

2016-2017 Conservation License Plate Special RFP

#1 Johnston's frankenia (*Frankenia johnstonii*)

As part of the Post Delisting Monitoring (PDM) plan, proposals will address on-site assessments to monitor plant population status. Data collection will include the following:

- surveying known areas of plants and mapping population perimeters
- estimating population size of nine *Frankenia johnstonii* sites identified in the PDM plan (using randomly-selected 10 sq m transects or exact counts depending on population size)
- documenting overall population site conditions (with TPWD Plant Field Forms and photographs)

Questions regarding this priority should be directed to anna.strong@tpwd.texas.gov

#2 Karst Invertebrate Surveys in the Texas Panhandle

Conduct baseline surveys for determining diversity and abundance of karst invertebrate assemblages at 5 bat hibernacula in the Texas panhandle in and around Childress County. Access to the cave sites will be coordinated by TPWD and specific locations will be made available to the grant recipient. Surveys should be conducted by cave biologists with extensive experience performing Texas karst invertebrate monitoring. Baseline surveys should include survey zones within potential WNS treatment areas at bat hibernacula caves, which could contribute to providing pre and post-treatment data on karst invertebrate diversity and abundance if these sites are chosen for testing experimental WNS treatments. Survey zones should also be outside of potential WNS treatment areas with these five caves to serve as potential control sites for analyzing treatment impacts to karst invertebrates inhabiting these caves. In order to minimize disturbance to hibernating bats, all surveys should occur within a small 3-day survey period in winter 2017 to coincide with bat surveys being conducted by Bat Conservation International.

Surveys should include identifying all karst invertebrates detected to the lowest taxonomic level possible, and recording abundance of each species detected. Unknown species should be collected and retained for potential future taxonomic examination. Environmental data (temperature, relative humidity and cave moisture conditions) and nutrient input will also be assessed and recorded during surveys. Questions regarding this priority should be directed to Jonah.evans@tpwd.texas.gov

#3 Texas Nature Tracker Population Targets

#3a Native Texas Milkweeds Modelling

Compile data on milkweeds in Texas using TNT data and other sources of data as identified by the applicant. Create maps of known distribution for each species, highlighting significant areas of persistence, significant areas of absence where presence is expected, and areas with high levels of uncertainty; especially relating to Monarch migration. Identify specific month and county level targets that need to be surveyed for milkweed persistence and phenology that will have an impact on monarch migration. Questions regarding this priority should be directed to cullen.hanks@tpwd.texas.gov

#3b Herps of Texas modelling; in search of lost populations

For 5-10 species of herpetofauna that will be determined by TPWD: Compile data from the TXNDD, University/museum specimen records, and Texas Nature Tracker Projects. Identify the most recent

observation date for each species and each county. Using knowledge of habitat requirements and possibly ecological niche modeling, identify the counties with the highest probability of detection that do not have any records for the species, or that do not have any records in the last 20 years (historical counties). For each species, create a map of the counties where the species has not been detected in over 20 years. In addition, establish up to five specific county targets with a description of the date range and conditions in which each species is most likely to be detected, along with the methodology used to identify those targets. Questions regarding this priority should be directed to cullen.hanks@tpwd.texas.gov

#3c Rare Plants of Texas modelling; in search of lost populations:

For 5-10 species of plants that will be determined by TPWD: Compile data from the TXNDD, herbarium specimen records, Texas Nature Tracker Projects, and other sources suggested by the applicant. Identify the most recent observation date for each species and each county. Using knowledge of habitat requirements and possibly ecological niche modeling, identify the counties with the highest probability of detection that do not have any records for the species, or that do not have any records in the last 20 years (historical counties). For each species, create a map of the counties where the species has not been detected in over 20 years. In addition, establish up to five specific county targets with a description of the date range and conditions in which each species is most likely to be detected, along with the methodology used to identify those targets. Questions regarding this priority should be directed to cullen.hanks@tpwd.texas.gov

#3d Mammals of Texas modelling; in search of lost populations:

For 5-10 species of mammals that will be determined by TPWD: Compile data from the TXNDD, specimen records, Texas Nature Tracker Projects and other sources suggested by the applicant. Identify the most recent observation date for each species and each county. Using knowledge of habitat requirements and possibly ecological niche modeling, identify the counties with the highest probability of detection that do not have any records for the species, or that do not have any records in the last 20 years (historical counties). For each species, create a map of the counties where the species has not been detected in over 20 years. In addition, establish up to five specific county targets with a description of the date range and conditions in which each species is most likely to be detected, along with the methodology used to identify those targets. Questions regarding this priority should be directed to cullen.hanks@tpwd.texas.gov