

# HABITAT CONSERVATION PLANNING ASSISTANCE GRANT PROPOSAL COMAL COUNTY REGIONAL HABITAT CONSERVATION PLAN -- PROJECT STATEMENT

## 1.0 Background and Need

Comal County proposes to develop and complete a regional habitat conservation plan (RHCP) and associated National Environmental Policy Act (NEPA) documentation for conservation of covered terrestrial species and listed Edwards Aquifer aquatic species in Comal County, Texas. The County is located in the Balcones Canyonlands region of the Edwards Plateau in the heart of central Texas, and includes habitat for a diverse community of native wildlife and plants (Figure 1). The terraced limestone hills in the area support dense woodlands and open savannas of live oak, Ashe juniper, and honey mesquite, and are home to the federally endangered golden-cheeked warbler (*Dendroica chrysoparia*) and black-capped vireo (*Vireo atricapilla*), in addition to a number of other rare and common terrestrial species. Spring fed waterways dissect the hills and provide recharge to the Edwards Aquifer. A wide variety of aquatic species, several of which are federally threatened or endangered, occur in Comal County and depend on the quality and quantity of water collected by these drainages. More information regarding these rare species can be found on [Exhibit A](#).

Comal County is located between two major metropolitan areas: the City of Austin and the City of San Antonio (Figure 1). The area has experienced rapid population growth over the past decade, with the population of Comal County increasing by 51 percent between 1990 and 2000 (U. S. Census Bureau 1990; U. S. Census Bureau 2000). Current projections estimate that the population of Comal County will almost quadruple from 78,021 people in 2000 to approximately 306,269 people by 2040 (Texas State Data Center 2004). Land development has and will continue to accompany population growth. Already, the rural character of the County is losing ground to new subdivisions, commercial property, and other developed land uses. The platting and construction of residential subdivisions is quickly fragmenting the large and contiguous patches of juniper-oak woodland habitat that are most valuable for endangered wildlife (Figure 2).

Most of the rapidly growing communities in central Texas recognize the need to conserve habitat for endangered species and protect water resources. Several conservation or land protection programs are under development or are currently operating in the region (Figure 3). However, the operating areas or missions of these programs either do not include Comal County or do not adequately address the growing conservation needs of the golden-cheeked warbler and black-capped vireo in the area between Austin and San Antonio. Further, Comal County lies wholly within the golden-cheeked warbler Recovery Unit 6 (Figure 1), which currently has no organized, regional conservation program for the golden-cheeked warbler, and preservation of warbler habitat in Comal County is essential to recovery of the species as a whole (See [Exhibit B](#)). Thus, a significant “conservation gap” exists in the area for endangered terrestrial wildlife species.

Comal County must serve the needs of its growing constituency for responsible economic development, sufficient public infrastructure, and open space recreation opportunities. The County recognizes that a coordinated RHCP would be the most efficient and effective way to meet the varied needs of both people and sensitive wildlife. This plan will seek to complement, but not duplicate, the existing efforts of the Edwards Aquifer Authority in Comal County to develop an RHCP covering aquifer pumping activities. The plan will seek to cover listed aquatic species with regards to potential impacts from water quality degradation.

Proceeds of the requested HCP Planning Assistance grant would initially be used to evaluate the needs, costs, and benefits of a plan and develop a recommendation for a locally appropriate regional conservation plan, particularly for the golden-cheeked warbler. Proceeds would also be used to evaluate whether to include the black-capped vireo as a covered species, and the potential to include other rare species in the plan as species of concern. Further, grant funds would be used for vetting the analysis and recommended conservation strategies with stakeholders, seeking additional biological review, and developing a complete RHCP and NEPA documentation. The package would be submitted with an application for an Endangered Species Act (ESA) section 10(a) incidental take permit to cover the golden-cheeked warbler, black-capped vireo, aquatic species with regards to water quality degradation, and other species of concern in Comal County. The RHCP would provide for conservation of the Covered Species in Comal County, and allow “one-stop shopping” for landowners and public entities to deal with complex endangered species issues, thereby providing more options and more certainty about future land uses.

