Control Number: 45624

Item Number: 237

Addendum StartPage: 0

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April 18, 2016

Ms. Karen Hubbard
Public Utility Commission
1701 N. Congress Avenue
P.O. Box 13326
Austin, TX 78711-3326

RE: City of Garland doing business as (dba) Garland Power and Light in Conjunction with Rusk Interconnection LLC
Proposed Rusk to Panola 345-kilovolt Transmission Line Project in Rusk and Panola Counties
PUC Docket No. 45624
TPWD Project Number 36297

Dear Ms. Hubbard:

Texas Parks and Wildlife Department (TPWD) has received the City of Garland's (Garland) Environmental Assessment and Alternative Route Analysis (EA) for the above-referenced project which was submitted to TPWD February 26, 2016.

TPWD, as the state agency with primary responsibility for protecting the state's fish and wildlife resources and in accordance with the authority granted by Parks and Wildlife Code §12.0011, hereby provides to the Public Utility Commission (PUC) the following recommendations and informational comments to minimize the adverse impacts to the state's fish and wildlife resources in the routing, construction and operation of the proposed transmission 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, Parks and Wildlife Code §12.0011. For tracking purposes, please refer to TPWD project number 36297 in any return correspondence regarding this project.

Project Description

Garland, doing business as Garland Power & Light, in conjunction with Rusk Interconnection LLC (Rusk) retained Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) to prepare the EA to support Garland's application for a Certificate of Convenience and Necessity (CCN) for a proposed transmission line. The proposed project involves constructing a 37- to 40-mile (mi) new double-circuit 345-kilovolt (kV) transmission line to connect the Oncor Electric Delivery Company LLC's proposed Rusk Switching Station, located approximately 8 miles northeast of Mount Enterprise in Rusk County, to Garland's proposed Panola Switching Station, located on the eastern edge of Panola County at the Louisiana border approximately 9 miles north of Joaquin. The line would be constructed within an approximate 150- to 160-foot wide right-of-way (ROW) on self-supporting tubular steel monopole structures

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where conditions allow. Typical structure height would range between 135 and 145 ft tall.

Previous Coordination

Appendix A of the EA includes a copy of TPWD's November 24, 2015, comment letter to Burns & McDonnell which provides scoping information and recommendations regarding the study area for this project.

Recommendation: Please review previous TPWD correspondence and consider the recommendations provided as they remain applicable to the project.

Proposed Alternative Routes

The EA evaluated 96 primary route alternatives using 51 route segments which were identified following a preliminary alternative route analysis and public involvement program. Appendix D of the EA provides data for 39 environmental and land use criteria that were collected for each of the 96 primary routes. Burns & McDonnell then used a statistical z-score analysis to screen the 96 routes, selecting 12 routes consisting of 48 route segments to be further evaluated in Chapter 8 assessing the environmental impacts. The z-score analysis transformed the various criteria measurements into comparable units using weighted scores and incorporated 21 criteria, which were subset from the 39 environmental criteria, to evaluate the relative difference among the primary routes. Z-scores are presented in Appendix D of the EA for each of the 96 primary routes. A negative z-score indicates the route would have a smaller impact than the average for all routes, and the more negative the score indicates less of an impact.

Garland's Selected Route

The 12 routes selected following the z-score analysis, identified in Table 8–4 of the EA, represent the proposed routes filed for the CCN application. Garland indicates in the CCN application that they can construct and operate the transmission line on any of the routes proposed in the application. The CCN identifies Route RP5 (Segments 1, 7, 8, 15, 26, 28, 31, 34, 42, 48) as Garland's recommended route because Route RP5:

- ranked best in Burns & McDonnel's z-score analysis (-106.1);
- is the second shortest route (37.1 mi);
- would be constructed largely along existing corridors (47,210 ft), the majority of which are existing transmission lines (32,340 ft);
- has a higher habitable structure count (25), but most of the structures are already located near an existing transmission line and thus the overall impact of Route RP5 would be relatively less for these residents compared to residents that would be affected by an entirely new ROW;
- has the least amount of National Wetland Inventory (NWI) forested wetlands within the proposed ROW of the proposed routes (22.8 acres);

- has the least amount of total NWI wetlands within the proposed ROW of the proposed routes (25.9 acres);
- has the second fewest number of recorded cultural sites within 1,000 ft (2); and
- has the second shortest length through High Probability Areas for cultural resources (61,530 ft).

Comment: Based on a review of the natural resource impacts presented in the EA, project maps, and publicly-available Geographic Information Systems (GIS) data, TPWD determined that Route RP5 would not be the best alternative route to minimize impacts to natural resources, primarily due to Route RP5 requiring new-location construction across the Sabine River and its associated bottomland hardwood forest along Segment 31 and Segment 34. TPWD review indicates that there is another alternative route(s) that better minimizes impacts to natural resources, as discussed below.

