for the project identified potentially significant adverse impacts related to construction and operation of the Humboldt Wind Energy project, and mitigation measures have been identified to reduce most of those impacts to less than significant. Some impacts will remain significant and unavoidable, even with implementation of the mitigation measures identified in the EIR and this MMRP.

PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

This MMRP summarizes the mitigation measures, implementation schedule, and responsible parties for implementing, monitoring and enforcing the mitigation measures required of the proposed Humboldt Wind Energy project. This MMRP will be adopted by Humboldt County if it approves the project and will be kept on file at the Humboldt County Planning and Building Department, 3015 H Street, Eureka, CA 95501. The County will use this MMRP to ensure that identified mitigation measures, adopted as a condition of project approval, are implemented appropriately.

ROLES AND RESPONSIBILITIES

Humboldt County will be responsible for monitoring the implementation of mitigation measures designed to minimize impacts associated with the project. Allthough Humboldt County shall have ultimate responsibility for ensuring implementation, the project applicant will be assigned the responsibility of actually implementing the mitigation and reporting on the implementation. Humboldt County shall retain the primary responsibility for ensuring that the project meets the requirements of this MMRP.

The project applicant shall designate specific personnel who will be responsible for monitoring implementation of the mitigation that will occur during project construction and operation. The designated personnel will be responsible for submitting documentation and reports to Humboldt County on a schedule consistent with the mitigation measure and in a manner necessary for demonstrating compliance with mitigation requirements. The project applicant shall ensure that the designated personnel have authority to require implementation of mitigation requirements and shall be capable of halting project construction or operation activities found to be inconsistent with mitigation objectives or project approval conditions.

The project applicant and its appointed contractor also shall be responsible for ensuring that all construction and operation personnel understand their responsibilities for adhering to the performance requirements of the mitigation plan and other contractual requirements related to the implementation of mitigation as part of project construction and operation.

If alternative measures are identified that would be equally effective in mitigating the identified impacts, such as those developed during project-specific permitting with the regulatory agencies, implementation of those alternative measures will not occur until agreed on by Humboldt County. Such changes shall be documented in writing and kept on file with the County.

CHANGES TO MITIGATION MEASURES

The mitigation measures in this MMRP are from the Draft EIR (DEIR) for the Humboldt Wind Energy Project dated April 2019. Mitigation measures revised since circulation of the DEIR are from the Final EIR (FEIR) dated November 2019.

REPORTING

Humboldt County will require the project applicant to prepare a monitoring report upon completion of the project construction describing the compliance of the activity with the required mitigation measures. Information regarding inspections and other requirements shall be compiled and explained in the report. The report will be designed to simply and clearly identify whether mitigation measures have been adequately implemented. At a minimum, each report will identify the mitigation measures or conditions to be monitored for implementation, whether compliance with the mitigation measures or conditions has occurred, the procedures used to assess compliance, and whether further action is required. Where required by specific mitigation measures, the project applicant shall also submit annual (or other reports frequency) reports as outlined in this MMPR during operation. The reports will be presented to theHumboldt County Planning and Building Department.

MITIGATION MONITORING AND REPORTING TABLE

The mitigation monitoring and reporting table below presents the following:

- Mitigation measures number and name, by resource topic;
- Timing of mitigation measures;
- Responsible party for implementation
- Responsible party for enforcement
- Completion of implementation

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
3.2	**Aesthetics**					
3.2-1a	**Design the Project to Avoid Aesthetic Impacts.** The project applicant shall consider topography when siting WTGs and shall avoid major modifications to natural landforms or other characteristic parts of the landscape. The WTGs shall be clustered or grouped to break up overly long lines of WTGs. The WTGs shall be similar in shape and size. Each WTG shall be painted an off-white or uniform light-grey color, per manufacturer's requirements. To minimize the structures' reflectivity, the paint used shall have a gloss level that does not exceed 30 percent, or 60–70 gloss units, as calculated by the manufacturer. The surfaces of all other structures (e.g., substations, O&M building) shall be given low-reflectivity finishes with neutral colors to minimize the contrast of the structures with their backdrops. Commercial messages and symbols shall be prohibited on WTGs. Overhead transmission lines shall not use lattice steel towers. In lieu of H-frame wooden structures, tubular steel poles or concrete poles may be used and shall be painted light grey or shall be dulled galvanized steel or other nonreflective surface. To minimize ground disturbance, existing roadways shall be used to access WTG pads. All construction-related areas shall be kept clean and tidy by storing construction materials and equipment in the construction staging and laydown areas and/or generally away from public view. The project applicant shall remove construction debris promptly at intervals of 2 weeks or less, at any one location. The Humboldt County Planning & Building Department shall enforce the requirements of this measure through site plan review.	During construction.	Project applicant.	Humboldt County Planning & Building Department; Federal Aviation Administration.		
3.2-1b	**Implement Operational Measures to Reduce Aesthetic Impacts.** WTGs shall be kept clean and in good repair. Nacelle covers and rotor nose cones shall always be maintained in place and undamaged. Inoperative WTGs shall be repaired, replaced, or removed as quickly as feasible because a WTG that is broken or disabled will create a health and safety hazard and disrupt the visual experience of the casual observer. The project applicant shall remove derelict WTGs and derelict parts and pieces within 60 days of decommissioning, and shall relocate such equipment and derelict parts and pieces to an area that is screened from view and/or not visible to the general public. Similarly, O&M areas shall be kept clean and tidy by storing all equipment, parts, and supplies in areas that are screened from view and/or are generally not visible to the general public. Grading and landscape treatment around tower bases shall match the conditions of surrounding landscape and habitat to recreate a pleasing visual environment.	During construction.	Project applicant.	Humboldt County Planning & Building Department; Federal Aviation Administration.		
3.3	**Agricultural Resources**					
	None					
3.4	**Air Quality**					

Mitigation Monitoring and Reporting Program

Mitigation Measures		Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
3.4-1	Use Current-Phase Equipment for all Construction Off-Road Vehicles and Equipment. The construction contractor shall use current-phase off-road construction vehicles and equipment (currently Tier 4 final) for construction activities. This requirement shall be shown in all construction plans and implemented through the issuance of construction permits. Alternatively, if there is insufficient availability of equipment that meets or exceeds ARB's standard (currently Tier 4) for heavy-duty diesel engines, an emissions reduction plan shall be prepared to identify other emission reduction measures to reduce NO_X emissions equivalent to what would be achieved through using current-phase equipment. The plan shall identify requirements to be implemented during construction, such as limiting the simultaneous operation of construction equipment on any given day to reduce maximum daily emissions, and shall quantify the maximum daily and total annual emissions with implementation of the identified measures. This plan shall be approved by NCUAQMD before any construction permits are issued.	During construction.	Project applicant; construction contractor.	Humboldt County Planning & Building Department.		
3.5	Biological Resources					
3.5-1a	Minimize the Construction Footprint to Avoid Impacts on All Suitable Marbled Murrelet Nesting Habitat. The project applicant shall not remove any old-growth redwood or mature coniferous forest that could support nesting marbled murrelets, and to the extent feasible shall maximize the buffer between construction activities and suitable marbled murrelet habitat. The project applicant shall prepare documentation depicting the location of marbled murrelet nesting habitat overlain with the construction footprint to confirm that construction activities would have no direct impacts on suitable marbled murrelet habitat. The documentation shall be submitted to the Humboldt County Planning & Building Department, CDFW, and USFWS before approval of grading or improvement plans or any ground-disturbing activities.	Submittal of documentation showing buffers and approval by CDFW and USFWS: Before approval of grading or improvement plans or any ground-disturbing activities.	Project applicant.	Humboldt County Planning & Building Department, CDFW, and USFWS.		
3.5-1b	Avoid Indirect Impacts on Nesting Marbled Murrelet. During the marbled murrelet nesting season (March 24–September 15), the project applicant shall maintain a no-disturbance buffer between the construction activity and marbled murrelet nesting habitat as described below. An exhibit showing the project improvements and marbled murrelet nesting habitat buffers shall be prepared demonstrating compliance with this mitigation measure. A biological monitor will be present to ensure compliance with buffers required in this measure. The following auditory disturbance buffers shall be maintained between the construction activity and marbled murrelet nesting habitat:	Submittal of documentation showing buffers and approval by CDFW and USFWS: Before approval of grading or improvement plans or any ground-disturbing activities.	Project applicant.	Humboldt County Planning & Building Department, CDFW, and USFWS.		

Mitigation Monitoring and Reporting Program

Mitigation Measures		Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	<table><tr><th>Construction Activity</th><th>Buffer Distance (meters)</th></tr><tr><td>Noise “high” (81–90 dB)</td><td>100</td></tr><tr><td>Noise “very high” (91–100 dB)</td><td>250</td></tr><tr><td>Noise “Extreme” (101–110 dB)</td><td>400</td></tr></table> The “high” and “very high” buffers described in the table above are not applicable in situations where potential marbled murrelet nesting habitat is separated from construction activity by Highway 101 or where habitat is directly adjacent to Highway 101. Instead, the project applicant shall maintain a no-disturbance buffer of 50 meters between construction activities that generate “very high” noise and these habitat stands during the period one hour after sunrise to one hour before sunset. The 50-meter buffer is based on USFWS guidance (USFWS 2006) for very high preconstruction ambient noise at this site during operating hours. Between one hour before sunset to one hour after sunrise, the project applicant shall maintain this 50-meter no-disturbance buffer between these stands and construction activities that generate “high” noise. If implementation of the buffers described above is infeasible, the project applicant shall consult with CDFW and USFWS regarding an alternative buffer size. The project applicant shall provide documentation of concurrence from CDFW and USFWS to the Humboldt County Planning & Building Department for the alternative buffer size before issuance of construction permits.					
3.5-1c	Develop and Implement a Worker Environmental Awareness Program. Before the start of any construction activity, the project applicant shall develop a worker environmental awareness program subject to review and approval by the Humboldt County Planning & Building Department, in consultation with CDFW and USFWS. Before the start of construction, the environmental training shall be provided to all personnel working on the project site during construction and operation. Training materials and briefings shall include but not be limited to: • discussion of the federal ESA and CESA, the BGEPA, the MBTA, and CWA; California Fish and Game Code Sections 3503, 3503.5, 3511, 3513, 3800(a), 4150, 4700, 5050, 5515, and 1602; 14 CCR Sections 30.10 and 251.1; the Porter-Cologne Act; CDFA Code Sections 5004 and 7201; and the California Coastal Act, as applicable; • the consequences of noncompliance with these regulatory requirements; • specific conditions of any permits from regulatory and other agencies obtained for the project (USACE, North Coast RWQCB, the CCC, USFWS, NMFS, CDFW, and the County); • identification and values of the special-status plant and wildlife species to be protected; • identification of any important wildlife habitat and sensitive natural communities to be protected; • identification of special-status species, life history descriptions, habitat requirements during various life stages, and the species’ protected status;	Submittal of worker environmental awareness program training materials: Before approval of grading or improvement plans or any ground-disturbing activities. Avoidance and minimization measures: Before and during construction activities proposed to take place during the marbled	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW, USFWS, and other agencies with permit conditions related to biological resources.		

Mitigation Monitoring and Reporting Program

Mitigation Measures		Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	• fire protection measures; • measures to avoid introduction and minimize the spread of invasive weeds during construction and operation; • trash and food waste management procedures to prevent attracting corvids or nuisance wildlife to the site; • hazardous substance spill prevention and containment measures; • clear instructions that if any workers encounter a special-status species within or near the project site during construction, work shall halt and the project biologist and project applicant shall be informed; • clear instructions regarding the scenarios in which permit conditions require the notification of specific agencies, the method for contacting the agencies, and the legally required time frames for such contact; • a contact person at the on-call biological services provider in the event of the discovery of dead or injured wildlife; and • review of any mitigation requirements related to biological resources. The training program shall be recorded and subsequently shown to all construction personnel who cannot attend the initial training program before their participation in any construction activity. The project applicant shall submit to the County documentation that all personnel working on the project site during construction and operation have signed a statement that they accept responsibility for acting in accordance with the worker environmental awareness program. Worker environmental awareness program training materials shall be submitted to the County and the regulatory agencies whose permits are addressed in the training, for their review and approval before ground-disturbing activities begin. Once approved, all project applicant, consultant, and construction personnel entering the project site shall be trained before being allowed on-site.	murrelet nesting season (March 24–September 15, annually).				
3.5-2a	Avoid and Minimize Operational Impacts on Marbled Murrelets. The project applicant shall implement the measures listed below to minimize and avoid collisions of marbled murrelets with project components, including WTGs and the gen-tie. As discussed in Chapter 2, "Project Description," the gen-tie would over the Eel River. • WTGs shall not be placed in areas characterized by high passage rates for marbled murrelets as described in the Marbled Murrelet Collision Risk Assessment Associated with the Humboldt Wind Project Proposed for Humboldt County, California: 2-Year Report in Appendix B of this FEIR. Before issuance of any construction permits, the project applicant shall provide a map to the Humboldt County Planning & Building Department showing proposed WTG locations relative to marbled murrelet high-passage areas. • The gen-tie shall be sited in accordance with the following criteria:	Submittal of a map showing proposed WTG locations relative to marbled murrelet high-passage areas: Before issuance of any construction permits.	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW and USFWS.		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	o If the gen-tie is to be placed on a ridgeline (particularly saddles), documentation shall be submitted showing that the location is not a high-use or high-activity area for marbled murrelet. o The gen-tie shall not be placed within 200 meters of old-growth or mature conifer forest stands of adequate size to support nesting murrelets The gen-tie transmission lines shall be designed to increase their visibility to marbled murrelet. The project applicant shall use approaches developed in consultation with USFWS and CDFW to increase the visibility of project gen-tie transmission line spans located near areas of potentially concentrated marbled murrelet use such as those described above. These approaches could include placement of bird diverters, aviation balls, or reflective diverters, the choice in application of which will be based on site-specific characteristics of the gen-tie conductors and static wires relative to the forest canopy.					
3.5-2b	Conduct Postconstruction Mortality Monitoring for Marbled Murrelets and Other Species. The project applicant shall prepare and implement PCMM plan as described below to evaluate operational impacts on common bird and bat species and special-status species, including bald and golden eagles and marbled murrelet. The PCMM plan targets attainment of the detection probability (g) standard for murrelets (and the various detection probability standards for other taxa [common bird and bat species and special-status species, including bald and golden eagles] discussed in the respective sections, below). The PCMM plan will include proposed field methods to attain the detection probability standards, including plot size, search interval, number of turbines searched, and transect spacing. The PCMM plan will also identify additional measures that will be available and possibly implemented should interim evaluations of the g value indicate that the standard for any individual taxa may not be reached. These measures could include decrease in the search interval, search habitat management such as mowing of high grasses and other vegetation, closer spacing between search transects within search plots, and the use of scent dogs. The PCMM shall be conducted annually for the life of the project, beginning with a 3-year period of "intensive" surveys (full plots around WTGs plus roads and pads) and followed by less intensive annual monitoring of mortality using a "roads and pads" design. As identified in the PCMM, studies shall be designed to ensure a minimum value of (g) (Dalthorp et al. 2017) for marbled murrelet of 30 percent during "intensive" searches (first 3 years) and 8 percent for subsequent annual "road and pad" searches. The overall detection probability for the EoA model represents the probability of detecting a carcass present on the site during the period of evaluation and is based on the results of searcher efficiency and carcass persistence trials, and the spatial and temporal extent of coverage (i.e., proportion of WTGs or time for which searches occurred). Searcher efficiency trials for medium-sized birds shall specifically utilize carcasses that serve as an acceptable proxy for marbled murrelet. Spatial coverage estimates shall also account for the proportion of carcasses expected to fall outside of the search area, based on the search radius from the WTG location and turbine height. This can be estimated initially using information provided by Hull and Muir (2010) or another scientifically defensible source. After a sufficient	Submittal of a postconstruction monitoring plan: Before issuance of any construction permits. Annual reports on postconstruction monitoring: For the life of the project.	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW and USFWS.		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	number of full plot and road and pad searches has been conducted, it may be possible to estimate the proportion of carcasses falling within the search area from site-specific carcass data. An example calculation of the overall detection probability (g) would be if the probability of detecting a carcass is 50 percent based on combined results of searcher efficiency and carcass persistence trials, and full plot searches (100 percent of carcasses fall within search plot) are conducted at 50 percent of project WTGs, g would be equal to 25 percent (0.5*0.5). To achieve the required 30 percent detection probability level, various search parameters can be adjusted, including the number of WTGs searched, search radius, search interval, and others. The level of search effort may be increased during the marbled murrelet nesting season, but adequate survey effort must still be implemented during the nonbreeding season for the species to meet PCMM objectives for other species (see eagles below). If search effort varies among seasons, the difference in marbled murrelet occurrence (and expected fatality rate) between the seasons must be accounted for in a scientifically defensible fashion when incorporating into overall calculations of g. At the completion of each year of PCMM studies, the maximum credible number of marbled murrelet mortalities shall be estimated using the EoA model and PCMM data. Separate estimates based on the 50 percent and 90 percent credibility levels ($1-\alpha$, where α=0.5 and 0.1, respectively) shall be calculated. There is a 50 percent probability that the actual number of marbled murrelet mortalities is greater than the 50 percent credible number, and a 10 percent probability that the actual number is greater than the 90 percent credible number of mortalities. These estimates can be used as triggers for potential adaptive management or to evaluate effectiveness of mitigation. If CDFW and USFWS incidental take permits for marbled murrelets specify PCMM methods that differ from those described above, the stricter or most conservative measures shall apply.					
3.5-2c	Implement Compensatory Mitigation to Offset Operational Impacts on Marbled Murrelets. The project applicant shall prepare and implement a marbled murrelet mitigation plan to offset the anticipated level of marbled murrelet take over the operational life of the project. The plan shall be based on the *Compensatory Mitigation Strategy for Marbled Murrelets Impacted by Operation of the Humboldt Wind Project, Appenidix B of this FEIR.* The anticipated level of take is set at 7.77 marbled murrelets over 30 years of project operation. Implementing the marbled murrelet mitigation plan must create at least one individual marbled murrelet for each marbled murrelet taken as a result of the project. The marbled murrelet mitigation plan will describe in detail the proposed measures to minimize and fully mitigate all impacts of the project on marbled murrlets as described in the *Compensatory Mitigation Strategy for Marbled Murrelets Impacted by Operation of the Humboldt Wind Project,* Appenidix B of this FEIR, including a description of the monitoring and reporting process to document compliance with and effectiveness of the minimization and mitigation measures; and a description of the funding and process required for implementation of the minimization, mitigation, and monitoring measures. The project applicant shall establish an endowment to fund implementation and monitoring of the marbled murrelet mitigation plan and shall demonstrate that funding is available to support implementation of the plan for the life of the	Submittal of marbled murrelet mitigation plan and postconstruction monitoring plan: Before issuance of any construction permits. Annual reports on postconstruction monitoring: For the life of the project.	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW and USFWS.		

