



United States Department of the Interior

FISH AND WILDLIFE SERVICE

10711 Burnet Road, Suite 200

Austin, Texas 78758

512 490-0057

FAX 490-0974



APR 15 2015

Council Member Leslie Pool
City of Austin, Council Member District 7
301 West 2nd Street
Austin, Texas 78701

Dear Council Member Pool:

Thank you for your March 13, 2015, letter requesting the U.S. Fish and Wildlife Service's (Service) guidance on the proposed State Highway 45 Southwest (SH 45 SW) project and the potential implications this project may have on the Balcones Canyonlands Conservation Plan (BCCP). As you know, the BCCP is the first permitted Regional Habitat Conservation Plan in the country and remains a leading example of a community-based solution to balancing economic development with the protection of threatened and endangered species. The Service is proud of the BCCP's accomplishments and the demonstrated leadership of the City of Austin and Travis County for the almost 19 years while implementing this Plan.

Regarding SH 45 SW, the Service reviewed the Draft Environmental Impact Statement (DEIS) for the proposed SH 45 SW project and provided comments to the Texas Department of Transportation (TxDOT) on August 12, 2014 (see attached). I have spoken to the Service's Texas Transportation liaison, Mr. Darren LeBlanc regarding SH 45 SW, and he has indicated that he has on a number of occasions informed TxDOT of the requirement to comply with Section 9 of the Endangered Species Act, specifically as it relates to the potential 'take' of the golden-cheeked warbler. Regarding the Service's DEIS comments, Mr. LeBlanc also expressed concerns over potential water quality degradation in the Barton Springs Segment of the Edwards Aquifer and the effect that this proposed project may have on the Barton Springs and the federally-listed Barton Springs and Austin blind salamanders located at the springs. The Service's DEIS comments also expressed concerns about potential impacts to Flint Ridge Cave. Mr. LeBlanc has informed me that although TxDOT has revised the DEIS to address some of the comments they received, the concerns expressed in the Service's letter remain regarding potential impacts to the golden-cheeked warbler, the two federally-listed salamanders, and the species of concern in Flint Ridge Cave.

On March 18, 2014, Travis County Commissioner's Court approved an Interlocal Cooperation Agreement between Hays County, Travis County, and the Central Texas Regional Mobility Authority to develop and construct this proposed project. Given that the Service's August 12, 2014 comments still stand, and Travis County is both a BCCP permit holder and partial funder of the proposed project, the primary purpose of this letter is to provide you with non-binding guidance regarding the BCCP incidental take permit (Permit) that was issued from the Service to the City of Austin and Travis County (Permittees) on May 2, 1996, for a 30-year term and how the proposed SW 45 SW relates to the BCCP and the Permit.



The BCCP covers 8 federally listed species and 27 unlisted species. Of the eight listed species, two are birds and six are karst invertebrates. Of the covered listed species that are not federally-listed, 25 are invertebrates and 2 are plants. The mitigation for the karst invertebrates is to “acquire, manage, or implement formal management agreements...adequate to preserve the environmental integrity” of 35 caves with listed species and 27 caves with non-listed covered species. Flint Ridge Cave is listed on the BCCP permit as mitigation for un-listed species and is located near the proposed SW 45 SW project. The Service is concerned that the proposed SH 45 SW project may impact the ‘environmental integrity’ of Flint Ridge cave and the covered non-listed species located in the cave given the close proximity of the proposed road to the cave entrance.

If the proposed SH 45 SW project is constructed and results in an adverse impact to Flint Ridge Cave and the covered species located in the cave, there are actions you may voluntarily pursue to remain in good standing with your Permit. Specifically, the Permit allows the Permittees to substitute another cave for a mitigation cave, like Flint Ridge Cave. One condition described in the Permit says that “If during investigations for development of a tract, karst features are discovered with a significant diversity of troglobitic fauna, those karst features may be submitted to the USFWS for consideration for exchange with karst features identified for protection by the BCCP” and the Permittees and the Service, in association with karst experts, make the determination of “significant diversity”. The BCCP staff is currently developing a process to evaluate substitution caves and is working with the Scientific Advisory Committee and the Service in the development of this process. Given the substitution process is included on the incidental take permit and does not result in any change in take of or mitigation of effects to covered species, substituting a cave for Flint Ridge Cave would likely require a minor amendment to the BCCP incidental take permit as approved by the Service. Note, to ensure that there is no change in mitigation of covered species, the substitution should not result in a decrease in the number of protected caves for any of the covered species in the original cave.

