

PROJECT TEAM

Project Sponsors

County of Bexar, Texas

Renee Green	County Engineer
Andrew Winter	Environmental Engineer, Infrastructure Services Department
Robert Brach	Development Services Engineer, Infrastructure Services Department
Diane Bartlett	Civil Engineer, Infrastructure Services Department

City of San Antonio, Texas

Jesus Garza	Assistant Director, Planning and Community Development
Christopher Looney	Interim Assistant Director, Planning and Community Development
Patricia Wallace	Manager, Planning and Community Development – Regional and Transportation Planning Unit
Kyle Cunningham	Manager, Health Program – Metropolitan Health District

Development of the SEP-HCP was jointly sponsored by Bexar County and the City of San Antonio. Each sponsor provided 50 percent of the local matching funds required to access federal grant funds for Habitat Conservation Plan development. Bexar County assumed the lead role in the partnership.

Prime Environmental Consultant

Bowman Consulting Group, LTD (Previously Loomis Partners, Inc.)

Jennifer Blair	Project Manager & Chief Scientist
Clifton Ladd	Project Manager & Chief Scientist
Amanda Aurora	Assistant Project Manager & Primary HCP Author
Catherine Wiggins	Staff Biologist
Laura Zebehazy	Staff Biologist

Wildlife biologists at Bowman Consulting Group (previously Loomis Partners) provided expertise in the conservation of the golden-cheeked warbler and black-capped vireo, as well as the development of regional habitat conservation plans in Texas. Bowman was primarily responsible for project management, authorship, and coordination of the SEP-HCP.

Core Environmental Team Sub-Consultant

Zara Environmental, LLC

Jean Krejca, PhD.	Chief Scientist & Karst Specialist
Rachel Barlow	Karst Biologist

Zara Environmental biologists provided scientific and technical expertise regarding the biology and conservation of karst and aquatic species.

Technical Sub-Consultants & Specialists

Ximenes & Associates

Sonia Jimenez	Facilitator
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Ximenes & Associates provided expertise in facilitating public meetings, identifying and resolving potential conflicts among stakeholder interests, and arriving at consensus.

Wendell Davis & Associates

Wendell Davis	Planner
Shelley Hauschild	GIS Planner
Dan Phillips	Research Associate

Wendell Davis & Associates provided demographic and housing market analysis and forecast land development trends for the Plan Area.

M. E. Allison & Co., Inc.

Christopher Allison	Chief Financial Officer
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M. E. Allison provided expertise in municipal finance, economic impact analysis, and funding mechanisms.

Independent Legal Counsel

Jackson Walker, LLP

Jerry Webberman	Partner, Austin Office
Megan Bluntzer	Associate, San Antonio Office

Bexar County retained independent legal counsel to provide additional guidance during SEP-HCP development.

ADVISORY COMMITTEES

Citizen's Advisory Committee

Bexar County convened the Citizen's Advisory Committee (CAC) to provide input on the direction and content of the SEP-HCP. The CAC was composed of 21 individuals representing a variety of stakeholder groups, including rural landowners, conservation interests, business/real estate interests, and government/utility provider interests.

TABLE 1. SEP-HCP Citizen's Advisory Committee Membership and Affiliations.

LANDOWNER MEMBERS

NAME	AFFILIATION	ALTERNATE
Bebe Fenstermaker	Bexar County	Clark Terrell
Ann Dietert	Kerr County	
Dr. Bob Fitzgerald	Medina County	Lester Landrum
Delmar Cain	Kendall County	Chuck Janzow
Mary Bradshaw	Bexar County	Lottie Millsaps
Randy Johnson	Bexar County	Myfe Moore
Gary Schott	Bexar County	Madelyn Schott

CONSERVATION AND ENVIRONMENTAL GROUPS

NAME	AFFILIATION	ALTERNATE
Annalisa Peace	Greater Edwards Aquifer Alliance	Paul Barwick
Kirby Brown (Co-Chair)	Texas Wildlife Association	
Gerald McFarlen	Cibolo Nature Center	
Mary Fenstermaker	Hill Country Planning Association	

REAL ESTATE AND BUSINESS GROUPS

NAME	AFFILIATION	ALTERNATE
Ian Cude	Real Estate Council of San Antonio	
Frosty Forster	Professional Engineers in Private Practice	
Michael Moore	Greater San Antonio Builders Association	
Susan Wright	Real Estate Council of San Antonio	
George Peck (Floating Alternate)	CEC Engineering	
Bob Liesman (Floating Alternate)	MBC Engineering	

LOCAL GOVERNMENTS AND UTILITY PROVIDERS

NAME	AFFILIATION	ALTERNATE
Commissioner Jonathan Letz (Co-Chair)	Kerr County	
Councilperson Jennifer Nottingham	City of Grey Forest	Mayor Jeff Waldrop

TABLE 1. SEP-HCP Citizen's Advisory Committee Membership and Affiliations.

Sandy Jenkins	City of San Antonio – Parks and Recreation	Eric Lautzenheiser
Tom Hornseth	Comal County	
Jenna V. Anguiano	CPS Energy	Kim Stoker
Deirdre Hisler	Texas Parks and Wildlife Department	Nic Maloukis

The CAC adopted their committee charge on March 1, 2010, and it included the following the language:

Bexar County proposes to charge the Citizens Advisory Committee (CAC) of the Southern Edwards Plateau Habitat Conservation Plan (SEP-HCP) with the following tasks:

- Recommend the overall vision, goals, and objectives of the SEP-HCP, including assistance with the recovery of threatened and endangered species; and reducing the associated pressures on Camp Bullis and aid in maintaining its training mission.
- Recommend a preferred alternative for each of the SEP-HCP major framing issues, including:
 - Boundaries of the Plan Area
 - Species to be Covered for Incidental Take
 - Activities to be Covered for Incidental Take
 - Conservation Strategy, and
 - Funding Strategy.
- Recommend the form and level of mitigation required of plan participants, and the methods for determining such requirements.
- Recommend a plan for consideration by Bexar County and the City of San Antonio prior to its submittal to the U.S. Fish and Wildlife Service as the basis for a permit application.
- The landowner members of the CAC will appoint one member of the Biological Advisory Team.

The CAC's adopted operational rules stated that the CAC will strive for consensus, but a super-majority of 65% of the CAC members present for a vote is sufficient to carry a motion.

Biological Advisory Team

Bexar County convened a Biological Advisory Team (BAT) to provide guidance on scientific aspects of the Plan. Members of the BAT were appointed by the Project Sponsors, Texas Parks and Wildlife, and the landowner members of the CAC. The BAT was composed of professional biologists with expertise ranging from species biology to general land management.

TABLE 2. SEP-HCP Biological Advisory Team Membership and Affiliations.

NAME	AFFILIATION
Richard Heilbrun, BAT Chairperson	Texas Parks and Wildlife Department
Valerie Collins	Pape-Dawson Engineers
Dr. Andy Gluesenkamp	Texas Parks and Wildlife Department

TABLE 2. SEP-HCP Biological Advisory Team Membership and Affiliations.

NAME	AFFILIATION
Julie Groce	Texas A&M University
Dr. Tom Hayes	Greater Edwards Aquifer Alliance
Jayne Neal	City of San Antonio
Jackie Poole	Texas Parks and Wildlife Department
Justin Dreibelbis	Texas Wildlife Association

The BAT adopted their committee charge on February 8, 2010, and it included the following the language:

The Biological Advisory Team (BAT) for the Southern Edwards Plateau Habitat Conservation Plan (SEP-HCP) is charged with the following tasks:

- Provide input to the plan participants, including the Citizens' Advisory Committee (CAC), on biological matters in connection with the development of the SEP-HCP, including critical reviews of any aspect of the SEP-HCP directly or indirectly affecting the biological integrity of the plan.
- As required by Chapter 83 of the Texas Parks and Wildlife Code (83.015c), the BAT will also assist in the:
 - Calculation of harm to the endangered species, and
 - The sizing and configuring of the habitat preserves.
- Comments and recommendations from the BAT will be based on the best available science.

The BAT's adopted operational rules of order stated that the BAT will strive for consensus, but if there is more than one dissenting vote then a motion does not carry.

Agency Oversight Group

The Agency Oversight Group (AOG) was created to facilitate coordination between the Project Sponsors and the regulatory agencies. Table 3 lists the group members and their affiliations.

TABLE 3. SEP-HCP Agency Oversight Group Membership and Affiliation.

NAME	AFFILIATION
Andrew Winter and Diane Bartlett	Bexar County
Jesús Garza, Kyle Cunningham, Patricia Wallace, and Christopher Looney	City of San Antonio
Allison Arnold, Christina Williams, and Charlotte Kucera	U.S. Fish and Wildlife Service
Richard Heilbrun	Chair, Biological Advisory Team
Kirby Brown and Jonathan Letz	Co-chairs, Citizen's Advisory Committee

The AOG adopted their committee charge on March 12, 2010, and it included the following the language:

To provide logistical support, as needed to the Citizens Advisory Committee (CAC), Biological Advisory Team (BAT), and ultimately the Southern Edwards Plateau Regional Habitat Conservation Plan (SEP-HCP) applicants, in order to meet deadlines, stay on budget, and provide a framework within which to facilitate communication between regulatory agencies and the Grant applicants. The AOG is not a decision-making body and will not deliberate on Plan decisions, development of, or implementation of the Regional Habitat Conservation Plan.

PROJECT TIMELINE

- June 11, 2009** The U.S. Fish & Wildlife Service announced a grant award to Bexar County and the City of San Antonio of approximately \$1.34 million to develop the Southern Edwards Plateau Habitat Conservation Plan. The County and City will each provide \$223,448.50 in local matching funds over the course of the project. The grant will be administered through the Texas Parks & Wildlife Department.
- June 23, 2009** Representatives of the SEP-HCP presented information on the SEP-HCP to the Gray Forest City Council.
- July 21, 2009** Bexar County Commissioners' Court voted to select Loomis Partners as the prime environmental consultant to assist with the development of the SEP-HCP. The Loomis team also includes assistance from Zara Environmental, Jacobs Engineering Group, The Nature Conservancy, Wendell Davis, Braun & Associates, Ximenes & Associates, and M.E. Allison.
- July 30, 2009** Representatives of the SEP-HCP presented information on the SEP-HCP to the Greater San Antonio Builders Association.
- August 12, 2009** Bexar County hosted a kick-off meeting for SEP-HCP stakeholders. Meeting featured presentations by Andrew Winter (Bexar County), Allison Arnold (U.S. Fish & Wildlife Service), and Clifton Ladd (Loomis Partners). Presentations were followed by a question and answer session.
- November 17, 2009** The Bexar County Commissioners Court approved Interlocal Agreements (ILAs) with the Texas Parks & Wildlife Department (TPWD) and the City of San Antonio to access the \$1.3 million in grant funds awarded by the U.S. Fish & Wildlife Service (USFWS) for development of the SEP-HCP. The County and City are each contributing \$223,000 in local matching funds. The Commissioners Court also approved a contract with Loomis Partners to engage the environmental consultant team selected to assist the County and City with this project.
- December 1, 2009** The Bexar County Commissioners Court approved the appointment of 20 representatives to the Citizens Advisory Committee (CAC). The appointments represent regional landowners, environmental/conservation groups, real estate/business groups, utilities, and government agencies. The Texas Parks & Wildlife Department (TPWD) must also appoint one member to the CAC.
- December 11, 2009** The SEP-HCP website (www.sephcp.com) was launched with email announcements made to the Stakeholders Group. The website provides a single point-of-contact for information related to the development of the SEP-HCP, including meetings, announcements, project updates, documents, and general information.
- January 8, 2010** Representatives of the SEP-HCP presented information on the SEP-HCP to the Real Estate Council from 9:00am to 11:00am.
- January 11, 2010** Representatives of the SEP-HCP presented information on the SEP-HCP to the Northside Neighborhoods for Organized Development from 7:00-8:30 pm at the Jewish Community Center, San Antonio.
- January 19, 2010** The CAC held its first meeting on January 19, 2010 and heard presentations from Bexar County, U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, and Loomis Partners (SEP-HCP environmental consultant team project manager). The CAC was briefed on the Endangered Species Act, Habitat Conservation Plans, the National Environmental Policy Act, and Texas state law pertaining to regional HCPs. The project team identified the various participants in the process and their primary roles, as well as the the project's work plan and schedule, including major tasks and milestones. The CAC landowner members appointed Mr. Justin Dreibelbis (Conservation Program Coordinator for the Texas Wildlife Association) as the landowner representative to the Biological Advisory Team.

