

APPENDIX A
CORRESPONDANCE



SAN ANTONIO
RIVER AUTHORITY

Water Brings Us Together

February 28, 2002

Mr. Stephen Brooks
U.S. Army Engineer District, Fort Worth
CESWF-PM-C
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Mr. Brooks:

The San Antonio River Authority (SARA) requests consideration of the Corps of Engineers (COE) for participation in Section 206 of the Flood Control Act of 1960, as amended, on Olmos Creek in the city limits of San Antonio, Bexar County, Texas.

SARA requests assistance in conducting a study to identify environmental degradation that has occurred as a result of past channelization projects that impacted habitat value, as well as significant brush infestation. In conjunction with the study, it is requested that a Preliminary Restoration Plan (PRP) be prepared to evaluate restoration alternatives, develop cost estimates, and recommend a course of action.

SARA would act as the local sponsor for the project on behalf of the City of San Antonio and will provide existing data from records to assist in the accomplishment of this request. We request the COE prepare a PRP at its earliest convenience. If the PRP is favorable, SARA understands that the COE would then either conduct a Planning Design Analysis (PDA) or prepare a Detailed Project Report (DPR) depending on the scope of the PRP. Following the PDA or DPR, and if SARA elects to proceed with the project, SARA would enter into a cost share agreement with the COE. SARA also understands that the local sponsor cost share would be provided either monetarily, through in-kind services, or a combination of both.

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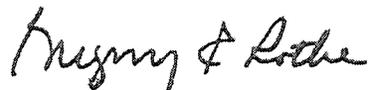
February 28, 2002

Mr. Brooks

Page 2

Please contact Stephen T. Graham, P.E., Technical and Projects Manager, at (210) 227-1373, if you have questions or comments.

Sincerely,



GREGORY E. ROTHE, P.E.
General Manager

GR/STG/srl



December 13, 2002

Colonel Gordon Wells
U.S. Army Corps of Engineers
P.O. Box 17300
Fort Worth, Texas 76102

Dear Sir:

We have reviewed the draft Preliminary Restoration Report for the **Olmos Creek Aquatic Ecosystem Restoration Project** and support the identified recommended project. We have also reviewed the draft Project Cooperation Agreement, understand and accept its provisions including cost-sharing, operation and maintenance responsibilities, and now state the intent of the San Antonio River Authority (SARA) on behalf of the City of San Antonio to participate in the implementation of the recommended project.

I further acknowledge the current estimate total project cost of \$1,536,000, of which SARA will be responsible for \$538,000.

The local cash contribution will come from bond proceeds that the City of San Antonio will issue in FY'04, or as required thereafter.

SARA looks forward to working with the Fort Worth District in the implementation of the Olmos Creek Aquatic Ecosystem Restoration Project.

Sincerely,

GREGORY E. ROTHE, P.E.
General Manager

PM
PER-~~us~~
DE
DD
PA-L
PER-P
PER-E
EXECUTIVE
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GENERAL
MANAGER

Gregory E. Rothe

WJ
FEL

United States Department of the Interior



FISH AND WILDLIFE SERVICE
10711 Burnet Road, Suite 200
Austin, Texas 78758
(512) 490-0057

FEB 3 2003

2-15-03-I-0164

William Fickel, Jr.
Chief, Environmental, Planning, and Regulatory Division
U.S. Army Corps of Engineers (USACE)
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Mr. Fickel:

Thank you for your November 18, 2002, letter conveying the draft Preliminary Restoration Plan for Olmos Creek, San Antonio, Bexar County, Texas. We support the project because it has significant potential to benefit fish and wildlife resources in the urban setting on lands owned by the City of San Antonio. The project would be sponsored by the San Antonio River Authority on behalf of the City of San Antonio.

The project would involve enhancement of aquatic, riparian, floodplain habitat along Olmos Creek. The study area amounts to about 620 acres in the vicinity of the Olmos Creek and U.S. Highway 281. Restoration would benefit about 1.75 miles of Olmos Creek and its riparian zone. The restoration would also involve about 30 acres of floodplain in the Olmos Creek basin.

Alternatives considered include (1) no action, (2) storm water drainage restoration (converting concrete lined ditches to grass-lined swales), and (3) wet meadow creation (improving water quality for runoff and providing some flood damage reduction).

While 11 federally listed species are known to occur in Bexar County (enclosure 1), none are known from the vicinity of the study area. Critical habitat for the federally listed Bexar karst invertebrates has been proposed (enclosure 2). However, the nearest unit of proposed critical habitat is in the Alamo Heights area, about 1 kilometer east of the northern part of the study area. Dr. George Veni has developed a set of maps that classify a significant part of Bexar County as to the likelihood of the existence of karst features that may support the listed endangered invertebrates. He is in the process of revising these maps for us based on the most recent information and when we receive these updates, we will forward the data germane to the Olmos Creek study area.

We offer the following comments for your consideration as project planning proceeds. It would be helpful to list and describe issues that may affect and/or limit specific restoration actions. For example, will flood conveyance be affected by any of the treatments planned?

Are there existing and potential future wildlife interactions with nearby land use (golf courses, skeet range, sports fields, quarry, etc.), streets, and highways that can be improved by the restoration efforts? Are there opportunities to improve the water quality or stormwater runoff from U.S. Highway 281 and other roads in and near the study area? Enclosure 2 is a 2002 report from the Transportation Research Board of the National Academies, which addresses a number of issues related to wildlife and roads.

In summary, we support your plans to restore and enhance fish and wildlife habitats in the Olmos Creek area. This project has the potential to improve a variety of wildlife habitats in an urban setting. We look forward to working with you, San Antonio River Authority, and the City of San Antonio on this ecological restoration project. If you have any questions, please contact Patrick Connor at extension 227.

Sincerely,



for Robert T. Pine
Supervisor

Enclosures

cc: Robert Cook, Texas Parks and Wildlife Department, Austin, Texas

**Federally Listed as Threatened and Endangered Species of Texas
Bexar County**

October 7, 2002

This list represents species that may be found in Bexar County. Please contact the Austin ES office (U.S. Fish and Wildlife Service, 10711 Burnet Rd., Suite 200, Austin, Texas 78758; phone 512 490-0057) if additional information is needed.

DISCLAIMER

This list is based on information available to the U.S. Fish and Wildlife Service at the time of preparation (date under title). This list is subject to change, without notice, as new biological information is gathered and should not be used as the sole source for identifying species that may be impacted by a project.

Edwards aquifer species: Edwards aquifer county refers to those six counties within the Edwards Aquifer region. The Edwards aquifer underlies portions of Kinney, Uvalde, Medina, Bexar, Hays, and Comal counties, Texas.

Comal Springs riffle beetle	(E)	<i>Heterelmis comalensis</i>
Comal Springs dryopid beetle	(E)	<i>Stygoparnus comalensis</i>
Fountain darter	(E w/CH)	<i>Etheostoma fonticola</i>
Peck's cave amphipod	(E)	<i>Stygobromus pecki</i>
San Marcos gambusia	(E w/CH)	<i>Gambusia georgei</i>
Texas wild-rice	(E w/CH)	<i>Zizania texana</i>
Texas blind salamander	(E)	<i>Eurycea rathbuni</i>
San Marcos salamander	(T □w/CH)	<i>Eurycea nana</i>

Migratory species seen in Bexar and other counties: Species listed specifically in a county have confirmed sightings. If a species is not listed they may occur as migrants in those counties.

Least tern	(E ~)	<i>Sterna antillarum</i>
Whooping crane	(E w/CH)	<i>Grus americana</i>
Bald eagle	(T)	<i>Haliaeetus leucocephalus</i>
Piping plover	(T w/CH)	<i>Charadrius melodus</i>

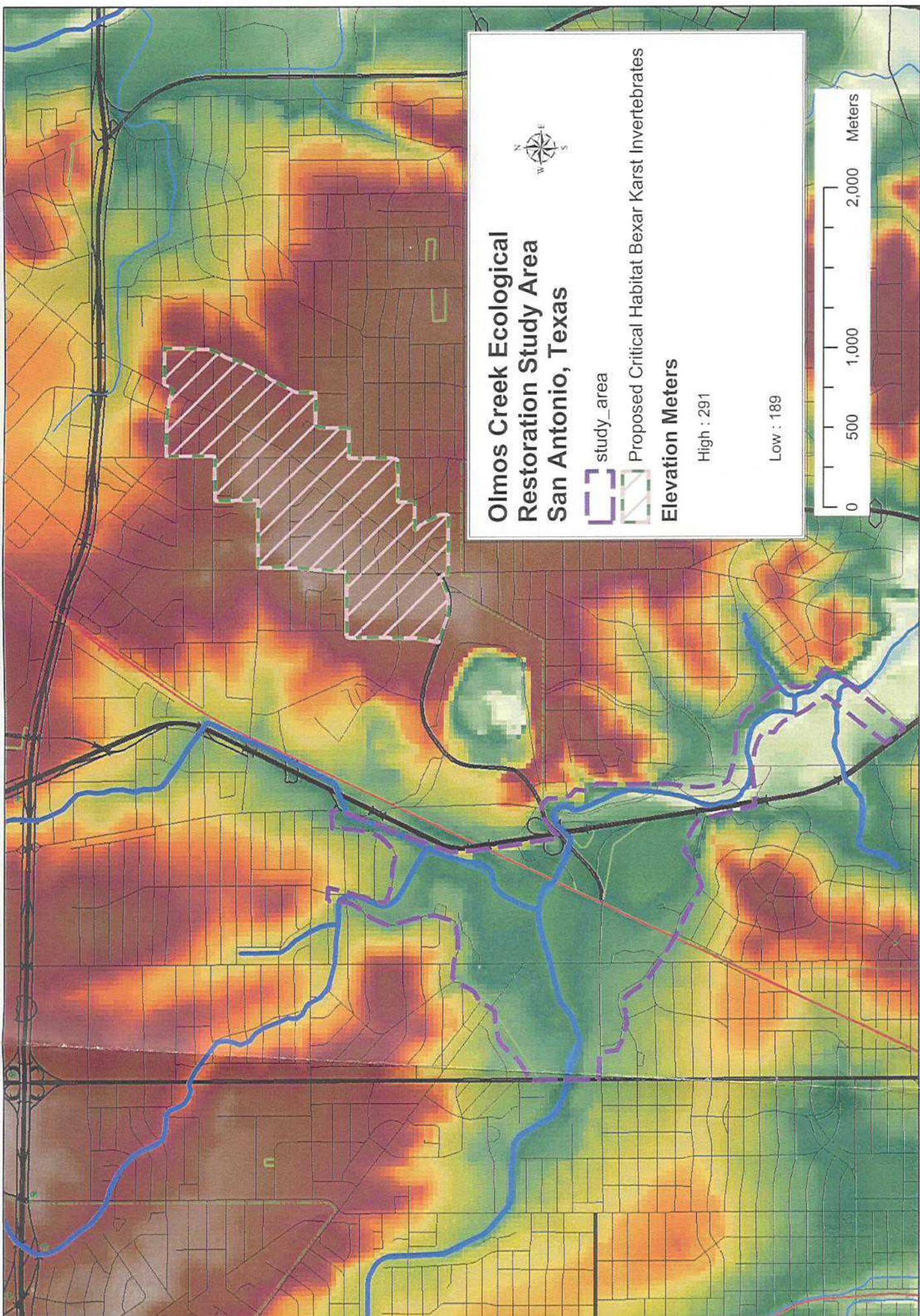
Bexar County (Edwards Aquifer County)

Black-capped vireo	(E)	<i>Vireo atricapillus</i>
Golden-cheeked warbler	(E)	<i>Dendroica chrysoparia</i>
Madla cave meshweaver	(E w/P/CH)	<i>Cicurina madla</i>
Robber Baron Cave meshweaver	(E w/P/CH)	<i>Cicurina baronia</i>
Braken Bat Cave meshweaver	(E w/P/CH)	<i>Cicurina venii</i>
Government Canyon Bat Cave meshweaver	(E w/P/CH)	<i>Cicurina vespera</i>
Government Canyon Bat Cave spider	(E w/P/CH)	<i>Neoleptoneta microps</i>
Cokendolpher cave harvestmen	(E w/P/CH)	<i>Texella cokendolpheri</i>
Ground beetle (no common name)	(E w/P/CH)	<i>Rhadine exilis</i>
Ground beetle (no common name)	(E w/P/CH)	<i>Rhadine infernalis</i>
Helotes mold beetle	(E w/P/CH)	<i>Batrisodes venyivi</i>
Mountain plover	(P/T)	<i>Charadrius montanus</i>

Legend

Statewide or areawide migrants are not included by county, except where they breed or occur in concentrations. The whooping crane is an exception; an attempt is made to include all confirmed sightings on this list.

- E = Species in danger of extinction throughout all or a significant portion of its range.
T = Species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
C = Species for which the Service has on file enough substantial information to warrant listing as threatened or endangered.
CH = Critical Habitat (in Texas unless annotated †)
P/ = Proposed . . .
P/E = Species proposed to be listed as endangered.
P/T = Species proposed to be listed as threatened.
□ = with special rule
~ = protection restricted to populations found in the “interior” of the United States. In Texas, the least tern receives full protection, except within 50 miles (80 km) of the Gulf Coast.
-



Olmos Creek Ecological Restoration Study Area San Antonio, Texas



 study_area

 Proposed Critical Habitat Bexar Karst Invertebrates

Elevation Meters

High : 291

Low : 189





DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

July 6, 2004

Planning, Environmental and Regulatory Division

SUBJECT: Olmos Creek Aquatic Ecosystem Restoration Project, San Antonio, Texas

Mr. F. Lawrence Oaks
State Historic Preservation Office
Texas Historical Commission
P.O. Box 12276
Capital Station
Austin, Texas 78711

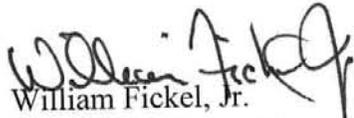
Dear Mr. Oaks:

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, the U.S. Army Corps of Engineers, Fort Worth District is initiating the consultation process with your office regarding the proposed project noted above. The Fort Worth District is acting with the San Antonio River Authority for the City of San Antonio to restore a high quality aquatic ecosystem along Olmos Creek in San Antonio, Texas, under Section 206 of the Water Resources Development Act of 1996. The proposed study area, located between San Pedro Avenue and the Olmos Dam, consists of approximately 1.75 miles of the Olmos Creek corridor and 30 acres of the floodplain within the Olmos basin and includes the portion of the stream that passes through an existing golf course. The proposed project includes restoring and diversifying the riparian forest corridor, controlling invasive/non native vegetation, and reducing erosion and increasing shade along the stream (see enclosed map). The project goals will be achieved through planting of native hard mast producing trees and native grasses within the riparian corridor. Bank stabilization, especially within the existing golf course area, will be accomplished through the installation of stone rip rap in high erosion areas.

In an effort to comply with Section 106 requirements, we plan to have a professional archaeologist survey the proposed restoration locations prior to construction to locate any cultural resources that may be impacted by the restoration activities. Survey efforts may include shovel testing throughout the proposed planting areas. If deemed necessary, deep (backhoe) trenching will be conducted in floodplain areas if project implementation will include deep disturbance. Once we have the results of our cultural resources investigation, we will send you a report of the findings and seek your concurrence with our determinations.

We request your comments and input on our proposed plan for locating potential cultural resources and construction monitoring. If you have any questions, please feel free to contact Ms. Nancy Parrish (817) 886-1725.

Sincerely,

A handwritten signature in black ink, appearing to read "William Fickel, Jr.", written in a cursive style.

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure



TEXAS
HISTORICAL
COMMISSION

The State Agency for Historic Preservation

RICK PERRY, GOVERNOR

JOHN L. NAU, III, CHAIRMAN

F. LAWRENCE OAKS, EXECUTIVE DIRECTOR

August 10, 2004

William Fickel, Jr.
Chief, Environmental Division
CESWF-EV-EC
Dept. of the Army
Ft. Worth District, Corps of Engineers
P.O. Box 17300
Fort Worth, Texas 76102-0300

Attention: Nancy Parrish

Re: Review under Section 106 of the National Historic Preservation Act and
The Antiquities Code of Texas
Olmos Creek Aquatic Ecosystem Restoration Project
(COE-FWD)

Dear Mr. Fickel:

Thank you for allowing us to review the report referenced above. This letter serves as comment on the document from the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission.

The review staff, led by Bill Martin, has examined the maps accompanying your letter. We concur that this area should be surveyed by a professional archeologist. Because this project is on land owned or controlled by the San Antonio River Authority, an Antiquities Permit must be issued by this agency prior to initiation of the survey. Please be sure to ask prospective principal investigators if they are eligible to receive a permit.

We look forward to receiving the draft survey report. Thank you for your cooperation in this federal review process, and for your efforts to preserve the irreplaceable heritage of Texas. **If we may be of further assistance, please contact Bill Martin at 512/463-5867.**

Sincerely,

A handwritten signature in cursive script, appearing to read "F. Lawrence Oaks".

for

F. Lawrence Oaks, State Historic Preservation Officer

FLO/wam



United States Department of the Interior

FISH AND WILDLIFE SERVICE
10711 Burnet Road, Suite 200
Austin, Texas 78758
512 490-0057
FAX 490-0974

Mark FYI

Mike V



DEC 16 2004

Colonel John R. Minahan
District Engineer
U.S. Army Corps of Engineers
P.O. Box 17300
Fort Worth, Texas 76102-0300

Dear Colonel Minahan:

This letter is to provide support for the U.S. Army Corps of Engineers (USACE) Planning Design Report and Environmental Assessment for the Olmos Creek Section 206 Aquatic Ecosystem Restoration Project, Bexar County, Texas. The project will enhance about 96 acres of riparian area through the restoration of bottomland hardwoods, native prairie, and instream aquatic habitat in Olmos Creek. Methods to be used include: removal of native and non-native invasive plant species, planting native soft and hard mast trees, planting native grasses and forbs, and placement of physical erosion control measures. The U.S. Fish and Wildlife Service (Service) concurs that these proposed measures are an effective way to restore this section of Olmos Creek for fish and wildlife resources and for benefit to the City of San Antonio. The Service applauds the City of San Antonio and USACE for taking a responsible lead in restoring urban riparian areas.

This planning assistance is provided, in part, pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and is intended to assist in USACE project development. We appreciate the opportunity to assist and to be actively involved with the Fort Worth District in ecosystem restoration projects like this one for Olmos Creek. If you have any questions or comments please contact Marty Underwood (marty_underwood@fws.gov) at (512) 490-0057.

Sincerely,

Robert T. Pine
Supervisor

cc: Tom Heger, Texas Parks and Wildlife Department, Austin, Texas
Michael Votaw, Ft. Worth District, U.S. Army Corps of Engineers. Ft. Worth, Texas.

TAKE PRIDE
IN AMERICA 



United States Department of the Interior

FISH AND WILDLIFE SERVICE

10711 Burnet Road, Suite 200

Austin, Texas 78758

512 490-0057

FAX 490-0974



OCT 23 2003

Colonel John R. Minahan, District Engineer
U.S. Army Corps of Engineers (CESWF-PER-EE)
P.O. Box 17300
Fort Worth, Texas 76102-0300

Consultation # 02-15-03-I-0164

Dear Colonel Minahan:

This letter provides planning assistance for the Olmos Creek Aquatic Ecosystem Restoration Project in San Antonio, Bexar County, Texas. The project will evaluate various alternatives to identify and implement ecosystem restoration activities within the study area. The purpose of this letter is to identify and describe existing fish and wildlife resources and opportunities within the proposed project area.

This planning assistance is provided, in part, pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and is intended to assist in the development of your draft feasibility report. It does not represent a final report of the Secretary of the Interior within the meaning of Section 2(b) of the Act. A complete draft Fish and Wildlife Coordination Act report will be prepared, for consideration and to accompany the feasibility report, after we have reviewed all available pertinent information during the planning process.

These studies were initiated at the request of the City of San Antonio, where plans are being made to restore aquatic ecosystems within the Olmos Creek basin. Project area inspections were conducted in April, May, June, and September of 2003, by U.S. Fish and Wildlife Service staff. The May and July 2003, field visits to gather habitat evaluation procedures data were accomplished with help from Texas Parks and Wildlife Department and your environmental planning staff. If you have any questions or comments concerning this study, please contact Dawn Whitehead at (512) 490-0057, extension 222. We look forward to continued coordination with your planning staff as this project investigation proceeds.

Sincerely,

Robert T. Pine
Supervisor

Enclosure

cc: Tom Heger, TPWD, Austin, Texas





DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

November 18, 2005

Planning, Environmental, and Regulatory Division

Ms. Rhonda Smith
Office of Planning and Coordination
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Mail Stop 6ENXP
Dallas, Texas 75202

Dear Ms. Smith:

The U.S. Army Corps of Engineers (USACE) has prepared a Draft Planning Design Report with an Integrated Environmental Assessment (EA) and a draft Finding of No Significant Impact (FONSI) regarding the proposed implementation of the Section 206 Aquatic Ecosystem Restoration Project on Olmos Creek in San Antonio, Bexar County, Texas.

The project is needed to restore aquatic and riparian habitats to a condition closer to natural, historic conditions. Prior to human encroachment, the floodplain along Olmos Creek was comprised of high quality riparian and in-stream habitat. However, the majority of the bottomland plant community along this portion of the creek has become highly disturbed and fragmented due primarily to conversion of land to recreational and urban uses, as well as the presence of a variety of invasive species. The quality of in-stream aquatic habitat has degraded due to alterations to natural water flows and channel morphology and removal of the riparian corridor along portions of the creek.

The proposed action consists of the following measures within the Olmos Creek study area:

- Enhancement and restoration of approximately 73 acres of riparian corridor including invasive removal, bank vegetation, bottomland hardwood planting, and grass plantings within the riparian corridor.
- Bank stabilization measures including live willow staking and rip-rap to reduce erosion and improve approximately six acres of aquatic habitat.
- Enhancement of approximately 17 acres of native prairie through removal of invasive grass species and planting with native grasses.

Please respond with any comments or concerns your agency may have regarding the proposed project within 30 days of the date of the Notice of Availability enclosed with this letter. Additional information regarding the proposed action is available upon request.

Please address any requests or comments to Mr. Michael Votaw (817) 886-1849 of my staff.
Thank you for your cooperation in this matter.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental, and
Regulatory Division

Enclosures

**(Letter sent to multiple agencies:
TCEQ, USFWS, TPWD, EPA,
SHPO)**

Mr. Votaw/1849
PAXTON, CESWF-PER-EE
HARBERG, CESWF-PER-E
FICKEL, CESWF-PER-
WV
WV
WV

Similar letter sent to the following agencies:

Mr. Robert Pine
Acting Field Supervisor
U.S. Fish and Wildlife Service
10711 Burnet Road, Suite 200
Austin, Texas 78758

Ms. Cindy Loeffler
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

Mr. F. Lawrence Oakes
State Historic Preservation Office
P.O. Box 12276
Capital Station
Austin, Texas 78711

Mr. Rollin MaCrae
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

Ms. Kathy Boydston
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

Mr. Mark Fisher
Research and Environmental Assessment Section
Water Planning and Assessment Division
Texas Commission on Environmental Quality
12100 Park Circle 35, Building F
P.O. Box 13087, Capitol Station
Austin, Texas 78711

W



DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

November 18, 2005

Planning, Environmental, and Regulatory Division

Central Public Library
600 Soledad
San Antonio, Texas 78212

To Whom It May Concern:

The U.S. Army Corps of Engineers, Fort Worth District, has completed preparation of a draft Planning Design Report (PDR), and Integrated Environmental Assessment (EA) and the draft Finding of No Significant Impact (FONSI) for the Olmos Creek Section 206 Aquatic Ecosystem Restoration Study, Bexar County, San Antonio, Texas.

The Public has an opportunity to review the above referenced document for thirty (30) days from the date it appears on the Notice of Availability (November 18, 2005). To ensure that the public has an opportunity to review the draft PDR and EA, please retain a copy of the attached document until December 19, 2005, and make it available to the public at their request.

