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March 13, 2023

Mr. Kevin Mannie
U.S. Army Corps of Engineers
Galveston District, Regulatory Branch
2000 Fort Point Road
Galveston, TX 77550
swg_public_notice@usace.army.mil

401 Coordinator
TCEQ, Mail Code 150
P.O. Box 13087
Austin, TX 78711-3087
401certs@tceq.texas.gov

Re: Permit Application Number SWG-2021-00163
Port of Corpus Christi Authority

Dear Mr. Mannie and 401 Coordinator:

Texas Parks and Wildlife Department (TPWD) has reviewed the Public Notice (PN) dated February 9, 2023, for permit application number SWG-2021-00163. The applicant requests authorization to construct a 600 megawatt (MW) photovoltaic (PV) solar panel development in emergent wetlands adjacent to McCampbell Slough within a 1,866-acre portion of a 2,850-acre tract of land, completely surrounding the McCampbell-Porter Airport located at 3141 Farm to Market Road (FM) 3512, in Aransas Pass, San Patricio County, Texas.

According to the PN, the applicant proposes to fill approximately 13.9 acres of emergent wetlands for the construction of 11.1 miles of access roads, rotating solar panels mounted on helical piles (dimensions and quantities of PV panels and helical piles are not described), 295 power inverters, and two electric substations in an approximate 1,866-acre area.

Project documents describe the proposed project site as 1,866 acers of the 2,850-acre McCampbell Property, 55% of which supports 1,558.3 acres of palustrine and estuarine wetlands and other jurisdictional waterbodies. The separate tracts that make up the proposed project site are separated by FM 3512 and the McCampbell-Porter Airport that is owned and operated by San Patricio County. Hydrology within the property is dominated by a large ditch that conveys stormwater from the City of Ingleside and from the site itself into McCampbell Slough and Port Bay. The proposed permittee-responsible compensatory mitigation plan (PRCMP) states that this feature provides "a substantial freshwater influx to the downstream estuaries of Port and Copano Bays".

Wetlands within the project area are described as dominated by salt meadow cordgrass (*Spartina spartinae*). These wetlands function to attenuate flood waters from stormwaters associated with both rainfall and storm surge, remove pollutants (including sediment, debris, excess nutrients, pesticides, etc.) associated with

4200 SMITH SCHOOL ROAD
AUSTIN, TEXAS 78744-3291
512.389.4800
www.tpwd.texas.gov

runoff from neighboring communities as well as onsite activities, store and re-cycle nutrients, and support water quality functions for fish and wildlife habitats onsite as well as those located down gradient (i.e., McCampbell Slough and Port Bay).

The 2022 303d List of Impaired Waters indicates that Port Bay was first listed as impaired in 1998 due to bacteria in oyster waters. The Texas Department of State Health Services currently classifies Port Bay as a restricted area that is closed to the taking of shellfish, including take associated with commercial oyster mariculture facilities. Currently, at least one commercial oyster mariculture facility has been authorized just outside the restricted waters of Port Bay. Any expansion of water quality degradation has the potential also expand the restricted shellfish harvest area.

> **Recommendation:** Impacts to wetland functions should be avoided and minimized to the extent practicable to support the attainment of water quality standards for the Mission-Aransas Estuary.

Alternatives Analysis
TPWD has reviewed the information provided in the Alternatives Analysis (AA) Summary provided with the PN. Because this activity is not water dependent, practicable alternatives that do not involve special aquatic sites are presumed available unless clearly demonstrated otherwise. The complete AA was not provided for resource agency or public review and Table 1 of the AA Summary does not provide sufficient information to fully evaluate the alternatives considered or the criteria used to support the alternatives in light of the project purpose and need. However, information provided in Table 1 raises the following concerns for the AA.

Table 1 indicates that the only alternative not owned by the applicant is not feasible in terms of acquisition. There is no explanation provided for this conclusion. Table 1 also states that acquisition of this tract would be required but does not indicate if it (or other tracts not identified in the table) are available for acquisition.

In addition, Table 1 indicates that only two alternatives will avoid impacts to waters of the U.S. (WOUS) and wetlands, but it also states that none of the alternatives will impact special aquatic sites. The applicant should note that wetlands are a type of special aquatic site (defined at 40 CFR 230.41). As such, Table 1 indicates that all the proposed alternatives will impact special aquatic sites except for those which do not contain wetlands.

It is uncertain if the AA provides sufficient justification for being unable to split the project among two or more sites (such as those which avoid wetlands/special aquatic sites), especially considering that two substations are proposed, one on each tract within the project boundary.

> **Recommendation:** The applicant should consider exploring additional alternatives to identify the least environmentally damaging practicable alternative (LEDPA).

Table 1 states: "Delay of acquisition restricts the ability to support economic development in the clean hydrogen sector at the place in which projects would be developed". The applicant should clarify what is meant by this statement and provide additional information about any interdependent or connected activities associated with the proposed project.

> **Recommendation:** If the proposed project is but part of a larger effort, the U.S. Army Corps of Engineers (USACE) should determine the appropriate scope of the proposed project, identify any connected facilities or actions, and evaluate the need to develop an Environmental Impact Statement (EIS).

