

AGENDA ITEM 32

Consider approving Millennium and Wilco Cave Preserve agreements and management plans with U.S. Fish and Wildlife Service.

Alan Glen, from Smith, Robertson, Elliott & Glen LLP, presented two agreements for the establishment of the karst preservation in the regional park.

Moved: **Commissioner Hays**

Seconded: **Commissioner Limmer**

Motion: To approve Millennium and Wilco Cave Preserve agreements and management plans with U.S. Fish and Wildlife Service.

Vote: **4 – 0. Commissioner Boatright was absent from the dais.**

< Attachment >

MILLENNIUM PRESERVE AGREEMENT

This Millennium Preserve Agreement (this "Agreement") is made by and between the U.S. Fish and Wildlife Service (the "Service"), the Williamson County Karst Conservation Foundation, a Texas non-profit corporation (the "Foundation"), and Williamson County, Texas (the "County"), to be effective as of March 1, 2003. The Service, Foundation, and County are hereinafter referred to collectively as the "parties" and individually as a "party."

Recitals

A. The Service and the Foundation heretofore entered into that certain Williamson County Karst Conservation Fund Memorandum of Understanding dated effective November 15, 2002 (the "MOU"), whereby the Foundation is entitled to receive marketable mitigation credits in exchange for taking certain "Conservation Actions" approved by the Service related to acquisition, preservation and/or management of "karst" areas in Williamson County, Texas, for the benefit of certain endangered invertebrate species located therein.

B. The MOU contemplates that the Service and Foundation will enter into conservation action agreements in order to implement approved Conservation Actions.

C. The County and the Foundation have entered into a certain interlocal agreement pursuant to which they will cooperate in the implementation of Conservation Actions.

D. By its execution of this Agreement, the Service hereby approves the Conservation Action described herein, and the Service and Foundation agree that this Agreement shall be the conservation action agreement for such Conservation Action.

E. Because the karst area that is the subject of this Agreement will be owned and managed by the County as parkland, the parties agree that in this instance, although the County is not a party to the MOU, it is appropriate that the County be a party to this Agreement and assume the obligations as described herein.

NOW, THEREFORE, for and in consideration of the premises, the covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. Background and Nature of Conservation Action.

a. Within sixty (60) days after the effective date of this Agreement, or upon such earlier date as the County may elect, the County will acquire as a part of a larger parcel of land, an approximately 90-acre area of land located in Williamson County, Texas, and depicted on Appendix A to the Millennium Preserve Conservation Plan (the "Conservation Plan") attached hereto as Exhibit A, which 90-acre area is to be included as part of the Williamson County Southwest Regional Park. Such area contains several caves and other karst features (including the "Millennium Cave"), and is hereinafter referred to as the "Millennium Preserve."

b. The County, working in cooperation with the Foundation, hereby agrees to operate, manage, and monitor the Millennium Preserve in perpetuity in accordance with this Agreement and that certain Conservation Plan as same may be modified from time to time upon agreement of the parties. The parties acknowledge that the current form of the Conservation Plan may require some refinement and additional detail. The parties agree to work together to revise the Conservation Plan in a mutually acceptable manner within six (6) months after the effective date of this Agreement. It is the parties' intent that the Conservation Plan will serve as an adaptive, "living" document subject to such periodic revision as the parties agree to be in the interests of conservation of the listed species within Millennium Preserve. The Conservation Plan will be reviewed by the parties at least once every five (5) years. The Conservation Plan includes certain uses and activities that will be permitted within the Millennium Preserve. The County and the Foundation agree to keep detailed, well-ordered records of the operation, management, and monitoring activities related to Millennium Preserve and shall provide to the Service at least annually (by October 1 of each year) written reports regarding the status of such activities.

c. In order to fund the County's acquisition of a portion the Millennium Preserve, the Texas Parks and Wildlife Department (TPWD) has, under separate agreement, made available to the County the sum of \$321,737.00, which represents proceeds from a grant proposal made by TPWD on behalf of the County for a Recovery Land Acquisition Grant from the Service's Cooperative Endangered Species Conservation Fund (the "RLA Grant").

d. The County will fund the balance of the cost to acquire Millennium Preserve. In addition, the County shall establish a restricted account into which it or the Foundation will from time to time deposit funds to be used for the ongoing operation, management, and monitoring of Millennium Preserve in accordance with this Agreement and the Conservation Plan. Such restricted account is the "Fund" referenced in the MOU and may include amounts dedicated to the operation, management, and monitoring of other karst preserves owned or managed by the County or the Foundation. The County will ensure accurate and complete accounting and documentation according to standard accounting practices for all activities related to the account and will invest funds in the

account in a manner consistent with other funds of a similar nature from time to time held and invested by the County. The parties agree that it is important to provide for the operation, management, and monitoring of the Millennium Preserve in as cost-effective manner as reasonably possible, and the parties will cooperate and coordinate on an ongoing basis to achieve that objective.

e. Properties purchased with RLA grant proceeds are not available to mitigate other impacts to listed species. Because the RLA Grant proceeds paid to the County represent only fifty percent (50%) of the amount requested by the County for the acquisition of the Millennium Preserve Area, the other fifty percent (50%) of the Millennium Preserve remains available to provide mitigation of impacts to *Texella reyesi* separately authorized by the Service. The parties agree, therefore, that this mitigation (that is, 50% of the mitigation value of Millennium Preserve) will, in consideration for and subject to the County's receipt of certain funds from the Texas Turnpike Authority (TTA), be considered as satisfying a part of TTA's mitigation commitment for the impacts associated with State Highway 45 North. The balance of such mitigation commitment by TTA is being addressed pursuant to that certain Wilco Preserve Agreement of even date herewith by and among the parties hereto.

2. Term. This Agreement shall have an initial term of thirty (30) years and thereafter shall be automatically renewed for successive five (5) year terms unless and until sooner terminated by the parties hereto. The termination of this Agreement shall not affect the obligations of the County, in cooperation with the Foundation, to operate, manage, and monitor Millennium Preserve in accordance with this Agreement, such obligations surviving any termination of this Agreement. Termination of the MOU shall not affect this Agreement.

3. Entire Agreement. This Agreement contains the entire agreement of the parties hereto with respect to the matters covered by this Agreement, and no other agreement, statement, or promise made by any party, or to any employee, officer, or agent of any party, which is not contained in this Agreement shall be binding or valid with respect to such matters.

4. Notices. Notices to be given hereunder shall be made in writing and may be given by delivering the same in person, by mail, or by telecopy (facsimile). Notices shall be effective only if and when received at the address of the party to be notified.

If to the Service:

Supervisor
U.S. Fish and Wildlife Service
Austin Ecological Service Field Office
10711 Burnet Road, Suite 200
Austin, TX 78758
(512) 490-0057
Fax (512) 490-0974

If to the Foundation:

Charlie Crossfield
Counsel
309 E. Main
Round Rock, TX 78664
(512) 255-8817
Fax (512) 255-8986

If to the County:

Parks Department
Attention: Director
1003 North Austin Ave.
Georgetown, TX 78626

5. Interpretation and Headings. The language in all parts of this Agreement shall in all cases be simply construed according to its fair meaning and not strictly for or against any party. Headings of the paragraphs of this Agreement are for the purposes of convenience only and the words contained in such headings shall in no way be held to explain, modify, amplify, or aid in the interpretation, construction, or meaning of the provisions of this Agreement.

6. Modification. This Agreement is not subject to modification except in a writing signed by all parties. Any attempted modification not in compliance with this requirement shall be void.

7. Successors and Assigns. This Agreement and each of its covenants and conditions shall be binding on and shall inure to the benefit of the parties and their respective successors and assigns.

8. Attorneys' Fees. If any action at law or equity including any action for declaratory relief is brought to enforce or interpret the provisions of this Agreement, each party to the litigation shall bear its own attorneys' fees and costs.

9. No Partnerships. This Agreement shall not make or be deemed to make any party to this Agreement an agent for or the partner of any other party.

10. Federal Appropriations. The duty of the Service to carry out its obligations under this Agreement shall be subject to the availability of federal appropriated funds.

11. Press Releases. The Foundation and County will obtain prior approval from the Service of all press releases, published advertisements, or other statements intended for the public that refer to this Agreement or to the Service, the Department of the Interior, or the name or title of any employee of the Department of the Interior in connection with this Agreement.

12. Authority. This Agreement is entered into under the authority of the Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661-666c, the Fish and Wildlife Act of 1956, 16 U.S.C. § 742(f) et seq., and the Endangered Species Act of 1973, 16 U.S.C. § 1531 et seq., as amended ("Act"), which authorize the Service to provide assistance to, and cooperate with, State and private organizations in activities that provide for the management, conservation, and protection of fish, wildlife, and plant resources. Under the Act, the Service is responsible for the listing and recovery of listed species, and cooperating with State and Federal agencies to achieve recovery of listed species.

Executed in multiple originals to be effective as of the date first specified above.

U.S. FISH AND WILDLIFE SERVICE

By: Robert J. Pie
 Title: Supervisor
 Date: 2/11/03

WILLIAMSON COUNTY KARST
 CONSERVATION FOUNDATION

By: [Signature]
 Title: President Karst Foundation
 Date: 2/11/03

WILLIAMSON COUNTY, TEXAS

By: John C. Daehler
 Title: County Judge
 Date: 2/11/03

Exhibit:

A – Millennium Preserve Conservation Plan



EXHIBIT A

MILLENNIUM PRESERVE CONSERVATION PLAN

Prepared by
Athabasca Consulting, Inc.

for

Williamson County, Texas

and the

Williamson County Karst Conservation Fund

February 2003

athabasca consulting, inc.

1001 Mopac Circle #100 Austin, Texas 78746 phone - 512.347.9000 fax - 512.306.0974 www.athabasca.net



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1.0 The Millennium Preserve

1.1 Summary

The Millennium Preserve (the "Preserve") is approximately 90-acres of dense oak/Ashe juniper woodland with interspersed native grassland. The Preserve is located in the western portion of the 558-acre Williamson County Regional Park (WCRP) (Appendix A). The WCRP entrance is located at 3005 County Road 175 (Sam Bass Road) north of FM 1431, Leander, Williamson County, Texas. The Preserve has been established pursuant to that certain Millennium Preserve Agreement dated to be effective March 1, 2003, by and among Williamson County, the Williamson County Karst Conservation Foundation, and the U.S. Fish and Wildlife Service (the "Service"). Of the three caves located within the Preserve, two caves are occupied by the Bone Cave harvestman (*Texella reyesi*) ("BCH"), a federally listed endangered species. The third cave has potential habitat for the BCH, but no BCH specimens have been collected to date. Some passive uses such as a skate/bike path (the "Path") will be permitted within the Preserve; however, without prior approval of the Service, the activities will be established at least 300-feet from the mouth of any cave occupied by the BCH with the exception of the existing road approximately 200-feet south of Little Demon Cave (see Appendix A). The two caves occupied by the BCH within the Preserve are Millennium and Little Demon. The cave with potential BCH habitat is Through-Trip. Descriptions and maps of each cave are included as Appendix B and C, respectively.

1.2 Purpose

The purpose of this cave management plan is to establish a program for the operation, management, and monitoring of the Preserve consistent with conservation of the BCH. Specific goals include establishing and protecting a 90-acre preserve area, maintaining the hydrologic regime, monitoring and controlling red imported fire ant (RIFA) infestation, and preventing human access into the caves.

1.3 Bone Cave Harvestman

The only federally listed endangered invertebrate species known to occur within the Millennium Preserve is the Bone Cave harvestman (*Texella reyesi*) (BCH). The BCH was identified in two of the three caves: Millennium and Little Demon. The third cave, Through-Trip, exhibits potential for BCH habitat and is recommended for recollection during optimal conditions.