Mitigation Monitoring and Reporting Program

Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
				Action	Date Completed
project. The performance standard for corvid reduction for the marbled murrelet mitigation plan shall be 35% below baseline, as described in the *Compensatory Mitigation Strategy for Marbled Murrelets Impacted by Operation of the Humboldt Wind Project,* Appenidix B of this FEIR. The plan will include the following elements: • A description of how predator management will be implemented at Van Duzen County Park to reduce the abundance and concentration of corvids (Steller's jays and ravens), which will include but not be limited to: o installation of specialized trash receptacles, recycling stations, and food lockers to reduce the availability of supplemental food resources to corvids and other wildlife; o installation of grates and rock bins under campsite faucets to reduce corvid attraction and feeding; and o implementation of a "crumb clean" outreach campaign, including installation of signs and providing funding for personnel to enforce the campaign and conduct outreach to visitors to ensure compliance. • A monitoring plan to assess the effectiveness of the predator management and outreach campaign, and a reporting plan to describe the results of the monitoring. Monitoring of marbled murrelet reproductive improvement will be implemented using corvid abundance as a proxy. Corvid surveys will be conducted beforehand as a baseline and then every other year for at least the first 10 years of corvid management to index use of the sites and to compare to corvid abundance. • A workplan for collaborating with land managers of adjoining parcels and nearby reserves to facilitate comprehensive predator and visitor management in areas adjacent to Van Duzen County Park. • A funding plan detailing the costs associated with implementation of the plan for the life of the project, and a description of a nonwasting endowment that will be established to fund ongoing predator management, visitor outreach, and monitoring. A fund will be established for ongoing implementation of the plan within 24 months of the beginning of project operation. Until the fund is established the applicant/operator shall be responsible for implementing and monitoring success of the plan. • A schedule for mitigation implementation and reporting. The project applicant shall implement an adaptive management plan if monitoring indicates that the effectiveness of the marbled murrelet mitigation plan is falling short of mitigation goals, or if take levels are on a trajectory to exceed the anticipated take limit. Adaptive management actions to rectify a shortfall in production of sufficient marbled murrelets to offset take shall involve consultation with CDFW and USFWS to develop and implement additional compensatory mitigation. This mitigation may include, but is not limited to, funding to support the following efforts:					

Mitigation Monitoring and Reporting Program

Mitigation Measures		Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	• Relocation of recreational facilities out of murrelet habitat. The California Department of Parks and Recreation is seeking funding to relocate a popular day-use picnic area and public restroom facility that currently exists within marbled murrelet old-growth redwood habitat at Founders Grove in Humboldt Redwoods State Park (McAllister, pers. comm., 2019). This day-use area regularly accommodates busloads of tourists who use it as a rest area and leave food behind as they walk on trails. Removing anthropogenic food subsidies in marbled murrelet habitat would help reduce predator pressures on murrelets in the same manner as is proposed for Van Duzen County Park. • Habitat enhancements in buffer forest. The California Department of Parks and Recreation has proposed and is seeking funding to thin and release approximately 125 acres of second-growth forest immediately adjacent to Founders Grove to accelerate the progress of these buffers toward old-growth conditions (McAllister, pers. comm., 2019). To further increase benefits to murrelets, canopy manipulation is proposed for these old-growth buffers to further expedite the process of generating murrelet nesting habitat. Such canopy manipulation work has already been successfully completed elsewhere in the park. Approximately 20,000 acres of formerly harvested stands in Humboldt Redwoods State Park adjacent to occupied murrelet habitat are in need of intervention to help promote the buffering of occupied stands and ultimately provide additional murrelet habitat. • Removal of derelict fishing gear. Removal of derelict fishing gear that poses an an entanglement hazard for foraging marbled murrelets could provide benefits to marbled murrelets by reducing fatalities. This measure is currently under consideration as mitigation for murrelets for the Skookumchuk wind project in Washington, and a pilot study has been conducted by SeaDoc out of Humboldt Bay (https://www.seadocsociety.org/california-lost-fishing-gear-removal-project/). If CDFW and USFWS incidental take permits for marbled murrelets require avoidance, minimization, mitigation measures, or postconstruction monitoring approaches that differ from those described above, the stricter or most conservative measures shall apply. The avoidance, minimization, and mitigation measures implemented in fulfillment of the CDFW and USFWS incidental take permit requirements will be counted toward fulfillment of the mitigation requirements described above.					
3.5-3	Avoid and Minimize Impacts on Nesting Eagles. The project applicant shall implement the following measures to avoid and minimize impacts on nesting eagles: • If construction activities are proposed during the eagle breeding season (January 1–August 31), the project applicant shall conduct preconstruction eagle nesting surveys to determine whether active eagle nests or territories are present within 2 miles of construction boundaries. Surveys shall be conducted by a qualified biologist experienced with the natural history and nesting/territorial behavior of eagles. The ground-based surveys shall be designed to cover all previously documented eagle nest locations (from the CNDDB, HRC monitoring results, or other	Preconstruction survey results: Submitted by August 31 of the year in which surveys were conducted. Surveys and monitoring: Before	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW and USFWS.		

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reliable sources) and suitable eagles nesting habitat within the 2-mile buffer from the project construction boundaries • Two 4-hour observations shall be conducted at each nest (multiple nests may be observed simultaneously), including one monitoring period in February, during courtship and before egg-laying, and one in early March to determine whether territories are occupied by adult eagles and to identify nesting activity where possible. • The results of the surveys shall be documented in a report and submitted to the Humboldt County Planning & Building Department, USFWS, and CDFW no later than August 31 of the breeding season in which the survey was conducted. • If preconstruction surveys determine that active nests are present within 2 miles of construction activities, the project applicant shall avoid disturbance at active eagle nests. Consistent with the USFWS National Bald Eagle Management Guidelines (2007) and the guidance and recommendations of Millsap et al. (2015) for golden eagles, any nest previously constructed or used by bald or golden eagles should be treated as active unless (1) the nest has been confirmed based on monitoring data to be inactive for at least the previous five breeding seasons or (2) as described in USFWS (2007) guidance, compelling evidence is available to support the conclusion that the nest is unlikely to be used again in the future. • Active eagle nests shall be subject to the following avoidance buffer distances based on USFWS (2007) guidance for bald eagle and USFWS (2002) guidance for golden eagle, unless specific circumstances warrant a lesser distance in accordance with exceptions set forth in the respective sets of guidelines. During construction, a qualified biological monitor shall be present to observe and record behavior of eagles at the nest and to detect eagle response to construction activities and related disturbance. Biological monitors may modify buffers as appropriate based on these observations, in consultation with CDFW and USFWS. The distances presented parenthetically below are for bald eagle and golden eagle (respectively) and assume a direct line of sight between the indicated work activity and the active nest: o Human foot traffic (100 meters/800 meters) o Pass-through vehicular traffic (200 meters/400 meters) o Any other construction work except the types described below (200 meters/800 meters) o Blasting (800 meters for both species) o Helicopter flight (300 meters/800 meters [horizontal and vertical]) Active eagle nests and associated buffers shall be discussed in the worker environmental awareness program training for construction workers (Mitigation Measure 3.5-1c). Compliance with eagle buffers shall be demonstrated in the monitoring reports submitted by the biological monitor (Mitigation Measure 3.5-19a, “Minimize Impacts on Wildlife and Monitor during Construction”).	and during construction. Continuously during all project related construction and operational activities, as applicable.				

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3.5-5a	Avoid, Minimize, and Compensate for Operational Impacts on Eagles. The project applicant shall design and operate the project to minimize potential operational impacts on eagles by adhering to the following impact avoidance and minimization measures: • Maintain a landscape around WTGs that does not encourage raptor occurrence by maintaining rodent prey populations to relatively low levels. • Adhere to the general guidelines for turbine and WTG tower design and operation to minimize bird and bat mortality, use turbines and WTG tower designs lacking potential raptor perches that may encourage bird activity near the moving rotors, and avoid guy wires on meteorological towers. • Design and construct all energized project components, including the entire gen-tie, according to APLIC (2006) standards to minimize the potential for electrocution or collision with transmission lines by raptors and other large birds. The project applicant shall demonstrate compliance with BGEPA: • Before beginning project construction, the project applicant shall demonstrate to the Humboldt County Planning & Building Department that it has consulted with USFWS regarding potential impacts of the proposed project on eagles, that the proposed project has been assessed in accordance with the USFWS (2013) *Eagle Conservation Plan Guidance*, and that the project is in compliance with the BGEPA. If the project applicant voluntarily elects to pursue an incidental take permit for eagles with USFWS, any mitigation measures implemented in association with the permit (e.g., mortality monitoring, utility pole retrofits for compensatory mitigation) shall also be counted toward the mitigation recommendations provided below.	Documentation of consultation with USFWS: Before issuance of any construction permits.	Project applicant.	Humboldt County Planning & Building Department, in consultation with USFWS.		
3.5-5b	Conduct Postconstruction Mortality Monitoring for Eagles. • As described for marbled murrelet in Mitigation Measure 3.5-2b, the project applicant shall conduct PCMM studies for the life of the project to assess impacts of project operation on eagles. The PCMM shall be designed to ensure a minimum overall detection probability (g) of 30 percent for bald or golden eagles during "intensive" searches (first 3 years) and 10 percent for subsequent annual "road and pad" searches. The overall detection probability shall be calculated as described for marbled murrelet (Mitigation Measure 3.5-2b; Dalthorp et al. 2017). • Because eagles are larger than marbled murrelets, the methods outlined for marbled murrelet in Mitigation Measure 3.5-2b are expected to provide adequate detection rates for eagle carcasses. However, because the risk of eagle mortality is spread more evenly throughout the year than the risk of marbled murrelet mortality, the project applicant shall ensure that the search effort for eagle carcasses is distributed evenly throughout all seasons. • The overall detection of eagle carcasses (g) shall be calculated based on results of searcher efficiency trials with large raptor carcasses. The overall detection probability for the Evidence of Absence (EoA) model represents the probability of detecting a carcass present on the site	Avoidance and minimization of impacts, BGEPA compliance, and postconstruction mortality monitoring: For the life of the project. .	Project applicant.	Humboldt County Planning & Building Department, in consultation with USFWS.		

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	during the evaluation period and is based on the results of searcher efficiency and carcass persistence trials, and the spatial and temporal extent of coverage (i.e., proportion of WTGs or time for which searches occurred). • At the completion of each year of PCMM studies, the maximum credible number of bald and golden eagle mortalities shall be estimated based on the 80 percent credibility level ($1-\alpha$, where α=0.2) using the EoA model and PCMM data. This estimate will be used to determine project-related loss (i.e., eagle injury or mortality which results in the removal of a bird from the population) for compensatory mitigation requirements, as outlined below (see Mitigation Measure 3.5-5c). The project applicant shall provide annual reports describing postconstruction monitoring results to the Humboldt County Planning & Building Department and to USFWS.					
3.5-5c	Implement Compensatory Mitigation to Offset Operational Impacts on Eagles. • The project applicant shall compensate for the loss of any golden or bald eagles injured or killed as a result of project operation by paying for the retrofitting of electrical utility poles that present a high risk of electrocution to eagles, as prescribed in the *Eagle Conservation Plan Guidance*, Appendix G (USFWS 2013) in accordance with the following requirments: • For each instance of estimated project-related loss (see Mitigation Measure 3.5b) that removes a bird from the population, 32 utility poles shall be retrofitted. This is based on a resource equivalency analysis (REA) performed by USFWS (2013; Appendix G) and assumes that each retrofitted pole would result in 10 years of avoided loss from electrocution. Certain utility poles may be eligible for "reframing" (as opposed to retrofitting) to avoid electrocution, which is assumed by USFWS to result in 30 years of avoided loss rather than 10 years. The reframing of 14 poles will be sufficient to offset take of a single eagle, according to the REA analysis. • Utility poles that are permanently removed as part of an "undergrounding" process will be considered to result in avoided loss of eagles for 30 years as discussed in the project description. • Compensatory mitigation for the loss of each eagle shall be completed within 1 year of each instance of documented take. Retrofitted poles must be Only poles considered "high-risk" for electrocution (per USFWS 2013, Appendix G), will be eligible for compensatory mitigation through retrofit or removal, and for instances of bald eagle take must these poles will be located in areas where both species occur and within the Pacific Flyway corridor north of 40 degrees North latitude. For instances of golden eagle take, retrofitted poles must be located within the Pacific Flyway. These areas represent the USFWS-designated "Eagle Management Units" for bald and golden eagles at the project site, respectively (USFWS 2016a). • The project applicant may perform utility pole retrofits or removals at any time to achieve positive credit toward future eagle mortalities. The project applicant shall receive such credit upon completion of the mitgiation proposed in revised Mitigation Measure 3.5-11, described in "Raptor Operational Impacts," in Chapter 9 of this FEIR, which will involve undergrounding of 5	Implementation of compensatory mitigation; within 1 year of documented take for the life of the project. Report on implementation of compensatory mitigation: Within 1 year of each documented instance of takethereafter.	Project applicant.	Humboldt County Planning & Building Department, in consultation with USFWS.		

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	miles of existing ridgeline overhead transmission lines in the project area. Once the credit derived from Migation Measure 3.5-11 is exhausted, additional poles to retrofit or reframe will be identified and addressed or funds will be provided to a mitigation bank for pole retrofitting and reframing. The project applicant shall provide a report describing successful implementation of the electric utility pole retrofits for every bald or golden eagle taken as a result of project operations to the Humboldt County Planning & Building Department and to USFWS. The report shall be provided no more than 1 year after detection of the eagle take. If the project applicant pursues a federal eagle incidental take permit and develops separate mitigation measures for eagles in association with an eagle conservation plan, any mitigation completed toward the eagle take permit requirements shall be counted toward the mitigation requirements outlined above.					
3.5-6	Minimize Construction Disturbance to Northern Spotted Owl. To prevent nest abandonment caused by auditory and visual disturbance, the project applicant shall implement the following noise and visual disturbance buffers during the nesting season in accordance with the USFWS guidelines *Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California* (USFWS 2006): • 100 meters for high construction noise (81–90 decibels [dB]) • 250 meters for very high construction noise (91–100 dB) • 400 meters for extreme construction noise (101–110 dB) The buffer sizes listed above are default thresholds. Site-specific sound attenuation shall be considered and buffers resized accordingly, and approved by CDFW and USFWS. Buffers shall be placed around northern spotted owl activity centers near the project site as determined during preconstruction surveys and shall account for the locations in the project area where extreme versus high category noise would occur. Buffers shall be clearly indicated on construction drawings and adherence to buffers shall be monitored during construction activities by a qualified monitor. The project applicant shall provide documentation to the Humboldt County Planning & Building Department that CDFW and USFWS have been consulted in developing the size of the auditory buffer and the level of monitoring and reporting required during construction, and that buffers have been established and adhered to during construction.	Surveys and buffer establishment: Before construction. Monitoring and reporting: During construction near northern spotted owl activity centers and buffers. Documentation of compliance: During and after construction.	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW and USFWS.		
3.5-7	Avoid, Minimize, and Compensate for Construction Impacts on Northern Spotted Owl. The project applicant shall implement the following measures to avoid, minimize, and compensate for impacts of project construction on northern spotted owl: • Develop a map based on the best available information depicting the locations of foraging, nesting, and roosting habitat for northern spotted owls on the project site. This information will guide efforts to minimize habitat impacts during the project's final design. The project applicant shall minimize, to the extent feasible, the removal or degradation of mature coniferous forest habitat or other habitats that could support foraging, roosting, or nesting northern spotted owls.	Documentation of northern spotted owl minimization efforts and accounting of temporary and permanent impacts: Within 1 month of	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW and USFWS.		

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Upon completion of construction, the project applicant shall submit to the Humboldt County Planning & Building Department, CDFW, and USFWS documentation of these minimization efforts, and shall provide an accounting of northern spotted owl foraging, nesting, and roosting habitat temporarily and permanently affected by construction. • Provide documentation to the Humboldt County Planning & Building Department, CDFW, and USFWS confirming that project activities will not preclude the landowners who are subject to the Forest Practices Act from maintaining functional habitat thresholds for all spotted owl activity sites occurring within 0.7 mile of the project area upon completion of construction. The thresholds that the subject landowners must meet include: o Maintain functional nesting habitat (no habitat modifications, no entry) within 500 feet of northern spotted owl activity centers. o Maintain functional foraging and roosting habitat and avoid disturbance within 500–1,000 feet of northern spotted owl activity centers during nesting season. o Provide 500 acres of functional habitat within 0.7 mile of activity centers. o Provide 1,336 acres of functional habitat within 1.3 miles of activity centers. • Provide compensatory mitigation for northern spotted owl foraging, nesting, and roosting habitat that is permanently removed (clearing for the gen-tie and roads is considered a permanent impact). This mitigation may be composed of one or more of the following options, and shall be developed in consultation with CDFW and USFWS: o The project applicant shall mitigate permanent and fragmentation impacts on northern spotted owl foraging, nesting, and roosting habitat by permanently preserving lands at the ratios described in Table 3.5-11a through the purchase of conservation easements or acquisition of suitable northern spotted owl habitat. The determination of what constitutes suitable habitat shall be made by Humboldt County in consultation with CDFW and USFWS. Temporary impacts (areas adjacent to roads disturbed for construction) would not require off-site mitigation because they would be replanted on-site after construction is complete. Land to be conserved as mitigation lands shall be of equal or higher value as the land disturbed. Mitigation lands shall contain at least one drainage, be of lower slopes compared to project area lands, and shall provide suitable foraging, nesting and roosting habitat in similar ratios to the lands being disturbed. Preference shall be given to lands suitable for nesting, roosting and foraging activities in that order. Nesting, roosting and foraging habitat on mitigation lands shall meet the following criteria, as defined in the California Forest Practice Rules (http://www.fire.ca.gov/resource_mgt/resource_mgt_forestpractice.php): o Functional Foraging Habitat is dependent upon the presence and availability of prey on the forest floor or in the canopy; presence of accessible perching limbs; and adjacency to stands with canopy closures >40%. Average stem diameter is usually >6" D.B.H. for hardwoods and >11" D.B.H. for conifers among dominants, and codominants, and the total overhead canopy closure, including intermediate trees is at least 40%. Where overall canopy closure is >80%,	completion of construction. Purchase and recordation of mitigation land in fee-title and/or easement: 2 years after first delivery of power. Implementation of a barred owl management plan: 2 years after first delivery of power and continuing for the duration of the project.				

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foraging habitat is limited to areas with ample flight space below limbs and among stems. Foraging habitat in smaller size classes and lower percentage canopy closures must be justified by local information.

- o Functional Nesting Habitat means habitat with a dominant and codominant tree canopy closure of at least 40% and a total canopy (including dominant, codominant, and intermediates) of at least 60%. Usually the stand is distinctly multi-layered with an average stem diameter in dominant, and codominant conifers, and hardwoods >11" D.B.H. The stand usually consists of several tree species (including hardwoods) of mixed sizes. All nests, snags, down logs, and decadent trees shall also be considered as part of the habitat. Nesting substrates are provided by broken tops, cavities, or platforms such as those created by a hawk or squirrel nest, mistletoe broom, or accumulated debris. Owls are known to occasionally nest in less than optimal habitat. Nesting areas may also be associated with characteristics of topographic relief and aspect which alter microclimates.
- o Functional Roosting Habitat during the territorial breeding season, consists of stands where average stem diameter is >11" D.B.H. among dominant and codominant trees. Hardwood and conifers provide an average of at least 40% canopy closure but the stand can have a high degree of variability. Stand size and configuration must be sufficient to provide multiple perch sites which are suitable for protection from various environmental conditions, including wind, heat, and precipitation.