Additional copies or additional information may be obtained by contacting Michael Votaw, at U.S. Army Corps of Engineers, attention: CESWF-PER-EE, P.O. Box 17300, Fort Worth, Texas 76102-0300, or by calling telephone number, (817) 886-1849.

Sincerely,

A handwritten signature in black ink, appearing to read "William Fickel, Jr.", written in a cursive style.

William Fickel, Jr.
Chief, Planning, Environmental, and
Regulatory Division

Enclosure

Same Letter Sent to:

Central Public Library
600 Soledad
San Antonio, Texas 78212
(210) 207-2500

Kenwood Community Center
300 Dora
San Antonio, Texas 78212
(210) 733-1454

Branch Library
233 Bushnell
San Antonio, Texas 78212
(210) 732-8639

San Pedro Branch Library
1315 San Pedro Ave
San Antonio, Texas 78205
(210) 732-1718



DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

November 18, 2005

Planning, Environmental, and Regulatory Division

Ms. Nina Nixon-Mendez
City of San Antonio Planning Department
Neighborhood and Urban Design Division
114 West Commerce
P.O. Box 839966
San Antonio, Texas 78283

Dear Ms. Nina Nixon-Mendez:

The U.S. Army Corps of Engineers, Fort Worth District, has completed preparation of a draft Planning Design Report (PDR), and Integrated Environmental Assessment (EA) and the draft Finding of No Significant Impact (FONSI) for the Olmos Creek Section 206 Aquatic Ecosystem Restoration Study, Bexar County, San Antonio, Texas.

Enclosed is a copy of the above referenced document for your review. The review period lasts thirty (30) days from the date (November 18, 2005) it appears on the Notice of Availability (NOA) ending on December 19, 2005. Please provide any comments within the above-specified time frame.

Additional copies or additional information may be obtained by contacting Michael Votaw, at U.S. Army Corps of Engineers, attention: CESWF-PER-EE, P.O. Box 17300, Fort Worth, Texas 76102-0300, or by calling telephone number (817) 886-1849.

Sincerely,

A handwritten signature in black ink, appearing to read "William Fickel, Jr.", is positioned above the printed name.

William Fickel, Jr.
Chief, Planning, Environmental, and
Regulatory Division

Enclosure

Same Letter Sent to:

Susan Rash
City Administrator
City of Alamo Heights
6116 Broadway
San Antonio, TX 78209



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

November 18, 2005

NOTICE OF AVAILABILITY

PROPOSED IMPLEMENTATION OF THE SECTION 206 AQUATIC ECOSYSTEM RESTORATION PROJECT SAN ANTONIO, TEXAS

Description. Interested parties are hereby notified that the District Engineer, U.S. Army Corps of Engineers (USACE), Fort Worth District, has prepared an Environmental Assessment (EA) and draft Finding of No Significant Impact (FONSI) regarding the implementation of an aquatic ecosystem restoration project located along Olmos Creek in the City of San Antonio, Bexar County, Texas.

Statutory Authority. This notice is being issued to all interested parties in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Council on Environmental Quality (CEQ) Code of Federal Regulations (40 CFR parts 1500-1508), and Engineering Regulation (ER) 200-2-2. This restoration project would be conducted under Section 206 of the Water Resources Development Act of 1996, as amended (33 USC 2201).

Background. The project area includes a portion of Olmos Creek between San Pedro Avenue and Olmos Dam, including portions of Olmos Municipal Golf Course and Olmos Basin Park in San Antonio, Texas (map attached). The project is needed to restore aquatic and riparian habitats to a condition closer to natural, historic conditions. Prior to human encroachment, the floodplain along Olmos Creek was comprised of high quality riparian and in-stream habitat. However, the majority of the bottomland plant community along this portion of the creek has become highly disturbed and fragmented due primarily to conversion of land to recreational and urban uses, as well as the presence of a variety of invasive species. The quality of in-stream aquatic habitat has degraded due to alterations to natural water flows and channel morphology and removal of the riparian corridor along portions of the creek.

The purpose of the proposed action is to implement restoration measures that would remedy some of these degradations by restoring habitats within the project area, which includes the Olmos Municipal Golf Course and Olmos Basin Park. Specific degradations that need restoration include areas experiencing bank erosion, a narrow, fragmented riparian corridor, a lack of stream shade, and decreased plant species diversity, specifically hard mast producing trees. Lands would be made available by the City of San Antonio as the non-Federal sponsor. The City would also be responsible for all operation, maintenance, replacement, and repair costs.

Proposed Action.

The proposed action consists of the following measures within the Olmos Creek study area:

- Enhancement and restoration of approximately 73 acres of riparian corridor including invasive removal, bank vegetation, bottomland hardwood planting, and grass plantings within the riparian corridor.
- Bank stabilization measures including live willow staking and rip-rap to reduce erosion and improve approximately six acres of aquatic habitat.
- Enhancement of approximately 17 acres of native prairie through removal of invasive grass species and planting with native grasses.

Alternatives considered include the proposed action (recommended plan) and no action as described in the draft Planning Design Report (PDR) and integrated EA. Additional alternatives and scales were analyzed in the draft DPR/EA, but eliminated from further analysis either because project restoration objectives were not realized or the plans were not cost effective. Under the no action alternative, no restoration measures would be implemented. The lack of a well-developed riparian corridor and continuation of existing management practices would likely result in continued loss of riparian habitat, bank erosion, and sedimentation.

The proposed action would not have any significant impacts on the social, economic, or human and natural environment. No adverse impact on any species, which are proposed or listed as threatened or endangered under the Endangered Species Act, is expected. No significant historical, archeological, or hazardous waste concerns were identified within the project area. Contractors would be required to have erosion control and hazardous spill prevention plans in place, and would prepare a Texas Pollutant Discharge Elimination System plan and Stormwater Pollution Prevention Plan. Vegetation and wetlands not proposed for restoration would be avoided during construction.

Public Meeting. A public meeting has not been scheduled for the proposed action. Prior to the close of the comment period, any person may make a written request for a public meeting, setting forth the particular reasons for the request. The District Engineer will then determine whether the issues raised are substantial and should be considered in his decision. If a public meeting is warranted, all known interested parties will be notified of the time, date, and location of such a meeting.

Public Review. Pursuant to the regulations implementing the procedural provisions of the National Environmental Policy Act of 1969 as amended in 1975 (40 Code of Federal Regulations [CFR], Parts 1500 through 1508), the U.S. Department of the Army gives notice that it has prepared the required environmental documentation for the Olmos Creek Aquatic Ecosystem Restoration Project in San Antonio, Texas. This document is available for review at the following addresses:

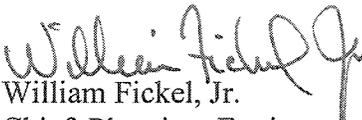
Central Public Library
600 Soledad
San Antonio, Texas 78212
(210) 207-2500

Branch Library
233 Bushnell
San Antonio, Texas 78212
(210) 732-8639

Kenwood Community Center
300 Dora
San Antonio, Texas 78212
(210) 732-1718

San Pedro Branch Library
1315 San Pedro Ave.
San Antonio, Texas 78205
(210) 733-1454

Comment Period. The comment period for this action is 30 days from the date of this Public Notice. Please address any comments to Mr. Michael Votaw, CESWF-PER-EE, Post Office Box 17300, Fort Worth, Texas 76102-0300, or by e-mail at Michael.Votaw@swf02.usace.army.mil. Copies of the EA and draft FONSI may be requested in writing at the above address, by telephone at (817) 886-1849, or visit the Fort Worth District website at www.swf.usace.army.mil.


William Fickel, Jr.
Chief, Planning, Environmental,
and Regulatory Division

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APPENDIX B
HTRW INVESTIGATION



**The EDR Radius Map
with GeoCheck®**

**Olmos Creek Aquatic Restoration Sec 206
Olmos Creek Aquatic
San Antonio, TX 78212**

Inquiry Number: 0981078.1s

May 21, 2003

***The Source
For Environmental
Risk Management
Data***

3530 Post Road
Southport, Connecticut 06890

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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Map Findings	6
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Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-7
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Physical Setting Source Records Searched	A-97

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

OLMOS CREEK AQUATIC
SAN ANTONIO, TX 78212

COORDINATES

Latitude (North): 29.488200 - 29° 29' 17.5"
Longitude (West): 98.488300 - 98° 29' 17.9"
Universal Transverse Mercator: Zone 14
UTM X (Meters): 549604.9
UTM Y (Meters): 3262007.0
Elevation: 721 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: 2429098-D4 SAN ANTONIO EAST, TX
Source: USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
CORRACTS..... Corrective Action Report
RCRIS-TSD..... Resource Conservation and Recovery Information System
RCRIS-LQG..... Resource Conservation and Recovery Information System
ERNS..... Emergency Response Notification System

STATE ASTM STANDARD

SHWS..... State Superfund Registry

EXECUTIVE SUMMARY

SWF/LF..... Permitted Solid Waste Facilities
CLI..... Closed Landfill Inventory
TX VCP..... Voluntary Cleanup Program Database

FEDERAL ASTM SUPPLEMENTAL

CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
Delisted NPL..... National Priority List Deletions
HMIRS..... Hazardous Materials Information Reporting System
MLTS..... Material Licensing Tracking System
MINES..... Mines Master Index File
NPL Liens..... Federal Superfund Liens
PADS..... PCB Activity Database System
DOD..... Department of Defense Sites
RAATS..... RCRA Administrative Action Tracking System
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
SSTS..... Section 7 Tracking Systems
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

AST..... Petroleum Storage Tank Database
TX Spills..... Spills Database
IOP..... Innocent Owner/Operator Program
Multimedia..... Multi Media Enforcement Cases
WasteMgt..... Commercial Hazardous & Solid Waste Management Facilities
AIRS..... Current Emission Inventory Data

EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas..... Former Manufactured Gas (Coal Gas) Sites

BROWNFIELDS DATABASES

Brownfields..... Brownfields Site Assessments
TX VCP..... Voluntary Cleanup Program Database

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the target property includes a tolerance of +/- 10 feet. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in *bold italics* are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

FEDERAL ASTM STANDARD

RCRIS: The Resource Conservation and Recovery Act database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The source of this database is the U.S. EPA.

A review of the RCRIS-SQG list, as provided by EDR, and dated 09/09/2002 has revealed that there are 3 RCRIS-SQG sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
QUALITY AUTO SERVICE INC	839 BASSE RD	1/4 - 1/2 W	A4	19
U-HAUL REPAIR	5810 SAN PEDRO AVE	1/2 - 1 W	B7	27
THE PEP BOYS SAN PEDRO	6200 SAN PEDRO AVE	1/2 - 1 WNW	D17	66

STATE ASTM STANDARD

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Texas Commission on Environmental Quality's Leaking Petroleum Storage Tank Database.

A review of the LUST list, as provided by EDR, and dated 04/18/2003 has revealed that there are 15 LUST sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
DATAFLEET 1961	835 BASSE RD	1/4 - 1/2 W	A2	9
NORTHSIDE AUTO PARTS	5906 SAN PEDRO	1/2 - 1 W	B5	19
OLMOS BASIN GOLF COURSE	7022 MCCULLOUGH AVE	1/2 - 1 NNW	9	32
CENTRAL DIST CO	6127 SAN PEDRO	1/2 - 1 WNW	C11	40
CATALINA MOTORS	6143 SAN PEDRO	1/2 - 1 WNW	C12	45
BILL BROWN AUTOMOTIVE	5505 SAN PEDRO AVE	1/2 - 1 WSW	13	53
DIAMOND SHAMROCK 95	5105 N MCCULLOUGH	1/2 - 1 SSW	14	53
ALAMO CEMENT CO	HWY 281	1/2 - 1 NE	15	61
OFFICES TO GO	6234 SAN PEDRO AVE	1/2 - 1 WNW	D19	70
BOYD CORP	6325 SAN PEDRO	1/2 - 1 NW	20	72
CRYSTAL CAR WASH	6402 SAN PEDRO	1/2 - 1 NW	E21	72
FDIC FOR NORTHSIDE BANK	6411 SAN PEDRO	1/2 - 1 NW	E22	77
EXXON RS 63670	6523 SAN PEDRO	1/2 - 1 NW	23	79
BANNER SIGNS & BARRICADES INC	70 HABY DR	1/2 - 1 W	24	85
E-Z MART 226	6614 SAN PEDRO BLVD	1/2 - 1 NW	25	86

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Texas Commission on Environmental Quality's Petroleum Storage Tank Database.

A review of the UST list, as provided by EDR, and dated 04/28/2003 has revealed that there are 13 UST sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
DATAFLEET 1961	835 BASSE RD	1/4 - 1/2 W	A2	9
NORTHSIDE AUTO PARTS	5906 SAN PEDRO	1/2 - 1 W	B5	19
STOP N GO 2086	5811 SAN PEDRO AVE	1/2 - 1 W	B6	22

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
SAN PEDRO U HAUL CTR 74480	5810 SAN PEDRO	1/2 - 1 W	B8	28
OLMOS BASIN GOLF COURSE	7022 MCCULLOUGH AVE	1/2 - 1 NNW	9	32
DBA DIXON BROS AUTO CENTER	210 JACKSON-KELLER	1/2 - 1 NW	10	39
CENTRAL DIST CO	6127 SAN PEDRO	1/2 - 1 WNW	C11	40
CATALINA MOTORS	8143 SAN PEDRO	1/2 - 1 WNW	C12	45
DIAMOND SHAMROCK 95	5105 N MCCULLOUGH	1/2 - 1 SSW	14	53
PEP BOYS 734	6200 SAN PEDRO	1/2 - 1 WNW	D16	62
ALS CORNER STORE	5407 SAN PEDRO AVE	1/2 - 1 WSW	18	66
OFFICES TO GO	6234 SAN PEDRO AVE	1/2 - 1 WNW	D19	70
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
ALAMO CEMENT	BOX 6925	1/4 - 1/2 ENE	1	6

FEDERAL ASTM SUPPLEMENTAL

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 01/14/2003 has revealed that there is 1 FINDS site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
QUALITY AUTO SERVICE INC	839 BASSE RD	1/4 - 1/2 W	A4	19

STATE OR LOCAL ASTM SUPPLEMENTAL

TX IHW: The Industrial and Hazardous Waste Database contains summary reports by waste handlers, generators and shippers in Texas.

A review of the Ind. Haz Waste list, as provided by EDR, has revealed that there is 1 Ind. Haz Waste site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
QUALITY AUTO SERVICE, INC.	839 BASSE RD.	1/4 - 1/2 W	A3	15

EXECUTIVE SUMMARY

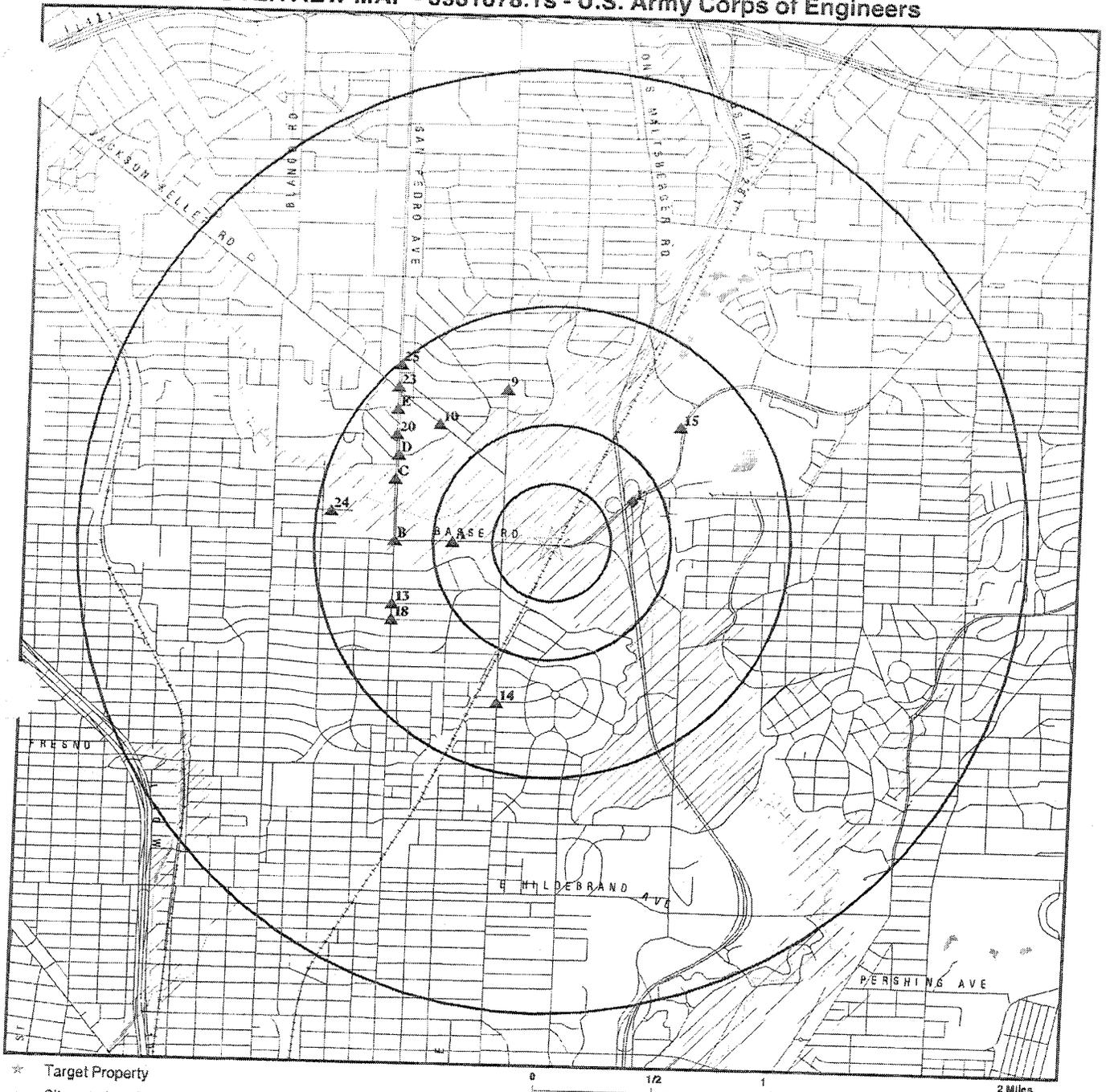
Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
FIRST QUALITY CYLINDERS	SHWS
PHIPPS PLATING	SHWS
J.C. PENNCO WASTE OIL SERVICE	SHWS
AZTEC CERAMICS	SHWS
5229 KBER SQUARE, SAN ANTONIO	SWF/LF
4542 S.E. LOOP 410 (IH 410)	SWF/LF, Ind. Haz Waste
4542 S LOOP 410 (IH 410)	SWF/LF
MARBACH OAKS	SWF/LF
7400 MERTON MINTOR BLVD., 2.0 M	SWF/LF
MISSION TERRACE OFFICE COMPLEX	SWF/LF
0.4 MI SE OF JONES-MALTSBERGER	SWF/LF
NORTHEAST POLICE STATION	SWF/LF
COMET 1 HR CLEANERS	LUST
WAL MART STORE NO 2404	RCRIS-SQG, FINDS
DRUMS ARE IN A DRY CREEK BED	RCRIS-SQG, FINDS
SPECPRO, INC.	ERNS
LINCOLN HEIGHTS SHOPPING CENTER/CO	MLTS
ALAMO CEMENT COMPANY/MATERIALS YAR	TX VCP
MKT - SLOAN RAILYARD	TX VCP
DATAPPOINT CORPORATION	TX VCP
CHEVRON #108562	Ind. Haz Waste
CHEVRON #108562	Ind. Haz Waste
BECK CONCRETE	Ind. Haz Waste
ADVANCED TOBACCO PRODUCTS INC.	Ind. Haz Waste
EXXON CO. USA 63732	Ind. Haz Waste
EXXON CO. USA 63732	Ind. Haz Waste
BROADWAY DODGE DBA	Ind. Haz Waste
BROADWAY DODGE DBA	Ind. Haz Waste
BROADWAY DODGE DBA	Ind. Haz Waste
BROADWAY DODGE (DBA)	Ind. Haz Waste
BROADWAY DODGE (DBA)	Ind. Haz Waste
AWARDS UNLIMITED	Ind. Haz Waste
LLOYD BALL EXXON	Ind. Haz Waste
LLOYD BALL EXXON	Ind. Haz Waste
HENDY ROSE GARAGE2	Ind. Haz Waste
HENDY ROSE GARAGE#2	Ind. Haz Waste
ARMY & A F EXCHANGE SERVICE	Ind. Haz Waste
ARMY & A F EXCHANGE SERVICE	Ind. Haz Waste
ARMY & A F EXCHANGE SERVICE	Ind. Haz Waste
ARMY & A/F EXCHANGE SERVICE	Ind. Haz Waste
ARMY & A/F EXCHANGE SERVICE	Ind. Haz Waste
CONTRACTORS EQUIPMENT REPAIR	Ind. Haz Waste
CONTRACTORS EQUIPMENT REPAIR	Ind. Haz Waste
ALAMO PARK, INC.	Ind. Haz Waste
ALAMO PARK, INC.	Ind. Haz Waste
COOPER EQUIPMENT CO	Ind. Haz Waste
COOPER EQUIPMENT CO	Ind. Haz Waste
COOPER EQUIPMENT CO	Ind. Haz Waste
COOPER EQUIPMENT CO.	Ind. Haz Waste
COOPER EQUIPMENT CO.	Ind. Haz Waste
LACKLAND AIR FORCE BASE TRAINING AN	Ind. Haz Waste

EXECUTIVE SUMMARY

NORTH IND SCHOOL DISTRICT	Ind. Haz Waste
NORTH IND SCHOOL DISTRICT	Ind. Haz Waste
NORTH IND SCHOOL DISTRICT	Ind. Haz Waste
NORTH IND. SCHOOL DISTRICT	Ind. Haz Waste
NORTH IND. SCHOOL DISTRICT	Ind. Haz Waste
VEG PAK INC.	Ind. Haz Waste
VEG PAK INC.	Ind. Haz Waste
VETERANS ADMIN. HOSP. SAN	Ind. Haz Waste
VETERANS ADMIN. HOSP. SAN	Ind. Haz Waste
J & S AUTO REPAIR	Ind. Haz Waste
J & S AUTO REPAIR	Ind. Haz Waste
J & S AUTO REPAIR	Ind. Haz Waste
GARLAND BOGGESS	Ind. Haz Waste
OLMOS EQUIPMENT	Ind. Haz Waste
OLMOS ENVIRONMENTAL SERVICES	Ind. Haz Waste
HARMONY HILLS AUTO SVC	Ind. Haz Waste
HARMONY HILLS AUTO SVC	Ind. Haz Waste
HARMONY HILLS AUTO SVC	Ind. Haz Waste
HARMONY HILLS AUTO SVC	Ind. Haz Waste
HARMONY HILLS AUTO SVC	Ind. Haz Waste
BURRIS REPAIR	Ind. Haz Waste
BURRIS REPAIR	Ind. Haz Waste
CHEVRON 108574	Ind. Haz Waste
EXXON CO USA 63280	Ind. Haz Waste
U.S. AIR FORCE	Ind. Haz Waste
LACKLAND AIR FORCE BASE - TRANSFER	Ind. Haz Waste
LACKLAND AIR FORCE BASE - TRANSFER	Ind. Haz Waste
LACKLAND AIR FORCE BASE - TRANSFER	Ind. Haz Waste
ROSS, A.C. & SON PAPER CO.,INC	Ind. Haz Waste
ROSS, A.C. & SON PAPER CO.,INC	Ind. Haz Waste
HALO DISTRIBUTING CO	Ind. Haz Waste
TOM FAIREY	Ind. Haz Waste
TOM FAIREY	Ind. Haz Waste
EXXON CO. USA 63670	Ind. Haz Waste
EXXON CO. USA 63670	Ind. Haz Waste
EXXON CO USA 63670	Ind. Haz Waste
EXXON CO USA 63670	Ind. Haz Waste
EXXON CO USA 63670	Ind. Haz Waste
EXXON CO. USA 63280	Ind. Haz Waste
EXXON CO. USA 63280	Ind. Haz Waste
CALVENDER BUICK INCORPORATED	Ind. Haz Waste
O'BOY SERVICE CO. OF S.A., INC	Ind. Haz Waste
O'BOY SERVICE CO. OF S.A., INC	Ind. Haz Waste
DUO-FAST	Ind. Haz Waste
DUO-FAST	Ind. Haz Waste
MAKITA CORP	Ind. Haz Waste
CHEVRON #108579	Ind. Haz Waste
CHEVRON #108579	Ind. Haz Waste
UNIT 1	Ind. Haz Waste
	AIRS