TPWD's Recommended Route

In addition to review of the EA, publicly available aerial imagery, topographic maps, Texas Natural Diversity Database (TXNDD) occurrences of rare resources, and TPWD Ecological Mapping Systems of Texas vegetation cover types, TPWD evaluated potential impacts to fish and wildlife resources using the following criteria from the EA Appendix D (96 Primary Routes) and Table 8–5 (12 Proposed Routes):

- Length of alternative route
- Length parallel to existing transmission lines
- Length parallel to roads
- Length parallel to oil/gas pipelines
- Total length parallel to existing facilities
- Acres of wooded areas within ROW
- Acres of NWI forested/scrub-shrub wetlands within ROW
- Acres of NWI emergent and riverine wetlands within ROW
- Number of streams crossed
- Length parallel to streams (within 100 ft)
- Length through potential threatened and endangered species habitat
- Length across open water
- Burns & McDonnell z-score analysis

The following criteria had equal or small differences in values for all routes and were not used by TPWD to compare routes: number of ecologically significant stream segments crossed, number of known rare/unique plant species in ROW, acres of rangeland within ROW, and length parallel to railroads.

The EA correctly acknowledges that the TXNDD only contains documented occurrences of rare species that have been reported to TPWD and the absence of records in the TXNDD is not evidence of the lack of sensitive species. However, the EA Section 8.2.8 makes conclusions regarding evaluation of the routes based solely on

the length of the routes through TXNDD occurrences of sensitive species, namely one occurrence of the breeding territory of the bald eagle (*Haliaeetus leucocephalus*), one occurrence of the southeastern myotis bat (*Myotis austroriparius*), and one occurrence of a colonial waterbird rookery. The data for length through potential threatened and endangered species habitat does not account for suitable habitat for these species or other threatened and endangered species elsewhere in the study area. Please note that TPWD's evaluation of the routes with respect to sensitive species takes into account the TXNDD occurrences as well as potential impacts to habitat that would be suitable for these and other sensitive species. Discussions regarding potential impacts and recommendations for avoidance and minimization to the TXNDD occurrences and habitat for rare species are addressed later in this letter under separate headings.

TPWD typically recommends that transmission line routes be located adjacent to previously disturbed areas such as existing utility or transportation ROWs and discourages fragmenting habitat or locating in areas that could directly negatively impact wildlife, including listed species. Prior to considering the 12 routes filed with the CCN application, TPWD conducted an evaluation of natural resource criteria data for all 96 routes studied in the EA. After careful evaluation of the 96 routes studied in the EA and the 12 routes filed with the CCN application, TPWD selected RP95 (1, 7, 8, 14, 27A, 52, 38, 42, 48) as the route having the least potential to impact fish and wildlife resources. The decision to recommend RP95 out of the 96 routes evaluated in the EA is based primarily on review of aerial photography, the Ecological Mapping Systems of Texas (EMST), and the following data from Appendix D:

- Fourth shortest route (36.8 mi) (All routes 36.5 to 43.5 mi) (Note: RP95 would be the shortest route if it had been carried forward to the CCN application)
- Would be constructed largely along existing facilities (80,250 ft), the majority of which are existing transmission lines (52,190 ft)
- Contains 710 acres of wooded areas within ROW (All routes 703 to 842 acres)
- Contains 47.5 acres of NWI forested/scrub-shrub wetlands within ROW (All routes 22.8 to 149.7 acres)
- Contains 1.7 acres of NWI emergent and riverine wetlands within ROW (All routes 0.6 to 5.6 acres)
- Crosses 89 streams (All routes 83 to 114)
- Follows parallel to streams (within 100 ft) for 8,790 ft (All routes 7,040 to 18,050 ft)
- Burns & McDonnell z-score analysis of -78.39 (All routes -106.06 to 113.75)

TPWD notes that Segment 52 is the only segment that crosses the Sabine River and its associated bottomland habitats parallel to an existing transmission line. The Sabine River and its bottomland hardwood forests are prominent features within the study area that provide important fish and wildlife habitat. Avoiding fragmentation of the Sabine River bottomland hardwood forests is preferred by TPWD for this project. Only Segment 52 avoids fragmenting the temporarily flooded and/or seasonally-flooded hardwood forest habitats along the Sabine River by following parallel to an existing transmission line across the Sabine River. Only one route using Segment 52 was carried forward to the CCN application (RP93).

Route RP95 was not carried forward to the CCN application, however RP95 includes Segment 52 and

- is 36.8 mi long, compared to RP93 at 36.9 mi and Garland's preferred RP5 at 37.1 mi;
- parallels 52,190 ft of existing transmission line compared to RP93 at 50,060 ft and RP5 at 32,340 ft;
- parallels existing facilities for 80,250 ft (41.3% of its the route length) compared to RP93 at 75,170 ft (38.5%) and RP5 at 47,210 ft (24.1%); and
- has a z-score of -78.39, compared to RP93 at -56.37.

TPWD notes that more than one route using Segment 52 should be considered for the CCN application in order to provide more alternatives for a route that crosses the Sabine River bottomland hardwood forests along an existing facility.

