PMSTPCOL PEmails

From: Kathy Boydston [Kathy.Boydston@tpwd.state.tx.us]
Sent: Friday, November 13, 2009 12:25 PM
To: Muir, Jessie
Subject: Comment letter on South Texas Nuclear Power Plant
Attachments: STP_11-13-09.pdf

Importance: High

Ms. Muir:

Please find attached Texas Parks and Wildlife Department comments on the proposed alternative sites for the combined license application for South Texas Project, Units 3 and 4.

If you have any questions please do not hesitate to contact me.

Kathy Boydston
Wildlife Habitat Assessment Program
Texas Parks and Wildlife Department
(512) 389-4638 phone
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November 13, 2009

Mr. Ray Whited, Chief
Environmental Projects Branch 2
Division of Site and Environmental Reviews
Office of New Reactors
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

RE: Proposed alternative sites related to the combined license application for South Texas Project, Units 3 and 4

Dear Mr. Whited:

The Texas Parks and Wildlife Department (TPWD) has received your request for information regarding potential impacts to threatened and endangered species and for information on other issues of concern relating to the project referenced above. Under Section 12.0011 of the Texas Parks and Wildlife Code, TPWD is charged with "providing recommendations that will protect fish and wildlife resources to local, state, and federal agencies that approve, permit, license, or construct developmental projects" and "providing information on fish and wildlife resources to any local, state, and federal agencies or private organizations that make decisions affecting those resources."

The South Texas Project Nuclear Operating Company (STPNOC) has submitted an application for combined licenses (COL) for the construction of Units 3 and 4, Matagorda County. As part of the COL review process, the Nuclear Regulatory Commission (NRC) is preparing an environmental impact statement (EIS) reviewing alternative sites. Three locations have been proposed for the alternative site analysis. The proposed alternative site locations to be evaluated include Red 2, Fannin County, Trinity 2, Freestone County, and Allens Creek, Austin County.

The acreage numbers used in describing impacts were taken from the EIS, and the totals do not add up. TPWD recommends the NRC evaluate the proposed acreage of impacts to calculate a more accurate total.

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Red 2, Fannin County

Vegetated Habitat Impacts

The proposed site would require approximately 2,000 acres of permanent impacts for the plant site and reservoir. The permanent impacts for the site would consist of:

Forested area—930 acres
Cleared farmland—1,020 acres
Water resources—50 acres

According to the Environmental Report (ER) the proposed construction would also impact additional acreage (up to several hundred acres). This acreage also includes a mixture of forest and open fields.

Transmission line impacts

The proposed site is approximately 5 miles north of the existing Valley Power Plant where multiple 345-kV connections exist. New right-of-ways (ROW) would be acquired to connect the proposed plant site to the Valley Power Plant location. The ER states that approximately 120 acres of ROW would be impacted by the proposed transmission lines.

Additional impacts

Utilization of Red 2 would require the construction of pipelines to deliver plant cooling water to the reservoir/plant site and transportation ROWs. An additional 63 acres would be required for the new cooling water supply pipeline, rail, and road ROWs. This is additional acreage is comprised of:

Rail—26 acres
Cooling water intake/discharge—35 acres
Access road—20 acres

Summary of vegetated habitat impacts

The proposed construction at site Red 2 would require approximately 2,183 acres of permanent impacts for the power plant site, reservoir, transmission lines and pipelines. In addition, an increase in transportation volume would necessitate roadway expansions in the vicinity. Temporary construction impacts would consist of approximately 500 acres.

Trinity 2, Freestone County

Vegetated Habitat Impacts

The proposed site would require approximately 2,000 acres of permanent impacts for the plant site and reservoir. The permanent impacts for the site would consist of:

Forested—350 (including 80 acres of high quality forested wetlands)
Open land/grasslands—1,600 acres
Developed areas—30 acres
Water resources/freshwater ponds—20 acres

The proposed construction would also impact additional acreage (up to several hundred acres). This acreage also includes a mixture of forest and open fields.

Transmission line impacts

New ROW would be acquired to connect the proposed plant to the Big Brown Power Plant where multiple 345 kV connections exist. The ER states that approximately 120 acres of ROW would be impacted by the proposed transmission lines.

Additional impacts

Utilization of Trinity 2 would require the construction of pipelines to deliver plant cooling water to the reservoir/plant site and transportation ROWs. An additional 183 acres would be required for the new cooling water supply pipeline, rail, and road ROWs. This additional acreage is comprised of:

Rail—120 acres
Cooling water intake/discharge—36 acres
Access road—27 acres

Summary of vegetated habitat impacts

The proposed construction at Trinity 2 would require approximately 2,285 acres of permanent impacts for the power plant site, reservoir, transmission lines and pipelines. In addition, an increase in transportation volume would necessitate roadway expansions in the vicinity.

Allens Creek, Austin County

Vegetated Habitat Impacts

The proposed site would require approximately 9,800 acres of permanent impacts for the plant site and reservoir. The permanent impacts for the site would consist of:

Crops—1,722 acres
Bottomland forest (including 1,733 acres of wetlands)—2,640 acres
Bluff Forest
Reservoir—90 acres
Plant Site (out of 300 acres)—75 acres
Grass
Reservoir—3,923 acres
Plant Site (pasture out of 300 acres)—225 acres
Parks*—27 acres

*Parks are trees that are greater that 9 feet tall and a canopy cover varying from 11 percent to 70 percent.