Avoidance and minimization
With respect to avoidance and minimization, the PN states:

> *The applicant has stated that they have avoided and minimized environmental impacts by designing the proposed project in a manner that preserves site hydrology and avoids/minimizes impacts to aquatic resources including installing solar panels on helical pilings without concrete footings to avoid wetland impacts, elevating the rotating solar panels 5 feet above the ground level to avoid shading effects, elevating cabling on trays to avoid temporary trenching through wetlands, siting the two substations entirely within uplands, placing approximately 60% of power inverters in uplands reducing wetland impacts to 0.3 acre, configuring site access routes to the minimum necessary to reduce wetland impacts to 13.4 acres, and minimizing constructions sequencing, utilizing construction best management practices (BMPs), and restoring temporary impacts to pre-project conditions.*

As proposed, the 1,866-acre project area only contains 308 acres of uplands. Wetlands account for the remaining 1,558.3 acres, or 83% of the total proposed project area. Because the 2850-acre McCampbell Property supports approximately 1,292 acres of uplands, additional impact avoidance and minimization may be feasible onsite.

> **Recommendation:** Once the applicant has sufficiently demonstrated that there are no practicable alternatives to the proposed project site with fewer environmental impacts, the applicant should evaluate onsite alternatives to demonstrate that onsite impacts have been avoided and minimized to the extent practicable.

Other potential effects

Page 17 of 22 of the proposed project plans notes that solar panels will rotate continuously throughout the day via a linear actuator to maximize solar absorption and minimize vegetation shading. Based on this information, the applicant has not provided an adequate rationale to support these competing ideas and the extent to which the PV panels will act as fill is not clear.

Limited research indicates that PV panels can alter the microclimate underneath them and result in changes to plant composition, soil moisture, and other variables. TPWD is concerned that there is a paucity of research available on the direct and indirect effects of PV panels on wetland ecosystems. Any adverse effects that may result from the installation, operation and decommissioning of the PV solar panel development at the project site have the potential to adversely affect up to 1,558.3 acres of wetlands.

The applicant has stated that temporary impacts will be restored to pre-construction conditions, but these temporary impacts have not been adequately described in terms of location, extent, or habitat types affected.

> **Recommendation:** The applicant should limit facilities to upland areas of the property to avoid and minimize wetland impacts. The applicant should also consider reducing the number of solar panels and associated infrastructure to lessen the project footprint and/or consider the use of multiple properties to construct a 600 MW PV solar panel development.

TPWD and the applicant's neighbor, McCampbell-Porter Airport, may have mutual concerns for the increased potential for bird strikes. These could result from birds mistaking the reflective surface of PV solar panels for water or from alterations to site hydrology, such as the construction of access roads, that results in greater frequency and/or duration of seasonal ponding events. Project documents describe the proposed permeable access roads as being comprised of caliche, limestone, or similar material. However, it is not clear if the hydraulic conductivity of these materials will continue to support current site conditions. Further, the applicant has not described any operational activities, such as washing the PV panels, that may also have secondary effects.

> **Recommendation:** The applicant should reach out to San Patricio County to determine if the proposed project is compatible with airport operations. A post-construction monitoring plan should be developed to determine whether bird fatalities (or other wildlife impacts) are occurring, and an adaptive management plan should be developed to minimize these potential impacts.

Mitigation Plan

Based on the information provided, TPWD lacks confidence that the applicant has adequately demonstrated that there are no practicable alternatives to the proposed fill which would have fewer adverse impacts on the aquatic ecosystem. In addition, the applicant has not demonstrated that impacts have been avoided and minimized to the extent practicable. Therefore, TPWD considers the proposed PRCMP to be premature.

Because the PN does not provide information which demonstrates that impacts have been avoided and minimized to the extent practicable, the PRCMP seems premature. Once the AA identifies the LEDPA and impacts are avoided and minimized to the extent practicable, the PRCMP should be revised to fully compensate for unavoidable impacts. The PRCMP proposes to restore 29.6 acres of disturbed vehicle paths to adjacent wetland elevations. In general, TPWD does not consider the proposed restoration project suitable for providing compensatory mitigation as proposed. The applicant has not provided sufficient information to inform or evaluate the PRCMP. For example, no hydrological assessments have been conducted to demonstrate that the proposed restoration project will result in a net gain in aquatic resource function that fully offsets functional losses.

> **Recommendation:** A hydrologic functional assessment should be completed to identify the directional flow of water at pre-restoration conditions and post-construction surveys to determine if the restoration was successful.

As previously described above, it is not clear how the proposed access roads will affect existing hydrology. The combined effects of potential hydrological changes (project impacts and onsite restorations) have the potential to make the site wetter and increase the frequency and duration of inundation. TPWD is concerned that excessive inundation could result in limited plant survival and growth.

The following information should be provided to support the proposed hydrologic design:

- A figure of <u>existing</u> surface hydrology conditions that shows arrows indicating the directions of surface water flow throughout the entire site including water inflow and outflow of each wetland and water feature (e.g., stormwater ditch, McCampbell Slough, etc.) at the project site.

- A figure of <u>proposed</u> surface hydrology conditions that shows arrows indicating the directions of surface water flow throughout the entire site including water inflow and outflow of each wetland and water feature at the project site.

TPWD recommends that the USACE not issue a permit for the project as proposed. The applicant should incorporate the above recommendations into revised project plans that fully evaluate practicable alternatives and avoids and minimizes impacts to special aquatic sites. TPWD requests that any revised project documents or draft compensatory mitigation plans be made available for public review and comment. Questions can be directed to Cindy Adams-Smith or Jackie Robinson (361-431-6003) in Corpus Christi.

Sincerely,

Jacqueline Robinson

for Emma Clarkson, PhD
Regional Director, Ecosystem Resources Program
Coastal Fisheries Division
Science and Policy Branch

EC:JR:CAS