State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE

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June 29, 2023

Jason Cashman
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GAVIN NEWSOM, Governor CHARLTON H. BONHAM, Director





Subject: BayoTech Hydrogen Production and Dispensing Facility Project, Initial

Study/Mitigated Negative Declaration, SCH No. 2023050692, City of

Stockton, San Joaquin County

Dear Mr. Cashman:

The California Department of Fish and Wildlife (CDFW) received an Initial Study/Mitigated Negative Declaration (IS/MND) from Port of Stockton for the BayoTech Hydrogen Production and Dispensing Facility Project (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: Port of Stockton

Objective: The objective of the Project is the development and operation of a hydrogen production and dispensing facility at the Port of Stockton. BayoTech will operate the hydrogen production and dispensing facility to produce and distribute hydrogen to customers. Primary Project activities include excavating; grading; paving; constructing slabs on grade; installing equipment, lighting, and utility connections; installing truck parking, hydrogen compressors (approximately 120 square feet each), hydrogen storage ponds (up to 160 square feet each), and BayoTech's H2-1000 Hydrogen Generation System (500 square feet). The equipment compound will be protected with a new solid wall on two sides and a vinyl fence with bollards on the other two sides, along with a 3- foot human gate and a 12-foot service gate. New utility connections would be installed at the facility, including electrical, water, sanitary, and natural gas. A warehouse facility, located just outside of the hydrogen production and dispensing facility, would include a storage office and employee parking spaces. In total, it is expected that the various hydrogen production and dispensing and warehouse facilities would occupy an area of approximately 0.5 acre on a 5-acre site. A perimeter fence installed around the entire project area, an automatic safety gate for entry with cameras, and site lighting for security will be installed at the Project site.

Location: The proposed Project location is in the City of Stockton, San Joaquin County, at the intersection of W. Washington Street and Navy Drive in the East Complex of the Port of Stockton. The property is bounded by Forrestal Village Road on the north, west, and south and by Navy Drive on the east; train tracks also encircle the northern part of the property. The site is currently vacant and encompasses approximately five acres of undeveloped, graded land in an industrialized area. The latitude/longitude is 37.943030495899826, 121.34005549078213.

Timeframe: The Project is expected to begin in summer 2023 and be completed in one phase in late 2023 or early 2024. Construction would occur over approximately three to four months.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Port of Stockton in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

I. Project Description and Related Impact Shortcoming

COMMENT 1: Artificial Light Impact

Section 2.3 Proposed Project Construction, Page 12

Issue: The IS/MND states that site lighting for security will be installed at the Project site. Page 15 also states that the facility will operate 24 hours per day, 7 days per week, 350 days per year. The site is located next to the San Joaquin River and across the river there is relatively undeveloped land that wildlife may utilize. The analysis provided in the IS/MND is insufficient to conclude that Project impacts from artificial light would be reduced to a level less-than-significant and requires additional evaluation and mitigation.

Evidence the impact would be significant: Night lighting can disrupt the circadian rhythms of many wildlife species. Many species use photoperiod cues for communication (e.g., bird song; Miller 2006), determining when to begin foraging (Stone et al. 2009), behavior thermoregulation (Beiswenger 1977), and migration (Longcore and Rich 2004). Even aquatic species can be affected; migration of salmonids can be slowed or halted by the presence of artificial lighting (Tabor et al. 2004, Nightingale et al. 2006). Phototaxis, a phenomenon which results in attraction and movement towards light, can disorient, entrap, and temporarily blind wildlife species that experience it (Longcore and Rich 2004).

Specifically for fish, artificial lighting can suppress the immune system of fish resulting in increased pathogen and parasite infections (Leonardi and Klempau 2003, Navara and Nelson 2007). Artificial lighting can also disrupt feeding patterns of juvenile salmon (Valdimarsson et al. 1997). Salmonids also use changes in ambient light to guide their migration patterns, which can be disrupted by artificial lighting (Grau et al. 1981). Also, Delta and longfin smelt experience diel shifts vertically in the water column that may be disrupted from artificial light. Additionally, artificial light can disrupt migration of Swainson's hawks (*Buteo swainsoni*) and cause them to become disoriented (Ogden 1996, Longcore and Rich 2016). In the case of giant garter snake (*Thamnophis gigas*; GGS), <u>lighting</u> may attract or make GGS more visible to native predators (e.g., raccoons).

