



# ***SOUTHERN EDWARDS PLATEAU HABITAT CONSERVATION PLAN***

**Greater Edwards Aquifer Alliance**

*16 June 2009*

*Andrew Winter, PE, RAS*

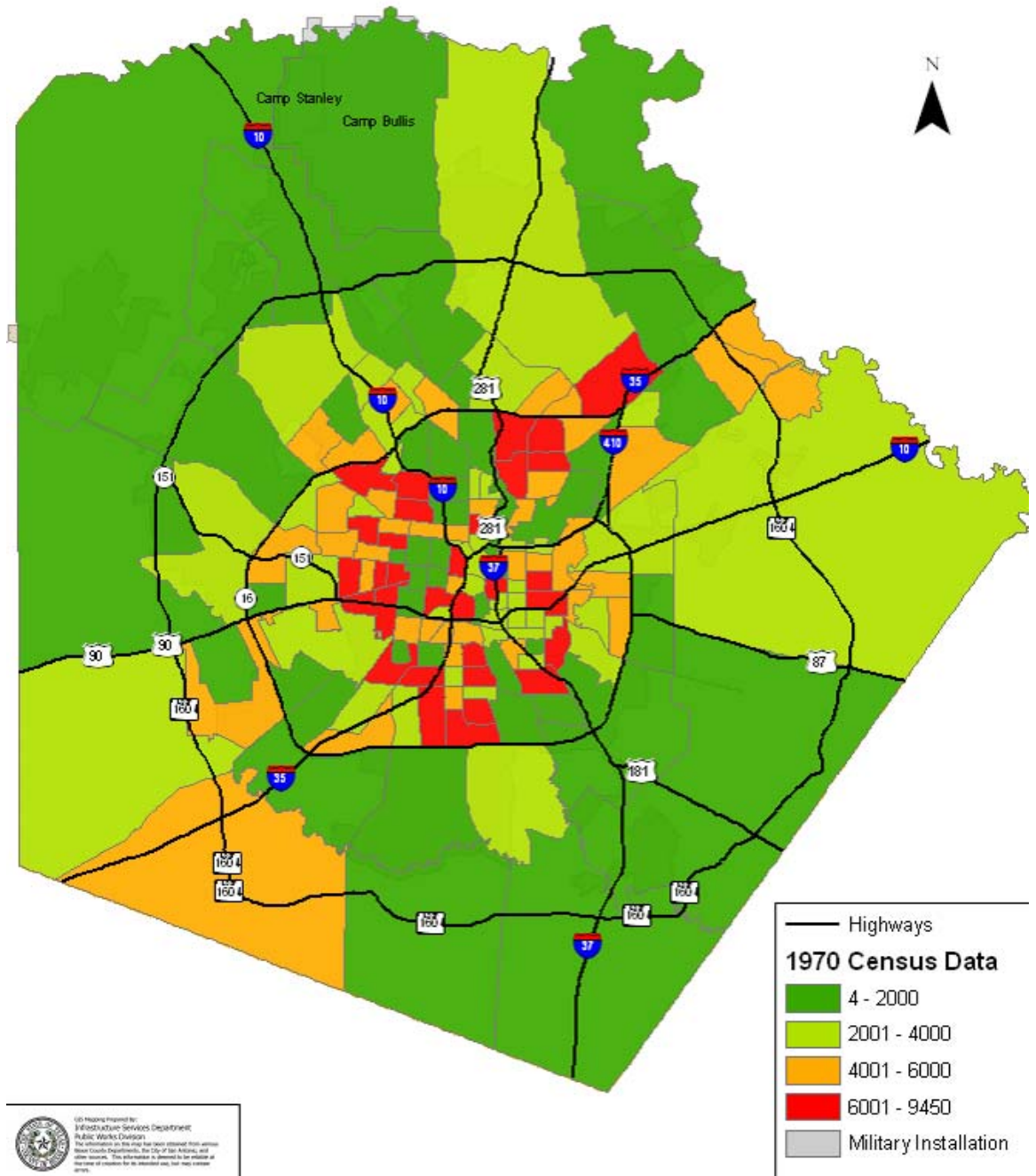
*Bexar County Environmental Engineer*

# The #1 threat to wildlife today...

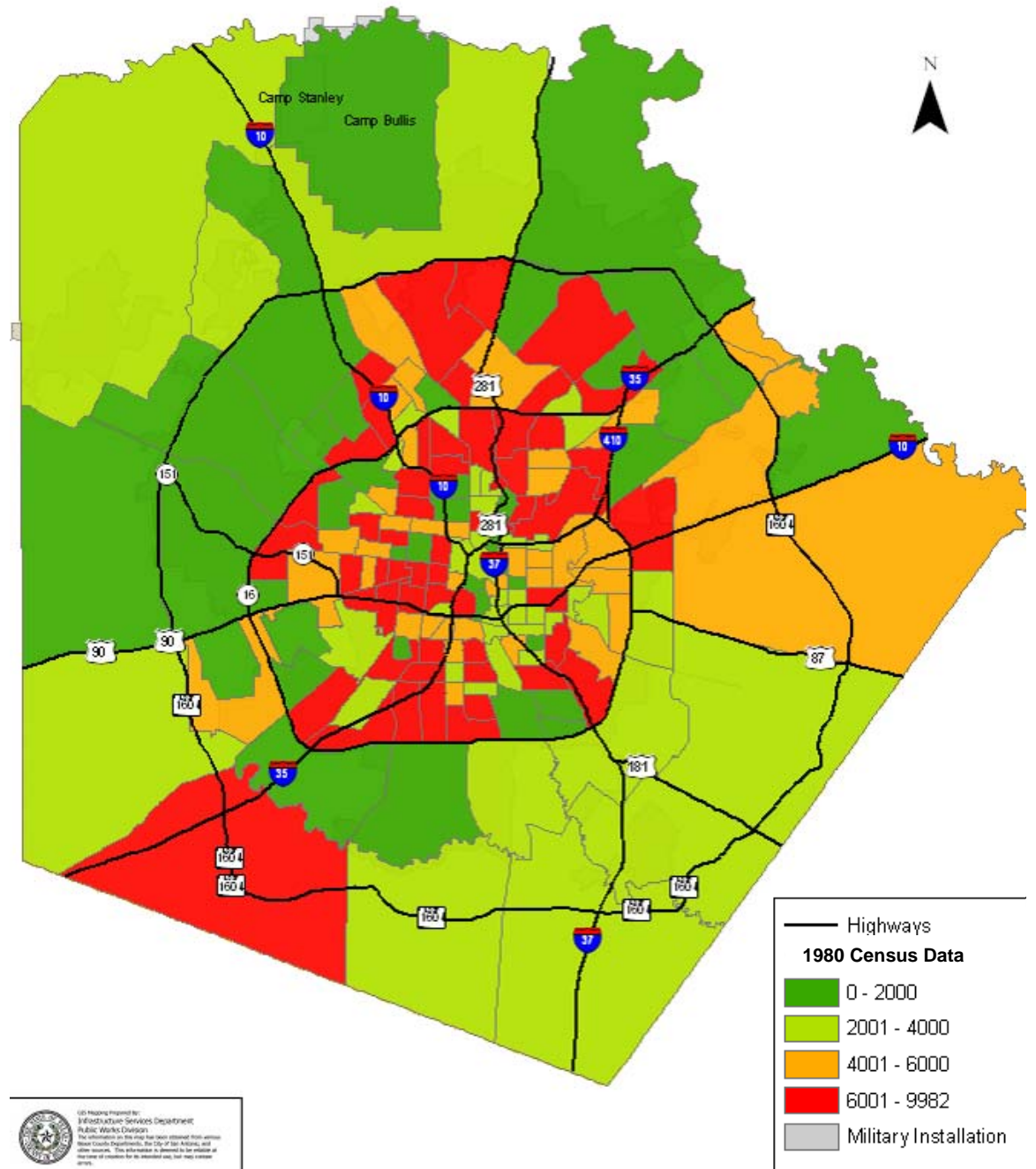


Texas loses more than 1 acre of habitat every 7 minutes,  
24 hours a day, 7 days a week, 365 days a year.  
During this presentation, 10 acres of habitat will be lost