According to the ER, the Allens Creek site would utilize the proposed Brazos River Authority's 9,500-acre reservoir for the plant's water needs. If this proposed reservoir is not constructed, then the STPNOC would have to construct a reservoir to meet water needs.

The proposed construction would also impact additional acreage (up to several hundred acres). This acreage also includes a mixture of forest and open fields. In addition, the rerouting of Allens Creek would impact the forest and grassland habitat below FM 1458, which are comprised of 82 acres and 186 acres, respectively.

Transmission line impacts

Three new ROWs would be acquired to connect the proposed plant to the three closest 345 kV lines in the area. The ER states that approximately 2,060 acres of ROW would be impacted by the proposed transmission lines.

Additional impacts

Utilization of Allens Creek would require the construction of pipelines to deliver plant cooling water to the reservoir/plant site and transportation ROWs. An additional 47.7 acres would be required for the new cooling water supply pipeline, rail, and road ROWs. This additional acreage is comprised of:

Rail—0.7 acres
Cooling water intake/discharge—36 acres
Access road—11 acres

Summary of vegetated habitat impacts

The proposed construction at Allens Creek would require approximately 11,907 acres of permanent impacts for the power plant site, reservoir, transmission lines and pipelines. In addition, an increase in transportation volume would necessitate roadway expansions in the vicinity.

Alternative Site Summary

After reviewing the environmental report, TPWD does not concur with STPNOC's conclusions that the construction impacts at Red 2, Trinity 2, or Allens Creek would be small. The permanent change of approximately 2,183 acres, 2,285 acres, and 11,907 acres, respectively, of fish and wildlife habitat and the associated cumulative impacts would have significant effects upon existing wildlife populations and habitat.

TPWD recommends that the NRC fully evaluate the impacts of the proposed alternatives on habitats covered under federal law (wetlands and associated habitats, threatened or endangered species) and state resource habitat types not covered by state or federal law (riparian areas, native prairies, certain types of bottomland hardwoods). TPWD recommends the NRC and STPNOC prepare a mitigation plan to provide compensatory mitigation for those habitats listed above where impacts from the project cannot be avoided or minimized. This would include impacts to species and habitats covered under federal law and state resource habitat types not covered by state or federal law. At a minimum, TPWD recommends a replacement ratio of 1:1 for state resource habitat types.

Specific Resource Concerns

Native Prairie

The potential for native pasture or native prairie remnants exists in Fannin County.

> **Recommendation:** TPWD recommends that the NRC evaluate the proposed site for the existence of native pasture or native prairie remnants, specifically the Little Bluestem-Indiangrass (*Schizachyrium scoparium-sorghastrum nutans)* Series and the Silveanus dropseed (*Sporobolus silveanus*) Series and avoid impacting these areas.

Recommendation: TPWD recommends that land disturbed by temporary impacts be restored with native plant species for the benefit of grassland species.

Riparian/Forested Vegetation

The proposed alternative sites would impact streams, creeks and rivers. Impacts from construction of a new nuclear facility, reservoir, and infrastructure at each of the alternative sites would be associated with the flooding of creeks, construction of intake and discharge structures, and potential stream crossings by proposed rail lines, access roads, and transmission lines.

In association with those waterways, the proposed project would likely impact herbaceous, scrub/shrub, forested wetlands, bottomland forests, and riparian habitats. Wetlands, riparian areas, and bottomland forests generally provide habitat for local wildlife and protect waterways from sediment loads in runoff water. Riparian habitat is a priority habitat type targeted for conservation by TPWD across the state.

Recommendation: The project sites should be situated to avoid or minimize disturbance to wetlands, bottomland forest and riparian areas, especially large contiguous tracts of quality habitats. When it is not feasible to avoid such habitats, the footprint of disturbance should be reduced as much as possible to reduce the amount of disturbance.

If avoidance is not possible, TPWD requests mitigation to compensate for the loss of riparian/forested habitat. Mitigation ratios should be determined based upon habitat quality. The NRC should evaluate the proposed sites for habitat quality and develop a mitigation plan and costs that compensate for the loss of riparian/forested habitat.

Wetland Resources

According to the ER, wetland resources would be significantly impacted by construction at each of the three alternative locations. Red 2 would impact approximately 40 acres of wetlands, Trinity 2 would impact approximately 100 acres of wetlands, and Allens Creek would impact approximately 1,733 acres of wetlands. Wetland types include high quality bottomland forested wetlands, streams, and freshwater emergent wetlands.

Recommendation: TPWD recommends avoidance and minimization of impacts to wetlands. If avoidance is not possible, TPWD requests mitigation to compensate for the loss of these wetlands. Mitigation ratios should be determined based upon habitat quality. The NRC should

evaluate the proposed sites for habitat quality and develop a mitigation plan and costs that compensate for the loss of wetland habitat.