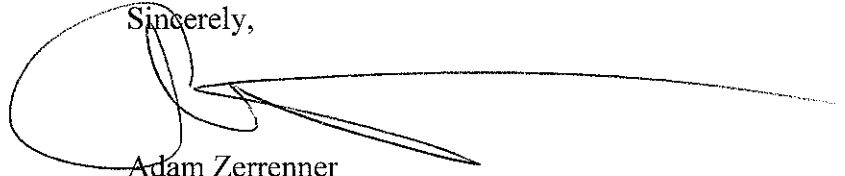
Another option exists, should there be an impact from the proposed SH 45 SW on Flint Ridge Cave, which involves a major amendment. The BCCP outlines the process to remove covered species from the Permit and describes this process as a major amendment as it results in a change in mitigation to species covered by the BCCP, environmental impact statement, and Permit. In the event that Travis County and the City of Austin do not plan to pursue a substitution cave for Flint Ridge Cave, a major amendment to remove the covered species found in Flint Ridge Cave may be an option for you to consider.

Lastly, I understand that the City of Austin is currently conducting dye tracing studies to assess potential impacts from the proposed project’s ROW to Flint Ridge Cave. Past work has shown that nearby caves and Bear Creek itself are hydrologically connected to Barton Springs. Completion of this work will be important to assessing the potential impact of SH 45 SW to Flint Ridge Cave, as well as the Barton Springs salamander and Austin Blind salamander. In the event it is determined that Flint Ridge Cave will likely be impacted by the proposed SH 45 SW project, the Service strongly recommends having one of the above processes completed before the impact occurs.

I want to again thank the City of Austin and Travis County’s leadership in implementing the BCCP as a National model for a community-based solution that balances economic development

with endangered species protection. I look forward to working with you and your staff on the continued success of the BCCP. Please contact me, at 512-490-0057 (ext. 248) if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adam Zerrenner'. The signature is fluid and cursive, with a large loop at the beginning and a long, sweeping tail that extends to the right.

Adam Zerrenner
Field Supervisor

cc

Assistant Regional Director, Ecological Services, Albuquerque, NM (attn.: Marty Tuegel)
Regional Solicitor, Department of Interior, Albuquerque, NM (attn.: Justin Tade)



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10711 Burnet Road, Suite 200

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August 12, 2014

Mr. Carlos Swonke
Texas Department of Transportation
Environmental Affairs Division
125 East 11th Street
Austin, Texas 78701-2483

RE: CSJs 1200-06-004 & 1200-07-001

Dear Mr. Swonke:

Thank you for your letter of June 26, 2014, requesting the U.S. Fish and Wildlife Service (Service) review and provide comments on the Texas Department of Transportation's (TxDOT) draft Environmental Impact Statement (dEIS) for the proposed construction of State Highway 45 Southwest (SH 45 SW), CSJs 1200-06-004 & 1200-07-001, located in Travis and Hays Counties, Texas. The proposed project is being developed by TxDOT in conjunction with the Central Texas Regional Mobility Authority (CTRMA). The proposed SH 45 SW would be a new location, 4-lane tolled roadway connecting the southern terminus of State Loop 1 (MoPac) with Farm-to-Market (FM) 1626, a distance of about four miles. There is no Federal nexus for this project, therefore, the dEIS has been prepared in accordance with the Texas Administrative Code, 43:1 Chapter 2, and is not required to comply with the National Environmental Policy Act (NEPA) requirements for an EIS.

