

**U.S. Army
Corps of Engineers
Fort Worth District**

PROJECT MANAGEMENT PLAN

**Section 206 Aquatic Ecosystem Restoration Project
San Marcos, Texas**

**San Marcos River Feasibility Study
Detailed Project Report And Integrated Environmental Assessment**

**Non-Federal Sponsor
City of San Marcos**

Baseline Version: 2 February 2010

Project Management Plan

Section 206 Aquatic Ecosystem Restoration Project San Marcos, Texas

San Marcos River Feasibility Study Detailed Project Report And Integrated Environmental Assessment

1.0 PROJECT SCOPE

1.1 PURPOSE. This document outlines the Project Management Plan (PMP), which is prepared in accordance with Engineering Regulation (ER) 5-1-11 dated 12 January 2007, the Project Management Business Process (PMBP) Manual (REF8005G), and ER 1105-2-100 dated 22 April 2000, for the San Marcos River Section 206 Aquatic Ecosystem Restoration Project. The purpose of this PMP is to provide a detailed description of work to be accomplished by Federal and non-Federal partners during the Feasibility Phase of the project. The PMP is considered a project planning tool for the Project Manager (PM) and Project Delivery Team (PDT), including the non-Federal partner. The PMP is considered a living document and shall be revised as required during the life of the project as changes occur to project scope, schedule and budget.

1.2 PROJECT SPONSORS. The Fort Worth District U.S. Army Corps of Engineers (USACE) shall be designated as the Federal “Government” and the City of San Marcos as the non-Federal “Sponsor” for the Feasibility Study.

1.3 PROJECT AUTHORITY. Authorization for the San Marcos River Section 206 Aquatic Ecosystem Restoration Project is outlined in Section 206 of the Water Resources Development Act (WRDA) of 1996 (P.L. 104-303). The principle objective of the Section 206 Aquatic Ecosystem Restoration process is to restore degraded aquatic ecosystem structure, function and dynamic processes to a less degraded, more natural condition, which will involve consideration of the ecosystem’s natural integrity, productivity, stability and biological diversity.

1.4 PROJECT PHASES. The Section 206 process consists of three project phases: **1)** A Federal Interest Determination (FID) Phase, which is fully Federally funded (\$100,000) by the Government to determine if the proposed project meets Section 206 guidelines for ecosystem restoration, to develop a PMP for Feasibility, and to execute a Feasibility Cost Sharing Agreement (FCSA). The FID phase for the San Marcos River Section 206 project was completed in September 2008 with execution of the FCSA. **2)** A Feasibility Phase, which is cost shared 50/50 between the Government and Sponsor to identify a recommended restoration plan for implementation. The Feasibility Phase was initiated in April 2008. **3)** A Design and Construction Phase, which is initially Federally funded (\$50,000) by the Government to negotiate and execute a Project Partnership Agreement (PPA) and initiate project design. Once the PPA is executed, the initial \$50,000 and all remaining project Design and Implementation costs are cost-shared 65% Government and 35% Sponsor. Project Design is scheduled to be initiated in August 2011 followed by project construction in November 2012.

2.0 FEASIBILITY STUDY

2.1 STUDY AREA. The study area is located in south central Texas in Hays County, approximately 30 miles southwest of Austin, Texas. The study area footprint is located along and within the San Marcos River, within the city limits of San Marcos, Texas and is bounded on the upstream by the Spring Lake Dam and at the downstream by the Cummings Dam, approximately 4.0 river miles (**Enclosure 1**). The area of interest for evaluation of ecosystem restoration opportunities shall be the San Marcos River, associated tributaries, and adjacent riparian corridor habitat; assessment of environmental effects shall include this area as well as the surrounding communities within the Region of Influence (ROI).

2.2 STUDY OBJECTIVE. The Government in partnership with the Sponsor are recommending incorporation of various ecosystem restoration features and recreational enhancements within and adjacent to the San Marcos River, located within San Marcos, Texas. Various ecosystem restoration measures are recommended to maximize habitat outputs for priority resource categories (i.e., wetlands, in-stream aquatic and riparian corridor). Recreational enhancements are proposed to optimize recreational opportunities that are consistent with other project purposes.

The objective of the Feasibility Study is to prepare a Detailed Project Report (DPR) that: identifies feasible ecosystem restoration measures with technically sound engineering and design features; evaluates the implementation costs and habitat outputs of identified measures; compares the effectiveness of ecosystem restoration plans for achieving desired ecosystem restoration objectives; and identifies a Recommended Plan for implementation of proposed ecosystem restoration features.