The BCH is a long-legged, blind, pale orange harvestman, with a body length of about 1.4 to 2.7 mm. It is sensitive to humidities below saturation. They are most often found under large rocks in caves, but are occasionally seen walking on moist floors. In the hottest part of the summer when small caves warm up and become drier, they can be found in the coolest, dampest areas. The BCH is a troglobite, which is an animal that is specially adapted to subterranean existence and spends its entire life underground. Further information about the BCH can be found at <http://ecos.fws.gov/servlet/SpeciesProfile?spcode=J009>.



2.0 Property Description

2.1 Surface

The historical land use on the Preserve appears to be minimal, however, some cattle ranching is likely and more recently deer hunting. The majority of the preserve is dense oak/Ashe juniper woodland with interspersed native grassland. Vegetation within the Preserve includes but is not limited to: Ashe juniper (*Juniperus ashei*), live oak (*Quercus fusiformis*), cedar elm (*Ulmus crassifolia*), post oak (*Quercus stellata*), mesquite (*Prosopis glandulosa*), hackberry (*Celtis laevigata* var. *texana*), yaupon holly (*Ilex vomitoria*), agarita (*Mahonia trifoliolata*), prickly pear cactus (*Opuntia lindheimeri*), pencil cactus (*Opuntia leptocaulis*), and various native grasses.

Soils on the Preserve are classified within the Eckrant series (Soil Conservation Service, 1974) and consist of Eckrant extremely stony clays 0–3% slopes. The soils profile thickness may range from 1.5 feet in thickness to limestone bedrock outcrops.

Elevation ranges from 880 feet to 995 feet above mean seal level (MSL). Contour elevations gradually decline from north to south (topo map, Figure X).

2.2 Subsurface

The Preserve is located within the Northern Edwards Plateau and within the defined boundaries of the Northern Edwards Aquifer Recharge Zone. The subgrade material of the preserve is identified as the Edwards Limestone formation, Kainer Unit, Kirschberg, and Grainstone Members (KeK). The Kirschberg member is the most favorable cave forming member. Caves and karst features are also found within the Grainstone member, however, the limestone is more resistant to solution than the Kirschberg member and features are commonly found developed within the underlying Kirschberg layer. The caves within the Preserve are namely developed within the Kirschberg member as low, wide bedding planes. Therefore, the majority of the caves are shallow in depth (less than 40 feet) with the horizontal extent generally well exceeding the vertical depth.

Intensive karst survey and excavation have confirmed three caves and one sink within the boundaries of the Millennium Preserve. As previously mentioned, two of the three caves contain BCH: Millennium and Little Demon Caves. All three caves were mapped and are included as Appendix C.

2.3 Hydrogeologic Setting

Groundwater movement within the subgrade of the area is dictated by geologic control of the bedding dip to the east/northeast. Runoff water captivated by most of the karst features descends vertically only to shallow depths of approximately 35 to 40 feet before being forced to move horizontally to the water table or the Edwards Aquifer.



3.0 Description of Planned Land Use

No development, except as permitted under this Plan or otherwise approved by the Service, will occur within the Preserve. Activities within the Preserve will be limited to passive uses such as biking, bird watching, and educational programs. A skate and bike path, designed to utilize portions of the 90-acre Preserve (Appendix A), will be permitted. The proposed layout of the Path is namely outside of the of the BCH cave buffer zones (300-foot radius) (with the exception of the existing park road), with the majority of the Path layout remaining 492 feet from the BCH caves. Fencing will be installed between the southern boundary of the Preserve and the existing park road. Other future allowable uses within the Preserve will be submitted to the Service for its approval, such approval not to be unreasonably withheld or delayed. The parking lot used to access the Path will be located outside of the Preserve and will have posted curfew hours, restricted activities, and park rules.

The BCH and BCH habitat caves will be gated by a qualified contractor using methodology and designs acceptable to the Service.

4.0 Operation, Management, and Monitoring Plan

4.1 Monitoring

4.1.2 Routine monthly site inspections will include checking for the following:

- ◆ Signs of vandalism, unauthorized entry, trash dumping
- ◆ Damage to vegetation within the buffer zones due to visitors and/or pets going off-trail
- ◆ Presence of RIFA within 10 meters (~33 feet) of each BCH cave entrance
- ◆ Inspecting all cave gates

4.1.3 Annual or Less Frequent Preserve inspections will include:

- ◆ Biospeleological Surveys of all BCH caves (once every 3 years)
- ◆ RIFA treatment within 300 feet of each BCH cave entrance (at least once a year)



- ◆ Monitoring any change in vegetation within the cave buffer areas using baseline information to evaluate degree of invasion by non-native species and to determine the need for restoration or manipulation of vegetation to maintain a native plant community (once every 3 years)
- ◆ Download recorded information from data logger (annually)

The results of the biospeleological surveys, RIFA treatment program, data logger, vegetation monitoring, and all other operation and maintenance activities will be compiled in an annual report and submitted to Williamson County, the Williamson County Karst Conservation Foundation, and USFWS.

4.1.4 Baseline Data

Baseline data will be collected for each BCH and BCH habitat cave within the Preserve in relation to species (listed and unlisted) present, BCH habitat quality, and temperature and relative humidity within each cave. Baseline data will also be collected within each BCH and BCH habitat cave buffer zone for the presence/density of RIFA mounds and structure/composition of vegetation. The first year of operation and management will also include gating the BCH and BCH habitat caves, installing a data logger in one of the BCH caves, and filling all other non-BCH caves according to TCEQ guidelines.

4.2 Management

Trash removal and damage repair will be conducted as needed for each BCH cave. If damage to vegetation within the buffer zones occurs, it will be restored. If damage to vegetation near BCH caves becomes a reoccurring problem, perimeter fencing may be required to detour park visitors from the buffer zones. All cave gates will be maintained and repaired as needed.

4.2.1 RIFA Control

The method of exterminating RIFA within the Preserve should follow the current USFWS recommendation (Appendix D) or other USFWS approved methods that may be developed in the future. Initial efforts to remove RIFA mounds maybe more extensive, especially within the cave buffer zones, in hopes to eliminate/reduce mounds to a manageable count. In areas where fire ant populations are high, RIFA treatment may be required more often than twice a year (minimally spring and fall of each year) until mound numbers drop to fewer than 5 mounds within 170 feet of a cave entrance. Thereafter, if effective, treatment will occur only in the spring.

4.2.2 Adaptive Management

Adaptive management is an integrated method for addressing uncertainty. Adaptive management of the Preserve will enable management efforts to be focused on observed changes within or affecting the Preserve or the Plan. Adaptive management may require some tasks to be executed more often than projected. If management is demonstrated to be ineffective, the operation, management and monitoring of the



Millennium Preserve will, subject to available funding, adjust accordingly. Examples of adaptive management activities may include more intense RIFA control, fencing around caves to prevent vandalism, removal of invasive plant/animal species found to be detrimental to the karst ecosystem, and/or removal of species found to directly/indirectly harm the karst ecosystem. If any additional BCH caves are discovered within the Preserve, such caves will be included in the Preserve’s approved Plan.

5.0 Funding

Estimated Hours/Costs for Annual Operation and Maintenance Tasks:

| Task | Estimated cost/hours per cave | Totals for 3 EIS caves | Frequency of task | Estimated annual total per task |
|---|-------------------------------|------------------------|--------------------|---------------------------------|
| Sample and Collect karst invertebrates (3 EIS/EISH caves) | \$600/cave | \$1,800 | Once every 3 years | \$1,800/3=\$600 |
| Curation of Insect Samples | \$45-\$100 /cave | \$135-\$300 | Once every 3 years | \$300/3=\$100 |
| Vegetation Monitoring | 4 hours | 12 hours | Once every 3 years | \$900/3=\$300 |
| RIFA control | 16 hours | 48 hours | Annually | \$2,000 |
| Monitoring/Requesting: Routine Monthly Inspections | 3 Hours | 9 Hours | 12 times a year | \$2,700 |
| Report Preparation of Operation and Maintenance Tasks/Results | | | Annually | \$1,500 |
| Miscellaneous Administrative Costs | | | | \$1,000 |
| Contingency Fund (unforeseen operation and maintenance tasks) | | | | \$2,500 |
| Total Annual O & M Costs | | | | \$10,700 |



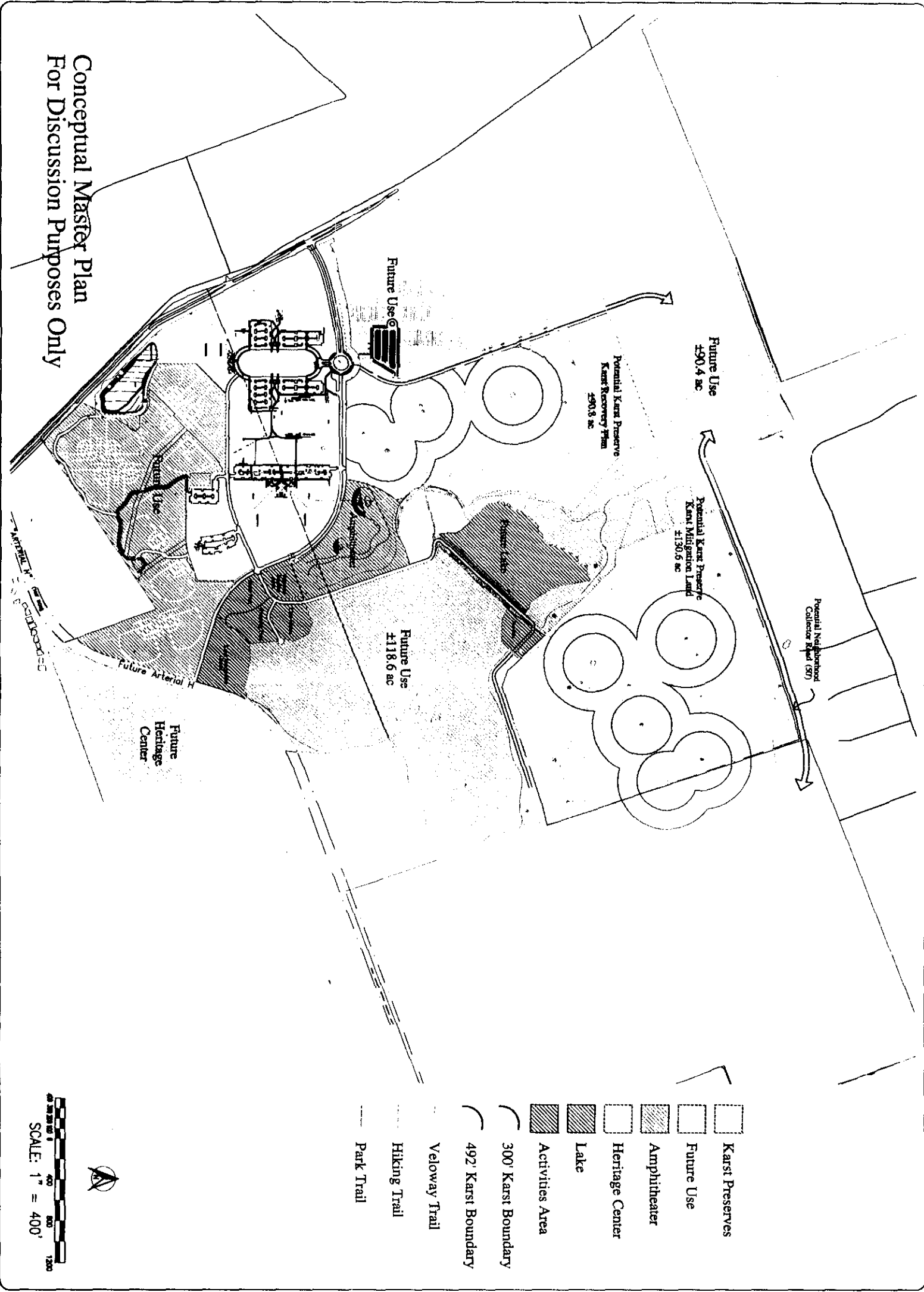
The first year of operation and management will include collecting baseline data (RIFA and vegetation surveys), gating the 3 BCH/BCH habitat caves, and filling all other non-BCH caves according to TCEQ guidelines. The upfront costs of gating caves, filling caves, collecting baseline data, initial RIFA treatment, fencing, and purchasing a data logger are not included in the annual O&M costs as these items are one-time expenses.