There are several issues in the dEIS related to Service trust resources that we believe must be examined in greater detail. Some of the issues are project related effects to listed species, the golden-cheeked warbler (GCW), the Barton Springs (*Eurycea sosorum*) and Austin blind salamanders (*Eurycea waterlooensis*), and the Bone Cave harvestman (*Texella reyesi*). The Service is also concerned about adverse effects to Flint Ridge Cave, which could violate the requirements of the Balcones Canyonlands Conservation Preserve (BCCP) Habitat Conservation Plan (HCP) and Incidental Take Permit (ITP). The Service has issues with the dEIS related to the evaluation of reasonable alternatives and a lack of sufficient information to be able to verify TxDOT's conclusions on potential project effects. Lastly, there is no mention in the dEIS of the requirements of the 1990 Consent Decree reached in settlement of the lawsuit on the original SH 45 project. Without describing the requirements of the Consent Decree, the Service is not able to determine whether TxDOT is complying with the project and consultation requirements in the Consent Decree.

As stated above, the dEIS prepared by TxDOT is a state environmental review document and does not comply with the NEPA requirements for content, coordination, review, oversight, approval, and dispute resolution. With no Federal nexus, TxDOT's requirements to comply with other Federal regulations are also minimized. For example, a project with a Federal nexus must consult with the Service under section 7 of the Endangered Species Act (Act) for any action which "may effect" a listed species or designated critical habitat, whereas, for a project without a Federal nexus the requirement is that the project effects must not result in a violation of section 9 of the Act, which prohibits "take" of a listed species. Take is defined in the Act as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct."

The dEIS states that the Service is a participating agency in the preparation of the dEIS and includes a copy of the Service's letter acknowledging that we would be a cooperating agency on the EIS development. Our agreement to be a cooperating agency was based on the (erroneous) assumption that the EIS would be a Federal document, based on the NEPA requirements and implementing regulations. Because it is not, and there are no mention of cooperating or participating Agency status in the Texas Administrative Code related to the development of a state EIS, this information should be removed from the EIS.

The dEIS was submitted to the Service and other agencies for public comment before some of the environmental studies undertaken for the project, or their final reports, were complete; including the geologic assessment and karst invertebrate surveys, and GCW habitat assessment and surveys. Because the final study reports were not included as appendices to the dEIS, detailed information on the methods and results were not available for review by the Service and other resource agencies. The information in these reports is vital in allowing reviewing agencies to determine if appropriate methods were followed to justify the effect analysis described in the dEIS.

The Texas Administrative Code requires an evaluation of "all reasonable alternatives satisfying the purpose and need..." of the project. The Service does not believe TxDOT has fulfilled this requirement in the dEIS. All of the alternatives mentioned in Chapter 2, except for the preferred and no action alternatives, were eliminated from consideration before any evaluation of their environmental effects. In addition, there are insufficient details for each proposed project alternative to accurately evaluate their environmental effects. There is no description of the actions, such as construction methods, necessary to implement each of the project alternatives. Construction methods that would avoid or minimize project related effects must be considered for an accurate evaluation of the project effects. There is also no discussion about TxDOT's ability to modify the proposed alignment within the existing ROW in order to avoid or minimize effects to the GCW, karst habitat, Flint Ridge Cave, or other resources. The dEIS also does a poor job of describing the environmental effects of the no action alternative or of comparing the effects of the no action alternative to the effects of the preferred alternative.

The Service does not believe the dEIS does an adequate job of evaluating the direct and indirect effects of the proposed project on listed species. The project analysis is generally limited to the

ROW and does not take into consideration the potential for adverse effects to occur beyond the limits of the ROW. Instead of evaluating the projects effects on listed species, TxDOT has made determinations on whether the preferred alternative would result in "take" of listed species, based on limited supporting data and analysis. Again, the requirements detailed in the Texas Administrative Code require an evaluation of the environmental impacts of the project, including direct, indirect, and cumulative effects. The Texas Administrative Code does not limit the evaluation to "take" of federally protected species. The evaluation in the dEIS should determine if the proposed project would affect listed species. If the effect to a listed species rises to the level of harm (defined as: any act which kills or injures federally protected species, including significant habitat modification or degradation that significantly impairs their essential behavior patterns and results in death or injury) or harass (defined as: the disruption of a listed species essential behavior patterns, including feeding, breeding, and sheltering), then TxDOT should consult with the Service under section 10 of the Act in order to avoid any potential section 9 "take" violation.