- January 29, 2010** The BAT held its first meeting on Friday January 29, 2010 and discussed considerations for the SEP-HCP Plan Area and list of Covered Species, as well as Open Meetings Act requirements, operational procedures, and the SEP-HCP work plan and schedule. The BAT established voting procedures that strive for consensus and provide for minority opinions to be added to the project record. The BAT will meet again in early February to resume discussions and possibly submit a recommendation for the Plan Area and list of Covered Species for the SEP-HCP.
- February 8, 2010** The BAT held an all-day meeting on Monday February 8, 2010. The BAT took up several items including adopting a charge that defines the BAT's role in the SEP-HCP process, refining operational procedures for conduct of BAT business, and continuing discussions regarding the Plan Area and list of Covered Species. The BAT's adopted charge directs the group to provide input on biological matters in connection with the development of the SEP-HCP, including critical reviews of any aspect of the SEP-HCP directly or indirectly affecting the biological integrity of the plan. The charge also directs the BAT to base its recommendations on the best available science. The BAT also recommended a draft Plan Area for the SEP-HCP that includes Bexar, Medina, Bandera, Kerr, Kendall, Comal, and Blanco counties (with the possibility of adding Uvalde and Gillespie counties, after additional consideration).
- February 9, 2010** The Bexar County Commissioners Court approved the appointment of 6 members of the SEP-HCP Biological Advisory Team (BAT). The Texas Parks and Wildlife Department appointed the BAT chairperson, and the landowner members of the Citizens Advisory Committee appointed another member of the BAT.
- February 12, 2010** Representatives of the SEP-HCP gave a presentation about the SEP-HCP to the SCIECA at their monthly storm water / water quality lunch and learn series from 11:30am to 1:30 pm.
- February 18, 2010** The CAC held its second meeting the evening of February 18, 2010 at the San Antonio Water System offices. The CAC appointed Kirby Brown (Texas Wildlife Association) and Commissioner Jonathan Letz (Kerr County) as committee co-chairs. The committee heard presentations about the Texas Open Meetings/Open Records Acts and Comal County's experience with developing a regional HCP. The CAC discussed wording for a committee charge and operational procedures, and voted to recommend a Plan Area for the SEP-HCP based on the recommendations from the BAT, which were presented to the committee by Allison Arnold (US Fish and Wildlife Service).
- February 22, 2010** The BAT met on February 22, 2010 and adopted a framework of four categories for addressing species in the SEP-HCP, including 1) species covered for incidental take at permit issuance ("Covered Species"); 2) species covered in the plan for future incidental take authorization ("Future Covered Species"); 3) species addressed with targeted voluntary conservation commitments without seeking take authorization ("Voluntarily Conserved Species"); and 4) rare species that will benefit from the targeted conservation measures implemented for species in categories 1, 2, and 3 ("Additional Species"). The BAT also provisionally adopted a list of species in these categories in order to help direct the consultant team, but the BAT also intends to continue work on the species list over the next few months. The BAT discussed issues related to addressing aquatic species in the plan, but requested additional information and guidance from the species experts, USFWS, Bexar County/City of San Antonio, and the CAC before making any recommendations. The BAT also adopted a set of operational procedures for the conduct of BAT business.
- March 1, 2010** The CAC held a training workshop and meeting on March 1, 2010. Several CAC members and appointed alternates participated in training on the Texas Open Meetings Act and Public Information Act by watching two videos prepared by the Texas Attorney General's office. During the regular meeting the CAC adopted a charge and operational procedures to help guide committee actions. The CAC also discussed ongoing communication and coordination with Comal County, with respect to Comal County's draft regional habitat conservation plan. The CAC also heard a presentation from the BAT chairperson regarding preliminary deliberations on a framework for including species in the SEP-HCP and the species that might be addressed by the plan. The next CAC meeting was tentatively set for the evening of Monday, April 5, 2010.

- April 5, 2010** The CAC met on the evening of April 5 and heard presentations from Mr. James Cannizzo regarding the mission and biological issues at Camp Bullis and from Mr. Richard Heilbrun (TPWD Wildlife Biologist and BAT chair) about the biology and habitat needs of the golden-cheeked warbler and black-capped vireo. The CAC also received updates on coordination efforts with Comal County, the status of obtaining independent legal counsel for the plan, and ongoing work by the consultant team on the baseline resource assessments. The CAC discussed the possibility of including aquatic species in the SEP-HCP, but did not take action on the topic. The next regular CAC meeting is scheduled for Monday, May 3, 2010.
- April 17, 2010** The SEP-HCP BAT & CAC had the opportunity to go on a field trip to Friedrich Wilderness Park and Rancho Diana from 7:00am to 12:00pm to view habitat areas for some of the SEP-HCP Covered Species.
- May 3, 2010** The CAC met on May 3, 2010 and heard a presentation from Mr. Robert Gulley on the progress of the Edwards Aquifer Recovery Implementation Program. Mr. Gulley described that the EARIP is developing a Habitat Conservation Plan to implement conservation actions that will protect the endangered and threatened species that rely on spring flow at Comal Springs and San Marcos Springs. The CAC discussed the types of activities that the SEP-HCP might cover for incidental take, and reviewed a list of examples from other approved and draft regional plans in central Texas. The CAC also received updates from Bexar County and the consultant team regarding the project budget and an anticipated schedule for major CAC agenda topics over the coming months. The next CAC meeting is scheduled for Monday June 7, 2010.
- May 28, 2010** The BAT met on May 28, 2010 and discussed a variety of topics, including aquatic species, activities covered, permit duration, and several resource assessments prepared by the consultant team. Action was taken to recommend the inclusion of three freshwater mussels to the list of voluntarily conserved species in the SEP-HCP (Category 3), with the BAT taking responsibility for developing the conservation measures. The BAT will also be preparing a rough draft recommendation for consideration by the CAC on activities covered.
- June 7, 2010** The CAC met on June 7, 2010 and heard presentations on the HCP process and karst species. CAC members discussed aquatic species issues and recommended the inclusion of 3 freshwater mussels as Category 3 (voluntarily conserved) species, with the rest of the rare aquatic species treated as Category 5 species (considered but not included). The CAC also voted to recommend draft language for covered activities that would broadly include coverage for any type of incidental take, with specific examples of common activities to aid understanding. The CAC also began discussions of the permit duration and permit applicant.
- June 11, 2010** Representatives of the SEP-HCP gave a presentation on the SEP HCP at the CLE Endangered Species Act Conference in Austin, Texas.
- June 18, 2010** The BAT met on June 18, 2010 and discussed the resource assessments prepared by the consultant team and some of the early comments on these documents. BAT members revisited the species list for the SEP-HCP, including how to address karst aquatic invertebrates and Eurycea salamanders. The BAT voted to not object to a possible 30-year duration for the incidental take permit, acknowledging that this decision is largely not a biological issue. Finally, the BAT discussed overall biological goals and objectives for the SEP-HCP, including standards for mitigation and funding issues.
- July 7, 2010** The BAT met on July 7, 2010 to discuss the resource assessments and the overall biological goals and objectives for the SEP-HCP, including standards for mitigation and preserve design. The BAT also revisited the species list for the plan, primarily involving how to address salamanders and other aquatic karst species. No formal action was taken on these topics.
- July 12, 2010** The CAC met on July 12, 2010 and voted to recommend that the duration of the SEP-HCP and associated permit be 30 years. The CAC also discussed issues concerning who the appropriate permit applicant should be and began discussions on the overall conservation strategy for the SEP-HCP, including the desired goals and objectives for the plan. The CAC also received information about the funding plans used in other local RHCPs.

July 28, 2010 The BAT met on July 28, 2010 and had detailed discussions on the species-specific biological goals and objectives for the plan. The BAT also discussed a draft proposal for broader community goals and objectives for the general conservation strategy. The BAT agreed to send their preliminary deliberations to the CAC for review and discussion, but did not make a formal recommendation.

August 2, 2010 The CAC met on August 2, 2010 to continue discussions on the permit holder, including how to include other jurisdictions in the plan. The CAC also deliberated on a general conservation strategy and broad community-based goals and objectives for the plan. This general conservation strategy includes goals for regional conservation, supporting Camp Bullis, stakeholder involvement, streamlined permitting, sensitivity to local concerns, and leveraging resources. The CAC's strategy recommendations will help guide the formation of a specific conservation program that achieves protection of the SEP-HCP species and addresses community needs and concerns. The CAC also reviewed preliminary work by the BAT on a set of biological goals and species-specific biological objectives for the plan. CAC members were encouraged to send written comments on the proposals to the committee chairs.

August 25, 2010 The BAT met on August 25, 2010 to discuss management and monitoring priorities for species addressed by the plan. No actions were taken, but BAT members generally agreed that plan resources should be focused first on acquisition of habitats, then active management of preserves, and finally on monitoring activities to demonstrate compliance with the permit, assess the biological effectiveness of the conservation program, and guide the adaptive management program.

September 10, 2010 The BAT met on September 10, 2010 to discuss estimated potential impacts to the GCW and BCV from land development over the next 30 years and factors that should be considered for establishing appropriate mitigation ratios for participating projects. The USFWS presented guidance on how to assess take and determine mitigation, recent findings on species status, and suggestions for the creation of a regional preserve system. The consultant team presented estimates for population and land use changes over the term of permit and estimates of potential habitat loss for the GCW and BCV.

September 13, 2010 The CAC met on September 13, 2010 and continued discussion on community goals and objectives, heard presentations on projected population and land use changes, and were introduced to the scale of potential habitat loss for the GCW and BCV over the duration of the plan. The CAC voted to approve a draft statement of community goals and objectives that outline preferences for the overall purpose and direction for the plan.

September 24, 2010 The BAT met on September 24, 2010 to discuss possible recommendations for the amount incidental take to authorize and the amount of mitigation to provide for the GCW and BCV. The BAT reviewed estimates of total habitat and patch size metrics for the GCW based on multiple habitat models and discussed various scenarios for incidental take authorization and corresponding preserve sizes. BAT members heard presentations from the USFWS and the consultant team regarding assessing impacts to covered karst species, guidance for appropriate conservation measures, basic karst terminology, and examples of karst conservation programs from other central Texas RHCPs. The BAT discussed ideas and alternatives for assessing impacts for karst habitats and achieving conservation goals. No action was taken on providing recommendations to the CAC.

October 4, 2010 The CAC met on October 4, 2010 and discussed preliminary guidance from the BAT on take authorization, mitigation ratios, and target preserve sizes for the GCW and BCV. The CAC also heard updates from the consultant team on the land development projections, illustrations of the range of possible funding needs, and alternatives for additional analysis of GCW habitat in the Plan Area. No actions were taken.

October 8, 2010 The BAT met on October 8, 2010 and heard presentations about managing public access on preserve lands from William Conrad (City of Austin Wildlands Conservation Division Manager responsible for management of endangered species and water quality protection lands) and Deirdre Hisler (TPWD Superintendent at Government Canyon State Natural Area). The BAT discussed preserve size recommendations for the GCW and voted to approve a draft recommendation to the CAC for a target preserve of 85K - 100K acres for this species. The

BAT decided to form a subcommittee to continue work on how to update GCW habitat estimates and mitigation ratio recommendations. The BAT also formed a subcommittee to discuss recommendations for karst preserve and mitigation requirements.

October 14, 2010 Representatives of the SEP-HCP gave a presentation to the Trinity Glen Rose Groundwater Conservation District on the SEP-HCP from 9:30-11:30am at Concordia Lutheran Church 16801 Huebner Rd.

October 15, 2010 The BAT Warbler Subcommittee had a meeting from 8:30am – 12:00pm at 2632 Broadway, Suite 301 South, San Antonio, TX 78215 to discuss Preserve and focal area configuration, Mitigation ratios, and the appropriate process for determining 2010 Available Warbler Habitat.

October 18, 2010 The CAC held a workshop with members of the BAT on October 18, 2010 to help the CAC understand some of the factors under consideration by the BAT with respect to preserve size and configuration, mitigation ratios, and other considerations for the conservation program. No actions were taken.