OVERVIEW MAP - 0981078.1s - U.S. Army Corps of Engineers



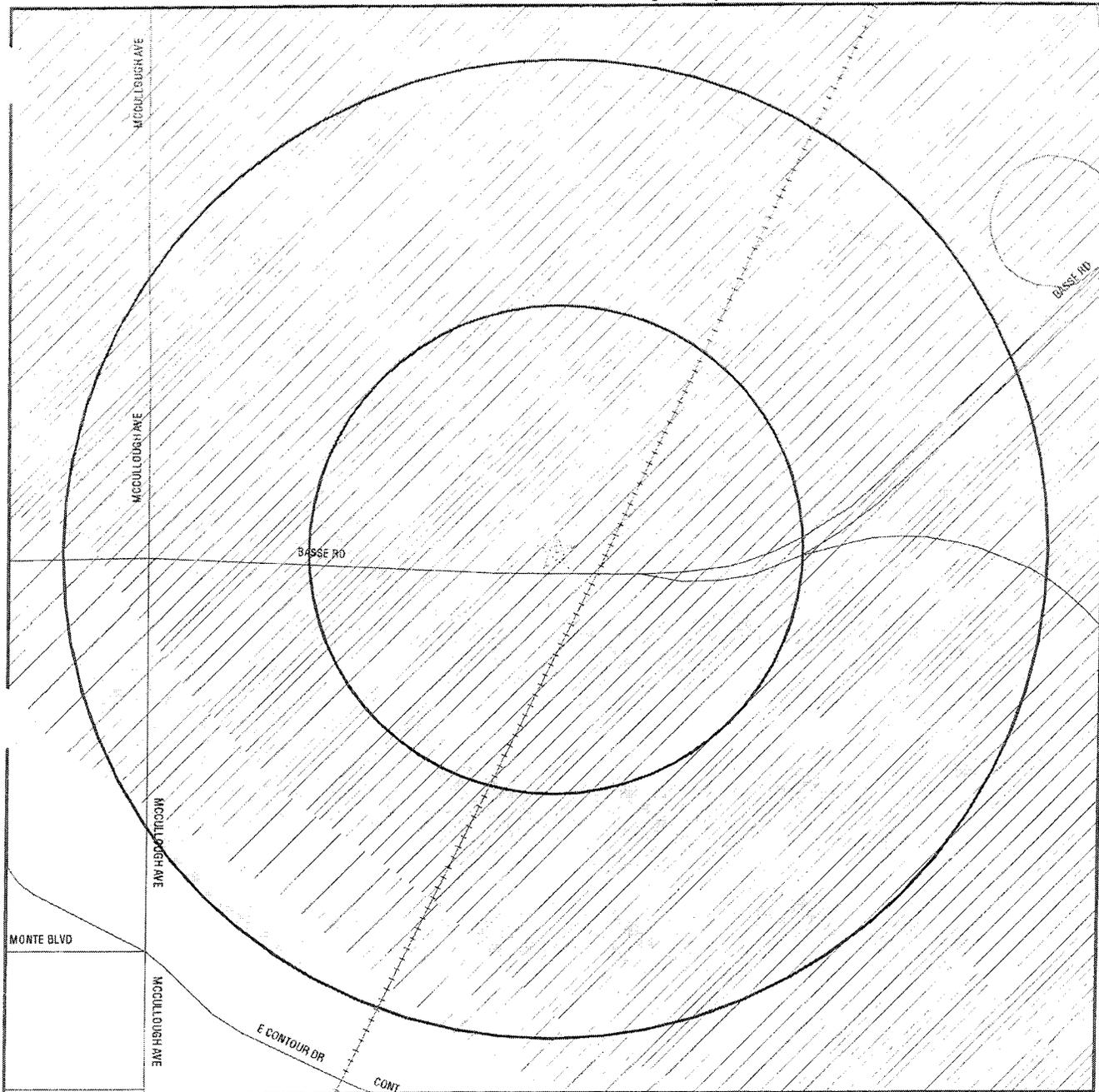
- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites

- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone



TARGET PROPERTY:	Olmos Creek Aquatic Restoration Sec 206	CUSTOMER:	U. S. Army Corps of Engineers
ADDRESS:	Olmos Creek Aquatic	CONTACT:	Eric Kirwan
CITY/STATE/ZIP:	San Antonio TX 78212	INQUIRY #:	0981078.1s
LAT/LONG:	29.4882 / 98.4883	DATE:	May 21, 2003 12:58 pm

DETAIL MAP - 0981078.1s - U.S. Army Corps of Engineers



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- ⊕ Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites

- Oil & Gas pipelines
- ▨ 100-year flood zone
- ▩ 500-year flood zone



N

TARGET PROPERTY: Olmos Creek Aquatic Restoration Sec 206 ADDRESS: Olmos Creek Aquatic CITY/STATE/ZIP: San Antonio TX 78212 LAT/LONG: 29.4882 / 98.4883	CUSTOMER: U.S. Army Corps of Engineers CONTACT: Eric Kirwan INQUIRY #: 0981078.1s DATE: May 21, 2003 12:58 pm
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APPENDIX C
INCREMENTAL COST ANALYSIS

SCENARIO STATISTICS

07/14/2004 9:49 AM

SCENARIO: olmos-5/4/2004 300 K Gross Estimate II

FILE: C:\IWRPLAN\Data\Bussey01.mdb

COST VARIABLE: Cost Average Annual Costs

SENSITIVITY: Expected

OUTPUT VARIABLE: AAHU's Average Annual Habitat Units

SENSITIVITY: Expected

CREATED: 7/14/2004 9:39:00 A EDITED: ANALYZED: 7/14/2004 9:40:00 A

POSSIBLE COMBINATIONS: 110,592

COST EFFECTIVE: 87

ACTUAL COMBINATIONS: 110,592

BEST BUY: 13

CONSTRAINT GROUP: NONE

EXCLUDED SOLUTIONS

DERIVED VARIABLES

DEPENDENCY / NON-COMBINABILITY

SOLUTION LEGEND

Solution / Scale Code	Solution Description	Scale Description
A 0	EC Area 1	No Action
A 1	EC Area 1	Flow Baffles
A 2	EC Area 1	Live Stakes
B 0	Rip Corr Restoration	No Action
B 1	Rip Corr Restoration	1"
B 2	Rip Corr Restoration	Seedlings
B 3	Rip Corr Restoration	1" / Seedlings
C 0	EC Area 2	No Action
C 1	EC Area 2	Rip-Rap
C 2	EC Area 2	Rip-Rap / Live Stakes
D 0	Rip. Corr. Restoration Area 2	No Action
D 1	Rip. Corr. Restoration Area 2	1"
D 2	Rip. Corr. Restoration Area 2	Seedlings
D 3	Rip. Corr. Restoration Area 2	1" / Seedlings
E 0	Pilot Channel Area 2	No Action
E 1	Pilot Channel Area 2	3' x 3' Pilot Channel
F 0	Rip. Corr. Restoration Area 3	No Action
F 1	Rip. Corr. Restoration Area 3	1"
F 2	Rip. Corr. Restoration Area 3	Seedlings
F 3	Rip. Corr. Restoration Area 3	1" / Seedlings
G 0	Park Area Restoration Area 3	No Action
G 1	Park Area Restoration Area 3	Grass and Shrubs
H 0	Inverted Siphons Area 3	No Action
H 1	Inverted Siphons Area 3	Two 24" Pipes
H 2	Inverted Siphons Area 3	One 24" and One 48" Pipe
H 3	Inverted Siphons Area 3	Two 24" and One 48" Pipe
H 4	Inverted Siphons Area 3	One 24" , One 48" , and COSA Parks Bri
H 5	Inverted Siphons Area 3	ALL
I 0	Rip. Corr. Restoration Area 4	No Action
I 1	Rip. Corr. Restoration Area 4	1"

IWR-PLAN * Plan Of Interest

			Seedlings
I	-	Rip. Corr. Restoration Area 4	1" / Seedlings
I	3	Rip. Corr. Restoration Area 4	No Action
J	0	Native Prairie Restoration Are	Native Grasses
J	1	Native Prairie Restoration Are	

INPUT DATA

07/14/2004

9:46 AM

CODE	36	37
A 0	0.31	0
A 1	2.89	744
A 2	5.22	1396
B 0	4.46	0
B 1	15.14	19720
B 2	13.32	8513
B 3	14.23	15647
C 0	0.71	0
C 1	2.43	3357
C 2	4.38	3922
D 0	0	0
D 1	4.26	8237
D 2	3.91	4302
D 3	4.06	6809
E 0	0	0
E 1	0.03	24483
F 0	3.27	0
F 1	7.04	12463
F 2	6.68	11858
F 3	6.83	12243

IWR-PLAN

INPUT DATA

07/14/2004

9:46 AM

CODE	36	37
G 0	1.61	0
G 1	2.41	1796
H 0	0.82	0
H 1	1.93	9499
H 2	1.93	13120
H 3	1.93	17246
H 4	1.93	13802
H 5	1.93	17928
I 0	11.65	0
I 1	34.06	19901
I 2	30.31	16924
I 3	32.19	18821
J 0	5.73	0
J 1	15.56	3523

Incremental Cost Of Best Buy Plan Combinations (Ordered By Output)

Scenario: olmos-5/4/200

Counter	Plan Code	AAHU's (HU's)	Cost (Dollars)	Avg. Cost Dollars / HU's	Inc. Cost (Dollars)	Inc. Output (HU's)	Incremental Cost Per Output
1	A0 B0 C0 D0 E0 F0 G0 H0 I0 J0	28.56	0.00	0.0000	0.0000	28.5600	0
2	A2 B0 C0 D0 E0 F0 G0 H0 I0 J0	33.47	1,396.00	41.7090	1,396.0000	4.9100	284.3177
3	A2 B0 C0 D0 E0 F0 G0 H0 I0 J1	43.30	4,919.00	113.6028	3,523.0000	9.8300	358.3927
4	A2 B0 C0 D0 E0 F0 G0 H0 I1 J1	65.71	24,820.00	377.7203	19,901.0000	22.4100	888.0411
5	A2 B2 C0 D0 E0 F0 G0 H0 I1 J1	74.57	33,333.00	447.0028	8,513.0000	8.8600	960.8352
6	A2 B2 C2 D0 E0 F0 G0 H0 I1 J1	78.24	37,255.00	476.1631	3,922.0000	3.6700	1068.665
7	A2 B2 C2 D2 E0 F0 G0 H0 I1 J1	82.15	41,557.00	505.8673	4,302.0000	3.9100	1100.256
8	A2 B2 C2 D2 E0 F0 G1 H0 I1 J1	82.95	43,353.00	522.6401	1,796.0000	0.8000	2245
9	A2 B2 C2 D2 E0 F1 G1 H0 I1 J1	86.72	55,816.00	643.6347	12,463.0000	3.7700	3305.835
10	A2 B1 C2 D2 E0 F1 G1 H0 I1 J1	88.54	67,023.00	756.9799	11,207.0000	1.8200	6157.692

Incremental Cost of Best Buy Plan Combinations (Ordered By Output)

Scenario: olmos-5/4/200

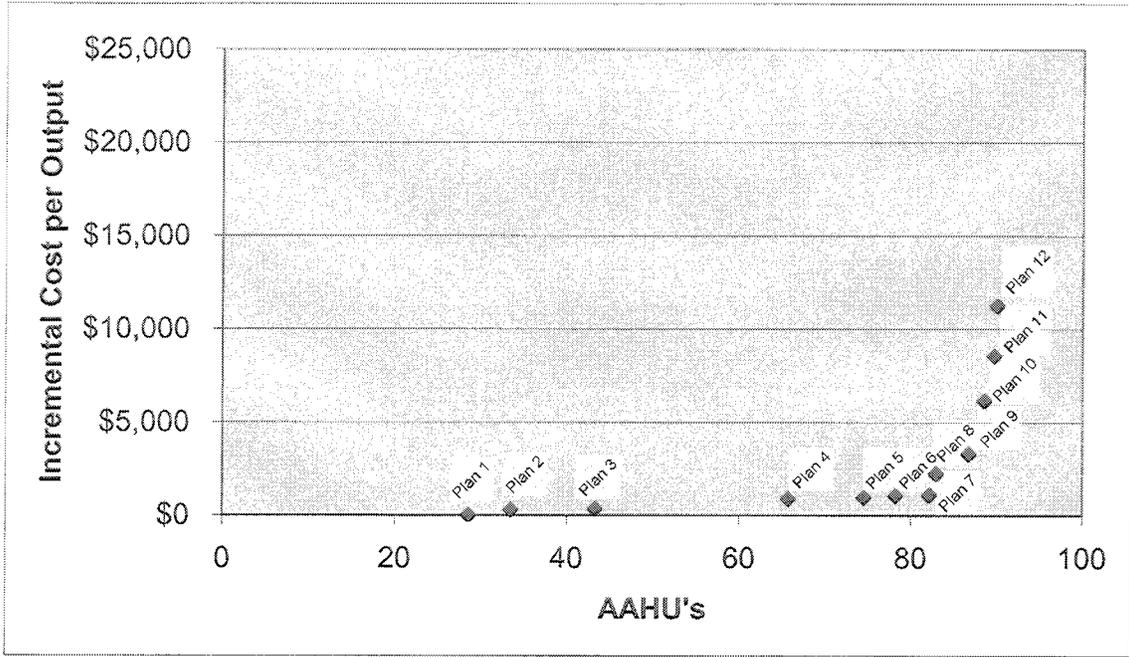
Counter	Plan Code	AAHU's (HU's)	Cost (Dollars)	Avg. Cost Dollars / HU's	Inc. Cost (Dollars)	Inc. Output (HU's)	Incremental Cost Per Output
11	A2 B1 C2 D2 E0 F1 G1 H1 I1 J1	89.65	76,522.00	853.5638	9,499.0000	1.1100	8557.657
12	A2 B1 C2 D1 E0 F1 G1 H1 I1 J1	90.00	80,457.00	893.9667	3,935.0000	0.3500	11242.86
13	A2 B1 C2 D1 E1 F1 G1 H1 I1 J1	90.03	104,940.00	1,165.6120	24,483.0000	0.0300	816100

Summary of Best Buy Plans

- Plan 1.** No action / future without project; land restrictions would not change, but due to the potential of creating a manicured landscape on City owned lands adjacent to Olmos Creek due to increased recreational needs and the high number of invasive / non-native species that are present, average annual habitat units (AAHU's) would decrease over time from 56.87 to 28.56.
- Plan 2.** Plan 1 with the addition of live willow stakes for erosion control in Area One. Live staking would occur on approximately 3,000 square feet near the terminus of the concrete-lined storm drain located in Area One. Staking would occur at three stakes per four square feet. Live staking provides benefits to the terrestrial environment as well as the aquatic environment. However, it is still estimated that AAHU's would decrease from 56.87 to 33.47.
- Plan 3.** Plan 2 with native prairie restoration located in Area Five. Prairie restoration would involve the purchase of approx. 17.62 acres, two applications of herbicide for invasive control, and overseeding with native grasses at 8 lbs. / acre. It is estimated that the AAHU's would still decrease from 56.87 to 43.30.
- Plan 4.** Plan 3 with the restoration of the riparian corridor in Area Four. Restoration of the riparian corridor in Area Four would require the purchase of approximately 37.47 acres, removal of invasive / non-native species, selective thinning of 1.0 acre of cedar elm and hackberry, and planting of approximately 4.91 acres of 1" caliper hard mast producing trees at 65 / acre. This plan would also involve a clean-up of debris and trash in the area so that proper planting equipment can be utilized. The addition of this measure would increase AAHU's from 56.87 to approximately 65.71.
- Plan 5.** Plan 4 with the restoration of the riparian corridor in Area One. Restoration of the riparian corridor in Area One would require the purchase of approximately 18.53 acres, two applications of herbicide for invasive control, drilling / overseeding of 18.53 acres with native grasses at 8 lbs. / acre, and planting of 18.53 acres of seedling hard and soft mast trees at 100 seedlings / acre. This plan would also involve a clean-up of debris and trash in the area so that proper planting equipment can be utilized. The addition of this measure would increase AAHU's from 56.87 to approximately 74.57.
- Plan 6.** Plan 5 with the addition of rip-rap and live stakes within Area Two (Olmos Municipal Golf Course). The addition of this measure would reduce the amount of erosion along the banks of Olmos Creek and reduce sedimentation downstream. This measure would require the purchase of approximately 2.107 acres, placement of approximately 288 cubic yards of rip-rap adjacent to the golf cart bridges, and planting of 1,635 live willow stakes at three stakes per four square feet. The addition of this measure would increase AAHU's from 56.87 to approximately 78.24.

- Plan 7.** Plan 6 with the restoration of the riparian corridor in Area Two (Olmos Municipal Golf Course). Restoration of the riparian corridor in Area Two would require the purchase of approximately 11.44 acres, drilling / overseeding of 6.5 acres with native grasses at 8 lbs. / acre, and planting of 6.5 acres of seedling hard and soft mast tress at 100 seedlings / acre. The addition of this measure would increase AAHU's from 56.87 to approximately 82.15.
- Plan 8.** Plan 7 with the restoration of Olmos Park in Area Three. Restoration of the park area would require the purchase of approximately 2.73 acres, one application of glyphosate to remove the bermuda grass, drilling / overseeding of 2.73 acres with native grasses at 8 lbs. / acre, and planting of 1 gallon shrubs at 20 shrubs / acre. The addition of this measure would increase AAHU's from 56.87 to 82.95.
- Plan 9.** Plan 8 with the restoration of the riparian corridor in Area Three. Restoration of the riparian corridor in Area Three would require the purchase of approximately 7.86 acres, removal of invasive / non-native species, selective thinning of 0.5 acre of cedar elm and hackberry, and planting of approximately 1.0 acre of 1" caliper hard mast producing trees at 65 / acre. This plan would also involve a clean-up of debris and trash in the area so that proper planting equipment can be utilized. The addition of this measure would increase AAHU's from 56.87 to approximately 86.72.
- Plan 10.** Plan 9 with the addition of 1" caliper plantings in Area One. This plan involves essentially the same measures as the plan above with the only difference being the size and rate of hard and soft mast producing trees to be planted in Area One. This addition of this measure would increase AAHU's from 56.87 to 88.54.
- Plan 11.** Plan 10 with the addition of instream restoration involving the conversion of two 24" pipeline crossings to inverted siphons and the demolition of a COSA Parks Department Bridge within Area Three. Instream restoration within Area Three would involve the purchase of approximately 0.86 acres, demolition of an abandoned concrete encased utility line, demolition of the COSA Parks Dept. Bridge, and conversion of two 24" pipeline crossings to inverted siphons. The addition of this measure would increase AAHU's from 56.87 to 89.65.
- Plan 12.** Plan 11 with the addition of 1" caliper plantings in Area Two. This plan involves essentially the same measures as Plan 7 above with the only difference being the size and rate of hard and soft mast producing trees to be planted in Area Two. This addition of this measure would increase AAHU's from 56.87 to 90.00.
- Plan 13.** Plan 12 with additional instream restoration involving the creation of a pilot channel in Area Two through the TXDOT concrete-lined channel. Instream restoration within Area Two would involve the purchase of approximately 1.05 acres and the creation of a 3' x 3' pilot channel though a 912' section of concrete-lined channel owned and operated by TXDOT. The addition of this measure would increase AAHU's from 56.87 to 90.03.

Incremental Cost per AAHU Of Best Buy Plans



* Note: Plan 13 is not shown on the above graph due to its extremely high incremental cost per output value.

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APPENDIX D
RESTORATION DIAGRAMS

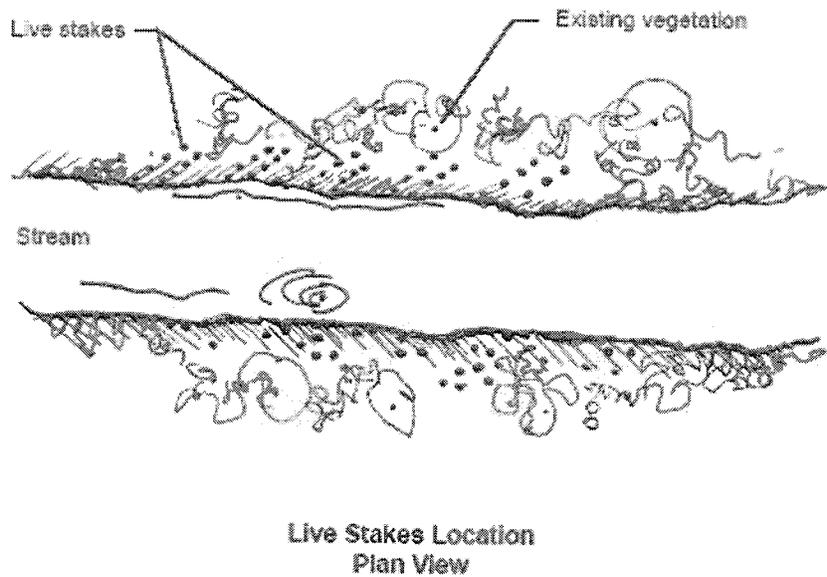


Diagram 1. Plan View of Live Stake Arrangement for Erosion Control (Source: Stream Corridor Restoration Handbook, USDA; Engineering Field Handbook, NRCS).

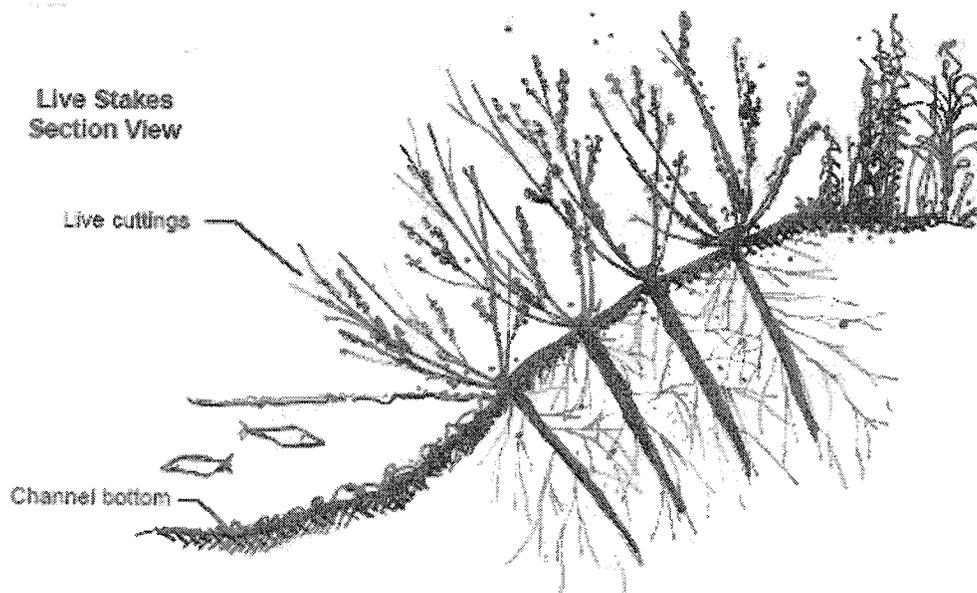


Diagram 2. Section View of Live Stake Arrangement for Erosion Control (Source: Stream Corridor Restoration Handbook, USDA; Engineering Field Handbook, NRCS).