The Service believes the current analysis of indirect and cumulative effects, located in Appendices D and I respectively, are insufficient. Indirect effects are those that are caused by the project but occur in a different location or later in time. Most of the dEIS discussion on water quality effects to the Edwards Aquifer, in Section 3.6, would be indirect effects. In addition, most of the discussion in Appendix I, covering cumulative impacts, relates to the direct or indirect effects of this project, instead of an evaluation of the past, present, and reasonably foreseeable future actions that may result in effects to the environment. We recommend the effects evaluation in the dEIS be redone to more accurately reflect potential direct, indirect and cumulative environmental effects and that all three types of effects be included in the Affected Environment/Environmental Consequences section of the dEIS, rather than having the indirect and cumulative effects separated into appendices.

TxDOT states that their GCW habitat assessment did not identify GCW habitat within the ROW, however in the dEIS (page 215) TxDOT describes the vegetation in the ROW as "generally composed of juniper-bluestem savannas and oak-juniper woodlands." Both of these habitat types can be used by GCW for feeding, breeding, and sheltering. TxDOT states in Appendix I that there are 52 acres of GCW habitat in the ROW, but did not quantify how much of that 52 acres would be affected by the proposed project. The Service's survey protocol for GCW states that if any area of the assessed property meets the vegetative associations described in Campbell (2003), and a determination of non-GCW habitat was made, a report of the GCW habitat assessment must be provided to the Service for review within five days of the determination. This has not been done, and based on the information in the dEIS, the Service would likely not have concurred with a negative GCW habitat findings.

One of the difficulties in interpreting the effects to the GCW, as well as other environmental factors, are the multitude of differing special scales used in the dEIS evaluation. The dEIS does a poor job defining the action area of the proposed project and relating the environmental effects analysis to the action area. Instead, TxDOT uses ROW, study area, resource study area, project corridor, and area of influence in various analyses in the dEIS, often for the same resource,

including the GCW. The action area is normally defined as the area where direct and indirect project related effects would occur. The Service believes the action area should be specifically defined in the dEIS and used consistently in the effect analysis throughout the document.

In regards to TxDOT's analysis of potential project effects to the GCW, your "no take" determination is based on a single year of GCW surveys within the SH 45 SW ROW and the negative GCW habitat assessment. Documentation for these evaluations was not included in the dEIS, nor submitted to the Service, for review. A single year of presence/absence surveys, for a highly mobile, migratory species like the GCW, is not sufficient information on the long-term use of the area by GCW to justify a no take determination. The GCW survey protocol also requires the surveys to extend 300 feet beyond the edge of the ROW.

Surveys in the project area over the past decade have documented habitat use by GCW within City of Austin (CoA) Water Quality Protection Lands (WQPL), located adjacent to the SH 45 SW ROW. Baer Engineering detected GCWs on the Tabor and Bliss Spiller Tracts in 2009, but not in 2010. The Nature Conservancy detected GCW on the Tabor Tract in 2000, but not on the Bliss Spiller Tract. SWCA did not record any GCW during multiple surveys on the Tabor Tract in 2002, but did detect them in 2003. GCW surveys on WQPL in the project area conducted in 2013 and 2014 documented the presence of GCWs. The dEIS notes in several locations that GCW have been confirmed to use WQPL and specifically states that a GCW nested and fledged a juvenile on the eastern boundary of the ROW, west of Bear Creek, in 2013. With previous surveys indicating that GCWs can be absent one year, then detected the next, and recent survey results indicating that GCW are using habitat in the area of the project, we believe that three consecutive years of negative GCW presence/absence surveys must be completed, in accordance with written Service survey protocol, before TxDOT can justify its proposed "no take" determination. The Service believes that the proposed project would result in harassment of GCWs if they are located in habitat within or adjacent to the ROW during construction.