October 20, 2010 The BAT met on October 20, 2010 to hear and discuss preliminary cost estimates for funding the acquisition of a preserve system under different scenarios for mitigation ratios, participation rates, and the general location of preserve lands. The BAT discussed ideas for recommendations on preserve size and configuration, including the locations of focal areas, commitments for a specific amount of preserve land in or immediately adjacent to Bexar County and the possibility of obtaining conservation credit for some existing parks and preserves. The BAT discussed options for the karst conservation program that would address uncertainties regarding the status of many of the karst species. The BAT recommended that Bexar County obtain additional updated habitat information for the GCW from an analysis of 2010 satellite data with error checking over 2010 aerial imagery.

November 4, 2010 The BAT met on November 4, 2010 to continue GCW and karst subcommittee discussions on draft recommendations for the conservation program. The full BAT discussed the subcommittee proposals and voted to approve recommendations for CAC consideration regarding aspects of the GCW and karst conservation programs, including GCW mitigation ratios, the general locations of GCW mitigation land, upfront karst conservation commitments and a process for determining impacts to karst habitats.

November 15, 2010 The CAC met on November 15, 2010 to hear presentations and consider the BAT recommendations for the GCW and karst conservation measures. The CAC asked questions and discussed the biological rationale for the recommendations, as well as economic concerns. No actions were taken.

November 17, 2010 The BAT met on November 17, 2010 to discuss additional recommendations for the GCW, karst, and BCV conservation programs. The BAT approved recommendations for the BCV conservation measures, based on a proposal by the BAT's BCV subcommittee, that included a recommended take authorization of 6,000 acres and a mitigation ratio of 2:1. The BAT also approved several other conservation measures for the GCW, including aspects of preserve configuration, the timing of mitigation, and management and monitoring. For a portion of the meeting, the BAT met in karst and bird subcommittees to discuss possible recommendations for public access and recreation on preserve lands.

December 6, 2010 The CAC met on December 6, 2010 to hear BAT conservation recommendations for the BCV and preliminary cost estimates associated with the BAT recommendations. The BAT also further discussed the biological recommendations for the GCW and karst. The BAT discussed concerns from some rural landowners regarding the potential impacts of the plan on property rights, including a letter submitted to Bexar County from representatives of Whiskey Ridge Ranches in Kerr County. The BAT discussed options for changing the Plan Area or extent of incidental take coverage in response to these concerns. The BAT took action to ratify the biological recommendations of the BAT for the BCV and karst species.

December 13, 2010 The Kerr County Commissioners' Court approved a resolution submitted by Commissioner Jonathan Letz (CAC Co-Chair) stating that Kerr County Commissioners Court does not want to participate in the SEP-HCP and requests that Kerr County not be included in

the SEP-HCP, unless the County or its residents specifically request (by resolution or letter to Bexar County) to be included.

December 28, 2010 The Bandera County Commissioners' Court approved a resolution on December 28, 2010 to not support or participate in the development or implementation of the SEP-HCP. The resolution also requests that Bandera County be removed from all planning documents that would commit Bandera County to the SEP-HCP process.

January 10, 2011 The CAC met on January 10, 2011 to discuss plan implementation and ideas for balancing plan costs. CAC members discussed simple examples of how the plan may be implemented to achieve conservation and extend endangered species take authorization to voluntary participants. The CAC also worked through a simple budget model for the plan that calculates how changes to the details of the conservation program and participation fees affect the overall program costs. No actions were taken on plan implementation or budget.

January 25, 2011 SEP-HCP Representatives gave a presentation to the Republican Club of Comal County from 7:00pm to 9:00 pm about the SEP-HCP at the Guadalupe Valley Telephone Cooperative Auditorium, 36101 FM 3159, New Braunfels, Texas.

January 26, 2011 Representatives of the SEP-HCP gave a presentation on the SEP-HCP to the Texas Alliance of Land Brokers (TALB) from 11:15 am to 1:15 pm at Grady's BBQ, 7400 Bandera Road.

February 7, 2011 The CAC met February 7, 2011 to discuss alternatives for the GCW and BCV conservation program and worked in small subgroups to identify options for balancing the amount of take to authorize, mitigation ratios and preserve size, the distribution of preserves, and the level of fees to charge participants. No decisions were made on these topics, and the CAC asked to continue the small group work sessions at their next meeting. The CAC heard public comments from landowners concerned with the direction of the plan and reviewed a draft brochure being developed to better inform the public about the project. The CAC also heard a presentation from Jacobs (the consultant team's NEPA contractor) about the EIS and scoping process.

February 11, 2011 The BAT rescheduled its February 4 meeting for February 11, 2011. The BAT heard a presentation from Dr. David Diamond (Missouri Resource Assessment Program) regarding the GCW habitat model updates that were requested by the BAT. The BAT discussed how to respond to the County's and the CAC's questions regarding the BAT's recommendations for the GCW conservation program. The BAT also heard an update from the consultant team regarding recommended revisions to the proposed karst conservation program.

February 21, 2011 The CAC held a meeting on Monday February 21, 2011 to continue small group discussions regarding alternatives for the GCW and BCV conservation program. The CAC members were asked to identify their priorities with respect to authorized habitat loss, mitigation ratios, preserve size and distribution, participation fees, and the level of acceptable public funding. Groups reported on their priorities and preferred scenarios to the full committee. This meeting was announced as a joint meeting of the CAC and BAT, but quorum of BAT members was not present at the meeting.

February 22, 2011 The Blanco County Commissioners' Court approved a resolution on February 28, 2011 to not support nor participate in the creation of the SEP-HCP. The resolution further requests that Blanco County be removed from any and all documents, permit applications, and records that may commit Blanco County or its landowners to this process.

February 28, 2011 The Kendall County Commissioners' Court approved a resolution on February 28, 2011 to not support nor participate in the creation of the SEP-HCP.

March 3, 2011 SEP-HCP representatives gave a presentation on the SEP-HCP to the Boerne Chamber Government Affairs Council -- 1221 S. Main St., Boerne, Texas - EDC Conference Room from 11:45am to 1:15pm.

March 7, 2011 The CAC met on March 7, 2011 to continue discussions regarding preferences for the GCW and BCV conservation program. The CAC used a "dot census" exercise to indicate preferences for mitigation ratios, preserve land distribution, participation fees, and levels of

acceptable public funding. No actions were taken on a CAC recommendation for the plan. The CAC also discussed the potential implications of other counties passing resolutions to "opt out" of the SEP-HCP and the anticipated schedule for reviewing the first draft of the plan.

March 11, 2011 The BAT met on March 11, 2011 to continue discussions on how to respond to Bexar County's and the CAC's questions concerning the BAT recommendations for the plan. The BAT approved a response for distribution to the CAC and the County, with a summary to be prepared by the BAT chair.

March 13, 2011 SEP-HCP Representatives gave a presentation about the SEP-HCP to the Kerr County 9-12 Patriots from 6:00 PM - 8:30 PM -- 213 Schreiner St, Buzzies BBQ Kerrville, Texas.

April 1, 2011 The BAT met on April 1, 2011 to discuss the karst subcommittee's ideas for the conservation program, including ensuring that the Plan would not preclude recovery, procedures for investigating voids discovered during construction, and karst preserve management. The BAT also continued discussions regarding the treatment of Eurycea salamanders in the Plan. The BAT recommended adding several salamander species to the list of "Category 3" or "Category 4" species addressed in the Plan.

April 11, 2011 The CAC met on April 11, 2011 to hear a presentation of the major components of the First Draft SEP-HCP and an update on the next steps, including review of the draft Plan, the process for addressing comments, and preparation of a revised draft. The CAC voted to reject the proposed draft model of the summary of the SEP-HCP with the understanding that the CAC will review and provide comments to Bexar County by June 1.

April 12, 2011 The First Draft SEP-HCP is available for review and comment! The draft text and associated appendices are posted on the SEP-HCP website for downloading. Bexar County will accept written comments on the First Draft until June 1, 2011. Comments may be submitted by email to info@sephcp.com or by regular mail to the consultant team (c/o Ms. Amanda Aurora, Loomis Partners, 3101 Bee Cave Road, Suite 100, Austin, Texas 78746). Bexar County will address each comment received and prepare a revised Second Draft SEP-HCP for additional review. The revised draft is expected to be available by September 2011.

April 25, 2011 The Medina County Commissioners' Court approved a resolution on April 25, 2011 to not support nor participate in the creation of the SEP-HCP.

April 27, 2011 The U.S. Fish and Wildlife Service published a Notice of Intent in the Federal Register to prepare an Environmental Impact Statement (EIS) related to the proposed SEP-HCP. The notice announced the start of a public comment period to collect input on the scope of the environmental analysis for the EIS, including alternatives to the proposed plan. The Service will be holding several public meetings across the 7-county Plan Area in May and early June. The specific dates and locations of these public meetings will be announced through a variety of media outlets as they become available. The public is invited to send written comments to the Service (email to allison_arnold@fws.gov or US Mail to Field Supervisor, Austin Ecological Services Field Office, 10711 Burnet Road, Suite 200, Austin, TX 78758-4460). Comments must be received by July 26, 2011.

May 9, 2011 The CAC met on May 9, 2011 to discuss the First Draft SEP-HCP and the anticipated project schedule through 2011. The CAC decided to hold a workshop in June to develop a consensus recommendation for an alternative to the First Draft. Specific dates and location for the workshop are to be determined and the workshop will be open to the public. The CAC also heard a presentation regarding a land developer's perspective on the need for a regional HCP and various mitigation strategies.

May 16, 2011 The U.S. Fish and Wildlife Service has announced dates for 5 public meetings to collect input on the scope of the environmental analysis for the EIS, including alternatives to the proposed plan. The meetings will be held between June 6 and June 14, 2011 in various locations within the proposed 7-county Plan Area, including Bandera, Kerrville, Boerne, Blanco, and Helotes. The public meetings will start at 5:30pm and include an open house, formal presentations, and panel discussions with agency and applicant representatives.

- June 1, 2011** The comment period on the First Draft SEP-HCP has been extended until June 10, 2011. The draft text and associated appendices are posted on the SEP-HCP website for downloading. Comments may be submitted by email to info@sephcp.com or by regular mail to the consultant team (c/o Ms. Amanda Aurora, Loomis Partners, 3101 Bee Cave Road, Suite 100, Austin, Texas 78746). Bexar County will address each comment received and prepare a revised Second Draft SEP-HCP for additional review. The revised draft is expected to be available by September 2011.
- June 6, 2011** The BAT met on June 6, 2011 to discuss BAT member comments on the First Draft SEP-HCP and to prepare a unified committee response to the draft. The BAT worked on several issues, including plan administration, advisory committees, mitigation ratios, karst preserves and participation process, secondary uses of preserves, and adaptive management and monitoring. The BAT agreed to continue working on a unified response to the First Draft on Friday June 10.
- June 10, 2011** The BAT met on Friday June 10, 2011 to prepare a unified committee response to the First Draft SEP-HCP. The BAT approved the content of an official BAT response to the First Draft, in addition to submitting comments from individual BAT members.
- June 15, 2011** The CAC held a 9-hour workshop on June 15, 2011 to develop a preferred scenario for the Plan that balances the amount of take authorization needed, mitigation ratios, preserve land distribution, and participation fees. Workshop participants developed ideas for a preferred scenario within their individual stakeholder groups, and then discussed these ideas with the entire group. Workshop participants developed a proposal that was unofficially accepted by more than 2/3 of the members present, with some members opposing it because of public funding concerns and/or desire for more preserve land in Bexar County. No actions were taken at this workshop. CAC members tentatively scheduled a July meeting to continue discussions on this consensus proposal with possible action on a recommendation for a Plan alternative.
- July 11, 2011** The CAC met on July 11, 2011 to discuss the outcome of the committee's June 15 workshop and vote on a recommended plan alternative. After much deliberation and several votes, the CAC was not able to pass a motion recommending a plan alternative. Several CAC members desired an alternative with higher level of conservation than the proposed First Draft, while other CAC members were concerned that the level of funding required for such an alternative would be too great for participants and the public to bear. The CAC is not expected to meet again until a revised Second Draft of the plan is available for review.
- December 6, 2011** The Bexar County Commissioners Court voted to submit the revised draft SEP-HCP to the USFWS with an application for an Endangered Species Act incidental take permit.
- August 2012** Completed response to comments from the Service on the Application Draft HCP (third draft of the SEP-HCP) submitted to the Service with permit application in December 2011, and prepared the Fourth Draft Habitat Conservation Plan (Service Review Draft).
- June 5, 2013** Representatives of the SEP-HCP gave a presentation on the SEP-HCP to SAWS from 10:00 – 11:00am.
- August 2013** Completed response to comments from the Service on the Service Review Draft HCP (fourth draft of the SEP-HCP) submitted to the Service August 2012, and prepared the Fifth Draft Habitat Conservation Plan (Service Review Draft 8/12/2013), submitted to the USFWS Austin ESFO on August 14, 2013. Reviewed and addressed comments from Service on Administrative Draft EIS and revised document based on comments and changes to draft HCP.
- September 2013** Reviewed and addressed comments from Service on Administrative Draft EIS and revised document based on comments and changes to draft HCP.
- November 1, 2013** Representatives of the SEP-HCP provided an update on the SEP-HCP to the Bexar County Development Process -- Associated Builders and Contractors, 814 Arion Parkway, Ste. 204, San Antonio, TX. 78216.
- December 2013** Completed response to comments from the Service on the Service Review Draft HCP (fifth draft of the SEP-HCP) submitted to the Service August 14, 2013, and prepared the Sixth

Daft Habitat Conservation Plan (Service Review Draft 12/20/2013), submitted to the USFWS Austin ESFO on December 20, 2013.