Table 3.5-11a. Mitigation Ratios and Acreages Required for Permanent Impacts on Northern Spotted Owl Habitat

Habitat Type	Disturbance type	Acres Affected	Mitigation Ratio	Mitigation Acres	Total Acres Needed
Foraging	Permanent (turbine pads, new roads, gen-tie)	164.01	1	164.01	164.01
	Edge effect (gen-tie 100' buffer)	292.13	0	0.00	
Roosting	Permanent (turbine pads, new roads, gen-tie)	49	1	49.00	75.84
	Edge effect (gen-tie 100' buffer)	107.34	0.25	26.84	
Nesting	Permanent (turbine pads, new roads, gen-tie)	17.39	1	17.39	26.79
	Edge effect (gen-tie 100' buffer)	37.61	0.25	9.40	
Total	**All**	**841.69**	**0.32**	**266.64**	**266.64**

- If acquisition of lands is combined with a barred owl management program, the ratio of lands to be preserved may be reduced to 0.5:1 with the concurrence of Humboldt County in consultation with CDFW and USFWS. Any preserved land shall be protected from development with an encumbering instrument (e.g., a deed restriction, covenant, or conservation easement) and shall be managed through the use of a nonwasting endowment. With concurrence of CDFW and USFWS, the same mitigation lands that are used for other resources may be used to satisfy

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	northern spotted owl mitigation obligations, if those lands are suitable. The replacement habitat shall be in the general vicinity of the project site (i.e., in Humboldt County) and should be capable of providing functions similar to those provided by the habitat that will be removed, as determined by Humboldt County in consultation with USFWS and CDFW. • Within 2 years following the first delivery of power, the project applicant shall purchase and record up the mitigation lands as off-site conservation land in fee-title and/or easement for open space suitable as nesting, foraging, and roosting habitat for northern spotted owls. If the applicant elects to implement a barred owl management plan, the applicant shall submit a draft barred owl management plan within 1 year following the first delivery of power. The County, in consultation with USFWS and CDFW, shall approve the location of the conservation land or easement and the barred owl management plan. • The project applicant may implement a barred owl management program in the project vicinity on privately held land occupied by northern spotted owl (owned by either HRC or another entity), and/or implement this program on the off-site conservation lands described above. The barred owl management program shall occur on a tract of land similar in size as the total acres of northern spotted owl habitat to be permanently impacted and shall be designed to achieve a stable or growing northern spotted owl habitat population on the managed lands. The project applicant shall endow funding for the management program for the life of the project. If the managed lands are not already being surveyed for northern spotted owl habitat, the endowment shall include funds for surveying the northern spotted owl habitat population on the managed tract to demonstrate a stable or growing northern spotted owl population. • A barred owl management program may be undertaken independently of land dedication. The area covered by the barred owl management program shall be determined by the Humboldt County Planning and Building Department in consultation with CDFW and USFWS. If CDFW and USFWS incidental take permits for northern spotted owl include avoidance, minimization, and mitigation measures that differ from those described above, the stricter or most conservative measures shall apply.					
3.5-8	Avoid, Minimize, and Compensate for Operational Impacts on Northern Spotted Owls. • The project applicant shall implement: o Mitigation Measure 3.5-5a, "Avoid, Minimize, and Compensate for Operational Impacts on Eagles," which provides similar benefits and protections for northern spotted owls; and o Mitigation Measure 3.5-5b, "Conduct Postconstruction Mortality Monitoring for Eagles," as adhering to postconstruction monitoring protocols for eagles will achieve adequate detection rates to determine whether the project has resulted in take of northern spotted owls. • For each northern spotted owl mortality, the project applicant shall develop and implement compensatory mitigation in consultation with CDFW and USFWS that will create one northern spotted owl for every individual taken to offset any fatalities documented over the operational life	Postconstruction monitoring: For the duration of the project, with reports submitted annually to CDFW, USFWS, and the Humboldt County Planning & Building Department.	Project applicant	Humboldt County Planning & Building Department, CDFW, and USFWS.		

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	of the project. This offset can be accomplished with funding and implemetation of barred owl management programs, or by acquisition of or conservation easements on habitat that would provide nesting, foraging, or roosting northern spotted owl habitat, as described in Mitigation Measure 3.5-7. The benefit to the affected population shall be demonstrated to offset take by creating one northern spotted owl for every spotted owl taken as a result of project operation. If CDFW and USFWS incidental take permits for northern spotted owl include avoidance, minimization, and mitigation measures that differ from those described above, the stricter or most conservative measures shall apply.	Purchase and recordation of mitigation land in fee-title and/or easement: 2 years after first delivery of power.				
3.5-9	Avoid Impacts on Nesting Raptors. The project applicant shall implement the following measures to avoid directly or indirectly affecting nesting raptors during project construction: • Where feasible, tree and vegetation removal activities shall be avoided in potential raptor nesting habitat during the avian nesting season (February 1–August 31, annually). • Preconstruction raptor nesting surveys shall be conducted. Before any construction activities occur during the avian nesting season (February 1–August 31), including vegetation removal (if necessary), preconstruction raptor nesting surveys shall be conducted by a qualified biologist to identify raptor nests within 500 feet of proposed work areas. The qualified biologist shall be knowledgeable in the distribution, habitat, life history, and identification of Northern California birds; experienced in nest searching for birds that may occur within study area; and knowledgeable in survey protocols and/or permits needed to survey for federally listed or state-listed birds. If active raptor nests are detected during preconstruction surveys, a 500-foot exclusion zone shall be established around the nest in which no work would be allowed until the young have successfully fledged or nesting activity has ceased. The determination of fledging or cessation of nesting shall be made by a qualified biologist with experience in nest searching and monitoring for raptors, in consultation with CDFW and USFWS. In consultation with CDFW and USFWS, the size of the exclusion zone may be modified depending on the species and the type of construction activity and associated disturbance anticipated near the nest. Active nest sites shall be monitored periodically by a qualified biologist throughout the nesting season to identify any sign of disturbance and to document nest status.	Before and during construction activities proposed to take place during the general avian nesting season (February 1–August 31, annually).	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW and USFWS.		
3.5-11	Avoid, Minimize, and Compensate for Operational Impacts on Raptors. Humboldt County Planning & Building Department will establish project-specific Bird Technical Advisory Committee (TAC). The TAC will evaluate postconstruction monitoring data for the project on an annual basis to determine whether project-related mortality of raptors and nonraptor birds poses a risk of significant adverse effects that could cause local and regional special-status bird populations to drop below self-sustaining levels if left unabated. Based on a review of the post-construction mortality data the TAC may make additional recommendations beyond the mitigation measures included in the Mitigation and Monitoring Plan	Avoidance and minimization of impacts during construction; postconstruction mortality monitoring for the life of the project.	Project applicant and Humboldt County Planning & Building Departent	Humboldt County Planning & Building Department, in consultation with CDFW and USFWS.		

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(MMRP) for the project to further avoid, minimize, or compensate for bird mortality. The TAC's duties shall include but not be limited to: • reviewing protocols for post-construction bird fatality monitoring and making recommendations for refinements, if appropriate; • reviewing and interpreting postconstruction fatality data on an annual basis for years in which monitoring is conducted; • assessing whether bird mortality attributable to the project may pose the potential for any bird population, particularly special-status birds, to drop below self-sustaining levels if left unabated, despite implementation of all mitigation in the project-specific MMRP; • strategically identifying operational minimization measures that will most efficiently minimize impacts on special-status raptors and other special-status bird populations while recognizing the operational needs of the facility, and based on evidence in the annual monitoring report that the threat for such impacts exist; and • identifying compensatory mitigation that would offset operational impacts on local or regional populations of special-status raptors and other special-status bird species. This mitigation would be recommended for implementation by the project applicant, as enforced by the Humboldt County Planning and Building Department and would be in addition to mitigation identified in the project specific MMRP. Additional mitigation would only be necessary if clearly linked to trends post construction mortality data that point to a threat to local and regional populations to fall below self-sustaining levels, and if the mortality causing these trends is clearly linked to operation of the project The TAC shall be established at least four months before operation of the project begins and will review and approve the proposed post-construction fatality monitoring protocols, and will have the ability to identify necessary changes of the protocols in subsequent years to address changing circumstances related to operation or monitoring of the project. The TAC shall operate under the authority of the Director of the Humboldt County Planning and Building Department and all actions/recommendations of the TAC will be implemented as a requirement of the Department, if the recommendations are clearly linked to the impacts of the project. The TAC shall be actively engaged during the first year of operational data collection to evaluate the mortality monitoring results. Year 1 of monitoring will begin immediately following the start of operations and will continue for 12 months.	Written findings of take of listed species within 2 calendar days of take; Notification of CDFW or USFWS required or recommended actions for take within 3 days of receipt of such requirements or recommendations by.either agency. TAC formed 4 months before project operation.				

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	Thereafter the TAC shall meet annually within a month of receipt of the annual fatality monitoring reports and will provide recommendations in the form of a technical memorandum to the Humboldt County Planning & Building Department Director within one month of the annual meeting. The TAC may meet more frequently as deemed necessary by the County or as unexpected trends are detected in the monitoring data. The TAC shall be maintained and provide technical memoranda for a minimum period of five years after submittal of the first annual monitoring report. If the TAC is unable to meet or unable to provide the memoranda in a timely manner prior to the start of the next monitoring period, the original protocols will maintain in place to ensure continued collection of data. The TAC shall remain active until the Humboldt County Planning & Building Department Director, in consultation with the TAC, concludes that operational impacts of the project do not pose a risk of reducing the population of any bird species below a self-sustaining level. Operation of the TAC may be extended for as long as deemed necessary by the County in consultation with the TAC. The County may appoint an independent TAC Facilitator whose duties include disseminating project data, setting up and moderating meetings, preparing agendas and meeting summaries, and preparing technical memoranda. The decision-making process for the TAC recommendations shall be by majority vote. The rules for TAC assembly and function shall be based on the recommendation in this measure and shall be memorialized after the first meeting of the TAC in a memorandum. The TAC shall provide a report of its findings to the Humboldt County Planning & Building Department Director on an annual basis, or at less frequent intervals if determined by the TAC that annual reporting is not necessary. TAC findings for implementation of mitigation actions shall be submitted to the Humboldt County Planning & Building Department Director, who will evaluate the recommendations against mitigation already implemented as part of the project MMRP. The Director will then communicate those findings and recommendations to the project applicant and who will be responsible for carrying out the measures recommended by the TAC. If the TAC determines that mortality monitoring results indicate that bird mortality attributable to the project poses a risk of causing local and regional special-status bird populations to drop below self-sustaining levels, the TAC will recommend adaptive management actions (e.g., vegetation management around turbines to reduce prey populations, operational modifications, installation of camera-based detection systems [e.g. Identiflight ©] and/or compensatory mitigation to offset impacts (e.g., riparian habitat acquisition or conservation easements, retrofitting of high-risk power lines). The TAC shall provide evidence of how proposed adaptive management actions directly relate to findings made based on the monitoring reports, how the recommended measures were developed, how they will result in reduction of the impacts and what the newly established criteria for success and monitoring are. These findings shall be documented in the annual memorandum to be prepared by the TAC or in special memoranda if the TAC meets off-cycle to address specific events.					

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The project applicant shall provide sufficient funding to establish and maintain the TAC for the duration of monitoring. The TAC will consist of at least three (3) and no more than seven (7) appointees and will consist of an odd number of voting participants. New appointees will be recommended to the Humboldt County Planning Commission for ratification as needed to fill vacancies based on recommendations from CDFW, USFWS and the Humboldt County Planning and Building Department. The TAC shall be composed of individuals who are recognized subject matter experts with expertise in bird biology and ecology, knowledge of local bird populations, and knowledge of wind-wildlife interactions. The TAC shall include eagle and raptor experts, and scientists with expertise in the biology and ecology of local non-raptor birds. The TAC may include but not be limited to representatives from the following organizations: • CDFW • USFWS • Research organizations or agencies with staff dedicated to bird research or other individuals who are recognized experts on special-status bird species occurring in the project area • Any other member determined to be necessary by Humboldt County to provide additional understanding of the impact of the project on local and regional bird populations. A representative from the operator of the facility and a representative from the Humboldt County Building & Planning Department will participate in the meetings to provide technical information (operator) and oversight (County) as needed, and to ensure that the original purpose of the TAC is implemented as outlined. The County and operator representative will not be voting members. In consultation with the TAC, t~~T~~he project applicant shall implement: • Mitigation Measure 3.5-5a, "Avoid, Minimize, and Compensate for Operational Impacts on Eagles," which provides similar protections to raptors; • Mitigation Measure 3.5-5b, "Conduct Postconstruction Mortality Monitoring for Eagles," as adhering to postconstruction monitoring for eagles will also provide sufficient fatality monitoring for other raptors; and • Mitigation Measure 3.5-5c, "Implement Compensatory Mitigation to Offset Operational Impacts on Eagles." These avoidance and minimization measures include requirements to implement avoidance and minimization measures and					

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implement a PCMM to monitor and report on project-related fatalities. This measure also describes compensatory mitigation in the form of retrofitting power poles to reduce electrocution risk to eagles, but this mitigation also provides benefits to raptors other than eagles (Kagan 2016). • Undergrounding 5 miles of existing overhead PG&E electrical distribution lines that represent existing electrocution and collision hazards for raptors; and • Pay $600 per raptor to a raptor rehabilitation facility, such as the Humboldt Wildlife Care Center in Arcata, California. which maintain funds for a variety of rehabilitation projects including for birds. In the event that the Humboldt Wildlife Center declines the donation, the project would donate the funds to the Lindsay Wildlife Center in Walnut Creek, California. The Lindsay Wildlife Hospital has an established raptor rehabilitation program. https://lindsaywildlife.org/featured-patienthospital-story. After collection of 3 years of postconstruction monitoring data, the Humboldt County Planning & Building Department will review the data and, in consultation with the TAC, USFWS and CDFW, will determine which, if any, specific WTGs generate disproportionately high levels of avian mortalities (based on evidence of statistically significant higher levels of mortality relative to other WTGs). If specific WTGs are found to result in disproportionately high avian mortalities, the project applicant shall consult with the TAC and the County to evaluate any feasible measures that can be implemented at the discretion of the County to reduce or avoid mortalities at those specific WTGs. If unauthorized take of a federal or state threatened or endangered raptor occurs during project operation, the project applicant shall immediately notify the appropriate agency (CDFW and/or USFWS) by phone. The applicant shall then submit a written finding to the appropriate agency and the County within 2 calendar days that describes the date, time, location, species and, if possible, cause of unauthorized take. The applicant shall notify the County within 3 calendar days of the receipt of any USFWS and/or CDFW required or recommended actions resulting from the unauthorized take, including whether an incidental take permit and/or additional requirements is deemed necessary by either agency.					

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3.5-12	Avoid and Minimize Impacts on Avian Nesting and Foraging Habitat. The project applicant shall implement the following measures to avoid or offset impacts on avian nesting and foraging habitat: • Minimize the construction footprint in riparian and wetland habitats, and in grassland habitats that could support nesting horned larks. Based on information from project bird use survey data (Stantec 2018g) and from McAllister (pers. comm., 2019), the project applicant shall develop a map depicting the location of the Bear River population of horned larks. Within this area, small and large rock outcroppings shall not be disturbed for the purposes of WTG placement. A 150-foot buffer shall be applied to large and small rock outcroppings that are suitable habitat for horned larks. If it is not feasible to maintain the rock outcroppings for the purpose of constructing the main access road, substitute rocks shall be placed within the mapped population area. • Implement Mitigation Measure 3.5-1c, "Develop and Implement a Worker Environmental Awareness Program." Provide compensatory mitigation for permanent impacts on grassland habitat that quality as sensitive natural communities at a no-net-loss ratio for grassland and scrub/shrub habitat, and at a 3:1 ratio for permanent impacts on riparian habitat, as described in Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan." Temporary impacts on grassland, scrub/shrub, and riparian habitat shall be restored on-site.	Before and during construction activities proposed to take place during the avian nesting season (February 15–September 15, annually). Submittal of a horned lark impact avoidance plan: Before issuance of grading permits.	Project applicant.	Humboldt County Planning & Building Department.		
3.5-13	Avoid Impacts on Nesting Birds. The project applicant shall minimize impacts on habitat supporting nesting birds, as described in Mitgation Measure 3.5-12, and shall implement Mitigation Measure 3.5-1c, "Develop and Implement a Worker Environmental Awareness Program," and measures for biological monitors. In addition, the project applicant shall implement the following measures to avoid directly or indirectly affecting nesting birds during project construction: • The project applicant shall conduct preconstruction nesting bird surveys to locate all active nests of special-status birds and birds protected under the MBTA, and California Fish and Game Code Sections 3503 and 3503.5. Before any construction activities occur during the general avian nesting season (March 1–August 31), including vegetation removal (if necessary), preconstruction nesting bird surveys shall be conducted by a qualified biologist to identify any nests within 250 feet of proposed work areas. The qualified biologist shall be knowledgeable in the distribution, habitat, life history, and identification of Northern California birds; experienced in nest searching for birds that may occur within the study area; and knowledgeable in survey protocols and/or permits needed to survey for federally listed or state-listed birds. If nests are detected during preconstruction surveys, a 250-foot exclusion zone shall be established around the nest in which no work will be allowed until the young have successfully fledged or nesting activity has ceased. The determination of fledging or cessation of nesting shall be made by a qualified biologist with experience in nest searching and monitoring for raptors, in consultation with CDFW and USFWS. In consultation with CDFW and USFWS, the qualified	Before and during construction activities proposed to take place during the general avian nesting season (March 1–August 31, annually).	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW and USFWS.		

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	biologist may modify the size of the exclusion zone depending on the species and the type of construction activity and associated disturbance anticipated near the nest. Active nest sites shall be monitored periodically throughout the nesting season to identify any sign of disturbance and to document nest status.					
3.5-14	Avoid and Minimize Operational Impacts on Nonraptor Birds. The project applicant shall implement the following measures in consultation with the project-specific bird TAC described in Mitigation Measure 3.5-11 to avoid and minimize operational impacts of the project on nonraptor birds: • Minimize Construction Footprint. The project applicant shall minimize the construction footprint to ensure that locations chosen for WTGs avoid known occurrences of all special-status nonraptor species to the greatest extent feasible. • Conduct Postconstruction Mortality Monitoring. PCMM studies shall be designed to ensure a minimum overall detection probability (g) for bats of 10 percent during "intensive" searches (first 3 years) and 3 percent for subsequent annual "road and pad" searches. The overall detection probability shall be calculated as described for marbled murrelet (Mitigation Measure 3.5-2b; Dalthorp et al. 2017). Achieving this level of detection for bats will ensure that the detection rates for small birds are sufficient as well, because small birds generally persist longer and are detected at higher rates than bats. • Calculate Detection Probability. The overall detection probability shall be calculated as described above for marbled murrelet and eagles, to represent the probability of detecting a carcass present on the site during the period of evaluation based on the results of searcher efficiency and carcass persistence trials, the proportion of WTGs covered, the proportion of carcasses falling within the search area, and the temporal extent of coverage. As described in Mitigation Measure 3.5-18b, this required level of detection is based on the need to accurately determine when the mortality rate of bats meets or exceeds 1.7 mortalities per MW per year, which would trigger adaptive management action. Meeting this requirement will also ensure that detection rates of small birds are adequate to identify when one or more species is experiencing significant mortality, because they are more readily detected and tend to persist for longer than bat carcasses. After collection of 3 years of postconstruction monitoring data, the Humboldt County Planning &	Avoidance and minimization of impacts: Before the start of project operation. Postconstruction mortality monitoring: First 3 years of project operation. Compensatory mitigation: Within 1 year of each documented instance of take thereafter. Written findings of take of listed species within 2 calendar days of take; Notification of CDFW or USFWS required or recommended actions for take within 3 days of receipt of such requirements or recommendations by either agency.	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW.		

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	Building Department will review the data and, in consultation with the bird TAC, the USFWS and CDFW, will determine which, if any, specific WTGs generate disproportionately high levels of avian mortalities (based on evidence of statistically significant higher levels of mortality relative to other WTGs). If specific WTGs are found to result in disproportionately high avian mortalities, the project applicant shall consult with the bird TAC and the County to evaluate any feasible measures that can be implemented at the discretion of the County to reduce or avoid mortalities at those specific WTGs. • Report Take. If unauthorized take of a federally listed or state-listed threatened or endangered avian species occurs during project operation, the project applicant shall immediately notify the appropriate agency (CDFW and/or USFWS) by phone. The project applicant shall then submit a written finding to the appropriate agency and the County and the bird TAC within 2 calendar days that describes the date, time, location, species, and if possible, cause of unauthorized take. The project applicant shall notify the County and the bird TAC within 3 calendar days of the receipt of any USFWS- and/or CDFW-required or recommended actions resulting from the unauthorized take, including whether an incidental take permit and/or additional requirements is deemed necessary by either agency. If the USWS and/or CDFW requires actions that involve compensatory mitigation that mitigation shall occur within 1 year of documentation of the take.					
3.5-15	Avoid and Compensate for Impacts on Bat Roosts. To avoid direct and indirect impacts on bats, the project applicant shall conduct a habitat assssment to determine whether potential bat roosts occur in or near the project area, and shall implement avoidance and minimization measures to protect bats and bat roosts as described below. 1 Conduct a habitat assessment to identify potential bat roost sites: a Trees, rock outcroppings, and structures to be removed shall be assessed for potentially suitable colonial roost habitat in advance of removal (Tatarian 2018). The assessment shall be conducted under the guidance of a qualified biologist with experience identifying bat roosts and approved by CDFW. The assessment shall emphasize trees and rock outcroppings that exhibit characteristics that provide high-quality roost habitat, such as snags with apparent cavities or sloughing bark, large-diameter trees with basal hollows, large-diameter trees with indications of senescence, live trees with dead tops, species that age or decay in a manner	Completion of habitat assessment before approval of grading or improvement plans or any ground-disturbing activities.	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW.		