## **2.0 Objective**

To develop and complete by December 2007 an RHCP and associated NEPA documentation for conservation of covered terrestrial species and listed Edwards Aquifer aquatic species in Comal County, Texas.

## **3.0 Expected Results and Benefits**

The development and implementation of an RHCP in Comal County provides a high benefit to species and ecosystem conservation, including the following:

- Permanently protecting and maintaining fully functional mature juniper-oak woodlands and oak savannas for the golden-cheeked warbler, black-capped vireo, and other native species that depend on these habitats (numerous additional species linked to these habitats are listed in Comal County as endangered, threatened, or rare – see Exhibit A);
- Filling a “conservation gap” in the area for endangered terrestrial wildlife species that could help extend existing conservation efforts along the southeastern portion of the range of the golden-cheeked warbler, and southeastern portion of the range of the black-capped vireo in Texas, and contributing to the recovery of the golden-cheeked warbler by establishing the first large-scale conservation plan in Recovery Unit 6;
- Facilitating the protection of endangered species habitat within a plan area of at least 362,880 acres in a rapidly developing area of central Texas. This plan area is large enough to contain most, if not all, of the naturally occurring ecological processes that are necessary to sustain habitat for the golden-cheeked warbler and black-capped vireo in Comal County;
- Creating opportunities for coordinated conservation efforts aimed at securing large blocks of endangered species habitat that also protect other important ecosystem functions, such as water quality and quantity in the Edward’s Aquifer system and the Guadalupe River watershed; and
- Providing water quality protection for listed Edwards Aquifer species.

Comal County believes that an RHCP is important to facilitating desirable economic growth in the County and promoting responsible stewardship of public resources. The significant benefits to the community from the development of this plan include:

- Proactively developing locally appropriate solutions to endangered species issues;
- Reducing the burden of ESA compliance on private individuals and entities, as well as public institutions, by creating a streamlined permitting process; and
- Creating a structure that could incorporate other community open space goals, such as endangered species-compatible recreation opportunities, scenic and cultural values, and water quality/water quantity protection.

## **4.0 Approach**

The County wishes to obtain federal HCP Planning Assistance funding to develop an RHCP and associated NEPA documentation for an application to the U.S. Fish and Wildlife Service (Service) for an ESA section 10(a) incidental take permit. The following sets forth specific actions for RHCP development and processing the permit application, assuming the grant is awarded in September 2006:

1. Work with the Service and TPWD to develop a specific scope for the development of the RHCP and NEPA documentation;
2. Consultant team review and implementation of the project scope;
3. Identify possible goals and objectives of a regional plan;
4. Identify and analyze opportunities for protection of habitat-related resources such as juniper-oak woodland;
5. Evaluate the potential of various conservation strategies to meet the County’s goals, and develop recommendation;

6. Develop a process for public input and establish an RHCP Steering Committee (also known as a Citizen's Advisory Committee, or CAC, required pursuant to Texas law) for the project that would include representative interests from the community and other stakeholders. Comal County expects this committee to be comprised of approximately 17 representatives, including representatives from the following public or private entities: Service, TPWD, Texas Department of Transportation, Texas Commission on Environmental Quality, Comal County, The Nature Conservancy - Texas Chapter, Environmental Defense, Hill Country Conservancy, New Braunfels Board of Realtors, New Braunfels, Garden Ridge, Bulverde, Schertz, Selma, Fair Oaks Ranch, Comal Independent School District, and New Braunfels Independent School District. Of course, more members may be added to this committee as necessary;
7. Develop a process for scientific input and establish a Biological Advisory Team (BAT) for the project that would include experts on the covered species and conservation biology;
8. Review the initial results of the RHCP development process (i.e., goals, objectives, opportunities, and recommendations) and solicit comments from the CAC and BAT;
9. Incorporate CAC and BAT comments, and establish the general framework for the RHCP, including plan area, permit duration, covered species, goals and objectives, likely conservation strategies, monitoring and reporting, and funding;
10. Begin the NEPA scoping process;
11. Introduce the project and present the RHCP framework to the general public with public meetings and notices through local media, and solicit additional comments;
12. Fine-tune RHCP framework and prepare a first draft of the RHCP, with assistance from the CAC and BAT, for initial Service review and comment;
13. Prepare first draft of NEPA documentation for initial Service review and comment;
14. Prepare second draft of RHCP and NEPA documentation addressing Service comments, with guidance from the stakeholder and biological advisory committees;
15. Hold second round of public meetings and update public notices to describe the conservation program, answer questions, and gather comments;
16. Finalize RHCP and NEPA documents, complete the incidental take permit application, and submit the package to the Service for coordination and processing; and
17. Provide final report to TPWD 90 days after completion of the last grant segment.