- February 2014** Competed response to comments from the Service on the Service Review Draft HCP (sixth draft of the SEP-HCP) submitted to the Service December 20, 2013, and prepared the Seventh Daft Habitat Conservation Plan (Service Review Draft 2/25/2014), submitted to the USFWS Austin ESFO on February 25, 2014. Reviewed and addressed comments from Service on Administrative Draft EIS and revised document based on comments and changes to draft HCP.
- March 2014** Competed response to comments from the Service on the Service Review Draft HCP (seventh draft of the SEP-HCP) submitted to the Service February 25, 2014, and prepared the Eighth Habitat Conservation Plan (Service Review Draft 3/6/2014), submitted to the USFWS Austin ESFO on March 6, 2014.
- April 2014** Reviewed and addressed comments from Service on Administrative Draft EIS and revised document based on comments and changes to draft HCP.
- October 2014** Competed response to comments from the Service on the Service Review Draft HCP (eighth draft of the SEP-HCP) submitted to the Service March 6, 2014, and prepared the Final Draft Habitat Conservation Plan (Service Review Final Draft 10/8/2014), submitted to the USFWS Austin ESFO on October 8, 2014. Reviewed and addressed comments from Service on Administrative Draft EIS and revised document based on comments and changes to draft HCP submitted to USFWS on October 10, 2014.
- November 3, 2014** Representatives of the SEP-HCP gave a presentation on the status of the HCP to attendees at Government Canyon State Natural Area from 1pm to 4pm.
- December 9, 2014** Bexar County sent out letters to each of the Plan Area Judges updating them on the SEP-HCP and informing them of the upcoming release of the draft SEP-HCP and draft EIS documents for official public review comment.
- December 19, 2014** The USFWS has published the Notice of Availability of the draft Environmental Impact Statement which has been prepared to evaluate the permit application in accordance with the requirements of the National Environmental Policy Act (42 U.S.C. 4321 et seq.; NEPA). The USFWS had made the permit application package, including the dHCP and dEIS, available for public review and comment. The Service encourages the public to review and provide comments on the documents during the 90-day public comment period. Written comments must be received by March 19, 2015. Comments may be submitted in one of the following ways: Electronically: through the Federal eRulemaking Portal at regulations.gov. In the search box enter FWS-R2-ES-2014-0053, which is the docket number for this notice. Then on the left side of the screen, under the Document Type heading, click on the Notices link to locate this document and submit a comment. U.S. Mail to: Public Comments Processing, Attn: FWS-R2-ES-2014-0053; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042-PDM; Arlington, VA 22203. The Draft SEP-HCP, Draft Environmental Impact Statement, and Federal Register Notice of Availability are posted on the DOCUMENTS page. Public meetings will be held during the comment period. The exact locations and times for the meeting will be noticed in local newspapers, on the USFWS Austin Ecological Services Office website and here at least two weeks prior to each event. For further information on how to obtain or review copies of these documents, or how to provide comments, see the Federal Register notice.
- January 20, 2015** The USFWS announced the scheduling of Public Meetings Scheduled on the Southern Edwards Plateau draft Habitat Conservation Plan and draft Environmental Impact Statement. The U.S. Fish and Wildlife Service (Service), in cooperation with the City of San Antonio and Bexar County will conduct public meetings in Helotes, Texas and Kerrville, Texas, to obtain comments on the Southern Edwards Plateau draft Habitat Conservation Plan (dHCP), draft Environmental Impact Statement (dEIS) and an incidental take permit application. The Southern Edwards Plateau dHCP outlines conservation actions designed to ensure that development occurring in one of the most rapidly growing areas of the country will not jeopardize the survival of the golden-cheeked warbler, black-capped vireo, Government Canyon Bat Cave spider, Madla Cave meshweaver, Braken Cave meshweaver, Government

Canyon Bat Cave Meshweaver, Helotes mold beetle, and two ground beetle species, each of which has no common name (*Rhadine exilis* and *Rhadine infernalis*). The dHCP and associated permit would cover lands within Bexar County and the City of San Antonio's extra-territorial jurisdictional boundaries. If the permit is approved, the Service would authorize the incidental take of the nine federally listed species for a period of 30 years. Public meetings are scheduled for 5:00 p.m. – 7:00 p.m. at each location. The dates and locations for the public meetings are: Tuesday, February 3rd Casa Helotes Senior Center 12070 Leslie Road, Helotes, Texas 78023 and Wednesday, February 4th YO Ranch Conference Center 2033 Sidney Baker, Kerrville, Texas 78028. Public meetings will consist of an Open House/Exhibit Review that will provide the public an opportunity to view the dHCP, dEIS, and exhibits and to learn more about the proposed action, permit area, and species covered. A presentation of the proposed action and summary of the National Environmental Policy Act (NEPA) process will be provided beginning at 5:30 p.m. The public is invited to provide written or oral comments in an informal, open-house setting until 7:00 p.m. The Service encourages the public to review and provide comments on the documents during the 90-day public comment period. Written comments must be received by March 19, 2015. U.S. Fish and Wildlife Service News Release Public Affairs Office PO Box 1306, Albuquerque, NM 87103 505/248-6911 or 505/248-6915 (Fax). Information on how to obtain or review copies of these documents, or how to provide comments can be found at <http://www.fws.gov/southwest/es/AustinTexas/>.

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February 3, 2015 The U.S. Fish and Wildlife Service, in cooperation with the City of San Antonio and Bexar County conducted the first of two public meetings to obtain comments on the Southern Edwards Plateau draft Habitat Conservation Plan (dHCP), draft Environmental Impact Statement (dEIS) and an incidental take permit application. The public meeting was scheduled for 5:00 p.m. - 7:00 p.m. at the Casa Helotes Senior Center 12070 Leslie Road, Helotes, Texas 78023.

February 4, 2015 The U.S. Fish and Wildlife Service, in cooperation with the City of San Antonio and Bexar County conducted the first of two public meetings to obtain comments on the Southern Edwards Plateau draft Habitat Conservation Plan (dHCP), draft Environmental Impact Statement (dEIS) and an incidental take permit application. The public meeting was scheduled for 5:00 p.m. - 7:00 p.m. at the YO Ranch Conference Center, 2033 Sidney Baker, Kerrville, Texas 78028.

February 9, 2015 Bexar County and TPWD met with the Medina County Commissioners Court to answer questions about the SEP-HCP. Representatives briefly told the court what the SEP-HCP was and what it was not, then proceeded to answer questions. A total of about 30 minutes was spent answering various questions about details of the SEP-HCP.

March 10, 2015 In an effort to provide the public a forum to discuss these and other aspects of the plan, the Hill Country Alliance called a meeting of interested parties to gather at the Chamber of Commerce in Boerne, 121 S. Main Street, from 3:00 – 5:00 to air concerns and gather information about the plan. The intended purpose of this informal gathering was to help the community appreciate the different points of view concerning the plan, to dispel misunderstandings, and provide a forum for the free exchange of ideas. Attendees to the meeting included, land owners, County officials, members of the County ad hoc committee formed to draft a resolution of concern regarding the program, a representative from the Kendall County Economic Development Council, directors of Cow Creek Groundwater Conservation District, board members of the Cibolo Nature Center, the Cibolo Conservancy Land Trust, and a representative from the consulting group hired by the Bexar County and City of San Antonio who had been involved in drafting the plan and knowledgeable of U.S. Fish and Wildlife Service (USFWS) powers.

May 5, 2015 Bandera Meeting of the Ranchers and Landowners Association Tuesday, May 5th, 2015 at 7:00 pm Mansfield Park Recreation Center in Bandera. The Ranchers and Landowner Association of Texas are inviting their membership and all area landowners to a very special and informational meeting addressing the possible mitigation of endangered species habitat. Mitigation is a voluntary program by which landowners are compensated for conducting land management practices that benefit endangered species. The proposal, commonly known as SEP-HCP is being undertaken by Bexar County and the City of San Antonio in cooperation with the US Fish and Wildlife Service. The goal of the program is to conserve endangered

songbird habitat within the surrounding counties north and west of San Antonio. Landowners in the counties of Medina, Comal, Kendall, Kerr, Bandera, and/or Blanco counties are eligible to participate. This very important meeting will take place at the Recreation Center at Mansfield Park in Bandera on Tuesday, May 5, 2015 and will start at 7:00 P M. Mansfield Park is located on SH 16 North. As mentioned before, all landowners are encouraged to attend and become familiar with this proposed voluntary program. Speakers will include Richard Heilbrun representing the Texas Parks and Wildlife Department and Jenny Blair representing Bowman Consulting, who is the contractor working with Bexar County and City of San Antonio. Carolyn Vogel of the Texas Conservation Connection will also speak about Conservation Easements. Speakers will explain the SEP-HCP and there will be ample time for those in attendance to ask questions. In cooperation with RLAT and serving as moderator will be Christy Muse, Executive Director of the Hill Country Alliance. Ranchers and Landowners Association of Texas is a strong advocate for individual property rights and has taken this initiative to inform not just our membership but all property owners in the area. County elected officials are invited to attend. For additional information feel free to contact Fidel C Ramirez, President of RLAT at 830-796-4376 or 210-218-7205.

SUMMARY OF CAC AND BAT RECOMMENDATIONS

TABLE 4. Summary of CAC and BAT Recommendations.

Plan Component	BAT Recommendation / Action	CAC Recommendation / Action
Complete Plan Review	No action	April 11, 2011 Approved Action: The CAC voted to reject the proposed draft model of the summary of the SEP-HCP with the understanding that the CAC will review and provide comments to Bexar County by June 1, 2011.
Community Goals and Objectives	July 28, 2010 Consensus Action: recommend revisions to a draft version of community goals and objectives for CAC consideration	September 13, 2010 Approved Action: <ul style="list-style-type: none"> •Regional conservation •Support Camp Bullis •Stakeholder involvement •Streamline permitting •Locally appropriate & cost effective •Leverage resources
Plan Area	February 8, 2010 Consensus Action: draft recommendation for Plan Area to include 7 counties with possible addition of Uvalde and Gillespie	February 18, 2010 Approved Action: Plan Area to include 7 counties with possible reconsideration of Comal Co.
Plan Duration	June 18, 2010 Approved Action: BAT does not object to a 30-year duration	July 12, 2010 Approved Action: CAC recommends 30-year duration for plan and permit

Plan Component	BAT Recommendation / Action	CAC Recommendation / Action
Covered Species	<p>February 22, 2010 Approved Action: adopt species category framework and preliminary classification of species in each category (Cat 1 = GCW, BCV, and 3 Karst Inverts; Cat 2 = 6 Karst Inverts)</p> <p>May 28, 2010 Approved Action: add 3 mussels to list of voluntarily conserved (Cat 3) species, with BAT taking responsibility for developing conservation measures for these species</p> <p>April 1, 2011 Approved Action: add 7 Eurycea salamanders to Cat 3; add 4 Eurycea salamander to Cat 4; add 2 Eurycea salamanders to Cat 5</p>	<p>June 7, 2010 Approved Action: add 3 mussels to Cat 3 and all other aquatics to Cat 5</p>
Covered Activities	<p>May 28, 2010 Consensus Action: allow BAT Chair to draft proposal for CAC consideration</p>	<p>June 7, 2010 Approved Action: cover take associated with otherwise lawful activities (note specific examples for clarity)</p>