Recommendation: TPWD recommends RP95 be considered by the PUC due to the comparisons provided above. If the PUC does not consider any route other than the 12 carried forward to the CCN application, then TPWD recommends RP93 (1, 7, 8, 14, 27A, 52, 37, 43) as the route having the second least potential to impact fish and wildlife resources due to its use of Segment 52 and its somewhat comparable values to RP95 with respect to overall length, length parallel to existing transmission lines, total length parallel to existing facilities, length parallel to streams within 100 ft, number of streams crossed, and acres of wooded areas, NWI forested/scrub-shrub wetlands and NWI emergent/riverine wetlands within the ROW.

Though the NWI is useful as an early project planning tool, it may not include all wetlands in a given area. Therefore, TPWD reviewed additional data sources that may indicate the presence of wetlands in the project area. In addition to acres of NWI forested/scrub-shrub wetlands and NWI herbaceous and riverine wetlands identified for the EA, TPWD considered routes that minimized fragmentation and loss to the EMST habitat types in which wetlands are likely to occur such as: bottomland baldcypress swamp, bottomland seasonally flooded hardwood forest, bottomland temporarily flooded hardwood forest, wet hardwood flatwoods, small stream and riparian temporarily flooded hardwood forest, bottomland wet prairie, bottomland herbaceous wetland, and small stream and riparian wet prairie.

The EA indicates that reconnaissance surveys from public roads and public ROW were conducted to assist in constraints mapping and route selection. Because on-the-ground surveys of the alternative routes were not conducted, the conclusions and routing recommendation below regarding the route which best minimizes impacts to important, rare, and protected species are based on the natural resource information, remote sensing and field reconnaissance surveys presented in the CCN application and EA, as well as publicly available information examined in a GIS.

Recommendation: Of the routes evaluated in the EA, RP95 appears to best minimize adverse impacts to natural resources while also maintaining a shorter route length and following an existing electric transmission line, oil or gas pipeline,

and road for approximately 41.3% of the route length. TPWD recommends the PUC select a route that would minimize adverse impacts to natural resources, such as RP95 (or RP93 if the PUC will only consider routes filed with the CCN application).

Recommendation: To reduce the impacts to forested/scrub-shrub wetlands along RP95 (or PR93) in the vicinity of the Sabine River, TPWD recommends the PUC consider a reduced ROW width, if feasible, where the route would follow along the existing 138-kV transmission line for approximately one mile along Segment 52.

Conservation Easements and Mitigation Banks

On properties with conservation easements, a conservation organization or government agency holds an easement that restricts certain uses and development of the property. Conservation easements allow for conservation of private lands, enabling landowners to conserve special features such as wetlands, fertile soils, mature trees, and wildlife habitat while also protecting their property from future development. Mitigation banks are properties under a perpetual conservation easement containing wetlands, streams or other aquatic resources being restored, established, enhanced or preserved for the purpose of providing compensation for unavoidable impacts to aquatic resources permitted under Section 404 of the Clean Water Act or a similar local wetland regulation. If property within the project area is currently being used to protect and conserve the state's natural resources, then TPWD prefers that these properties do not become fragmented by the proposed transmission line. TPWD considers routes that do not impact conservation easements to better minimize impacts to fish and wildlife resources because future habitat fragmentation is restricted on easement properties.

The Figure 3–2 and Figure 8–1 indicate that the four conservation easements identified by TPWD in the scoping period were considered during Burns & McDonnell's evaluation. None of the proposed routes would cross the conservation easements that the EA identified in the study area.

Recommendation: If conservation easements other than the four identified in the EA would be crossed by a route, TPWD recommends PUC consider an alternative route or route adjustment to avoid impact to conservation easements.

Construction Recommendations

Federal Law: Migratory Bird Treaty Act (MBTA)

The EA Section 8.2.7, regarding wildlife impacts, indicates that direct take of less-mobile species of wildlife could occur along the transmission line during construction because they may be using the project area for feeding, shelter, or nesting. The EA Section 2.2.3, regarding clearing requirements, indicates that all trees, brush and undergrowth within the ROW, except low-growing vegetation, would be removed. The EA does not indicate if Garland proposes to complete all ROW clearing and construction activities compliant with the MBTA to avoid or minimize potential

impacts to nesting birds. The EA does indicate that Garland would follow American Power Line Interaction Committee (APLIC) suggested practices for reducing avian electrocution and collision with the proposed project. The EA Section 8.2.8 acknowledges TPWD's previous recommendations to avoid or minimize impacts to colonial waterbird rookeries if routes occur within or near rookeries.

Recommendation: TPWD recommends excluding vegetation clearing activities during the general bird nesting season, March through August, to avoid adverse impacts to nesting birds. If clearing vegetation during the migratory bird nesting season is unavoidable, TPWD recommends Garland survey the area proposed for disturbance to ensure that no nests with eggs or young will be disturbed by operations. Any vegetation (trees, shrubs, and grasses) where occupied nests are located should not be disturbed until the eggs have hatched and the young have fledged. TPWD prefers that removal of trees containing colonial waterbird rookeries be avoided through route adjustments.