#### Key Project Personnel

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**5.0 Location**

The core area to be included in the RHCP is Comal County, which is approximately 362,880 acres (Figure 1).

**6.0 Estimated Cost**

Pursuant to TPWD requirements, a \$5,000.00 TPWD administrative fee will be charged to the federal share. The County proposes to provide at least a 25% cost share<sup>1</sup>, or \$251,250.00 for the cost of completing the RHCP, section 10(a) permit application, and NEPA documentation (presumably an Environmental Impact Statement, EIS), with the federal government providing no more than 75% in grant funds, or \$753,750.00 (including TPWD fee)

| <u>Budget.</u>  | Amount                           |
|---|----------------------------------|
| 1. Prepare and process complete section 10(a) permit application package, including RHCP, permit application, and Implementing Agreement.                           | \$ 580,000.00                    |
| 2. Prepare and process EIS, including public scoping, public meeting, review and incorporate public comments, and process through Final EIS and Record of Decision. | \$ 400,000.00                    |
| 3. Complete section 7 consultation.   | \$ 20,000.00                     |
| 4. TPWD Administrative Fee.   | \$ <u>5,000.00</u>               |
| Total Project Cost  | \$ 1,005,000.00                  |
| Federal Share   | \$ 753,750.00 (75%)              |
| Non-federal Share   | \$ 251,250.00 <sup>1</sup> (25%) |

**7.0 Milestone Schedule**

RHCP development will be completed by December 2007. A schedule of project milestones that are associated with the tasks described in Section 4 of this grant proposal are listed below.

| Month/Year     | Project Milestone  |
|----------------|--|
| September 2006 | Grant awarded  |
| September 2006 | Task 1: Develop specific project scope   |
| October 2006   | Task 2: Identify possible goals and objectives of a regional plan  |
| October 2006   | Task 3: Identify and analyze opportunities for protection of habitat-related resources such as juniper-oak woodland      |
| November 2006  | Task 4: Evaluate the potential of various conservation strategies to meet the County's goals, and develop recommendation |

<sup>1</sup> Comal County will provide part of the non-federal cost share in the form of work performed by County employees.

|                |   |
|----------------|---|
| December 2006  | Task 5: Finalize grant contract; start work                                   |
| January 2007   | Task 6: Convene CAC   |
|                | Task 7: Convene BAT   |
|                | Task 8: Committee reviews of initial phases of RHCP development               |
| February 2007  | Task 9: Draft RHCP framework  |
| March 2007     | Task 10: Begin NEPA process   |
|                | Task 11: First public meeting   |
|                | Task 12: First draft of RHCP for Service review                               |
| April 2007     | Task 13: First draft of NEPA document for Service review                      |
| August 2007    | Task 14: Second draft of RHCP and NEPA documents                              |
| September 2007 | Task 15: Second public meeting  |
| October 2007   | Task 16: Final draft of RHCP and NEPA documents and submit permit application |
| November 2007  | Task 17: Final TPWD grant report  |