Upfront Operation and Maintenance Costs:

| Upfront Costs | Hours per Task | Cost | Total Cost/Hours |
|---|--------------------------------|---|------------------|
| Gating 3 EIS Caves | n/a | \$12,025 | \$12,025 |
| Intensive RIFA Treatment | 180 hours | RIFA bait (~\$50 per cave) + labor hrs (aci & county) | \$5,750 |
| Data Logger - | n/a | \$200 each + \$350 software | \$550 |
| Fencing (southern preserve boundary) | | \$10,000- \$12,000 | \$12,000 |
| Baseline Data Surveys: | | | |
| Cave Survey (3 EIS caves) | 4 hrs x2 biologist x3 caves | \$600 per cave | \$1,800 |
| RIFA density survey | 24 hours | 24 hours (aci) | \$1,800 |
| Vegetation Composition/Structure Survey | 12 hours | 12 hours (aci) | \$900 |
| Total Upfront Costs | | | \$34,825 |



APPENDIX A



| | | | | | | |
|---|---|---------------------------|------------------------|------|----|----------|
| LAND STRATEGIES INC. 1810 LAND CREEK CV. SUITE 100 AUSTIN, TX 78746 TEL: (512) 355-0000 FAX: (512) 355-0172 1800LandPlan.COM | Williamson County Park CR 175 Proposed Conceptual Plan | OWNER INFORMATION: | REVISION BLOCK: | | | |
| | | | NO. | DATE | BY | COMMENTS |
| | | | | | | |
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RECORDERS MEMORANDUM
All or parts of the text on this page was not
clearly legible for satisfactory recordation.



APPENDIX B

**Through Trip Cave**

This cave has two entrances and consists of crawlway type passages and a very low but wide chamber with a total length and depth of 105 feet and 16 feet, respectively. The crawlway is approximately 60 feet long. The chamber has a diameter and height of 20 feet and 1 foot, respectively. A biological collection yielded several invertebrate species, however the endangered *Texella reyesi* was not discovered. At the time of investigation, the outside temperature was 103°. The temperature within the cave was 75°, with a humidity of 94%. Although no endangered invertebrate species were collected, this cave has the potential to contain habitat and has minor recharge potential. It is recommended that the cave undergo re-collection during more agreeable seasonal temperatures and conditions.

Little Demon Cave

This cave consists of a shaft and an open chamber with a total length and depth of 75.6 feet and 19 feet, respectively. The shaft has a length of approximately 12 feet. The entrance shaft opens up into a long, linear cave. The majority of the cave is made up of ragged and abrasive popcorn rock. A biological collection yielded several invertebrate species, including *Texella reyesi*. At the time of investigation, the outside temperature was 101°. The temperature within the cave was 76°, with a humidity of 94%. This cave is considered habitat for the endangered invertebrate species and has minor recharge potential.

Millennium Cave

This cave consists of a medium sized, open, entrance chamber and a larger lower cave with a total length and depth of 82 feet and 29 feet, respectively. The entrance chamber was very dry at the time of investigation, therefore it is not considered habitat for any endangered invertebrate species. The lower cave has a diameter and height of 40 feet and up to 4.5 feet, respectively. This room, (the "Sleeping Hollow" Room) contains an impressive array of flowstone, spelothems, and stalactites. A biological collection yielded several invertebrate species, including *Texella reyesi*. At the time of the investigation, the outside temperature was 98°. The temperature within the lower chamber was 74°, with a humidity of 98%. This cave is considered habitat for the endangered invertebrate species and has minor to intermediate recharge potential.



APPENDIX C

MILLENNIUM CAVE

WILLIAMSON COUNTY, TEXAS

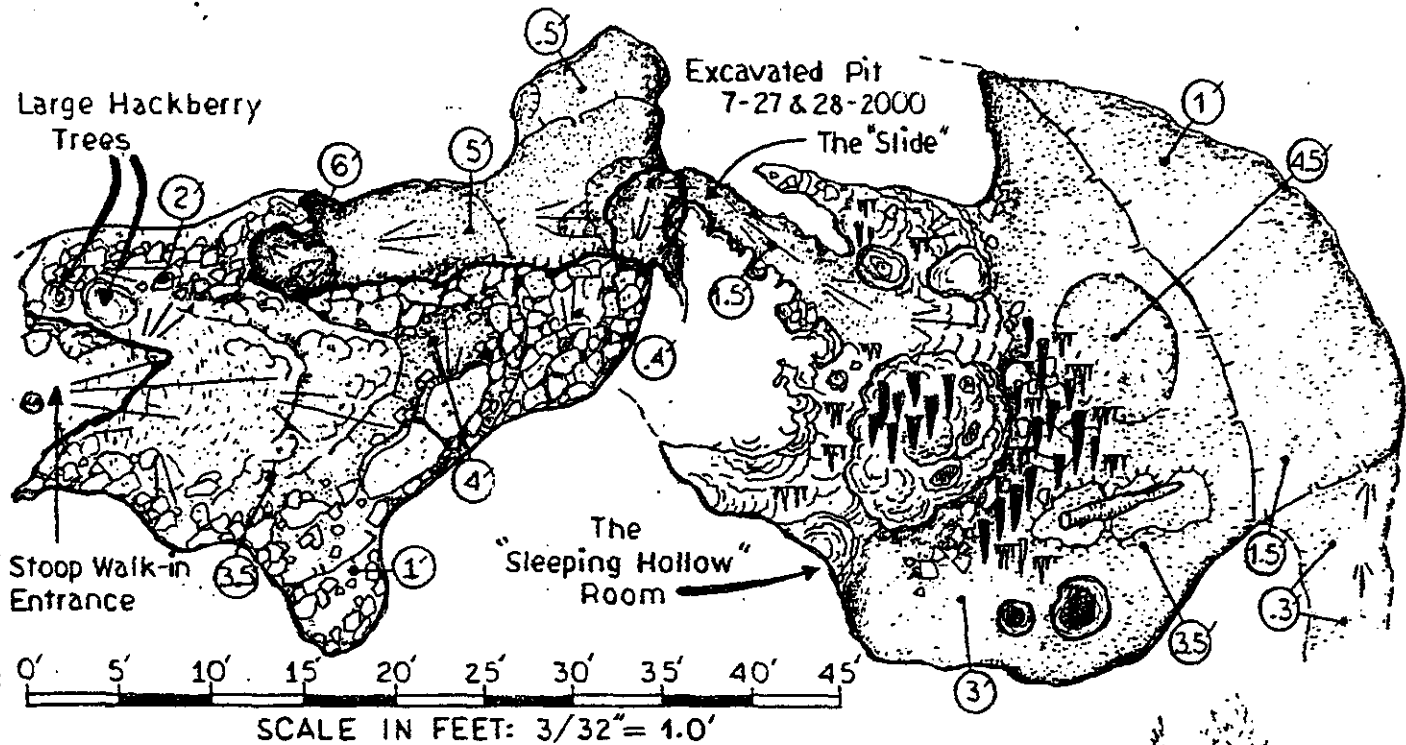
SUUNTS & TAPE SURVEY • JULY 28, 2000

PERSONNEL; MIKE WARTON & ASSOCIATES: A. STAPLES • B. HINDES •

C. LANGILLE • B. WETUSKI • M. WARTON • DRAFT BY: M. WARTON

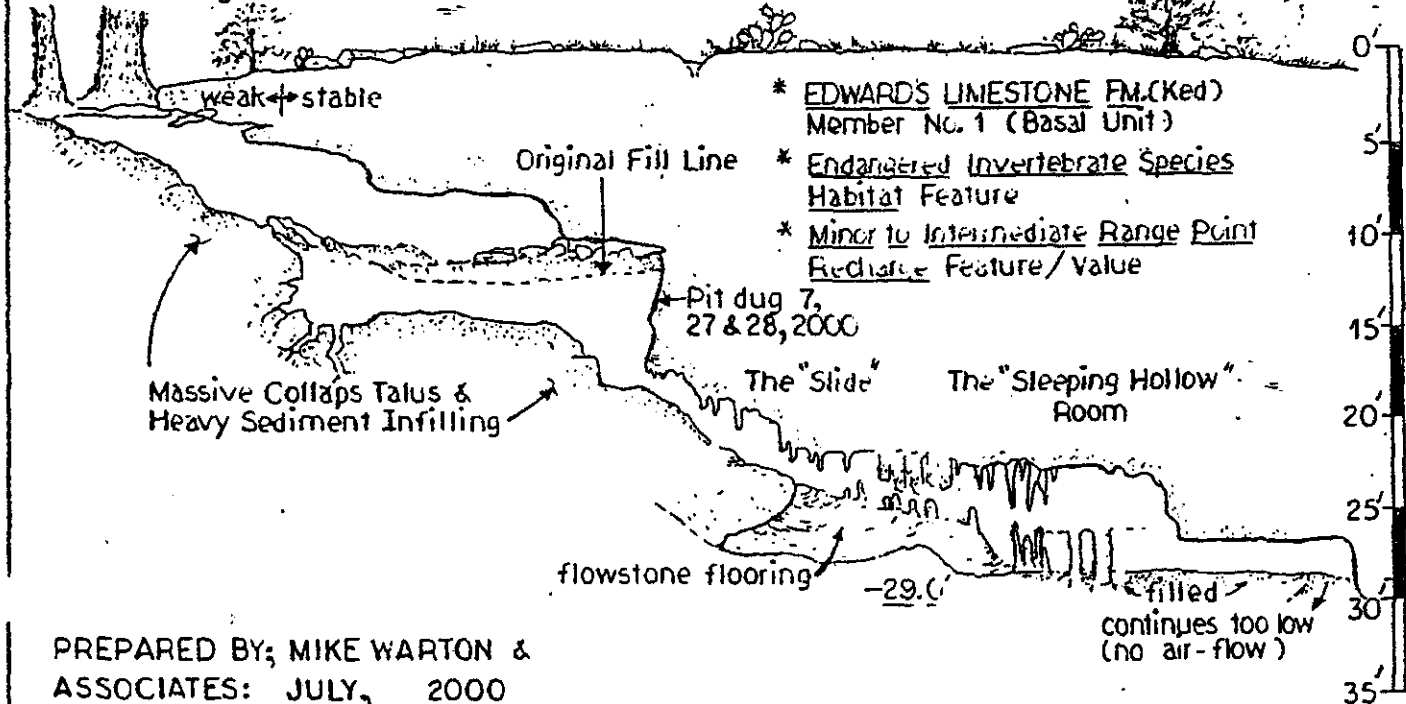
LENGTH: 82.7' DEPTH: 29.0' CONFIGURATION OF: 80' x 35'