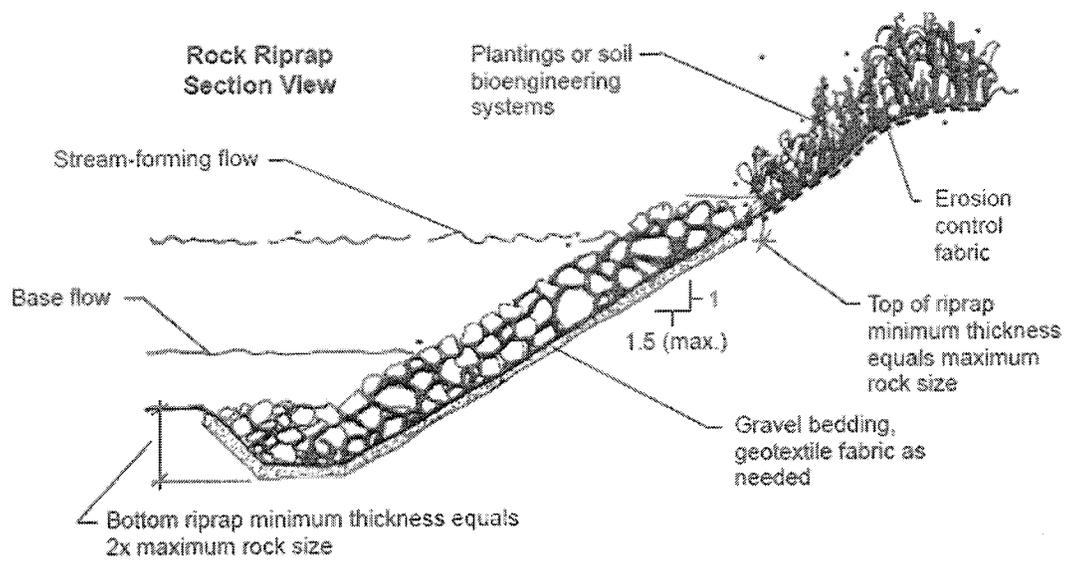


Diagram 3. Section View of Riprap used for Erosion Control
 (Source: Stream Corridor Restoration Handbook, USDA; Engineering Field Handbook, NRCS).

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APPENDIX E
DRAFT REAL ESTATE PLAN

REAL ESTATE PLAN

**OLMOS CREEK AQUATIC ECOSYSYEM
RESTORATION PROJECT
SAN ANTONIO, BEXAR COUNTY, TEXAS**

DATE OF REPORT

MAY 16, 2005

PREPARED BY

**U.S. ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT**

Over 1

**This Real Estate Plan has been prepared in accordance with
ER 405-1-12 dated 1 May 1998.**

PREPARED BY:



Thurman A. Schweitzer
Realty Specialist
Fort Worth District, Corps of Engineers
Real Estate Division, Technical Resources Branch

RECOMMENDED BY:



Rocky D. Lee, MAI, SRA
Lead Realty Specialist
Fort Worth District, Corps of Engineers
Real Estate Division, Technical Resources Branch

PURPOSE

This Real Estate Plan has been prepared in support of the feasibility study that describes the lands, easements, and rights of way (LER) required for the Olmos Creek Aquatic Ecosystem Restoration Project in San Antonio, Bexar County, Texas. The City of San Antonio is the local sponsor and will acquire all LER. Authority for the project is Section 206 of the Water Resources Development Act of 1998.

Urbanization has caused the degradation of the aquatic ecosystem and surrounding riparian corridor in the Olmos Creek study area. Urbanization has also increased flow velocities resulting in increased erosion and sedimentation within the project area. Disturbances associated with urbanization have also caused invasive, non-native plant species to colonize portions of the riparian corridor, decreasing the structural and species diversity leading to a decrease in the overall habitat quality.

LANDS, EASEMENTS, AND RIGHTS-OF-WAY FOR THE RECOMMENDED PLAN

The subject property is located in the north central part of the City of San Antonio, Texas, south of I-410 and adjacent to US 281. The City of San Antonio is located in south central Texas, approximately 80 miles south of Austin and 200 miles west of Houston.

That portion of Olmos Creek included in this project is located near Basse Road and meanders from the west side of US 281 to the east side. The northern boundary of the project is adjacent to S. Skipper Road, and the southern boundary is the Olmos Dam. The extreme western boundary is San Pedro Avenue, and E. Olmos Drive is the eastern boundary.

A total of 11 tracts of land (99.21 acres) will be required for the project. Of this total, 7 tracts (96.85 acres) are owned in fee simple by the City of San Antonio. None of the lands were previously credited as part of a Federal project. The remaining 4 tracts (2.36 acres) are in private ownership. On the attached map, these tracts are noted as 5, 6, 7, and 9 and will require a perpetual easement.

Based on information provided by the Project Manager, the cost-share for the project has not been finalized, but at this point is estimated at 65% Federal and 35% local.

Table 1 identifies the estates, acreages, and estimated values of the lands.

TABLE 1
LANDS, EASEMENTS, AND RIGHTS OF WAY
OLMOS CREEK AQUATIC ECOSYSTEM RESTORATION PROJECT
SAN ANTONIO, TEXAS

ESTATE	ACRES	ESTIMATED VALUE
PROJECT PURPOSE: Aquatic Ecosystem Restoration		
PROJECT FEATURE: Aquatic Ecosystem Restoration		
Fee Simple	96.85	\$168,713
Perpetual Easement	2.36	\$ 83,269

NON-STANDARD ESTATES

The perpetual easement (2.36 acres), located within the city limits of the City of Alamo Heights, is a non-standard estate. After the perpetual easement is acquired by the City of Alamo Heights, they will assign it to the City of San Antonio, through a Memorandum of Agreement (MOA). The non-standard estate is purposed in lieu of fee, because it is believed to be more locally acceptable. It will be submitted for approval prior to acquisition.

This non-standard estate: a perpetual and assignable right and easement, in, on, over and across the land described in Exhibit A attached hereto, beginning on the date that the instrument is recorded in Bexar County records, to construct, operate, maintain, repair, alter, rehabilitate, remove, replace, and monitor features of the Olmos Creek Aquatic Ecosystem Restoration Project including, but not limited to the following:

- removal of invasive and non-native plant species
- selectively thinning of thick tree canopy
- planting of native vegetation
- removal of existing debris and trash as appropriate
- ingress and egress over and across said land for the purposes of exercising the rights set forth herein

- all activities appurtenant to the above described rights subject, however, to existing easements for public roads and highways, public utilities, railroads, and pipelines; reserving, however, to the landowners, their heirs, successors, and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired, provided that no human habitation or structures for human habitation shall be permitted; that except as specifically authorized in the Project Operations and Maintenance Manual, no other structures shall be constructed or maintained on the land, no agricultural activities or livestock shall be allowed, no vegetation shall be removed, and no excavation shall be permitted without prior written consent of the representative in charge of the Project; provided further that these restrictions shall constitute a covenant running with the land and be binding upon the Grantors, their heirs, successors, and assigns.

EXISTING FEDERAL PROJECT

There is no existing Federal project that lies fully or partially within the project area.

FEDERALLY OWNED LAND

There is no federally owned land associated with this project.

NAVIGATIONAL SERVITUDE

Olmos Creek is not a navigable stream or river. Therefore, navigation servitude is not applicable.

PROJECT AREA

A map depicting the project area is attached.

FLOODING OF PROJECT AREA

Based on calculations performed by the Hydrology and Hydraulics Section of the Fort Worth District, no significant flooding to private property will be caused by the construction and maintenance of the aquatic ecosystem restoration project.

BASELINE COST ESTIMATE FOR REAL ESTATE

Property values included in the cost estimate are based on a Gross Appraisal, dated November 10, 2003, prepared by Travis Thorne. A supplement to the Gross Appraisal, dated 25 August 2005 was prepared by Randy Roberts. A review by Rocky Lee, MAI, SRA, of the Real Estate Division of the Fort Worth District concluded that the data was sufficient for planning purposes. The Fort Worth District, Technical Resources Branch, staff estimated administrative cost. Contingencies have been added to the estimates as follows:

- 01.23.03.01 Real Estate Planning Documents, 10% based on reasonable cost estimates
- 01.23.03.02 Real Estate Acquisition Documents, 10% based on reasonable certainty
- 01.23.03.03 Real Estate Condemnation Documents, 25% based on the expectation of at least 1 condemnation
- 01.23.03.05 Real Estate Appraisal Documents, 25% based on reasonable certainty of contract costs
- 01.23.03.06 Real Estate PL 91-646 Asst. Documents, 10% based on reasonable certainty
- 01.23.03.15 Real Estate Payment Documents, based on contingencies (20%) assigned by the Appraiser in the Gross Appraisal
- 01.23.03.17 Real Estate LERRD Accounting Documents, 25% based on reasonable certainty regarding accounting requirements

Costs are presented in Table 2, as follows. Estimates are presented in the standard Code of Accounts from MCACES Model Database, October 1994.

REAL ESTATE PLAN: Olmos Creek Aquatic Ecosystem Restoration Project,
San Antonio, Bexar County, Texas

Table 2
REAL ESTATE COST ESTIMATE FOR PROJECT IMPLEMENTATION
OLMOS CREEK AQUATIC RESTORATION PROJECT
SAN ANTONIO, TEXAS

ACCT	DESCRIPTION	ESTIMATE	CONTINGENCY
01	Lands & Damages		
01.23	Construction Contract Documents		
01.23.03	Real Estate Analysis Documents		
01.23.03.01	Real Estate Planning Documents	\$10,000	\$1,000
01.23.03.02	Real Estate Acquisition Documents		
	Acquisitions by Local Sponsor	\$104,000	\$1,040
	Review of Local Sponsor	\$6,500	\$650
01.23.03.03	Real Estate Condemnation Documents		
	Condemnations by Local Sponsor	\$12,000	\$3,000
	Review of Local Sponsor	\$1,000	\$250
01.23.03.05	Real Estate Appraisal Documents		
	Appraisals by Local Sponsor	\$23,400	\$5,850
	Review of Local Sponsor	\$6,500	\$1,625
01.23.03.06	Real Estate PL 91-646 Asst. Documents		
	PL 91-646 Asst. by Local Sponsor (Admin)	\$ - 0 -	\$ - 0 -
	Review of Local Sponsor	\$ - 0 -	\$ - 0 -
01.23.03.15	Real Estate Payment Documents		
	Payments by Local Sponsor (Land)	\$251,982	\$50,396
	Payments by Local Sponsor (PL 91-646)	\$ - 0 -	\$ - 0 -
	Review of Local Sponsor	\$ - 0 -	\$ - 0 -
01.23.03.17	Real Estate LERRD Crediting Documents	\$8,000	\$2,000
	TOTAL ADMIN & PAYMENTS	\$423,382	
	TOTAL CONTINGENCY		\$65,811
	GRAND TOTAL	\$489,193	

RELOCATION ASSISTANCE PROGRAM P.L. 91-646

Current plans indicate that no houses or businesses will be displaced in conjunction with this project.

MINERAL AND TIMBER ACTIVITY

The production of minerals is considered to be low. The local sponsor owns the majority of the project lands and the extent of their mineral ownership is still to be researched, albeit, it is thought that the mineral rights have long been severed from surface ownership and highly fractionalized. Administrative costs to acquire or subordinate the mineral rights would be inordinately high. For these reasons, it is expected that acquisition of third-party minerals can be waived.

The trees within the project area have been discussed with the Fort Worth District Forester. Based on this level of level of review, the Forester has offered the opinion that some merchantable timber may be within the subject area, but not of significant quantity to be profitable.

NON-FEDERAL SPONSOR'S CAPABILITY TO ACQUIRE LERRD

The City of San Antonio is responsible for acquiring LERRD. A checklist has been prepared in accordance with Chapter 12 of ER 405-1-12 and is attached. The City is aware of the requirements of PL 91-646, as amended, and the requirements for documenting expenses for credit purposes.

The City has also been advised of the risks associated with acquiring LERRD before execution of the PCA. The Corps will work with the sponsor throughout the project, to the extent appropriate and allowable; to ensure that there is understanding of the Federal real estate principles. Action will also be taken to address any policy issues that could significantly impact the project.

ZONING ORDINANCES

There are no special Zoning Ordinances proposed for enactment with the project.

MILESTONES FOR REAL ESTATE ACQUISITION

Significant milestones for the acquisition of real estate have been entered into P2 by the Project Manager.

REAL ESTATE PLAN: Olmos Creek Aquatic Ecosystem Restoration Project,
San Antonio, Bexar County, Texas

FACILITY OR UTILITY RELOCATIONS

The project will not affect any water lines, sanitary sewer lines, storm water lines, gas lines, cable lines, telephone lines, and/or electric lines.

CONTAMINANTS ON REAL ESTATE ACQUISITIONS

The Planning, Environmental, and Regulatory Division of the Fort Worth District have verified that there are no known HTRW lands in the project area or adjacent areas.

OPPOSITION BY LANDOWNERS IN PROJECT AREA

No landowners in the project area have come forward to give positive or negative responses concerning this project.

OTHER REAL ESTATE ISSUES

There are no real estate issues relevant to planning, designing, or implementing this project.

CHECKLIST TO ACQUIRE LERRD

I. Legal Authority

- a. Does the sponsor have legal authority to acquire and hold title to real property for project purposes? **Yes**
- b. Does the sponsor have the power of eminent domain for this project? **Yes**
- c. Does the sponsor have "quick-take" authority for this project? **Yes**
- d. Are any of the lands/interests in land required for the project, located outside the sponsor's political boundary? **Yes – City of Alamo Heights**
- e. Are any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn? **No**

II. Human Resource Requirements

- a. Will the sponsor's in-house staff require training to become familiar with the real estate requirements of Federal projects including PL 91-646, as amended? **Yes**
- b. If the answer to II.a is yes, has a reasonable plan been developed to provide such training? **Currently being developed**
- c. Does the sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project? **Yes**
- d. Is the sponsor's projected in-house staffing level sufficient considering other work load, if any, and the project schedule? **Yes**
- e. Can the sponsor obtain contractor support, if required, in a timely fashion? **Yes**
- f. Will the sponsor likely request USACE assistance in acquiring real estate? **No**

III. Other Project Variables

- a. Will the sponsor's staff be located within reasonable proximity to the project site? **Yes**
- b. Has the sponsor approved the project/real estate schedule/milestones/ **Yes**

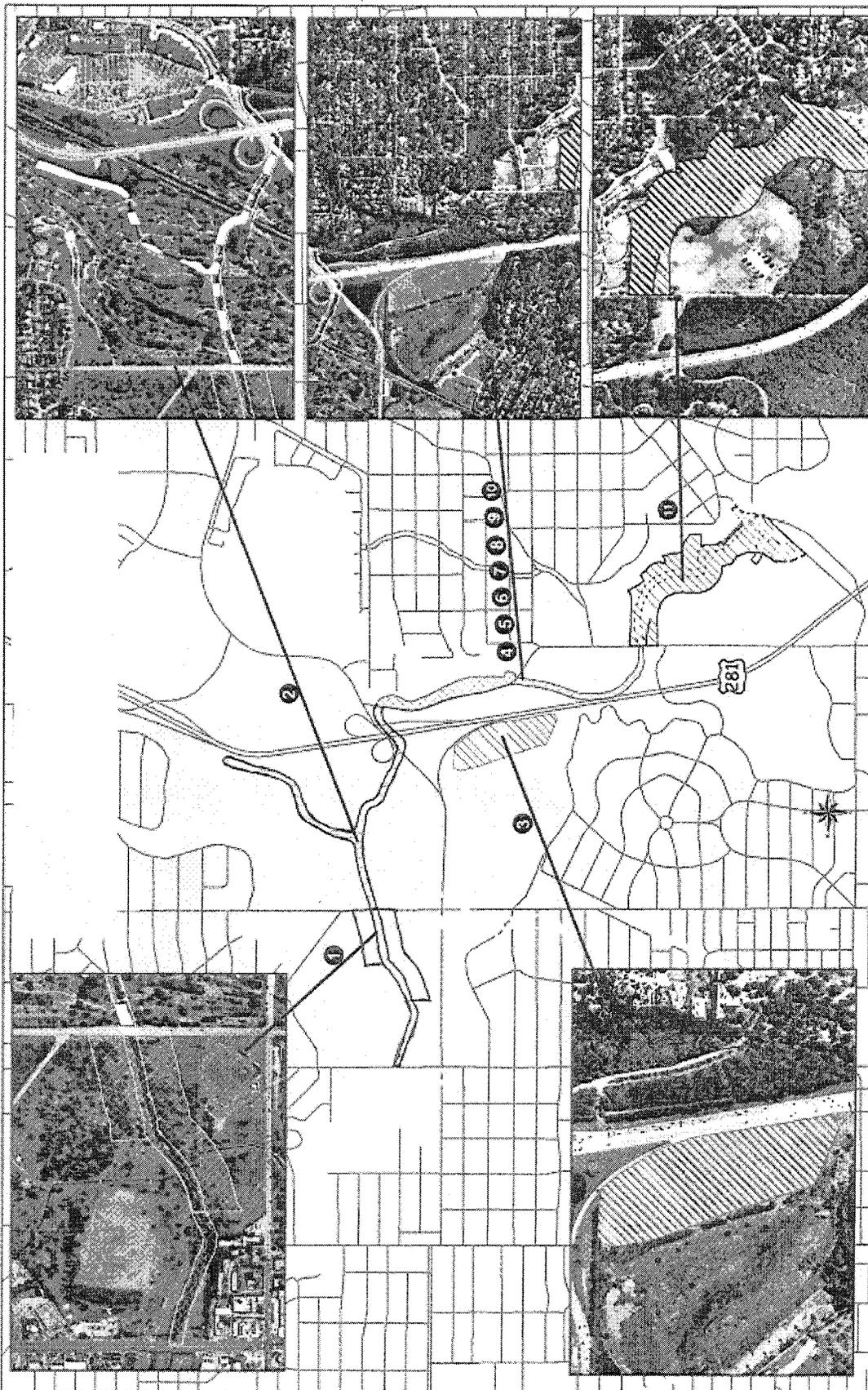
IV. Overall Assessment

- a. Has the sponsor performed satisfactorily on other USACE projects? **Yes**
- b. With regard to this project, the sponsor is anticipated to be: **Fully Capable**

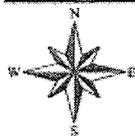
V. Coordination

- a. Has this assessment been coordinated with the sponsor? **Yes**
- b. Does the sponsor concur with this assessment? **Yes**

REAL ESTATE PLAN: Olmos Creek Aquatic Ecosystem Restoration Project,
San Antonio, Bexar County, Texas



REAL ESTATE PLAN: Olmos Creek Aquatic Ecosystem Restoration Project,
San Antonio, Bexar County, Texas



Olmos Creek-San Antonio, TX
Real Estate Parcel Locations

APPENDIX F
DRAFT PROJECT COOPERATION AGREEMENT

PROJECT COOPERATION AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE CITY OF SAN ANTONIO
FOR THE
OLMOS CREEK
AQUATIC ECOSYSTEM RESTORATION PROJECT

THIS AGREEMENT is entered into this _____ day of _____, 20 __, by and between the Department of the Army (hereinafter the "Government"), represented by the U.S. Army Engineer for the Fort Worth District (hereinafter the "District Engineer") and the City of San Antonio (hereinafter the "Non-Federal Sponsor"), represented by the Planning Director, City of San Antonio

WITNESSETH, THAT:

WHEREAS, this Project is authorized by Section 206 of the Water Resources Development Act of 1996, Public Law 104-303, as amended;

WHEREAS, Section 206 of the Water Resources Development Act of 1996, Public Law 104-303, as amended, authorizes the Secretary of the Army to carry out an aquatic ecosystem restoration and protection project if the Secretary determines that the project will improve the quality of the environment, is in the public interest, and is cost-effective;

WHEREAS, the Government and the Non-Federal Sponsor desire to enter into a Project Cooperation Agreement for implementation of the Olmos Creek Aquatic Ecosystem Restoration Project (hereinafter the "Project", as defined in Article I.A. of this Agreement);

WHEREAS, Section 206(b) of the Water Resources Development Act of 1996, Public Law 104-303, as amended, specifies the cost-sharing requirements applicable to this Project;

WHEREAS, Section 206(c) of the Water Resources Development Act of 1996, Public Law 104-303, as amended, provides that the Secretary of the Army shall not commence construction of any project, or separable element thereof, under the Section 206 authority, until each non-Federal sponsor has entered into a binding agreement to pay the non-Federal share of the costs of construction required by Section 206(b) and to pay 100 percent of any operation, maintenance, replacement, and rehabilitation costs with respect to the project in accordance with regulations prescribed by the Secretary;

WHEREAS, the Non-Federal Sponsor desires to perform certain work (hereinafter the "work-in-kind", as defined in Article I.L. of this Agreement) which is a part of the Project;

WHEREAS, the Government and Non-Federal Sponsor have the full authority and capability to perform as hereinafter set forth and intend to cooperate in cost-sharing and financing of the implementation of the Project in accordance with the terms of this Agreement.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree as follows:

ARTICLE I - DEFINITIONS AND GENERAL PROVISIONS

For purposes of this Agreement:

A. The term "Project" shall mean restoration of instream habitat and the riparian corridor in and along Olmos Creek between San Pedro Avenue and Olmos Dam. Instream habitat will be restored through erosion control techniques and an increase in stream shade. Riparian corridor restoration will be accomplished through invasive / exotic plant control, selective thinning, and accompanied by woody and herbaceous plantings as generally described in the Olmos Creek Section 206 Aquatic Ecosystem Restoration Planning Design Report, dated September 20, 2005, and approved by the Fort Worth District Engineer, on _____, 20____ .

B. The term "total project costs" shall mean all costs incurred by the Non-Federal Sponsor and the Government in accordance with the terms of this Agreement directly related to implementation of the Project. Subject to the provisions of this Agreement, the term shall include, but is not necessarily limited to, feasibility phase planning costs; all engineering and design costs, including those incurred in the feasibility phase; the costs of investigations to identify the existence and extent of hazardous substances in accordance with Article XV.A. of this Agreement; the costs incurred by the Government for clean-up and response in accordance with Article XV.C. of this Agreement; costs of historic preservation activities in accordance with Article XVIII.A. of this Agreement; actual implementation costs; supervision and administration costs; costs of participation in the Project Coordination Team in accordance with Article V of this Agreement; costs of contract dispute settlements or awards; the value of lands, easements, rights-of-way, relocations, and suitable borrow and dredged or excavated material disposal areas for which the Government affords credit in accordance with Article IV of this Agreement; and costs of audit in accordance with Article X of this Agreement. The term does not include any costs for operation, maintenance, repair, replacement, or rehabilitation; any costs due to betterments; or any costs of dispute resolution under Article VII of this Agreement.

C. The term "financial obligation for implementation" shall mean a financial obligation of the Government, other than an obligation pertaining to the provision of lands, easements, rights-of-way, relocations, and borrow and dredged or excavated material disposal areas, that results or would result in a cost that is or would be included in total project costs.

D. The term "implementation" shall mean all actions required to carry out the Project.

E. The term "non-Federal proportionate share" shall mean the ratio of the Non-Federal Sponsor's total cash contribution required in accordance with Article II.D.2. of this Agreement to total financial obligations for implementation as projected by the Government.

F. The term "period of implementation" shall mean the time from the effective date of this Agreement to the date that the District Engineer notifies the Non-Federal Sponsor in writing of the Government's determination that implementation of the Project is complete.