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that creates cavities or large crevices (e.g., redwood, big-leaf maple, tanoak), and large rock outcroppings containing cave-like structures, or numerous fissures or flakes. 2 All potentially suitable roost habitat shall be rated on a scale of 1 to 3, as follows: 1 = unsuitable/low suitability, 2 = high suitability, 3 = identifiable roost. Avoid removal of confirmed roosts and highly suitable potential roost habitat: 3 Removal of roost habitat rated 2 or 3 shall be avoided to the extent feasible via project modifications (e.g., roadway realignment). When determining whether suitable roost habitat shall be preserved, the qualified biologist, in consultation with CDFW, shall consider whether preserving the habitat might lead to greater impacts (ongoing mortality) from wind farm operations than the impacts that would be caused by removal (exclusion and loss of habitat), depending on the location and significance of the suitable roost habitat. a If avoiding all potential and identifiable roost habitat rated 2 or 3 is not feasible, the qualified biologist shall visually inspect all accessible habitat during the daytime. During the inspection, the biologist shall identify characteristics that would make the habitat unsuitable for roosting bats (e.g., water intrusion, excessive airflow, indications of use by other wildlife) and for indications of use by bats (e.g., guano, urine or oil staining, bat smells, audible bat noises, visible bats). Visual inspections shall be aided as appropriate by the use of spotlights, binoculars, and borescopes, and shall avoid undue disturbance to roosting bats in a sensitive state (e.g., rearing or hibernation). Any roost habitat determined to be unsuitable shall be changed to a rating of 1. Any indications of bat use shall be recorded and the roost habitat shall be rated 3. 4 A qualified biologist who is experienced in surveying potential roost habitat, and who is approved by CDFW, shall survey all potential roost habitat rated 2 that is inaccessible for visual inspection to determine habitat use patterns. The survey design may include emergence surveys using night-vision technology, acoustic surveys, thermal surveys, or any combination of the above, as determined appropriate for specific site conditions by the qualified biologist, and as approved by CDFW. The surveyor shall attempt to determine whether the habitat serves as a day roost, night roost, maternity roost, and/or hibernacula; how many bats may use the habitat; and which species may use the habitat. To determine which seasons the roost is in use, such surveys may need to be conducted during all four seasons. Any habitat with indications of use shall be changed to a rating of 3. Any roost habitat that is surveyed sufficiently, as determined by the qualified biologist in consultation with CDFW, to indicate an absence of bat use shall be changed to a rating of 1. a As an alternative to doing extensive surveys to determine habitat use patterns and/or to determine whether the roost is used by Townsend's big-eared bat, the project applicant shall assume that all potential roost habitat rated 2 is identified roost habitat rated 3, and shall remove it and compensate for its loss as described below. 5 Adjust tree removal timing and approach to minimize impacts: a To the extent feasible, all tree removal shall occur in the fall (September 1–October 31, with adjustments possible depending on weather conditions and as approved by CDFW) to					

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minimize impacts on foliage-roosting bat species, and on any colonial tree-roosting species not detected during the habitat assessment and surveys. All trees rated 3 shall only be removed outside of their season(s) of use, or in the fall. b The project applicant shall implement a staged approach to tree removal under the guidance of the qualified biologist who has experience identifying bat roosts. The purpose of the staged approach is to encourage any bats in residence to leave before habitat is removed. Where roost habitat rated 2 or 3 must be removed, habitat rated 1 shall be removed at least 1 day and no more than 5 days before habitat rated 2 or 3. In addition, if roost habitat rated 3 must be removed, the qualified biologist shall develop a tree removal approach to further encourage any bats in residence to leave before any trees are removed. This approach shall be developed in consultation with CDFW and may include such measures as limbing the tree a day before felling the tree; opening up the potential roost habitat to introduce disturbing airflow; introducing nighttime lighting or other disturbing elements to the roost area; or excluding bats from the habitat, either physically with the use of one-way doors, or with the use of acoustic deterrents, as practical. 6 Compensate for the loss of essential Townsend's big-eared bat roost habitat: a All essential Townsend's big-eared bat roost habitat being removed shall be replaced with artificial roost habitat constructed to mimic the specific type of roost habitat being removed. The design and location of the artificial roost habitat shall be approved by CDFW, and may include the creation of basal hollows in existing trees, or constructed artificial roosts. b Based on the judgment of the qualified biologist and in consultation with CDFW, replacement habitat shall be located near suitable foraging habitat, and within a suitable distance of the habitat removed, to benefit the local bat populations affected. Bat occupancy performance standards, provisions for long-term protection, and a monitoring approach for the replacement habitat shall be approved by CDFW before the roost is removed. 7 Avoid and minimize temporary impacts on roost sites during construction: a *Conduct a habitat assessment.* Trees, rock outcroppings, and structures located within a minimum 100-foot buffer area from anticipated construction disturbance areas shall be assessed as part of the habitat assessment described above in Measure 1. The buffer area will generally include all habitat within the line of sight from the edge of the disturbance area. However, the buffer area may be field-fit and expanded as necessary by the qualified biologist, depending on the severity of planned disturbance and any visual or acoustic screening that may exist (e.g., dense vegetation can reduce noise levels by 10 dBA more than 200 feet [U.S. Department of Transportation 2011 in Caltrans 2016]). b *Avoid and minimize disturbance of potential roost habitat.* Disturbance of all habitat rated 2 or 3 shall be avoided to the extent feasible via project modifications. If avoiding all habitat rated 2 or 3 is not possible, a qualified biologist, in consultation with CDFW, shall assess the degree of anticipated disturbance and probable species sensitivity. If warranted, the qualified biologist shall develop and implement impact minimization measures that are appropriate to site conditions. He or she shall consider that some degree of construction disturbance to					

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	species with high roost fidelity may be less disruptive than implementation of certain minimization measures (e.g., temporary exclusion). Impact minimization measures may include the following: ▪ Delaying work in a buffer area around the suitable roost habitat until spring or fall when all bats would be volant and could fly away from the disturbance area. An appropriate buffer may be approximately 100 feet depending on site specifics, but greater avoidance distances might be needed to allow noise to attenuate to approximately background levels to achieve optimal noise avoidance (Johnston et al. 2004). ▪ Modifying construction techniques, equipment, and/or timing to use less disruptive approaches. Examples of less disruptive approaches include using equipment that emits noise at a lower decibel level and/or at lower frequencies outside the ranges that bats can hear; scheduling intermittent highly disruptive activities during the spring and fall when bats are the least sensitive; and conducting intermittent highly disruptive activities when atmospheric conditions are favorable. (For example, noise travels farther during periods of higher humidity or lower temperatures [Washington Department of Transportation 2015 in Caltrans 2016]). ▪ Installing sound or vision barriers between the suitable roost habitat and the construction. ▪ Starting the disturbance before the sensitive season(s) and continuing into the sensitive season(s), so that bats can avoid establishing a maternity or hibernation roost in the area of disturbance, or can become desensitized to the disturbance before their sensitive season(s). ▪ Avoiding the use of nighttime lighting and/or disruptive work around important night roosts. ▪ Temporarily excluding bats before their sensitive seasons and before construction disturbance. As an alternative to implementing Measures 5a and 5b listed above, all highly suitable roost habitat may be surveyed as described above in Measure 2. If the qualified biologist determines that survey approaches and results are sufficient to indicate an absence of bats in the potential roost habitat, no further action is required.					
3.5-18a	Avoid and Minimize Bat Population Level Decline through Consultation with a Technical Advisory Committee. To minimize the risk of bat mortality and preclude the project's contribution to significant impacts on local and regional bat populations, a technical advisory committee (TAC) shall be formed by the Humboldt County Planning & Building Department and funded by the project applicant. The TAC shall evaluate postconstruction monitoring data to determine whether bat mortality attributable to the project poses a potential for a significant impact on the local and regional bat population if left unabated. The TAC's duties shall include but not be limited to the following:	Submittal of post-construction mortality monitoring plan: 4 months before project operation. Annual reporting: for the life of the project	Project applicant and Humboldt County Planning & Building Department.	Humboldt County Planning & Building Department.		

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• review protocol for post-construction fatality monitoring and bat activity monitoring; • reviewing and interpreting postconstruction fatality data and bat survey data; • assessing whether bat mortality attributable to the project poses a potential for a bat population to drop below self-sustaining levels if left unabated; and • strategically identifying operational minimization measures that will most efficiently minimize impacts on bat populations while recognizing the operational needs of the facility. The TAC will be established at least four months before operation of the project begins, will review and approve the proposed post-construction fatality and bat activity monitoring protocol, and will have the ability to identify necessary changes of protocol in subsequent years to address changing circumstances. The TAC will operate under the authority of the Director of the Humboldt County Planning and Building Department and all actions/recommendations of the TAC will be implemented as a requirement of the Department. The TAC will be actively engaged during the first year of operational data collection to evaluate the mortality monitoring results. The applicant shall provide the TAC with fatality data for the first high risk season, (August to mid-October) and after Year 1 of monitoring and then annually each year thereafter. The TAC will be authorized to require commencement of adaptive management described in Mitigation Measure 3.5-18d following reporting of the interim monitoring results. Year 1 of monitoring will begin immediately following the start of operations and will continue for 12 months. Thereafter the TAC will meet annually within a month of receipt of the annual fatality monitoring reports and will provide recommendations in the form of a technical memorandum to the Humboldt County Planning & Building Department Director within two months of the annual meeting. The TAC may meet more frequently as deemed necessary by the County. The TAC will be maintained and provide technical memorandum for a minimum period of five years after submittal of the first annual monitoring report. The TAC shall remain active until the number of fatalities per year has stabilized at a level that does not have the potential to reduce the population of hoary bats below a self-sustaining level. Operation of the TAC may be extended for as long as deemed necessary by the County in consultation with the TAC. The County may appoint an independent TAC Facilitator whose duties include disseminating project data, setting up and moderating meetings, preparing agendas and meeting summaries, and preparing technical memorandum. The decision-making process for the TAC recommendations will be by majority vote. In the event the TAC finds that action is needed, to avoid and minimize significant operational impacts of the project on bats, the TAC shall require the implementation of the step-wise bat impact mitigation strategy provided in Mitigation Measure 3.5-18d, below. This measure is based on the reduction of impacts on hoary bats and would have benefits to other bat species. The TAC will provide a report of its findings to the Humboldt County Planning & Building Department Director on an annual basis, or at less frequent intervals if determined by the TAC that annual reporting is not necessary. TAC findings for implementation of mitigation actions shall be					

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	submitted to the Humboldt County Planning & Building Department Director, who will communicate those findings to the applicant and who will carry out the findings of the TAC, consistent with the step-wise table described in Mitigation Measure 3.5-18d. The project applicant shall provide sufficient funding to establish and maintain the TAC for the duration of monitoring. The TAC shall consist of at least three (3) and no more than seven (7) appointees and shall consist of an odd number of voting participants. New appointees shall be recommended to the Humboldt County Planning Commission for ratification as needed to fill vacancies based on recommendations from CDFW and the Humboldt County Planning and Building Department. The TAC shall be composed of individuals who are recognized subject matter experts with expertise in bat biology and ecology and knowledge of wind-wildlife interactions, and shall include but not be limited to representatives from the following organizations: • Humboldt County Planning & Building Department • CDFW • Research organizations or agencies with staff dedicated to bat research (e.g., Bat Wind Energy Cooperative, American Wind Wildlife Institute, Humboldt State University, US Forest Service Pacific Southwest Research Station, USGS) • Humboldt Wind, LLC (operator of facility) • Any other member determined to be necessary by Humboldt County to provide additional understanding of the environmental conditions affecting bats. A representative from the operator of the facility and a representative from the Humboldt County Building & Planning Department will participate in the meetings to provide advice as needed, but will not be voting members.					
3.5-18b	Conduct Bat Surveys and Mortality Monitoring. To inform operations and resource management practices, the project applicant shall conduct surveys to assess and monitor bat use across the project site. Surveys shall be designed for determining whether bat presence in the project area can be used to refine operations to minimize bat fatalities and loss of energy generation. Study designs shall be developed in consultation with the TAC. Surveys shall be designed for determining whether, when, and where bats—particularly hoary bats—move through the project site and in what numbers. The study design may include a combination of study methods, such as radiotelemetry monitoring using Motus stations, thermal imaging, radar studies designed to detect the elevations at which bats fly through the project area, and acoustic studies conducted at WTG elevations (Weller, pers. comm., 2018; Johnston, pers. comm., 2018). The project applicant shall conduct mortality monitoring across the project site to inform resource management practices, to aid in refining operational minimization measures for minimizing bat fatalities and loss of energy generation, and for assessing the effectiveness of other impact	Before and during project operation.	Project applicant.	Humboldt County Planning & Building Department .		

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	minimization measures currently in development that may be implemented as they become available. The monitoring protocol (i.e., field protocol) and data evaluation methods (e.g., statistical and modeling approaches) shall be developed in consultation with the TAC. The monitoring protocol and evaluation methods used shall incorporate "lessons learned" from other recent monitoring efforts (e.g., Golden Hills North Wind Energy Center), and may include the use of scent detection dogs and data analysis approaches developed by USGS (GenEst, Evidence of Absence model), as appropriate. PCMM studies shall be designed to ensure a minimum overall detection probability (g) for bats of 10 percent during "intensive" searches (first 3 years) and 3 percent for subsequent annual "road and pad" searches. The overall detection probability shall be calculated as described for marbled murrelet (Mitigation Measure 3.5-2b; Dalthorp et al. 2017). The overall detection probability shall be calculated as described above for marbled murrelet and eagles, to represent the probability of detecting a carcass present on the site during the period of evaluation based on the results of searcher efficiency and carcass persistence trials, the proportion of WTGs covered, the proportion of carcasses falling within the search area, and the temporal extent of coverage. This required level of detection is based on the need to accurately determine when the mortality rate of hoary bats meets or exceeds mortality rates that may trigger adaptive management action. The TAC may determine that intensive searches are needed beyond the first 3 years of operation to provide enough iterations to determine the best operational protocols to minimize mortality and loss of energy generation. The project applicant shall report bat survey and mortality data to BatAMP, the Wildlife Response and Reporting System, the Biogeographic Information and Observation System Program, and other organizations that collaboratively collect and analyze these data, in accordance with California Energy Commission guidelines, and as directed by the TAC. The project applicant shall implement an employee wildlife incident reporting program to document and report any unanticipated or unusual events (e.g., a large-scale bat fatality event or atypical fatality pattern) discovered outside the course of standardized postconstruction monitoring. Such discoveries shall be reported to the TAC for a root cause analysis, and operational minimization measures shall be developed and implemented to reduce the likelihood of such events occurring again.					
3.5-18c	Design and Operate Facility Lighting to Avoid Attracting Bats into Rotor Paths. Light sources required for operations shall be located, shielded, and oriented to avoid attracting bats into the rotor path of any WTGs. Lighting near WTGs shall be motion-activated, shall emit no light during the "off" phase, and shall be set for short durations when activated.	During project operation.	Project applicant.	Humboldt County Planning and Building Department.		
3.5-18d	Implement Operational Minimization Measures. If the TAC determines that the results of mortality monitoring at the project indicate that hoary bat mortality attributable to the project poses a significant impact to the hoary bat population, the step-	During project operation.	Project applicant.	Humboldt County Planning and		

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wise adaptive management identified below shall be implemented. The measure for determining this level of effect will be a hoary bat fatality rate of 1.7 hoary bats/MW/year, as corrected for searcher efficiency and scavenging. The TAC may adopt a lower bat mortality threshold if it is deemed necessary to prevent population level decline. This measure is based on the reduction of impacts on hoary bats and would have benefits to other bat species. If any year of post-construction fatality monitoring, including the first interim report described above, determines that corrected hoary bat fatality rates exceed this value the measures described below will be implemented. TAC may provide recommendation on modifications to the stepwise approach described below as needed to prevent any bat population from dropping below self-sustaining levels.			Building Department.		

Summary of Hoary Bat Mitigation Measures using a Step-wise Approach:
To be Implemented When Hoary Bat Mortality above 1.7 bats/MW/year Occurs.

Threshold or Trigger	Mitigation Measure
Hoary bat mortality exceeds 1.7 bats/MW within a 1-year period.	STEP II: Evaluate the mortality data for hoary bat fatality for specific locations, seasons, or meteorological events. Establish the exceedance value of mortality of hoary bats as a percentage above the threshold of 1.7 bats/MW/year. Using the percentage exceedance value, target installation of additional deterrents necessary to reduce hoary bat mortality to below 1.7 bats/MW/year. Install deterrents strategically based upon mortality data. If hoary bat mortality exceedance is determined the data shall be studied to determine if there are specific turbines or groups of turbines causing high mortality deterrents shall be applied to these specific turbines. Perform mortality monitoring the following year.