The Service is concerned that the geologic assessment and karst feature surveys were not complete at the time the dEIS was issued. Without the karst assessment being finalized before the issuance of the dEIS, TxDOT is not able to fully and accurately describe the number of karst features, particularly within the Recharge Zone, that occur within the ROW or would be directly or indirectly affected by the project. Because the current karst study is incomplete, TxDOT based their karst analysis on a study from 2007. Supporting documentation was not included in the dEIS to justify the analysis of impacts to karst habitat or listed karst invertebrates. An example of the importance of a complete karst geologic survey can be seen in the different number of features found in the 2007 survey, compared to the ongoing study. During the 2007 karst investigation of the ROW, only 21 features were identified. However at the July 25, 2014 Technical Work Group meeting, the karst consultant stated that 220 features had been found thus far, including 19 that are still under investigation. The Service believes that even more features will be uncovered as soil disturbance occurs during project construction. In the dEIS, TxDOT states that only seven known features would be permanently sealed due to the implementation of the preferred alternative, however it is unknown if that number is based on the 2007 survey or the one currently being conducted. Also, TxDOT does not discuss how they plan to address

impacts to previously unknown subsurface karst features if they are discovered during construction and contain protected karst species.

The Service believes it was premature for TxDOT to make a "no take" determination for listed karst species before all karst geologic feature and invertebrate surveys were complete and the Service has had the opportunity to review the survey findings. The Service is concerned about potential affects to *Texella reyesi*, a listed karst invertebrate species. We acknowledge that the identification of the specimen from Barker Ranch Cave #1 is in question, since the specimen is a juvenile and no other *T. reyesi* have been found south of the Colorado River. However, until scientific findings indicate otherwise, the Service considers Barker Ranch Cave #1 to be occupied by *T. reyesi* and we believe there is potential for *T. reyesi* to be located in other karst features in the project area. After the issuance of the dEIS, an additional *Texella* specimen was collected in Barker Ranch Cave #1 and submitted to Dr. Darrell Ubick, a *Texella* taxonomist at the California Academy of Sciences, for identification. Hopefully, Dr. Ubick will be able to identify the new specimen and provide guidance on whether *T. reyesi* is likely to occur south of the Colorado River.

The Service has repeatedly expressed our concern about the potential for water quality degradation to occur in the Barton Springs Segment of the Edwards Aquifer associated with TxDOT projects located within the aquifer's Recharge Zone and the effects that degradation could have on the Barton Springs and Austin blind salamanders. Within the project ROW, 277.4 acres occur within the Recharge Zone, with an additional 31.7 acres in the Transition Zone. There are currently about 17.2 and 5.7 acres of impervious cover in the Recharge and Transition Zones, respectively, within the project ROW. Construction of the preferred alternative would add about 47.9 acres of impervious cover in the Recharge Zone and 4 acres in the Transition Zone.

TxDOT is proposing to treat construction and roadway runoff so that about 90 percent of TSS would be captured by water quality best management practices (BMPs). In addition to TSS, other water quality pollutants, including heavy metals, petrochemical products, nutrients (nitrates and phosphorus), bacteria, and organic carbon, are associated with highway construction and road runoff. TxDOT is required to develop and implement a stormwater pollution prevention plan and a water pollution abatement plan for the project, but they were not complete prior to the issuance of the dEIS and details of specific preventative and treatment actions that would be implemented were not available for review. Instead, TxDOT discusses general methods that could be implemented to maintain water quality standards under normal environmental conditions.

The implementation of water quality BMPs does not guarantee that adverse effects to water quality would be avoided and TxDOT admits in the dEIS that some level of pollutants would remain after water quality treatment. Occasional severe storm events could result in failure of BMPs as the storage capacity of temporary controls are overwhelmed and result in a significant amount of pollutants entering the aquifer, either through karst features within or adjacent to the ROW, such as Flint Ridge Cave, or through Bear Creek.

TxDOT proposes to develop an environmental compliance management plan and hire an environmental compliance manager to oversee water quality monitoring and oversee inspection of BMPs. However, repairing a BMP after it has failed would not reduce or mitigate for the environmental impacts resulting from that failure. This is especially relevant since the water quality BMPs would also be used as hazardous material traps. In order to ensure no adverse effects, TxDOT would need to be able to prevent outflow from the BMPs after hazardous material spills, including during extreme weather events. Complete elimination of water quality impacts would require the retention of all runoff from the site, during construction, and roadway, once the project is completed. Water quality monitoring is needed pre-construction to establish baseline conditions, then during and post construction, in Bear Creek, Flint Ridge Cave and other recharge locations, to evaluate and monitor effects of the project.