Aquatic Resources

The alternative sites are located in Fannin County (Red 2), Freestone County (Trinity 2), and Austin County (Allens Creek) with necessary cooling waters obtained from the Red, Trinity, or Brazos River basin. Groundwater would be used during the construction phase, and surface water from a cooling water reservoir would be required during normal plant operation. Return flows will consist of diluted cooling tower blowdown. The acquisition of existing water rights would be required in order to fill and maintain the cooling water reservoir if no unappropriated surface water exists in the basin.

Water resources considerations for all of the potential sites include:

- Identifying return flow quantities and locations,
- Identifying and protecting wetlands,
- Attaining water quality standards, especially regarding the temperature of discharges and levels of dissolved solids,
- Protecting rivers and streams from increased sedimentation, and
- Including environmental flow provisions for any water rights granted or amended to support the project.

For the Allens Creek site, it was noted in the alternative site assessment report that the potential exists for the Allens Creek Reservoir to support both the anticipated water supply needs of the City of Houston as well as the nuclear power plant – if not as a shared single reservoir then perhaps as two separate but adjacent reservoirs. It is suggested that additional consideration be given to assess the compatibility of the site for both uses.

Rare and Protected Resources

The species shown on the attached Table 1 are species that TPWD currently recommends NRC consider during its assessment of potential impacts in the EIS. The county listings for the applicable alternative site per species is also shown. If TPWD has Texas Natural Diversity Database (TXNDD) records or other reports for species, the applicable county name is asterisked for occurrences within 1.5 (**) and 10 miles (*) based on the approximated locations in the June 29, 2009 COLA Part 3 Environmental Report, Section 9.3 (COLA). Selected species are discussed below.

TPWD recommends NRC consult the references shown on the Natureserve website (http://www.natureserve.org/explorer/) for more detailed information on

these species. For comparative purposes, species relevant to the STP site (Matagorda County) are also included on the table. When considering rare, threatened and endangered species, whose numbers are already significantly reduced, additional pressures from development could disproportionally threaten their recovery; therefore, the EIS should include a mitigation plan for rare and protected species.

Amphibians

The Houston toad (*Bufo houstonensis*) is the only rare amphibian currently known to occur within the alternative site counties. The Houston toad could potentially occur on the Trinity 2 (Freestone County) site. Depending on the actual site location, some of the area is underlain by the Queen City geologic formation. Though the Allen Creek (Austin County) site has a record in the general area, the mapped geology is not consistent with other areas known to support the Houston toad. However, this species should be included in the assessments for both sites, as further assessment should include analysis for soils and distance to deep sands for which this species is closely associated.

For more common species of amphibians, long-term changes in water temperature from discharging heated water could adversely impact species whose gender development or life stage progression are sensitive to small temperature changes.

Birds

In general, the avian species should be considered especially in the cumulative impacts since electrical transmission and distribution lines and associated structures can have a significant impact on rare species.

The Bachman's Sparrow (*Aimophila aestivalis*), although closely associated with old growth pine forests, primarily occurs in oak woodlands, including much younger stands and clearcut areas that still contain a strong grass component, and in pastures adjacent to woodlands. Both the Trinity 2 (Freestone County) and Malakoff (Henderson County) sites are located within the Oak Woodlands subecoregion. TPWD does not have currently mapped records for this species; however, the species has been reported in Lamar County just east of Fannin County (Red 2 site). The species is also known to occur at the Gus Engling Wildlife Management Area, which could be within 10 miles of both the Malakoff (Henderson County) and the Trinity 2 (Freestone County) sites.

Although the Piping Plover (*Charadrius melodus*) does not nest in Texas, the species spends the majority of the year here. This species leaves Texas for its breeding grounds in mid May and begins returning here to wintering grounds in July. Optimal wintering diet and habitat have been correlated with improved

success on breeding grounds for several bird species. Given the amount of time this species spends in Texas, winter habitat is likely an important component for the recovery of this species. While its final destination in Texas is the Gulf Coast, the species stops off at reservoirs and utilizes river corridors on its migration to and from the coast. Given that all the proposed alternatives are located near rivers and many near large reservoirs, this species should be further assessed for potential impacts. The Peregrine Falcon (*Falco peregrinus*) is also a species that potentially could stop over at any of the locations during its migratory periods. Migratory stopovers can last anywhere from a single day to several weeks at a location.

The Whooping Crane (*Grus americana*) is another species subject to impacts during migration. The Red 2 site (Fannin County) is the only site that falls just outside the recorded 'verified observations' corridor (Cooperative Whooping Crane Tracking Project, U.S. Fish and Wildlife Service (USFWS), Nebraska Field Office). All the other sites fall well within the observations corridor; the Red 2 site is barely outside this corridor. It must be noted that the observation corridor is based on less than an estimated four percent of stopovers beings reported. Reference is made here to call attention to the fact that all the sites are well within the actual migratory corridor that this species uses. Cumulative impacts, particularly to species such as this that have been shown to be impacted by power lines, need to be addressed in the EIS. TPWD encourages the NRC to require that all applicable recommendations from the Avian Protection Power Line Committee's collision and electrocution guidance documents be adopted as standard operating procedures for new lines and for retrofitting existing lines on an incremental schedule. Existing lines crossing through and near the corridor for this species should be prioritized.

