November 18, 2021

Mr. Brian Zinn  
Austin-Bergstrom International Airport  
Environmental Scientist  
2716 Spirit of Texas Dr.  
Austin, TX 78719

RE: Request for Comment – Austin-Bergstrom International Airport (AUS)  
Airport Expansion and Development Program (AEDP) Environmental  
Assessment, Travis County, Texas

Dear Mr. Zinn:

Texas Parks and Wildlife Department (TPWD) has received the request for coordination regarding the proposed project referenced above located in Travis County. TPWD staff has reviewed the information provided and offers the following information, comments, and recommendations concerning this project.

Please be aware that a written response to a TPWD recommendation or informational comment received by a state governmental agency may be required by state law. For further guidance, see the Texas Parks and Wildlife Code, Section 12.0011. For tracking purposes, please refer to TPWD project number 47613 in any return correspondence regarding this project.

Project Description

The City of Austin (City or Airport) is proposing an expansion project located at Austin-Bergstrom International Airport (AUS). This expansion project – the “Airport Expansion Development Program” – is the result of reaching the limitations of the existing Barbara Jordan Terminal and needing to accommodate the forecasted demand projected by the Federal Aviation Administration (FAA). The City has begun an Environmental Assessment in accordance with the National Environmental Policy Act (NEPA) to evaluate the potential impacts to environmental resources at AUS as well as to environmental resources within the surrounding community. This Environmental Assessment is being done in partnership with the FAA.

General Construction Recommendations

TPWD would like to provide the following general construction recommendations to assist in project planning.

Recommendation: TPWD recommends the judicious use and placement of sediment control fence to exclude wildlife from the construction areas. In many cases, sediment control fence placement for the purposes of controlling erosion to manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.
and protecting water quality can be modified minimally to also provide the benefit of excluding wildlife access to construction areas. The exclusion fence should be buried at least six inches and be at least 24 inches high. The exclusion fence should be maintained for the life of the project and only removed after the construction is completed and the disturbed site has been revegetated with site-specific native species. Construction personnel should be encouraged to examine the inside of the exclusion area daily to determine if any wildlife species have been trapped inside the area of impact and provide safe egress opportunities prior to initiation of construction activities. TPWD recommends that any open trenches or excavation areas be covered overnight and/or inspected every morning to ensure no wildlife species have been trapped. For open trenches and excavated pits, install escape ramps at an angle of less than 45 degrees (1:1) in areas left uncovered. Also, inspect excavation areas for trapped wildlife prior to refilling.

**Recommendation:** For soil stabilization and/or revegetation of disturbed areas within the proposed project area, TPWD recommends erosion and seed/mulch stabilization materials that avoid entanglement hazards to snakes and other wildlife species. Because the mesh found in many erosion control blankets or mats pose an entanglement hazard to wildlife, TPWD recommends the use of no-till drilling, hydromulching and/or hydroseeding due to a reduced risk to wildlife. If erosion control blankets or mats will be used, the product should not contain netting, but if it must contain netting it should contain loosely woven, natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. TPWD recommends avoiding the use of plastic mesh matting.

**Recommendation:** Impervious vehicular areas, such as roads, sidewalks, and parking areas, should not impede natural surface water drainage. TPWD recommends Green Stormwater Infrastructure (GSI) to manage and treat stormwater runoff before discharging into nearby waterways through limiting the amount of connected impervious cover, using permeable or porous pavement, and directing runoff into rain gardens, vegetated swales, retention or detention ponds, or similar pre-treatment areas. When designing roads or parking areas with curbs, consider using Type I or Type III curbs to provide a gentle slope to enable turtles and small animals to get out of roadways.

**Impacts to Vegetation/Wildlife Habitat**

According to the map provided in the coordination request, it appears that there will be several areas where vegetation will need to be removed for the airport expansion project. TPWD would like to provide the following vegetation removal, revegetation, and landscaping recommendations to assist in project planning.