The Service continues to be concerned that indirect impacts to Flint Ridge Cave would alter the biological conditions of the cave sufficiently to remove its conservation value as a BCCP mitigation feature in accordance with their Habitat Conservation Plan and section 10 Incidental Take Permit. TxDOT proposes to direct construction and road runoff, funneled by a 2,900 foot berm, into catchment basins for treatment, then release the treated runoff into Bear Creek. However, maintaining the water quality in Bear Creek is extremely important to the aquifer. Barrett et al (1985) estimate that approximately 85 percent of the recharge into the Barton Springs Segment of the Edward Aquifer occurs in the beds of the creeks that cross the recharge zone. TxDOT states that the amount of surface runoff entering Flint Ridge Cave would not be altered by the project. TxDOT proposes to replace an equivalent amount of surface runoff into Flint Ridge Cave as the amount that would be diverted into the detention BMPs. However, the specifics of how this would be accomplished, or what effect it would have on other karst features in the project area, were not addressed in the dEIS.

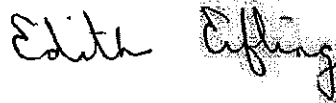
TxDOT has not delineated, nor addressed impacts to the Flint Ridge Cave subsurface drainage basin. Recharge into Flint Ridge Cave has been measured to reach Barton Springs in as little as 2 days and recharge from Bear Creek can reach Barton Springs in 2 to 4 days. Construction of SH 45 SW would result in the conversion of about 5.6 acres, or about 13 percent, of the 43.8 acre Flint Ridge Cave surface drainage basin into impervious cover. It is unclear if that total includes only the road surface, or if it also includes the proposed berm, the area between the road and berm where TxDOT proposes to install an impermeable bentonite clay layer to prevent infiltration of runoff before it has been treated, or the area of the other treatment BMPs. In addition to the increase in impervious cover, during project construction TxDOT would be removing about 159 acres of the 309 acres of vegetation currently in the ROW. Surface vegetation within 345 feet of the cave footprint is necessary to support the troglobitic species which occupy the cave. An infiltration study is currently underway to examine the groundwater infiltration influences on Flint Ridge Cave. The Service believes the information from this study is a significant step in understanding the project's impacts to the cave, and ultimately to the Edwards Aquifer, from surface pollutants related to the SH 45 SW construction and operation.

Our last issue with the dEIS relates to the proposed project's effects on wildlife that are not protected under the Act. TxDOT relies heavily on the Texas Parks and Wildlife Department's

Natural Diversity Database (NDD) for your determination of effects to rare species. However, the NDD is not a complete database of the locations of rare species and should only be used as a tool in the evaluation of affects to these species, along with information on the species life history and habitat, and site specific habitat evaluations. The NDD only presents information of where species have been found and reported. If an area has never been surveyed or survey results were not reported to the appropriate agencies, reliance on the NDD alone may provide inaccurate information on the species that may be present in that project area. Effects to non-listed species are also readily dismissed in the dEIS, stating that any wildlife in the project area will be displaced to adjacent habitat. However, that conclusion does not take into consideration the habitat quality or the carrying capacity of the adjacent areas for any displaced species. The dEIS also does not take into account the wildlife that will be directly harmed by construction of the project. We recommend TxDOT revise the dEIS discussion related to state listed and non-listed wildlife resources.

We will continue to work with TxDOT to address these issues and we appreciate your continued efforts to conserve sensitive species throughout the state. If you have any questions or comments, please contact Darren LeBlanc at 512-490-0057 (ext. 247) or 512-608-7591.

Sincerely,

A handwritten signature in dark ink, appearing to read "Edith Erfling", written in a cursive style.

Edith Erfling
Field Supervisor
Coastal Ecological Services Field Office

Literature cited

Barrett, M.E., J.F. Malina, and R.J. Charbeneau. 1995. Water quality impacts on highway construction and operation: Summary and conclusions. Center for Research in Water Resources, Bureau of Engineering Research, University of Texas. Austin, Texas.

Campbell, L. 2003. Endangered and threatened animals of Texas: Their life history and management. Golden-cheeked warbler. Texas Parks and Wildlife Department. Austin, Texas.