## 8.0 References

- Campbell, L. 1996. Endangered and Threatened Animals of Texas - Their Life History and Management: Black-capped vireo. Texas Parks and Wildlife Press, Austin, Texas. pp. 29 – 36.
- Ladd, C., and L. Gass. 1999. Golden-cheeked warbler (*Dendroica chrysoparia*). In The Birds of North America, No. 420 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, Pennsylvania. 24 pp.
- Texas Biological and Conservation Data System. 2004. County Lists of Texas' Special Species – Comal County. Texas Parks and Wildlife Department, Wildlife Diversity Branch. Last updated January 15, 2004.
- Texas State Data Center. 2004. Projections of the Population of Texas and Counties in Texas by age, sex and race/ethnicity for 2000-2040. Population Estimates and Projections Program, Texas State Data Center, Office of the State Demographer, Institute for Demographic and Socioeconomic Research, College of Business, University of Texas at San Antonio. June 2004. <http://txsdc.utsa.edu/tpepp/2004projections>.
- U .S. Census Bureau. 1990. Census of Population and Housing, Summary Tape File 1 (100% Data) Matrices P1, P3, P5, P6, P8, P11, P15, P16, P23, H1, H2, H3, H5, H8, H10, H18A, H21, H23, H23B, H32, H32B, and H41. [www.census.gov/main/www/cen1990.html](http://www.census.gov/main/www/cen1990.html).
- U. S. Census Bureau. 2000. Census 2000 Summary File 1, Matrices P1, P3, P4, P8, P9, P12, P13, P,17, P18, P19, P20, P23, P27, P28, P33, PCT5, PCT8, PCT11, PCT15, H1, H3, H4, H5, H11, and H12. [www.census.gov/main/www/cen2000.html](http://www.census.gov/main/www/cen2000.html).