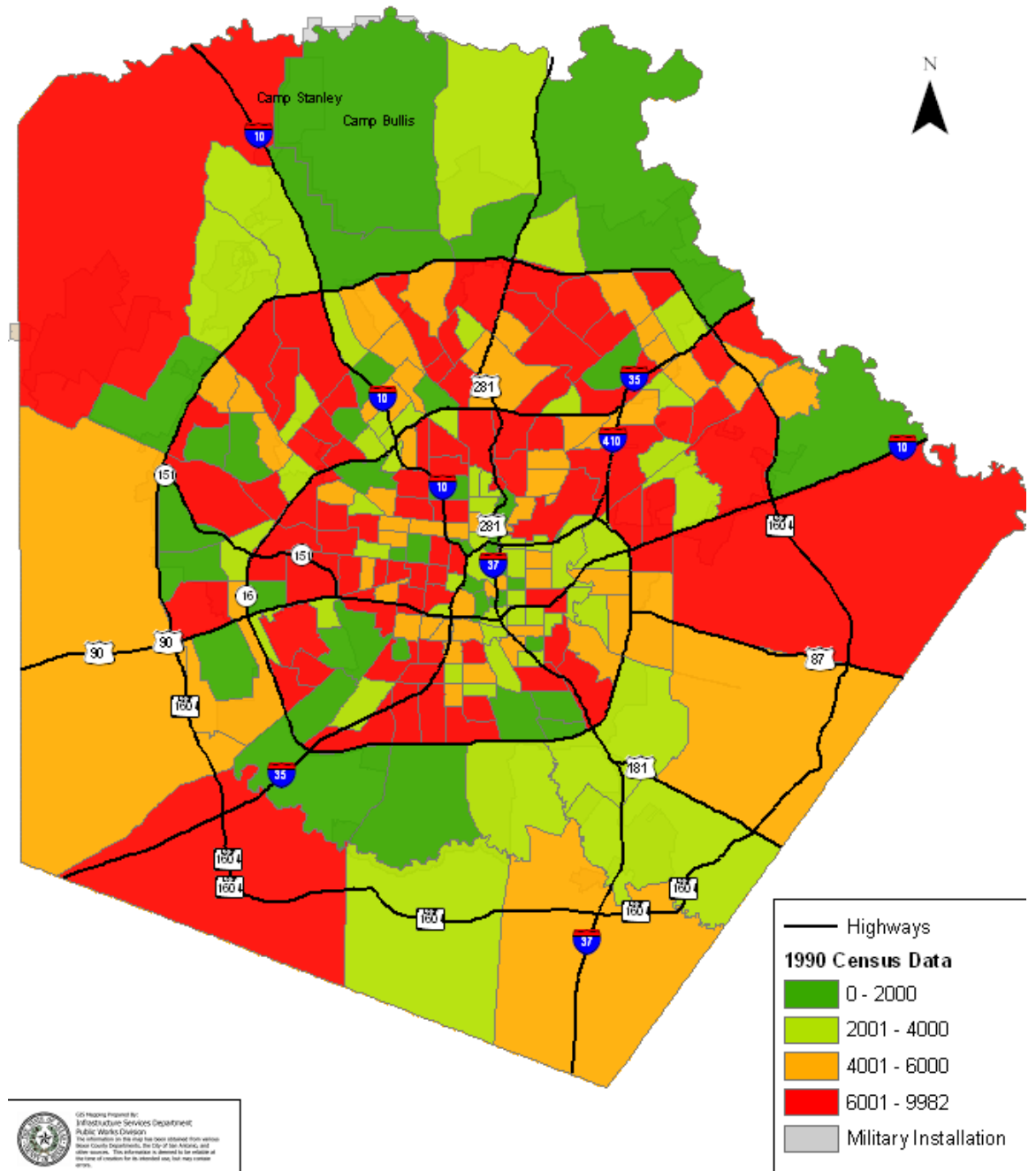
# Bexar County 1970



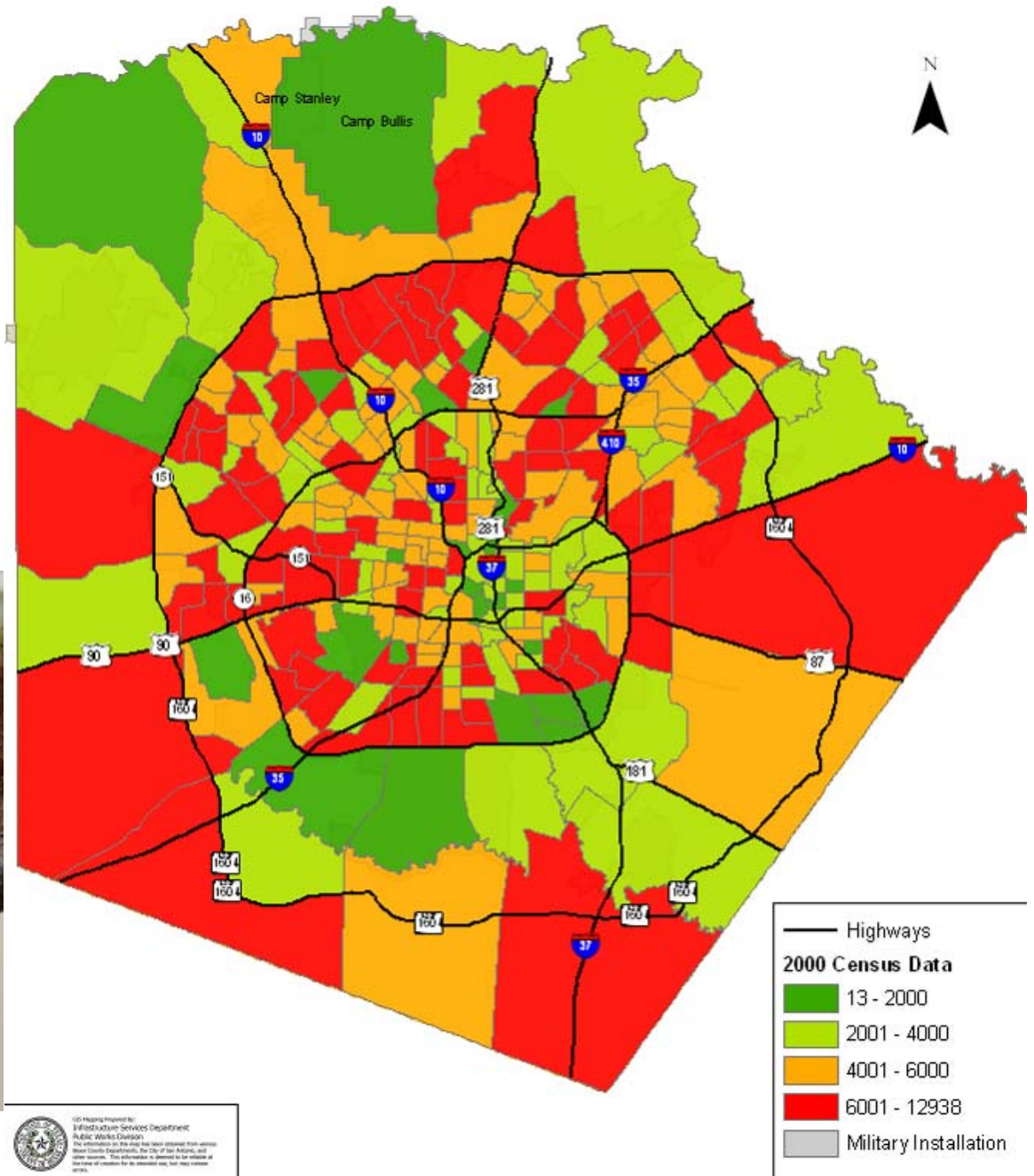
# Bexar County 1980



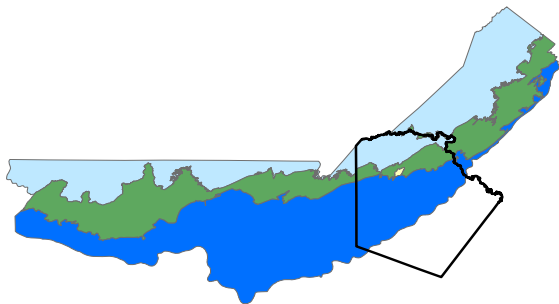
# Bexar County 1990



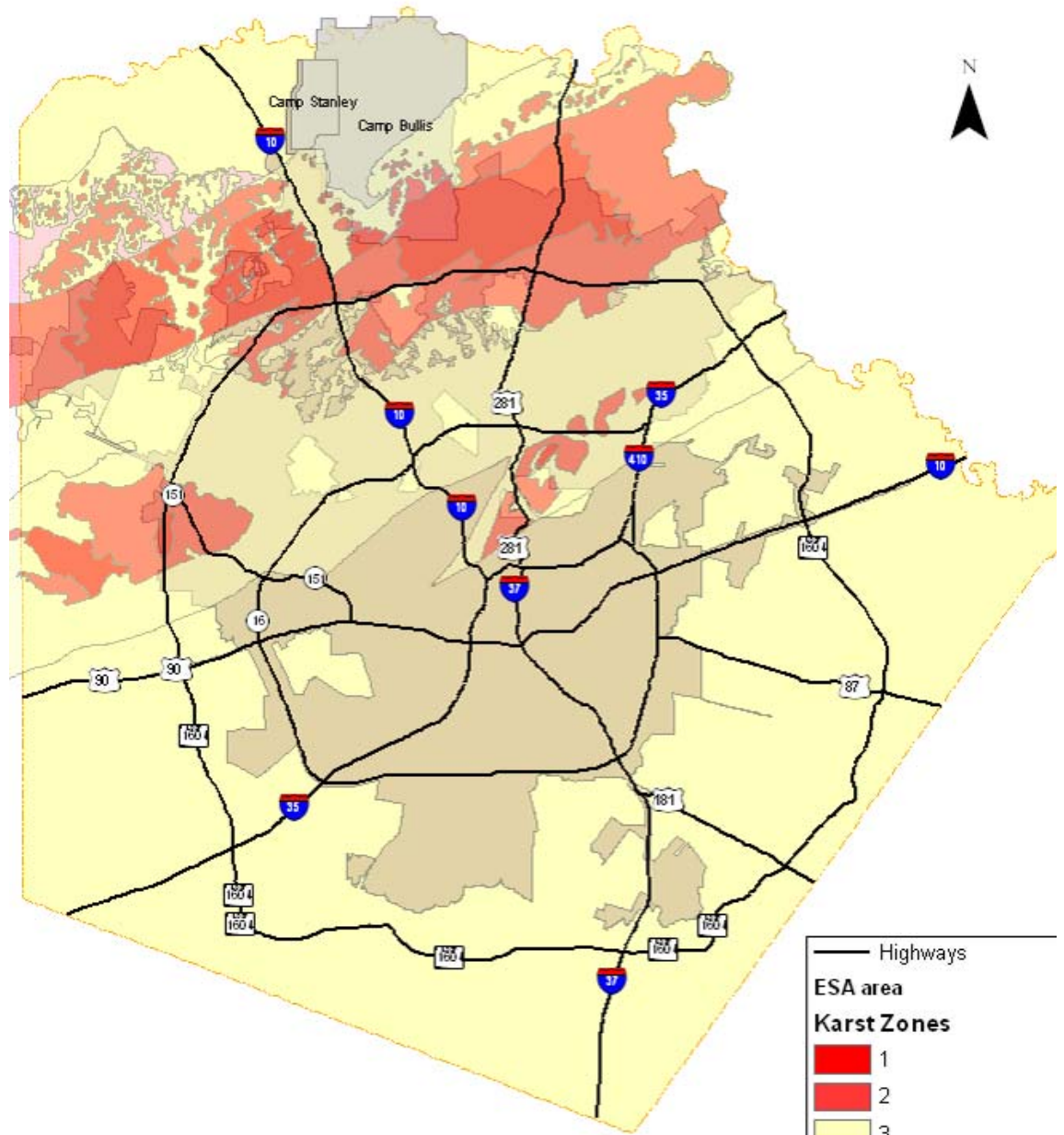
# Bexar County 2000



# Bexar County Karst Zones



Edwards Aquifer



— Highways

ESA area

**Karst Zones**

- 1
- 2
- 3
- 4

Military Installation

GIS Mapping prepared by:  
 Infrastructure Services Department  
 Public Works Division  
 The information on this map has been obtained from various  
 state, federal, and local agencies, and is not intended to be used for  
 any other purpose. This information is provided for informational  
 purposes only. The information is provided for informational  
 purposes only.



# The Endangered Species Act (ESA)

- The U. S. Congress recognized and set out to halt the rapid loss of plants and animals that make up our nation's natural heritage in 1973
- It was determined that these species are valuable to the Nation (aesthetic, ecological, educational, historical, recreational, and scientific)
- The US Fish and Wildlife Service is the federal agency charged with administration and enforcement. USFWS had to develop a conservation strategy to include States and other interested parties with the goal being to conserve ecosystems upon which threatened and endangered species depend