Plan Component	BAT Recommendation / Action	CAC Recommendation / Action
GCW Take and Mitigation	<p>November 4, 2010 Approved Action:</p> <ul style="list-style-type: none"> •Consider authorizing approximately 8,000 acres of take in Bexar County and approximately 7,361 acres of take outside of Bexar County (15,361 acres total). •Take in Bexar County be mitigated at a ratio of 3:1, with 60% of the mitigation located within or within 5 miles of Bexar County and 40% located anywhere within the Plan Area. •Take outside of Bexar County be mitigated at a ratio of 2:1, with the mitigation located anywhere within the Plan Area. <p>November 17, 2010 Approved Action: adopt BAT recommendations for GCW as presented to CAC, including:</p> <ul style="list-style-type: none"> •Mitigation must be in place before take occurs •Mitigate in proportion to severity of impact/harm 	<p>December 6, 2010: The CAC voted on a motion to accept the BAT's biological recommendations for the GCW, subject to later modification by the CAC, but the motion did not pass.</p> <p>March 7, 2010 Small Group Exercise: Group 1 Alternative received most votes, but no clear consensus and no action taken (6,900 ac of total take authorization; 3:1 Bexar County mitigation ratio; 2:1 rural county mitigation ratio; 60% of Bexar County mitigation located within 5 miles of Bexar County; \$5,500 per credit)</p> <p>June 15, 2011 Workshop: Supermajority of workshop participants unofficially accepted a preferred scenario, but no official CAC action was taken (7,500 ac of take authorization within Bexar County and 4,300 ac of take reserved for other counties; 2:1 ratio for direct impacts and 0.5:1 ratio for indirect impacts; 5,000 ac new preserves in Bexar County; \$4,000/credit)</p>

Plan Component	BAT Recommendation / Action	CAC Recommendation / Action
GCW Biological Goals and Objectives & GCW Preserve Standards	<p>October 8, 2010 Approved Action: Draft preserve size goal of 85,000 to 100,000 acres for the GCW; the actual amount and configuration of the preserve will depend on the locations of currently available habitat and anticipated habitat losses</p> <p>November 4, 2010 Approved Action: Up 10% of preserve lands may be composed of existing public lands, but 0% is preferred.</p> <p>November 17, 2010 Approved Action:</p> <ul style="list-style-type: none"> •500 acre minimum size •Priority for 5k to 10k acre focal preserves •Priority for at least 1 focal preserve in each county except Blanco •Priority for building upon existing protected lands 	<p>December 6, 2010 meeting: The CAC voted on a motion to accept the BAT's biological recommendations for the GCW, subject to later modification by the CAC, but the motion did not pass.</p>

Plan Component	BAT Recommendation / Action	CAC Recommendation / Action
BCV Take and Mitigation	<p>November 17, 2010 Approved Action: approve subcommittee recommendations for BCV conservation program</p> <ul style="list-style-type: none"> •Consider up to 6000 acres of take authorization •2:1 mitigation ratio for all areas •Mitigation in place before take occurs •Mitigate in proportion to severity of impact/harm 	<p>December 6, 2010 Approved Action: Accept BAT's recommendations for the BCV conservation measures, but acknowledge that the CAC may issue different recommendations for the BCV based on further discussions.</p> <p>March 7, 2010 Small Group Exercise: Group 1 Alternative received most votes, but no clear consensus and no action taken (2:1 mitigation ratio for all areas; mitigation = \$5,500/credit)</p> <p>June 15, 2011 Workshop: Supermajority of workshop participants unofficially accepted a preferred scenario, but no official CAC action was taken (2,400 ac of take authorization within Bexar County and 1,400 ac of take reserved for other counties)</p>

Plan Component	BAT Recommendation / Action	CAC Recommendation / Action
BCV Biological Goals and Objectives & Preserve Standards	<p>November 17, 2010 Approved Action: approve subcommittee recommendations for BCV conservation program:</p> <ul style="list-style-type: none"> •Goal to acquire and manage 12,000 acres for BCV •100 acre minimum managed area within a minimum 500 acre protected property •Priority for at least 1 focal preserve of 2k to 4k acres in western part of plan area •Priority for expanding existing protected lands •Up 10% of preserve lands may be composed of existing public lands, but 0% is preferred. 	<p>December 6, 2010 Approved Action: Accept BAT's recommendations for the BCV conservation measures, but acknowledge that the CAC may issue different recommendations for the BCV based on further discussions.</p>
Karst Take and Mitigation	<p>November 4 and 17, 2010 Approved Action:</p> <ul style="list-style-type: none"> •No take authorization until draft downlisting criteria are met for a particular species in a particular KFR •Contribute to achieving 2x draft downlisting criteria •Able to use collected mitigation fees to purchase karst preserves in other KFRs •Karst survey protocol •Impact Zones <ul style="list-style-type: none"> ○ 0 – 150 ft ○ 150 – 345 ft 	<p>December 6, 2010 Approved Action: Accept the BAT recommendations for karst conservation measures, subject to later modification by the CAC.</p>
Karst Preserves	<p>November 4, 2010 Approved Action: Preserves consistent with standards in draft recovery plan</p>	<p>December 6, 2010 Approved Action: Accept the BAT recommendations for karst conservation measures, subject to later modification by the CAC.</p>

Plan Component	BAT Recommendation / Action	CAC Recommendation / Action
Karst Biological Goals and Objectives	<p>November 4, 2010 Approved Action: BAT approved recommendations for the karst conservation program, including:</p> <ul style="list-style-type: none"> •No take allowed until draft downlisting criteria are met for individual species in individual KFRs •Contribute to achieving 2x of draft downlisting criteria •Mitigation fees may be used to perform conservation in other KFRs 	<p>December 6, 2010 Approved Action: Accept the BAT recommendations for karst conservation measures, subject to later modification by the CAC.</p>
Preserve Management and Monitoring	<p>November 4 and 17, 2010 Approved Action: BAT approved recommendations for the conservation programs, including:</p> <ul style="list-style-type: none"> •GCW & BCV - Manage protected habitats within preserves for the benefit of the species by minimizing threats and maintaining, restoring, or enhancing high quality habitat. •GCW & BCV - Monitor populations and habitats to track the status of the species within the preserve system and to inform the adaptive management process. •BCV - Management staff should be given authority to use lethal means to manage excessive numbers of predatory species and other traditional land management practices, such as prescribed fire. •Adaptive management strategies should be implemented to prevent detriment to other listed species. 	<p>December 6, 2010 Approved Action: Accept BAT's recommendations for the BCV conservation measures, but acknowledge that the CAC may issue different recommendations for the BCV based on further discussions.</p>

EXECUTIVE SUMMARY

The Biological Advisory Team provides this document in response to requests for clarification on BAT recommendations. The questions originated from Bexar County and the Citizens Advisory Committee on Dec 30, 2010.

Regarding the **distribution of mitigation lands**, the BAT recommends that the CAC and plan participants ensure that mitigation lands are strategically located throughout the plan area, including Bexar County. Though HCP guidelines recommend that mitigation occurs as closely as possible to the impact, our recommendation did not indicate a distance from habitat loss, but rather that mitigation occurs anywhere within Bexar County plus an extra 5 miles. This means that 60% of mitigation could occur up to 32 miles from the impact area and the remainder could occur within 95 miles from the impact site. The BAT feels it is important to protect existing habitat throughout the plan area, and not rely on rural habitat alone to prevent harm to the species. Protected habitat in too few blocks, too isolated, or in too small blocks is overly sensitive to population and habitat threats (fire, disease, predators, etc) and may compromise the objectives of the SEP-HCP.

The BAT carefully deliberated over recommendations concerning **mitigation ratios**. Our recommendations were based on the scientific literature, our combined experience in the field, and our professional knowledge of our community, which includes knowledge of threats to the species, and significantly de-emphasizes historical impact to habitat. Our recommendations are not intended to compensate for prior habitat loss, but rather the new loss of habitat that will be authorized by this plan.

The BAT cautions against comparing San Antonio to other communities and other HCPs. Many other communities that have negotiated HCPs have a smaller human population, more available land for development, and less GCWA habitat. Each HCP has a different set of objectives, addresses different threats to the species, and solves different community needs.

The County asked the BAT to propose a new mitigation strategy that would meet minimum issuance standards. It is important to note that regardless of which mitigation ratio the SEP-HCP uses, there will still be a net loss of sensitive habitat. Habitat loss authorized under this plan is gone forever. Additionally, the USFWS is statutorily bound to ensure that there is a contribution to recovery with the issuance of their permits. The BAT feels that the structure of our recommendations allows the CAC to adjust its goals, whether the CAC intended to meet minimum standards or contribute to recovery. This can be done by adjusting the acres of Habitat Take Requested and the resulting acres of Mitigation.

The BAT cautions against comparing the SEP-HCP to the **Camp Bullis** Biological Opinion. Federal installations operate under more strict standards than HCP and have greater management and monitoring requirements. Because the Camp Bullis BO requires that they mitigate for unoccupied habitat, their “overall” or “effective” mitigation ratio is larger than 3:1, and in some cases, could exceed 4:1.

The CAC is reminded that under the BAT recommendations, a potential participant (e.g. a developer) has an important choice that could substantially impact the overall cost of mitigation. In the interest of expediency, a participant may choose to assume occupancy on all forested lands on the property. In this scenario, the developer may get a permit within 3 weeks. Alternatively, if expediency is not necessary, the developer could perform 3 years of USFWS protocol surveys on their project, but would not need to assume occupancy. In this scenario, though the project is slowed, the developer would know exactly how much habitat is occupied, and would only need to mitigate this amount.

The BAT offers 2 areas of **flexibility** for the CAC to consider. First, survey requirements for habitat within Loop 1604 may be relaxed. The conservation value of this habitat is already compromised, and it may be appropriate to accept absence surveys covering fewer than the 3 years traditionally required by USFWS. Secondly, there might be flexibility in the recommendation that the SEP-HCP preserves an additional 25% buffer for GCWA and BCVI mitigation lands.

It is important to note that BAT recommendations were based on scientific knowledge, needs of the species, and several over-riding biological issues concerning the plan. We also substantially considered the practicability of both implementing recommendations and accomplishing objectives. If the CAC has logistic, economic, or political concerns about our recommendations, we strongly recommend they consider those issues and make an appropriate decision based on the totality of their charge. Our charge, both adopted by the BAT members and statutorily imposed, required that we limit our discussions to mostly biological concerns. However, we did not create biological recommendations without also considering the feasibility and practicability of those decisions. We repeat our offer to be available for joint meetings and workshops. Additionally, we are willing to comment on decisions and drafts created by the County and the CAC.

Biological Advisory Team

Southern Edwards Plateau Habitat Conservation Plan

FROM: Biological Advisory Team
 TO: Citizen's Advisory Committee
 DATE: March 28 2011
 RE: Clarification of Mitigation Standards and Recommendations

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Pg 3 Clarification of BAT Recommendations and Response to Questions

Pg 8 BAT Recommendations as approved fall 2010 (karst has since been revised but not finalized)

Pg 14 Bexar County and CAC Questions to BAT 12/30/2010

The Need for SEP-HCP Protected Lands in Bexar County

The County raised concerns that the BAT Recommendation on the location and distance of mitigation is not appropriate for the SEP-HCP (County's Question 2). The BAT considered the HCP handbook, scientific literature, conservation research, professional biological knowledge, and basic biological principles. The HCP Handbook recommends that mitigation be as close as possible to the loss of habitat.

A likely reason for the negative effect of habitat loss and fragmentation on the genetic health of GCWA is the species' high level of fidelity to breeding sites. Urbanization in Bexar County often clears and fragments mature oak-juniper woodlands, upon which the GCWA depends. As is typical of other species of forest birds, the dependence of GCWA on old-growth woodlands and forests indicates a limited ability to disperse across non-forested areas (Harris and Reed 2002). Studies from Fort Hood found many GCWA individuals establish breeding territories within 2.5 miles (4 km) of where they were born (Ladd and Gass 1999). We also know that adult GCWAs will typically settle within 1.8 miles (3 km) of previously used breeding areas (Jetté et al. 1998).