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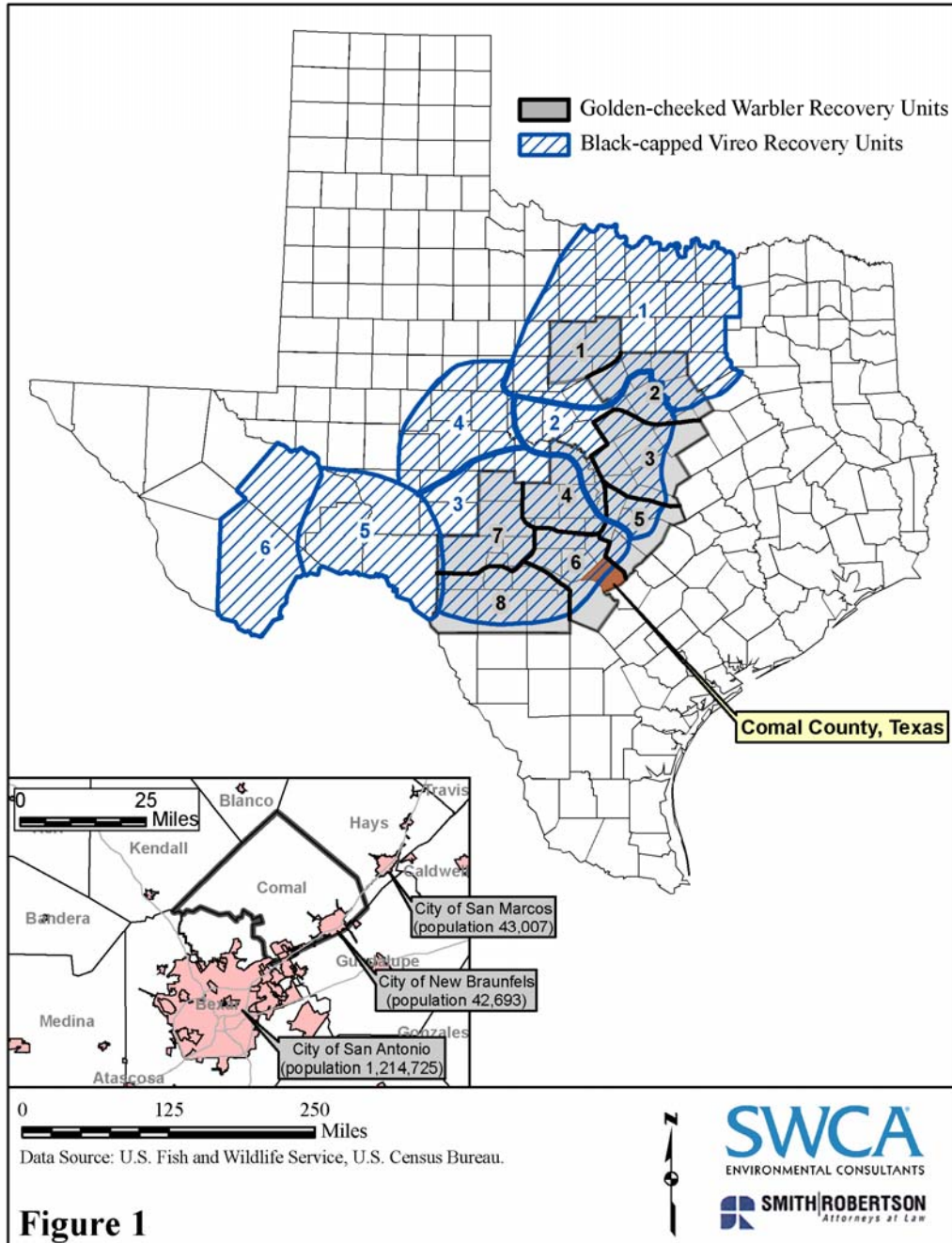
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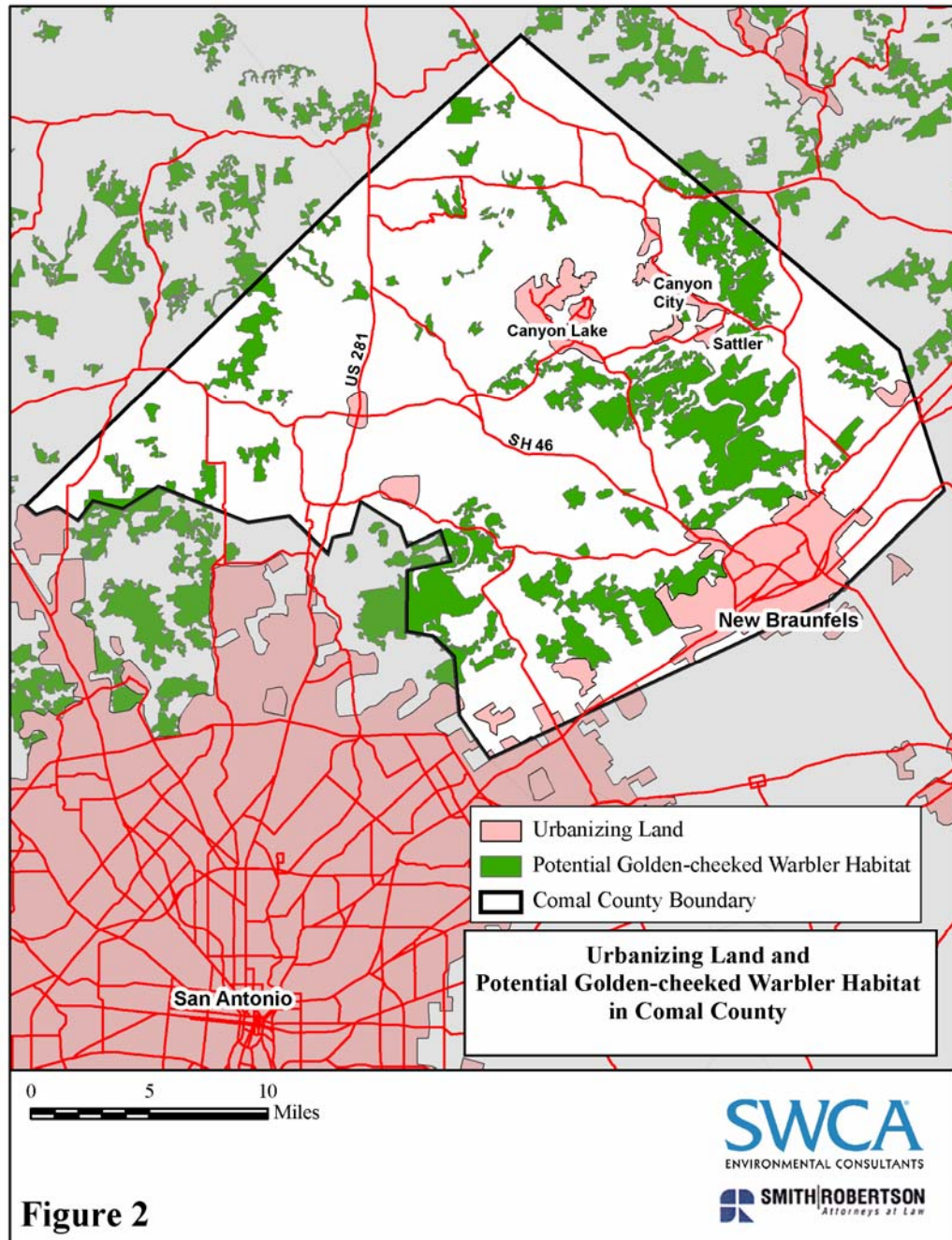
**FIGURE 1**