The DPR will also include an integrated Environmental Assessment (EA) that addresses potential social and environmental impacts associated with proposed project actions within the San Marcos River. The integrated EA will identify and evaluate all relevant impacts, conditions, and issues associated with proposed alternatives within and adjacent to the San Marcos River, in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, subsequent implementing regulations promulgated by the Council on Environmental Quality (CEQ), ER 200-2-2, and current USACE policy, guidance, and expectations. An example Table of Contents for the DPR/EA is outlined in **Enclosure 2**.

2.3 PLANNING PROCESS. The Government and Sponsor PMs shall lead the PDT in completion of the efforts required during the Feasibility Study, including the USACE six-step planning process and development of required NEPA documentation. During this process, PDT members shall complete all necessary studies, analyses, and assessments as appropriate to their areas of technical expertise. PDT members shall prepare written documentation covering the technical studies conducted during this time along with their results to support the findings in the DPR/EA. This documentation shall be either incorporated into the DPR/EA or attached as technical appendices. Major products of the planning process shall include, but are not limited to: (1) a DPR prepared in accordance with the requirements of ER 1105-2-100 and containing, at a minimum, documentation of the planning process, formulation of the National Ecosystem Restoration (NER) plan, and the conclusions and recommendations of the District Engineer; (2) all NEPA documentation, including an EA and Finding of No Significant Impact (FNSI); (3) an Engineering Technical Appendix, including a MII cost estimate for the NER plan; and (4) a Real Estate Appendix. Additional technical appendices such as Cultural, Hydrology & Hydraulics (H&H), Geotechnical, and Hazardous Toxic Radioactive Waste (HTRW) shall be prepared as needed to support the conclusions and recommendations contained in the DPR/EA. A description of the USACE six-step planning process along with associated activities is outlined below:

Step 1: Specification of the Water and Related Land Resources Problems and Opportunities Associated with the Federal Objective and Specific State and Local Concerns. Through initial feasibility level planning efforts, specific water and land resources problems, opportunities, and potential ecosystem restoration features were identified by the Government and Sponsor, and are outlined in the 2003 Preliminary Restoration Plan (PRP). Five primary ecosystem restoration measures are currently being considered for potential inclusion in the San Marcos River Section 206 project: Riparian Corridor Restoration, Aquatic Ecosystem Restoration, Wetland Restoration, Education & Recreation Enhancement, and Long Term Monitoring. Identified problems and concerns will be developed during the Feasibility Study.

Step 2: Inventory, Forecast, and Analysis of Water and Related Land Resource Conditions within the Planning Area Relevant to the Identified Problems and Opportunities. The baseline conditions within the study area shall be inventoried and analyzed during the Feasibility Study to document existing environmental conditions. In addition, “Future Without Project” or “No Action” conditions shall be assessed to determine potential future impacts, modifications, and changes to the baseline conditions from other reasonably foreseeable developments, projects, and trends within the study area.

Step 3: Formulation of Alternatives. For each proposed ecosystem restoration measure, a “Range of Alternatives” shall be developed for evaluation and comparison using the USACE Incremental Cost Analysis (ICA) system. At a minimum the “Range of Alternatives” for each ecosystem restoration measure should be economically viable, technically feasible, Operation & Maintenance (O&M) acceptable, and free of any design constraints that would inhibit implementation. Alternatives that are not considered feasible should be discussed briefly with reasoning on why they were not practical or desirable and then dismissed from detailed analysis.

Step 4: Evaluation of the Effects of the Alternatives. An ecosystem restoration project must be justified through a determination that the combined monetary and non-monetary benefits of the project justify its monetary and non-monetary costs. Following formulation of the “Range of Alternatives”, the Government shall calculate “Future With Project” average annual habitat conditions over the 50-year project life to determine the ecosystem benefits associated with each proposed alternative. Average annual construction cost estimates will also be developed for the “Range of Alternatives” to provide the monetary costs associated with each proposed alternative. Construction cost estimates shall include implementation costs (i.e., delivery, labor, material, warranty, and lands), O&M costs, and contingencies.