TPWD has either reports or mapped records for Bald Eagles (*Haliaeetus leucocephalus*) in the general area for all of the locations, and as noted in the text, the STP site has at least one active eagle nest on its property. For the approximated Malakoff and Trinity 2 sites, the nesting territories are likely within 1.5 miles. Eagle numbers have been increasing at average rates of greater than 10 percent annually in Texas. This makes it highly likely that numerous additional nesting territories have been established along all the major waterways in the eastern half of the state. The Trinity River along the western Henderson County boundary (Malakoff site) and the eastern Freestone County boundary (Trinity 2 site) is a riparian segment that may have seen a higher concentration of eagles for a longer period of time than the other alternative sites. For the current status and limitations of TPWD eagle data, please see the Bulletin of Texas Ornithological Society 42 (1-2): 2009. For the final site selection, TPWD recommends NRC require the implementation of a management plan to include a buffer of between 750 feet and 1,500 feet around active nests. Also, any areas within 1 mile of a medium to major waterway should be preserved to help conserve eagle habitat.

For riparian areas that will need to be crossed between the site and the waterway (within 1 mile of the shore), the area should be assessed for evidence of potential nest trees, current and former nest trees, and winter roosting grounds. This assessment should extend 1 mile up- and downstream as well. NRC should require that potential nest trees (tallest trees) and a surrounding buffer be avoided during clearing activities pipeline route selection. The plan should also include annual or biannual monitoring of nest productivity or wintering population numbers. Since close proximity to the water source is a requirement for the plant siting, TPWD recommends that NRC consider compensatory mitigation for fragmentation and loss of eagle habitat, in addition to the avoidance and minimization measures recommended above.

The Interior Least Tern (*Sterna antillarum athalassos*) is known to nest at several reservoirs on TPWD managed lands. The Trinity 2 site (Freestone County) has a record for a population of this tern within 3 miles of the approximated alternative site location. This population nests at the Big Brown Mine facility and has been observed nesting in parking lots, reclaimed areas, and a variety of other areas at the site. In Texas, Interior Least Terns are known to nest at water treatment plants, on gravel roof tops, and other mines, as well; this species is not limited to gravel bars or beaches. Depending on the actual location for the reservoir at the Trinity 2 alternative, the site would need to be assessed for its potential to impact current known nesting areas, and the location would need to be surveyed for additional nests and foraging use. TPWD encourages NRC to formally consult with the USFWS for potential impacts to nesting or foraging grounds, or connectivity between the two. This species also has been recorded nesting on the Red River, less than 15 miles from the approximated site location for Red 2. The other sites should be assessed for suitable habitat.

Fishes

The protected aquatic species summary for the sites indicated that the blowdown would be discharged to the reservoir or directly to the rivers, as necessary. The quality of water discharged back into the river or receiving waterbody should not include any additional impurities above the intact water. The water quality should be the same or better than the water taken in for plant use. The COLA indicated that most species could tolerate higher levels of total dissolved solids; however, this justification should not be applied to rare, threatened, and endangered species.

The site summaries discussed the potential for impacts from heated water discharges back into the rivers. Changes in water temperature should be mitigated to avoid episodes of fish kill from heat shock, the creation of heat plume barriers, and life cycle changes in species sensitive to temperature changes. The COLA indicates that the reservoir and cooling tower designs would minimize

the potential for impacts. The EIS should also clarify what remaining anticipated impacts are likely to occur.

Regardless of the adult habitat used by any of the rare fish species, most of those listed will swim upstream into smaller creeks for spawning. These smaller creeks, including intermittent creeks, play an important role in the overall life history of these fish species. The Trinity 2 site appears to have a large number of state listed fish species that could potentially be impacted by the water diversion.

Mammals

While it is not known if the Black bear (*Ursus americanus*) currently has a reproducing population in East Texas, numerous reliable sightings have been reported, including sightings in Fannin and Henderson counties. These sightings extend as far south as Hardin County. The bears are thought to be coming from Oklahoma, although they are within the historical range of the subspecies Louisiana black bear (*U. a. lueolus*). Riparian corridors provide essential habitat for bears, whose home range tends to be fairly large. Smaller perennial streams and intermittent streams with wide wooded corridors help these species to cross between river basins by providing cover. Loss of connecting corridors can limit movement and force bears to cross through open areas, including roadways, where mortality from motor vehicle collisions can be high. TPWD is working with landowners to restore this species in East Texas, and the numbers of bear sightings is increasing. Mitigation for impacting this species habitat should include minimizing clearing and compensatory mitigation to preserve historic and current known use corridors. The Black Bear Conservation Coalition has tools available on the Web to assist in managing various land cover types for improving bear habitat and can be accessed at http://www.bbcc.org.

Mollusks

The rare Texas freshwater mussels tend to occur in mussel beds with a higher diversity of mussel species. Many of these mussels are endemic to the state. The COLA indicated that the Brazos River was noted for its high diversity of mussels near the Allens Creek site. The Trinity River segment nearest Trinity 2 site is known for a rare mussel. On October 2, 2009, TPWD proposed listing as threatened 15 species of freshwater mussels in the Texas Register. On November 5, 2009, the TPWD Commission voted to adopt the proposal. Additionally, the USFWS is currently evaluating petitions to list 11 freshwater mussel species. For the species whose range overlaps with the potential project areas, the USFWS is considering the same species that TPWD has proposed for added state protection, except for the Sandbank Pocketbook (*Lampsilis satura*) and Texas Pigtoe (*Fusconaia askewi*). The species protected by this TPWD listing and that may occur in the alternative site counties are identified as such in the attached table.