PLAN (5') = CEILING HEIGHTS IN FEET



PROFILE

South looking North



PREPARED BY; MIKE WARTON &
ASSOCIATES: JULY, 2000

LITTLE DEMON CAVE

WILLIAMSON COUNTY, TEXAS

SUUNTOS & TAPE SURVEY • JULY 27, 2000

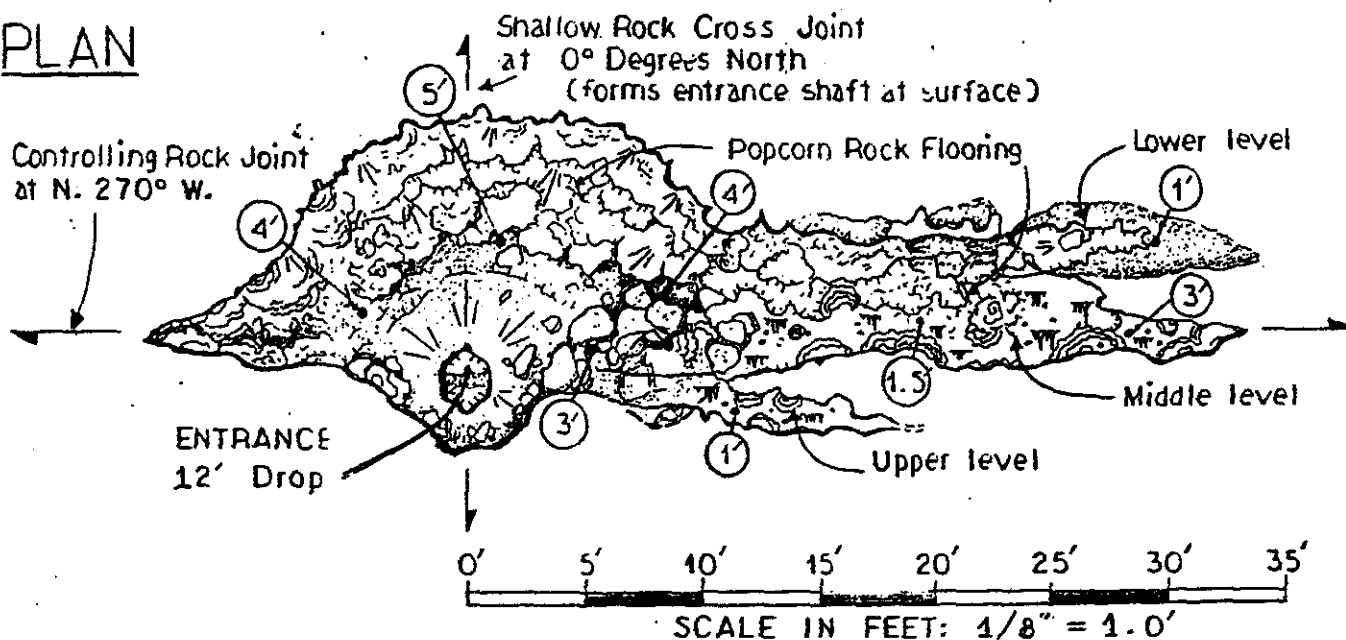
PERSONNEL; MIKE WARTON & ASSOCIATES: A. STAPLES • B. HINDS •

C. LANGILLE • B. WETUSKI • M. WARTON • DRAFT BY: M. WARTON

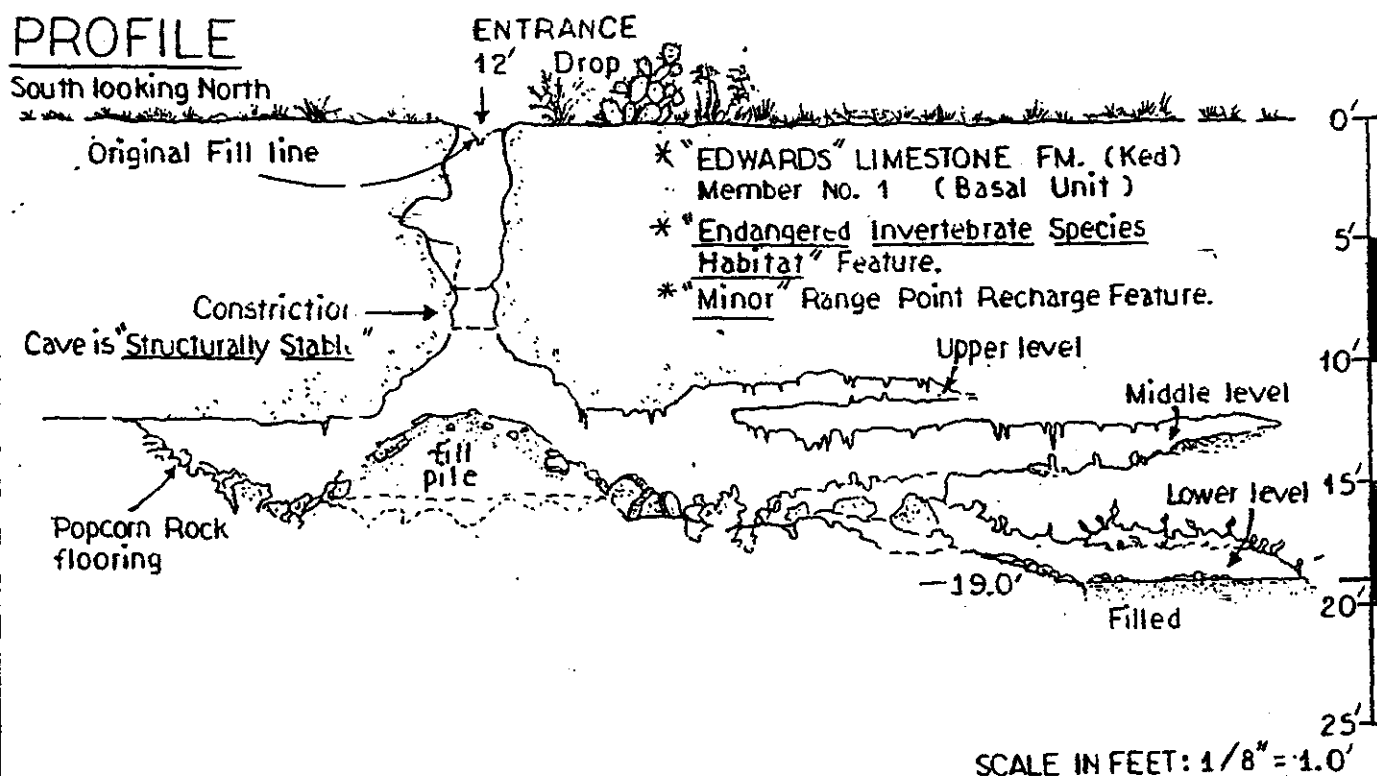
LENGTH: 75.6' • DEPTH: 19.0' • CONFIGURATION OF: 45" x 14"

N (4) = CEILING HEIGHTS IN FEET

PLAN



PROFILE



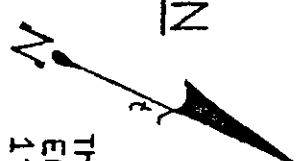
PREPARED BY; MIKE WARTON & ASSOCIATES:
JULY, 2000

THROUGH → TRIP CAVE

WILLIAMSON COUNTY, TEXAS

SUUNTOS & TAPE SURVEY
PERSONNEL: MIKE WARTON & ASSOCIATES: A. STAPLES, B. HINDS.
B. WETUSKI, C. LANGILLE, M. WARTON
AUGUST 2, 2000
DRAFT BY: M. WARTON
LENGTH: 105.9' DEPTH: 16.0'
CONFIGURATION OF: 80' x 32'

PLAN



The "Hissing Raccoon"
Entrance
11' Drop

Entrance to Entrance 80'

Perimeter Line of
Sink/Closed Drainage
Depression

The "Discovery" Entrance
5' Drop

constriction

Rock Joint
N. 75° E.

Tree



PROFILE

Southeast looking Northwest

raccoon family

* Edwards Limestone Formation (Ked)
Member No. 1 (Basal Unit)

-16.0'

(Filled)

Floors: High Infilling of
Dark Gray Clay & Soil
Sediments

* Potential to Contain Habitat for
Endangered Invertebrate Species
* "Minor" Range Point Recharge Value
PREPARED BY: MIKE WARTON & ASSOCIATES:
AUGUST, 2000

SCALE IN FEET: 3/32" = 1.0'

20'
15'
10'
5'
0'



APPENDIX D



USFWS Imported Fire Ant Control Recommendations

Within 35 feet of the cave entrance one to four gallons of boiling water should be applied directly to each mound until the mound caves in on itself. Boiling water application is most effective in the mid-morning hours when the sun has started to warm up the mound. The mound should not be disturbed before the application to increase the likelihood of killing the queens.

For areas between 35 and 300 feet from the cave entrance, boiling water is recommended but small amounts of bait applied in a controlled manner are allowable to minimize the effect on non-target species. Baits should only be applied to fire ant mounds and not the mounds of native ant species. Baits should be applied before noon if possible to allow time for the ants to collect most of it by nightfall when cave crickets come out to forage. Bait should be applied during dry weather with no immediate forecast of rain as moisture reduces the efficiency of the bait and increases the likelihood of it washing into the cave. Bait application is best done when the ants are actively foraging.

WILCO PRESERVE AGREEMENT

This Wilco Preserve Agreement (this "Agreement") is made by and between the U.S. Fish and Wildlife Service (the "Service"), the Williamson County Karst Conservation Foundation, a Texas non-profit corporation (the "Foundation"), and Williamson County, Texas (the "County"), to be effective as of March 1, 2003. The Service, Foundation, and County are hereinafter referred to collectively as the "parties" and individually as a "party."

Recitals

A. The Service and the Foundation heretofore entered into that certain Williamson County Karst Conservation Fund Memorandum of Understanding dated effective November 15, 2002 (the "MOU"), whereby the Foundation is entitled to receive marketable mitigation credits in exchange for taking certain "Conservation Actions" approved by the Service related to acquisition, preservation and/or management of "karst" areas in Williamson County, Texas, for the benefit of certain endangered invertebrate species located therein.

B. The MOU contemplates that the Service and Foundation will enter into conservation action agreements in order to implement approved Conservation Actions.

C. The County and the Foundation have entered into a certain interlocal agreement pursuant to which they will cooperate in the implementation of Conservation Actions.

D. By its execution of this Agreement, the Service hereby approves the Conservation Action described herein, and the Service and Foundation agree that this Agreement shall be the conservation action agreement for such Conservation Action.

E. Because the karst area that is the subject of this Agreement will be owned and managed by the County as parkland, the parties agree that in this instance, although the County is not a party to the MOU, it is appropriate that the County be a party to this Agreement and assume the obligations as described herein.

NOW, THEREFORE, for and in consideration of the premises, the covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. Background and Nature of Conservation Action.

a. Within sixty (60) days after the effective date of this Agreement, or upon such earlier date as the County may elect, the County will acquire as a part of a larger parcel of land an approximately 130-acre area of land located in Williamson County, Texas, and depicted on Appendix A to the Wilco Preserve Conservation Plan (the "Conservation Plan") attached hereto as Exhibit A, which 130-acre area is to be included as part of the Williamson County Southwest Regional Park. Such area contains several caves and other karst features (including the "Wilco Cave"), and is hereinafter referred to as the "Wilco Preserve."

b. The County, working in cooperation with the Foundation, hereby agrees to operate, manage, and monitor the Wilco Preserve in perpetuity in accordance with this Agreement and that certain Conservation Plan as same may be modified from time to time upon agreement of the parties. The parties acknowledge that the current form of the Conservation Plan may require some refinement and additional detail. The parties agree to work together to revise the Conservation Plan in a mutually acceptable manner within six (6) months after the effective date of this Agreement. It is the parties' intent that the Conservation Plan will serve as an adaptive, "living" document subject to such periodic revision as the parties agree to be in the interests of conservation of the listed species within Wilco Preserve. The Conservation Plan will be reviewed by the parties at least once every five (5) years. The Conservation Plan includes certain uses and activities that will be permitted within the Wilco Preserve. The County and the Foundation agree to keep detailed, well-ordered records of the operation, management, and monitoring activities related to Wilco Preserve and shall provide to the Service at least annually (by October 1 of each year) written reports regarding the status of such activities.

c. The County will fund the cost to acquire, operate, manage, and monitor the Wilco Preserve with a portion of funds the County will receive from the Texas Turnpike Authority ("TTA"), which funds TTA is paying to the County to satisfy TTA's mitigation commitments pursuant to the Service's Biological Opinion dated February 21, 2001, concerning the impacts of the TTA's SH 45 North project on listed endangered karst invertebrates.

d. The County shall establish a restricted account into which it or the Foundation will from time to time deposit funds to be used for the ongoing operation, management, and monitoring of Wilco Preserve in accordance with this Agreement and the Conservation Plan. Such restricted account is the "Fund" referenced in the MOU and may include amounts dedicated to the operation, management, and monitoring of other karst preserves owned or managed by the County or the Foundation. The County will ensure accurate and complete accounting and documentation according to standard accounting practices for all activities related to the account and will invest funds in the account in a manner consistent with other funds of a similar nature from time to time held and invested by the County. The parties agree that it is important to provide for the operation, management, and monitoring of the Wilco Preserve in as cost-effective manner as reasonably possible, and the parties will cooperate and coordinate on an ongoing basis to achieve that objective.

e. The Service acknowledges that the payment of funds by TTA to the County to be used in part to fund the County's acquisition, operation, management, and monitoring of the Wilco Preserve and a portion of another karst preserve referred to as the Millennium Preserve, satisfies TTA's commitment to provide karst invertebrate mitigation for the impacts associated with SH 45 North.