- An amendment to the Act in 1982 created Habitat Conservation Plans that allow development while protecting rare species by ensuring mitigating conservation measures.
- Under the ESA, any activities that result in "take" of listed species or their habitat requires consultation with the USFWS
- Water resource issues must also be resolved in conjunction with species conservation





# ENDANGERED SPECIES ACT PROVISIONS

- Section 9 prohibits “take” of listed wildlife species
- Section 10(a) permits authorize “take” for non-federal actions
- 10(a) Permit Process
  - Preparation of habitat conservation plan (HCP)
  - National Environmental Policy Act (NEPA)
  - Citizen Advisory Committee
  - Biological Advisory Team
  - Public comment
  
- Required elements of an HCP
  - Identification of impacts
  - Steps applicant will take to minimize and mitigate the impacts
  - Funding sources
  - Biological goals and objectives
  - Monitoring
  - Adaptive management



# What is a “Take”?

- "Take" is defined in the Endangered Species Act as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered species.
- Harm may include habitat modification that impacts a listed species through impairment of essential behavior (e.g., nesting or reproduction).



## Who must comply with the ESA?

- Any landowner or individual engaging in activities that result in “take” are required to comply with the law.
- This includes:
  - Private Landowners
  - Commercial Developers
  - Agricultural Users
  - Governmental Agencies
  - Infrastructure Providers

# Listing Criteria – Five Factors


1. Destruction, modification or curtailment of the species range or habitat
2. Over-utilization for commercial, recreational, scientific, or educational purposes
3. Disease or predation
4. Inadequacy of existing regulatory mechanisms
5. Other factors affecting the continued existence of the species






# What is an “HCP”?

- A habitat conservation plan or "HCP" is a planning document that is a mandatory component of an application for incidental take of a listed species under the Endangered Species Act and regulations.
- The applicant's (Bexar County, The City of San Antonio, and other interested parties) HCP must describe
  - the impacts likely to result from activities the applicant plans to undertake or authorize
  - the measures the applicant will undertake to avoid, minimize, and mitigate to the maximum extent practicable for those impacts
- Issuance criteria must be met before the FWS can issue an incidental “take” permit.