Federal Law: Endangered Species Act

The EA Section 4.4.5 regarding threatened and endangered plant species indicates that the federal- and state-listed threatened earth fruit (*Geocarpon minimum*) is not likely to occur within the study area due to the distance between the study area and the areas above the floodplain of the Neches River, where this species can be found.

Please note that *Geocarpon minimum* also occurs within vegetated slick spots in saline barren complexes associated with the floodplains of the Sabine River and Cypress Creek. If such barrens are located within the ROW of a proposed route then impacts to *Geocarpon minimum* may occur during construction and maintenance operations of the project.

Because of the low-growing characteristics of vegetation that may occur in barrens, the project may not require vegetation clearing activities in areas that may contain *Geocarpon minimum*; however, ground disturbance due to installing structures and stringing the lines as well as post-construction seeding, mowing, or herbicide use could impact the species unless protection measures are conducted. The EA Section 8.2.5 indicates that Garland would conduct detailed environmental surveys along the approved route to identify potential habitat and/or endangered plant species and would coordinate with both the U.S. Fish and Wildlife Service (USFWS) and TPWD, as needed.

Recommendation: TPWD supports the need for surveys along the approved route to identify potential habitat and/or endangered plant species and recommends that surveys of suitable habitat occur during the season of highest detection for the *Geocarpon minimum*, during the late February – March flowering period. If the approved route cannot be adjusted to avoid an area containing *Geocarpon minimum*, then Garland should contact the USFWS – Arlington Ecological Services at (817) 277-1100 and TPWD to develop a plan for protection during construction and to develop an operation and maintenance plan to ensure that the

site does not become degraded by ground disturbance, revegetation, and/or herbicide activities.

Recommendation: To aid in the scientific knowledge of a species' status and current range, TPWD encourages reporting encounters of federal- and state-listed species and other rare resources to the TXNDD by following the data submission link found at http://tpwd.texas.gov/txndd.

The EA Section 4.4.8 and Section 8.2.8 regarding endangered and threatened wildlife identifies the following federally-listed species as potentially occurring within the study area if suitable habitat is present:

Birds
Interior least tern (*Sterna antillarium athalassos*)
Piping plover (*Charadrius melodus*)*
Red-cockaded woodpecker (*Picoides borealis*)
Red knot (*Calidris canutus rufa*)**
Louisiana black bear (*Ursus americanus luteolus*)***
Black bear (*Ursus americanus*)***

* TPWD correction to EA, potentially occurring as a non-breeding migrant
** Potentially occurring as a non-breeding migrant
*** TPWD correction to EA, delisted by USFWS March 11, 2016

The EA indicates that if areas are found to contain the interior least tern during field surveys along the approved route, then precautions would be taken to avoid potential impacts, including limiting activities within the inhabited areas to outside the nesting period. The EA indicates that field surveys may be required to determine the presence of red-cockaded woodpecker habitat along the approved route and that precautions would be taken to limit impacts to potential cavity trees when clearing within pine plantations. The EA indicates that impacts are not likely to occur due to the project to the red knot because the red knot would potentially stop-over during migration to feed and rest, if occurring in the study area. The same would be true of the piping plover, which would occur only during migration, stopping to feed or rest.

Recommendation: TPWD recommends field surveys along the approved route to determine whether suitable habitat for the red-cockaded woodpecker and interior least tern occur within the project area and to coordinate with the USFWS to determine avoidance and mitigation strategies if found within the project area. When suitable habitat is present, the USFWS should be contacted for guidance, permitting, survey protocols, and mitigation for federally listed species. Please note that the provisions of the MBTA also apply to the federal- and state-listed avian species.

Federal Law: Bald and Golden Eagle Protection Act (BGEPA)

The EA Section 8.2.8, acknowledges that the bald eagle is state-listed threatened and protected by the BGEPA and MBTA and that the bald eagle may forage and nest in the project area. The EA indicates that a bald eagle nest survey may be required to verify absence of any nests along the approved route and that Garland would coordinate any mitigation requirements with the USFWS and TPWD if a nest is discovered near the route.

Routes containing Segment 4 or Segment 6 cross a TXNDD occurrence of a bald eagle nesting territory for which a nest was last observed in 2005, the last year that TPWD conducted annual eagle nest surveys. A nest representing the TXNDD occurrence may still be active in the area and additional nesting eagles may have arrived in the area since 2005. Routes near Lake Murvaul, other large bodies of water, and possibly the Sabine River may contain suitable nesting habitat for the bald eagle.