G. The term "highway" shall mean any public highway, roadway, street, or way, including any bridge thereof.

H. The term "relocation" shall mean providing a functionally equivalent facility to the owner of an existing utility, cemetery, highway or other public facility, or railroad when such action is authorized in accordance with applicable legal principles of just compensation. Providing a functionally equivalent facility may take the form of alteration, lowering, raising, or replacement and attendant removal of the affected facility or part thereof.

I. The term "fiscal year" shall mean one fiscal year of the Government. The Government fiscal year begins on October 1 and ends on September 30.

J. The term "functional portion of the Project" shall mean a portion of the Project that is suitable for tender to the Non-Federal Sponsor to operate and maintain in advance of completion of the entire Project. For a portion of the Project to be suitable for tender, the District Engineer must notify the Non-Federal Sponsor in writing of the Government's determination that the portion of the Project is complete and can function independently and for a useful purpose, although the balance of the Project is not complete.

K. The term "betterment" shall mean a change in the design and construction of an element of the Project resulting from the application of standards that the Government determines exceed those that the Government would otherwise apply for accomplishing the design and construction of that element.

ARTICLE II - OBLIGATIONS OF THE GOVERNMENT AND THE NON-FEDERAL SPONSOR

A. The Government, subject to the availability of funds and using those funds and funds provided by the Non-Federal Sponsor, shall expeditiously implement the Project, applying those procedures usually applied to Federal projects, pursuant to Federal laws, regulations, and policies.

1. The Government shall afford the Non-Federal Sponsor the opportunity to

review and comment on the solicitations for all contracts, including relevant plans and specifications, prior to the Government's issuance of such solicitations. The Government shall not issue the solicitation for the first contract for implementation until the Non-Federal Sponsor has confirmed in writing its willingness to proceed with the Project. To the extent possible, the Government shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract modifications, including change orders, prior to the issuance to the contractor of a Notice to Proceed. In any instance where providing the Non-Federal Sponsor with notification of a contract modification or change order is not possible prior to issuance of the Notice to Proceed, the Government shall provide such notification in writing at the earliest date possible. To the extent possible, the Government also shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract claims prior to resolution thereof. The Government shall consider in good faith the comments of the Non-Federal Sponsor, but the contents of solicitations, award of contracts, execution of contract modifications, issuance of change orders, resolution of contract claims, and performance of all work on the Project (whether the work is performed under contract or by Government personnel), shall be exclusively within the control of the Government.

2. Throughout the period of implementation, the District Engineer shall furnish the Non-Federal Sponsor with a copy of the Government's Written Notice of Acceptance of Completed Work for each contract for the Project.

B. The Non-Federal Sponsor may request the Government to accomplish betterments. Such requests shall be in writing and shall describe the betterments requested to be accomplished. If the Government in its sole discretion elects to accomplish the requested betterments or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs due to the requested betterments and shall pay all such costs in accordance with Article VI.C. of this Agreement.

C. When the District Engineer determines that the entire Project is complete or that a portion of the Project has become a functional portion of the Project, the District Engineer shall so notify the Non-Federal Sponsor in writing and furnish the Non-Federal Sponsor with an Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual (hereinafter the "OMRR&R Manual") and with copies of all of the Government's Written Notices of Acceptance of Completed Work for all contracts for the Project or the functional portion of the Project that have not been provided previously. Upon such notification, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the entire Project or the functional portion of the Project in accordance with Article VIII of this Agreement.

D. The Non-Federal Sponsor shall contribute 35 percent of total project costs in accordance with the provisions of this paragraph.

1. In accordance with Article III of this Agreement, the Non-Federal Sponsor shall provide all lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas that the Government determines the Non-Federal Sponsor must provide for the implementation, operation, and maintenance of the Project, and shall perform or ensure performance of all relocations that the Government determines to be necessary for the implementation, operation, and maintenance of the Project.

2. If the Government projects that the value of the Non-Federal Sponsor's contributions under paragraph D.1. of this Article and Articles V, X, and XV.A. of this Agreement will be less than 35 percent of total project costs, the Non-Federal Sponsor shall provide an additional cash contribution, in accordance with Article VI.B. of this Agreement, in the amount necessary to make the Non-Federal Sponsor's total contribution equal to 35 percent of total project costs.

3. If the Government determines that the value of the Non-Federal Sponsor's contributions provided under paragraphs D.1. and D.2. of this Article and Articles V, X, and XV.A. of this Agreement has exceeded 35 percent of total project costs, the Government, subject to the availability of funds, shall reimburse the Non-Federal Sponsor for any such value in excess of 35 percent of total project costs. After such a determination, the Government, in its sole discretion, may provide any remaining Project lands, easements, rights-of-way, and suitable borrow and dredged excavated material disposal areas and perform any remaining Project relocations on behalf of the Non-Federal Sponsor. Notwithstanding the provision of lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or performance of relocations by the Government under this paragraph, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response in accordance with Article XV.C. of this Agreement.

E. The Non-Federal Sponsor may request the Government to provide lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or perform relocations on behalf of the Non-Federal Sponsor. Such requests shall be in writing and shall describe the services requested to be performed. If in its sole discretion the Government elects to perform the requested services or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs of the requested services and shall pay all such costs in accordance with Article VI.C. of this Agreement. Notwithstanding the provision of lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas or performance of relocations by the Government under this paragraph, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response in accordance with Article XV.C. of this Agreement.

F. The Government shall perform a final accounting in accordance with Article VI.D. of

this Agreement to determine the contributions provided by the Non-Federal Sponsor in accordance with paragraphs B., D., and E. of this Article and Articles V, X, and XV.A. of this Agreement and to determine whether the Non-Federal Sponsor has met its obligations under paragraphs B., D., and E. of this Article.

G. The Non-Federal Sponsor shall not use Federal funds to meet its share of total project costs under this Agreement unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute.

ARTICLE III - LANDS, RELOCATIONS, DISPOSAL AREAS, AND PUBLIC LAW 91-646 COMPLIANCE

A. The Government, after consultation with the Non-Federal Sponsor, shall determine the lands, easements, and rights-of-way required for the implementation, operation, and maintenance of the Project, including those required for relocations, borrow materials, and dredged or excavated material disposal. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of the lands, easements, and rights-of-way that the Government determines the Non-Federal Sponsor must provide, in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with acquisition of such lands, easements, and rights-of-way. Prior to the end of the period of implementation, the Non-Federal Sponsor shall acquire all lands, easements, and rights-of-way set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each construction contract, the Non-Federal Sponsor shall provide the Government with authorization for entry to all lands, easements, and rights-of-way the Government determines the Non-Federal Sponsor must provide for that contract. The Non-Federal Sponsor shall ensure that lands, easements, and rights-of-way that the Government determines to be required for the operation and maintenance of the Project and that were provided by the Non-Federal Sponsor are retained in public ownership for uses compatible with the authorized purposes of the Project.

B. The Government, after consultation with the Non-Federal Sponsor, shall determine the improvements required on lands, easements, and rights-of-way to enable the proper disposal of dredged or excavated material associated with the implementation, operation, and maintenance of the Project. Such improvements may include, but are not necessarily limited to, retaining dikes, wasteweirs, bulkheads, embankments, monitoring features, stilling basins, and de-watering pumps and pipes. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions of such improvements in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with construction of such improvements. Prior to the end of the period of implementation, the Non-Federal Sponsor shall provide all improvements set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each Government construction contract, the Non-Federal Sponsor shall prepare

plans and specifications for all improvements the Government determines to be required for the proper disposal of dredged or excavated material under that contract, submit such plans and specifications to the Government for approval, and provide such improvements in accordance with the approved plans and specifications.

C. The Government, after consultation with the Non-Federal Sponsor, shall determine the relocations necessary for the implementation, operation, and maintenance of the Project, including those necessary to enable the removal of borrow materials and the proper disposal of dredged or excavated material. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of such relocations in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with such relocations. Prior to the end of the period of implementation, the Non-Federal Sponsor shall perform or ensure the performance of all relocations as set forth in such descriptions. Furthermore, prior to issuance of the solicitation for each Government construction contract, the Non-Federal Sponsor shall prepare or ensure the preparation of plans and specifications for, and perform or ensure the performance of, all relocations the Government determines to be necessary for that contract.

D. The Non-Federal Sponsor in a timely manner shall provide the Government with such documents as are sufficient to enable the Government to determine the value of any contribution provided pursuant to paragraphs A., B., or C. of this Article. Upon receipt of such documents the Government, in accordance with Article IV of this Agreement and in a timely manner, shall determine the value of such contribution, include such value in total project costs, and afford credit for such value toward the Non-Federal Sponsor's share of total project costs.

E. The Non-Federal Sponsor shall comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 C.F.R. Part 24, in acquiring lands, easements, and rights-of-way required for the implementation, operation, and maintenance of the Project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and shall inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

ARTICLE IV - CREDIT FOR LANDS, RELOCATIONS, AND DISPOSAL AREAS

A. The Non-Federal Sponsor shall receive credit toward its share of total project costs for the value of the lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas that the Non-Federal Sponsor must provide pursuant to Article III of this Agreement, and for the value of the relocations that the Non-Federal Sponsor must perform or for which it must ensure performance pursuant to Article III of this Agreement.

However, the Non-Federal Sponsor shall not receive credit for the value of any lands, easements, rights-of-way, relocations, or borrow and dredged or excavated material disposal areas that have been provided previously as an item of cooperation for another Federal project. The Non-Federal Sponsor also shall not receive credit for the value of lands, easements, rights-of-way, relocations, or borrow and dredged or excavated material disposal areas to the extent that such items are provided using Federal funds unless the Federal granting agency verifies in writing that such credit is expressly authorized by statute.

B. For the sole purpose of affording credit in accordance with this Agreement, the value of lands, easements, and rights-of-way, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, shall be the fair market value of the real property interests, plus certain incidental costs of acquiring those interests, as determined in accordance with the provisions of this paragraph.

1. Date of Valuation. The fair market value of lands, easements, or rights-of-way owned by the Non-Federal Sponsor on the effective date of this Agreement shall be the fair market value of such real property interests as of the date the Non-Federal Sponsor provides the Government with authorization for entry thereto. The fair market value of lands, easements, or rights-of-way acquired by the Non-Federal Sponsor after the effective date of this Agreement shall be the fair market value of such real property interests at the time the interests are acquired.

2. General Valuation Procedure. Except as provided in paragraph B.3. of this Article, the fair market value of lands, easements, or rights-of-way shall be determined in accordance with paragraph B.2.a. of this Article, unless thereafter a different amount is determined to represent fair market value in accordance with paragraph B.2.b. of this Article.

a. The Non-Federal Sponsor shall obtain, for each real property interest, an appraisal that is prepared by a qualified appraiser who is acceptable to the Non-Federal Sponsor and the Government. The appraisal must be prepared in accordance with the applicable rules of just compensation, as specified by the Government. The fair market value shall be the amount set forth in the Non-Federal Sponsor's appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's appraisal, the Non-Federal Sponsor may obtain a second appraisal, and the fair market value shall be the amount set forth in the Non-Federal Sponsor's second appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's second appraisal, or the Non-Federal Sponsor chooses not to obtain a second appraisal, the Government shall obtain an appraisal, and the fair market value shall be the amount set forth in the Government's appraisal, if such appraisal is approved by the Non-Federal Sponsor. In the event the Non-Federal Sponsor does not approve the Government's appraisal, the Government, after consultation with the Non-Federal Sponsor, shall consider the Government's and the Non-Federal Sponsor's appraisals and determine an amount based thereon, which shall be deemed to be the fair market value.

b. Where the amount paid or proposed to be paid by the Non-Federal Sponsor for the real property interest exceeds the amount determined pursuant to paragraph B.2.a. of this Article, the Government, at the request of the Non-Federal Sponsor, shall consider all factors relevant to determining fair market value and, in its sole discretion, after consultation with the Non-Federal Sponsor, may approve in writing an amount greater than the amount determined pursuant to paragraph B.2.a. of this Article, but not to exceed the amount actually paid or proposed to be paid. If the Government approves such an amount, the fair market value shall be the lesser of the approved amount or the amount paid by the Non-Federal Sponsor, but no less than the amount determined pursuant to paragraph B.2.a. of this Article.

3. Eminent Domain Valuation Procedure. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted after the effective date of this Agreement, the Non-Federal Sponsor shall, prior to instituting such proceedings, submit to the Government notification in writing of its intent to institute such proceedings and an appraisal of the specific real property interests to be acquired in such proceedings. The Government shall have 60 days after receipt of such a notice and appraisal within which to review the appraisal, if not previously approved by the Government in writing.

a. If the Government previously has approved the appraisal in writing, or if the Government provides written approval of, or takes no action on, the appraisal within such 60-day period, the Non-Federal Sponsor shall use the amount set forth in such appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

b. If the Government provides written disapproval of the appraisal, including the reasons for disapproval, within such 60-day period, the Government and the Non-Federal Sponsor shall consult in good faith to promptly resolve the issues or areas of disagreement that are identified in the Government's written disapproval. If, after such good faith consultation, the Government and the Non-Federal Sponsor agree as to an appropriate amount, then the Non-Federal Sponsor shall use that amount as the estimate of just compensation for the purpose of instituting the eminent domain proceeding. If, after such good faith consultation, the Government and the Non-Federal Sponsor cannot agree as to an appropriate amount, then the Non-Federal Sponsor may use the amount set forth in its appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

c. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted in accordance with sub-paragraph B.3. of this Article, fair market value shall be either the amount of the court award for the real property interests taken, to the extent the Government determined such interests are required for the implementation, operation, and maintenance of the Project, or the amount of any stipulated settlement or portion thereof that the Government approves in writing.

4. Incidental Costs. For lands, easements, or rights-of-way acquired by the Non-Federal Sponsor within a five-year period preceding the effective date of this Agreement, or at

any time after the effective date of this Agreement, the value of the interest shall include the documented incidental costs of acquiring the interest, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs. Such incidental costs shall include, but not necessarily be limited to, closing and title costs, appraisal costs, survey costs, attorney's fees, plat maps, and mapping costs, as well as the actual amounts expended for payment of any Public Law 91-646 relocation assistance benefits provided in accordance with Article III.E. of this Agreement.

C. After consultation with the Non-Federal Sponsor, the Government shall determine the value of relocations in accordance with the provisions of this paragraph.

1. For a relocation other than a highway, the value shall be only that portion of relocation costs that the Government determines is necessary to provide a functionally equivalent facility, reduced by depreciation, as applicable, and by the salvage value of any removed items.

2. For a relocation of a highway, the value shall be only that portion of relocation costs that would be necessary to accomplish the relocation in accordance with the design standard that the State of Texas would apply under similar conditions of geography and traffic load, reduced by the salvage value of any removed items.

3. Relocation costs shall include, but not necessarily be limited to, actual costs of performing the relocation; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with performance of the relocation, but shall not include any costs due to betterments, as determined by the Government, nor any additional cost of using new material when suitable used material is available. Relocation costs shall be subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

4. Any credit afforded for the value of relocations performed within the Project boundaries is subject to satisfactory compliance with applicable Federal labor laws covering non-Federal construction, including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)). Crediting may be withheld, in whole or in part, as a result of the Non-Federal Sponsor's failure to comply with its obligations under these laws.

D. The value of the improvements made to lands, easements, and rights-of-way for the proper disposal of dredged or excavated material shall be the costs of the improvements, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs. Such costs shall include, but not necessarily be limited to, actual costs of providing the improvements; planning, engineering and design costs; supervision and administration costs; and documented incidental

costs associated with providing the improvements, but shall not include any costs due to betterments, as determined by the Government.

ARTICLE V - PROJECT COORDINATION TEAM

A. To provide for consistent and effective communication, the Non-Federal Sponsor and the Government, not later than 30 days after the effective date of this Agreement, shall appoint named senior representatives to a Project Coordination Team. Thereafter, the Project Coordination Team shall meet regularly until the end of the period of implementation. The Government's Project Manager and a counterpart named by the Non-Federal Sponsor shall co-chair the Project Coordination Team.

B. The Government's Project Manager and the Non-Federal Sponsor's counterpart shall keep the Project Coordination Team informed of the progress of implementation and of significant pending issues and actions, and shall seek the views of the Project Coordination Team on matters that the Project Coordination Team generally oversees.

C. Until the end of the period of implementation, the Project Coordination Team shall generally oversee the Project, including issues related to design; plans and specifications; scheduling; real property and relocation requirements; real property acquisition; contract awards and modifications; contract costs; the application of and compliance with 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)) for relocations; the Government's cost projections; final inspection of the entire Project or functional portions of the Project; preparation of the proposed OMR&R Manual; anticipated requirements and needed capabilities for performance of operation, maintenance, repair, replacement, and rehabilitation of the Project; and other related matters.

D. The Project Coordination Team may make recommendations that it deems warranted to the District Engineer on matters that the Project Coordination Team generally oversees, including suggestions to avoid potential sources of dispute. The Government in good faith shall consider the recommendations of the Project Coordination Team. The Government, having the legal authority and responsibility for implementation of the Project, has the discretion to accept, reject, or modify the Project Coordination Team's recommendations.

E. The costs of participation in the Project Coordination Team shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE VI - METHOD OF PAYMENT

A. The Government shall maintain current records of contributions provided by the parties and current projections of total project costs and costs due to betterments. At least quarterly, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of total project costs, of total costs due to betterments, of the components of total project costs, of each party's share of total project costs, of the Non-Federal Sponsor's total cash contributions required in accordance with Articles II.B., II.D., and II.E. of this Agreement, and of the non-Federal proportionate share. On the effective date of this Agreement, total project costs are projected to be \$1,120,309, and the Non-Federal Sponsor's cash contribution required under Article II.D. of this Agreement is projected to be \$0. Such amounts are estimates subject to adjustment by the Government and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

B. The Non-Federal Sponsor shall provide the cash contribution required under Article II.D.2. of this Agreement in accordance with the following provisions: Not less than 30 calendar days prior to the scheduled date for issuance of the solicitation for the first construction contract, the Government shall notify the Non-Federal Sponsor in writing of such scheduled date and the funds the Government determines to be required from the Non-Federal Sponsor to meet its projected cash contribution under Article II.D.2. of this Agreement. Not later than such scheduled date, the Non-Federal Sponsor shall provide the Government with the full amount of the required funds by delivering a check payable to "FAO, USAED, Fort Worth District" to the District Engineer, or verifying to the satisfaction of the Government that the Non-Federal Sponsor has deposited the required funds in an escrow or other account acceptable to the Government, with interest accruing to the Non-Federal Sponsor, or presenting the Government with an irrevocable letter of credit acceptable to the Government for the required funds, or providing an Electronic Funds Transfer of the required funds in accordance with procedures established by the Government. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover: (a) the non-Federal proportionate share of financial obligations for implementation incurred prior to commencement of the period of implementation; and (b) the non-Federal proportionate share of financial obligations for implementation as they are incurred during the period of implementation. In the event the Government determines that the Non-Federal Sponsor must provide additional funds to meet the Non-Federal Sponsor's cash contribution, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required and provide an explanation of why additional funds are required. Within 60 calendar days after receipt of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of the additional required funds through any of the payment mechanisms specified above.

C. In advance of the Government incurring any financial obligation associated with additional work under Article II.B. or II.E. of this Agreement, the Non-Federal Sponsor shall provide the Government with the full amount of the funds required to pay for such additional work through any of the payment mechanisms specified in B.1. of this Article. The Government

shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover the Government's financial obligations for such additional work as they are incurred. In the event the Government determines that the Non-Federal Sponsor must provide additional funds to meet its cash contribution, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required and provide an explanation of why additional funds are required. Within 30 calendar days from receipt of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of the additional required funds through any of the payment mechanisms specified in B.1. of this Article.

D. Upon completion of the Project or termination of this Agreement, and upon resolution of all relevant claims and appeals, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with the results of the final accounting. The final accounting shall determine total project costs, each party's contribution provided thereto, and each party's required share thereof. The final accounting also shall determine costs due to betterments and the Non-Federal Sponsor's cash contribution provided pursuant to Article II.B. of this Agreement.

1. In the event the final accounting shows that the total contribution provided by the Non-Federal Sponsor is less than its required share of total project costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement, the Non-Federal Sponsor shall, no later than 90 calendar days after receipt of written notice, make a payment to the Government of whatever sum is required to meet the Non-Federal Sponsor's required share of total project costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement by delivering a check payable to "FAO, USAED, Fort Worth District" to the District Engineer or providing an Electronic Funds Transfer in accordance with procedures established by the Government.

2. In the event the final accounting shows that the total contribution provided by the Non-Federal Sponsor exceeds its required share of total project costs plus costs due to any betterments provided in accordance with Article II.B. of this Agreement, the Government shall, subject to the availability of funds, refund the excess to the Non-Federal Sponsor no later than 90 calendar days after the final accounting is complete. In the event existing funds are not available to refund the excess to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund.

ARTICLE VII - DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. The parties shall each

pay 50 percent of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VIII - OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, AND REHABILITATION (OMRR&R)

A. Upon notification in accordance with Article II.C. of this Agreement and for so long as the Project remains authorized, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the entire Project or the functional portion of the Project, at no cost to the Government, in a manner compatible with the Project's authorized purposes and in accordance with applicable Federal and State laws as provided in Article XI of this Agreement and specific directions prescribed by the Government in the OMRR&R Manual and any subsequent amendments thereto.

B. The Non-Federal Sponsor hereby gives the Government a right to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor owns or controls for access to the Project for the purpose of inspection and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project. If an inspection shows that the Non-Federal Sponsor for any reason is failing to perform its obligations under this Agreement, the Government shall send a written notice describing the non-performance to the Non-Federal Sponsor. If, after 30 calendar days from receipt of the notice, the Non-Federal Sponsor continues to fail to perform, then the Government shall have the right to enter, at reasonable times and in a reasonable manner, upon property the Non-Federal Sponsor owns or controls for access to the Project for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Government shall operate to relieve the Non-Federal Sponsor's obligations as set forth in this Agreement, or to preclude the Government from pursuing any other remedy at law or equity to ensure faithful performance pursuant to this Agreement.

ARTICLE IX – HOLD AND SAVE

Subject to the provisions of Article XX of this Agreement, the Non-Federal Sponsor shall hold and save the Government free from all damages arising from the implementation, operation, maintenance, repair, replacement and rehabilitation of the Project, and any Project related betterments, except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE X - MAINTENANCE OF RECORDS AND AUDIT

A. Not later than 60 calendar days after the effective date of this Agreement, the Government and the Non-Federal Sponsor shall develop procedures for keeping books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 C.F.R. Section 33.20. The Government and the Non-Federal Sponsor shall maintain such books, records, documents, and other evidence in accordance with these procedures and for a minimum of three years after the period of implementation and resolution of all relevant claims arising therefrom. To the extent permitted under applicable Federal laws and regulations, the Government and the Non-Federal Sponsor shall each allow the other to inspect such books, documents, records, and other evidence.

B. Pursuant to 32 C.F.R. Section 33.26, the Non-Federal Sponsor is responsible for complying with the Single Audit Act of 1984, 31 U.S.C. Sections 7501-7507, as implemented by Office of Management and Budget (OMB) Circular No. A-133 and Department of Defense Directive 7600.10. Upon request of the Non-Federal Sponsor and to the extent permitted under applicable Federal laws and regulations, the Government shall provide to the Non-Federal Sponsor and independent auditors any information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of any non-Federal audits performed in accordance with this paragraph shall be allocated in accordance with the provisions of OMB Circulars A-87 and A-133, and such costs as are allocated to the Project shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

C. In accordance with 31 U.S.C. Section 7503, the Government may conduct audits in addition to any audit that the Non-Federal Sponsor is required to conduct under the Single Audit Act. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular No. A-87 and other applicable cost principles and regulations. The costs of Government audits performed in accordance with this paragraph shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

ARTICLE XI - FEDERAL AND STATE LAWS

In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and the Government agree to comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in

Programs and Activities Assisted or Conducted by the Department of the Army”; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)).

ARTICLE XII - RELATIONSHIP OF PARTIES

A. In the exercise of their respective rights and obligations under this Agreement the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to be considered the officer, agent, or employee of the other.