# What is an “HCP”? (cont)

- The 10(a)(1)(B) permit authorizes the incidental take of a listed species and will allow “the entity (at that point the Permittee)” to authorize Participants (i.e., Developers) to conduct covered activities that will cause incidental take, so long as the Participants conform to the terms of the HCP and permit (i.e., mitigation of the “take”).
- NOTE: The HCP is the plan of action - the permit is the legal instrument that usually incorporates the HCP by reference.
- This process ensures adequate minimization and mitigation of the effects of the authorized incidental take to the maximum extent practicable.
- Permit duration of 30 years
- Participation is completely voluntary



# What is an “HCP”? (cont)

## Documents Required for the HCP

- Draft HCP
- Draft NEPA document
- Permit Application Form and Fee
- Certification that HCP documents are complete
- Federal Register Notice
- Implementation Agreement

## Additional Required Documents

- Biological Opinion
- Findings Document
- NEPA Decision



# Our HCP Goals

- Provide assistance in the recovery of the listed species
- Provide assistance to prevent new species (threatened species) from being listed
- Provide a tool that allows for cost effective compliance with federal law (the ESA)





# What an HCP is not

- It is not mandatory
- It is not intended to stop development – it is a tool to encourage compliant development
- It will not recover the species – it is intended to aid in the recovery of the species
- It is not intended to be a drain on the taxpayers – it should be self supporting



# Why an HCP?

- Balance development and conservation
- Development provides funding for conservation
- Provides a tool for developers and landowners to easily and cost effectively comply with Federal Law
- Provides certainty by streamlining the approvals for public and private projects
- Reduces time and cost associated with Endangered Species Act compliance
- Allows us to control our own economic growth
- Ensures preservation of open space and the natural character of the County
- For San Antonio, provides protection of our sole source of water – the aquifer
- In Bexar County aquifer protection coincides with endangered species protection
- Facilitates recovery of listed species
- Allows for public participation in the process

# Who Benefits from an HCP?

- Conservation Groups
- Governmental entities
- School districts
- Political subdivisions
- TxDOT
- Developers
- Landowners
- Citizens
- TPWD
- USFWS

**EVERYONE**





# How an HCP would work

1. You want to develop in an environmentally sensitive an area of Bexar County
2. You conduct an endangered species survey to determine if your development would result in a “take”
3. You choose to participate in our HCP in order to comply with the Endangered Species Act.
4. You submit an HCP participation application and supporting documents to a our local HCP administrator (TBD)
5. HCP administrator reviews the application, ensures you are in compliance with the HCP and determines your participation fee.
6. If you choose to participate, you pay mitigation fee and become part of our HCP - \*\*Likely a 2 week process

## **WITHOUT THE HCP**

**You work individually with the U.S. Fish and Wildlife Service to obtain an individual 10(a) permit - \*\*Likely a 2 year process**



# Proposed HCP Funding Sources

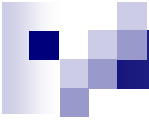
- Participation fees from developers for karst and bird mitigation
- Tax Benefit Financing
  - Baseline valuation determined
  - Enhanced valuation of the property on an ongoing basis
  - Calculation of TBF
  - TBF set aside into Conservation Trust for future acquisition, operations and management
- Federal grants, Land grants, and Donations



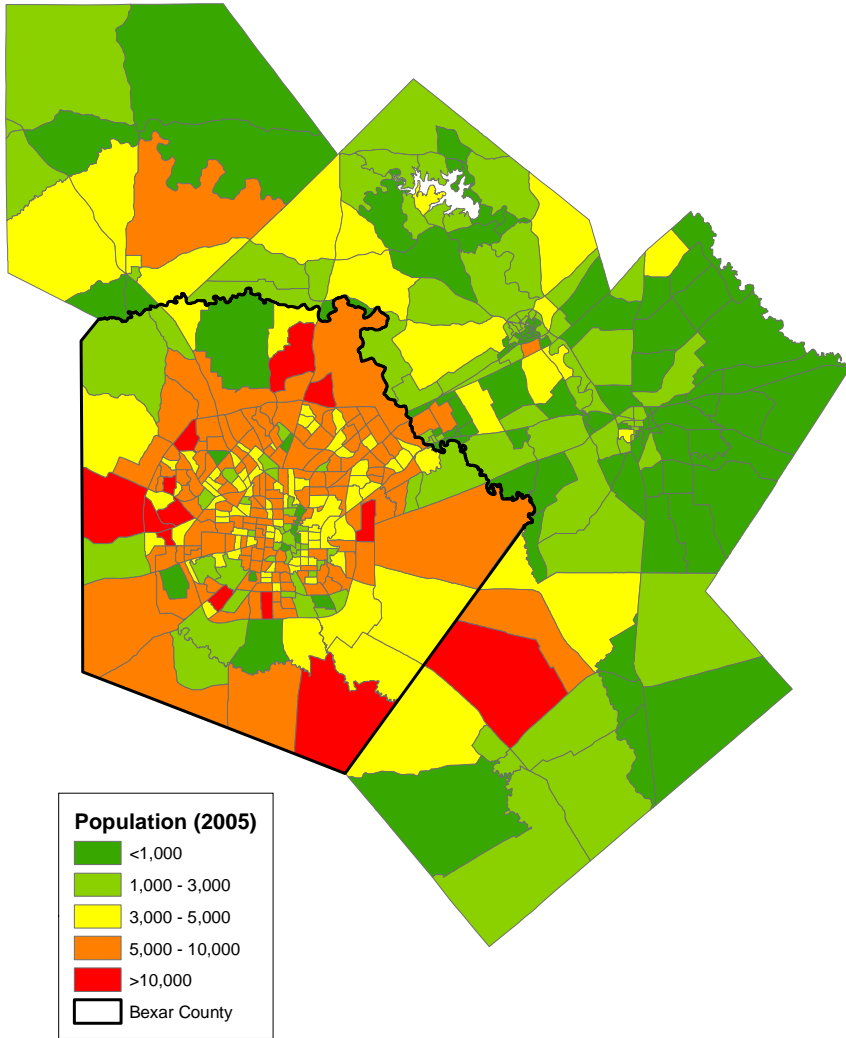
# Conservation and Development, Strange Bedfellows?