Recommendation: CDFW recommends the following be incorporated as mitigation measures either in a revised IS/MND or required as conditions of approval in permits the Port of Stockton issues for the Project:

Recommendations to minimize significant impacts:

- Require that the Project be designed in a manner that sites structures to eliminate all non-essential lighting, and avoid or limit the use of artificial light during the hours of dawn and dusk, as these windows of time are when many wildlife species are most active.
- 2. Require use of motion-activated lighting to decrease the amount of time artificial night lighting is used and decrease wildlife exposure to sources of artificial light.
- 3. Ensure that lighting for necessary activities such as security purposes is shielded, cast downward, and does not spill over onto other properties or upwards into the night sky (see the International Dark-Sky Association standards at http://darksky.org/).
- 4. Use LED lighting with a correlated color temperature at or under 2,700 Kelvin or less that results in the output of a warm white color spectrum, properly dispose of hazardous waste, and recycle all lighting that contains toxic compounds with a qualified recycler.

II. Mitigation Measure and Related Impact Shortcoming

COMMENT 2: Swainson's Hawk Protocol Surveys and Assessment

Issue: BIO-MM-3 of the IS/MND may not be sufficient to avoid potentially significant impacts to Swainson's hawk, a state threatened species. The California Natural Diversity Database (CNDDB) indicates multiple occurrences within a 5-mile radius of the Project site and one occurrence is within the 0.5-mile avoidance buffer as well as potentially suitable nest trees.

In the IS/MND, on page 44, BIO-MM-3 states that the lead agency will obtain coverage under the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) or conduct nesting bird surveys. If the proposed Project is unable to obtain coverage under the SJMSCP, BayoTech will implement alternatives to SJMSCP coverage that are consistent with CDFW's standard requirements, including surveys and avoidance measures. However, BIO-MM-3 is vague and does not sufficiently avoid potentially significant impacts to Swainson's Hawk if the Project does not participate in the SJMSCP.

Evidence the impact would be significant: The estimated historical population of Swainson's hawk was nearly 17,000 pairs; however, in the late 20th century, Bloom (1980) estimated a population of only 375 pairs. The decline was primarily a result of habitat loss from development (CDFW 2016). The most recent survey conducted in 2009 estimated the population at 941 breeding pairs. The breeding population of Swainson's hawks in California has declined by an estimated 91% since 1900 (CDFW 2016). The species is currently threatened by loss of nesting and foraging habitat (e.g., from agricultural shifts to less crops that provide less suitable habitat), urban development, environmental contaminants (e.g., pesticides), and climate change (CDFW 2016).

Recommendations to minimize significant impacts: To avoid "take" or adverse impacts to Swainson's hawk if the Project does not participate in the SJMSCP, CDFW recommends incorporation of the following into the IS/MND:

- 1. Recommended Mitigation Measure 1 Swainson's Hawk Protocol Surveys: If Project work will occur during the breeding season for nesting birds (February 15 to September 15), CDFW recommends surveys be conducted according to the Swainson's Hawk Technical Advisory Committee's (TAC) Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (CDFW, 2010) found at https://wildlife.ca.gov/Conservation/Survey-Protocols. CDFW recommends that the TAC survey method be strictly followed by starting early in the nesting season (late March to early April) in order to maximize the likelihood of detecting an active nest. Surveys should be conducted within a minimum 5-mile radius of the proposed Project area and should be completed for at least the two survey periods immediately prior to initiating any Project-related construction work. Raptor nests may be very difficult to locate during egg-laying or incubation, or chick brooding periods (late April to early June) if earlier surveys have not been conducted. These full-season surveys may assist with Project planning, development of appropriate avoidance, minimization and mitigation measures, and may help avoid any Project delays.
- 2. Recommendation 2 Swainson's Hawk Nest Buffers: If an active nest is found during surveys, avoid all Project-related disturbance during the Swainson's hawk nesting season within a minimum of 0.25 miles and up to 0.5 miles from an active nest, depending on site-specific conditions. CDFW considers a nest active if it has been occupied once in the previous five years. Please refer to CDFW's Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California available at https://wildlife.ca.gov/Conservation/Survey-Protocols if impacts cannot be avoided.
- 3. **Recommendation 3 Swainson's Hawk Take Prohibition**: If "take" of Swainson's hawk or any other species listed under CESA cannot be avoided either

during Project activities or over the life of the Project, a CESA Permit must be obtained (pursuant to Fish and Game Code Section 2080 *et seq.*). Issuance of a CESA Permit is subject to CEQA documentation; therefore, the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the proposed Project will impact any CESA-listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit. More information on the CESA permitting process can be found on the CDFW website at https://wildlife.ca.gov/Conservation/CESA.