**Recommendation:** TPWD recommends reducing the amount of vegetation proposed for clearing if possible and minimizing clearing of native vegetation,
particularly mature native trees, riparian vegetation, and shrubs to the greatest extent practicable. TPWD recommends in-kind on-site replacement/restoration of the native vegetation wherever practicable. Colonization by invasive species, particularly invasive grasses and weeds, should be actively prevented. Vegetation management should include removing invasive species early on while allowing the existing native plants to revegetate the disturbed areas. TPWD recommends referring to the Lady Bird Johnson Wildflower Center Native Plant Database for regionally adapted native species that would be appropriate for landscaping and revegetation.

**Landscaping for Monarch Butterflies**

In December 2020, the U.S. Fish and Wildlife Service (USFWS) determined that Endangered Species Act (ESA) listing for the monarch butterfly (*Danaus plexippus*) was warranted; however, listing was precluded by higher priority listing actions. Currently, the monarch butterfly is a candidate for listing and USFWS will review the species status annually until a proposal for listing is developed.

Significant declines in the population of migrating monarch butterflies have led to widespread concern about this species and the long-term persistence of the North American monarch migration. As part of an international conservation effort TPWD has developed the Texas Monarch and Native Pollinator Conservation Plan, and one of the broad categories of action in this plan is to augment larval feeding and adult nectaring opportunities.

**Recommendation:** TPWD recommends incorporating pollinator conservation and management into the revegetation and maintenance plan for this project, such as promoting growth of native flowering species throughout the growing season. TPWD recommends revegetation efforts include planting or seeding native milkweed (*Asclepias* spp.) and nectar plants as funding and seed availability allow. Information about monarch biology, migration, and butterfly gardening can be found on the Monarch Watch website.

**Recommendation:** TPWD advises against planting the non-native milkweed species black swallow-wort (*Cynanchum louiseae*) and pale swallow-wort (*C. rossicum*). Monarch butterflies will lay eggs on these plant species, but the larvae are unable to feed and complete their life cycle. Additionally, these plant species can be highly invasive. TPWD also advises against planting the non-native tropical milkweed (*Asclepias curassavica*), a popular commercial nursery milkweed that can persist year-round in southern states. The year-round persistence of tropical milkweed fosters greater transmission of the protozoan *Ophryocystis elektroscirrha* (OE), increasing the likelihood that monarchs become infected with the debilitating parasite.
**Water Resources**

Project elements included in the proposed airport expansion project are located in close proximity to the Colorado River (S-2 and S-5) and Onion Creek (U-2). The Colorado River and Onion Creek are both designated as an Ecologically Significant Stream Segments (ESSSs).

TPWD has identified ESSSs throughout the state to assist regional water planning groups in identifying ecologically unique stream segments under Texas Administrative Code (TAC) Title 31 357.43 and 358.2. Until approved by the legislature this is not a legal designation. The stream segments are identified through extensive review by TPWD staff and are determined to be ecologically important due to one or more of the following criteria: biological function; hydrologic function; riparian conservation areas; high water quality/exceptional aquatic life/high aesthetic value; or threatened or endangered species/unique communities. Additional information on ESSSs may be found on TPWD’s website.

**Recommendation:** TPWD recommends implementing beneficial management practices (BMPs) to prevent erosion and sedimentation into the Colorado River and Onion Creek. Erosion and sediment control measures include temporary or permanent seeding (with native plants), mulching, earth dikes, silt fences, sediment traps, and sediment basins. Examples of post-construction BMPs include vegetation systems (biofilters) such as grass filter strips and vegetated swales as well as retention basins capable of treating any additional runoff. Please also refer to the General Construction Recommendations section of this letter for erosion and seed/mulch stabilization materials TPWD recommends utilizing and avoiding. Erosion controls and sediment runoff control measures should be installed prior to construction and maintained until disturbed areas are permanently revegetated using site-specific native vegetation. Measures should be properly installed to effectively minimize the amount of sediment and other debris entering the waterway.