- NO
- Conservation needs Development to fund the conservation activities
- Development needs Conservation to preserve the very reason people want to develop here

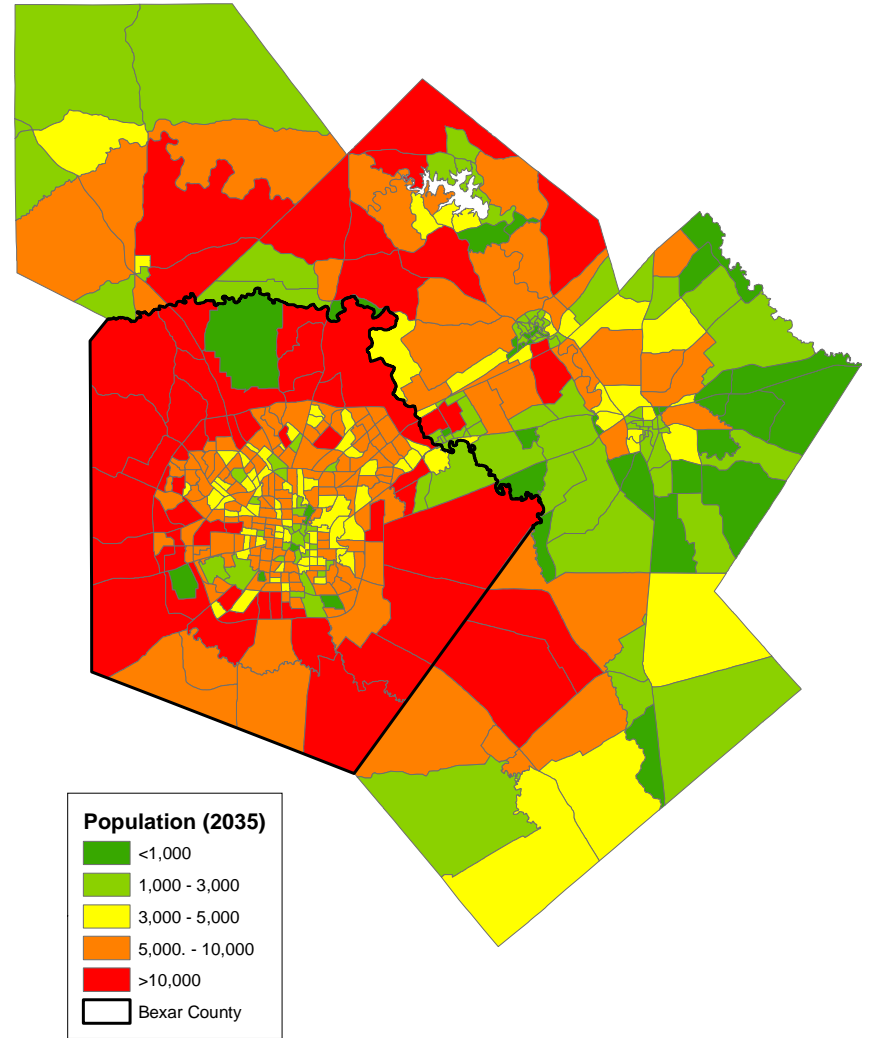
Conservation and Development  
Must Be Partners



# Population 2005



# Projected Population 2035



# What is our vision of Texas?





Or this?



And this?



And this?





## With an HCP

### **There are NO Surprises**

There will be NO additional conservation and mitigation measures required of developers

No additional restrictions on the use of natural resources, other than those agreed to in the HCP.

**A Deal's a Deal!**

# What species need to be covered

- **Endangered Species**
  - **3 Birds**
  - **10 karst invertebrates**
  - **18 plants**
- **44 Other Species of Concern**





# Endangered Species in Bexar County

## Birds

- Black-capped vireo (*Vireo atricapilla*)
- Golden-cheeked warbler (*Dendroica chrysoparia*)
- Whooping Crane (*Grus americana*)

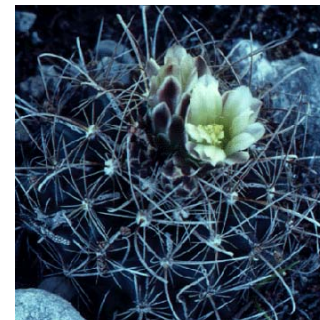
## Karst Creatures

- Braken Bat Cave Meshweaver (*Cicurina venii*)
- Cokendolpher Cave Harvestman (*Texella cokendolpheri*)
- Government Canyon Bat Cave Meshweaver (*Cicurina vespera*)
- Government Canyon Bat Cave Spider (*Neoleptoneta microps*)
- Helotes Mold Beetle (*Batrisodes venyivi*)
- Interior Least Tern (*Sterna antillarum athalassos*)
- Madla Cave Meshweaver (*Cicurina madla*)
- Rhadine exilis (*no common name*)
- Rhadine infernalis (*no common name*)
- Robber Baron Cave Meshweaver (*Cicurina baronia*),