Location of Comal County



**FIGURE 2**

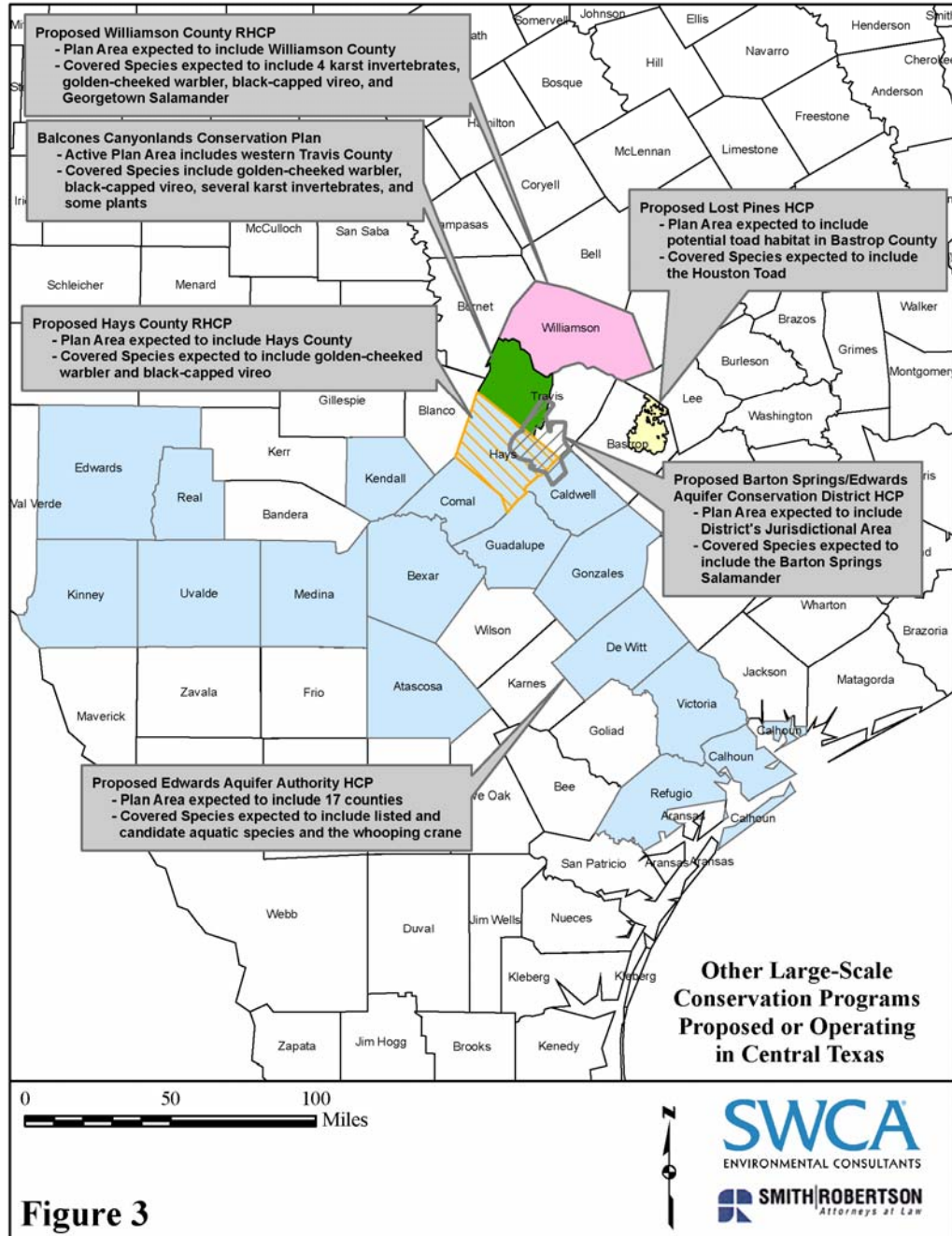
Urbanizing Land and Potential Golden-cheeked Warbler Habitat in Comal County