**Recommendation:** All waterways and associated floodplains, riparian corridors, springs, and wetlands, regardless of their jurisdictional status, provide valuable wildlife habitat and should be protected to the maximum extent possible. Natural buffers contiguous to any wetlands or aquatic systems should remain undisturbed to preserve wildlife cover, food sources, and travel corridors. During construction, trucks and equipment should use existing bridge or culvert structures to cross creeks, and equipment staging areas should be located in previously disturbed areas outside of riparian corridors. Destruction of inert microhabitats in waterways such as snags, brush piles, fallen logs, creek banks, pools, and gravel stream bottoms should also be avoided, as these provide habitat for a variety of fish and wildlife species and their food sources.
Lighting

According to the map provided in the coordination request, a new Austin Energy Substation (U-2) is proposed as part of the airport expansion project. This substation is proposed close to Onion Creek, which as previously mentioned, is considered an ESSS.

Sky glow as a result of light pollution can have negative impacts on wildlife and ecosystems by disrupting natural day and night cycles inherent in managing behaviors such as migration, reproduction, nourishment, sleep, and protection from predators. Wildlife impacts from light pollution is of concern to TPWD. Therefore, TPWD has provided the following recommendation to assist in project planning.

**Recommendation:** TPWD recommends committing to dark-sky lighting practices for the proposed Austin Energy Substation and any other project elements that will require lighting. TPWD recommends implementing the following BMPs:

- When lighting is added, minimize sky glow by focusing light downward, with full cutoff luminaires to avoid light emitting above the horizontal.
- Use the minimum amount of night-time lighting needed for safety and security.
- Use dark-sky friendly lighting that is on only when needed, down-shielded, as bright as needed, and minimizing blue light emissions.

Appropriate lighting technologies and BMPs can be found on the International Dark-Sky Association website or the McDonald Observatory website.

Federal Laws

*Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) prohibits direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control, except when specifically authorized by the Department of the Interior. This protection applies to most native bird species, including ground nesting species. The USFWS Migratory Bird Office can be contacted at (505) 248-7882 for more information on potential impacts to migratory birds.

**Recommendation:** TPWD recommends excluding vegetation clearing activities during the general bird nesting season, March 15 through September 15, to avoid adverse impacts to breeding birds. If clearing vegetation during the migratory bird nesting season is unavoidable, TPWD recommends surveying the area proposed for disturbance to ensure that no nests with eggs or young will be disturbed by operations. TPWD recommends performing active bird
nest surveys no more than five days prior to planned clearing or construction. TPWD recommends that a minimum 150-foot buffer of vegetation remain around any active nests that are observed prior to disturbance. Any vegetation (such as trees, shrubs, and grasses) or other open areas where occupied nests are located should not be disturbed until the eggs have hatched and the young have fledged.

Proposed Austin Energy Substation

**Recommendation:** While raptor electrocutions at substations are uncommon, smaller birds such as songbirds and corvids may perch, roost or nest in substations, causing electrocution and outage risks. For new substations, a combination of framing and covering is the most effective method for preventing bird (and other animal) contacts with the substation.

For additional information, please see the guidelines published by USFWS and the Avian Power Lines Interaction Committee (APLIC) in the updated guidance document *Reducing Avian Collisions with Power Lines: State of the Art in 2012*. This manual identifies best practices and provides specific guidance to help electric utilities and cooperatives reduce bird collisions with power lines and substations. A companion document, *Suggested Practices for Avian Protection on Power Lines*, was published by APLIC and the USFWS in 2006. For more information on both documents, please visit the APLIC website.

*Endangered Species Act*

Federally-listed animal species and their habitats are protected from “take” on any property by the ESA. Take of a federally-listed species can be allowed if it is “incidental” to an otherwise lawful activity and must be permitted in accordance with Section 7 or 10 of the ESA. Federally-listed plants are not protected from take except on lands under federal/state jurisdiction or for which a federal/state nexus (i.e., permits or funding) exists. Any take of a federally-listed species or its habitat without the required take permit (or allowance) from the USFWS is a violation of the ESA.