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	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	<table><tr><td>Hoary bat mortality exceeds 1.7 bats/MW the year following Step I.</td><td>STEP II: Evaluate the mortality data for hoary bat fatality for specific locations, seasons, or meteorological events. Establish the exceedance value of mortality of hoary bats as a percentage above the threshold of 1.7 bats/MW/year. Using the percentage exceedance value, target installation of additional deterrents necessary to reduce hoary bat mortality to below 1.7 bats/MW/year. Install deterrents strategically based upon mortality data. If hoary bat mortality exceedance is determined the data shall be studied to determine if there are specific turbines or groups of turbines causing high mortality and deterrents shall be applied to these specific turbines. Perform mortality monitoring the following year.</td></tr><tr><td>Hoary bat mortality exceeds 1.7 bats/MW the year following Step II</td><td>STEP III Engage the TAC and implement their recommendations for a low-wind speed curtailment strategy. The strategy will use patterns in hoary bat fatality documented during previous years of monitoring and bat activity data to design a smart curtailment program that reduces exposure of hoary bats to operating turbines to a level that drops the hoary bat fatality rate to below 1.7/MW/year. The project would curtail during high risk periods, at night (sunset to sunrise) and would not exceed two months (consecutive or aggregate) in duration. Curtailment would occur when the 10-minute average wind speed (measured and implemented on an individual turbine basis) is 5.0 m/s or less. Below this wind speed, turbine blades will be feathered such that rotor rotation is 2 rpm or less. Perform mortality monitoring the following year. The TAC may recommend additional monitoring beyond one year to confirm effectiveness of curtailment.</td></tr></table> It is anticipated that use of acoustic deterrents, and if necessary smart curtailment as described above in Step III of the table, will successfully maintain the hoary bat fatality rate below 1.7/MW/year. The TAC will oversee that implementation of these measures, as deemed necessary based on fatality monitoring results and will review the results of each year of fatality monitoring designed to evaluate the effectiveness of each mitigation measure that is implemented.					
3.5-18e	Implement American Wind Energy Association Best Management Practices The project will implement an operations-phase best management practice endorsed by the American Wind Energy Association called feathering below normal cut-in speeds. Under this practice the turbines are programed using the automatic Supervisory Control and Data Acquisition system so that when wind speeds are below the turbine manufacturer's normal cut-in speed during the nighttime hours, blades are pitched to a low angle to the wind. This results in turbine rotors spinning at 1-2 rpm, at most, which significantly reduces the chance of bat collisions with the turbine blades.	During project operation.	Project applicant.	Humboldt County Planning and Building Department		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
3.5-19a	Minimize Impacts on Wildlife and Monitor during Construction. The project applicant shall retain qualified biological monitors to continuously implement the following measures during construction to minimize impacts on wildlife and sensitive habitats: • Monitor construction activity for compliance with all project permits and the approved mitigation and monitoring program for the project; report on monitoring activities as required by project permits. • All fences installed on the project site shall be a maximum of 4 feet in height, wire strand, with a smooth bottom wire at least 18 inches from the ground to facilitate wildlife movement during operation of the project. • During construction activities, if an injured or dead special-status species is encountered, the work shall stop within the immediate vicinity. The project applicant shall notify the biological monitor, and the appropriate resource agency (e.g., USFWS or CDFW). Any measures required by these agencies be implemented and proof of implementation shall be submitted to the agencies before construction is allowed to proceed. • At the end of each work day, the biological monitor shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with exclusion fencing. If any wildlife species become entrapped, construction shall not occur until the animal has left the trench or been removed by a qualified biological monitor as feasible. • Employees and contractors shall look under vehicles and equipment for the presence of wildlife before moving vehicles and equipment. If wildlife is observed, no vehicles or equipment would be moved until the animal has left voluntarily or is removed by the biological monitor. No federally listed or state-listed species shall be handled. • Vehicle speed limits shall not exceed 15 miles per hour during construction and operation of the project. A speed limit sign shall be posted at all project site entry locations. • The use of high-intensity lighting, steady burning, or bright lights such as sodium vapor, quartz, halogen, or other bright spotlights shall be continuously minimized. Nighttime vehicle traffic associated with project activities shall be kept to a minimum volume and speed to prevent mortality of nocturnal wildlife species.	Continuously during all project-related construction activities.	Project applicant.	Humboldt County Planning & Building Department.		
3.5-19b	Avoid and Minimize Impacts on Special-Status Mammals and Associated Habitats. To avoid and minimize impacts on special-status wildlife and associated habitats, the project applicant shall implement the following measures: • Mitigation Measure 3.5-1c, "Develop and Implement a Worker Environmental Awareness Program"	Before approval of grading or improvement plans or any ground-disturbing activities	Project applicant.	Humboldt County Planning & Building Department.		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	• "Minimize Construction Footprint" in Mitigation Measure 3.5-14, "Avoid and Minimize Operational Impacts on Nonraptor Birds" • Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan" • Mitigation Measure 3.5-22b, "Implement Siting Constraint Measures to Delineate and Protect Aquatic Resources" Mitigation Measure 3.10-1, "Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan," in Section 3.10, "Hydrology and Water Quality"					
3.5-19c	Develop and Implement a Preconstruction Survey Plan for Special-Status Mammals. Before approval of grading or improvement plans, a qualified biologist shall prepare a preconstruction survey plan for special-status mammals. The survey plan shall address the following special-status species: Sonoma tree vole, ringtail, Pacific fisher, and American badger. Survey techniques and methodologies described in the plan may incorporate those described in *Sonoma Tree Vole Habitat on Managed Redwood and Douglas-fir Forestlands in North Coastal California* (Chinnici et al. 2011) and the *Fisher and Marten Survey Techniques on the Tahoe National Forest* (Fowler and Golightly 1994). The survey plan shall include the following elements: • The survey area shall be conducted in a buffer 150 feet from the boundary of construction disturbance in areas with suitable habitat for these species. • If occupied burrows, dens, or nests are detected, impacts shall be avoided by establishing 50-foot exclusion buffers within which construction activities shall be prohibited until denning/nesting activities are compete or the den/nest is abandoned. • Occupied dens/nests shall be monitored once per week to assess disturbance and use status. • If avoidance of a den/nest is infeasible, the project applicant shall coordinate with CDFW to passively relocate the mammal. The project applicant shall submit the special-status mammal survey plan for approval to the Humboldt County Planning & Building Department before approval of grading or improvement plans, and surveys shall be conducted before ground-disturbing activities.	Before approval of grading or improvement plans or any ground-disturbing activities.	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW.		
3.5-19d	Minimize Impacts on Special-Status Mammals during Construction. The project applicant shall continuously implement the following measures to minimize impacts on wildlife during ongoing construction activities: • All fences installed on the project site shall be a maximum of 4 feet in height, wire strand, with a smooth bottom wire at least 18 inches from the ground to facilitate wildlife movement during project operation. • During construction activities, if an injured or dead special-status species is encountered, the construction contractor shall stop work within the immediate vicinity. The project applicant shall notify the Humboldt County Planning & Building Department, the on-call biologist, and the	Continuously during all project-related construction activities.	Project applicant.	Humboldt County Planning & Building Department.		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	appropriate resources agency (e.g., USFWS or CDFW) before construction is allowed to proceed. • At the end of each work day, the biological monitor shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with exclusion fencing. If any wildlife becomes entrapped, construction shall not occur until the animal has left the trench or been removed by a qualified biological monitor as feasible. • Employees and contractors shall look under vehicles and equipment for the presence of wildlife before moving vehicles and equipment. If wildlife is observed, no vehicles or equipment shall be moved until the animal has left voluntarily or is removed by the biological monitor. No listed species shall be handled. • Vehicle speed limits shall not exceed 15 miles per hour during construction and operation of the project. A speed limit sign shall be posted at all project site entry locations. • The project shall continuously minimize use of high-intensity lighting, steady burning, or bright lights such as sodium vapor, quartz, halogen, or other bright spotlights. • Nighttime vehicle traffic associated with project activities shall be kept to a minimum volume and speed to prevent mortality of nocturnal wildlife species.					
3.5-19e	Restore Special-Status Mammal Habitat. The project applicant shall implement Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan," and include performance standards, and a monitoring and reporting program to track revegetation and/or enhancement success.	Preparation and development of reclamation, revegetation, and weed control plan before approval of grading or improvement plans or any ground-disturbing activities; implementation of the plan within 1 year of the commencement of construction activities.	Project applicant.	Humboldt County Planning & Building Department.		
3.5-21a	Avoid and Minimize Impacts on Aquatic, Riparian, and Upland Habitats.	Continuously during all project-	Project applicant.	Humboldt County Planning &		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	The project applicant shall avoid and minimize removal and disturbance of aquatic, riparian, and upland habitats that could support special-status amphibians and reptlies by implementing the following measures: • Mitigation Measure 3.5-1c, "Develop and Implement a Worker Environmental Awareness Program" • "Minimize Construction Footprint" in Mitigation Measure 3.5-14, "Avoid and Minimize Operational Impacts on Nonraptor Birds" • Mitigation Measure 3.5-22b, "Implement Siting Constraint Measures to Delineate and Protect Aquatic Resources" • Mitigation Measure 3.5-22d, "Avoid Potential Effects on Aquatic Resources Associated with Horizontal Directional Drilling" • Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan" • Mitigation Measure 3.10-1, "Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan," in Section 3.10, "Hydrology and Water Quality"	related construction activities.		Building Department.		
3.5-21b	Avoid and Minimize Impacts on Special-Status Amphibians and Reptiles. The project applicant shall avoid and minimize impacts on foothill yellow-legged frog, northern red-legged frog, Pacific tailed frog, southern torrent salamander, and western pond turtle by implementing the mitigation measures listed above and Mitigation Measure 3.5-19a, "Minimize Impacts on Wildlife and Monitor during Construction."	Continuously during all project-related construction activities.	Project applicant.	Humboldt County Planning & Building Department.		
3.5-21c	Develop and Implement a Preconstruction Survey Plan for Special-Status Amphibians and Reptiles. The project applicant shall implement preconstruction surveys as described below. The preconstruction survey plan shall identify, at minimum, the following information for each special-status amphibian species and western pond turtle: • The life stage(s) to be surveyed for • Survey method(s) • Timing of survey(s) • Justification for timing and methodology of survey design (e.g., watershed characteristics, regional snowpack, timing and rate of spring runoff, day length, average ambient air and water temperatures, local and seasonal conditions) The project applicant shall conduct preconstruction surveys for special-status amphibians and western pond turtles. Preconstruction surveys shall include, at minimum, the following provisions: • Surveys shall be conducted by a qualified biologist within 3–5 days before entering or working within suitable aquatic and/or upland habitat.	Preconstruction survey 3-5 days before before entering or working within suitable aquatic and/or upland habitat. .	Project applicant.	Humboldt County Planning & Building Department		

Mitigation Monitoring and Reporting Program

Mitigation Measures		Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	• Surveys shall be conducted within the boundaries of the proposed worksite plus a 500-foot buffer zone upstream and downstream of the construction area. • Surveys shall include a description of any standing or flowing water. • Surveys shall consist of "walk and turn" surveys during which the biologist shall examine areas beneath surface objects (e.g., rocks, leaf litter, moss mats, coarse woody debris) for salamanders, and conduct visual surveys for frogs and western pond turtle. • If special-status amphibians or reptiles are detected during the preconstruction survey, impacts shall be avoided by establishing an exclusion buffer of no less than 50 feet within which construction activities shall be prohibited. A qualified biologist shall be on-site during all nearby construction activities. If the biologist determines that the habitat is no longer occupied, construction may proceed within the exclusion buffer. If avoidance is infeasible, the project applicant shall coordinate with CDFW to passively relocate the special-status amphibian or reptile.					
3.5.21d	Avoid and Minimize Impacts on Foothill Yellow-Legged Frog. A qualified biologist shall conduct a visual preconstruction survey for foothill yellow-legged frog in or within 200 feet of suitable habitat 48 hours before the start of construction. The biologist shall be familiar with the life cycle of this species and shall conduct surveys appropriate to the life stage anticipated to be present in the project area at the time of year during which surveys are being undertaken. If foothill yellow-legged frog is detected during surveys, the project applicant shall implement avoidance measures included in the incidental take permits obtained by CDFW. Avoidance and minimization measures for foothill yellow-legged frog shall include, as appropriate, the following components: • Seasonal work restriction • Exclusion fencing • Decontamination • No night work or lighting • Water diversion • Water storage facilities • Season of diversion • Bypass flow • Diversion materials • Diversion monitoring	Preconstruction survey 48 hours before the start of construction Implementation of avoidance measures during all project-related construction activities.	Project applicant.	Humboldt County Planning & Building Department. , in consultation with CDFW.		

Mitigation Monitoring and Reporting Program

Mitigation Measures		Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	If foothill yellow-legged frogs are found during the preconstruction survey, the project applicant shall consult CDFW immediately by either telephone or e-mail and shall provide a short description of observations, including a count of individuals and the life stage(s), conditions at the site, and other aquatic species observed. If no foothill yellow-legged frogs are found during the preconstruction survey and no surface water is present in the project area, work may commence without further surveys or construction restrictions. If no foothill yellow-legged frogs are found but surface water is present during the preconstruction survey, or if surface water becomes present at any time during the work period, the biologist shall survey the worksite each day before the start of work activities where equipment and/or materials may come in contact with such water.					
3.5-21e	Compensate for Impacts on Aquatic and Upland Habitats for Foothill Yellow-Legged Frog. The project applicant shall provide compensatory mitigation for permanent impacts on aquatic, riparian, and associated upland habitats for foothill yellow-legged frog at a minimum 1:1 ratio. Within 2 years following the first delivery of power, the project applicant shall purchase and record the mitigation lands as off-site conservation land in fee-title and/or easement for suitable habitat that would support foothill yellow-legged frogs. The County, in consultation with CDFW, shall approve the location of the conservation land or easement. Mitigation for other sensitive habitats (riparian, wetlands, and sensitive natural communities) can be counted toward fulfillment of this mitigation.	Avoidance and minimization of impacts: Before approval of grading or improvement plans or any ground-disturbing activities. Preconstruction survey plan: Submittal of plan at least 3 months before submittal of grading or improvement plans. Approval of survey plan must be granted before approval of grading or improvement plans or any ground-disturbing activities. Compensatory mitigation: Continuously during all project-	Project applicant.	Humboldt County Planning & Building Department, in consultation with CDFW.		

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Mitigation Measures		Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
		related construction activities, with completion within 1 year of completion of construction. Purchase and recordation of mitigation land in fee-title and/or easement: 2 years after first delivery of power.				
3.5.22a	Avoid and Minimize Impacts on Aquatic Resources. The project applicant shall implement the following mitigation measures: • Mitigation Measure 3.5-1c, "Develop and Implement a Worker Environmental Awareness Program" • "Minimize Construction Footprint" in Mitigation Measure 3.5-14, "Avoid and Minimize Operational Impacts on Nonraptor Birds" • Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan" • Mitigation Measure 3.10-1, "Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan," in Section 3.10, "Hydrology and Water Quality" In addition, the project applicant shall coordinate with Humboldt County to implement the Five Counties Salmonid Conservation Program to protect water quality for listed salmonids during activities associated with construction of access roads, including culvert installation, in accordance with the *Five Counties Salmonid Conservation Roads Maintenance Manual.* This manual (Five Counties Salmon Conservation Program 2002) provides a framework for implementing improved road maintenance practices and was developed with input from CDFW Region I, the North Coast RWQCB, and NMFS. The manual, which was adopted by the County in 2010, includes guidelines and procedures for protecting listed salmonids in the context of road construction and maintenance, including measures for culvert maintenance, soil disposal, bridge maintenance, monitoring practices, staff training, BMP designs, culvert criteria for fish passage, and water drafting guidelines.	Before approval of grading or improvement plans or any ground-disturbing activities.	Project applicant.	Humboldt County Planning & Building Department.		
3.5.22b	Implement Siting Constraint Measures to Delineate and Protect Aquatic Resources.	Before approval of grading or	Project applicant.	Humboldt County Planning &		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	The project applicant shall assign a qualified biologist to flag or fence aquatic habitats to clearly delineate the extent of construction. All crews shall be provided a set of drawings showing the locations of aquatic habitats in and near the work area.	improvement plans or any ground-disturbing activities.		Building Department.		
3.5-22c	Avoid Impacts on Sediment and Habitats in Humboldt Bay and Implement Eelgrass Monitoring and Protection Plan. The project applicant shall avoid all impacts on sediment and adjacent habitats (such as eelgrass beds) in Humboldt Bay by using existing shipping channels and pinning the barge against wooden piles connected to the shore by a mooring line. The barge shall not come in contact with Humboldt Bay sediment or habitats at any time. The project applicant has developed an eelgrass monitoring and protection plan to ensure that eelgrass beds will not be adversely affected during offloading of components in Humboldt Bay. The project applicant shall implement the following mitigation and monitoring measures in the eelgrass monitoring and protection plan to avoid impacts on eelgrass. 1 Depths along the outer margin of the piling field, which extends approximately 60 feet beyond the terminal wall within the project area, range from -5 feet at the northern end of the terminal, to less than -1 ft MLLW at the gap in the piling field (see Figure 1 in *Eelgrass Avoidance Recommendations for the Humboldt Wind Energy Project* prepared by Merkel & Associates, Inc. June 2019, Appendix B in this FEIR). Eelgrass occurs at depths ranging from approximately -5.4 ft to +1.1 feet MLLW within the project area. To avoid impacts to eelgrass, tug/barge operators shall maintain a minimum operational buffer distance of 10 feet from the perimeter of mapped eelgrass beds with respect to barge positioning and spud leg mooring placement and be aware of shallow shoals near the southern periphery of the piling field where the risk of grounding in eelgrass habitat is greatest (Figure 3.5-4 in Appendix C of this FEIR). 2 Eelgrass bed margins within the APE boundary (shown in Figure 2 in *Eelgrass Avoidance Recommendations for the Humboldt Wind Energy Project* prepared by Merkel & Associates, Inc. June 2019, Appendix B in this FEIR) shall be staked with PVC posts prior to commencement of offloading activities to provide visual guidance for operators to avoid eelgrass beds with respect to tug thrusting as well as barge and spud leg mooring placement. To avoid grounding or tug thrust impacts during barge repositioning, the barge operators shall move the barges out to the main channel to rotate them due to the narrow dimensions and presence of eelgrass on both sides of the terminal channel. The project applicant shall complete pre and post-construction eelgrass surveys in accordance with the *California Mitigation Policy and Implementing Guidelines* (NOAA 2014b) to confirm that impacts on eelgrass have been avoided during the offloading operation. These guidelines require completion of pre-implementation surveys within the project APE and appropriate reference site(s) within the active growth period for eelgrass (May – September) 60 days prior to the commencement of the project. Post-construction surveys of the APE and reference site shall be completed within 30 days following the completion of barge offloading activities, or within the first 30 days of the next active growth period following project implementation that occurs outside the	Pre-implementation surveys within the project APE and appropriate reference site(s) within the active growth period for eelgrass (May – September) 60 days prior to the commencement of the project. Post-construction surveys of the APE and reference site completed within 30 days following the completion of barge offloading activities, or within the first 30 days of the next active growth period following project implementation that occurs outside the active growing season. Survey reports submitted within 30 days of completion of each survey	Project applicant.	Humboldt County Planning & Building Department, CDFW.		

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Mitigation Measures		Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	active growing season. All monitoring shall be conducted by qualified biologists who are experienced with eelgrass monitoring. Survey reports shall be submitted to the appropriate state and federal resource/regulatory agencies and to the Humboldt County Planning & Building Department within 30 day of completion of each survey.					
3.5-23a	Conduct Preconstruction Botanical Surveys for Special-Status Plants. The project applicant shall conduct appropriately timed botanical surveys before construction for all areas of ground disturbance that could support special-status plant populations. A qualified biologist shall be present during construction activities to ensure that special-status plants are flagged for avoidance during preconstruction surveys. Floristic surveys shall be conducted by a qualified botanist during the species' blooming period in accordance with methods described in CDFW's 2018 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018b). The results of the survey shall be presented in a report submitted to Humboldt County and CDFW no later than August 2019. If additional special-status plants are detected in the project area, they shall be incorporated into project siting, design, avoidance, and management in accordance with Mitigation Measures 3.5-23b through 3.5-23d below.	Appropriately timed surveys prior to construction; presence of qualified biologist to ensure avoidance during construction near flagged special-status plant populations. Submittal of survey report in August of year survey was completed	Project applicant.	Humboldt County Planning & Building Department.		
3.5-23b	Avoid and Minimize Impacts of Project Construction on Special-Status Plants. Known occurrences of special-status plants shall be flagged during preconstruction surveys and avoided to the greatest extent feasible. Avoidance measures may consist of placing an equipment limitation or equipment exclusion zone around special-status plant populations to minimize direct impacts while allowing the use of any existing roads or other access areas that may pass through the equipment limitation zone or near the equipment exclusion zone. If impacts on Siskiyou checkerbloom cannot be avoided, then a qualified biologist shall map the location and extent of potentially affected populations in the project impact area during preconstruction surveys, and shall quantify the anticipated loss for mitigation. To control invasive/noxious weeds, the project applicant shall implement Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan," before construction begins. The project applicant shall return all temporarily disturbed areas to their natural condition by implementing the project reclamation, revegetation, and weed control plan.	Flagging prior to construction.	Project applicant.	Humboldt County Planning & Building Department.		
3.5-23c	Compensate for Permanent Effects of Project Construction on Special-Status Plants and Associated Habitats. Where occurrences of special-status plants cannot be avoided, the reclamation, revegetation, and weed control plan shall include seed, plant, and/or topsoil salvage. Topsoil, seeds, and/or plants	*Approval of final Reclamation, Revegetation, and Weed Control*	Project applicant.	Humboldt County Planning & Building Department.		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
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	shall be replaced in the approximate location of their removal after project construction has been completed, or in another location within the project area with suitable habitat. In addition, mitigation for permanent loss for sensitive natural communities (Mitigation Measures 3.5-24a through 3.5-24c, below) will benefit the special-status plant species supported in those communities.	*Plan:* Before issuance of grading permits or initiation of vegetation-disturbing activities. *Monitoring of and* reporting *on restored habitat:* Minimum of 5 years or until established success criteria have been met.				
3.5-23d	Compensate for Impacts on Siskiyou Checkerbloom. For any unavoidable impacts on Siskiyou checkerbloom, the project applicant shall implement the*Humboldt Wind Revegetation, Reclamation and Weed Control Plan* in Appendix B of this FEIR. The mitigation strategy shall include performance standards for successful (re)establishment of Siskiyou checkerbloom and/or enhancement of existing habitat, and a monitoring and reporting program to track revegetation and/or enhancement success. This plan shall be developed in consultation with CDFW and shall be approved by Humboldt County before construction begins. Mitigation shall be at least 1.5:1 for the actual impact. • The acreage to Siskiyou checkerbloom populations, calculated per as-built construction drawings and the results of the preconstruction plan surveys. • The revegetation plan shall include the following provisions for the restoration and/or enhancement of affected Siskiyou checkerbloom plants: • Before project disturbance, identification of restoration areas within the project site for seeding and/or transplanting of Siskiyou checkerbloom, with data collection to determine appropriate microsites • Before project disturbance, measurement of existing Siskiyou checkerbloom populations within the project site for percent cover and density and establishment of these characteristics as the minimum success criteria for the species' cover and density as a result of restoration/enhancement. • A plan and protocols for appropriate and ecologically sensitive collection and storage of Siskiyou checkerbloom seeds, rhizomes, and plants from the project site. • Transplanting and seeding protocols for Siskiyou checkerbloom.	*Approval* of *final Reclamation, Revegetation, and Weed Control Plan:* Before issuance of grading permits or initiation of vegetation-disturbing activities. *Revegetation monitoring and reporting: at least 3 years.* *Monitoring of and* reporting *on restored habitat:* Minimum of 5 years or until established success criteria have been met.	Project applicant	Humboldt County Planning & Building Department.		