Mussels have a complex life cycle, in addition to being sensitive to environmental pollutants. Adverse impacts to their fish hosts can have cascading effects on the mussel populations.

Special Features

Colonial Waterbird Rookeries (and Migratory Songbird fallout sites for the STP site) are important locations that provide for the particular habitat needs of numerous nesting sites (or shelter) for birds that nest or roost in aggregate numbers. The inland rookeries, while not including rare nesting species, will often include non-breeding individuals of rare species. The rookeries tend to utilize the same location over consecutive years until the location's vegetation becomes too degraded. The rookery then moves to a new location within the same general area. The larger riparian corridors present along the major rivers tend to provide the security offered by remote sites generally selected by these groups, as well as food sources. Fledglings may be particularly susceptible to collisions with power lines built in close proximity or crossing between nests and feeding areas. High quality forested wetlands are located at the Trinity 2 site along the river, mostly east and south of the site. The Malakoff and STP sites are the only two alternatives with minimal forest cover along the potential reservoir locations. However, these locations may contain rare prairie and marsh remnants.

Ecologically significant stream segments (ESSSs) were identified within 10 miles of each of the sites and within 1.5 miles of the STP, Allens Creek, and Trinity 2 sites. These are identified in the attached table. TPWD has identified ESSSs throughout the state to assist regional water planning groups in identifying ecologically unique stream segments under Texas Administrative Code Title 31 §357.8. Until approved by the legislature this is not a legal designation. Applicability to this project is that 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. Criteria for the three nearest segments are included below. Qualifying criteria for the other segments can be viewed online at http://www.tpwd.state.tx.us/landwater/water/environconcerns/water_quality/sigsegs/listofreports.phtml.

- Brazos River from Gulf of Mexico in Brazoria County upstream to FM 529 in Austin/Waller County, Texas Commission on Environmental Quality (TCEQ) stream segments 1201 and 1202.

- Hydrological Function- performs valuable hydrologic functions relating to flood attenuation, water quality, and groundwater recharge of the Chicot Aquifer
- Riparian Conservation Area- fringed by Brazos Bend State Park and Stephen F. Austin State Park and is part of the Great Texas Coastal Birding Trail
- Threatened or Endangered Species/Unique Communities- significant due to presence of rare live oak-water oak-pecan bottomlands inland and Diamondback terrapin at the river mouth to the Gulf

- Trinity River from the Houston/Trinity county line upstream to the Anderson/Henderson county line, TCEQ stream segments 0803 and 0804.

  - Biological function - bottomland hardwood habitat displays significant overall habitat value
  - Riparian conservation area - Big Lake Bottom Wildlife Management Area
  - Threatened or endangered species/unique communities - one of the two largest populations of rare, endemic Texas heelsplitter (*Potamilis amphichaenus*) freshwater mussel remaining

- Colorado River from the confluence with West Matagorda Bay in Matagorda County to 1.3 miles downstream of the Missouri-Pacific Railroad in Matagorda County, TCEQ stream segment 1401.

  - Biological function - extensive freshwater and estuarine wetland habitats display significant overall habitat value.

State law prohibits any take (incidental or otherwise) of state listed species and there are penalties associated with take of state listed species. State listed species may only be handled by persons possessing a Scientific Collecting Permit. Please see attachment A for additional information.

Revegetation Plan

TPWD recommends the development of a detailed revegetation plan that would utilize species that are suited to the site conditions, ecoregion, and intended uses and to consider native species that have multiple values and provide species diversity.

Comment. TPWD prefers that disturbed areas be restored to pre-construction contours and planted with a mixture of **native** herbaceous species, especially when the adjacent property on one or both sides of the

pipeline ROW contains native species of vegetation. Introduction of non-native species into native landscapes should be prevented. Native perennial grass species preferred by TPWD for permanent cover include Switchgrass (*Panicum virgatum*), Eastern Gamagrass (*Tripsacum dactyloides*), Virginia Wildrye (*Elymus virginicus*), Canada Wildrye (*E. canadensis*), Yellow Indiangrass (*Sorghastrum nutans*) and Little Bluestem (*Schizachyrium scoparium*). Other species appropriate for the area can be found by accessing the TPWD Texas Plant Information Database at http://tpid.tpwd.state.tx.us/overview.asp or by accessing the TPWD Wildscapes website at http://www.tpwd.state.tx.us/huntwild/wild/wildscapes/.

TPWD Summary Recommendation

TPWD recommends the proposed expansion, Units 3 and 4, be constructed at the existing facility. Constructing Units 3 and 4 at the existing facility's current location will minimize the project's overall impacts to the habitat and the environment. The proposed expansion is located within the existing South Texas Project footprint in an area that is directly adjacent to the existing nuclear facility, has been previously disturbed, and is currently a maintained area (mowed regularly and used as a staging area).

Construction of two new units at one of the alternate sites, Red 2, Trinity 2, or Allens Creek, would require the construction of associated infrastructure support services and facilities required for a nuclear energy plant such as administrative building, warehouses, parking, radioactive waste storage, pipelines, lay down areas, and a cooling reservoir, ultimately constructing an entirely new nuclear energy plant in an undeveloped area.