**Texas fatmucket (Lampsilis bracteata) – Proposed to be listed as Federally-Endangered (with designated critical habitat)**

There are two Texas Natural Diversity Database (TXNDD) records for the Texas fatmucket within Onion Creek close to the airport. TPWD notes that the Texas fatmucket was proposed to be listed as endangered by the USFWS and this proposed listing was published in the Federal Register on August 26, 2021 with proposed designated critical habitat. The Texas fatmucket is also state-listed as threatened. This species is reported to occur in slow to moderate current in sand, mud, and gravel substrates among large cobble, boulders, bedrock ledges,
horizontal cracks in bedrock slabs, and macrophyte beds. The Texas fatmucket has also been observed inhabiting the roots of cypress trees and vegetation along steep banks. Past authorities have reported this species to be intolerant of reservoir conditions, but recent surveys suggest it may persist in some impoundment conditions.

TPWD notes that it is unclear from the information provided if impacts to the Colorado River or Onion Creek are anticipated from the construction of the proposed airport expansion project.

**Recommendations:** TPWD recommends the use of BMPs for riparian areas to minimize impacts on mussels (as well as all fish species which may serve as the mussels’ larval host). BMPs would include measures such as avoiding construction during fish and mussel spawning periods and use of double silt fences and doubling soil stabilization measures along the banks to avoid increasing the turbidity of the creek or river. If mussel populations are present within the limits of the proposed project area, those populations should be protected from disturbance to the greatest extent possible.

If impacts to the Colorado River or Onion Creek (including the banks) are anticipated as part of this project, then TPWD recommends contacting this office as additional permits may be required.

**State Laws**

*Texas Parks and Wildlife Code – Chapter 64, Birds*

Texas Parks and Wildlife Code Section 64.002, regarding protection of nongame birds, provides that no person may catch, kill, injure, pursue, or possess a bird that is not a game bird. Texas Parks and Wildlife Code Section 64.003, regarding destroying nests or eggs, provides that, no person may destroy or take the nests, eggs, or young and any wild game bird, wild bird, or wild fowl.

**Recommendation:** Please review the *Migratory Bird Treaty Act* section above for recommendations as they are also applicable for Chapter 64 of the Texas Parks and Wildlife Code compliance.

*Texas Parks and Wildlife Code, Section 68.015 – State-listed Species*

Texas Parks and Wildlife Code regulates state-listed threatened and endangered animal species. The capture, trap, take, or killing of state-listed threatened and endangered animal species is unlawful unless expressly authorized under a permit issued by USFWS or TPWD. The *TPWD Guidelines for Protection of State-Listed Species*, which includes a list of penalties for take of species, can be found on the Wildlife Habitat Assessment Program website. State-listed species may only be handled by persons with authorization obtained through TPWD. For more
information on this permit, please contact the Wildlife Permits Office at (512) 389-4647.

**Species of Greatest Conservation Need**

In addition to state and federally-protected species, TPWD tracks SGCN and other special features and natural communities that are not listed as threatened or endangered. These species and communities are tracked in the TXNDD, and TPWD actively promotes their conservation. TPWD considers it important to evaluate and, if necessary, minimize impacts to SGCN and their habitat to reduce the likelihood of endangerment and preclude the need to list as threatened or endangered in the future.

Texas fescue (*Festuca versuta*)

There is a TXNDD record for Texas fescue located approximately 1.6 miles from the airport. This species occurs in mesic woodlands on limestone-derived soils on stream terraces and canyon slopes. Texas fescue is perennial and flowers/fruit April through June.

Texas amorpha (*Amorpha roemeriana*)

There is a TXNDD record for Texas amorpha located approximately 2.7 miles from the airport. This species inhabits oak-juniper woodlands or shrublands on rocky limestone slopes, sometimes on dry shelves above creeks. Texas amorpha is a perennial species and flowers May through June and fruits June through October.

Heller’s marbleseed (*Onosmodium helleri*)

There is a TXNDD record for Heller’s marbleseed located within the current boundary of the airport. This species occurs in loamy calcareous soils in oak-juniper woodlands on rocky limestone slopes, often in more mesic portions of canyons. Heller’s marbleseed is perennial and flowers March through May.