Step 5: Comparison of Alternatives. During the ICA process, proposed alternatives shall be evaluated to determine their effectiveness for achieving desired ecosystem restoration benefits in relation to implementation costs. All potential combinations of individual project alternatives for each ecosystem restoration measure, along with their average annual habitat benefits and costs, shall be compared on an incremental cost per habitat unit basis to produce “Best-Buy” Plans. These will be the combinations of ecosystem restoration alternatives that have the highest ratio of incremental cost per habitat unit output.

Step 6: Selection of a Recommended Plan Based Upon the Comparison of “Best Buy” Plans. The “Best Buy” Plans will then be compared to determine which plan provides the most average annual habitat benefits for the least amount of cost. This plan will be identified as the Government’s NER Plan. Following identification of the NER Plan, the Sponsor may elect to identify another plan from the list of “Best Buy” Plans, which shall be designated as the Locally Preferred Plan (LPP). However, if the LPP is more costly than the Government’s NER Plan, all additional plan costs above and beyond the NER Plan are the full responsibility of the Sponsor.

3.0 PROJECT DELIVERY TEAM MEMBERS

This section identifies the Government, Sponsor, and Architect-Engineer (A-E) PDT members that will be responsible for development, review, and submission of final Feasibility information for the San Marcos River Section 206 project. Government and Sponsor PMs will be members of both the core and review components of the PDT team. The Southwestern Division (SWD) USACE will be responsible for final approval of the DPR/EA

3.1 Core PDT Members. Table 1 below identifies the core PDT members that will be responsible for providing project oversight, guidance, and management services or will produce a project deliverable required for completion of the Feasibility Phase.

3.2 Review PDT Members. Table 1 below also identifies additional PDT members and their supervisors that will be responsible for review and commentary on technical related products that are produced by in-house team members, the non-Federal Sponsor, and any A-E firms. Reviews for Feasibility deliverables shall occur at several stages during development of the DPR/EA to ensure that questions and issues are captured and addressed before progressing to the next level.

Table 1. Core, Review, and Supervisory PDT Members by Name and Discipline.			
Discipline	Core Member	Review Member	Supervisory Member
Sponsor	Melani Howard	Melani Howard	Melani Howard
Account / Program Manager	Marcia Hackett	Marcia Hackett	Elston Eckhardt
Project Manager / Planning	Jeff Tripe	Jeff Tripe	Mark Harberg
Environmental Resources	Jeff Tripe	Jeff Tripe	Mark Harberg
Cultural Resources	Ann Chancey	Ann Chancey	Nancy Parrish
Program / Budget Analyst	Anita Horky		Kevin Craig
Contracting	Allen Bassett		June Wohlbach
Contractor Services	A-E		A-E
USFWS	Patrick Conner		Bill Seawell
LAERF	Chetta Owens		Mike Smart
Public Affairs		Clayton Church	Rhonda Paige
BCOE Review Coordinator		Delissa Hamilton	Debbie Castens
HTRW		Mark Vercos	Janet Welch
GIS / Mapping		Phuong Tran	Eli Kangas
Regulatory		Jennifer Walker	Stephen Brooks
H&H Engineering		Mike Velasquez	Darlene Prochaska
Civil Engineering		Efren Martinez	Mark Black
Structural Engineering		Jun Robbins	John VanLeeuwen
Geotechnical Engineering		Josh Pickering	Ramanuja Kannan
Real Estate		Anthony Dunni	Randy Roberts
Cost Engineering		Samuel Howarth	Milton Schmidt
Office of Counsel		Kendra Laffe	Rex Crosswhite

4.0 CRITICAL ASSUMPTIONS AND CONSTRAINTS

This section of the PMP outlines the critical project assumptions and constraints that were identified during the FID Phase and initial coordination meetings. The list of assumptions and constraints outlined below will be used as a guide for determining project design requirements and boundaries.