B. In the exercise of its rights and obligations under this Agreement, neither party shall provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights such other party may have to seek relief or redress against such contractor either pursuant to any cause of action that such other party may have or for violation of any law.

ARTICLE XIII - OFFICIALS NOT TO BENEFIT

No member of or delegate to the Congress, nor any resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

ARTICLE XIV - TERMINATION OR SUSPENSION

A. If at any time the Non-Federal Sponsor fails to fulfill its obligations under Article II.B., II.D., II.E., VI, or XVIII.C. of this Agreement, the Assistant Secretary of the Army (Civil Works) shall terminate this Agreement or suspend future performance under this Agreement unless he determines that continuation of work on the Project is in the interest of the United States or is necessary in order to satisfy agreements with any other non-Federal interests in connection with the Project.

B. If appropriations are not available in amounts sufficient to meet the Government's share of Project expenditures for the then-current or upcoming fiscal year, the Government shall so notify the Non-Federal Sponsor in writing, and 60 calendar days thereafter either party may elect without penalty to terminate this Agreement or to suspend future performance under this Agreement. In the event that either party elects to suspend future performance under this Agreement pursuant to this paragraph, such suspension shall remain in effect until such time as the Government receives sufficient appropriations or until either the Government or the Non-

Federal Sponsor elects to terminate this Agreement.

C. In the event that either party elects to terminate this Agreement pursuant to this Article or Article XV of this Agreement, both parties shall conclude their activities relating to the Project and proceed to a final accounting in accordance with Article VI.D. of this Agreement.

D. Any termination of this Agreement or suspension of future performance under this Agreement in accordance with this Article or Article XV of this Agreement shall not relieve the parties of any obligation previously incurred. Any delinquent payment owed by the Non-Federal Sponsor shall be charged interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13-week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3-month period if the period of delinquency exceeds 3 months.

ARTICLE XV - HAZARDOUS SUBSTANCES

A. After execution of this Agreement and upon direction by the District Engineer, the Non-Federal Sponsor shall perform, or cause to be performed, any investigations for hazardous substances that the Government or the Non-Federal Sponsor determines to be necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter "CERCLA"), 42 U.S.C. Sections 9601-9675, that may exist in, on, or under lands, easements, and rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the implementation, operation, and maintenance of the Project, except for any such lands that the Government determines to be subject to the navigation servitude. For lands that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigations unless the District Engineer provides the Non-Federal Sponsor with prior specific written direction, in which case the Non-Federal Sponsor shall perform such investigations in accordance with such written direction. All actual costs incurred by the Non-Federal Sponsor or the Government for such investigations for hazardous substances shall be included in total project costs and cost shared in accordance with the provisions of this Agreement, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of costs.

B. In the event it is discovered through any investigation for hazardous substances or other means that hazardous substances regulated under CERCLA exist in, on, or under any lands, easements, or rights-of-way, that the Government determines, pursuant to Article III of this Agreement, the Non-Federal Sponsor must provide for the implementation, operation, and maintenance of the Project, the Non-Federal Sponsor and the Government shall provide prompt written notice to each other, and the Non-Federal Sponsor shall not proceed with the acquisition of the real property interests until both parties agree that the Non-Federal Sponsor should

proceed.

C. The Government and the Non-Federal Sponsor shall determine whether to initiate implementation of the Project, or, if already in implementation, whether to continue with work on the Project, suspend future performance under this Agreement, or terminate this Agreement for the convenience of the Government, in any case where hazardous substances regulated under CERCLA are found to exist in, on, or under any lands, easements, or rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for the implementation, operation, and maintenance of the Project. Should the Government and the Non-Federal Sponsor determine to initiate or continue with implementation after considering any liability that may arise under CERCLA, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of clean-up and response, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination on lands, easements or rights of way that the Government determines, pursuant to Article III of this Agreement, to be required for the implementation, operation, and maintenance of the Project, except for any such lands, easements, or rights-of-way owned by the United States and administered by the Government. Such costs shall not be considered a part of total project costs. In the event the Non-Federal Sponsor fails to provide any funds necessary to pay for clean up and response costs or to otherwise discharge the Non-Federal Sponsor's responsibilities under this paragraph upon direction by the Government, the Government may, in its sole discretion, either terminate this Agreement for the convenience of the Government, suspend future performance under this Agreement, or continue work on the Project. The Government shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of clean-up and response, to include the costs of any studies and investigations necessary to determine an appropriate response to the contamination on lands, easements, or rights of way owned by the United States and administered by the Government. All costs incurred by the Government shall be included in total project costs and cost shared in accordance with the terms of this Agreement.

D. The Non-Federal Sponsor and the Government shall consult with each other in accordance with Article V of this Agreement in an effort to ensure that responsible parties bear any necessary cleanup and response costs as defined in CERCLA. Any decision made pursuant to paragraph C. of this Article shall not relieve any third party from any liability that may arise under CERCLA.

E. As between the Government and the Non-Federal Sponsor, the Non-Federal Sponsor shall be considered the operator of the Project for purposes of CERCLA liability. To the maximum extent practicable, the Non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the Project in a manner that will not cause liability to arise under CERCLA.

ARTICLE XVI - NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and either delivered personally, or by telegram, or mailed by first-class, registered, or certified mail, as follows:

If to the Non-Federal Sponsor:

City of San Antonio
114 W. Commerce
PO Box 839966
San Antonio, TX 78283-3966

If to the Government:

USACE attn: Olmos Creek Project Manager
819 Taylor Street Rm 3A28
Fort Worth TX, 76102

B. A party may change the address to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

C. Any notice, request, demand, or other communication made pursuant to this Article shall be deemed to have been received by the addressee at the earlier of such time as it is actually received or seven calendar days after it is mailed.

ARTICLE XVII - CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

ARTICLE XVIII - HISTORIC PRESERVATION

A. The costs of identification, survey and evaluation of historic properties shall be included in total project costs and cost shared in accordance with the provisions of this Agreement.

B. Pursuant to Section 7(a) of Public Law 93-291 (16 U.S.C. Section 469c(a)), the costs of mitigation and data recovery activities associated with historic preservation shall be borne entirely by the Government and shall not be included in total project costs, up to the statutory limit of one percent of the total amount the Government is authorized to expend for the Project.

C. The Government shall not incur costs for mitigation and data recovery that exceed the statutory one percent limit specified in paragraph B. of this Article unless and until the Assistant Secretary of the Army (Civil Works) has waived that limit in accordance with Section 208(3) of Public Law 96-515 (16 U.S.C. Section 469c-2(3)). Any costs of mitigation and data recovery that exceed the one percent limit shall be included in total project costs and shall be cost shared in accordance with the provisions of this Agreement.

ARTICLE XIX - LIMITATION ON GOVERNMENT EXPENDITURES

Notwithstanding any other provisions of this Agreement, the Government's financial participation in the Project is limited to \$5,000,000. The Non-Federal Sponsor shall be responsible for all total project costs that exceed this amount. In lieu of further construction of the Project at the Non-Federal Sponsor's expense, the Government shall, at the request of the Non-Federal Sponsor suspend construction or terminate this Agreement in accordance with Article XIV.B. of this Agreement. To provide for this eventuality, the Government may reserve a percentage of total Federal funds available for the Project and an equal percentage of the total funds contributed by the Non-Federal Sponsor in accordance with Article II.D. of this Agreement as a contingency to pay costs of termination, including any costs of contract claims and contract modifications.

ARTICLE XX - OBLIGATIONS OF FUTURE APPROPRIATIONS

A. Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the Council of the City of San Antonio.

B. The Non-Federal Sponsor intends to satisfy its obligations under this Agreement. The Non-Federal Sponsor shall include in its budget request or otherwise propose, for each fiscal period, appropriations sufficient to cover the Non-Federal Sponsor's obligations under this Agreement for each year, and will use all reasonable and lawful means to secure the appropriations for that year biennium sufficient to make the payments necessary to fulfill its obligations hereunder. The Non-Federal Sponsor reasonably believes that funds in amounts sufficient to discharge these obligations can and will lawfully be appropriated and made available for this purpose. In the event the budget or other means of appropriations does not provide funds in sufficient amounts to discharge these obligations, the Non-Federal Sponsor shall use its best efforts to satisfy any requirements for payments under this Agreement from any other source of funds legally available for this purpose. Further, if the Non-Federal Sponsor is unable to satisfy its obligations hereunder, the Government may exercise any legal rights it has to protect the Government's interests related to this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the District Engineer.

DEPARTMENT OF THE ARMY

CITY OF SAN ANTONIO

BY: _____
JOHN R. MINAHAN
Colonel, Corps of Engineers
District Engineer
Fort Worth District

BY: _____
Emil Moncivais
Planning Director
City of San Antonio

DATE: _____

DATE: _____

CERTIFICATE OF AUTHORITY

I, _____, do hereby certify that I am the principal legal officer of the City of San Antonio, that the City of San Antonio is a legally constituted public body with full authority and legal capability to perform the terms of the Agreement between the Department of the Army and the City of San Antonio in connection with the Olmos Creek Section 206 Aquatic Ecosystem Restoration Project, and to pay damages in accordance with the terms of this Agreement, if necessary, in the event of the failure to perform, and that the persons who have executed this Agreement on behalf of the City of San Antonio have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this
_____ day of _____, 20 .

[TYPED NAME]

City Attorney

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Emil Moncivais
Planning Director

DATE: _____

CERTIFICATION OF LEGAL REVIEW

The Project Cooperation Agreement (PCA) for the Olmos Creek Section 206 Aquatic Ecosystem Restoration Project has been fully reviewed by the Office of Counsel, USAED, Fort Worth District, Fort Worth, Texas, and contains no deviations from the current Section 206 PCA model agreement.

Fort Worth District Office of Counsel

DATE:_____

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APPENDIX G
USFWS PLANNING AID LETTER

Planning Aid
Olmos Creek Basin Aquatic Ecosystem Restoration Project
In
San Antonio, Bexar County, Texas
By
The U.S. Fish and Wildlife Service
Austin Ecological Services Office
Austin, Texas
For
The Fort Worth District
U.S. Army Corps of Engineers
Fort Worth, Texas



DESCRIPTION OF THE STUDY AREA

Location

The study area is located in San Antonio, Bexar County, Texas and is entirely within the San Antonio River watershed (Figure 1). The study area was divided up into five areas that were different habitat types. Area One is a grassland that borders both sides of the stream. In Area Two the stream runs through a golf course. Area three runs through Olmos Basin Park. Area four is also in the park but in a less developed portion and is bounded at the lower end by Olmos Dam. Area five is a grassland located just west of Highway 281 and adjacent to a skeet shooting range.



Figure One. Study Area for Olmos Creek Aquatic Ecosystem Restoration Project in San Antonio, Bexar County, Texas.

Edwards Plateau

The Edwards Plateau Region comprises an area of West Central Texas commonly known as the hill country. It is bounded on the east and south by the Balcones Fault. To the north it extends to the Western Cross Timbers of the Oak Woods and Prairies Region and grades into the Plains regions. The Llano Uplift Region also forms part of the northern border. The Pecos River and eastern edge of the Stockton Plateau define the western extent of the Edwards Plateau Region.

Elevations range from slightly less than 100 feet, to over 3,000 feet (30 to 90 meters). Several river systems dissect the surface, creating a rough and well-drained landscape. Average annual rainfall increases from west to east, ranging from 15 to 33 inches (38 to 84 centimeters). Seasonal rainfall patterns peak in May/June and in September. Soils of the Edwards Plateau are usually shallow with a variety of surface textures. They are underlain by limestone. Man-made lakes, ranches, and farms are scattered throughout the region.

The original vegetation of the Edwards Plateau ecoregion was a combination of dense woodlands and grasslands or open savannah-type plains. The mosaic of habitat within this ecoregion was influenced greatly by natural and human caused fires. Deciduous forest is the most characteristic plant association of the area. Ashe juniper (*Juniperus ashei*), Texas oak (*Quercus buckleyi*), and live oak (*Quercus fusiformis*) are dominant in the more dissected southern and eastern canyonlands of the region. Mesquite (*Prosopis glandulosa*) occurs throughout the Edwards Plateau, and along with live oak, it dominates the woody vegetation in the west. Some savanna type vegetation also occurs and was formerly more widespread. Live oak-mesquite savanna topography is flat to rolling with oak and mesquite woods on grassland. Tall grasses such as various bluestems (*Andropogon* spp.), indiangrass (*Sorghastrum nutans*), and switchgrass (*Panicum virgatum*) are still common along rocky outcrops and areas having good soil moisture. Mid-grasses and short-grasses such as sideoats grama (*Bouteloua curtipendula*), buffalograss (*Buchloe dactyloides*), and Texas grama (*Bouteloua rigidiseta*) dominate the shallow xeric sites. The creek banks are wooded with a variety of trees, some of them ranging 20-50 inches (51 to 127 centimeters) in diameter at breast height. Species common to this area include cottonwood (*Populus deltoides*), pecan (*Carya illinoensis*), American elm (*Ulmus americana*), hackberry (*Celtis laevigata*), various oak (*Quercus* spp.), mesquite, ashe juniper, bald cypress (*Taxodium distichum*), and willow (*Salix* spp.).

FISH AND WILDLIFE RESOURCES

Habitat Cover Types

Riparian Woodlands - This cover type is predominately composed of mature pecan, oaks, and elms within the riparian corridors, or areas that are periodically flooded. These bottomland ecosystems have been created by the interaction of streams, floodplains, and the adjacent terrestrial habitat. These hardwood forests, particularly old growth hardwoods (greater than 100 years old), contribute to the biodiversity and provide important food and shelter for wildlife. Periodic flooding enhances the diversity of habitat types within these areas. The disturbance of the bottomland forest by flooding is a natural and important part of the proper functioning of these areas. Bottomlands help to contain floodwaters and lessen the impact of flooding when

rivers overflow. In addition, these bottomland forests help maintain water quality by trapping sediments, wastes, and pollutants from stormwater runoff.

Trees found in the riparian areas include pecan, sycamore (*Platanus occidentalis*), elm, cottonwood, and hackberry. According to reports by the Texas Parks and Wildlife Department (Fentress, 1986), at least 189 species of trees and shrubs, 42 woody vines, 75 grasses and 802 herbaceous plants are known to occur in the bottomland hardwoods ecosystems in Texas. Even though central Texas bottomland hardwood ecosystems are not quite as diverse as the east Texas woodlands described by Fentress (1986), they are complex and dynamic habitats with large diverse communities. These plant communities provide habitat for a diversity of animal species.

Streams, creeks, rivers, and other bodies of water of bottomland hardwoods in Texas also support at least 116 species of fish, 31 species of amphibians, 54 species of reptiles, 273 species of birds and 45 species of mammals (Fentress, 1986). Over 50 percent of all the neotropical songbirds are associated with bottomland hardwood forests (Fentress, 1986). The Olmos Creek basin bottomlands support a large diversity of insects, fish, amphibians, reptiles, birds, and mammals. Signs of armadillos (*Dasypus novemcinctus*), raccoons (*Procyon lotor*), and opossums (*Didelphis virginiana*) were fairly numerous throughout the study area. Leopard frogs (*Rana pipiens*) and cricket frogs (*Acris crepitans*) were abundant, as were snakes, butterflies, bees, and other flying insects. These areas provide some habitat for white-tail deer (*Odocoileus virginianus*). Bird species sighted were typical of bottomland riparian areas.

Overall, the riparian habitat along the study area is highly fragmented and impacted by past management along the streambanks. Dense pockets of properly functioning riparian habitat do exist within the study area in the lower reaches of the stream. Within the remainder of the study area, it appears that subsequent management has greatly impacted the wildlife habitat within the riparian corridors.

Grasslands - Two grassland areas are located within the study area. In most cases the grasslands are the result of past management activity (i.e. brush clearing). Much of the existing grasslands are within flood prone areas and are comprised of mainly forbs with scattered grasses, trees, and shrubs. The plants are a mixture of native and introduced species.

Wildlife Resources

The project area is used by both resident and migratory species that are somewhat tolerant of human activity. Migratory waterfowl and shorebirds, and resident wood ducks (*Aix sponsa*), can be seen along the stream. A variety of migratory and resident passerine, owl, and hawk species use the woodlands as well. Some common resident birds that may be observed in the study area are white-crowned sparrows (*Zonotrichia leucophrys*), northern cardinals (*Cardinalis cardinalis*), blue jays (*Cyanocitta cristata*), common grackles (*Quiscalus quiscula*), common crows (*Corvus brachyrhynchos*), kingfishers (*Ceryle alcyon*), and red-tailed hawks (*Buteo jamaicensis*). Mammal species that may utilize the riparian woodland in the study area include raccoons, armadillos, skunks (*Mephitis mephitis*), opossums, eastern cottontail (*Sylvilagus floridanus*), fox squirrels (*Sciurus niger*), and other small rodents.

Aquatic Resources

Common fish species that can be found in the stream are bass (*Micropterus spp.*), bullhead (*Ictalurus spp.*), Rio Grande cichlid (*Cichlasoma cyanoguttata*), green sunfish (*Lepomis cyanellus*), and various minnows. Fish population information (Table 1) was derived from field visits and a survey of fish conducted by the San Antonio River Authority in a section of the San Antonio River located downstream of Olmos Creek (San Antonio River Authority, 1996). The fish population in Olmos Creek is typical of central Texas streams. Several introduced species were noted in relatively high abundance.

The stream throughout most of the study area is intermittent. From about the stream crossing of McCullough Avenue downstream to just below the crossing of Jones-Maltsberger Road, appears to have permanent water. This stream section appears to have very low flow in the summer months and water availability is probably greatly enhanced by watering on the golf course. Several species of frogs and turtles may also be found in the project area. Species sighted included cricket frogs (*Acris crepitans*), leopard frogs (*Rana pipiens*), snapping turtles (*Chelydra serpentina*), soft-shelled turtles (*Apalone spp.*), and red eared sliders (*Trachemys scripta*). In addition, many bird species were noted using the aquatic habitat, including green herons (*Butorides virescens*), yellow-crowned night herons (*Nyctanassa violacea*), cattle egrets (*Bubulcus ibis*), great egrets (*Ardea alba*), little blue herons (*Egretta caerulea*), and great blue herons (*Ardea herodias*).

Because stream temperature is often a factor limiting aquatic productivity in Central Texas streams, an analysis of stream temperature was done for the portion of the study with permanent water (Areas One, Two and Three). Temperature has a marked effect on the aquatic productivity and species found in streams. In addition, an analysis of stream shading was done by collecting information on streamside tree canopy cover throughout the study area.

Stream temperatures were measured from June 25 to September 4, 2003 (Figure 2). During this period, the highest temperature readings were from early August. Spring flow was probably at the lowest point during the year and ambient air temperature (day and night) was probably the warmest. The temperatures appear to be greatly influenced by storm events. These summer storms increase flow and moderate temperature differences among the areas.

In general, the temperature was coolest in Area One where some spring flow probably enters the stream. The water appears to heat up through the golf course and again as it passes through the concrete lined channel at the top of Area Three. Temperatures appear to moderate in the shaded stretch of stream below the crossing of Jones-Maltsberger Road. However, this moderation is slight and appears to be influenced by stream flow.

Table 1. - List of fishes possibly occurring in Olmos Creek. This list was derived from an area known as the Museum Reach of the San Antonio River (SARA, 1996). This area is about one mile downstream of the Olmos Creek study area.

Species	Common Name	Species	Common Name
<i>Atractosteus spatula</i>	Alligator Gar	<i>Poecilia latipinna</i>	Sailfin Molly*
<i>Lepisosteus osseus</i>	Longnose Gar	<i>Micropterus salmoides</i>	Largemouth Bass
<i>Lepisosteus oculatus</i>	Spotted Gar	<i>Moxostoma congestum</i>	Gray Redhorse
<i>Dorosoma cepedianum</i>	Gizzard Shad	<i>Lepomis gulosus</i>	Warmouth
<i>Astyanax mexicanus</i>	Mexican tetra*	<i>Lepomis cyanellus</i>	Green Sunfish
<i>Notropis lutrensis</i>	Red Shiner	<i>Lepomis microlophus</i>	Redear Sunfish
<i>Notropis volucellus</i>	Mimic Shiner	<i>Lepomis macrochirus</i>	Bluegill
<i>Notropis venustus</i>	Blacktail Shiner	<i>Lepomis auritus</i>	Redbreast Sunfish
<i>Dionda episcopa</i>	Roundnose Minnow	<i>Lepomis megalotus</i>	Longear Sunfish
<i>Pimephales vigilax</i>	Bullhead Minnow	<i>Lepomis punctatus</i>	Spotted Sunfish
<i>Pimephales promelas</i>	Fathead Minnow	<i>Cichlasoma cyanoguttatum</i>	Rio Grande Cichlid*
<i>Ictalurus punctatus</i>	Channel Catfish	<i>Tilapia aurea</i>	Blue Tilapia*
<i>Ictalurus furcatus</i>	Blue Catfish	<i>Tilapia mossambica</i>	Mozambique Tilapia*
<i>Ictalurus natalis</i>	Yellow Bullhead	<i>Cyprinus carpio</i>	Common Carp*
<i>Pylodictis olivaris</i>	Flathead Catfish	<i>Camptostoma anomalum</i>	Central Stoneroller
<i>Noturus gyrinus</i>	Tadpole Madtom	<i>Hypostomus plecostomus</i>	Suckermouth Catfish*
<i>Gambusia affinis</i>	Mosquitofish	<i>Xiphophorus helleri</i>	Green Swordtail*

* Nonnative or introduced species.

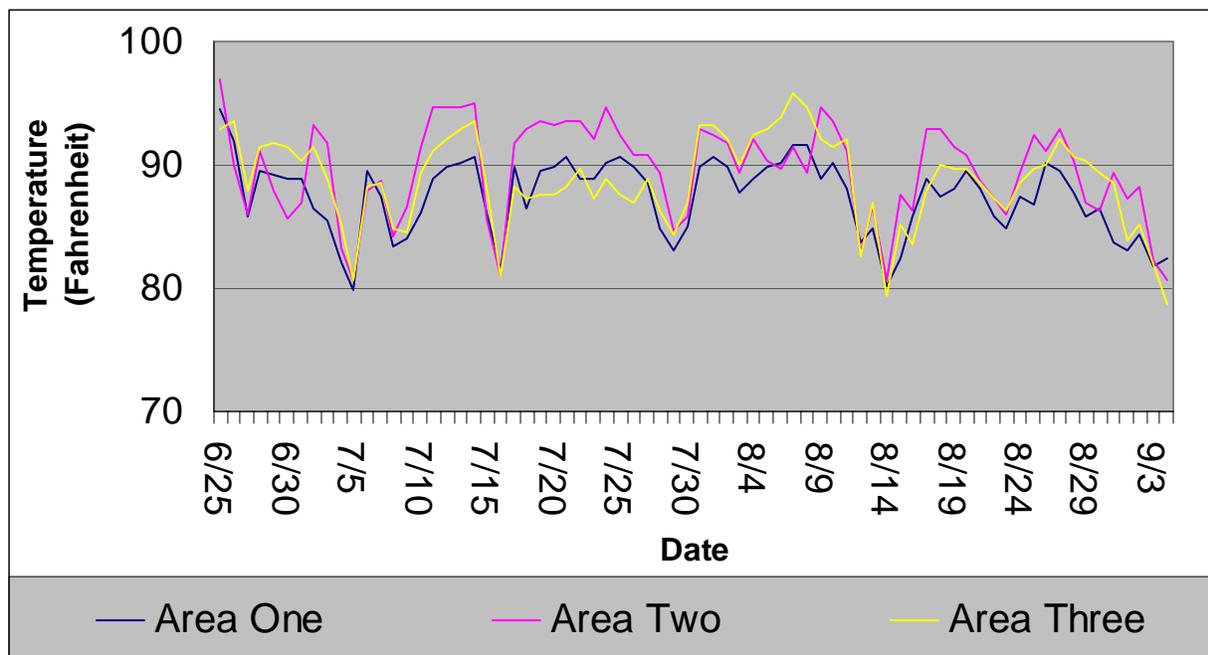


Figure Two. Olmos Creek Maximum Daily Temperatures June 25 to September 4, 2003.