2. Term. This Agreement shall have an initial term of thirty (30) years and thereafter shall be automatically renewed for successive five (5) year terms unless and until sooner terminated by the parties hereto. The termination of this Agreement shall not affect the obligations of the County, in cooperation with the Foundation, to operate, manage, and monitor

Wilco Preserve in accordance with this Agreement, such obligations surviving any termination of this Agreement. Termination of the MOU shall not affect this Agreement.

3. Entire Agreement. This Agreement contains the entire agreement of the parties hereto with respect to the matters covered by this Agreement, and no other agreement, statement, or promise made by any party, or to any employee, officer, or agent of any party, which is not contained in this Agreement shall be binding or valid with respect to such matters.

4. Notices. Notices to be given hereunder shall be made in writing and may be given by delivering the same in person, by mail, or by telecopy (facsimile). Notices shall be effective only if and when received at the address of the party to be notified.

If to the Service:

Supervisor
U.S. Fish and Wildlife Service
Austin Ecological Service Field Office
10711 Burnet Road, Suite 200
Austin, TX 78758
(512) 490-0057
Fax (512) 490-0974

If to the Foundation:

Charlie Crossfield
Counsel
309 E. Main
Round Rock, TX 78664
(512) 255-8817
Fax (512) 255-8986

If to the County:

Parks Department
Attention: Director
1003 North Austin Ave.
Georgetown, TX 78626

5. Interpretation and Headings. The language in all parts of this Agreement shall in all cases be simply construed according to its fair meaning and not strictly for or against any party. Headings of the paragraphs of this Agreement are for the purposes of convenience only and the words contained in such headings shall in no way be held to explain, modify, amplify, or aid in the interpretation, construction, or meaning of the provisions of this Agreement.

6. Modification. This Agreement is not subject to modification except in a writing signed by all parties. Any attempted modification not in compliance with this requirement shall be void.

7. Successors and Assigns. This Agreement and each of its covenants and conditions shall be binding on and shall inure to the benefit of the parties and their respective successors and assigns.

8. Attorneys' Fees. If any action at law or equity including any action for declaratory relief is brought to enforce or interpret the provisions of this Agreement, each party to the litigation shall bear its own attorneys' fees and costs.

9. No Partnerships. This Agreement shall not make or be deemed to make any party to this Agreement an agent for or the partner of any other party.

10. Federal Appropriations. The duty of the Service to carry out its obligations under this Agreement shall be subject to the availability of federal appropriated funds.

11. Press Releases. The Foundation and County will obtain prior approval from the Service of all press releases, published advertisements, or other statements intended for the public that refer to this Agreement or to the Service, the Department of the Interior, or the name or title of any employee of the Department of the Interior in connection with this Agreement.

12. Authority. This Agreement is entered into under the authority of the Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661-666c, the Fish and Wildlife Act of 1956, 16 U.S.C. § 742(f) et seq., and the Endangered Species Act of 1973, 16 U.S.C. § 1531 et seq., as amended ("Act"), which authorize the Service to provide assistance to, and cooperate with, State and private organizations in activities that provide for the management, conservation, and protection of fish, wildlife, and plant resources. Under the Act, the Service is responsible for the listing and recovery of listed species, and cooperating with State and Federal agencies to achieve recovery of listed species.

Executed in multiple originals to be effective as of the date first specified above.

U.S. FISH AND WILDLIFE SERVICE

WILLIAMSON COUNTY KARST
CONSERVATION FOUNDATION

By: Robert J. Price
Title: Supervisor
Date: 2/11/03

By: [Signature]
Title: President Karst Foundation
Date: 2/11/03

WILLIAMSON COUNTY, TEXAS

By: John C. Dangler
Title: County Judge
Date: 2/11/03

Exhibit:

A – Wilco Preserve Conservation Plan



EXHIBIT A

WILCO PRESERVE CONSERVATION PLAN

Prepared by
Athabasca Consulting, Inc.

for

Williamson County, Texas

and the

Williamson County Karst Conservation Fund

February 2003

athabasca consulting, inc.

1001 Mopac Circle #100 Austin, Texas 78746 phone - 512.347.9000 fax - 512.306.0974 www.athabasca.net



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1.0 The Wilco Preserve

1.1 Summary

The Wilco Preserve (the "Preserve") is approximately 130-acres of dense oak/Ashe juniper woodland with interspersed native grassland. The Preserve is located in the northeast corner of the 558-acre Williamson County Regional Park (WCRP) (Appendix A). The WCRP entrance is located at 3005 County Road 175 (Sam Bass Road) north of FM 1431, Leander, Williamson County, Texas. The Preserve has been established pursuant to that certain Wilco Preserve Agreement dated to be effective March 1, 2003, by and among Williamson County, the Williamson County Karst Conservation Foundation, and the U.S. Fish and Wildlife Service (the "Service"). Of the seven caves located within the Preserve, four caves are occupied by the Bone Cave harvestman (*Texella reyesi*) ("BCH"), a federally listed endangered species. Some passive uses such as a hike and bike path (the "Path") will be permitted within the Preserve; however, without prior approval of the Service, the Path will be established at least 300-feet from the mouth of any cave occupied by the BCH. The four caves occupied by the BCH within the Preserve are Wilco, Mongo, Wild West, and Rockridge. Descriptions and maps of each cave are included as Appendix B and C, respectively.

1.2 Purpose

The purpose of this cave management plan is to establish a program for the operation, management, and monitoring of the Preserve consistent with conservation of the BCH. Specific goals include establishing and protecting a 130-acre preserve area, maintaining the hydrologic regime, monitoring and controlling red imported fire ant (RIFA) infestation, and preventing human access into the caves.

1.3 Bone Cave Harvestman

The only federally listed endangered invertebrate species known to occur within the Wilco Preserve is the Bone Cave harvestman (*Texella reyesi*) (BCH). The BCH was identified in four of the nine caves: Wilco, Rockridge, Mongo, and Wild West.

The BCH is a long-legged, blind, pale orange harvestman, with a body length of about 1.4 to 2.7 mm. It is sensitive to humidities below saturation. They are most often found under large rocks in caves, but are occasionally seen walking on moist floors. In the hottest part of the summer when small caves warm up and become drier, they can be found in the coolest, dampest areas. The BCH is a troglobite, which is an animal that is specially adapted to subterranean existence and spends its entire life underground. Further information about the BCH can be found at <http://ecos.fws.gov/servlet/SpeciesProfile?spcode=J009>.



2.0 Property Description

2.1 Surface

The historical land use on the Preserve appears to be minimal, however, some cattle ranching is likely and more recently deer hunting. The majority of the preserve is dense oak/Ashe juniper woodland with interspersed native grassland. Vegetation within the Preserve includes but is not limited to: Ashe juniper (*Juniperus ashei*), live oak (*Quercus fusiformis*), cedar elm (*Ulmus crassifolia*), post oak (*Quercus stellata*), mesquite (*Prosopis glandulosa*), hackberry (*Celtis laevigata* var. *texana*), yaupon holly (*Ilex vomitoria*), agarita (*Mahonia trifoliolata*), prickly pear cactus (*Opuntia lindheimeri*), pencil cactus (*Opuntia leptocaulis*), and various native grasses.

Soils on the Preserve are classified within the Eckrant series (Soil Conservation Service, 1974) and consist of Eckrant extremely stony clays 0–3% slopes. The soils profile thickness may range from 1.5 feet in thickness to limestone bedrock outcrops.

Elevation ranges from 880 feet to 995 feet above mean seal level (MSL). Contour elevations gradually decline from north to south (topo map, Figure X).

2.2 Subsurface

The Preserve is located within the Northern Edwards Plateau and within the defined boundaries of the Northern Edwards Aquifer Recharge Zone. The subgrade material of the preserve is identified as the Edwards Limestone formation, Kainer Unit, Kirschberg, and Grainstone Members (KeK). The Kirschberg member is the most favorable cave forming member. Caves and karst features are also found within the Grainstone member, however, the limestone is more resistant to solution than the Kirschberg member and features are commonly found developed within the underlying Kirschberg layer. The caves within the Preserve are namely developed within the Kirschberg member as low, wide bedding planes. Therefore, the majority of the caves are shallow in depth (less than 40 feet) with the horizontal extent generally well exceeding the vertical depth.

Intensive karst survey and excavation have confirmed seven caves and four sinks within the boundaries of the Wilco Preserve. As previously mentioned, four of the nine caves contain BCH: Wilco, Mongo, Rockridge, and Wild West Caves. All seven caves were mapped and are included as Appendix C.

2.3 Hydrogeologic Setting

Groundwater movement within the subgrade of the area is dictated by geologic control of the bedding dip to the east/northeast. Runoff water captivated by most of the karst features descends vertically only to shallow depths of approximately 35 to 40 feet before being forced to move horizontally to the water table or the Edwards Aquifer.



3.0 Description of Planned Land Use

No development, except as permitted under this Plan or otherwise approved by the Service, will occur within the Preserve. Activities within the Preserve will be limited to passive uses such as hiking, biking, bird watching, and educational programs. A hike and bike path (the "Path"), designed to utilize portions of the 130-acre Preserve (Appendix A), will be permitted. The proposed layout of the Path is outside of the of the BCH cave buffer zones (300-foot radius), with the majority of the layout remaining 492 feet from the BCH caves. Other future allowable uses within the Preserve will be submitted to the Service for its approval, such approval not to be unreasonably withheld or delayed. The parking lot used to access the Path will be located outside of the Preserve and will have posted curfew hours, restricted activities, and park rules.

The four BCH caves will be gated by a qualified contractor using methodology and designs acceptable to the Service.

4.0 Operation, Management, and Monitoring Plan

4.1 Monitoring

4.1.2 Routine monthly site inspections will include checking for the following:

- ◆ Signs of vandalism, unauthorized entry, trash dumping
- ◆ Damage to vegetation within the buffer zones due to visitors and/or pets going off-trail
- ◆ Presence of RIFA within 10 meters (~33 feet) of each BCH cave entrance
- ◆ Inspecting all cave gates

4.1.3 Annual or Less Frequent Preserve inspections will include:

- ◆ Biospeleological Surveys of all BCH caves (once every 3 years)
- ◆ RIFA treatment within 300 feet of each BCH cave entrance (at least once a year)
- ◆ Monitoring any change in vegetation within the cave buffer areas using baseline information to evaluate degree of invasion by non-native species and to determine the need for restoration or manipulation of vegetation to maintain a native plant community (once every 3 years)



- ◆ Download recorded information from data logger (annually)

The results of the biospeleological surveys, RIFA treatment program, data logger, vegetation monitoring, and all other operation and maintenance activities will be compiled in an annual report and submitted to the Williamson County, the Williamson County Karst Conservation Foundation, and USFWS.