TPWD advises review and implementation of the comments and recommendations. If you have any questions, please contact Amy Hanna at (361) 576-0022 or amy.hanna@tpwd.state.tx.us. As the primary point-of-contact for this project, correspondence regarding this project should be addressed to Amy Hanna, TPWD Wildlife Division, Wildlife Habitat Assessment Program, 4200 Smith School Road, Austin, TX 78744.

Sincerely,

Ross Melinchuk
Deputy Executive Director

RM:AH:gg.14606

Attachments

Attachment A

Protection of State-Listed Species
Texas Parks and Wildlife Department Guidelines

Protection of State-Listed Species

State law prohibits any take (incidental or otherwise) of state-listed species. State-listed species may only be handled by persons possessing a **Scientific Collecting Permit.**

- **Section 68.002 of the Texas Parks and Wildlife (TPW) Code** states that species of fish or wildlife indigenous to Texas are endangered if listed on the United States List of Endangered Native Fish and Wildlife or the list of fish or wildlife threatened with statewide extinction as filed by the director of Texas Park and Wildlife Department. Species listed as Endangered or Threatened by the Endangered Species Act are protected by both Federal and State Law. The State of Texas also lists and protects additional species considered to be threatened with extinction within Texas.

- **Animals** - Laws and regulations pertaining to state listed endangered or threatened animal species are contained in **Chapters 67 and 68 of the Texas Parks and Wildlife (TPW) Code** and **Sections 65.171 - 65.176 of Title 31 of the Texas Administrative Code (TAC).** State-listed animals may be found at **31 TAC §65.175 & 176**.

- **Plants** - Laws and regulations pertaining to endangered or threatened plant species are contained in **Chapter 88 of the TPW Code and Sections 69.01 - 69.9 of the TAC**. State-listed plants may be found at **31 TAC §69.8(a) & (b).**

Prohibitions on Take of State Listed Species

Section 68.015 of the TPW Code states that no person may capture, trap, take, or kill, or attempt to capture, trap, take, or kill, endangered fish or wildlife.

Section 65.171 of the Texas Administrative Code states that except as otherwise provided in this subchapter or **Parks and Wildlife Code, Chapters 67 or 68**, no person may take, possess, propagate, transport, export, sell or offer for sale, or ship any species of fish or wildlife listed by the department as endangered or threatened.

"Take" is defined in **Section 1.101(5) of the Texas Parks and Wildlife Code** as:

> *"Take," except as otherwise provided by this code, means collect, hook, hunt, net, shoot, or snare, by any means or device, and includes an attempt to take or to pursue in order to take.*

Penalties

The penalties for take of state-listed species (**TPW Code, Chapter 67 or 68**) are:

- 1ST Offense = Class C Misdemeanor:
  $25-$500 fine

- One or more prior convictions = Class B Misdemeanor
  $200-$2,000 fine and/or up to 180 days in jail.

- Two or more prior convictions = Class A Misdemeanor
  $500-$4,000 fine and/or up to 1 year in jail.

Restitution values apply and vary by species. Specific values and a list of species may be obtained from TPWD

TABLE 1
RARE AND PROTECTED RESOURCES, SPECIAL FEATURES, AND MANAGED AREAS NEAR PROPOSED ALTERNATIVE SITE LOCATIONS

Group/Common Name	Scientific Name	Federal Status	State Status	Alternative Site Counties
Amphibians				
Houston toad	*Bufo houstonensis*	LE	E	Austin* Freestone
Birds				
Bachman's Sparrow	*Aimophila aestivalis*		T	Freestone Henderson
Henslow's Sparrow	*Ammodramus henslowii*			Austin Fannin Freestone Henderson Matagorda
Western Burrowing Owl	*Athene cunicularia hypugaea*			Austin Matagorda
White-tailed Hawk	*Buteo albicaudatus*		T	Austin* Matagorda
Snowy Plover	*Charadrius alexandrinus*			Matagorda
Western Snowy Plover	*Charadrius alexandrinus nivosus*			Matagorda
Southeastern Snowy Plover	*Charadrius alexandrinus tenuirostris*			Matagorda
Piping Plover	*Charadrius melodus*	LT	T	Fannin Freestone Henderson Matagorda*
Mountain Plover	*Charadrius montanus*			Austin
Cerulean Warbler	*Dendroica cerulea*			Fannin
Reddish Egret	*Egretta rufescens*		T	Matagorda
Northern Aplomado Falcon	*Falco femoralis septentrionalis*	LE	E	Matagorda
Peregrine Falcon	*Falco peregrinus*		T	Austin Fannin Freestone Henderson Matagorda
American Peregrine Falcon	*Falco peregrinus anatum*		T	Austin Fannin Freestone Henderson Matagorda
Arctic Peregrine Falcon	*Falco peregrinus tundrius*		DL	Austin Fannin Freestone Henderson Matagorda
Whooping Crane	*Grus americana*	LE	E	Austin Fannin Freestone Henderson Matagorda
Bald Eagle	*Haliaeetus leucocephalus*	DL	T	Austin* Fannin* Freestone** Henderson** Matagorda**
Black Rail	*Laterallus jamaicensis*			Matagorda
Wood Stork	*Mycteria americana*		T	Austin Fannin Freestone Henderson Matagorda
Eskimo Curlew	*Numenius borealis*	LE	E	Fannin Matagorda
Brown Pelican	*Pelecanus occidentalis*	LE-PDL	E	Matagorda*
White-faced Ibis	*Plegadis chihi*		T	Austin Matagorda
Interior Least Tern	*Sterna antillarum athalassos*	LE	E	Austin Fannin Freestone* Henderson
Sooty Tern	*Sterna fuscata*		T	Matagorda
Attwater's Greater Prairie-Chicken	*Tympanuchus cupido attwateri*	LE	E	Austin*
Crustaceans				
A crayfish	*Cambarellus texanus*			Matagorda