Our recommendation did not recommend a specific distance from habitat loss, but rather recommended that mitigation for Bexar County habitat loss occur anywhere within Bexar County plus an extra 5 miles. This means that 60% of mitigation could occur up to 32 miles from the location of habitat loss. The remaining 40% of the mitigation could occur up to 95 miles from the impact site. We feel this is extremely generous, more than practicable, and well within the HCP Handbook guidelines to allow for flexibility and individual judgment without requiring a case-by-case analysis.

Additionally, the BAT strongly feels that it is important to protect existing habitat throughout the plan area, and not to rely on rural habitat alone to prevent harm to the species. Realizing that there are both biological and political justifications for this, the BAT relied on the biological knowledge that habitat in too few, too isolated, or too small blocks is unacceptably sensitive to population and habitat threats (fire, disease, new predators, etc.) and also wished to ensure that extremely large geographic areas of habitat are not ignored (e.g., all of the habitat in Bexar County).

Impact assessments of random events and of habitat quantity and quality on species survival are the required data analyses that Harding et al. (2001) found most commonly lacking in the HCPs they examined. As one example, the SEP-HCP region's long-term reproduction failures of deciduous tree species important to the GCWA (Russell and Fowler 1999) need to be assessed in terms of habitat effects on GCWA survival and mitigation measures.

Moreover, fragmentation adversely impacts GCWA reproduction within remaining breeding habitat. Reidy et al. (2009) while quantifying the reduction in GCWA nest survival within fragmented habitats and near edges, hypothesized that increased nest loss in these areas is due to an increase in predation. Their concluding recommendation is to protect both urban and rural preserves with greater than 100 ha of

breeding habitat, by reducing both the fragmentation of habitat patches and the amount of patch edge abutting open areas (Reidy et al. 2009).

The suggestion that larger blocks of habitat should be favored over a consideration of proximity to the habitat loss is accurate. The question for the CAC to consider then, is how would they prefer to structure the size and location of preserve lands. The BAT's recommendation is to create several smaller (at least 500 acres of GCWA habitat in size) preserve patches throughout the Plan Area, and to strive to create a limited number of larger patches (focal areas of 5,000-10,000 acres), preferably 1 in each county (except Blanco).

Adequacy of Currently Protected GCWA Habitat in Bexar County

Although GCWA are migratory and may be expanding in terms of population size within the breeding range, gene flow for both GCWA and BCVI remains a concern (Lindsey et al. 2008, Barr et al. 2008, respectively). In an attempt to avoid loss of genetic diversity for GCWA, the BAT feels it is important to protect habitat throughout the breeding range (including Bexar County) so as to maintain adequate gene flow. One study suggests lack of habitat connectivity may result in population isolation for GCWA, which could lead to lower genetic variation in those subpopulations (Lindsey et al. 2008).

In response to Bexar County's Question 3, the important issue is not whether the currently protected lands represent GCWA habitat, but rather whether those lands are truly perpetually protected:

- Camp Bullis could at any time be declared exempt from ESA laws by the Department of Homeland Security
- The City of San Antonio properties are not bound to manage their lands for warblers, vireos, or endangered karst species. Over time, through neglect, mismanagement, or a lack of funding, these lands could become unsuitable for warblers and the conservation value of those lands would be lost.
- Portions of Government Canyon State Natural Area are not bound by conservation easements. Other portions are bound only by aquifer-related easement language, and these areas may be threatened by several factors, including local efforts to create regional flood control structures. In addition, those parts of GCSNA not bound by legal easements for warblers could be annexed by the General Land Office and sold.

It is critical that the SEP-HCP considers only perpetually protected lands as resources that can perpetually provide for the Golden-cheeked warbler. The BAT carefully considered this issue, and felt that "new" habitat loss authorized under the SEP-HCP warrants "new" mitigation. It is unwise to expect a few properties to carry the biological burden of widespread habitat loss. However, we do feel that currently protected lands can provide limited new conservation benefit with the addition of new legal protection. While there are political and logistical concerns with this strategy, we feel that using these properties as anchors for a preserve system and to jumpstart the economics can be biologically justified.

The BAT strongly reminds the CAC that their committee must consider political, economic, biological, and logistical concerns. The BAT provided biological recommendations that we feel were practicable and feasible. However, we would like to clarify that we are very willing to review any changes that the CAC makes to our recommendations and to comment on whether we think those decisions are biologically appropriate. There may be an economic or political need to adjust our recommendations, and it is up to the CAC to find an appropriate solution.

The Role of Population Estimates

Though some progress has been made in assessing habitat extent and presence/absence within the breeding range (e.g. Diamond et al. 2007, Morrisson et al. 2010), data on range-wide status of reproduction and colonization success are lacking, and essentially no population trend data is known for GCWA. In addition, a quantitative link between habitat decline (past and future) and numbers of birds is unavailable for an accurate analysis of the reproduction and colonization necessary to maintain populations. Thus, the BAT feels that estimates of current population size alone are not sufficient to address the issues relevant to the SEP-HCP.

Within the SEP-HCP area, an accurate determination of the relationship between habitat trends and long-term GCWA sustainability may depend upon a monitoring program, which provides a statistically valid measure of actual take and mitigation effectiveness. Linking monitoring and adaptive management through frequent oversight is essential, especially in light of the lack of definitive data.

The BAT reminds the CAC that both the Golden-cheeked Warbler and the Black-capped Vireo were listed primarily due to the anticipated *threats* to habitat loss. Regardless of how many individuals exist, threats to habitat loss and poor reproductive success remain. The recent studies by Texas A&M University are useful in deciding how to address those threats, and where those threats are greatest. However, ultimately the TAMU studies are best used by the USFWS in their decision to downgrade or delist the species. The role of this SEP-HCP process is to minimize the threats so that existing populations can continue to thrive. Only after a sufficient population is documented AND species threats have been addressed can the USFWS reconsider the listing status of the GCWA.

Bexar County Section C

The mitigation ratios framework allows the CAC to choose a ratio based on the CAC's goal, regardless of whether or not the goal is to make a significant contribution to recovery. Mitigation ratios are intended to offset Take of covered species associated with covered activities under the SEP-HCP. Take may be the result of direct effects or indirect effects of completing a covered activity.

Mitigation Ratios & Camp Bullis Biological Opinion

Question 1: The County asked for clarification of the biological rationale for the recommended mitigation ratios. It is important to note that because the Golden-cheeked Warbler was listed due to both a lack of knowledge of population size *and* the substantial level of threats to habitat loss, we must consider several issues. First, we must consider the amount of habitat that historically existed as well as the amount that currently exists. Secondly, we must consider the rate at which GCWA habitat has been and continues to be lost in Bexar County. Other HCPs were written for areas with varying amounts of habitat that needed protection, and substantially different rates of threat to that habitat. Development rates are not as indicative of biological threat as acres of habitat lost over time. In Bexar county, 10,544 acres of prime GCWA habitat were lost in an 8 year period. This rate is alarming, and biologically unsustainable.

It is possible that the County has misunderstood language within the Camp Bullis Biological Opinion. The "extraordinary measures" reference refers to the extraordinary measures of protection and research that Camp Bullis has undertaken beyond their regulatory responsibility. Their data collection methods, karst preserve standards, karst management plan, research projects, and GCWA habitat classification exceed what is required by both Section 10 standards (non-federal HCPs) and Section 7 standards (federal T/E requirements). In return for these activities, they have negotiated different mitigation ratios with the USFWS. If the CAC would like to require such extraordinary measures of either the HCP administrative entity or plan participants, the BAT would make different recommendations for the SEP-HCP mitigation ratios. Camp Bullis spends approximately \$1M annually on their research and monitoring activities alone. We believe that implementing such extraordinary measures in the SEP-HCP would be financially and logistically impractical.

Generally speaking, the BAT recommends against comparing the SEP-HCP to Camp Bullis. Not only are different standards applied to HCPs and to federal installations, but specifically, Camp Bullis is required to mitigate for both occupied and unoccupied habitat. The SEP-HCP will only require mitigation for *occupied habitat*. This means that if a potential participant invested the time and money to perform bird surveys and demonstrated that all or a portion of his property was unoccupied, those portions would not need to be mitigated at all, even if these areas were expected to be habitat by a map, computer model, etc. Because Camp Bullis has added requirements, their "effective" or "overall" mitigation ratio exceeds 3:1, and in some cases, exceeds 4:1.

Bexar County continued to express concern over recommended mitigation ratios in section B of their document. The BAT carefully deliberated over these mitigation ratios and did not arrive at them lightly. Our mitigation recommendations were based on our knowledge of current threats to the species. While we used historic data to arrive at these predictions, we also used our knowledge of our community to identify the level to which local habitat was threatened. Our recommendations are not intended to compensate for

prior habitat loss, but rather to mitigate the current and expected threats to the habitat (which include more than development pressures) as well as estimates of future loss.

When evaluating threats to habitat in Bexar County versus other counties, it is not appropriate to compare growth rates of smaller communities with growth rates of San Antonio and Bexar County. Many other communities that have negotiated HCPs have a smaller human population, more available land for development, and less GCWA habitat. In other words, 5% growth in Bexar County means more sensitive acreage lost than would be lost with 5% growth in Williamson County.

The County asked the BAT to propose a new mitigation strategy that would meet minimum issuance standards. The CAC is reminded that the USFWS is statutorily bound to ensure that there is a contribution to recovery with the issuance of their permits. The BAT feels that the structure of our recommendations allows the CAC to adjust its goals, whether the CAC intends to meet minimum standards or to contribute to recovery. The CAC can adjust the acres of Take Requested and thus the resulting acres of Mitigation required.

There may be some flexibility to the mitigation strategy that the CAC considers. Habitat within Loop 1604 is highly fragmented and provides less conservation value than other habitat patches. It may be possible for participants within these areas to demonstrate absence with fewer requirements, which would decrease costs of participation.

The CAC is reminded that participants do not need to mitigate habitat if they have demonstrated absence. Many participants will want to assume occupancy to save time, but if they are encouraged or choose to perform surveys and document absence on their property, their mitigation bill is substantially reduced.

Other Concerns

The County included some concerns by a CAC committee member. We addressed several of those concerns elsewhere in this BAT response document, but offer the following additional response to a few specific questions.

#10: There are variances made to city ordinances all the time, and loopholes are readily exploited. We can't assume that these areas are in fact GCWA habitat, or that the steep slopes won't be developed. In fact, we recommend that only lands with legal protections be considered as protected habitat. Additionally, these "steep slope" lands are still subject to fragmentation, higher rates of depredation, human incursion, and other habitat stressors. That said, we recognize the importance of private land stewardship in GCWA and BCVI conservation. However, when addressing the threats to a species in a highly developed area like Bexar County, formal legal protection should be the standard for estimating available habitat.

#11: the BAT feels that buffers are important when calculating preserve standards. However, this biological need may be outweighed by other non-biological considerations. This may be an area where the CAC can find some flexibility and cost-savings.

Summary

It is vitally important to note that the BAT recommendations were based on species requirements, scientific knowledge, and biological issues. We also substantially considered the practicability of both implementing recommendations and accomplishing objectives. If the CAC has logistical, economic, or political concerns about our recommendations, we strongly recommend they consider those issues and make an appropriate decision based on the totality of their charge. Our charge, both adopted by the BAT members and statutorily imposed, required that we limit our discussions to primarily biological concerns. However, we did not make biological recommendations without also considering the feasibility and practicability of those decisions. We repeat our offer to be available for joint meetings and workshops and our willingness to comment on CAC decisions.

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BAT Recommendations for the SEP-HCP Conservation Program

Nov 18, 2010

Some items are presented as (required) and some as (recommended). In the final document, Plan Applicants have an option to specify items as either Requirements or Goals. The BAT makes a distinction thusly.

GCW Conservation Program

Summary:

The BAT recommends that GCW take occurring in Bexar County be mitigated at a ratio of 3:1 (acres of mitigation : acres of take), with at least 60% of the mitigation located within Bexar County or a 5-mile buffer around Bexar County. The remaining 40% of the mitigation may occur elsewhere within the Plan Area.

The BAT recommends that GCW take occurring outside of Bexar county be mitigated at a ratio of 2:1 (acres of mitigation : acres of take). Mitigation for take occurring outside of Bexar County may be located anywhere within the Plan Area.

The BAT recommends that no more than 10% of the GCW conservation credits be generated from public lands that were protected as of November 4, 2010.