4. Recommended Mitigation Measure 4 – Swainson's Hawk Nests: CDFW recommends avoiding all Project-related disturbance within a minimum of 0.5 miles of an active Swainson's hawk nest during the nesting season. Please refer to the CDFW guidance document on Swainson's hawk (CDFW,1994, 2010) take avoidance, minimization and mitigation measures. Early consultation with CDFW and other natural resource agencies on Swainson's hawk take avoidance, minimization and mitigation measures is strongly recommended.

COMMENT 3: Giant Garter Snake Surveys and Habitat Assessment

Issue: BIO-MM-3 of the IS/MND may not be sufficient to avoid potentially significant impacts to GGS, a state threatened species. Ground disturbing activities and burrow destruction have the potential to result in collapse of GGS refugia and may result in take of GGS if present.

Evidence the impact would be significant: The GGS is a highly aquatic snake endemic to the Central Valley of California. The species became threatened several decades ago primarily due to habitat loss from agriculture (Hansen and Brode 1980). The species relies on wetland habitats that have been destroyed, fragmented, or degraded by urbanization and agricultural development. Only 5% of the species' historic wetland habitat acreage remains. Additionally, GGS are threatened by invasive predatory fish and bullfrogs as well as pesticides, herbicides, fertilizers, and heavy metals, which not only impact GGS directly, but are cause declines in their native prey (e.g., Sierran treefrogs and Sacramento blackfish). Water diversions, dams, canal and levee maintenance, and rodent abatement also threaten the species. Plastic erosion control or bird netting can entangle and kill snakes as well (Kapfer and Paloski 2011).

Currently, GGS are isolated to only nine disjunct populations. At the time of the species listing in 1993 under the federal Endangered Species Act (ESA), the U.S. Fish and Wildlife Service (USFWS) recognized 13 populations. Since then, two populations have been determined extirpated (USFWS 2017). In addition, GGS are also susceptible to roads, vehicular traffic, and non-native species impacts (USFWS 2017). Road use can result in snake mortality as they congregate on roads due to the increased temperature

that create a heat island on and near the road for thermoregulation (Rosen and Lowe 1994, Trombulak and Frissell 2000). Reptile diversity has been shown to decline relative to the density of roads (Findlay and Houlahan 1997).

The species has specific seasonal habitat requirements. During summer months, GGS require aquatic habitat for foraging and adjacent upland areas with emergent vegetation for basking (USFWS 2017). During periods of inactivity, GGS require burrows in upland habitat as refugia for summer shelter and cracks and burrows in uplands for winter estivation (Hansen et al. 2015).

Recommendations to minimize significant impacts: To avoid "take" or adverse impacts to GGS if the Project does not participate in the SJMSCP, CDFW recommends incorporation of the following mitigation measures into the IS/MND or be required as conditions of approval in permits the Port of Stockton issues for the Project:

- Recommended Mitigation Measure 1 Giant Garter Snake Habitat
 Assessment: CDFW recommends that a qualified biologist conduct a habitat
 assessment of Project areas in advance of Project activities, to determine if the
 Project area or its vicinity contains usable habitat for GGS.
 - If usable habitat is present, CDFW recommends, no more than 30 days prior to ground disturbing activities, a qualified biologist with GGS experience, survey the work area and a minimum 50-foot radius of the work area for burrows and crevices in which GGS could be present. It is advised that all potentially suitable burrows and crevices be flagged and avoided by a minimum 50-foot no-disturbance buffer. If a 50-foot radius buffer isn't feasible, consultation with CDFW is warranted to discuss how to implement the Project and avoid take of the species.
- 2. **Recommendation 2 Giant Garter Snake Take Prohibition:** If "take" of GGS or any other species listed under CESA cannot be avoided either during Project activities or over the life of the Project, a CESA Permit should be obtained (pursuant to Fish and Game Code Section 2080 *et seq.*).
- 3. Recommendation 3 Giant Garter Snake Habitat Buffer: If potential aquatic habitat for GGS has been identified in or within 200 feet of the Project area by the Qualified Biologist, a 200-foot buffer shall be established around the aquatic habitat. Buffers will be marked in the field with temporary fencing, high-visibility flagging, or other means that effectively delineates the buffers. Buffers will be delineated with guidance from the Qualified Biologist. Project activities will not occur within the buffer and workers shall avoid entering the buffer at all times.
- 4. **Recommendation 4 Giant Garter Snake Observation:** If a snake species of any kind is observed within the Project site, then all Project activities shall halt and work shall not continue until the snake species is identified by a qualified biologist.