4.1 Assumptions.

- For the Purposes of this PMP it is assumed that the restoration information as recommended in the September 2003 PRP will be used as the basis for developing a list of potential restoration features, measures, and scales. Various restoration features identified in the 2003 PRP have since been modified during FID coordination meetings.
- Through coordination with the Sponsor and other stakeholders in the region, the original study area will be expanded to include the San Marcos River from IH-35 downstream to the confluence with the Blanco River; from the Spring Lake Dam downstream to University Drive; and the Cummings Dam (located downstream of the San Marcos River / Blanco River confluence).
- Personnel from the U.S. Fish and Wildlife Service (USFWS), Texas Parks and Wildlife Department (TPWD), Lewisville Aquatic Ecosystem Research Facility (LAERF), Fort Worth District USACE, and City of San Marcos will be responsible for conducting existing conditions surveys and development of habitat assessment protocol.
- The development of the DPR/EA will be conducted using A-E services and their products will be reviewed for technical sufficiency and environmental acceptability by Government and Sponsor PDT members.
- To aid with development of the DPR/EA, the Sponsor will provide existing data to include: aerial photography, master plans, contour surveys, infrastructure delineations, environmental conditions, socioeconomic information, H&H data, and real estate boundaries.
- Primary stakeholders in the regions will include the Edwards Aquifer Recovery Implementation Program (EARIP), the San Marcos River Restoration Group, and various recreational entities.
- Riparian corridor restoration and/or dam modification below IH-35 will require Sponsor acquisition of land in fee or through conservation easements. The Capes Millrace and irrigation ditches located below IH-35 will not be assessed or included in the restoration study.

4.2 Constraints.

- Federal funding is normally a constraint. If Federal funds are not appropriated on an annual basis, the schedule may be delayed.
- Project recommendations shall comply with any reasonable and prudent measures, terms and conditions, and conservation recommendations as outlined in USFWS Biological Opinions (BO). Proposed project features shall be designed and implemented to avoid unnecessary impacts to existing Threatened & Endangered species and their critical habitat.
- Guidance and stipulations as outlined in a Memorandum of Agreement (MOA) between the Government, Sponsor, and Texas Historical Commission (THC) shall be developed to minimize potential construction impacts to existing cultural resources. Project designs shall be coordinated, reviewed, and adjusted as appropriate to avoid unnecessary impacts to cultural resources.
- The information in the September 2008 FCSA will be used as the formal agreement between the Government and Sponsor for the Feasibility Phase. This document outlines Federal and non-Federal requirements for cost sharing and other project related information.

- The San Marcos River is a popular recreational location for river enthusiasts (i.e., canoeing, kayaking, fishing, swimming, and fishing). Due to the high demand of recreational activities within the San Marcos River, there may be potential conflicts with proposed restoration measures.
- The Edwards Aquifer is the major water source for a variety of competing uses within the region. As demand for the water increases within the near future, the dependability of this water source to supply existing river flows is questionable. Proposed restoration features will need to take this into consideration.

5.0 WORK BREAKDOWN STRUCTURE (WBS) AND SCHEDULE

The project schedule was developed using USACE Primavera Project Manager (P2). **Table 2** below outlines the current schedule for completion of major milestones as defined by the USACE standard Civil Works (CW) Work Breakdown Structure (WBS). These milestones will be used to monitor the progress of the Feasibility Study and for submittals to higher Corps authorities. The CW WBS milestones shall be updated monthly by the USACE PM and will be available for view in P2.

Table 2. Outline of CW WBS Milestones During the Feasibility Study.		
WBS Code	Milestone Description	Scheduled Completion Date
CW000	Federal Interest Determination (FID)	September 2003*
CW060	FID Guidance Memo	October 2003*
CW110	Feasibility Approval	October 2003*
CW030	PMP Start	April 2008*
CW070	Agreement Start (FCSA)	July 2008*
CW080	Agreement Submittal (FCSA)	September 2008*
CW090	Agreement Approval (FCSA)	September 2008*
CW130	Agreement Execution (FCSA)	September 2008*
CW140	Start DPR/EA Report	August 2009*
CW040	PMP Approval	January 2010*
CW400	Ready to Advertise AE Contract	February 2010*
CW801	AE Contract Award	March 2010
CW190	Alternative Formulation Briefing (AFB)	September 2010
CW060	AFB Guidance Memo	September 2010
CW150	Draft DPR/EA Report Submittal	January 2011
CW250	Public Review Period Start	January 2011
CW200	EA & FNSI Complete	April 2011
CW230	FNSI Signed	May 2011
CW160	Final DPR/EA Report Submittal	June 2011
CW170	Final DPR/EA Report Approval	July 2011

* Represents Feasibility milestones with actual completion dates.