> **Recommendation:** TPWD recommends a survey for bald eagle nests where the approved route occurs in the vicinity of Lake Murvaul, other large bodies of water and the Sabine River. TPWD recommends Garland construct and operate the line following the 2006 and 2012 APLIC guidelines referenced above, in accordance with the BGEPA, and using the USFWS *National Bald Eagle Management Guidelines.*

State Law: Endangered Species

In addition to the previously-discussed bald eagle, red-cockaded woodpecker, interior least tern, piping plover, and red knot the EA Section 4.4.8 and Section 8.2.8, regarding endangered and threatened wildlife, identifies the following state-listed species as potentially occurring within the study area if suitable habitat is present:

Birds
Peregrine Falcon (*Falco spp*)*
Bachman's Sparrow (*Aimophila aestivalis*)
Wood Stork (*Mycteria americana*)**

Fishes
Creek chubsucker (*Erimyzon oblongus*)
Paddlefish (*Polyodon spathula*)

Mammals
Rafinesque's big-eared bat (*Corynorhinus rafinesquii*)
Louisiana black bear
Black bear

Mollusks
Louisiana pigtoe (*Pleurobema riddellii*)
Sandbank pocketbook (*Lampsilis satura*)

Southern hickorynut (*Obovaria jacksoniana*)
Texas heelsplitter (*Potamilus amphichaenus*)***
Texas pigtoe (*Fusconaia askewi*)

Reptiles
Alligator snapping turtle (*Macrochelys temminckii*)***
Northern scarlet snake (*Cemophora coccinea copei*)
Texas horned lizard (*Phrynosoma cornutum*)
Timber rattlesnake (*Crotalus horridus*)

* TPWD correction to EA, potentially occurring as a non-breeding migrant
** TPWD correction to EA, potentially occurring as a post-breeding visitor
*** TXNDD occurrence within the study area

The EA indicates that the project would not likely impact the peregrine falcon because the project would not impact roosting, nesting or foraging habitat. The EA indicates that the project would not likely impact the Bachman's sparrow because the loss of potential habitat of this species is not likely to lead to a loss of viability or lead to federal listing of the species. The EA indicates that impacts to the wood stork are not anticipated because of the limited amount of transmission line that would cross over open water that may contain trees suitable for nesting.

Recommendation: TPWD notes that wood storks are not known to currently nest in Texas, and they may occur within the study area as post-breeding migrants foraging in prairie ponds, flooded pastures, ditches, and other shallow standing water and roosting in tall snags. TPWD recommends avoiding or minimizing placement of the line across suitable foraging habitat for wood storks, such as shallow water areas, and avoiding or minimizing loss of potential roosting habitat, such as large snags. If the approved route contains shallow water and/or large snags, then, TPWD recommends considering minor route adjustments to minimize the potential impacts to such habitats.

Recommendation: Recommendations provided above to minimize impacts to migratory birds and the bald eagle apply to state-listed bird species with potential to occur in the project area. Because the state-listed threatened wood stork is a large-bodied bird that is less agile during landing and departure from feeding areas, TPWD recommends Garland mark the lines with bird flight diverters to minimize potential collision impacts. Line marking is recommended where the line would occur across or near lake edges, rivers, wetlands, swamps and marshes.

The EA indicates that impacts are possible to the rafinesque's big-eared bat due to the amount of clearing required by the project and that precautions would be taken to identify roost trees and avoid clearing while bats are present.

Recommendation: Lack of suitable cavity trees is a limiting factor for rafinesque's big-eared bats, thus it is preferred that Garland avoid the removal of suitable cavity trees of bottomland hardwood forests. TPWD recommends

surveying the approved route for cavity trees that would be suitable for the rafinesque's big-eared bat and recommends avoiding removal of such trees through minor route adjustments.

The EA indicates that suitable habitat for the black bear and the Louisiana black bear occurs within the eastern portion of the state especially in bottomland hardwood forests. The EA indicates that impacts to the black bear are not likely due to the abundance of habitat within the area and the relatively large range and easy mobility of the species. The EA indicates that the Louisiana black bear would not likely occur within the study area because it is considered extirpated in Texas, due to the close proximity of the study area to Louisiana, the recent recovery of the subspecies, and because bears may travel long distances from their breeding range, TPWD notes that the potential for occurrence of the Louisiana black bear in east Texas cannot be ruled out.

The EA indicates that impacts to the northern scarlet snake and timber rattlesnake are not anticipated if Garland follows TPWD's previous recommendations to train construction and clearing crews of the potential to encounter these snakes, to avoid contact, and to allow the snakes to leave the premise before commencing work. The EA indicates that precautions would be taken to avoid potential impacts to the Texas horned lizard if areas are found to contain this species and acknowledges TPWD's previous recommendations to use a biological monitor during construction to help identify and avoid impacts.

Recommendation: TPWD recommends Garland survey the approved route to determine the potential of the site to support state-listed species or their habitat, including the Texas horned lizard, timber rattlesnake, northern scarlet snake and rafinesque's big-eared bat. Surveying the route prior to construction would aid in protecting state-listed species from potential impacts. Please be aware that species not occurring during site surveys may utilize the habitat within the project area at times beyond those during which the survey was conducted, such as seasonally or nocturnally.