If GGS is discovered at any time within the Project site and staging areas, then all Project activities shall halt until CDFW has been notified and the Project proponent can demonstrate compliance with CESA to CDFW's satisfaction. CDFW reserves the right to provide additional GGS protection measures in the event of a GGS detection.

5. **Recommendation 5 – Prevent Giant Garter Snake Entanglement:** The Project shall avoid all use of erosion control materials potentially harmful to GGS, such as monofilament netting (erosion control matting) or similar material.

III. Editorial Comments and/or Suggestions

Comment 4 – Compensatory Mitigation for Threatened and Endangered Species. If the Project does not participate in the SJMSCP, CDFW recommends that the IS/MND require compensatory mitigation for impacts to threatened and endangered species and their habitats and include a mitigation proposal. Examples of compensatory mitigation acceptable to CDFW include mitigation bank credits, participation in the SJMSCP, and conserved lands. Compensatory mitigation in the form of permanently conserved lands should be acquired at the following ratios: 3:1 ratio (conserved land to impacted habitat) for permanent impacts and 1:1 for temporary impacts (i.e. impact to baseline recovery in under one year). Conservation lands should be placed under a conservation easement with CDFW listed as a third-party beneficiary and an endowment should be funded for managing the lands for the benefit of the conserved species in perpetuity. Additionally, a long-term management plan should be prepared and implemented by a land manager.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be filled out and submitted online at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

CONCLUSION

CDFW appreciates the opportunity to comment on the IS/MND to assist Port of Stockton in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Andrea Boertien, Environmental Scientist, at (209) 317-0388 or

<u>Andrea.Boertien@wildlife.ca.gov</u>; or Michelle Battaglia, Senior Environmental Scientist (Supervisory), at <u>Michelle.Battaglia@wildlife.ca.gov</u>.

Sincerely,

--- DocuSigned by:

Erin Chappell Regional Manager Bay Delta Region

Erin Chappell

Attachment

cc: Office of Planning and Research, State Clearinghouse, Sacramento

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ATTACHMENT A

Draft Mitigation Monitoring and Reporting Program (MMRP)

CDFW provides the following language to be incorporated into the MMRP for the Project.

Biological Resources (BIO)			
Mitigation Measure (MM) Description	Implementation Schedule	Responsible Party	
MM-BIO41: Artificial Light Minimization. Design the Project site structures to eliminate all non-essential lighting, and avoid or limit the use of artificial light during the hours of dawn and dusk, as these windows of time are when many wildlife species are most active. Use motion-activated lighting to decrease the amount of time artificial night lighting is used and decrease wildlife exposure. Ensure that lighting for necessary activities such as security purposes is shielded, cast downward, and does not spill over onto other properties or upwards into the night sky (see the International Dark-Sky Association standards at http://darksky.org/). Use LED lighting with a correlated color temperature at or under 2,700 Kelvin or less that results in the output of a warm white color spectrum, properly dispose of hazardous waste, and recycle all lighting that contains toxic compounds with a qualified recycler.	Prior to Project Activities; Prior to the lead agency issuing construction- related permits, ground disturbing activities, and vegetation clearing	Port of Stockton	
MM-BIO-5: Pre-Construction Surveys and Nest Buffers for Swainson's Hawk. CDFW recommends conducting Project activities outside of the Swainson's hawk breeding season (February 15 to September 15). If Project activities are to be conducted during the breeding season, surveys for Swainson's hawks and their nests shall be conducted by the Qualified Biologist(s) prior to the beginning of Project-related activities. Results of all surveys shall be submitted to CDFW prior to the initiation of any work. Surveys shall be conducted in a manner consistent with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley	Prior to Project Activities	Port of Stockton	