TABLE 1
RARE AND PROTECTED RESOURCES, SPECIAL FEATURES, AND MANAGED AREAS NEAR PROPOSED ALTERNATIVE SITE LOCATIONS

Fishes				
American eel	*Anguilla rostrata*			Matagorda
Western sand darter	*Ammocrypta clara*			Fannin
Blue sucker	*Cycleptus elongatus*		T	Fannin Matagorda
Creek chubsucker	*Erimyzon oblongus*		T	Fannin
Orangebelly darter	*Etheostoma radiosum*			Fannin
Goldeye	*Hiodon alosoides*			Fannin
Taillight shiner	*Notropis maculatus*			Fannin
Sharpnose shiner	*Notropis oxyrhynchus*	C		Austin
Blackside darter	*Percina maculata*		T	Fannin
Paddlefish	*Polyodon spathula*		T	Fannin
Smalltooth sawfish	*Pristis pectinata*	LE	E	Matagorda
Shovelnose sturgeon	*Scaphirhynchus platorynchus*		T	Fannin
Insects				
Morse's net-spinning caddisfly	*Cheumatopsyche morsei*			Freestone[3] Henderson[3]
Holzenthal's philopotamid caddisfly	*Chimarra holzenthali*			Freestone[3] Henderson[3]
Gulf Coast clubtail	*Gomphus modestus*			Matagorda
A purse casemaker caddisfly	*Hydroptilla ouachita*			Freestone[3] Henderson[3]
American burying beetle	*Nicrophorus americanus*	LE		Fannin
A caddisfly	*Phylocentropus harrisi*			Freestone[3] Henderson[3]
A mayfly	*Pseudocentroptiloides morihari*			Austin
Mammals				
Red wolf	*Canis rufus*	LE	E	Austin Fannin Freestone Henderson Matagorda
Ocelot	*Leopardus pardalis*	LE	E	Matagorda
Southeastern myotis bat	*Myotis austroriparius*			Freestone Henderson
Plains spotted skunk	*Spilogale putorius interrupta*			Austin Fannin Freestone Henderson Matagorda
West Indian manatee	*Trichechus manatus*	LE	E	Matagorda
Black bear	*Ursus americanus*	T/SA;NL	T	Fannin Henderson
Louisiana black bear	*Ursus americanus luteolus*	LT	T	Austin Matgorda
Mollusks				
Rock pocketbook	*Arcidens confragosus*			Austin Fannin Freestone Henderson Matagorda
Texas pigtoe[1]	*Fusconaia askewi*		PT	Freestone Henderson
Wabash pigtoe	*Fusconaia flava*			Fannin Freestone Henderson
Plain pocketbook	*Lampsilis cardium*			Fannin
Sandbank pocketbook[1]	*Lampsilis satura*		PT	Freestone Henderson
White heelsplitter	*Lasmigona complanata*			Fannin
Southern hickorynut[1]	*Obovaria jacksoniana*		PT	Henderson

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RARE AND PROTECTED RESOURCES, SPECIAL FEATURES, AND MANAGED AREAS NEAR PROPOSED ALTERNATIVE SITE LOCATIONS