Recommendation: TPWD recommends avoiding disturbance to state-listed species during clearing, construction, operation and maintenance of the proposed line and ROW. TPWD continues to recommends a biological monitor be present during construction to assist in detecting state-listed species in the ROW. As a reminder, for purposes of relocation, surveys, monitoring, and research, terrestrial state-listed species may only be handled by persons permitted through the TPWD Wildlife Permits Office, http://www.tpwd.texas.gov/business/permits/land/wildlife/research/.

The EA indicates that potential impacts to the state-listed aquatic species identified above are not anticipated because the project would span rivers, creeks, and open bodies of water and that best management practices (BMPs) would be included in the storm water pollution prevention plan to further protect water quality and aquatic species. Project activities involving work within streams, temporary or permanent

access roads/crossings within streams and placement of structures in surface waters may impact state-listed turtles, freshwater mussels or fish if occurring within the project area.

Recommendation: TPWD recommends construction methodologies and BMPs to avoid or minimize adverse impacts to state-listed species, such as minimizing vegetation removal and ground disturbance in or near streams, employing appropriate sediment controls, use existing bridge crossings or constructing stream crossings that do not obstruct flow, and ensuring that permanent or temporary fills do not trample aquatic species including the Alligator snapping turtle and freshwater mussels.

Recommendation: If the project would require work within streams, the project may need to be coordinated with the TPWD Kills and Spills Team (KAST) for appropriate authorization and to ensure protection of aquatic wildlife, see *State Law: Aquatic Resources* section below for more information.

State Law: Aquatic Resources

TPW Code Section 1.011 grants TPWD authority to regulate and conserve aquatic animal life of public waters. Title 31, Chapter 57, Subchapter B, Section 57.157 of Texas Administrative Code (TAC) regulates take of mussels **which are not limited to state-listed mussels.** Section 12.301 of TPW Code identifies liability for wildlife taken in violation of TPW Code or a regulation adopted under TPW Code.

Under TPW Code Section 12.015, 12.019, 66.015 and TAC 52.101-52.105, 52.202, and 57.251-57.259, TPWD regulates the introduction and stocking of fish, shellfish, and aquatic plants into public waters of the state. The *Permit to Introduce Fish, Shellfish or Aquatic Plants into Public Waters* allows for movement (i.e., introduction, stocking, transplant, relocation) of aquatic species in waters of the state. Movement of aquatic species, even within the same river or estuary, has potential natural resources risk (e.g., exotics, timing for successful survival); therefore, a permit is required to minimize that risk.

Dewatering activities can impact aquatic resources through stranding fish and mussels. Other harmful construction activities can trample, dredge or fill areas exhibiting stationary aquatic resources such as plants and mussels. To avoid or reduce impacts, TPWD recommends relocating aquatic life, including, but not limited to, fish, turtles, and mussels, to an area of suitable habitat outside the project footprint. Relocation activities are done under the authority of a TPWD *Permit to Introduce Fish, Shellfish or Aquatic Plants into Public Waters.* Information regarding this permit can be obtained at http://www.tpwd.texas.gov/publications/fishboat/forms/. Aquatic Resource Relocation Plans (ARRPs) are used to plan resource handling activities and assist in the permitting process. If dewatering activities and other project-related activities cause mortality to fish and wildlife species, then the responsible party would be subject to investigation by the TPWD KAST and will be liable for the value of the lost resources under the authority of TPW Code Sections 12.0011 (b) (1) and 12.301.

The proposed project would cross streams, primarily by spanning; however access roads may need to be built in remote areas and permanent structures may need to be placed into streams if alternative access road routes or spanning is unavoidable.

Recommendation: TPWD recommends that impact avoidance measures for aquatic organisms, including **all** native freshwater mussel species, regardless of state-listing status, be considered during project planning and construction activities.

Recommendation: If construction occurs during times when water is present in streams and dewatering activities or other harmful construction activities are involved (such as placement of temporary or permanent fills), then TPWD recommends relocating potentially impacted native aquatic resources in conjunction with a *Permit to Introduce Fish, Shellfish or Aquatic Plants into Public Waters* and an ARRP. The ARRP should be completed and approved by TPWD **30 days prior to activity within project waters and/or resource relocation** and submitted with an application for a no-cost *Permit to Introduce Fish, Shellfish, or Aquatic Plants into Public Waters.* ARRPs can be submitted to Greg Conley, TPWD Region 2 KAST at 903-566-2518 or Greg.Conley@tpwd.texas.gov to initiate coordination for a permit.

State Law: Public Parks and Recreation Areas

Chapter 26 of the TPW Code requires that before a state agency can approve any project that will result in the use or taking of public land designated and used as a park, public recreation area, scientific area, wildlife refuge, or historic site, that state agency must provide certain notices to the public, conduct a hearing, and render a finding that there is no feasible and prudent alternative and that the project includes all reasonable planning to minimize harm to the property.