4.1.4 Baseline Data

Baseline data will be collected for each BCH cave within the Preserve in relation to species (listed and unlisted) present, BCH habitat quality, and temperature and relative humidity within each BCH cave. Baseline data will also be collected within each BCH cave buffer zone for the presence/density of RIFA mounds and structure/composition of vegetation. The first year of operation and management will also include gating the 4 BCH caves, installing a data logger in one of the BCH caves, and filling all other non-BCH caves according to TCEQ guidelines.

4.2 Management

Trash removal and damage repair will be conducted as needed for each BCH cave. If damage to vegetation within the buffer zones occurs, it will be restored. If damage to vegetation near BCH caves becomes a reoccurring problem, perimeter fencing may be required to detour park visitors from the buffer zones. All cave gates will be maintained and repaired as needed.

4.2.1 RIFA Control

The method of exterminating RIFA within the Preserve should follow the current USFWS recommendation (Appendix D) or other USFWS approved methods that may be developed in the future. Initial efforts to remove RIFA mounds maybe more extensive, especially within the cave buffer zones, in hopes to eliminate/reduce mounds to a manageable count. In areas where fire ant populations are high, RIFA treatment may be required more often than twice a year (minimally spring and fall of each year) until mound numbers drop to fewer than 5 mounds within 170 feet of a cave entrance. Thereafter, if effective, treatment will occur only in the spring.

4.2.2 Adaptive Management

Adaptive management is an integrated method for addressing uncertainty. Adaptive management of the Preserve will enable management efforts to be focused on observed changes within or affecting the Preserve or the Plan. Adaptive management may require some tasks to be executed more often than projected. If management is demonstrated to be ineffective, the operation, management and monitoring of the Wilco Preserve will, subject to available funding, adjust accordingly. Examples of adaptive management activities may include more intense RIFA control, fencing around caves to prevent vandalism, removal of invasive plant/animal species found to be detrimental to the karst ecosystem, and/or removal of species found to directly/indirectly harm the



karst ecosystem. If any additional BCH caves are discovered within the Preserve, such caves will be included in the Preserve’s approved Plan.

5.0 Funding

Estimated Hours/Costs for Annual Operation and Maintenance Tasks

| Task | Estimated cost/hours per cave | Totals for 4 EIS caves | Frequency of task | Estimated annual total per task |
|---|-------------------------------|------------------------|--------------------|---------------------------------|
| Sample and Collect karst invertebrates (4 EIS caves) | \$600/cave | \$2,400 | Once every 3 years | \$2,400/3=\$800 |
| Curation of Insect Samples | \$45-\$100 /cave | \$180-\$400 | Once every 3 years | \$400/3=\$133.33 |
| Vegetation Monitoring | 4 hours | 16 hours | Once every 3 years | \$1,200/3=\$400 |
| RIFA control | 17.5 hours | 70 hours | Annually | \$2,750 |
| Monitoring/Requesting: Routine Monthly Inspections | 3 Hours | 12 Hours | 12 times a year | \$3,600 |
| Report Preparation of Operation and Maintenance Tasks/Results | | | Annually | \$1,500 |
| Miscellaneous Administrative Costs | | | | \$1,000 |
| Contingency Fund (unforeseen operation and maintenance tasks) | | | | \$2,500 |
| Total Annual O & M Costs | | | | \$12,683.33 |



The first year of operation and management will include collecting baseline data (RIFA and vegetation surveys), gating the 4 BCH caves, and filling all other non-BCH caves according to TCEQ guidelines. The upfront costs of gating caves, filling caves, collecting baseline data, initial RIFA treatment, and purchasing a data logger are not included in the annual O&M costs as these items are one time expenses.

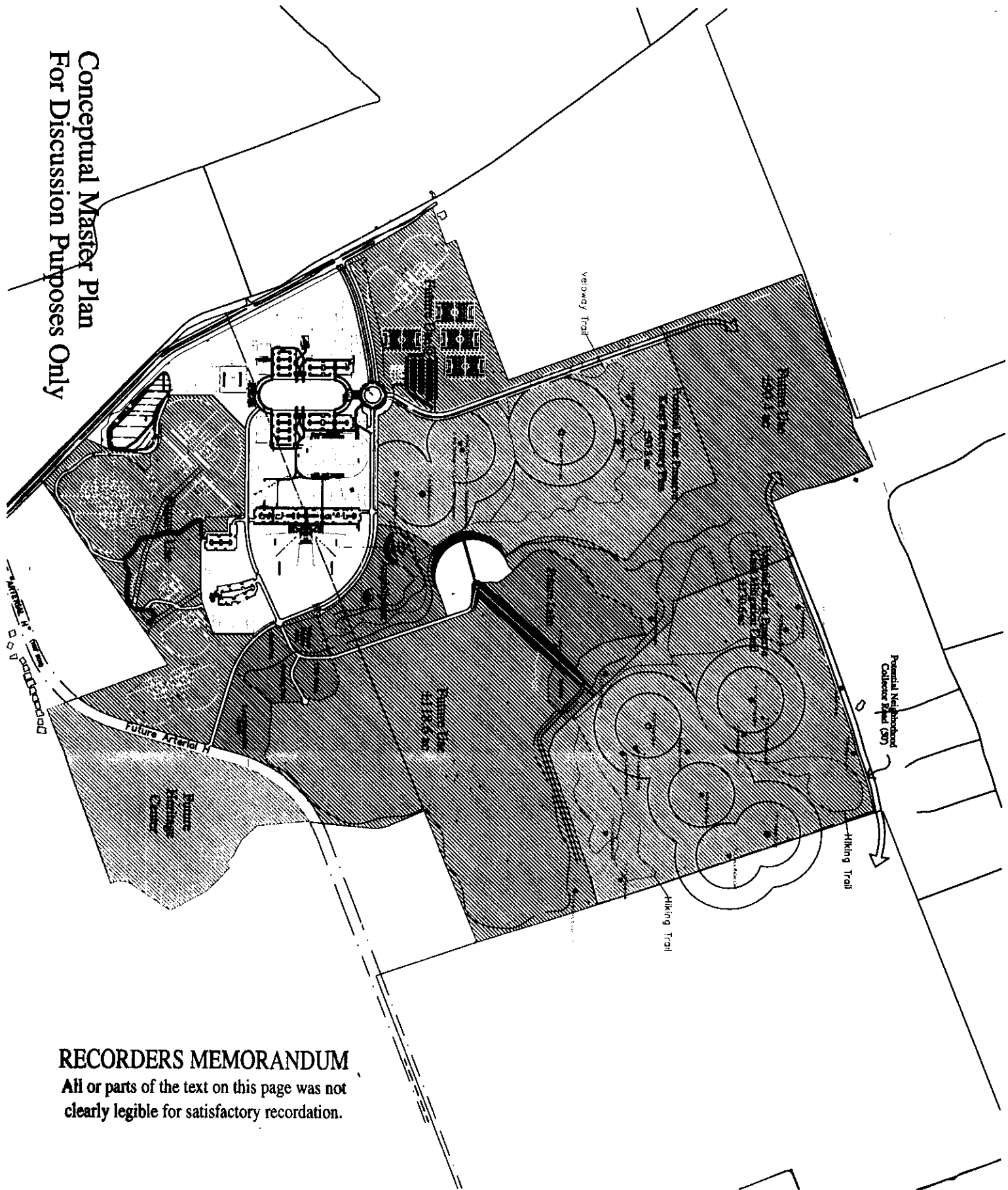
Upfront Operation and Maintenance Costs

| Upfront Costs | Hours per Task | Cost | Total Cost/Hours |
|---|--------------------------------|---|--------------------|
| Gating 4 EIS Caves | n/a | \$3250 per cave | \$13,000 |
| Filling 3 non-EISH caves | 6 hours (monitoring biologist) | 6 hours (aci) | \$450 |
| Filling 3 non-EISH caves | 12 hours (2 people) | County Staff | \$300 |
| Intensive RIFA Treatment | 250 hours | RIFA bait (~\$50 per cave) + labor hrs (aci & county) | \$6,950 |
| Data Logger | n/a | \$200 each + \$350 software | \$550 |
| Baseline Data Surveys: | | | |
| Cave Survey (4 EIS caves) | 4 hrs x2 biologist x4 caves | \$600 per cave | \$2,400 |
| RIFA density survey | 32 hours | 32 hours (aci) | \$2,400 |
| Vegetation Composition/Structure Survey | 16 hours | 16 hours (aci) | \$1,200 |
| Total Upfront Costs | | | \$27,250.00 |



APPENDIX A

Conceptual Master Plan
For Discussion Purposes Only



RECORDERS MEMORANDUM
All or parts of the text on this page was not
clearly legible for satisfactory recordation.



- Karst Preserves
- Future Use
- Amphitheater
- Heritage Center
- Lake
- Activities Area
- 300' Karst Boundary
- 492' Karst Boundary
- Veloway Trail
- Hiking Trail
- Park Trail



APPENDIX B

**Mongo Cave**

This cave consists of a narrow passage which opens up to a single room with a total length and depth of 167.8 feet and 29.3 feet, respectively. The main chamber exhibits stalactites, stalagmites, and flowstone and has a length, width, and height of 86 feet, 41 feet, and up to 6 feet, respectively. A biological collection yielded several invertebrate species, including *Texella reyesi*. At the time of investigation, the outside temperature was 89°. The temperature within the cave ranged from 75-77°, with a humidity of 90-98%. This cave is considered habitat for the endangered invertebrate species and has intermediate recharge potential.

Rock Ridge Cave

This cave consists of a narrow passage which opens up to a single room with a total length and depth of 103.7 feet and 14 feet, respectively. The main chamber has a length and width of 60 feet and 20 feet, respectively. The cave exhibits flowstone on the walls and large, exposed roots within the walls and ceiling. A biological collection yielded the endangered species *Texella reyesi*. At the time of investigation, the outside temperature was 93°. The temperature within the cave was 77°, with a humidity of 94%. This cave is considered habitat for the endangered invertebrate species and has minor recharge potential.

Wilco Cave

This cave consists of a very small room with a low bedding plane tunnel with a total length and depth of 47 feet and 15.7 feet, respectively. The small chamber is high enough to stand up and the tunnel has a length of 28 feet before hitting a blocking point or wall. A biological collection yielded very few invertebrate species; however, the endangered *Texella reyesi* was identified. At the time of investigation, the outside temperature was 100°. The temperature within the cave was 80°, with a humidity of 96%. This cave is considered habitat for the endangered invertebrate species and has minor recharge potential.

Wild West Cave

This cave consists of three rooms with a total length and depth of 88.4 feet and 15.5 feet, respectively. The first room has a length, width, and height of 40 feet, 18 feet, and 5.5 feet, respectively. The second room has a length, width, and height of 25 feet, 35 feet, and 3 feet, respectively. The third room has a length and height of 15 feet and 3 feet, respectively. The floor is covered with massive rock debris and has a variable slope ranging from 0° to 30°. A biological collection yielded several invertebrate species, including *Texella reyesi*. At the time of the investigation, the outside temperature was 97°. The temperature within the cave ranged from 76-79°, with a humidity of 78-91%. This cave is considered habitat for the endangered invertebrate species and has minor recharge potential.