 (https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds). Surveys shall cover a minimum of two survey periods with the minimum number of surveys prior to project initiation as follows: a. January to March 20 - survey all day for raptor nests a minimum of one survey. b. March 20 to April 5 – survey from either sunrise to 1000 or 1600 to sunset with a minimum of three surveys. c. April 5 to April 20 – survey from either sunrise to 1200 or 1630 to sunset with a minimum of 3 surveys. 1) Alternative survey methodology specific to work within the project area may be submitted to CDFW for review and written approval at least 30 days in advance of conducting surveys. 2) If a lapse in Project-related work of 7 days or longer occurs, then a focused all-day (i.e., from dawn to dusk) survey shall be performed, and the results shall be sent to CDFW prior to resuming work. Surveys shall be conducted in proposed work areas, staging and storage areas, and access routes. If any active Swainson's hawk nests are found within ½-mile of a Project site, an avoidance buffer of ¼-mile in urban areas or a ½-mile buffer in 		
non-urban areas shall be implemented from February 15 to September 15, or until the young fledge, unless otherwise approved in writing by CDFW.		
MM-BIO-6: Giant Garter Snake Habitat Assessment. A Qualified Biologist shall conduct a habitat assessment of Project areas in advance of Project activities, to determine if the Project area or its vicinity contains usable habitat for GGS.		
If usable habitat is present, no more than 30 days prior to ground disturbing activities, a Qualified Biologist with GGS experience shall survey the work area and a minimum 200-foot radius of the work area for burrows and crevices in which GGS could be present. All potentially suitable burrows and crevices shall be flagged and avoided by a minimum 200-foot no-disturbance buffer. If a 200-	Prior to Project Activities	Port of Stockton

foot radius buffer isn't feasible, consultation with CDFW is warranted to discuss how to implement the Project and avoid take of the species.		
MM-BIO-7: Giant Garter Snake Habitat Buffer. If potential aquatic habitat for GGS has been identified in or within 200 feet of the Project area by the Qualified Biologist, a 200-foot buffer shall be established around the aquatic habitat. Buffers will be marked in the field with temporary fencing, high-visibility flagging, or other means that effectively delineates the buffers. Buffers will be delineated with guidance from the Qualified Biologist. Project activities will not occur within the buffer and workers shall avoid entering the buffer at all times.		
MM-BIO-8: Prevent Giant Garter Snake Entanglement. To minimize the risk of ensnaring snakes and other wildlife, Permittee shall not use erosion control materials containing synthetic (e.g., plastic or nylon) monofilament netting or cross joints in the netting that are bound/stitched. Geotextiles, fiber rolls, and other erosion control measures shall be made of loose-weave mesh, such as coconut (coir) fiber, or other products without welded or tight weaves.	Prior to Project Activities; Entirety of the Project	Port of Stockton
MM-BIO-9: Giant Garter Snake Observation and Avoidance. If a snake species of any kind is observed within the Project site, then all Project Activities shall halt and work shall not continue until the snake species can be identified by the Qualified Biologist. If GGS is discovered at any time within the Project site and staging areas, then all Project activities shall halt until CDFW has been notified and Permittee can demonstrate compliance with CESA to CDFW's satisfaction. If take of GGS is expected to occur as a result of Project-related activities, then an Incidental Take Permit from CDFW may be obtained to avoid disruptions to Project activities.	Entirety of the Project	Port of Stockton
MM-BIO-10: Compensatory Mitigation for Threatened and Endangered Species. If the Project does not participate in the SJMSCP, compensatory mitigation for impacts to threatened and endangered species and their habitats shall be	Prior to Project Activities or within 18 Months with a Security	Port of Stockton

acquired. Compensatory mitigation shall be in the form of mitigation bank credits, participation in the SJMSCP, conserved lands, or some other form acceptable to CDFW. If compensatory mitigation in the form of permanently conserved lands shall be acquired, the mitigation ratio shall be 3:1 ratio (conserved land to impacted habitat) for permanent impacts and 1:1 for temporary impacts (i.e., impact to baseline recovery in under one year). Conservation lands shall be placed under a conservation easement with CDFW listed as a thirdparty beneficiary and an endowment shall be funded for managing the lands for the benefit of the conserved species in perpetuity. Additionally, a long-term management plan shall be prepared and implemented by a land manager. The Grantee of the conservation easement shall be an entity that has been through the due diligence process for approval by CDFW to hold or manage conservation lands.