The EA Section 4.5.1.4 and Section 8.3.1.4 regarding park and recreational areas indicate a few park and recreation areas occur within the study area including the George W. Pirtle Scout Reservation, the Sabine River Authority recreation and hunting areas, facilities at the Gary City School, and public boat ramps at Lake Murvaul and the Sabine River.

Two of the 12 proposed routes cross park or recreational areas; RP28 crosses the George W. Pirtle Scout Reservation and RP82 crosses the Sabine River Authority Unit #630 hunting area. None of the alternative routes cross TPWD owned or managed properties. The EA did not indicate if any of the recreational properties crossed by the route alternatives would be subject to Chapter 26 of TPW Code.

Recommendation: TPWD recommends PUC consider that crossing the Sabine River Authority hunting area and other public park and recreational areas may be subject to Chapter 26 of TPW Code. In order to avoid fragmentation and loss of public hunting areas as well as the habitat associated with the recreational activity,

TPWD recommends the PUC consider a route that avoids using Segment 39, which crosses the Sabine River Authority #630 hunting area

The EA Table 8–7 indicates that all the remaining routes except RP16 are within 1,000 ft of a boat ramp and concludes that RP16 is preferred from a park and recreation perspective because it is the only route not within 1,000 ft or crossing a boat ramp or recreation area. TPWD finds that inclusion of boat ramps as park and recreational areas skews the data regarding assessment of the routes, as discussed in the following paragraph.

The data for two criteria from the EA used to evaluate route impacts on parks and recreation areas do not appear to appropriately represent impacts of the routes on these areas; the two criteria are the number of park and recreation areas located within 1,000 ft and the length of a route within the foreground visual zone of parks and recreation areas. Point locations of boat ramps for access to the Sabine River or Lake Murvaul were identified as parks and recreation areas for evaluation in the EA. However, the recreation areas of boaters who use the boat ramps are the Sabine River and its floatable tributaries or Lake Murvaul. Thus, any areas of the Sabine River and its floatable tributaries or Lake Murvaul are more reasonable to consider as recreation areas that could be impacted by the transmission line rather than just at existing boat ramp access points. All routes cross the Sabine River and would occur within 1,000 ft and in the foreground visual zone of the Sabine River. The data presented are misleading, and the inclusion of boat ramps as the physical area for recreation skews the data. If the boat ramp includes a park or camping area, then it would be more appropriate to identify as a constraint for the EA.

Recommendation: TPWD recommends PUC consider that much of the data provided for two parks and recreation criteria (the number of park and recreation areas located within 1,000 ft and the length of a route within the foreground visual zone of parks and recreation areas) are not appropriate to evaluate impacts because boat ramps themselves are not the recreation area being served by the boat ramps. TPWD recommends PUC consider how the location of the proposed transmission line across the Sabine River may affect recreational boaters along the river, rather than focusing on the impacts at the boat ramps.

Additionally, TPWD considers the location of a proposed transmission line parallel to an existing transmission line and/or bridge at the Sabine River as having less of an adverse impact on boat ramp users and boaters on the Sabine River, than placing a transmission line across the Sabine River on new location. Boater experience would generally be negatively impacted with a new-location transmission line due to increased areas of discontinuous riverside forest (fragmentation) and an additional area where development would be seen from the river. TPWD does not agree that RP16 is the preferred route from a park and recreation perspective because it includes Segment 27B that crosses the Sabine River on new location. Of the 12 routes filed with the CCN, only RP93 crosses the Sabine River using Segment 52 parallel to an existing transmission line and FM 2571.

Recommendation: TPWD recommends PUC consider a route that utilizes Segment 52 that crosses the Sabine River parallel to an existing transmission line and FM 2571 bridge.

State Fish and Wildlife Resources: Resources of Concern

In addition to federal- and state-protected species, Texas contains over 1,300 species that are considered to be Species of Greatest Conservation Need (SGCN) that, due to limited distributions and/or declining populations, may face threat of extirpation or extinction but lack the legal protections given to threatened or endangered species. Special landscape features, natural plant communities, and SGCN are rare resources tracked by TPWD, and TPWD actively promotes conservation of these rare resources. TPWD considers it important to minimize impacts to special landscape features, natural plant communities, and SGCN to reduce the likelihood of endangerment.

The EA did not acknowledge SGCN with potential to occur within the study area. TPWD identifies the following SGCN as potentially occurring within the study area if suitable habitat is present:

Birds
Sprague's Pipit (*Anthus spragueii*), also a federal candidate species*
Henslow's Sparrow (*Ammodramus henslowii*)*

Fishes
Ironcolor shiner (*Notropis chaybaeus*)
Western sand darter (*Ammocrypta clara*)
Orangebelly darter (*Etheostoma radiosum*)

Mammals
Plains spotted skunk (*Spilogale putorius interrupta*)
Southeastern myotis bat **

Plants
Panicled indigobush (*Amorpha paniculata*)
Soxman's milkvetch (*Astragalus soxmaniorum*)
Texas trillium (*Trilium texanum*)
Warner's hawthorn (*Crataegus warneri*)
Mohlenbrock's sedge (*Cyperus grayioides*)