**Figure 2**

**FIGURE 3**

**Other Large-Scale Conservation Programs Proposed or Operating in Central Texas**



**Figure 3**

## EXHIBIT A

### Endangered, Threatened, and Other Rare Species Resources Located in Comal County, Texas

The endangered golden-cheeked warbler (*Dendroica chrysoparia*) utilizes dense canopied juniper-oak woodlands that contain a variety of deciduous tree species and mature Ashe juniper trees. The warbler nests only in central Texas. Comal County is one of only 25 counties where the species is currently known to breed (Figure 1) (Ladd and Gass 1999). Mapping data shows that Comal County includes approximately 52,924 acres of juniper-oak woodlands that may represent potential warbler habitat (Figure 2) (SWCA, unpublished data).

The endangered black-capped vireo (*Vireo atricapilla*) in Comal County utilizes patchy woodlands and savannas that have a dense layer of shrubby broadleaf vegetation from ground level to approximately six feet. The vireo occurs in Texas, Oklahoma, and in Mexico in the states of Coahuila, Nuevo Leon, Tamalaulipas, and possibly San Luis Potosi. Within the U.S., the vireo nests mostly in 37 central and western Texas counties, including Comal County on the southeastern edge of its Texas range (Figure 1) (Campbell 1996).

Spring outlets and riverine habitat in Comal County (particularly Comal Springs, Hueco Springs, the Dry Comal River, the Comal River, and the Guadalupe River) provide habitat for four endangered species (see below). The Cagle's map turtle (*Graptemys caglei*), a candidate species, occurs within the Guadalupe River upstream of Canyon Lake in Comal County. Each of these species is dependent on the quality and quantity of water in the region's surface and sub-surface water systems.

Numerous other rare animal and plant species depend on the juniper-oak woodland vegetation utilized by the endangered warbler and vireo in Comal County (see below).

#### 1. Threatened or Endangered Species

##### Occurring in Comal County

- Golden-cheeked warbler (*Dendroica chrysoparia*) (E)
- Black-capped vireo (*Vireo atricapilla*) (E)
- Peck's cave amphipod (*Stygobromus pecki*) (E)
- Comal Springs riffle beetle (*Heterelmis comalensis*) (E)
- Comal Springs dryopid beetle (*Stygoparnus comalensis*) (E)
- Fountain darter (*Etheostoma fonticola*) (E)

##### Related Edwards Aquifer Species Occurring in Hays County

- San Marcos salamander (*Eurycea nana*) (T)
- Texas blind salamander (*Eurycea rathbuni*) (E)
- Texas wild-rice (*Zizania texana*) (E)

2. Candidate Species

- Cagle's map turtle (*Graptemys caglei*)

3. Rare Species for Comal County, Texas, Identified by TPWD<sup>2</sup>

- Plains spotted skunk (*Spilogale putorius interrupta*)
- Cave myotis (*Myotis velifer*)
- Spot-tailed earless lizard (*Holbrookia lacerata*)
- Texas garter snake (*Thamnophis sirtalis annectens*)
- Texas horned lizard (*Phrynosoma cornutum*)
- Cascade Caverns salamander (*Eurycea latitans*)
- Comal blind salamander (*Eurycea tridentifera*)
- Comal Springs salamander (*Eurycea* sp.)
- Edwards Plateau spring salamander (*Eurycea* sp.)
- Guadalupe bass (*Micropterus treculii*)
- Guadalupe darter (*Percina sciera apristis*)
- Long-legged cave amphipod (*Stygobromus longipes*)
- Creeper (squawfoot mussel) (*Strophitus undulatus*)
- False spike mussel (*Quincuncina mitchelli*)
- Golden orb (mussel) (*Quadrula aurea*)
- Horseshoe liptooth (mussel) (*Daedalochila hippocrepis*)
- Pistolgrip (mussel) (*Tritogonia verrucosa*)
- Rock-pocketbook (mussel) (*Arcidens confragosus*)
- Texas fatmucket (mussel) (*Lampsilis bracteata*)
- Bracted twistflower (*Streptanthus bracteatus*)
- Canyon mock-orange (*Philadelphus ernestii*)
- Texas mock-orange (*Philadelphus texensis*)
- Hill Country wild-mercury (*Argythamnia aphoroides*)
- Comal Springs diving beetle (*Comaldessus stygius*)