Louisiana pigtoe[1]	*Pleurobema riddellii*		PT	Freestone Henderson
Texas heelsplitter[1]	*Potamilus amphichaenus*		PT	Freestone Henderson
Smooth pimpleback[1]	*Quadrula houstonensis*		PT	Austin Matagorda
Wartyback	*Quadrula nodulata*			Henderson
Common pimpleback	*Quadrula pustulosa*			Fannin
False spike mussel[1]	*Quincuncina mitchelli*		PT	Austin
Creeper (squawfoot)	*Strophitus undulatus*			Freestone Henderson Matagorda
Pistolgrip	*Tritogonia verrucosa*			Austin Fannin Freestone Henderson Matagorda
Fawnsfoot	*Truncilla donaciformis*			Fannin Freestone Henderson
Texas fawnsfoot[1]	*Truncilla macrodon*		PT	Austin Matagorda
Little spectaclecase	*Villosa lienosa*			Freestone Henderson
Plants				
Large-fruited sand-verbena	*Abronia macrocarpa*	LE	E	Freestone
Small-headed pipewort	*Eriocaulon koernickianum*			Henderson*
Shinner's sunflower	*Helianthus occidentalis* ssp *plantagineus*			Austin Matagorda
Coastal gay-feather	*Liatris bracteata*			Matagorda**
Navasota ladies'-tresses	*Spiranthes parksii*	LE	E	Freestone
Rough-stem aster	*Symphyotrichum puniceum* var *scabricaule*			Freestone Henderson
Texas meadow-rue	*Thalictrum texanum*			Austin*
Threeflower broomweed	*Thurovia triflora*			Matagorda*
Chapman's yellow-eyed grass	*Xyris chapmanii*			Freestone Henderson
Reptiles				
Loggerhead sea turtle	*Caretta caretta*	LT	T	Matagorda
Northern scarlet snake	*Cemophora coccinea copei*		T	Henderson
Texas scarlet snake	*Cemophora coccinea lineri*		T	Matagorda
Green sea turtle	*Chelonia mydas*	LT	T	Matagorda
Timber/Canebrake rattlesnake	*Crotalus horridus*		T	Austin Fannin Freestone* Henderson Matagorda
Leatherback sea turtle	*Dermochelys coriacea*	LE	E	Matagorda
Atlantic hawksbill sea turtle	*Eretmochelys imbricata*	LE	E	Matagorda
Texas tortoise	*Gopherus berlandieri*		T	Matagorda
Sabine map turtle	*Graptemys ouachitensis sabinensis*			Henderson
Kemp's Ridley sea turtle	*Lepidochelys kempii*	LE	E	Matagorda
Smooth green snake	*Liochlorophis vernalis*		T	Austin** Matagorda
Alligator snapping turtle	*Macrochelys temminckii*		T	Austin Fannin Freestone* Henderson
Texas diamondback terrapin	*Malaclemys terrapin littoralis*			Matagorda
Gulf Saltmarsh snake	*Nerodia clarkii*			Matagorda
Texas horned lizard	*Phrynosoma cornutum*		T	Austin Fannin Freestone Henderson Matagorda

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RARE AND PROTECTED RESOURCES, SPECIAL FEATURES, AND MANAGED AREAS NEAR PROPOSED ALTERNATIVE SITE LOCATIONS

Texas garter snake	*Thamnophis sirtalis annectens*	Austin*[2] Freestone
Special Features and Natural Communities		
Colonial Waterbird Rookery		Austin* Fannin Freestone* Henderson* Matagorda*
Migratory Songbird Fallout Site		Matagorda*
Primary Whooping Crane Corridor		Austin* Freestone** Henderson*
Colorado River - Ecologically Significant Stream Segment (ESSS)		Matagorda**
Brazos River - ESSS		Austin **
Catfish Creek - ESSS		Henderson *
Trinity River - ESSS		Freestone** Hendersson *
Tres Palacios Creek - ESSS		Matagorda*
Big Boggy Creek - ESSS		Matagorda*
Bois d'Arc Creek - ESSS		Fannin*
Coffee Mill Creek - ESSS		Fannin*
Big Woods Loop - Wildlife Trail		Henderson*
Rio Colorado Loop - Birding Classic Trail		Austin*
Pecan-Sugarberry Series	*Carya illinoensis-celtis laevigata*	Freestone*
Water Oak-Willow Oak Series	*Quercus nigra-quercus phellos*	Freestone*
Post Oak-Black Hickory Series	*Quercus stellata-carya texana*	Freestone* Henderson*
Post Oak-Blackjack Oak Series	*Quercus stellata-quercus marilandica*	Fannin* Freestone**
Little Bluestem-Brownseed Paspalum Series	*Schizachyrium scoparium-paspalum plicatulum*	Austin* Matagorda*
Little Bluestem-Indiangrass Series	*Schizachyrium scoparium-sorghastrum nutans*	Austin*
Sphagnum-Beakrush Series	*Sphagnum* spp.-*rhynchospora* spp.	Henderson*
Managed Areas		
Attwater's Prairie-Chicken National Wildlife Refuge (NWR)		Austin*
Big Boggy NWR		Matagorda*
Big Lake Bottom Wildlife Management Area (WMA)		Freestone *
Fairfield Lake State Park		Freestone**
Gus Engling WMA		Henderson*
Mad Island Marsh Preserve - private land trust		Matagorda*
Mad Island WMA		Matagorda*
Richland Creek WMA		Freestone* Henderson *
Stephen F. Austin State Park		Austin*
Williams Prairie Preserve - private land trust		Austin*

Notes:

* - within 10 miles

** - within 1.5 miles or crossing

1 - The State Status listing will become effective upon publication of the final rule in the Texas Register, approximately December 2009

2 - species is not on list; record is outside of expected range

3 - species is not on county list, record is in 10 miles of site, but within adjacent county

Status Key:

LE - Federally Listed Endangered

TABLE 1
RARE AND PROTECTED RESOURCES, SPECIAL FEATURES, AND MANAGED AREAS NEAR PROPOSED ALTERNATIVE SITE LOCATIONS

LT - Federally Listed Threatened
T/SA; NL - Federally Listed Threatened by Similarity of Appearance, where range overlaps with *U. a. luteolus*; elsewhere Not Federally Listed
C - Federal Candidate for Listing
PDL - Federally Proposed for Delisting
DL - Delisted
E - State Listed Endangered
PT - State Proposed Listed Threatened
T - State Listed Threatened