Texas almond (*Prunus minutiflora*)

There is a TXNDD record for Texas almond located approximately 1.5 miles from the airport. Texas almond is wide-ranging but scarce, found in a variety of grassland and shrubland situations, mostly on calcareous soils underlain by limestone but occasionally in sandier neutral soils underlain by granite. Texas almond is perennial and flowers February through May and October.

Correll’s false dragonhead (*Physostegia correllii*)

There is a TXNDD record for Correll’s false dragonhead located approximately 2.1 miles from the airport. This species is found in wet, silty clay loams on
streamsides, in creek beds, irrigation channels and roadside drainage ditches. This species can also be found on seepy, mucky, sometimes gravelly soils along riverbanks or small islands in the Rio Grande or underlain by Austin Chalk limestone along gently flowing spring-fed creeks in central Texas. This species flowers May through September.

Gravelbar brickellbush (*Brickellia dentata*)

There is a TXNDD record for Gravelbar brickellbush located approximately 2.5 miles from the airport. Gravelbar brickellbush is essentially restricted to frequently-scoured gravelly alluvial beds in creek and river bottoms. This species is perennial and flowers June through November.

Little Bluestem-Indiangrass Series (*Schizachyrium scoparium-Sorghastrum nutans* series)

There is a TXNDD record for the Little Bluestem-Indiangrass Series (vegetation community) located approximately 0.2-mile from the airport.

**Recommendation:** TPWD recommends that the areas proposed for disturbance be surveyed for the above-listed plant SGCN (and rare vegetation community) where suitable habitat is present. Field surveys should be performed by a qualified biologist familiar with the identification of these species. Surveys should be conducted when these species are most detectable and identifiable (usually during their respective flowering periods), and disturbance should be avoided during construction to the extent feasible. If these species are found in the path of construction, this office should be contacted for further coordination and possible salvage of plants and/or seeds for seed banking. Plants not in the direct path of construction should be protected by markers or fencing and by instructing construction crews to avoid any harm.

Western spotted skunk (*Spilogale gracilis*)

There is a TXNDD record for the western spotted skunk located approximately 1.5 miles from the airport. The western spotted skunk can be found in open fields, prairies, croplands, fence rows, forest edges, and woodlands.

**Recommendation:** If the western spotted skunk is found during construction, TPWD recommends that precautions be taken to avoid direct or indirect impacts to this species or their dens.

Texas map turtle (*Graptemys versa*)

There are six TXNDD records for the Texas map turtle located within the general project area, three records in the Colorado River (adjacent to S-2) and three records
in Onion Creek. The Texas map turtle is found only within the Edwards Plateau region of Central Texas and these turtles stay within close proximity of the Colorado River drainage area. They prefer shallow waterways with riffle systems and abundant vegetation. When not in the water, they are often found basking on snags or logs.

As previously mentioned, it is unclear from the information provided if impacts to the Colorado River or Onion Creek are anticipated from the construction of the proposed airport expansion project; therefore, TPWD is including the following recommendations to assist in project planning.

**Recommendation:** TPWD recommends implementing the following BMPs to avoid and/or minimize potential impacts to the Texas map turtle that could occur from the construction of the proposed project:

- Avoid impacts to snags and logs as Texas map turtles like to use these for basking.
- TPWD recommends paying particular attention to gravel bars or riffle habitat in streams around where construction-related disturbance may occur. TPWD recommends avoiding impacts to gravel bars and riffle habitat in the project area.
- During construction, trucks and equipment should use existing bridge or culvert structures to cross creeks, and equipment staging areas should be located in previously disturbed areas outside of riparian corridors.
- Texas map turtles come to shore to nest and nest along sand bars and other sandy areas that provide protection to the clutch. TPWD recommends avoiding disturbance of these types of areas to avoid disturbing nesting turtles or their nests.
- TPWD recommends avoiding construction during the breeding and nesting season of this species (spring and summer).

**Guadalupe bass** (*Micropterus treculii*)

There are four TXNDD records for the Guadalupe bass located within the general project area in the Colorado River and Onion Creek. The Guadalupe bass is endemic to perennial streams of the Edward's Plateau region and has been introduced in Nueces River system.