Habitat Evaluation Procedures (HEP)

Wildlife values were analyzed using HEP (U.S. Fish and Wildlife Service, 1980) to describe and measure key habitats in the project area. The HEP requires the use of Habitat Suitability Index (HSI) models developed for indicator species that best represent groups of species that use the habitats in the project area. The eight wildlife species utilized for the habitat evaluations are indicative of species found within the Olmos Creek study area and are listed below in Table 2.

Riparian Woodlands	Grasslands
Raccoon (<i>Procyon lotor</i>)	Red-tailed Hawk (<i>Buteo jamaicensis</i>)
Barred Owl (<i>Strix varia</i>)	Scissor-tailed Flycatcher (<i>Muscivora forficata</i>)
Fox Squirrel (<i>Sciurus niger</i>)	Eastern Meadowlark (<i>Sturnella magna</i>)
Green Heron (<i>Butorides virescens</i>)	Eastern Cottontail (<i>Sylvilagus floridanus</i>)

Using these models, baseline habitat conditions are expressed as a numeric function (HSI value) ranging from 0.0 to 1.0, where 0.0 represents no suitable habitat for an indicator species and 1.0 represents optimum conditions for the species. Habitat units (HU) are calculated by multiplying the HSI by the amount of acres of the habitat type available within each restoration area. Acreages were derived from floodplain maps provided by the Corps of Engineers. The study area was divided into several different areas based on the habitat type and land use. These areas

will be described below based on the HEP/HSI results. Site specific HEP/HSI data is included in Appendix A.

Riparian Woodlands - Overview

Riparian woodland habitat was assessed at seventeen sites along Olmos Creek (Sites 1-17). Photos of the sites can be found in Appendix B. Plant and animal species found in these sites are listed in Appendix C. The overall HSI value for the riparian habitat in the Olmos Creek study area is 0.60 with 37 Habitat Units (Table 3) providing fair habitat.

Table 3. Riparian Woodland Habitat Scores for Olmos Creek Aquatic Ecosystem Restoration Project.					
Habitat	Species Habitat Suitability Index Habitat Units				Average
	Riparian Woodlands	Raccoon 0.62 38	Barred Owl 0.47 29	Fox Squirrel 0.37 23	
Grasslands	Red-tailed Hawk 0.91 36	Scissor-tailed Flycatcher 0.98 38	Meadowlark 0.51 20	Eastern Cottontail 0.73 28	0.78 30
Grasslands Golf Course	Red-tailed Hawk 0.57 5	Scissor-tailed Flycatcher 0.80 6	Meadowlark 0.43 3	Eastern Cottontail 0.33 3	0.53 4

Raccoons require large diameter trees, which were found throughout the lower portion of the study area. However, Area One and Area Two were lacking in large diameter streamside trees. These areas greatly influenced the overall habitat value (0.62) for raccoons. Similarly, barred owl habitat (0.47) was reduced due to the lack of large diameter trees in Areas One and Two. Fox squirrel habitat (0.37) rated low for winter food production, while cover/reproduction values appeared to be fairly high. Mast producing trees greater than or equal to 6 inches diameter at breast height (dbh) were rare throughout many of the riparian areas and thus the food value for fox squirrels rated poorly. In addition, green heron habitat suitability (0.93) was very good due to abundant streamside cover and good food production in the stream.

Grasslands – Overview

The project study area contains two grassland areas. Habitat suitability data is reported in Table 3. These areas provide good habitat for most grassland species. The high quality food production capacity of these grasslands and the good feeding conditions provide excellent habitat for both the red-tailed hawk (0.91) and scissor-tailed flycatcher (0.98). Both areas tend to be dominated by forbs and lack a large component of native grass species. This lack of native grass species limits the quality of the habitat for seed eating animals like the meadowlark (0.51). The general lack of shrub habitat in these areas limits the habitat suitability for eastern cottontails (0.73).

Area Specific Habitat Analysis

The study area was divided into five project areas (Figure 1.) based on habitat type and land use. Below is an analysis of the fish and wildlife habitat conditions for each area.

Area One – Riparian Woodlands

Area One is located between San Pedro Avenue and McCullough Avenue and is predominantly a forb-dominated grassland. Some riparian habitat is present along the stream but this area has been cleared of most woody vegetation in the past. This area is subject to flooding and is periodically mowed. There are a few remnant clumps of live oak, cedar elm (*Ulmus crassifolia*), and mesquite trees and a few scattered areas along the creek that provide some tree canopy cover. The stream lacks shade and riparian woodland habitat. The HEP/HSI information is summarized in Table 4.

Table 4. Riparian Woodland and Grassland Habitat Scores for Area One, Olmos Creek Aquatic Ecosystem Restoration Project.					
Habitat	Species Habitat Suitability Index Habitat Units				Average
Riparian Woodlands	Raccoon	Barred Owl	Fox Squirrel	Green Heron	0.38 7
	0.39 7	0.11 2	0.08 2	0.92 17	
Grasslands	Red-tailed Hawk	Scissor- tailed Flycatcher	Meadowlark	Eastern Cottontail	0.83 16
	0.91 17	0.98 19	0.58 11	0.85 16	

The riparian woodland scores for area one were very low (0.38). This portion of the stream habitat lacked large diameter trees and had a very poor stream canopy cover that are both important habitat components for raccoon (0.39), barred owl (0.11), and fox squirrel (0.08). The

green heron (0.92) habitat was good because the stream was productive and the streamside vegetation provided excellent hunting cover.

Area One – Grasslands

Grassland habitat was assessed at five sites in Area One (13-17) and the habitat was found to be in very good condition. The overall HSI value was 0.83, with 16 habitat units (Table 4). Photos of each site can be found in Appendix B. Plant and animal species found in these sites are listed in Appendix C.

The habitat was very good for the red-tailed hawk (0.91) due to very good habitat for small mammal production providing ideal hunting habitat. Scissor-tailed flycatcher habitat rated excellent (0.98) with good food production and perching habitat. In addition, food production and hiding cover in the streamside areas provided very good habitat for cottontail rabbits (0.85). Meadowlark habitat (0.58) was rated relatively low because of the low percentage of grass species found in Area One. The dominant vegetation in this area was forbs, and the lack of grass species limits the food availability for meadowlarks, which are seed eating birds.

Area One – Aquatic Habitat

The aquatic habitat within Area One is not in optimal condition. It appears that springs may be present in the downstream portion of this area. The stream lacks shade and riparian habitat in the streamside zone. An analysis of stream shade was conducted along this stretch of Olmos Creek (Figure 3). Overall, the canopy is very poor, with little to no shade along most of the stream. One or two areas along this section have some dense pockets of stream shade. The lack of stream shade probably has a great impact on stream water temperature.

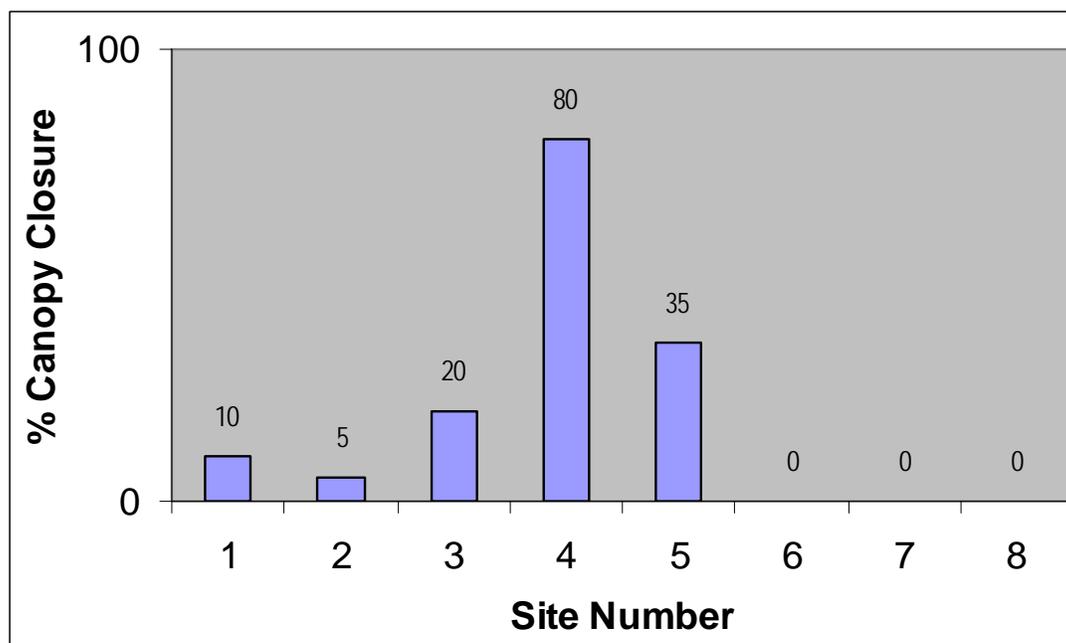


Figure 3. Olmos Creek canopy closure in Area One of the Olmos Creek Restoration Project.

The temperature was measured continuously from June 25 to September 4, 2003 (Figure 4). Water temperature was mostly between 80°F (26°C) and 90°F (32°C) but spiked to 95°F (35°C) in late June. The temperatures above 80°F (26°C) and 90°F (32°C) indicate low water flow and high solar input. Temperature is also greatly influenced by storms that drove stream temperatures below 80°F (26°C). The lack of stream shade and the high summer water temperatures probably limit the aquatic productivity of this stream section.

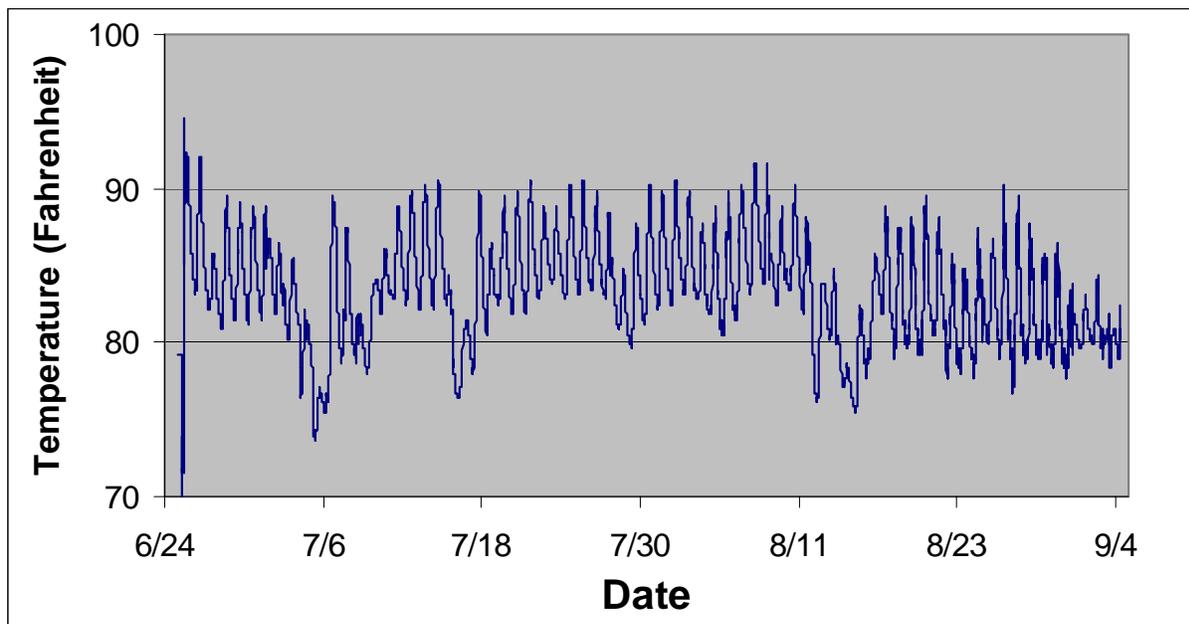


Figure 4. Olmos Creek water temperature in Area One of the Olmos Creek Restoration Project.

Area Two – Grasslands (Golf Course)

Area Two is located between McCullough Avenue and the stream crossing of Jones-Maltsberger Road. This area is predominantly a golf course. Some riparian habitat is present along the stream, but this area has been cleared of most woody vegetation. This area is subject to flooding and is regularly mowed. There are a few remnant clumps of pecan, cedar elm, and mesquite trees and a few scattered areas along the creek that provide some tree canopy cover. In general, this stream section lacks shade and riparian woodland habitat. The HEP/HSI information is summarized in Table 5.

Grassland habitat was assessed at four sites in Area Two (19-22) and the habitat was found to be in relatively poor condition. The overall HSI value was 0.53, with 4 habitat units (Table 5). Photos of each site can be found in Appendix B. Plant and animal species found at these sites are listed in Appendix C.

Table 5. Grassland Habitat Scores for Area Two, Olmos Creek Aquatic Ecosystem Restoration Project.					
Habitat	Species Habitat Suitability Index Habitat Units				Average
	Red-tailed Hawk	Scissor- tailed Flycatcher	Meadowlark	Eastern Cottontail	
Grasslands (Golf Course)	0.57	0.80	0.43	0.33	0.53
	5	6	3	3	

The grassland habitat scores for the golf course were poor. The golf course was not good habitat for red-tailed hawk (0.57) because the managed turf provided very poor habitat for small mammal production. The lack of hiding cover in the streamside areas also provided poor habitat for cottontail rabbits (0.33). However, scissor-tailed flycatcher habitat rated fairly high (0.80) with good food production and fair perching habitat. Meadowlark habitat (0.48) was rated relatively low because of the low percentage of grass species that reach maturity in the managed turf areas of the golf course. The dominant vegetation in this area was introduced grass species that were mowed regularly. There was little to no seed production, and that limits the food availability for meadowlarks.

Area Two – Aquatic Habitat

The aquatic habitat within Area Two is not in optimal condition. While this area may have small springs and seeps along the stream, there is little to no streamflow, except during rain events. The stream lacks shade and riparian habitat in the streamside zone. An analysis of stream shade was conducted along this stretch of Olmos Creek (Figure 5). Overall the canopy is very poor, with little to no shade along most of the stream. One or two areas along this section have some pockets of stream shade. The lack of stream shade probably has a great impact on stream water temperature.

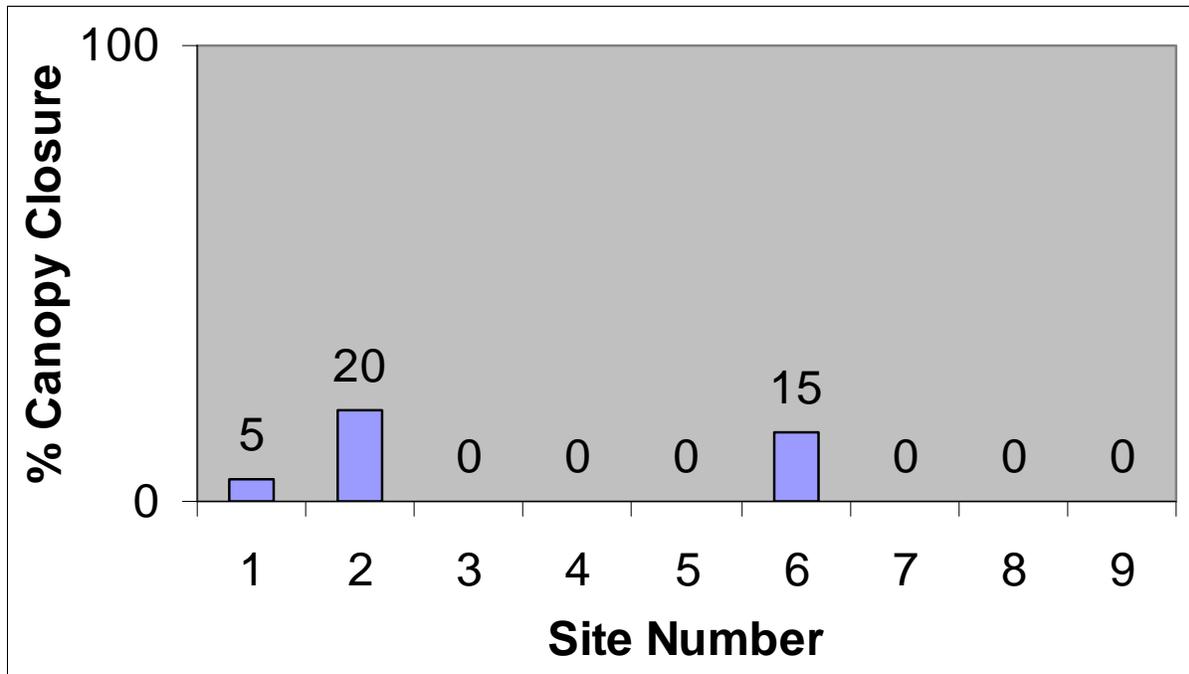


Figure 5. Olmos Creek canopy closure in Area Two of the Olmos Creek Restoration Project.

The temperature was measured continuously from June 25 to September 4, 2003 (Figure 6). Water temperature was mostly between 80°F (26°C) and 90°F (32°C) but spiked to 95°F (35°C) in late June. The temperatures above 80°F (26°C) and 90°F (32°C) indicated low water flow and high solar input. Temperature is also greatly influenced by storms that drove stream temperatures below 80°F (26°C). The lack of stream shade and the high summer water temperatures probably limit the aquatic productivity of this stream section.

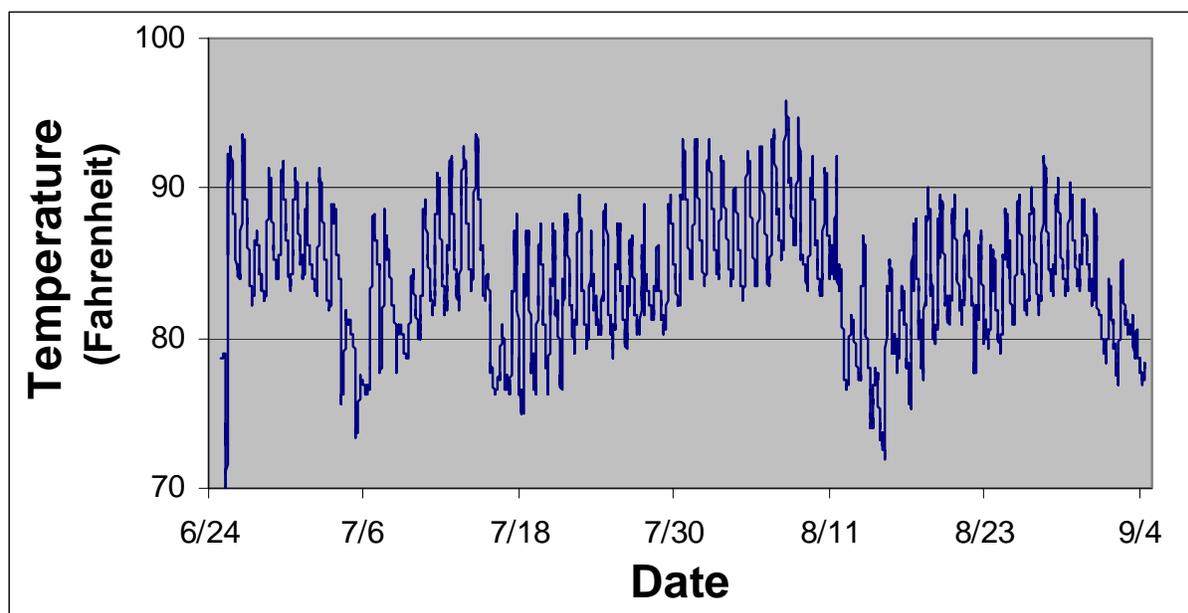


Figure 6. Olmos Creek water temperature in Area Two of the Olmos Creek restoration project.

At the bottom of Area Two there is a long, wide concrete channel that the Texas Department of Transportation installed to route the stream around Highway 281. This channel is a barrier to upstream movement of aquatic species except at higher flows. In addition, the wide shallow nature of this ditch causes the water to be exposed to high solar radiation that warms the stream temperature. Stream temperature probably limits aquatic productivity in this central Texas stream. A temperature monitoring device was placed below this concrete ditch, but unfortunately the probe was damaged. The seal broke on the probe and water leaked inside the device and all data was lost. Without the data we can say no more than the concrete channel probably has a great impact on temperature. It certainly lacks the stream depth at base flow for fish passage. A pilot channel to increase depth and reduce solar radiation would benefit the aquatic ecosystem.

Area Three – Riparian Woodlands

Area Three is located between the crossing of Jones-Maltsberger Road and the second stream crossing of Devine Road and runs through Olmos Basin Park. This area is predominantly an improved park with picnic tables and mowed turf along the east side of the stream course. The west bank of the stream is a heavily wooded bottomland hardwood forest. Riparian habitat is present along most of the stream but the area within the park has been altered and most of the woody understory vegetation has been removed. This area is subject to flooding and is regularly mowed. There is an abundance of pecan and hackberry trees along the creek that provide good tree canopy cover within the park area. However, the bottomland hardwood forest between the first crossing of Devine Road and Jones-Maltsberger Road lacks the hard mast producing trees found in the park. The HEP/HSI information is summarized in Table 6.

Table 6. Riparian Woodlands Habitat Scores for Area Three, Olmos Creek Aquatic Ecosystem Restoration Project.					
Habitat	Species Habitat Suitability Index Habitat Units				Average
	Raccoon	Barred Owl	Fox Squirrel	Green Heron	
Grasslands (Golf Course)	0.76	0.85	0.73	0.93	0.82
	8	9	8	10	9

Riparian woodland habitat was assessed at five sites (1-5) in Area Three and the habitat was found to be in fair condition. The overall HSI value was 0.82 with 9 habitat units (Table 6). Photos of each site can be found in Appendix B. Plant and animal species found at these sites are listed in Appendix C.

The riparian woodland habitat scores for the park were fair. The habitat was fair for raccoons (0.76) with good large trees for overstory cover but a lack of good denning sites. Barred owl habitat rated well (0.85) because the large pecan trees provide good nesting and cover. Fox squirrel habitat was fair with adequate food and cover. One site in the park lacked pecan trees for hard mast and that reduced the average habitat suitability. Green heron habitat along the stream rated excellent (0.93) with good food productivity, stream depth, and hiding cover.

Area Three – Aquatic Habitat

The aquatic habitat within Area Three is in fairly good condition. While this area goes dry during the summer, it provides an important link between downstream pools and upstream permanent water. The creek has good streamside shade and fair riparian habitat. An analysis of stream shade was conducted along this stretch of Olmos Creek (Figure 7). Overall, the canopy is very good, with adequate shade along most of the stream.