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	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	• Adaptive management measures and a remedial planting plan. • Revegetation and/or enhancement monitoring and reporting for at least 3 years. Techniques for the protection and enhancement of existing populations of Siskiyou checkerbloom within the project site that are not affected, such as control of invasive weeds and, through coordination with local tribes, cultural methods associated with traditional ecological knowledge of tending the species.					
3.5.23e	Develop and Submit a Reclamation, Revegetation, and Weed Control Plan. Prior to issuance of any permits, the project applicant shall submit the Reclamation, Revegetation, and Weed Control Plan in Appendix B of this FEIR to CDFW and any agency whose permit requirements are addressed in the plan. The applicant shall incorporate agency comments addressing permit requirements into the plan. The plan shall describe in detail any reclamation, revegetation, and weed control efforts to be conducted during and after project construction, both to stabilize the site and to comply with the mitigation requirements of regulatory agency permits. The plan shall establish performance criteria, time frames for reclamation and restoration of the project site, and provisions for a monitoring program to assess the success of any proposed reclamation, revegetation, and/or restoration efforts. The reclamation, revegetation, and weed control plan shall be developed and implemented to preserve native vegetation communities in the project area and reestablish native plant cover, natural communities, and wildlife habitat to the greatest extent feasible. The plan shall provide for the reestablishment/restoration of sensitive natural communities on a no-net-loss basis. The plan shall be developed in accordance with the Humboldt County Grading, Excavation, Erosion, and Sedimentation Control Ordinance. The reclamation, revegetation, and weed control plan shall include, at a minimum, the following provisions: • Reclamation of all areas disturbed by project construction, including temporary disturbance areas around construction sites, laydown/staging areas, temporary access roads, and the gen-tie, using a locally sourced native seed mix. For portions of the gen-tie that cross HRC lands, the seed mix shall be developed in coordination with HRC to ensure compliance with any provisions of the Humboldt Redwood Company HCP. A qualified biologist with demonstrated experience with the habitat to be restored shall have oversight for the selection of reclamation species. • Procedures and practices included in the project's weed control plan for the control of nonnative invasive/noxious weeds in reclaimed and revegetated areas. Invasive pest species, as listed by the California Invasive Plant Council and the Humboldt Weed Management Area, shall not be used. The weed control plan may be appended to the reclamation and revegetation plan. • A description of proven available reclamation techniques and procedures (such as hydroseeding, drill seeding, and broadcast seeding, adapted to local conditions) in all disturbed areas.	*Approval* of *final Reclamation, Revegetation, and Weed Control Plan:* Before issuance of grading permits or initiation of vegetation-disturbing activities. *Monitoring of and* reporting *on restored habitat:* Minimum of 5 years or until established success criteria have been met.	Project applicant	Humboldt County Planning & Building Department.		

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Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
				Action	Date Completed
• Salvage of topsoil in all areas subject to grading or excavation. Topsoil shall be removed, stockpiled on-site, and returned to the original site (reclaimed) or used in habitat restoration activities elsewhere on the site. To avoid spreading pathogens such as Sudden Oak Death with movement of topsoil, the following BMPs from the California Oak Mortality Task Force (2014) shall be implemented: o Before issuance of any permits or grading activities, conduct a survey of the site to determine whether portions of the forest are infected with the pathogen that causes Sudden Oak Death. If identified, the areas of infestation shall be shown on a map. This map shall be included in the worker environmental awareness plan and the criteria listed below shall be followed. o To the extent practical and feasible, route equipment away from host plants and trees, especially in areas with disease symptoms. Locate landings, access roads, staging areas, and other sites of equipment activity away from host plants, especially areas with disease symptoms. o Each time equipment or vehicles leave the site, inspect the equipment or vehicles for host plant debris (leaves, twigs, and branches). Host plant debris should be removed from equipment and vehicles before their departure. This applies to all equipment and vehicles associated with the operation. An exception will be granted for equipment or vehicles that leave the site temporarily and will be not be traveling to uninfested areas before their return. o After working in an infested area, remove or wash off accumulations of soil, mud, and organic debris from shoes, boots, vehicles and heavy equipment, etc., before traveling to an area that is not infested with Sudden Oak Death. Lysol® or a bleach solution can be used to disinfect shoes and boots after cleaning. o Clean mud from vehicles to remove host plant material embedded in mud. Establish an equipment power wash station near the infested area. The power wash station shall be constructed to include paved or rocked base; well-drained so that vehicles exiting the station do not become contaminated by wash water; and located where wash water and displaced soil does not have the potential to carry fines to a watercourse, paying particular attention to sites where soil and organic debris may accumulate. • BMPs for erosion control and water quality protection identified in Section 3.10, "Hydrology and Water Quality"; the CDFW Streambed Alteration Agreement; the USACE permit; and the project's storm water pollution prevention plan (SWPPP). Before issuance of a grading permit, the project applicant shall consult with the County, the State Water Resources Control Board, and the North Coast RWQCB to acquire the appropriate regulatory approvals that may be necessary to obtain Section 401 water quality certification, a State Water Resources Control Board statewide National Pollutant Discharge Elimination System stormwater permit for general construction activity (Water Quality Order 2009-0009-DWQ), and any other necessary site-specific waste discharge requirements or waivers under the Porter-Cologne Act. The project applicant shall prepare and submit the appropriate notices of intent and prepare the SWPPP					

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	and any other necessary engineering plans and specifications for erosion and pollution prevention and control. • Monitoring of and reporting on created or restored habitat as mitigation for temporary and permanent impacts for a minimum of 5 years or until established success criteria have been met, to assess progress and identify potential problems with the restoration sites. Success criteria are defined as minimum thresholds for vegetation growth and establishment. Such criteria will be developed based on preproject (baseline) conditions and the conditions of appropriate nearby reference sites for the particular habitat types being reclaimed or restored. In communities not considered sensitive natural communities by CDFW, minimum success criteria would include but are not be limited to overall percent cover, relative percent cover of native species, and percent cover of noxious weeds. For created or restored sensitive natural communities, additional success criteria would include percent cover for herbaceous plants, percent canopy cover for native woody (i.e., tree and shrub) species (if applicable to the habitat type being reclaimed/restored), density of native woody species (if applicable to the habitat type being reclaimed/restored), and percent survival of planted woody species (if applicable). • Adaptive management measures and a remedial planting plan. Remedial measures (e.g., additional planting, weeding, or erosion control) shall be taken during the monitoring period if necessary to ensure the success of the restoration effort. • Maintenance, monitoring, and reporting procedures. If the mitigation fails to meet the established performance criteria for vegetation growth and establishment within the maintenance and monitoring period, monitoring of remedial plantings shall extend beyond the initial period until the criteria are met or unless otherwise approved by Humboldt County in consultation with the North Coast RWQCB, USACE, and CDFW. If elements of the restoration area(s) meet their success criteria before the end of 5 years of monitoring, they may be eliminated from future monitoring with approval from the enforcement agency.					
3.5-24a	Avoid and Minimize Impacts on Sensitive Natural Communities and Riparian Habitat. During project engineering and design and during construction, the project applicant shall avoid and minimize disturbances to sensitive natural communities and riparian habitat whenever possible by implementing the following mitigation measures: • Mitigation Measure 3.5-1c, "Develop and Implement a Worker Environmental Awareness Program" • "Minimize Construction Footprint" in Mitigation Measure 3.5-14, "Avoid and Minimize Operational Impacts on Nonraptor Birds" • Mitigation Measure 3.5-19a, "Minimize Impacts on Wildlife and Monitor during Construction" • Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan"	Monitoring of sensitive natural communities and riparian habitat before approval of grading or improvement plans or any ground-disturbing activities; avoidance and	Project applicant.	Humboldt County Planning & Building Department.		

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	A qualified biologist shall monitor impacts on sensitive natural communities and riparian habitat during construction to ensure that they are identified for avoidance and preserved on-site to the greatest extent feasible. For all sensitive natural communities and riparian habitat that cannot be avoided, the project applicant shall quantify refined impact acreages based on the final design before construction, to identify the degree of actual impacts adequately to determine required mitigation acreages. These impact acreages shall be verified upon completion of construction based on monitoring reports and as-built drawings.	monitoring during construction Quantification of impacts on sensitive natural communities and riprian habitat: upon completion of construction.				
3.5-24b	Compensate for Loss of Sensitive Natural Communities and Riparian Habitat. Any sensitive natural communities and/or riparian habitat permanently affected shall be included in per-acre compensatory mitigation as described in Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan." For sensitive natural communities that cannot be reestablished/created on-site or off-site because of the limited nature of suitable substrates, such as coastal prairie communities, habitat enhancement/on-site restoration of degraded sensitive natural communities may be used for compensation. Habitat lift/enhancement may be used to count toward compensatory mitigation ratios, but shall not exceed 1.5 to 1 (i.e., 1.5 acre of enhanced high-quality sensitive natural community to compensate for the loss of 1 acre of degraded sensitive natural community). An exception to replacement applies to forest communities that are removed under a timber harvest plan in accordance with Section 1106 of the California Forest Practice Rules. No off-site tree planting or other mitigation is required for these forest communities. These communities are identified with a single asterisk (*) in DEIR Table 3.5-15 and include redwood forest, grand fir forest, and Douglas-fir forest.	Within 1 year of initiation of project construction.	Project applicant.	Humboldt County Planning & Building Department.		
3.5-24c	Restore Sensitive Natural Communities and Riparian Habitat. If on-site restoration is selected as compensatory mitigation for impacts on sensitive natural communities and/or riparian habitat, the project applicant shall prepare and implement Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan." The plan shall include reestablishment of sensitive natural communities and/or riparian habitat, including riparian vegetation subject to CDFW jurisdiction, and/or enhancement of existing habitat, on a per-acre basis. To offset the temporary loss of sensitive natural communities during construction, the minimum mitigation ratio shall be at least 1 acre of sensitive natural communities for each acre of permanent or temporary impact. Greater mitigation ratios are required for impacts on mature, high-quality riparian habitat that require a longer period to create high-value replacement habitat. Riparian vegetation under CDFW jurisdiction shall be mitigated according to the project's lake and streambed alteration agreement obtained pursuant to Section 1600 of the California Fish and Game Code. The reclamation, revegetation, and weed control plan shall	Planning before project construction; implementation of planting within one growing season and no later than 1 year from ground disturbance.	Project applicant.	Humboldt County Planning & Building Department.		

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	include the following provisions for restoring affected sensitive natural communities and/or riparian habitat: • Baseline data shall be collected at reference locations within the project site to establish expected ranges and minimum thresholds for species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy) for each sensitive habitat that would be affected. • An appropriate species planting palette shall be developed for each sensitive habitat that would be affected. • Minimum planting densities shall be designed to achieve minimum performance standards for survival cover and density, while maintaining the natural character of the vegetation community being restored/created. • Minimum performance standards shall be established for percent survival, species composition, relative species richness, and vegetative cover (i.e., herbaceous, shrub, and/or woody canopy). These standards shall be based on the preconstruction documentation of reference locations within the project site and the life history traits of the plants being restored (i.e., herbaceous vs. woody, fast-growing primary colonizers vs. slow-growing successional species). • Any trees removed from riparian habitat shall be replaced with the same or similar species at a ratio of 3:1 (three trees planted for every one tree removed). Tree replacement may be carried out concurrently on sensitive natural communities and/or riparian habitats that are also being restored/created/enhanced on a per-acre compensatory basis. • In sensitive natural communities, mature, woody trees and shrubs shall be avoided to the greatest extent feasible. In cases where mature trees within sensitive natural communities will be removed, a mitigation ratio of 3:1 shall be used to compensate for the time it takes for trees to grow to functional capacity. Mature trees consist of trees with the following DBH: o Oregon white oak: More than 6 inches DBH o California bay: More than 10 inches DBH o Madrone: More than 6 inches DBH o Big-leaf maple: More than 10 inches DBH o Tanoak: More than 10 inches DBH o Red alder: More than 10 inches DBH o Shining willow: More than 6 inches DBH					
3.5-25a	Avoid and Minimize Impacts on Wetlands and Other Waters of the United States. The project applicant shall avoid and minimize impacts on wetlands and other waters of the United States by implementing the following mitigation measures:	Submittal of wetland delineation: Prior to project construction.	Project Applicant	Humboldt County Planning & Building Department; U.S.		

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• Mitigation Measure 3.5-22b, "Implement Siting Constraint Measures to Delineate and Protect Aquatic Resources" • Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan" • Mitigation Measure 3.10-1, "Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan," in Section 3.10, "Hydrology and Water Quality" In addition, the project applicant shall implement the following measures: • Before any construction activity, the project applicant shall submit a wetland delineation to USACE for verification. The verified delineation shall serve as the baseline to determine actual project impacts for the purpose of permitting and determining compensatory mitigation needs. The project applicant shall obtain a CWA Section 404 permit from USACE for discharges under USACE jurisdiction before project construction, and shall abide by all permit conditions, including those for compensatory mitigation. The mitigation ratio will be determined by USACE but shall be no less than 1:1 for permanent impacts to ensure no net loss of wetlands functions and values in the project area in the long term. To ensure consistency and a comprehensive approach to mitigation planning, compensatory mitigation may be planned and implemented concurrently with other mitigation requirements, such as those for riparian habitat mitigation and sensitive natural communities. • The project applicant shall also submit wetland mapping to Humboldt County and identify corresponding setback requirements as appropriate (i.e., 100-foot setback) on project maps to comply with County setback requirements. Any required setback shall be shown on project construction drawings and plans (e.g., grading and improvement plans). • Construction activities and project components shall be located at least 100 feet from aquatic resources wherever feasible. • Before any construction activity, the project applicant shall assign a qualified biologist to identify the locations of wetlands and other waters and their corresponding setbacks (if applicable) as required by project permits, for avoidance. Identification of wetlands and other waters for avoidance shall be in addition to and distinguished from any required construction boundary fencing or flagging. • If it is not feasible to maintain the aquatic resource setbacks, the County may allow encroachment within the setbacks depending on site-specific factors, subject to advance consultation with CDFW, as required by the County's Streamside Management Ordinance. The project applicant shall submit a supplemental evaluation to the County that details how the proposed construction activities would avoid potential impacts on aquatic resources, including through BMPs, and shall obtain permission from the County for encroachment. The project applicant shall implement Mitigation Measure 3.5-1c, "Develop and Implement a Worker Environmental Awareness Program," to include specific information regarding wetlands	Submittal of wetland maps depicting setback requirements: before construction; Flagging of aquatic resource setbacks: prior to project construction Implementation of avoidance and minimization measures and WEAP training: during project construction.		Army Corps of Engineers.		

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	and other waters that occur on the project site and that either would be affected or have been identified for avoidance. Training shall be conducted before the start of construction and shall include information about the locations and extent of wetlands and other waters, methods of resource avoidance, permit conditions, and possible fines for violations of permit conditions and federal and/or state environmental laws.					
3.5-25b	Compensate for Impacts on Wetlands and Other Waters. The project applicant shall implement Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan," and shall include detailed measures for the compensation, restoration, and/or enhancement of wetlands and other waters on a wetland type per-acre basis. The standard for mitigation shall be no net loss. If restoration is selected as a method of compensatory mitigation, the project applicant shall prepare a wetland mitigation and monitoring plan as part of the project's reclamation, revegetation, and weed control plan (Mitigation Measure 3.5-23e), and shall submit it to the County for review, determination of adequacy, and approval. Mitigation ratios shall be calculated following USACE wetland mitigation procedures and shall be based on the actual impact acreage of final design per as-built construction drawings and the results of the preconstruction surveys. After review and approval by the pertinent agencies, mitigation shall be carried out at a ratio no less than 1:1, or another ratio approved by the appropriate jurisdictional agency, whichever is higher. The wetland mitigation and monitoring plan shall be written by a qualified biologist and shall include the following elements, at minimum: • goals of the plan and permitting requirements satisfied; • wetland restoration activities and locations, including the restoration of temporarily affected wetlands and other waters to preconstruction conditions; • monitoring and reporting requirements (including monitoring period), and criteria to measure mitigation success; and • remedial measures, should mitigation efforts fall short of established targets. The project applicant shall consult with USACE about the adequacy of the plan and may consult with other agencies, if the plan aims to fulfill multiple permitting and mitigation requirements.	Prior to project construction.	Project applicant.	Humboldt County Planning & Building Department; U.S. Army Corps of Engineers.		
3.5-28	Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan or Equivalent BMPs. To reduce the potential for erosion and sedimentation that may cause downstream impacts on anadromous fish species, the project applicant shall implement the following measures from the Humboldt Redwood Company HCP. During the wet season (October 15–June 1), the project applicant shall implement the following measures while conducting road or landing construction, reconstruction, and road upgrades: • No road or landing construction, reconstruction, and upgrading shall occur within 170 feet of Class I or II waters, or within the Equipment Exclusion Zone (50 or 100 feet, respectively) of	Before issuance of a grading permit and throughout construction.	Project applicant.	Humboldt County Planning & Building Department.		