APPENDIX C

WILCO CAVE

WILLIAMSON COUNTY, TEXAS

SUUNTOS & TAPE SURVEY • JUNE 29, 2000

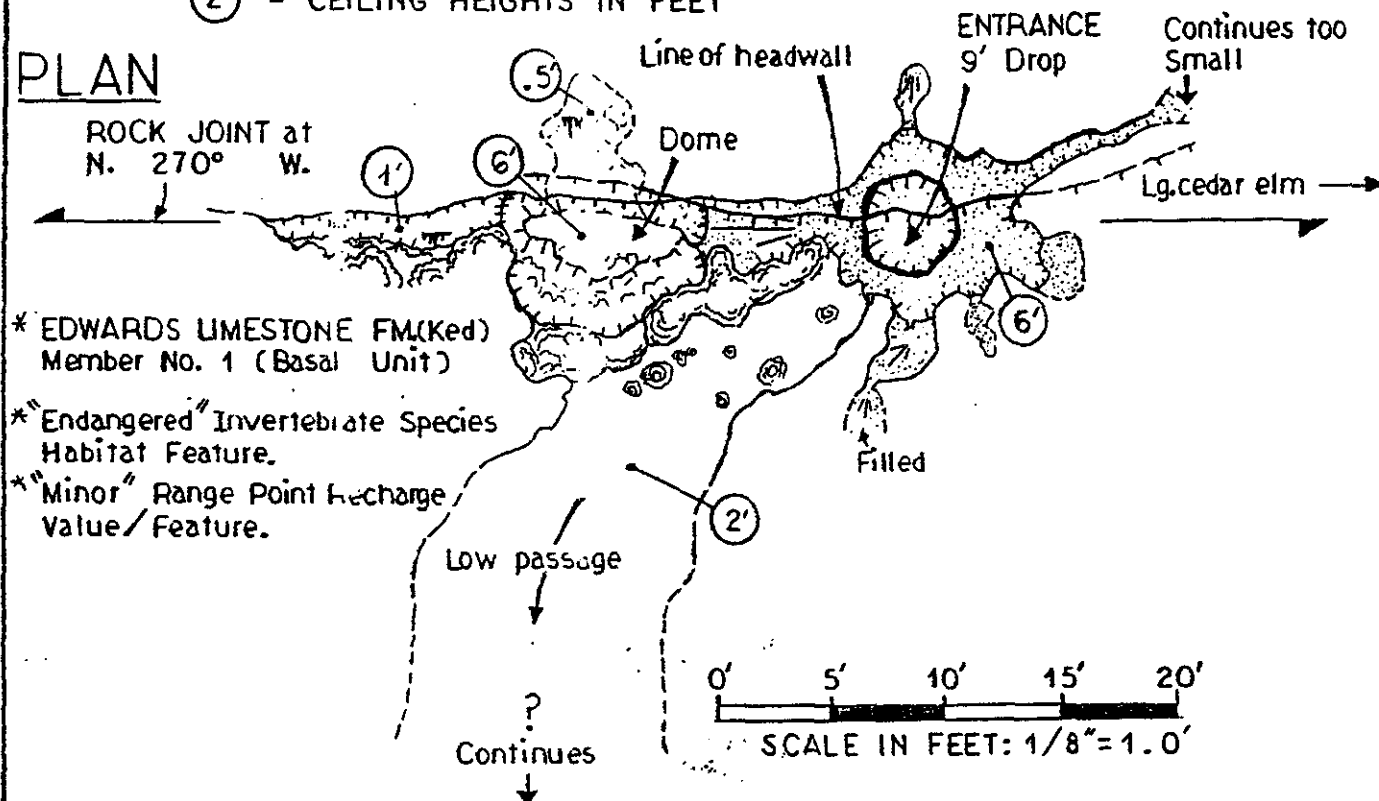
PERSONNEL; MIKE WARTON & ASSOCIATES: N. AASE • A. STAPLES •

B. HINES • C. LANGILLE • M. WARTON • DRAFT BY: M. WARTON

LENGTH: 47' ± DEPTH: 15.7' CONFIGURATION OF: 37' x 27' +

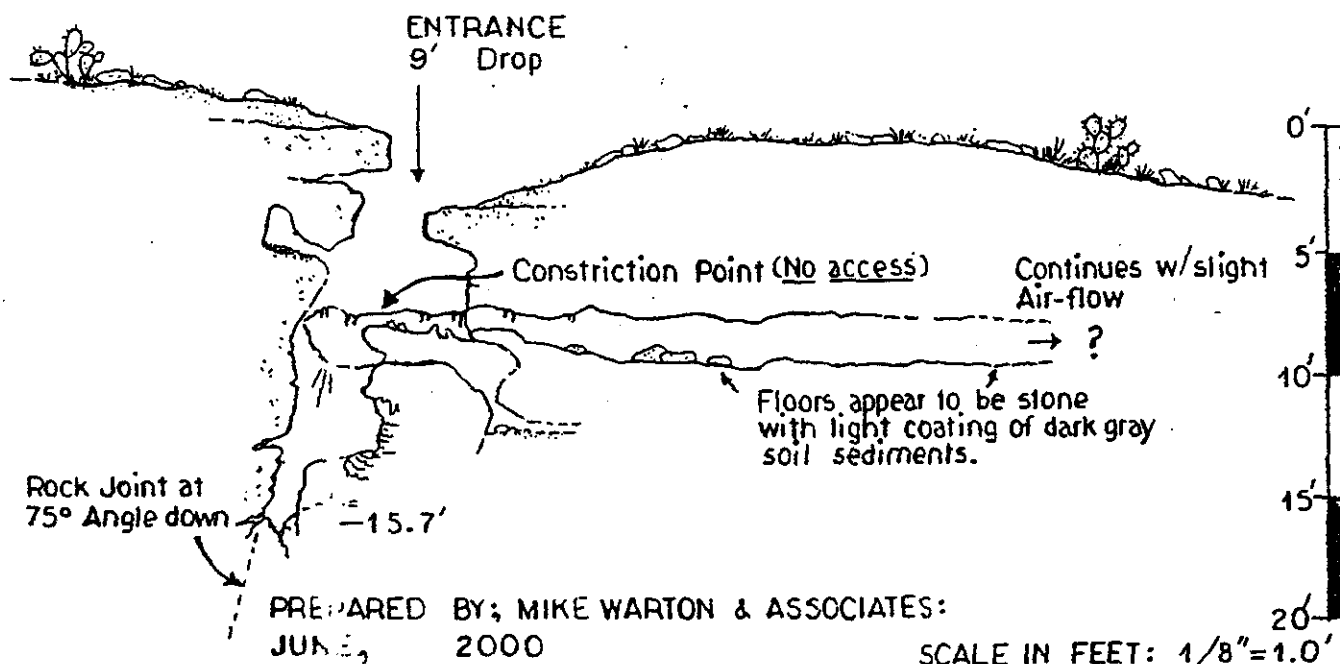
(2') = CEILING HEIGHTS IN FEET

PLAN

* EDWARDS LIMESTONE FM(Ked)
Member No. 1 (Basal Unit)* "Endangered" Invertebrate Species
Habitat Feature.* "Minor" Range Point Recharge
Value/Feature.

PROFILE

Rotated to view looking 90° East

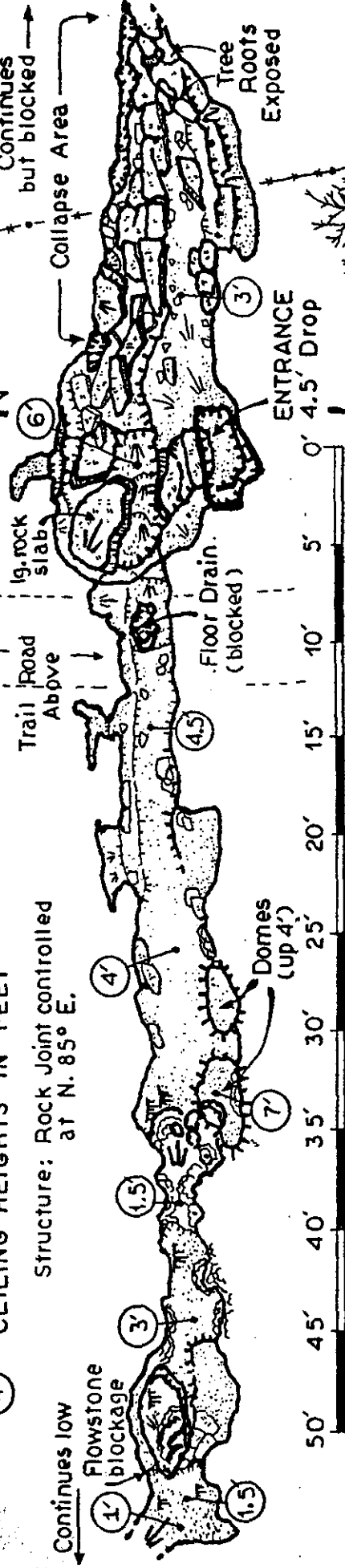
PREPARED BY: MIKE WARTON & ASSOCIATES:
JUNE, 2000

ROCK RIDGE CAVE

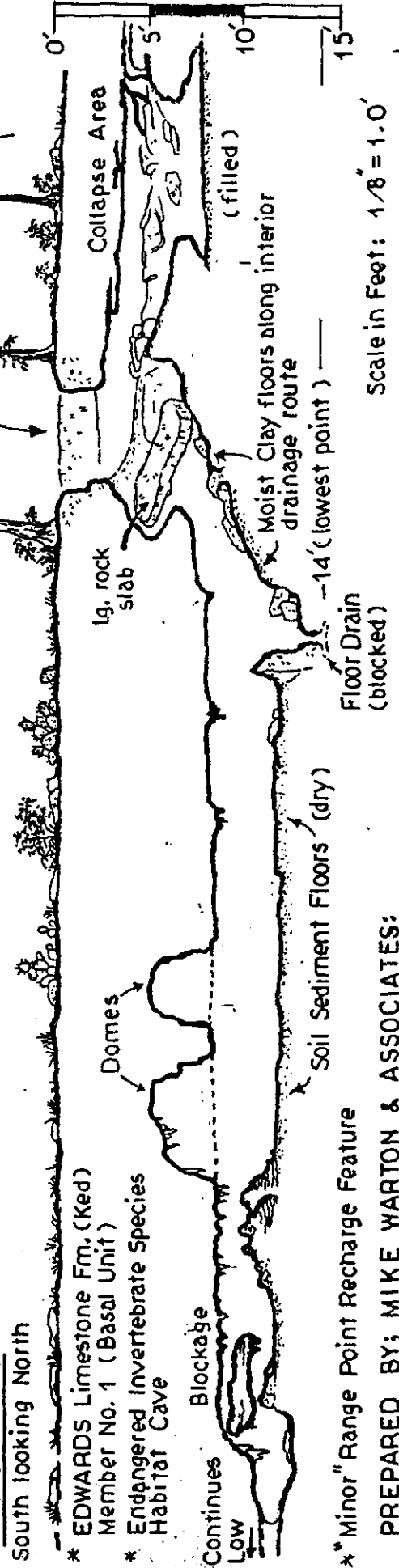
WILLIAMSON COUNTY, TEXAS

SUNTOS & TAPE SURVEY • JUNE 17, 2000
 PERSONNEL; MIKE WARTON & ASSOCIATES: N. AASE • A. STAPLES •
 B. HINDS • C. LANGILLE • M. WARTON • DRAFT BY: M. WARTON
 LENGTH: 103.7' DEPTH: 14.0' CONFIGURATION OF: 80' x 14'
 (4') = CEILING HEIGHTS IN FEET

PLAN



PROFILE



* Minor Range Point Recharge Feature

PREPARED BY: MIKE WARTON & ASSOCIATES:
 JUNE, 2000

Scale in Feet: 1/8" = 1.0'