* Potentially occurring during migration and winter
** TXNDD occurrence within study area

The EA addresses rare vegetation communities, identifying the TXNDD-mapped willow oak – water oak (*Quercus nigra – Q. phellos*) (WO-WO) Series G4S3 bottomland hardwood forest community that occurs along the Sabine River. The EA indicates that all proposed routes would cross and require clearing of this community to some degree and that, where possible, routes were designed to parallel existing ROW

and extend through disturbed areas to minimize potential impacts. The mapped WO-WO community generally represents the Sabine River bottomland hardwood forest community which appears as a prominent feature within the study area and represents an important ecosystem, as previously discussed above. TPWD prefers a route that minimizes impact to and avoids additional fragmentation to the Sabine River bottomland hardwood forest. Of the routes presented, only route RP93 (as well as RP95 evaluated in the EA) minimizes impacts while also avoiding additional fragmentation to the Sabine River bottomland hardwood forest by following parallel to an existing transmission line and FM 2571.

Recommendation: In addition to threatened and endangered species, TPWD recommends that pre-construction surveys of the approved route include surveys to determine whether rare resources or suitable habitat for SGCN would be impacted as a result of the proposed project and to avoid or minimize impacts to the extent feasible.

Recommendation: TPWD recommends that prior to construction, the selected route be surveyed in areas of suitable habitat and during the season of highest detection for the above-listed rare plant species, typically during the flowering period for each species. If rare plants or rare vegetation communities are identified during surveys, TPWD recommends route adjustments to minimize impacts. Where occurring within the ROW and route adjustments to avoid the species are not feasible, TPWD recommends protecting rare plants from construction and maintenance disturbances by marking or fencing and instructing crews to avoid any harm. If disturbance of rare plants cannot be avoided, then Garland should contact this office for further coordination and to develop a plan for protection and/or possible salvage of plants and/or propagules. Areas exhibiting a native grass and forbs component should be protected from disturbance and from introduction of non-native vegetation during construction, maintenance, and operation activities.

Recommendation: The presence of a biological monitor is recommended during construction to identify rare plants, vegetation communities, and wildlife, and to assist contractors with avoiding impacts.

Invasive Species

Statewide rules have been enacted per TAC Title 31, Part 2, Chapter 57, Subchapter N that requires persons leaving or approaching public fresh water to drain all water from their vessels and on-board receptacles (includes live wells, bilges, motors and any other receptacles or water-intake systems coming into contact with public waters). This rule applies to all sites where boats can be launched and includes all types and sizes of boats whether powered or not, personal watercraft, sailboats, kayaks/canoes, or any other vessel used to travel on public waters. Furthermore, per TAC Title 31, Part 2, Chapter 57, Subchapter A, it is an offense for any person to possess, transport, or release into the water of this state any species, hybrid of a species, subspecies, eggs, seeds, or any part of any species defined as a harmful or potentially harmful exotic fish, shellfish, or aquatic plant. This rule applies not only to zebra mussels (live or dead) and their larvae

but also to any species (or fragments thereof) designated as harmful or potentially harmful under this subchapter (e.g., giant salvinia, hydrilla, Eurasian watermilfoil).

The EA indicates that surface waters would be spanned; however, temporary and permanent stream crossings installed along access routes may require work within surface waters. Equipment coming in contact with surface waters could transport aquatic invasive species where mud, plant debris, and/or water can accumulate.

> **Recommendation:** If equipment would come in contact with inland streams or waterbodies, such as during construction/demolition of temporary and permanent crossings, TPWD recommends Garland prepare and follow an aquatic invasive species transfer prevention plan which outlines BMPs for preventing inadvertent transfer of aquatic invasive plants and animals on project equipment. For information on how to avoid spreading harmful aquatic invasive species, please refer to the *TPWD Clean/Drain/Dry Procedures and Zebra Mussel Decontamination Procedures for Contractors Working in Inland Public Waters* which can be obtained at http://tpwd.texas.gov/huntwild/wild/wildlife_diversity/habitat_assessment/media/WHAB_ZebraMussel_CleanDrainDryDecontaminationProcedures__Final_02052015.pdf.

Mitigation Plan

TPWD recommends Garland prepare a mitigation plan to provide compensatory mitigation for those habitats where impacts from the transmission line cannot be avoided or minimized. This would include impacts to species and habitat covered under federal law (e.g., wetlands and associated habitats, threatened or endangered species) and state resource habitat types not covered by state or federal law (e.g., riparian areas, rare plants, native prairies). At a minimum, TPWD recommends a replacement ratio of 1:1 for state resource habitat types. For more detailed suggestions or information regarding a mitigation plan, please contact this office.

I appreciate the opportunity to review and comment on the EA. Please contact me at (903) 322-5001 or Karen.Hardin@tpwd.texas.gov if you have any questions.

Sincerely,

for Julia C. Wicker

Karen B. Hardin
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