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<sup>2</sup> The Texas Parks and Wildlife Department (TPWD) annotated county list of rare species for Comal County. While identified as rare, none of these species is currently listed as a candidate, threatened, or endangered species by the U. S. Fish and Wildlife Service (Service) or TPWD (Texas Biological and Conservation Data System 2004).

## **EXHIBIT B**

### **Proposed Changes to the Recovery Plan for the Golden-Cheeked Warbler**

The Recovery Plan for the golden-cheeked warbler divided the range of the species into eight recovery units and identified preservation and protection of one viable warbler population in each of the eight recovery units as a primary criterion for de-listing of the species (U.S. Fish and Wildlife Service 1992). “Viable population” was not defined in the Recovery Plan, although it did suggest a viable population of warblers could range from 500 pairs to a few thousand individuals. More recently, the Service indicated a viable population may need to be as large as 3,000 pairs of warblers (Alldredge et al. 2002).

The Service has proposed to revise the Recovery Plan for the golden-cheeked warbler by reducing the number of recovery units from eight to six. This would largely be accomplished by combining four of the previously delineated units into two units, but would also include modification to the boundaries of the other four original units. Current Recovery Unit 6, which includes Comal County, would become Recovery Unit 5, and would be expanded to include southern Hays County and northeastern Medina County.

The original recovery criterion of protecting and preserving eight viable populations of the warbler would be retained by requiring proposed Recovery Units 3 and 5 (including Comal County) to each possess two viable warbler populations.<sup>3</sup> Proposed revisions to the Recovery Plan have not yet been approved by the Golden-cheeked Warbler Recovery Team and, so, have not been formally adopted.

Revisions to the Recovery Plan as proposed would greatly increase the need for organized regional conservation planning in Comal County. Current mapping of potential golden-cheeked warbler habitat across proposed Recovery Unit 5 indicates that potential warbler habitat in the central portion of the proposed Recovery Unit 5 (southern Blanco, eastern Kendall, and western Comal Counties) is highly fragmented and very limited in extent, while potential habitat in the western and eastern portions of proposed Unit 5 (central and eastern Comal and southern Hays Counties) is much more extensive (Missouri Resource Assessment Program 1997, SWCA, Inc. unpublished data). Therefore, it appears that ability to achieve recovery of the golden-cheeked warbler in Recovery Unit 5 is dependent upon the ability to preserve viable populations of the warbler in the eastern and western portions of this recovery unit, thereby making preservation of warbler habitat in Comal County essential to recovery of the species as a whole.

Alldredge, M.W., J.S. Hatfield, D.D. Diamond, and C.D. True. 2002. Population Viability Analysis of the Golden-cheeked Warbler. U.S. Fish and Wildlife Service, Austin, Texas.

Missouri Resource Assessment Program. 1997. Golden-cheeked warbler habitat throughout the range of the species. Analysis of 1996 and 1997 Landsat Thematic Mapper (TM) data. ESRI ArcInfo grid coverage. Prepared for the U.S. Fish and Wildlife Service.

SWCA, Inc. Undated. Delineation of potential golden-cheeked warbler habitat in proposed Recovery Unit 5. Unpublished data developed in preparation of a recovery strategy for the golden-cheeked warbler. Austin, Texas.

U.S. Fish and Wildlife Service. 1992. Golden-cheeked Warbler (*Dendroica chrysoparia*) Recovery Plan. Albuquerque, New Mexico. 88 pp.

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<sup>3</sup> Recovery Unit 3 would be located northeast of Unit 5 and would include, in part, northern Hays County, Travis County, and most of Williamson County.