MONGO CAVE

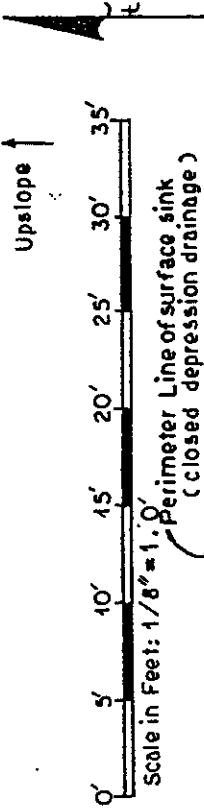
WILLIAMSON COUNTY, TEXAS

SUUNTOS & TAPE SURVEY • JUNE 17, 2000
PERSONNEL: MIKE WARTON & ASSOCIATES: N. AASE • A. STAPLES •
B. HINDS • C. LANGILLE • M. WARTON • DRAFT BY: M. WARTON
LENGTH: 167.8' DEPTH: 29.3' CONFIGURATION OF: 86' x 41'
⑤ = CEILING HEIGHTS IN FEET

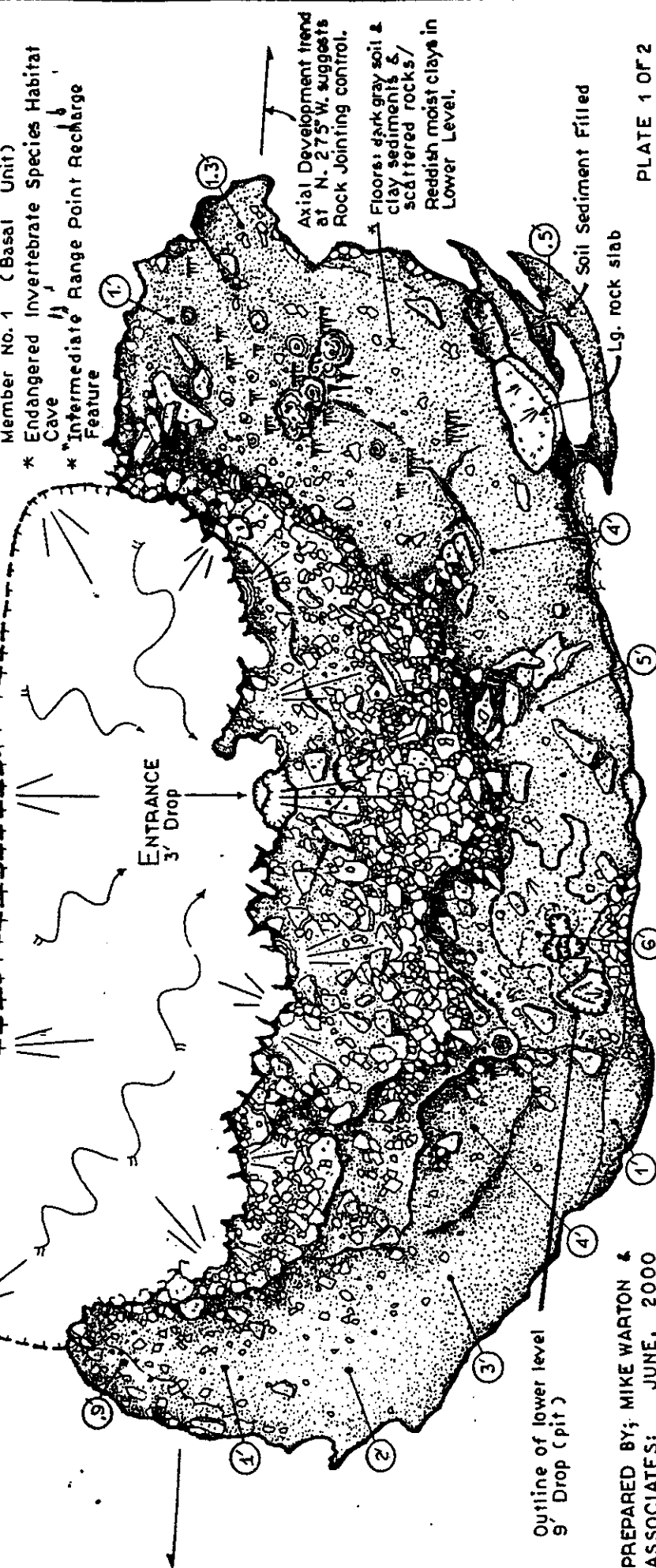
* EDWARDS LIMESTONE FM. (Ked)
Member No. 1 (Basal Unit)

* Endangered Invertebrate Species Habitat
Cave

* "Intermediate Range Point Recharge
Feature"



PLAN



PREPARED BY: MIKE WARTON &
ASSOCIATES: JUNE, 2000

PLATE 1 OF 2

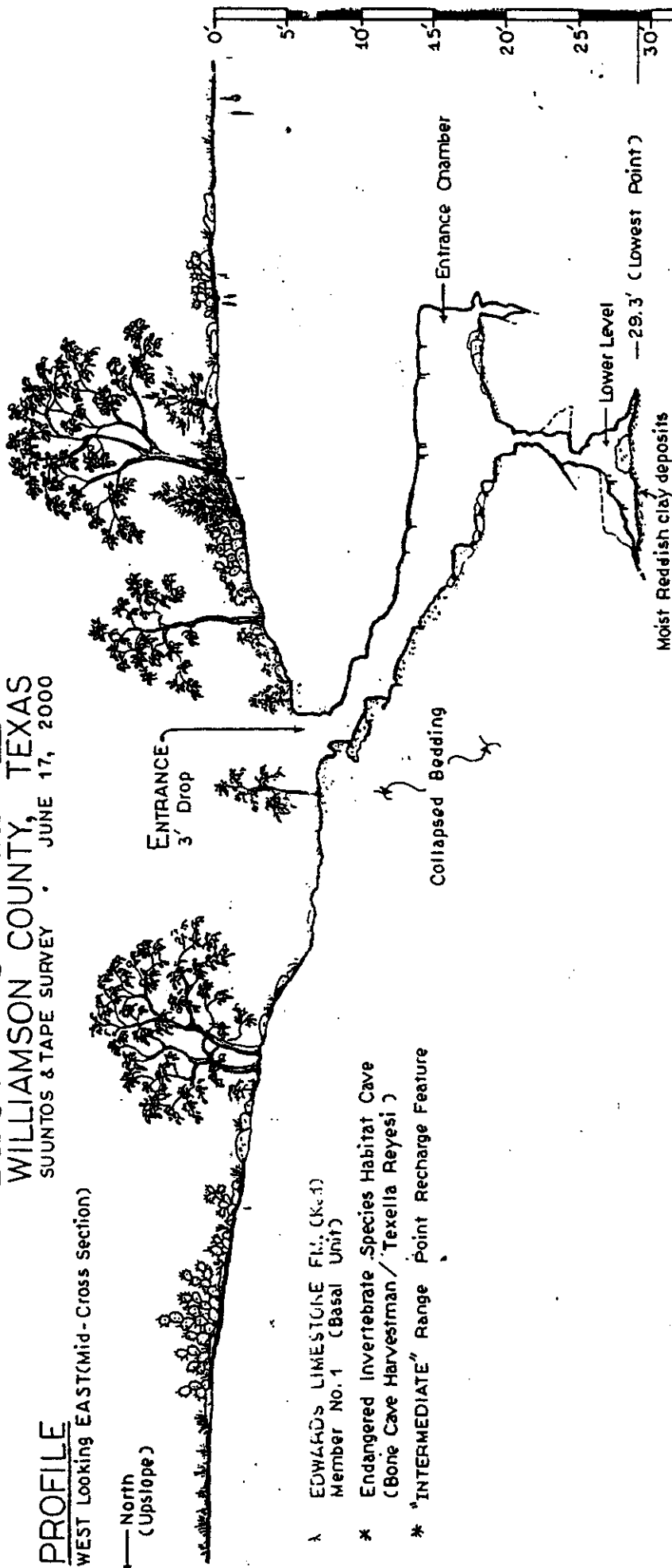
MONGO CAVE

WILLIAMSON COUNTY, TEXAS
SUUNTOS & TAPE SURVEY · JUNE 17, 2000

PROFILE

WEST Looking EAST (Mid - Cross Section)

← North
(Upslope)



* EDWARDS LIMESTONE Fm. (Kc.1)
Member No. 1 (Basal Unit)

* Endangered Invertebrate Species Habitat Cave
(Bone Cave Harvestman / Texella Reyesi)

* "INTERMEDIATE" Range Point Recharge Feature

PREPARED BY: MIKE WARTON & ASSOCIATES:

JUNE, 2000

PLATE 2 OF 2



APPENDIX D



USFWS Imported Fire Ant Control Recommendations

Within 35 feet of the cave entrance one to four gallons of boiling water should be applied directly to each mound until the mound caves in on itself. Boiling water application is most effective in the mid-morning hours when the sun has started to warm up the mound. The mound should not be disturbed before the application to increase the likelihood of killing the queens.

For areas between 35 and 300 feet from the cave entrance, boiling water is recommended but small amounts of bait applied in a controlled manner are allowable to minimize the effect on non-target species. Baits should only be applied to fire ant mounds and not the mounds of native ant species. Baits should be applied before noon if possible to allow time for the ants to collect most of it by nightfall when cave crickets come out to forage. Bait should be applied during dry weather with no immediate forecast of rain as moisture reduces the efficiency of the bait and increases the likelihood of it washing into the cave. Bait application is best done when the ants are actively foraging.

**COMMISSIONERS' COURT ADJOURNED TO EXECUTIVE SESSION AT 11:17 A.M. ON
TUESDAY, FEBRUARY 11, 2003.**

AGENDA ITEM 33

Discuss real estate (EXECUTIVE SESSION as per VTCA Govt. Code sec. 551.071 consultation with attorney.)

No action was taken in Executive Session.

AGENDA ITEM 34

Discuss acquisition of real estate for expansion of Round Rock offices (EXECUTIVE SESSION as per VTCA Govt. Code sec. 551.071 consultation with attorney.)

No action was taken in Executive Session.

**COMMISSIONERS' COURT RECONVENED FROM EXECUTIVE SESSION AT 11:36 A.M. ON
TUESDAY, FEBRUARY 11, 2003.**

AGENDA ITEM 35

Consider extending contract on Church of Christ building for 30 days (EXECUTIVE SESSION as per VTCA Govt. Code sec. 551.071 consultation with attorney.)

No action was taken on this agenda item.

AGENDA ITEM 36

Discuss and take appropriate action on real estate.

No action was taken on this agenda item.

AGENDA ITEM 37

Discuss and take appropriate action on acquisition of real estate for expansion of Round Rock offices.

Moved: **Judge Doerfler**

Seconded: **Commissioner Limmer**

Motion: To authorize **Commissioner Heiligenstein** to negotiate on the acquisition of real estate for the expansion of Round Rock offices.

Vote: 5 - 0

AGENDA ITEM 38

Discuss and take appropriate action on extending contract on Church of Christ building for 30 days.

Judge Doerfler stated that the request for extending the contract on the Church of Christ building had been withdrawn.

No action was taken on this agenda item.

AGENDA ITEM 39

Comments from Commissioners.

Commissioner Heiligenstein mentioned that the Conference of Urban Counties is having a luncheon on February 12, 2002 and Senator Lindsey will be making a presentation. He spoke regarding a discussion with Senator Ellis pertaining to issues relating to indigent defense legislation. The Conference of Urban Counties is asking for amendments that would benefit the counties and be reflective of the special needs as it relates to indigent defense. The CUC is hosting a reception for the central Texas delegation at the CUC office on San Jacinto and 13th from 5:30 p.m. to 7:00 p.m. tonight.

COMMISSIONERS' COURT ADJOURNED AT 11:40 A.M. ON TUESDAY, FEBRUARY 11, 2003.