# Endangered Species in Bexar County (cont)

## Plants

- Elmendorf Onion (*Allium elmendorfi*)
- Hill Country Wild Mercury (*Argythamnia aphyllodes*)
- Basin Bellflower (*Campanula reverchonii*)
- Texabama Croton (*Croton alabamensis* var. *texensis*)
- Sabinal Prairie Clover (*Dalea sabinalis*)
- Warnock's Coral-Root (*Hexalectris warnockii*)
- Carrizo Sands Wollywhite (*Hymenopappus carrizoanus*)
- Longstalk Heimia (*Nesaea longipes*)
- Canyon Mock-Orange (*Philadelphus ernestii*)
- Texas Mock-Orange (*Philadelphus texensis* var. *coryanus*)
- Correll's False Dragonhead (*Physostegia correllii*)
- Parks' Jointweed (*Polygonella parksii*)
- Canyon Rattlesnake-Root (*Prenanthes carrii*)
- Big Red Sage (*Salvia pentstemonoides*)
- Tobusch Fishhook Cactus (*Sclerocactus brevihamatus* subsp. *Tobuschii*)
- Bracted Twistflower (*Streptanthus bracteatus*)
- Granite Spiderwort (*Tradescantia pedicellata*)
- Texas Wild Rice (*Zizania texana*)



# Additional Species in Bexar County

(as identified by TPWD)

- A cave obligate crustacean (*Monodella texana*)
- American Peregrine Falcon (*Falco peregrinus tundrius*)
- Cascade Caverns Salamander (*Eurycea latitans*)
- Comal Blind Salamander (*Eurycea tridentifera*)
- Peregrine Falcon (*Falco peregrinus*)
- Texas Salamander (*Eurycea neotenes*)
- Western Burrowing Owl (*Athene cunicularia hypugaea*)
- White-faced Ibis (*Plegadis chihi*)
- Wood Stork (*Mycteria americana*)
- Zone-tailed Hawk (*Buteo albonotatus*)





# Additional Listed and Rare Species in Bandera, Kendall, Kerr and Medina counties (as identified by TPWD)

- A mayfly (*Baetodes alleni*)
- A mayfly (*Plauditus futilis*)
- American Peregrine Falcon (*Falco peregrinus anatum*)
- Arctic Peregrine Falcon (*Falco peregrinus tundrius*)
- Baird's Sparrow (*Ammodramus bairdii*)
- Bald Eagle (*Haliaeetus leucocephalus*)
- Black Bear (*Ursus americanus*)
- Blanco River Springs Salamander (*Eurycea pterophila*)
- Cascade Cave Amphipod (*Stygobromus dejectus*)
- Cave Myotis Bat (*Myotis velifer*)
- Edwards Plateau Shiner (*Cyprinella lepida*)
- Ezell's Cave Amphipod (*Stygobromus flagellatus*)
- Frio Pocket Gopher (*Geomys texensis bakeri*)
- Ghost-faced Bat (*Mormoops megalophylla*)
- Guadalupe Bass (*Micropterus treculii*)
- Guadalupe Darter (*Percina sciera apristis*)
- Headwater Catfish (*Ictalurus lupus*)
- Leonora's Dancer Damselfly (*Argia leonora*)
- Long-legged Cave Amphipod (*Stygobromus longipes*)
- Mountain Plover (*Charadrius montanus*)
- Nueces Roundnose Minnow (*Dionda serena*)
- Rawson's Metalmark (*Calephelis rawsoni*)
- Sage Sphinx (*Sphinx eremitoides*)
- Texas Austrotinodes caddisfly (*Austrotinodes texensis*)
- Texas Salamander (*Eurycea neotenes*)
- Valdina Farms Sinkhole Salamander (*Eurycea troglodytes complex*)



Federally listed species that occur in springs down-gradient from Bexar County that would benefit from the protection and management of upstream recharge areas (e.g. San Marcos Springs, Comal Springs)

- Comal Springs Dryopid Beetle (*Stygoparnus comalensis*)
- Comal Springs Riffle Beetle (*Heterelmis comalensis*)
- Fountain Darter (*Etheostoma fonticola*)
- Peck's Cave Amphipod (*Stygobromus pecki*)
- San Marcos Gambusia (*Gambusia georgei*)
- San Marcos Salamander (*Eurycea nana*)
- Texas Blind Salamander (*Eurycea rathbuni*)
- Texas Wild Rice (*Zizania texana*)