**Recommendation:** TPWD recommends referring to the recommendations in the *Water Resources* section of this letter and the recommendations for the Texas fatmucket as these would assist in avoiding and minimizing impacts to the Guadalupe bass. TPWD also recommends avoiding construction during the spawning period of the Guadalupe bass, if feasible. Avoiding construction during a species’ spawning period may reduce the potential for adverse impacts to water quality and the habitat of this species.
Texas garter snake (*Thamnophis sirtalis annectens*)

There are two TXNDD records for the Texas garter snake located in the general project area, one record is located approximately 1.7 miles from the project area and one record is located approximately 2.0 miles from the project area. This species prefers marshy, flooded pastureland or meadows, particularly in spring when frogs are present in numbers and at other times prefers grassy or brushy terrain near hill country streams and ponds. The Texas garter snake seems to prefer vicinity of permanent sources of water or soil damp enough to support earthworm populations.

**Recommendation:** Because snakes are generally perceived as a threat and killed when encountered, and since the project area contains potential suitable habitat for the Texas garter snake, TPWD recommends construction personnel and contractors be advised to avoid injury or harm to all snakes encountered during clearing and construction. Injury to humans usually occurs when the snake becomes agitated following harassment or when someone attempts to handle a recently dead venomous snake that still contains its bite reflex. Therefore, contractors should avoid contact with snakes if encountered and allow all native snakes to safely leave the premises.

**Evaluation of SGCN**

TPWD notes that it is the responsibility of the project proponent to evaluate all of the species listed on the TPWD Rare, Threatened, and Endangered Species of Texas by County online application (RTEST or TPWD county list), not just state- and federally-listed species, and to determine if those species have habitat within the project area and if those species have the potential to be impacted by the construction of the proposed project.

**Recommendation:** Please review the TPWD county list for Travis County because species in addition to those discussed in this letter could be present within the project area depending upon habitat availability. TPWD strongly recommends including a discussion and evaluation of potential impacts to SGCN (in addition to state-listed and federally-listed species) in the EA being developed for this project. The USFWS should be contacted for species occurrence data, guidance, permitting, survey protocols, and mitigation for federally-listed species.

Determining the actual presence of a species in a given area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency and population density (both wildlife and human). The absence of a species can be demonstrated only with great difficulty and then only with repeated negative observations, considering all the variable factors contributing to the lack of detectable presence. If
encountered during construction, measures should be taken to avoid impacting all wildlife, regardless of listing status.

**Texas Natural Diversity Database**

The TXNDD is intended to assist users in avoiding harm to rare species or significant ecological features. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Absence of information in the database does not imply that a species is absent from that area. Although it is based on the best data available to TPWD regarding rare species, the data from the TXNDD do not provide a definitive statement as to the presence, absence or condition of special species, natural communities, or other significant features within your project area. These data are not inclusive and cannot be used as presence/absence data. They represent species that could potentially be in your project area. This information cannot be substituted for field surveys.

**Recommendation:** The TXNDD is updated continuously based on new, updated and undigitized records; therefore, TPWD recommends requesting the most recent TXNDD data on a regular basis. For questions regarding a record or to request the most recent data, please contact TexasNatural.DiversityDatabase@tpwd.texas.gov.

**Recommendation:** To aid in the scientific knowledge of a species’ status and current range, TPWD encourages project proponents and their contractors report all encounters of SGCN, state-listed, and federally-listed species to the TXNDD according to the data submittal instructions found on the TXNDD website.

TPWD strives to respond to requests for project review within a 45-day comment period. Responses may be delayed due to workload and lack of staff. Failure to meet the 45-day review timeframe does not constitute a concurrence from TPWD that the proposed project will not adversely impact fish and wildlife resources.

TPWD appreciates the opportunity to provide comments and recommendations for this project. If you have any questions, please contact me at (512) 389-8054 or Jessica.Schmerler@tpwd.texas.gov.

Sincerely,

Jessica E. Schmerler, CWB
Wildlife Habitat Assessment Program
Wildlife Division

JES:47613