Rationale:

Mitigation Ratios – The HCP requires that mitigation must be commensurate with the take, both in size and location. The GCW is experiencing a severe amount of habitat loss in Bexar County and, therefore, the degree of threat to the species is greater in Bexar County than in more rural counties. This higher degree of threat to the species warrants a higher mitigation ratio for take. Habitat outside of Bexar County is less threatened by habitat loss and may not require as much mitigation to offset the impacts of take.

Bexar County Mitigation – To help address the severe threat of habitat loss in Bexar County, it is appropriate to require a substantial portion of the mitigation for Bexar County take to be located in or just outside of the county boundary. This requirement also addresses the community's desire to help protect the mission at Camp Bullis and protect the biological integrity of previous public conservation investments (i.e., Government Canyon and other City of San Antonio preserves). Conserving additional lands that expand and/or connect these currently protected properties is necessary to ensure the long-term conservation value of these properties for the GCW.

Scenarios:

The BAT presents two examples for the amount of authorized take and the corresponding mitigation under the recommended approach described above (see attached Table). The amount of mitigation needed for the plan must correspond to the amount of authorized take. Scenario 1 illustrates the amount of incidental take that might be authorized via the mitigation formula recommended above, if the goal is to achieve a preserve size that represents the BAT's previous recommendation of 85,000 acres. Scenario 2 illustrates the amount of mitigation that would be required by the recommended mitigation formula for a more modest level of incidental take authorization.

1. Mitigation Ratio

- 1.1 Incidental Take of GCW Habitat in Bexar County should be mitigated at a ratio of 3:1 (acres of mitigation : acres of take), with at least 60% of the mitigation located within Bexar County plus a buffer around Bexar County. The remaining 40% of the mitigation may occur elsewhere within the Plan Area.
- 1.2 The BAT recommends that GCW take occurring outside of Bexar county be mitigated at a ratio of 2:1 (acres of mitigation : acres of take). Mitigation for take occurring outside of Bexar County may be located anywhere within the Plan Area.

2. **Preserve Configuration -Definitions of adjacency and contiguity will be provided in a separate document**

- 2.1. *Create preserves composed of individual parcels or clusters of adjacent parcels that include at least 500 acres of GCW habitat. Smaller parcels may be obtained to contribute to the preserve, but no credit is awarded unless the parcel contributes to a block of habitat that is 500 acres or greater (See Figure 1)*
- 2.2. *Prioritize the creation of a preserve system composed of conservation areas for the GCW that each contains approximately 5,000 to 10,000 acres of protected lands, which includes GCW habitat. These conservation areas will likely include currently protected parcels.*

Rationale: Patch size of 500 acres is an important predictor of habitat occupancy (Magness et al. 2006, Groce et al. 2010). Large contiguous patches of GCW habitat are distributed throughout several subregions of the Plan Area, in varying sizes, watersheds, and geologic types. Preserve units on the order of 5,000 to 10,000 acres are achievable and would be sufficiently large to reduce habitat threats, given appropriate management.

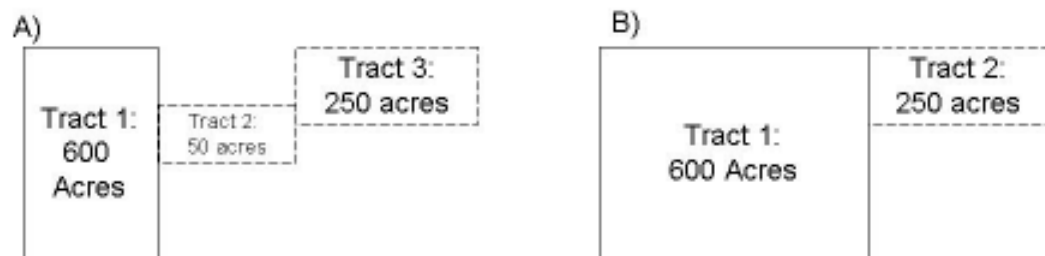


Figure 1. Solid border depicts protected lands with a legally binding conservation easement. Dashed lines represent properties being considered for enrollment in the Preserve. A) Tract 2 and 3 may be purchased at any time for the Preserve, but will not contribute to mitigation credits until the block meets or exceeds 500 acres. Tract 2 is eligible at any time for credit. Tract 3 will not contribute to credit until it is connected to an additional 250 acre block. (In this scenario, when Tract 2 is obtained. B) Tract 2 is immediately eligible for credit because it is adjacent to a block with at least 500 acres under protection.

3. **Preserve Distribution**

- 3.1. Lands mitigated for Take occurring in Bexar County must be mitigated 60% within Bexar County or a buffer around Bexar County (Required)
- 3.2. The buffer for Bexar County mitigation extends 5 miles from the County line. (recommended)
- 3.3 *Prioritize the protection of focal areas for the GCW in each of the Plan Area counties, except for Blanco County. (recommended)*
- 3.4 Prioritize the acquisition of preserve parcels that expand upon or help connect existing conserved lands and parks within the Plan Area (recommended)

Rationale: Protection of additional habitat in and adjacent to Bexar County is needed to conserve the species in that part of the species' range, prevent range contraction, and alleviate the threat of habitat loss to the species. Protection of several focal areas throughout the Plan Area is important for maintaining multiple subpopulations, connected through a preserve system that protects major blocks of habitat., prevents susceptibility to disease, and limits habitat degradation from encroachment, predators, and human disturbance. Planning future land conservation around currently existing protected lands would help ensure the most effective use of financial resources to achieve biologically significant, regional conservation of endangered species and complement other conservation efforts in the region, such as aquifer protection.

4. **Use of already protected public lands**

- 4.1 No more than 10% of the preserve system should consist of land publicly owned as of November 4, 2010. To qualify as a preserve component, a new conservation easement must be developed for GCW conservation and management. (required) This requirement should not be perceived to influence the spatial arrangement of the preserve system.

Rationale: Preserve size was calculated based on the harm to the species by new incidental take activities, so the bulk of the mitigation lands should consist of new lands not already protected in the public trust.

5. **Mitigation**

- 5.1 *Mitigate for impacts of GCW take resulting from participating projects by permanently protecting GCW habitat in the Plan Area at a rate proportional to the relative severity of the impact or degree of harm to the species.*

5.2 *Secure the mitigation to offset the impact to the GCW of take from participating projects before such take occurs.*

6. **Management and Biological Monitoring**

6.1 *Manage protected GCW habitat within preserves for the benefit of the GCW by minimizing threats and maintaining, restoring, or enhancing high quality habitat for the GCW.*

6.2 *Monitor GCW populations and habitats to track the status of the species within the preserve system and to inform the adaptive management process.*

7. **Research:** *Contribute to the body of scientific knowledge to benefit the recovery of the GCW*

Karst Conservation Program

The BAT recommends approaching the karst conservation program using an “Upfront Conservation with In-Lieu Fee Approach”, whereby:

- Karst participation is applicable for participating projects that occur within Karst Zones 1 – 4 (i.e., the “karst region”, mostly occurring in Bexar and Medina counties). The karst region is divided into 6 distinct “Karst Faunal Regions.”
- The Plan will offer incidental take authorization for the covered karst species only in KFRs where at least 3 caves (or “Karst Faunal Areas”) have been permanently protected for these species. At least one of these protected KFAs must meet the standards for a “high quality” preserve and the remaining 2 must meet the standards for a “medium quality” preserve. The Plan will not be able to provide take authorization for covered karst species within a KFR until this upfront mitigation has occurred.
- The Plan will then contribute to the creation of at least 2 high quality Karst Faunal Areas and 4 medium quality KFAs for each of the covered karst species in each of the KFRs (Total of 6 KFAs per KFR per species)
- In KFRs where take authorization is allowed, plan participants will provide mitigation fees to the Plan to offset the impacts of the project on karst species. The Plan will collect and use karst mitigation fees to protect caves in other KFRs to expand opportunities for take coverage.
- Based on current information, the BAT believes this approach assures that regional recovery of the covered species is possible in a KFR (thereby avoiding a jeopardy situation) prior to authorizing take in that KFR.

Rationale:

This approach addresses aspects of karst preserve size, configuration, and location. The recommendation for the establishment of 6 KFAs per KFR per species is based on substantial uncertainties regarding the taxonomic status of these poorly known species, persistence of the species within preserves under changed circumstances, and the paucity of basic biological and habitat/range information for these species.

Taxonomic uncertainty associated with cave organisms: Cave species are exceptionally difficult to differentiate because of convergent evolution. Similar ancestors invade caves and experience the same selection pressures (lack of light, near constant temps, high humidity, paucity of food, periodicity of nutrients), and this tends to make them morphologically indistinguishable. For this reason it is common for cave species to become “split” as more detailed research is performed. If the species are split, then their range is also reduced and they may be limited to fewer KFR's, in which case recovery can no longer be reached and therefore participation permits will be halted.

Uncertainty regarding the persistence of cave preserves based on the potential for natural or man-made catastrophic events: To actually reach recovery, the recovery plan calls for substantial additional research to demonstrate the adequacy of the recovery criteria. Since very little is known about the biology and needs of cave organisms, many of these research objectives include

gathering basic information on efficacy of different preserve sizes, vegetation components, and connectedness with other preserve areas. Because of this inherent uncertainty about these species, the plan also calls for monitoring to demonstrate population viability for at least thirty years. Since all of those additional actions will not necessarily be done in the timeframe of this plan, this plan proposes three additional preserves in each KFR as a 'buffer' to make up for that lack of information.

Lack of recent information about species boundaries: Most of the species boundaries given in the recovery plan are based on a single paper that was authored decades ago, and these papers may have been based on as few as one specimen. In general there is an extreme lack of verification of this information, partially based on a paucity of specimens available and a lack of taxonomists qualified to do the work. In some cases there is evidence for potential habitat barriers within the range of a species, and these barriers may in fact turn out to divide populations that are considered species (given an evolutionary species concept). In these cases, the recovery criteria would jump from 3 caves per KFR to 6, and the preserve goal would be met by this plan.

The BAT recommends the following criteria or standards for a Karst Preserve (i.e., a KFA):

- Protected caves may qualify as a KFA suitable for meeting the upfront conservation commitment if:
 - KFAs must be permanently protected for the benefit of the species through an appropriate legal mechanism. Appropriate management of protected habitats must also be assured.
 - High quality KFAs be sufficient to maintain the following habitat elements, as described in the Bexar County Karst Invertebrates Draft Recovery Plan (date March 2008):
 - High humidity
 - Stable temperatures
 - High water quality of surface drainage basin
 - High water quality of subsurface drainage basin
 - Low red-imported fire ant (RIFA) predation
 - Healthy cave cricket population
 - Natural quantities of native vertebrate matter input
 - Natural quantities of native plant matter input
 - Healthy native surface arthropod community
 - Healthy native surface plant community
 - Adjacent karst features for cave cricket metapopulations
 - Good connectivity with mesocaverns for population dynamics of troglobites
 - *Acreage is $\geq XXX$ (to be determined)*
 - Medium quality KFAs must maintain most of the following elements identified for a high quality KFA. *The acreage needed for a medium quality KFA is $\geq XX$ (to be determined).*
- Previously protected caves may count towards the upfront conservation commitment if they meet the standards for high or medium quality KFAs.

The BAT recommends the following process for assessing karst impacts and mitigation requirements. However, this process does not substitute for any other local, state, or federal rules or regulations.

- For participating projects in Karst Zones 1 – 4, conduct karst surveys in accordance with the process described in USFWS (2006), as summarized below.