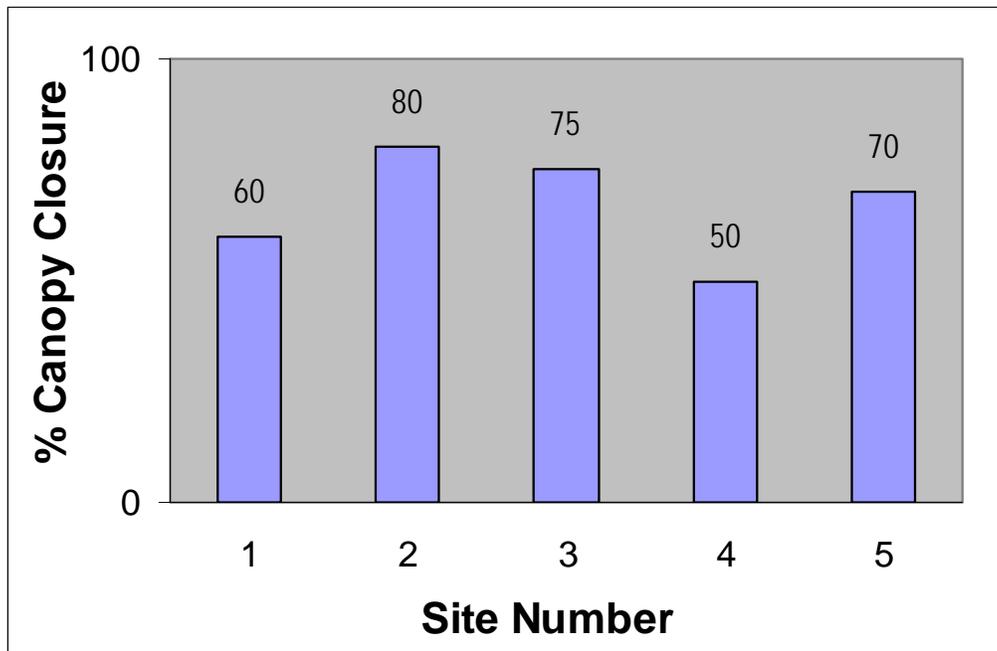


Figure 7. Olmos Creek canopy closure in Area Three of the Olmos Creek Restoration Project.

The temperature was measured continuously from June 25 to September 4, 2003 (Figure 8). Water temperature was mostly between 80°F (26°C) and 90°F (32°C). The temperatures above 80°F (26°C) and 90°F (32°C) indicated low water flow. Temperature is also greatly influenced by storms that drove stream temperatures below 80°F (26°C). The high summer water temperatures probably limit the aquatic productivity of this stream section.

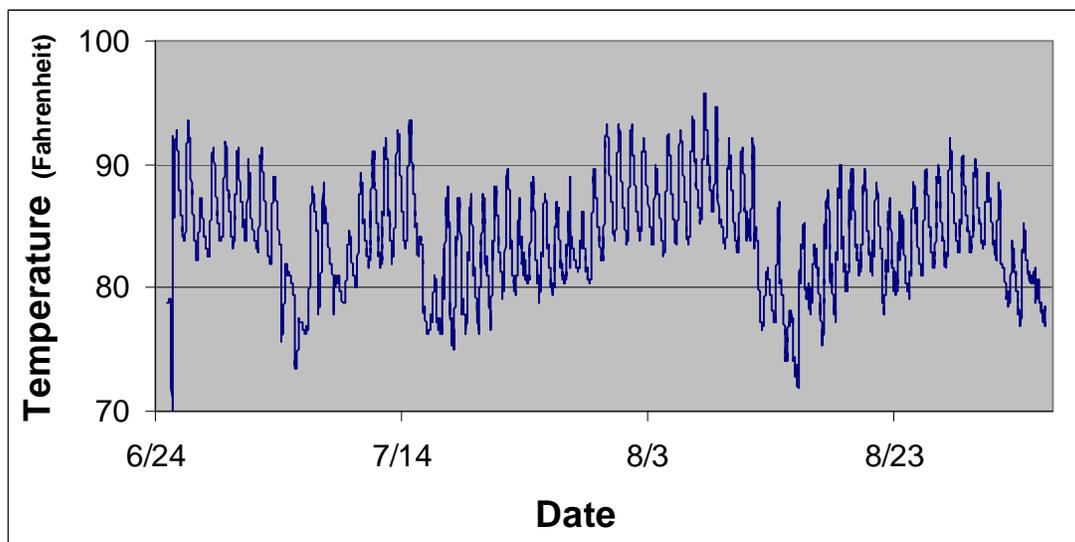


Figure 8. Olmos Creek water temperature in Area Three of the Olmos Creek Restoration Project.

Area Three was identified as a potential area for stream restoration in the earlier phases of restoration planning. Therefore, an extensive aquatic habitat survey was conducted for a portion of this area. Stream habitat attributes were measured in the park area between the first and second crossings of Devine Road. The stream segment was stratified into different habitat types (pools and riffles), and specific attributes were collected in each identified habitat unit. Attributes included stream width, percent of substrate embedded in silt (embeddedness), dominant substrate type (silt, gravel, cobble, or boulder), and aquatic habitat (cover).

Successful hydrological and ecological management of urbanized headwater drainages, such as the Olmos Creek requires a clear understanding of flow and sediment dynamics. The pool-riffle unit is a fundamental hydrological control for bed scour, sediment transfer, bank erosion and channel instability. In addition, biological niches, which are critical in sustaining aquatic habitats, are created by a diversity of these basic habitat types. Both resting areas (pools) and food production areas (riffles) are important components of a healthy aquatic ecosystem.

About 2,500 feet (763 meters) of stream was sampled and the ratio of pools to riffles was about 4:1. The pool/riffle ratio in this stream section shows that there is an abundance of pool habitat. Generally, a lower pool/riffle ratio with closer to a 1:1 relationship is considered a better balance of resting habitat and food production areas. The over abundance of pool habitat is related to the instream structures and sewer lines that cross the creek and create pools. Reduction in the number of pools through this stream section and an increase in riffle habitat would be beneficial to the aquatic ecosystem.

Stream width can also be used as an indication of the habitat condition within the stream (Figure 9). Olmos Creek, through this stream section, has been widened by past management activities. Based on our observations and measurements, this stream section should have an average stream width between 10 and 15 feet (3 and 5 meters). The riffle habitat was within this range having an average stream width of 11 feet (3 meters), with a minimum width of 4 feet (1 meter) and a maximum width of 20 feet (6 meters). However, the pool habitat was considerably wider with an average width of 20 feet (6 meters), a minimum width of 10 feet and a maximum width of 62 feet (19 meters). For the most part, each pool width measurement that exceeded about 15 feet (5 meters) was in response to a man-made structure. Two bridges, three utility (sewer) lines, one abandoned utility crossing, and one abandoned concrete crossing directly impact stream width through the park section of Olmos Creek. Reduction of these impacts would benefit the aquatic habitat by reducing stream width and increasing stream depth. This change in stream channel dimensions would serve to improve habitat conditions by moderating stream temperature and reducing the amount of pool habitat within the stream. In addition, riffles, the food production habitat, would probably increase.

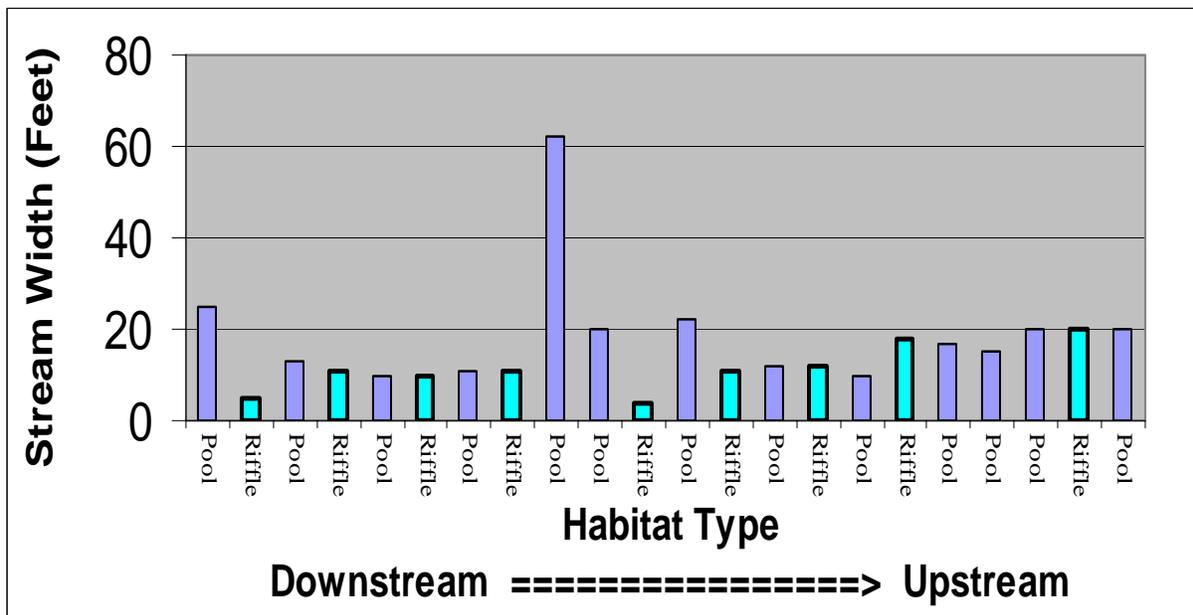


Figure 9. Stream width of each habitat unit in Olmos Creek within Area Three. Area Three is between the first and second stream crossing of Olmos Creek and Devine road in Olmos Basin.

The level of embeddedness (pools = 30 and riffles = 6) is fairly low and indicates a light silt load (Figure 10). The stream receives a large amount of scouring streamflow during most storm events. While individual sources of streambank erosion were noted, overall stream sedimentation does not appear to be a major issue in Olmos Creek.

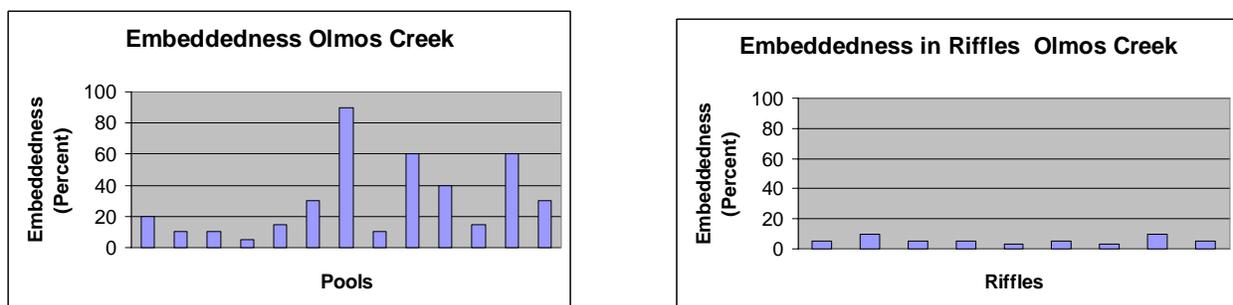


Figure 10. Embeddedness or the percent to which the substrate is embedded in fine silt, for Olmos Creek within Area Three. Area Three is between the first and second stream crossing of Olmos Creek and Devine road in Olmos Basin.

Aquatic habitat cover scores (pools = 6 and riffles = 3) were fair to good (Figure 11). The stream could benefit from the introduction of boulders to provide additional cover for aquatic species. Most benefits would be gained from introducing these habitat elements in the pools. With the scouring flows that the stream receives, boulder introduction may be the only feasible way to introduce cover that will stay in place.

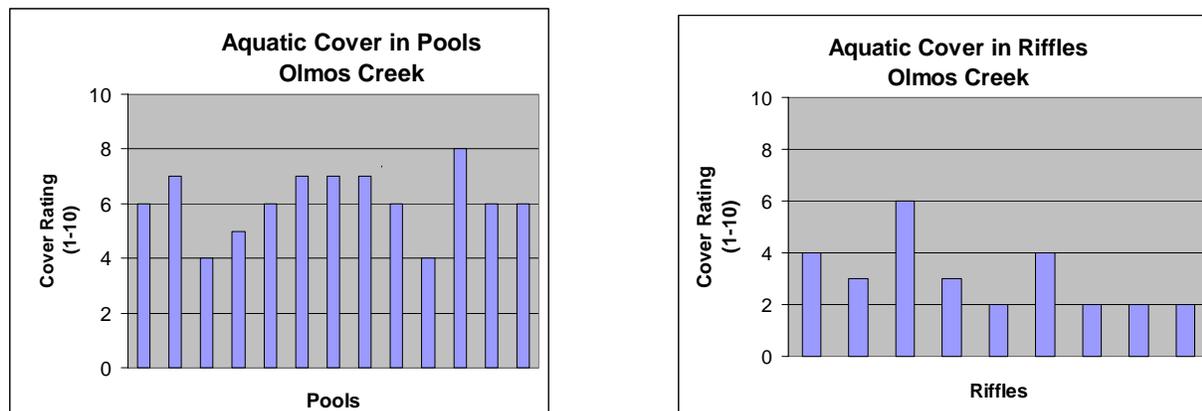


Figure 11. Aquatic cover, or a rating of the hiding and resting cover, for Olmos Creek within Area Three. Area Three is between the first and second stream crossing of Olmos Creek and Devine road in Olmos Basin.

The dominant substrate types in pools were gravel (30 percent), cobble (40 percent), and silt (30 percent). The pools would benefit from more large rocks to provide resting and feeding cover. The dominant substrate type in riffles was cobble (89 percent), and gravel (11 percent). The riffles within this section of stream appear to be in good condition. Decreasing the amount of pool habitat by removing the crossings should increase the amount of riffle habitat. As noted above, increasing the amount of the riffle habitat would improve aquatic ecosystem health

Area Four – Riparian Woodlands

Area Four is located between the second crossing of Devine Road and Olmos Dam (Figure 1). This area is a thickly vegetated riparian bottomland hardwood and is subject to flooding. Riparian woodland habitat was assessed at seven sites in Area Four (6-12). The HEP/HSI information is summarized in Table 7.

Table 7. Riparian Woodland and Grassland Habitat Scores for Area Four, Olmos Creek Aquatic Ecosystem Restoration Project.					
Habitat	Species Habitat Suitability Index Habitat Units				Average
	Raccoon	Barred Owl	Fox Squirrel	Green Heron	
Riparian Woodlands	0.69	0.45	0.33	0.92	0.60
	35	23	17	46	30

The riparian woodland scores for Area Four were relatively low (0.60). This portion of the stream habitat had some large diameter trees and had a very good stream canopy cover that are essential habitat components for raccoon (0.69), barred owl (0.45), and fox squirrel (0.33).

However, the presence of many smaller sized trees limited the habitat value of this area for raccoon and barred owl. There was a surprising lack of pecan, oak, and other hard mast producing trees in this area. This lack of hard mast producing trees limited the food value and contributed to the low habitat suitability for fox squirrel. In addition, many of the tree species noted were not native vegetation. All ligustrum (*ligustrum* spp.), chinaberry (*Melia azedarach*), Chinese tallow (*Sapium sebiferum*), and other non-native species should be removed. The green heron (0.92) habitat was good because the stream itself was productive and the streamside vegetation provided excellent hunting cover.

Area Four – Aquatic Habitat

The aquatic habitat within Area Four, while not perennial is in good condition. Deep pools and a shady stream provide good aquatic habitat. While this area goes dry during the summer, it provides an important link between downstream pools and upstream permanent water. The creek has good streamside shade and fair riparian habitat. An analysis of stream shade was conducted along this stretch of Olmos Creek (Figure 12). Overall the canopy is very good, with dense shade along most of the stream.

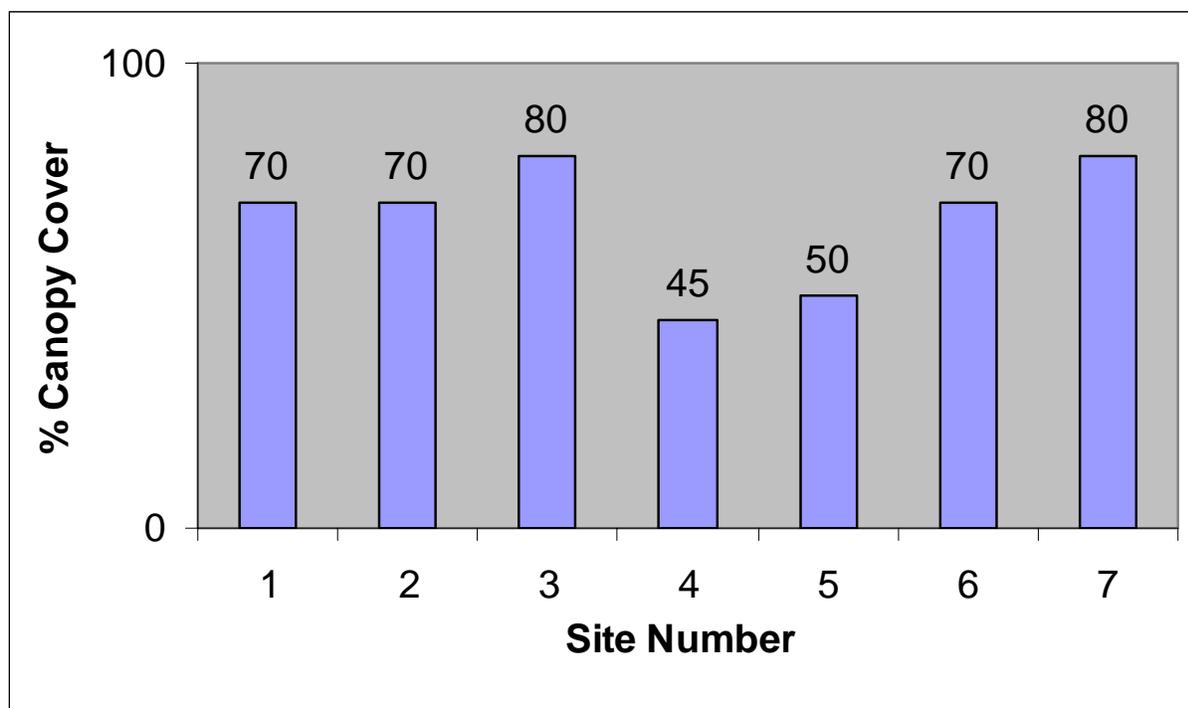


Figure 12. Olmos Creek canopy closure in Area Four of the Olmos Creek Restoration Project.

This area also contained some deciduous forested wetlands that fill with water periodically following rainfall events. These areas are very productive habitats for resident and migrating wildlife species and should be maintained. There was a large amount of garbage present that should be cleaned up as well. The area would be excellent for an interpretative trail focusing on birding.

Area Five – Grasslands

Area Five is located between Highway 281 and the Olmos Basin Shooting Range (Figure 1). This area is a forb-dominated grassland and one site (18) was sampled in this grassland. The HEP/HSI information is summarized in Table 8.

Habitat	Species Habitat Suitability Index Habitat Units				Average
	Grasslands	Red-tailed Hawk	Scissor-tailed Flycatcher	Meadowlark	
0.90 18		1.00 20	0.17 3	0.12 2	

The habitat suitability scores for Area Five were relatively low (0.55). The area provided excellent habitat for the red-tailed hawk (0.90) and the scissor-tailed flycatcher (1.00) due to high capacity for rodent and insect food production. Meadowlark (0.17) and Eastern cottontail rabbit (0.12) scores were very low. The meadowlark scores were low because of a lack of grass for food production and perching sites. The rabbit habitat was poor because of a total lack of hiding cover in the grassland.

ENDANGERED SPECIES

Bexar County

Black-capped vireo	(E)	<i>Vireo atricapillus</i>
Golden-cheeked warbler	(E)	<i>Dendroica chrysoparia</i>
Madla cave meshweaver	(E w/CH)	<i>Cicurina madla</i>
Robber Baron Cave meshweaver	(E w/CH)	<i>Cicurina baronia</i>
Braken Bat Cave meshweaver	(E w/CH)	<i>Cicurina venii</i>
Government Canyon Bat Cave meshweaver	(E)	<i>Cicurina vespera</i>
Government Canyon Bat Cave spider	(E)	<i>Neoleptoneta microps</i>
Cokendolpher cave harvestmen	(E w/CH)	<i>Texella cokendolpheri</i>
Ground beetle (no common name)	(E w/CH)	<i>Rhadine exilis</i>
Ground beetle (no common name)	(E w/CH)	<i>Rhadine infernalis</i>
Helotes mold beetle	(E w/CH)	<i>Batrisodes venyivi</i>
Black-tailed prairie dog	(C)	<i>Cynomys ludovicianus</i>

There are eleven endangered, and one candidate species that are federally listed and known to occur within Bexar County. There is no habitat for any of the endangered species or the candidate species within the project area. There is critical habitat designated for several karst invertebrates in Bexar County, but no critical habitat is located within the proposed project area. Therefore, the proposed project should have no effect on these species.

FUTURE WITHOUT PROJECT

Staff from the U.S. Army Corps of Engineers, Texas Parks and Wildlife Department, and the U.S. Fish and Wildlife Service discussed the potential variables that could affect the habitat and its value within the study area. Several items identified were non-native species invasion, habitat fragmentation, and habitat destruction. There is expected to be a decrease in habitat values due to continued fragmentation and exotic species invasion over the next 50 years.

Overall, there should be a decrease in habitat quantity and quality (Table 9). Therefore, it is essential that every attempt is made to implement nonstructural options to the extent practicable, and if it is not practicable, then every attempt should be made to protect and restore the habitat.

Table 9. Future without the Project projections for Olmos Creek Aquatic Ecosystem Restoration Project.				
Habitat	Timeframe			
	Habitat Suitability Index			
	Habitat Units			
	Existing	10 Years	25 Years	50 Years
Riparian Woodlands	0.60	0.50	0.35	0.20
	37	31	21	12
	Existing	10 Years	25 Years	50 Years
Grasslands	0.78	0.70	0.65	0.55
	30	27	25	21
	Existing	10 Years	25 Years	50 Years
Grasslands Golf Course	0.53	0.53	0.53	0.53
	4	4	4	4

Project Recommendations

Based on the existing condition of the fish and wildlife habitat within the project area, the U.S. Fish and Wildlife Service offers the following recommendations for each area.

Area One

The stream channel through Area One is relatively open and exposed to solar radiation. Stream temperatures are high and probably limit aquatic ecosystem productivity. We recommend establishing a riparian woodland/grassland management area, along Olmos Creek, through Area One. The area should be a minimum of 300 feet (92 meters) on either side of the stream and managed for fish and wildlife habitat values. In general, the areas should be planted with pecan, oak, cottonwood, and willow trees to reestablish riparian woodland habitat and to increase the diversity of species available for food production, hiding cover, and nesting/denning habitat. The first 100-200 feet (31-62 meters) should be managed for woodland habitat with riparian trees closer to the creek, gently fading to upland tree species. The last 100 feet (31 meters) should be managed as grassland. The diversity in this grassland could be enhanced by the introduction of mottes of shrubs and native grasses interspersed with the existing forb habitat. For aquatic habitat values, increasing the bank stability with willow planting would provide good cover, and shade.

Area Two

The stream channel through the golf course is open and exposed to solar radiation. Stream temperatures are high and probably limit aquatic ecosystem productivity. We recommend establishing a riparian woodland/grassland management area, along Olmos Creek, through Area Two. The area should be a minimum of 50 feet (15 meters) on either side of the stream and managed for fish and wildlife habitat values. Since this area is managed as a golf course, efforts should be made to increase stream shade in areas that would not impact play. Planting trees along the streams could be accomplished without impacting play. The streambank area should be managed to increase streambank stability and riparian habitat values. In general, the areas should be planted with pecan, oak, and willow trees to reestablish riparian woodland habitat and to increase stream shade. Eroding streambanks around low water golf cart crossings should be stabilized. The concrete channel at the bottom of Area Two should be modified to provide fish passage by reducing stream width and increasing stream depth. This would also serve to reduce solar radiation and moderate stream temperatures.

Area Three

The stream channel and riparian habitat through Area Three is generally in good condition. Efforts in this area should focus on nonnative species removal and providing a buffer along the stream through the park area. The sewer lines and abandoned bridges are impacting the aquatic health of the stream system and should be removed or buried beneath the stream. There should also be hard mast plantings in the area upstream of Olmos Basin Park.

Area Four

The stream channel and riparian habitat through Area Four is generally in fair condition. Efforts in this area should focus on nonnative species removal and planting of hard mast producing trees such as oaks and pecans. Removing the accumulated trash and debris and establishing a

birding/interpretive trail along the deciduous wetlands would increase visitor use and enjoyment of this area.

Area Five

Native grasslands should be reestablished in this area. The grasslands would contribute to the habitat diversity and food production within the study area. In addition, planting mottes of native shrubs and grasses within this area would also increase habitat diversity and species use of this area. The existing grassland could be enhanced by increasing the amount of native grass species to improve food availability for seed eating species.

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