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	Class III waters. [The Equipment Exclusion Zone is the area where heavy equipment associated with timber operations is totally excluded for the protection of aquatic habitat, aquatic species, water quality, and beneficial uses of water and other forest resources. Class I waters are those where fish are always or seasonally present on-site, and include habitat to sustain fish migration, spawning, and rearing, and domestic water supplies, such as springs, on-site or within 100 feet downstream of the project operations area. Class II waters are non-fish-bearing waters where aquatic habitat is present for non-fish aquatic species, including in watercourses, streams, seeps, springs, lakes, ponds, and wetlands. Class III waters are those with no aquatic life or habitat present.] • The construction, reconstruction, and upgrading shall not cross Class I, II, or III waters. • No portion of the constructed, reconstructed, and upgraded road/landing shall cross an inner gorge, headwall swale, unstable area, extreme, very high, or high mass-wasting hazard area. The soil moisture condition in the soils moved for purposes of construction, reconstruction, and upgrading shall be no wetter than is found during normal watering (dust abatement treatments or light rainfall, and the soil is not rutting or pumping fines. • During and after construction, reconstruction, and upgrading, there shall be no visible increase in turbidity in any drainage facility, construction/reconstruction site, or road surface, any of which drains directly to Class I, II, or III waters (standing water on the road that does not drain to Class I, II, or III waters is not applicable). • During construction, reconstruction, and upgrading, erosion control material of sufficient quantity shall be stockpiled on-site and utilized to prevent an increase in turbidity in any drainage facility, construction site, or road surface, any of which drains directly to Class I, II, or III waters. Alternatively, the project applicant shall implement Mitigation Measure 3.10-1, "Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan," described in Section 3.10, "Hydrology and Water Quality." These measures describe BMPs for wet-season erosion control, and a water quality monitoring program that provides Humboldt County with stop-work authority over project construction activities.					
3.6	Cultural Resources					
3.6-1a	Avoid Potential Impacts. Before construction permits are issued, the project applicant shall submit improvement plans to the County Planning & Building Department demonstrating that the WTG locations and other permanent infrastructure will avoid known archaeological resources. consistent	Before approval of grading or any ground-disturbing activities.	Project applicant.	Humboldt County Planning & Building Department.		
3.6-1b	Preserve Resources in Place. For locations where archaeological resources have been identified or may exist and cannot be avoided, the improvements shall be constructed such that no excavation is undertaken. The intact resources shall be preserved in place by capping the resource(s). The improvement plans submitted to the County shall include details regarding the improvements, with components	Before approval of grading or improvement plans or any	Project applicant.	Humboldt County Planning & Building Department		

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	including placement of geo-fabric over existing ground, placement of clean fill material over the fabric, and final improvements on top of the clean fill.	ground-disturbing activities.				
3.6-1c	Monitor Ground-Disturbing Activities. An archaeologist and Native American Tribal monitor shall be on-site, at the project applicant's expense, to observe and inspect all ground-disturbing activities. The archaeologist and Native American Tribal monitor shall have authority to stop work in an area where previously unidentified resources are encountered until the resources have been appropriately identified and addressed. In the event that resources are discovered, the County Planning & Building Department shall be notified immediately.	During grading or improvement plans or any ground-disturbing activities.	Project applicant.	Humboldt County Planning & Building Department.		
3.6-1d	Prepare Treatment Plan and Stop Potentially Damaging Work for Inadvertent Discovery of Cultural Materials Uncovered during Project Construction, Assess the Significance of the Find, and Pursue Appropriate Management. The project applicant shall prepare an unanticipated-discoveries plan that shall outline contacts and steps to be taken in the event of an unanticipated discovery, including steps from assessment to curation. The plan shall include the following steps to be taken if an inadvertent discovery of cultural materials (e.g., unusual amounts of shell, animal bone, bottle glass, ceramics, structure/building remains) is made during project-related construction activities: • Halt construction activities within 100 feet until a qualified archaeologist and Native American monitor make a determination about the resource. • Evaluate the significance of the resources. Implement treatment measures set forth in the plan in consultation with the County. If avoidance is feasible, project modifications shall be made to avoid the resource. If avoidance is not feasible and the County Planning & Building Department determines that the resource is not CRHR eligible, no additional mitigation is required and construction can proceed. If the County Planning & Building Department determines that the resource is CRHR eligible and that the discovery has significant historical associations or could yield additional scientific information about local or regional history or prehistory that has not been recovered during prior investigations, the project applicant shall complete a Phase III data recovery excavation program for significant cultural resources that would be affected. Prepare a report documenting evaluation and treatment of the resource for submission to the County.	Project applicant.	Approval of plan by County Planning & Building Department before any ground disturbance or issuance of any permits.	Humboldt County Planning & Building Department in consultation with Native American tribes.		
3.6-2	Stop Potentially Damaging Work if Human Remains Are Uncovered during Project Construction, Assess the Significance of the Find, and Pursue Appropriate Management. California law recognizes the need to protect interred human remains, particularly Native American burials and associated items of patrimony, from vandalism and inadvertent	Project applicant.	During construction.	Humboldt County Planning & Building Department.		

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	destruction. The procedures for the treatment of discovered human remains are contained in Sections 7050.5 and 7052 of the California Health and Safety Code, and PRC Section 5097. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all such activities within a 100-foot radius of the find must be halted immediately and the project applicant's designated representative must be notified. The project applicant is required to notify the County Coroner and a qualified professional archaeologist immediately. The coroner will examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands, as per Section 7050.5(b) of the Health and Safety Code. If the coroner determines that the remains are those of a Native American, the coroner will contact the NAHC by phone within 24 hours of making that determination, as per Section 7050(c) of the Health and Safety Code. The project applicant must act on notification of a discovery of Native American human remains in compliance with PRC Section 5097.9. The project applicant and the professional archaeologist are required to contact the Most Likely Descendant, as determined by the NAHC, regarding the remains. The Most Likely Descendant, in cooperation with the property owner and the lead agencies, will determine the ultimate disposition of the remains.					
3.6-3a	Prepare a Historic American Landscape Survey Report. Before any project-related ground disturbance, the project applicant shall retain a professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to prepare written and photographic documentation of the historic landscape that will be negatively affected by the project. The documentation of historical resources shall be prepared based on the National Park Service's Historic American Landscape Survey (HALS) report guidelines; however, the documentation will not be reviewed by the National Park Service or transmitted to the Library of Congress, and therefore, does not need to be a full-definition dataset. The written historical data shall follow the HALS Historic Guidelines' three-part outline format, which includes (1) historical information (physical history, historical context); (2) physical information; and (3) sources of information. The written historical data shall be printed on 8.5-by-11-inch archival bond paper. Efforts shall also be made to locate historic photographs and maps of the built environment resources within the historic landscape. If located, these shall be reproduced and included in the dataset. If available, up to 10 historic photographs, maps, or other relevant material shall also be included in the dataset. Before the start of construction and any ground-moving activities, large-format (4 x 5 inch) black-and-white archival photographs shall be taken of the historical resources. Up to 30 photograph views for the dataset shall include (1) contextual views; (2) detail views of building	Before grading or improvement plans or any ground-disturbing activities.	Project applicant.	Humboldt County Planning & Building Department.		

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	clusters; and (3) any relevant detail views. The photographs shall be fully captioned and referenced on a photographic key. After completion of the HALS documentation, the materials shall be placed on file with Humboldt County and archival-quality copies of the respective reports shall be distributed to the Ferndale Museum, the Scotia Museum, the Humboldt County Historical Society, and other local historical societies, libraries, and museums as necessary.					
3.6-3b	Prepare and Implement a Site Protection Plan. Before permits are issued for construction or grading activities, a detailed site plan to protect historic-age built environment resources shall be developed and submitted to the County Planning & Building Department. Implementation of the plan will reduce potential impacts by avoidance and protection of properties to ensure that construction activities will not cause inadvertent damage. The protection plan shall also include mitigation strategies to avoid inadvertent damage, including but not limited to the following: • Avoid siting or routing heavy equipment or trucks within 100 feet of historic-age buildings or structures including corrals, barns, and ancillary buildings. • Establish compliance and monitoring procedures to avoid any inadvertent damage to historic-age buildings and structures. Brief project personnel on the sensitivity of historical resources in the historic landscape and compliance and monitoring procedures.	Project applicant.	Before approval of grading or improvement plans or any ground-disturbing activities.	Humboldt County Planning & Building Department.		
3.6-3c	Incorporate Plants Appropriate for the Wiyot Tribe Ethnobotanical Area into the Reclamation, Revegetation, and Weed Control Plan Required as Part of Mitigation Measure 3.5-23e. The project's reclamation, revegetation, and weed control plan shall incorporate plants included in the "Wiyot List of Plant Species of Environmental and Cultural Concern" in the final restoration plan. The species planted shall be subject to the same monitoring requirements and success criteria established in Mitigation Measure 3.5-23e, "Develop and Submit a Reclamation, Revegetation, and Weed Control Plan."	Project applicant.	Before and after construction.	Humboldt County Planning & Building Department in consultation with the Wiyot Tribe.		
3.6-4	Detect Presence of and Curtail Operations for Condors. If condors are released in the Bald Hills in Redwood National Park or another location with a range overlapping the project's WTGs, the project applicant shall implement a detection system using the transponders attached to the condors, and shall curtail operations when condors are close to the WTGs so that the condors are not at risk of encountering operating WTGs. The detection technology and plan for curtailment shall be consistent with that described in Sheppard et al. 2015 or an equally effective curtailment system whereby condors are fitted with functional system-specific transmitters (i.e., tagged individuals) to alert the wind farm operaters when condors are in the vicinity of the Humboldt Wind project to inform WTG curtailment decisions. Implementation of	Bird and bat conservation strategy before issuance of construction permits; Condor curtailment plan to be implemented for the duration of	Project applicant.	Humboldt County Planning & Building Department.		

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	the detection technology and the requirement to curtail WTGs shall occur upon project operation after the condors are released.	project operation. within 6 months of the release of condors.				
3.7	Geology and Soils					
	None					
3.8	Greenhouse Gas Emissions					
	None					
3.9	Hazards and Hazardous Materials					
3.9-1	Investigate Known Hazard along the Project Alignment. The project applicant shall retain a licensed professional to conduct soil sampling and testing along the segment of the project alignment routed near the Mount Pierce Relay Annex. A report shall be prepared to summarize the findings of lab tests and make recommendations for project design and construction to protect human health. Available measures may include remedial actions to remove the contaminated soils or routing of the alignment to avoid the contaminated area. The report shall be submitted to the County for review and recommendations shall be enforced by reviewing engineering plans during inspection and confirming implementation while in the field.	Prior to project construction.	Project Applicant.	Humboldt County Planning & Building Department.		

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3.9-2	**Prepare and Implement a Blasting Plan to Minimize Potential for Blasting-Related Safety Incidents.** Before the issuance of grading or building permits, if blasting is required, the project applicant shall contract with a blasting contractor with experience conducting blasting activities. The contractor shall be licensed to use Class A explosives, and licensed as a contractor in the State of California. The blasting contractor shall prepare a blasting plan for the proposed blasting activities to avoid endangering worker safety. The blasting plan shall be submitted for review to the Humboldt County Planning Department, in consultation with the County Environmental Health Services Department, the State Fire Marshal, and the North Coast Unified Air Pollution Control District. The blasting plan shall: • describe procedures to be implemented to protect workers during blasting, such as using a signaling system to alert workers of an impending blast and using blasting mats to prevent or reduce the number of rock particles thrown into the air; • provide procedures for preventing employee or public entry into any area subject to blasting; • describe procedures for proper storage and transportation of explosive materials, including protecting explosives from wildfires; • prohibit blasting during extreme fire danger periods; and • comply with the guidelines established by the U.S. Bureau of Mines and the U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement, for minimizing damage to structures from blasting.	Prior to project construction.	Prior to project construction.	Humboldt County Planning & Building Department.		
3.10	Hydrology and Water Quality					
3.10-1	**Implement Wet-Weather BMPs Consistent with the Humboldt Redwood Company Habitat Conservation Plan.** To reduce the potential for erosion and sedimentation that may cause downstream impacts on anadromous fish species, the project applicant shall prepare and implement an erosion control plan for review and approval by the Humboldt County Planning & Building Department that includes the following measures from the Humboldt Redwood Company HCP: • No road or landing construction, reconstruction, and upgrading shall occur within 170 feet of Class I or II waters, or within the Equipment Exclusion Zone (50 or 100 feet, respectively) of Class III waters. The construction, reconstruction, and upgrading shall not cross Class I, II, or III waters. • No portion of the constructed, reconstructed, and upgraded road/landing shall cross an inner gorge, headwall swale, unstable area, extreme, very high, or high mass-wasting hazard area. The soil moisture condition in the soils moved for purposes of construction, reconstruction, and upgrading shall be no wetter than is found during normal watering (dust abatement treatments or light rainfall, and the soil is not rutting or pumping fines).	Before issuance of a grading permit and throughout construction.	Project applicant.	Humboldt County Planning & Building Department.		

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Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
				Action	Date Completed
• During and after construction, reconstruction, and upgrading, there shall be no visible increase in turbidity in any drainage facility, construction/reconstruction site, or road surface, any of which drains directly to Class I, II, or III waters (standing water on the road that does not drain to Class I, II, or III waters is not applicable). • During construction, reconstruction, and upgrading, erosion control material of sufficient quantity shall be stockpiled on-site and used to prevent an increase in turbidity in any drainage facility, construction site, or road surface, any of which drains directly to Class I, II, or III waters. If the Humboldt Redwood Company HCP measures cannot be implemented, or if the project applicant seeks to conduct work during the wet season (October 15–June 1), the project applicant shall implement the following measures while conducting tree harvest, road or landing construction, reconstruction, and road upgrades: • Exposed slopes greater than 10:1 shall be stabilized with hydraulic wood fiber mulch applied at a minimum rate of 2,500 pounds per acre. A sterile erosion control seed mix or suitable native seed mix shall be applied with the hydraulic mulch. Exposed slopes greater than 3:1 shall be stabilized with erosion control matting installed in accordance with the current California Stormwater Quality Association (CASQA) BMP Handbook. Erosion control matting shall consist of 100 percent biodegradable materials. In lieu of erosion control matting, hydraulic Bonded Fiber Matrix (BFM) consisting of wood mulch with tackifier shall be applied at a minimum rate of 3,500 pounds per acre. A sterile erosion control seed mix or suitable native seed mix shall be applied with the hydraulic BFM.\ • Exposed slopes greater than 10:1 shall have fiber roll or equivalent linear slope breaks installed at the following minimum intervals: Slope Interval i. >15:1 25 feet ii. >10:1 20 feet iii. >4:1 15 feet iv. >2:1 10 feet Fiber roll linear slope breaks shall consist of 100 percent biodegradable materials and shall be installed in accordance with the current CASQA BMP Handbook. • Temporary access roads established as part of the project shall be stabilized with rock and shall have water bars, earthen dike, or equivalent slope diverters installed at the following intervals: Slope Interval					

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	v. >15:1 150 feet vi. >10:1 100 feet vii. >5:1 75 feet viii. >4:1 50 feet • The outflow form slope diverters shall be directed onto a stabilized area or into a grade stabilization structure. Road slope diversion and outflow structures shall be installed in accordance with the current CASQA BMP Handbook. • To monitor the effectiveness of wet-season erosion control measures, the project applicant shall implement a stormwater discharge sampling program in accordance with the SWRCB General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (General Permit). The project applicant shall comply with the Numeric Action Levels (NALs) for turbidity and pH specified in the General Permit, and shall adjust BMPs as necessary to maintain compliance with turbidity and pH NALs. The results of laboratory sampling will be provided to the Humboldt County Planning & Building Department at the time the results are uploaded to the state Stormwater Multiple Application and Report Tracking System database. • Should erosion and sedimentation devices fail, or should the NALs and/or pH NALs be exceeded, the County will have stop-work authority over project construction activities. The County will stop work on any portion of the project determined by the County to be the source of erosion or sedementation. Work will be suspended until the erosion and sedimentation control measures can be fortified or reestablished, or until the County determines that site conditions (e.g., weather, soil moisture content) have improved. • The project applicant shall inspect erosion and sedimentaion control measures before any precipitation event (as defined by greater than 0.25 inch of rain forcasted for a 24-hour period) during the wet season, and shall report the inspection results to the County before conducting work during any precipitation event. Work shall be suspended if the County determines that erosion control measures are in disrepair, or would be ineffective in the prevention of erosion resulting from the forecasted precipitation event. At any time, work may be suspended at the discretion of the County if site conditions deteriorate to the point where erosion control measures would be ineffective.					
3.11	Noise					
3.11-1	Implement Noise-Reducing Construction Practices. The project applicant shall ensure that the following measures are implemented during construction activities, where construction occurs within 500 feet of a sensitive receptor, to avoid and minimize construction noise effects on sensitive receptors:	During construction.	Project applicant.	Humboldt County Planning & Building Department.		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	• All construction equipment shall be equipped with noise-reduction devices, such as mufflers, to minimize construction noise, and all internal combustion engines will be equipped with exhaust and intake silencers, in accordance with manufacturers' specifications. • The use of bells, whistles, alarms, and horns shall be restricted to safety warning purposes only. • Mobile and fixed construction equipment (e.g., compressors and generators), construction staging and stockpiling areas, and construction vehicle routes shall be located at the most distant point feasible from noise-sensitive receptors. The project applicant shall ensure that all heavy trucks are properly maintained and equipped with noise-control (e.g., muffler) devices, in accordance with manufacturers' specifications, at each work site during project construction, to minimize construction traffic noise effects on sensitive receptors.					
3.11-2	Implement Noise-Reducing Wind Turbine Generator Operations. The project applicant shall reduce the number of proposed WTGs north of receptor R-5 (shown in Figure 3.11-2) to avoid and minimize the effects of noise related to WTG operation. The following measure shall be implemented: Relocate, eliminate, or impose operational modifications on WTGs within 1,200 feet of receptor R-5 to reduce the permanent increase in ambient noise levels from 24-hour-per-day operation of WTGs to less than 5 dBA.	Before approval of grading or improvement plans or any ground-disturbing activities.	Project applicant.	Humboldt County Planning & Building Department.		
3.12	Transportation/Traffic					
3.12-1	Rehabilitate/Reconstruct County-Maintained Roads Damaged by Truck Traffic. The project applicant shall prepare a transportation route plan that avoids heavy truck trips (except pickup trucks without trailers) on Monument Road and Mattole Road. All truck traffic shall use Jordan Road for ingress and egress from U.S. 101 to the project site. Before issuance of the grading permit, the project applicant shall submit a haul route map to the County Department of Public Works identifying all County-maintained roads that would be used by trucks. The applicant and County Department of Public Works shall assess each road on the ground to determine their preproject condition before project-related truck traffic uses the roads. During the course of the project, if the project applicant wishes to use additional County-maintained roads, the applicant shall submit a revised haul route map to the County Department of Public Works. The applicant and the County Department of Public Works shall assess each road on the ground to determine their preproject condition before project-related truck traffic uses the roads. At the conclusion of the project, the project applicant and the County Department of Public Works shall reassess all roads used by project-related truck traffic. The applicant shall rehabilitate/reconstruct the roads to the satisfaction of the County Department of Public Works.	Transportation Route Plan, including haul route map	Project applicant.	Humboldt County Department of Public Works.		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
3.12-2	Create a Traffic Control Plan and Notify the Public Regarding Anticipated Roadway Obstructions. The transporters shall travel under loaded conditions during off-peak hours and possibly during evenings or at night, to minimize impacts on roadway traffic flows. The project applicant shall work with Caltrans to determine the lowest hourly traffic flows and develop a traffic control plan that specifies travel times and days, and includes public notification of anticipated roadway obstructions before transporter travel days. The final plan shall be submitted to Caltrans for review and approval.	Traffic Control Plan.	Project applicant.	Humboldt County Department of Public Works; Caltrans		
3.13	Fire Protection and Wildfire Hazards					
3.13-1a	Prepare and Implement a Fire Services Financing Plan. Before energizing the project, the project applicant shall develop and implement a fire services financing plan in consultation with the Humboldt County Fire Chiefs' Association and Rio Dell Fire Protection District. The plan shall identify: • the equipment needed to provide emergency rescue, medical, or fire protection calls for service at the project site; • the cost to acquire equipment and training in the use of the equipment as measured over the 30-year life span of the project; • the project applicant's fair-share contribution toward acquisition of this equipment and training; and • a financing mechanism to allow for receipt and distribution of funds to implement the plan. The plan shall be monitored annually and the outcome shall be included in the fire services report completed by the fire chiefs and submitted to the County Board of Supervisors.	Fire services financing plan: Before the project is energized.	Project applicant.	Humboldt County Planning & Building Department.		
3.13-1b	Prepare and Implement a Fall Protection and Rescue Plan. Before any construction permits are issued or construction activity begins, the project applicant shall prepare a fall protection and rescue plan that shall be submitted for approval by the Humboldt County Planning & Building Department. Once approved, the plan shall be implemented throughout the life of the project. The fall protection and rescue plan shall identify site access, vehicle parking and staging areas, dimensions of confined spaces, anchor points, personal protection, and patient packaging. The project applicant shall retain a reputable training provider that will provide training in high-angle rescue. Potential training providers can include state fire training organizations and private companies. Training shall be in accordance with National Fire Protection Association (NFPA) 1006, Standard for Technical Rescuer Professional Qualifications, and NFPA 1670, Standard on Operations and Training for Technical Search and Rescue Incidents. This training shall include but not be limited to the following elements: • Rope system anchors	Fall protection and rescue plan: Before issuance of construction permits or initiation of construction activity.	Project applicant.	Humboldt County Planning & Building Department.		