- Step 1: Conduct an Initial Karst Feature Survey. It is preferred that geologists performing these surveys have experience conducting karst invertebrate habitat surveys with a permitted biologist.
 - NOT CONFIRMED PRESENT: If no features are identified from the surface assessment, then the assessment process is complete and mitigation fees are assessed on a per-acre basis (see mitigation fee structure below). The per-acre assessment addresses potential impacts to undetected sub-surface karst features that may be occupied by the covered karst species and encountered during construction. The per-acre assessment also addresses general, indirect impacts to karst habitat (including features outside of the project area).
 - Per-Acre Karst Mitigation Fees (no known occupied caves):
 - Karst Zones 1 and 2 = \$xx per-acre within the project area
 - Karst Zones 3 and 4 = \$x per-acre within the project area
 - CONFIRMED PRESENT: If karst features are identified, then additional work is needed to determine if the features may provide habitat for karst invertebrates.
- Step 2: Conduct a suitable habitat determination. It is preferred that geologists performing these surveys have experience conducting karst invertebrate habitat surveys with a permitted biologist.
 - NOT CONFIRMED PRESENT: If identified karst features do not represent suitable habitat for karst invertebrates, then the assessment process is complete and mitigation fees are assessed on a per-acre basis, as described above in Step 1.
 - CONFIRMED PRESENT: If identified karst features do represent suitable habitat for karst invertebrates, then additional work is needed to determine if endangered karst invertebrates are present.
- Step 3: Conduct a Karst Invertebrate Study.
 - NOT CONFIRMED PRESENT: If suitable habitat is not found to be occupied by endangered karst invertebrates (including the covered karst species and the Category 2 karst species), then the assessment process is complete and mitigation fees are assessed on a per-acre basis as described above.
 - CONFIRMED PRESENT: If endangered karst invertebrates are present, then the participant begins informal consultations with the Service to identify which avoidance or mitigation options are available.
 - Avoid Impacts: To avoid impacts you must avoid actions within one or more of the following areas, with case-by-case Service approval:
 - Surface drainage basin
 - Subsurface drainage basin
 - Cricket foraging range (105m)
 - Cave footprint
 - Mitigation Credit: Establish a high or medium quality KFA around the cave suitable for use as mitigation for impacts to karst species. Mitigation may be used by the plan participant to offset other karst impacts within the same KFR or may be acquired by the Plan to help achieve the goals and objectives of the Plan. Per-acre mitigation fees for karst species on other areas outside of the KFA will be waived for the project. If creating a high or medium quality KFA is not possible given the available acreage, the Service can evaluate the on-site mitigation on a case-by-case basis.
 - Karst Impact Mitigation Fees: Only applicable for projects that occur in KFRs where the upfront conservation commitments have been achieved. Is not applicable for any caves that contain Category 2 karst

species (these species are not covered for incidental take). Mitigation fees within Karst Impact Areas will be assessed based on the acreage of surface disturbance within the karst area of impact. Per-acre mitigation fees, as described above) for areas outside of the karst area of impact will also be assessed.

- Impact Area 1 (0 – 150 feet from the cave entrance) - \$xxxx per acre of surface disturbance within the zone
- Impact Area 2 (150 – 345 feet from the cave entrance) - \$xxx per acre of surface disturbance within the zone. **NOTE: The BAT is still reviewing the 345 ft designation and will clarify soon.**
- Alternate Survey Zones: Delineate the cave footprint, surface drainage basin, and subsurface drainage basin of the cave.
 - Cave Footprint = \$xxxx per acre of surface disturbance within the area
 - Surface Drainage Basin = \$xxx per acre of surface disturbance within the area
 - Cave cricket foraging area = \$xxx per acre of surface disturbance within the area
 - Subsurface Drainage Basin = \$xxx per acre of surface disturbance within the area



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December 30, 2010

Southern Edwards Plateau Habitat Conservation Plan (SEP-HCP)
 Biological Assessment Team (BAT)

RE: Comments, Questions and Concerns regarding the BAT Recommendations

Bexar County, as the applicant, requests the BAT address the following questions and concerns regarding the committee's recommendations presented to the Citizens Advisory Committee on the SEP-HCP conservation measures.

- A. The County requests that the BAT more fully explain the biological rationale for the recommended Golden Cheek Warbler (GCW) mitigation ratios and the requirement for a substantial portion of the GCW mitigation to be located in Bexar County, particularly in light of the following considerations:**
1. Mitigation ratios. The 2009 Camp Bullis Biological Opinion prepared by the U.S. Fish and Wildlife Service (USFWS) describes the Department of Army's voluntary 3:1 to 0.5:1 graded mitigation ratios as "extraordinary efforts on the part of Camp Bullis to not only off-set the anticipated adverse effects, but to add to the recovery potential for the (GCW) due to their proposed voluntary mitigation strategy." This rationale would suggest that the 3:1 and 2:1 mitigation ratios proposed by the BAT also include an "extraordinary" contribution to recovery, beyond what might be needed to adequately compensate for the adverse impacts of the authorized take.
 2. Bexar County mitigation. The BAT recommended a substantial portion of the mitigation for covered habitat loss in Bexar County to be located within or within five miles of the Bexar County boundary. The BAT has stated that the rationale for this provision is to ensure that the mitigation is close to the take, as required by the USFWS. However, the standards for a HCP and an incidental take permit included in the Endangered Species Act do not include such a requirement (the only regulatory standard is that the mitigation must be to the maximum extent practicable). The USFWS 1996 HCP Handbook, which represents the USFWS' official published policy for the development of HCPs, states (page 3-21):

Generally, the location of replacement habitats should be as close as possible to the area of impact; it must also include similar habitat types and support the same species affected by the HCP. However, there may be good reason to accept mitigation lands that are distant from the impact area – e.g., if a large habitat block as opposed to fragmented blocks can be protected or if the mitigation lands are obtained through a mitigation fund. Ultimately, the location of mitigation habitat must be based on individual circumstances and good judgment.

The policy described in the HCP Handbook indicates that it may be acceptable to have mitigation located distant from the habitat loss, if the conservation value of that mitigation is greater (such as being able to protect a larger block of habitat).

3. Currently protected lands in Bexar County. As part of the justification for requiring a large amount of mitigation to be located in Bexar County, the BAT has indicated that the GCW populations on currently protected lands (such as Government Canyon and other San Antonio parks and preserves) are at risk of extirpation if additional lands are not protected to expand and/or connect these currently protected properties. However, the recent TAMU study by Morrison et al. (2010), suggests that patches of habitat that are at least 500 acres have a probability of occupancy that approaches 100%. Bexar County currently has at least 3 clusters of adjacent parks or preserves that include more than 500 acres of GCW habitat, not including Camp Bullis. The Government Canyon complex of protected lands includes approximately 11,500 acres. The cluster of existing parks and natural areas that includes Friedrich Park, Crownridge Canyon, and Rancho Diana includes approximately 2,200 acres. The private GCW conservation lands for Indian Springs and Cibolo Canyon also include approximately 2,000 acres. All the current GCW habitat models indicate that nearly all of these acres may be suitable GCW habitat. Given the size of these clusters of protected lands and the presence of approximately 2,000 acres of additional protected lands containing GCW habitat within the county, it seems unlikely that Bexar County would lose its GCW population, even if these large clusters of protected lands were to be completely surrounded by development.

B. The County would like the BAT to explain why the BAT finds that their recommended level and distribution of mitigation is biologically necessary to adequately balance the amount of harm to the species from the corresponding amount of incidental take requested and meet the issuance criteria for an incidental take permit. The County also asks the BAT to recommend an appropriate level of mitigation that would meet the permit issuance criteria, without making a substantial contribution to recovery of the species.

1. Potential severity of threat. The BAT has discussed that higher mitigation ratios for Bexar County take are warranted due to the potential greater risk and severity of threats to the species in this area, compared to other parts of the plan area. Mitigation ratios that are based on potential severity of threats to the species could require plan participants to mitigate at a level that is intended to compensate for impacts caused before the plan was in place or for future impacts caused by non-

plan participants, not just the impacts of the take covered by the plan. The Endangered Species Act requires that “the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.”

C. The County would like the BAT to explain what types of impacts these mitigation ratios are intended to address. If the BAT recommends mitigation at a level that includes a substantial contribution to recovery, would this mitigation be understood to cover both the direct and indirect impacts of authorized take, and simplify the assessment of impacts (direct, indirect, and cumulative) in the participation process?

1. Recent population estimates. Texas A&M University (TAMU) recently reported estimates of the GCW population size, based on patch-specific GCW densities and occupancy rates derived from field data collected across the range of the species (Morrison et al. 2010). The TAMU estimates suggest that a range-wide population of approximately 370,000 adult GCWs occur over approximately 4.1 million acres of potential habitat. GCW population estimates at the time of listing ranged from approximately 9,600 to 32,000 individuals (Groce et al. 2010). Therefore, the current GCW population may be at least an order of magnitude larger than previously thought. The USFWS status review for the BCV also found that the overall breeding population of the vireo is substantially larger than was known at the time of listing (by a similar order of magnitude) and concluded that the magnitude of the threats to the species were sufficiently reduced to justify a recommendation for downlisting to threatened. Similar biological arguments could be made for the GCW that the magnitude of the threats to the species may not be as severe as previously thought.

The County looks forward to your answers. In addition attached are specific questions submitted by a member of the CAC. Thank you for your time and attention to this matter.

Sincerely,

Renee D. Green, P.E.
County Engineer

Morrison, M. L., R. N. Wilkins, B. A. Collier, J. E. Groce, H. A. Mathewson, T. M. McFarland, A. G. Snelgrove, R. T. Snelgrove, and K. L. Skow. 2010. Golden-cheeked warbler population distribution and abundance. Texas A&M Institute of Renewable Natural Resources, College Station, Texas, USA.

Groce, J. E., H. A. Mathewson, M. L. Morrison, and N. Wilkins. 2010. Scientific evaluation for the 5-year status review of the Golden-cheeked Warbler. Prepared for the U.S. Fish and Wildlife Service. Texas A&M Institute of Renewable Natural Resources, College Station, Texas, USA.

Attached are additional questions from a member of the CAC:

I have numerous questions regarding some of the proposed requirements of this plan, and I have listed below several of those for further consideration.

1. Are the currently proposed mitigation ratios for GCW and BCV based primarily on population projections originally produced by Wendell Davis? If they are based on other issues, what are some of the other considerations?
2. If the population projections change, will the proposed ratios change accordingly?
3. Bexar County had a growth rate of 18.6% from 2000 to 2009. During that same period, Hays County grew at 59%, Williamson County grew at 64%, and Comal County grew at 47%. None of their associated HCPs have REQUIRED mitigation at a ratio of 3:1. What different biology in Bexar County indicates that the SEPHCP should be treated differently?
4. Guidance on Mitigation from HCP Handbook stated clearly that contribution to recovery is often part of an HCP but not a statutory requirement. If the HCP is written with the proposed mitigation ratios, then it will become a statutory requirement making recovery mandatory for anyone that participates. Why would this be allowed to occur, if it is not otherwise required?
5. Guidance on Mitigation from HCP Handbook indicates that there might be valid reasons to accept mitigation lands that are distant from the impact area. Since this is considered an acceptable practice, why is it being excluded from the SEPHCP?
6. GCW HCPs appear to have per acre costs to the user of \$6,500 or less, with less than 10% participation. If the SEPHCP is going to cost the user \$9,000+ per acre, as indicated in earlier cost projections, wouldn't that likely indicate much lower usage rates? If usage rates are lower, doesn't that diminish the probability that the HCP will be successful?
7. The Camp Bullis plan allows for mitigation anywhere in Recovery Unit 5. What is the biological reason that the SEPHCP will be required to have at least 60% of its mitigation in Bexar County?
8. The Camp Bullis Plan calls for mitigation of occupied habitat at a 3:1 ratio, buffer at a ratio of 2:1, and unoccupied habitat at a ratio of 1:1. What is the biological justification for the difference in those requirements versus those proposed in the SEPHCP?
9. The Camp Bullis plan allows for effective on-site mitigation ratios of 1:1 for tracts of 500+ contiguous acres. What is the biological reason that these same ratios are not allowed in the SEPHCP?
10. The City of San Antonio adopted its Steep Slope Ordinance prohibiting development on land with slopes greater than 20%, an area of approximately 26,866 acres. In addition, approximately 15,244 acres of additional land having slopes greater than 25% exists in Bexar County, bringing the total number of acres that will most likely not be developable to over 42,000 acres. Neither the BAT nor the USFWS have recognized this or shown any indication that this land could be considered as areas for undisturbed habitat. What is the biological reason for this?
11. Imbedded in the cost calculations is a 25% increase in mitigation tract size to account for "non-habitat" occurring within the acquired reserves. This is assumed for ALL acquired reserves. Upon what fact is that assumption based? Does that mean that even the best available acquired habitat will have at least 25% non-habitat? Will marginal acquired habitat have no more than 25% non-habitat? Is there no way to judge that for each piece of habitat to be acquired?

In general, it appears that the proposed rules for the SEPHCP are being written as unnecessarily stringent, without much thought to flexibility or how this plan compares to other plans in Texas. As a representative of the members of the real estate industry, it is my duty to comment on their behalf as to whether or not I think this plan will be beneficial to them. Thank you for asking for the additional input and for being open to additional discussion on these matters.

Michael D. Moore