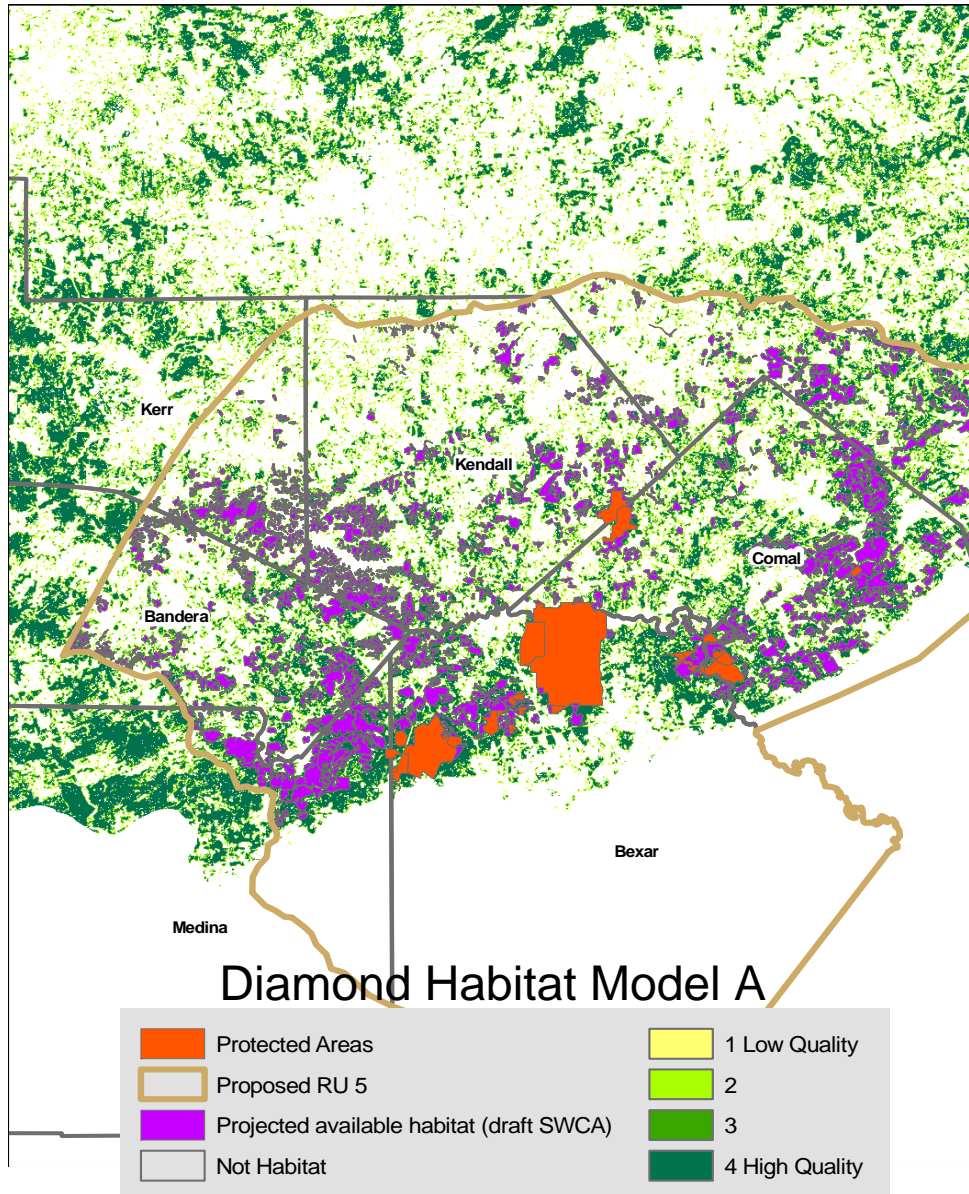
Only one bird breeds only in  
the Lone Star State...



The Golden-cheeked Warbler  
(*Dendroica crysoparia*)

Photo by Clif Ladd

# Golden-cheeked warblers



Scientists such as SWCA used existing aerials and incorporate considerations regarding patch size to project habitat “suitable” for recovery purposes

# Karst Protection

**“Karst” refers to limestone caves and sinkholes with underground streams**

**The Edwards Aquifer is the primary drinking water source for millions of Central Texas residents**

**Protecting Karst Critters protects the aquifer**





# The Team



**Bexar County**

**City of San Antonio**

**Private Landowners**

**Greater Edwards Aquifer Alliance**

**The U. S. Fish and Wildlife Service**

**Texas Parks and Wildlife**

**Camp Bullis**

**YOU?**





# Timeline

**19 Jun** – Draft a cover letter & partnership agreement for agencies to sign, also invite partners to the kickoff meeting (9AM – Noon, Wednesday 12 Aug 09, location TBD)

**23 Jun** – Bexar County Commissioners Court, Presentation of FWS Grant & request to accept grant, and request for authority to interview top two consultants and hire consultant

**30 Jun** – Broadcast partnership agreement for agencies to sign, deadline for return 28 Jul 09

**3-7 Jul** – Interview top two consultants

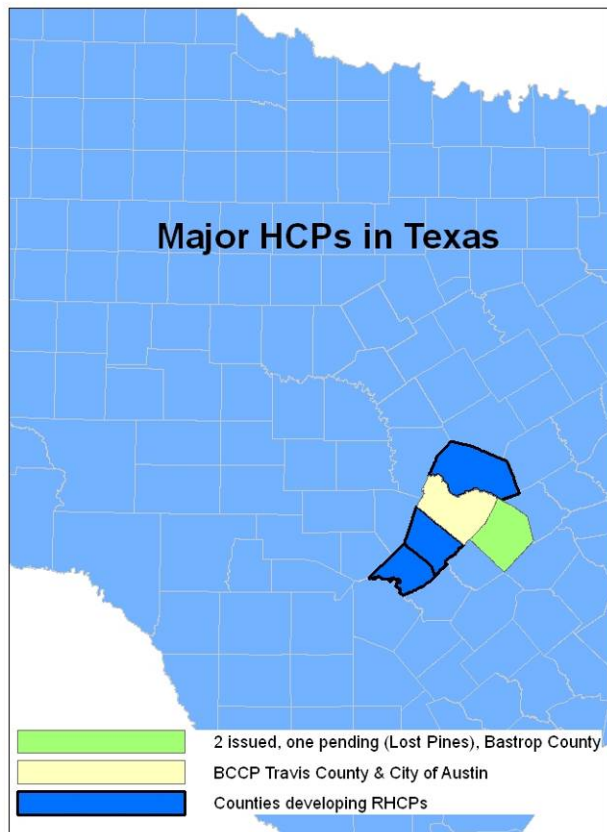
**14 Jul** – Hire consultant for HCP development, and perhaps independent reporter/transcriptionist, and legal council

**28 Jul** – Deadline for MOU/MOA/ILA partnership agreement to be returned signed

**12 Aug** – SEP-HCP kickoff meeting (9AM – Noon, Wednesday 12 Aug 09, location TBD)

Follow-on HCP meetings will be the 2ed Wednesday of the month for the next 18 months

# Other HCPs in Texas



## RHCPs

- Williamson County
- BCCP (Travis County and City of Austin)
- Bastrop County

## RHCPs (under development)

- Hays
- Comal

Many small acreage HCPs throughout central Texas







## Contact Information

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Eastern Pipistrelle (Eastern Pipistrelle)

# QUESTIONS?