Mitigation Monitoring and Reporting Program

	Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	• Evacuation litters • Rescuer and patient packaging • Lowering and raising systems • Mechanical advantage systems • Fall protection and/or limiter systems • Personnel shall practice their techniques on a regular basis to remain proficient. All training shall be documented and include attendee signatures, and files documenting all training shall be maintained in the event of an investigation after an incident.					
3.13-2a	Prepare and Implement a Fire Safety and Management Plan to Minimize the Potential for Wildland Fires Before any construction permits are issued or construction activity begins, the project applicant shall develop a fire protection plan. The plan is subject to review and approval by the Humboldt County Planning & Building Department in consultation with CAL FIRE and shall be implemented during construction and throughout the lifetime of project operations. The scope of the plan shall apply to all property, buildings, structures, operations, and facilities associated with the project. The plan shall include identified helicopter landing zones, special rescue equipment to be kept on-site, a training plan for first responders, and suitable areas for the installation and maintenance of wildland fire control features. The fire safety and management plan shall do all of the following: • Require that all internal combustion engines, stationary and mobile, be equipped with spark arresters. Spark arresters shall be maintained in good working order. • Require that light-duty trucks and cars with factory-installed (type) mufflers be used only on roads where the roadway is cleared of vegetation. Said vehicle types shall maintain their factory-installed (type) muffler in good condition. • Specify that fire rules shall be posted on the project bulletin board at the contractor's field office and in areas visible to employees. • Ensure that equipment parking areas and small stationary engine sites are cleared of all extraneous flammable materials. • Specify that personnel must be trained in the practices of the fire safety plan relevant to their duties. Construction and maintenance personnel shall be trained and equipped to extinguish small fires to prevent them from growing into more serious threats. • Prohibit smoking in wildland areas, with smoking limited to paved areas or areas cleared of all vegetation. • Require consultation with CAL FIRE regarding the need to install water or dip tanks within the project site.	*Fire safety and management plan:* Plan preparation before issuance of construction permits or initiation of construction activity; plan implementation during construction and throughout the lifetime of project operations. The plan is to be updated and submitted to the Humboldt County Planning & Building Department and CAL FIRE annually.	Project applicant.	Humboldt County Planning & Building Department in consultation with CAL FIRE.		

Mitigation Monitoring and Reporting Program

Mitigation Measures	Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
				Action	Date Completed
• Implement measures developed to address fire prevention on Red Flag Warning days issued by the National Weather Service for the project site. All nonemergency construction and maintenance activities shall cease, or implementation measures to address fire hazards on Red Flag Warning days shall be approved, as part of construction plans and or within the operation plan, allowing certain limited activities to proceed. • Describe and implement the preventive strategies and programs adopted to minimize the risk of wildfire due to electrical lines and equipment. Strategies may include, but are not limited to, systems hardening through use of covered conductor wire instead of exposed wire, the use of steel poles in areas that are difficult to access (steel poles are less prone to breakage or fire damage), and the use of modern transformers that have fluids less reactive to fire. • Identify and implement protocols for identifying the potential for fire, including providing meteorological data collected by meteorological towers to CAL FIRE to help reporting on local conditions, and actions to verify fire and CAL FIRE contact information to report a potential fire. • Identify and implement protocols for disabling re-closers and de-energizing portions of the electrical distribution system, considering the associated impacts on public safety. • Describe and implement plans for inspections of electrical infrastructure. • Prepare a list that identifies, describes, and prioritizes all wildfire risks and drivers for those risks associated with project operation and transmission to the point of interconnection. • Use metrics to track system performance such as the number of elevated fire danger days (whether Red Flag Warnings, Fire Potential Index ratings, or National Fire Danger Rating System data are used as the indicator), and the number and types of potential ignition events (e.g., wire down, blown fuses, vegetation contact, etc.) that occur on those days. • Conduct an annual review of industry practices and technologies that reduce the likelihood of an interruption (frequency) in service and improve the restoration (duration) of service. In addition, review available fire investigation reports for fires throughout California to understand root causes that can be addressed through system operations or maintenance and incorporate these insights into updated management plans. • Vegetation Management: The project would comply with North American Electric Reliability Corporation Standard FAC-003 on Transmission Vegetation Management, by practicing a defense-in-depth strategy to manage vegetation located on transmission rights-of-way. The management plan would: o specify procedures for documenting the maintenance strategies, processes, and specifications used to manage vegetation; o require timely notification of the appropriate control center regarding vegetation conditions that could cause a flashover; o require corrective actions to ensure that flashover distances would not be violated;					

Mitigation Monitoring and Reporting Program

Mitigation Measures		Timing	Responsible Party for Implementation	Responsible Party for Enforcement	Completion of Implementation	
					Action	Date Completed
	o require annual inspections of vegetation conditions; and o require completion of the annual work needed to prevent a flashover.					
3.13-2b	Prepare an Emergency Response Plan. Before any construction permits are issued or construction activity begins, the project applicant shall prepare an emergency response plan for operations. The plan is subject to review and the Humboldt County Planning & Building Department in consultation with CAL FIRE. The emergency response plan shall address potential accidents or emergencies involving fires or explosions at the wind energy facility, and shall provide key names and addresses of contacts in case of emergency, as well as a description of processes and general information about facility hazards. The emergency response plan shall describe how to identify an emergency, how to alert someone and whom to alert if an emergency occurs, roles during an emergency, how the emergency will be controlled, and how to terminate the incident.	*Emergency response plan:* Before issuance of construction permits or initiation of construction activity.	Project applicant.	Humboldt County Planning & Building Department in consultation with CAL FIRE.		

Letter I245

Robin Hamlin
2330 Mather Road
McKinleyville, CA 95519
May 28, 2019

Humboldt Wind Project Planner
County of Humboldt
Planning and Building Department, Planning Division
3015 H Street
Eureka, CA 95501

The following are comments on the Draft Environmental Impact Report for the Humboldt Wind LLC, Humboldt Wind Energy Project

- Appendix K: Page 11 section 5.2 – only considered stands over 124 ac as potential habitat. Murrelets are known to be nesting in stands as small as a few acres. Also on page 3.5-72, several stands were considered of marginal quality because of their small size. These stands were once part of larger stands, and are likely to remain occupied. Are there survey data for these stands? Should not state they are marginal quality due to small stand size; even more importantly and contradictory to these statements, the very stands in Van Duzen Park that are proposed for mitigation are small. This is an erroneous assumption carried throughout the document.

- 3.5-72 – "Each of these was evaluated conservatively against a "very low" ambient sound level (51–60 dB), which resulted in estimated auditory harassment distances of nesting marbled murrelet of 100 meters, 250 meters, and 400 meters for general construction, blasting, and helicopter overflights, respectively."

Erroneous application of disturbance buffers for blasting in this statement. Blasting should require maximum buffer distance of ¼ mile or more. Should consult with USFWS.

I245-1

- 3.5-79 reviews a model developed by HT Harvey and Assoc. and referenced as follows: 2019 (April 6). Summary of the Humboldt Wind Project Compensatory Mitigation for Marbled Murrelets. Memo from Richard T. Golightly, H. T. Harvey & Associates, Los Gatos, CA, to Susan Sanders, AECOM, Sacramento, CA.

This memo should be provided for the record as it is not clear how trash management in one small Park – Van Duzen County Park can fully mitigate for the direct mortality of 10 to 20 marbled murrelets from collision with turbines and collision with gen tie transmission lines. Particularly if the very murrelets expected to benefit from trash management are killed trying to access the Park.

I245-2

- 3.5-81 discusses measures to avoid or minimize impacts to marbled murrelets. It discusses high use murrelet areas that will be avoided, but does not define what high use is. This is a critical factor and must be described in detail. What might be considered high will be different for everyone. I245-3

- 3.5-81. Post Construction Monitoring. Monitoring should be conducted using scent dogs – they are proven to be the most effective at finding carcasses. Not only should the turbine area be monitored, plus roads and pads less intensively as stated, but in particular, the area under the Gen-tie along Shively ridge should be monitored more intensively, not less, due to the likelihood of murrelets colliding with wires as they traverse the ridge between occupied habitats. I245-4

- 3.5-184 discussion of how the loss of murrelets to the project is consistent with the HRC HCP. The HCP set aside MMCAs and buffers along Park borders to protect murrelets both on HRC property and in the Parks. The document erroneously discusses only the expectation that MMCAs would continue to be used. Murrelets were assumed to continue to use BOTH the MMCAs and Parks given timber harvest under the HCP. This Project proposes to take additional murrelets that are using the Park lands in the area, and which are not considered under the HCP as a covered activity.

- 3.5-100 discusses loss of NSO habitat (473.6 ac) and consistency with the HRC HCP. Though the activities associated with the wind facility and transmission line construction and operation result in loss of habitat like the timber harvest considered in the HCP, they are NOT covered activities under the HCP and may result in additional loss of habitat (beyond 32,500 ac in HCP EIS) not considered under the HCP. Has HRC agreed to commit the 473.6 ac toward their total NSO habitat loss? In addition, the HCP's goal of maintaining a certain number of reproduction is not being met. The additional impact of this project to NSO on the landscape can only exacerbate the problem with NSO. I245-5

- 3.5-187. States: "With implementation of Mitigation Measures 3.5-1a through 3.5-1c, 3.5-2a through 3.5-2c, 3.5-6 through 3.5-8, and by implementing the conditions described in the incidental take permit, the project would not restrict HRC from achieving the HCP management objectives for marbled murrelets or northern spotted owls."

The additional take of marbled murrelets that are using the Parks in the project area will not be consistent with the management objectives of the HCP for murrelets.

The additional take of NSO due to loss of habitat from the project will add to HRC's inability to maintain NSO reproduction.

- Appendix O : The sensitivity analysis conducted clearly shows how very small changes in model assumptions can lead to large differences in estimates of the number of murrelets killed. With reference to the avoidance probability, given the lack of murrelet specific data, an assumption of 0.98 avoidance should not be considered conservative. Additional modeling should have been provided assuming much less avoidance e.g., 0.80 or 0.90. Because mitigation is proportional to number of birds estimated killed over the life of the project, the estimated number becomes very important, and should reflect a larger range of potential outcomes.

I245-5 (Cont.)

- An examination of Tables 1 and 2 reveal that Zones C and G have the highest likelihood of murrelets crossing, and should be considered for elimination, or curtailment during the breeding season (e.g., see June in Tables). Given that radar was only conducted for 1 year as opposed to 2 years, annual variability is not reflected in this data. Additional years of radar should be conducted to accurately assess murrelet use of the area.

I245-6

Letter	
I-245	**Robin Hamlin**
Response	**June 3, 2019**

I-245-1 *The commenter states that Appendix K of the DEIR (Humboldt Wind Project Marbled Murrelet Habitat Assessment and Auditory and Visual Disturbance Analysis Report - page 11 Section 5.2) only considered stands over 124 acres as potential habitat, and notes that murrelets are known to nest in stands as small as a few acres. The commenter further notes that on page 3.5-72 of the DEIR several stands were considered of marginal quality because of their small size, and states that this erroneous connection of small stand size and marginal habitat quality is carried on throughout the document. The commenter states that these small stands were evaluated conservatively against a "very low" ambient sound level (51-60 dB), which resulted in estimated auditory harassment distances of nesting marbled murrelet of 100 meters, 250 meters, and 400 meters for general construction, blasting, and helicopter overflights; respectively, but states that this the 400 meters is an incorrect buffer for blasting activities, rather it should be ¼ mile or more. The commenter recommends consulting the USFWS.*

The commenter correctly notes that marbled murrelets can nest in stands smaller than 124 acres. Appendix K in the DEIR describes how nesting can occur in stands less than 124 acres in size, discussing on page 11 that: “stands recently reduced in size by harvest may still include a nest because of the murrelet’s strong fidelity to a site.” Appendix K describes how one stand (Stand 64) is smaller than 124 acres but because it contains old-growth redwood trees and was recently connected to a larger stand, it is also considered potential nesting habitat for murrelets. Section 5.2.2 (*Evaluation of Forest Stand Size Reduction or Fragmentation Over Time)* of Appendix K in the DEIR further discusses how several stands smaller than 124 acres were considered potential nesting for marbled murrelets because of the history of occupancy, the presence of several redwood trees of sufficient size with suitable platforms, and the relatively recent fragmentation (< 20 years) of the stands.

The commenter correctly notes that one-quarter mile (402 meters) or more is the appropriate buffer for blasting activities. Mitigation Measure 3.5-1b (Avoid Indirect Impacts on Nesting Marbled Murrelet) requires a buffer of 400 meters for “extreme” noises (101-110dB) and requires that buffer distances be approved by CDFW and USFWS before approval of grading or improvement plans or any ground-disturbing activities.

Please also see the *Supplement to Humboldt Wind Energy Project Marbled Murrelet Habitat Assessment and Auditory and Visual Disturbance Analysis Report* prepared by H.T. Harvey & Associates and Stantec Consulting, Inc. dated September 30, 2019 in Appendix B of the FEIR for additional discussion of marbled murrelet buffers in relation to construction activities.

I-245-2 *The commenter states that page 3.5-79 of the DEIR reviews a model developed by HT Harvey and Assoc. and referenced as: 2019 (April 6). Summary of the Humboldt Wind Project Compensatory Mitigation for Marbled Murrelets Memo from Richard T. Golightly, H. T. Harvey & Associates, Los Gatos, CA, to Susan Sanders, AECOM, Sacramento, CA. The commenter states*

that this memo should be provided for the record as it is not clear how trash management in Van Duzen County Park can fully mitigate for the direct mortality of 10 to 20 marbled murrelets.

Please see Master Response 1, "*Marbled Murrelets*," the *Compensatory Mitigation Strategy for Marbled Murrelets Impacted by Operation of the Humboldt Wind Project*, prepared by H. T. Harvey & Associates, dated September 2019, and *Supplement to Compensatory Mitigation Strategy for Marbled Murrelets Impacted by Operation of the Humboldt Wind Project* prepared by H.T. Harvey & Associates and Stantec Consulting, Inc., dated October 3, 2019 in Appendix B of the FEIR. These reports provide considerably more detail on the proposed mitigation approach for marbled murrelets than the memo cited in the DEIR, and describe how the corvid management program is projected to result in reproductive success for 48 to 97 murrelets over the life of the project.

I-245-3 *The commenter states that page 3.5-81 of the DEIR discusses measures to avoid or minimize impacts to marbled murrelets, describing how "high use" murrelet areas will be avoided, but notes that there is no definition of what "high use" means.*

Please see the *Marbled Murrelet Collision Risk Assessment Associated with the Humboldt Wind Project Proposed for Humboldt County, California: 2-Year Report*, prepared by H.T. Harvey & Associates, dated September 2019, in Appendix B of the FEIR. Figure 3 from this report depicts marbled murrelet high use areas as defined by passage rates. It shows a map of topographically delineated zones used to assess collision risk for marbled murrelets flying through the proposed project area as they transit between the ocean and inland nesting habitats. Figure 3 shows three high use areas. These high use areas have been eliminated from consideration for turbine placement in the refined project description presented in the FEIR. They were eliminated because these areas descend into adjacent river valleys and consistently had greater documented passage rates and associated modelled collision rates in both 2018 and 2019. Please also see Master Response 2, "*Marbled Murrelet*," for a discussion of how turbines that posed a high risk to marbled murrelets were eliminated from the proposed project.

I-245-4 *The commenter states that monitoring should be conducted using scent dogs, and that not only should the turbine area be monitored, plus roads and pads less intensively as stated, but in particular, the area under the Gen-tie along Shively ridge should be monitored more intensively due to the likelihood of murrelets colliding with wires as they traverse the ridge between occupied habitats.*

Please see Mitigation Measure 3.5-2b (Conduct Postconstruction Mortality Monitoring for Marbled Murrelets and Other Species) in Chapter 9 of the FEIR, which discusses the use of scent dogs for post-construction mortality monitoring (PCMM). While Mitigation Measure 3.5-2b does not prescribe specific turbines or portions of the gen-tie line that need to be monitored, the measure requires achievement of specified performance standards in the PCMM plan for detecting marbled murrelet and other species in the project area. This plan must be approved by Humboldt County in consultation with CDFW before issuance of any construction permits.

I-245-5 *The commenter states that DEIR discussion of project consistency with the HRC HCP erroneously discusses only the expectation that Marbled Murrelet Conservation Areas (MMCAs) would continue to be used, stating that the HCP assumed to continue to use BOTH the MMCAs and Parks given timber harvest under the HCP. The commenter states that the project proposes to take additional murrelets that are using the Park lands in the area, and which are not considered under the HCP as a covered activity. The commenter also states that page 3.5-100 of the DEIR discusses loss of NSO habitat and consistency with the HRC HCP, noting that these are not covered activity in the HCP, and that the HCP's goal of maintaining a certain number of NSO reproduction is not being met.*

Please see Master Response 8, "*Conflict with Adopted HCP,"* for a discussion of how the project does not conflict with the HRC HCP marbled murrelet management objectives and will not prevent HRC from compliance with the conservation measures. The commenter correctly notes that Humboldt Wind LLC is not a permittee under that HCP. However, as described in Master Response 8, the project is not in conflict with the management objectives of the HCP and will not preclude the HCP permittees from compliance with the terms and conditions of the HCP. In addition, the applicant will also be seeking their own incidental take permit(s) for marbled murrelets from USFWS and CDFW for activities on lands within and outside of the HCP area. In addition to the mitigation measures in the DEIR, it is anticipated that consultations with the resource agencies will result in similar and/or additional measures to avoid the take of marbled murrelets. Any measures required in the take permits would also be expected to be congruent with and not conflict with the HCP and would apply in addition to the mitigation laid out in the DEIR and refined in the FEIR

With respect to loss of NSO habitat, please note that the County is imposing mitigation for the loss of northern spotted owl habitat independently of the HCP EIS/EIR. Please see Master Response 8, "*Conflict with Adopted HCP*," Master Response 3, "*NSO Impacts and Mitigation* and "*Humboldt Wind Energy Project – NSO Activity Center Occurrences Discussion and Figures*" in Appendix B of the FEIR. Please also see responses to Comments O7-62 and S4-10.

I-245-6 *The commenter states that the sensitivity analysis in DEIR Appendix 0 (Marbled Murrelet Collision Risk Assessment) shows how very small changes in model assumptions can lead to large differences in estimates of the number of murrelets killed. The commenter states that an assumption of 0.98 avoidance for marbled murrelets should not be considered conservative, and additional modeling of other avoidance rates (e.g., 0.80 or 0.90) should have been used. The commenter notes that an examination of Tables 1 and 2 in Appendix O reveal that Zones C and G have the highest likelihood of murrelets crossing, and should be considered for elimination, or curtailment during the breeding season, and also states additional years of radar should be conducted to accurately assess murrelet use of the area.*

Please see Table 5 in the *Marbled Murrelet Collision Risk Assessment Associated with the Humboldt Wind Project Proposed for Humboldt County, California: 2-Year Report*, prepared by H.T. Harvey & Associates, dated September 2019, in Appendix B of this FEIR. This table

describes risk for a range of avoidance (0.99, 0.98, 0.97, 0.96, 0.95). When considering avoidance rates lower than 0.95, it is important that evaluators consider this data in the context of avoidance typically exhibited by birds, as observed by actual studies. Empirical measures of avoidance less than 0.95 with adequate precision to be reliable have not been documented for any birds other than a few raptors or soaring birds. Further, birds with empirical measures for avoidance rates averaging less than 0.98 have been raptors that were territorial and hunt among turbines or reflected inadequate sampling.

As described in Master Response 2, "*Marbled Murrelets*," a second year of radar data has been conducted, and the highest risk turbines described by the commenter have been eliminated from the project.

Please also see responses to Comments O9-25 and S4-5.