A detailed schedule of work and services that includes major milestones and the six-step planning process is included in the PMP to identify all critical study tasks, inter-relationships between tasks, key decision points, report reviews, and in-progress review meetings. The PDT shall submit deliverables covered in this PMP in accordance with the schedule outlined in **Table 3** below (Deliverables identified by "D" plus action agency "G" Government, "C" Contractor, "S" Sponsor, "O" Other Agency, and deliverable

Table 3. Proposed Schedule of Work for the San Marcos River Section 206 Aquatic Ecosystem Restoration Project.				
Planning Steps	Milestone	Activity Description	Activity Duration**	Meeting Type / Deliverables*
	CW400	Ready to Advertise AE Contract	February 2010	
	CW801	AE Contract Award / Notice to Proceed	March 2010	
Step 1		Kickoff Meeting / Critical Path Method (CPM) / Quality Control Plan (QCP)	10 days from Notice to Proceed / Contract Award	Kickoff Meeting at the City of San Marcos; DC1 (CPM); DC2 (QCP)
		Meeting Minutes / USACE Review / Incorporation of Comments	10 days after Kickoff Meeting	DC3 (Meeting Minutes)
		Public / Agency Coordination / Mailing List	20 days after Kickoff Meeting	DC4, DG1, DS1 (Mailing List)
		Agency Letters / Initiate Informal Section 7 Consultation	15 days after Preparation of the Mailing List	DC5 (Coordination Letters)
Step 2		Exiting Conditions Inventory / Background Database Collection	120 days after Agency Letters	DC6 (Surveys); DC7 (Modeling); DC8 (Cultural); DG2 (Phase I); DO1 (PAL)
		Institutional, Public, and Technical Significance / Recognition	30 days after Existing Conditions Inventory	To be included in DPR/EA text
		Existing Degradation and Project Planning Criteria	30 days after Resource Significance documentation	To be included in DPR/EA text; DG3, DO2 (Future “without” Project)
Step 3		Formulation of Project Features	90 days after Degradation and Project Planning Criteria	DC9 (Outline of project features with conceptual construction methods)
Step 4 and 5		Evaluation & Comparison of Project Features	30 days after Project Formulation	DC10 (Construction Costs); DG4, DO3 (Future “with” Project); DG5 (ICA)
		Draft Alternative Formulation Briefing (AFB) Report	30 days after receipt of ICA results	DC11 (Draft AFB Report)
		USACE Review of Draft AFB Report	30 days after receipt of Draft AFB Report	DG6 (Draft AFB Report Comments)
		Draft AFB In-Progress Review (IPR) Meeting	3 days after receipt of Government Comments	Conference call with updated comment matrix
		Check-Copy AFB Report	15 days after IPR Meeting	DC12 (Check-Copy AFB Report)
		SWD Review of Check-Copy AFB Report	30 days after receipt of Check-Copy AFB Report	
	CW190	AFB Meeting with SWD	5 days after SWD review of Check-Copy AFB Report	DG7 (Check-Copy Report Comments)
		Check-Copy IPR Meeting	3 days after AFB Meeting with SWD	Conference call with updated comment matrix
		Final AFB Report	15 days after IPR Meeting	DC13 (Final AFB Report)
	CW060	AFB Guidance Memo	30 days after Final AFB Report	DG8 (AFB Guidance Memorandum from SWD)
Step 6		Selection and Description of Recommended Restoration Plan	5 days after receipt of AFB Guidance Memo	Recommended Restoration Plan Meeting at Corps
		Description of Recommended Restoration Plan	30 days after Recommended Restoration Plan Meeting	DC14 (Designs); DC15 (Construction Costs); DG9 (RE Plan & Gross Appraisal)
		Environmental Consequences	60 days after Recommended Restoration Plan Meeting	DG10 (Cultural-Geotech Results); DC16 (Preliminary Draft Biological Assessment)
		USACE Review of Preliminary Draft Biological Assessment (BA)	30 days after receipt of Preliminary Draft BA	DG11 (Preliminary Draft BA comments)
		Draft BA	15 days after receipt of Government Comments	DC17 (Draft BA)
		USFWS Review of Draft BA	45 days after receipt of Draft BA	DO4 (USFWS comments on Draft BA)
		Final BA / Initiate Formal Section 7 Consultation	15 days after receipt of USFWS comments	DC18 (Final BA)
		USFWS Draft Biological Opinion (BO)	90 days after Initiation of Formal Consultation	DO5 (Draft BO)
		USACE Review of Draft BO	45 days after receipt of Draft BO	DG12 (Draft BO comments)
		USFWS Delivers Final BO / End Formal Section 7 Consultation	45 days after receipt of Draft BO	DO6 (Final BO)
		Draft DPR/EA and Draft FNSI	15 days after Recommended Restoration Plan Meeting	DC19 (Draft DPP/EA and Draft FNSI,
		USACE Review of Draft DPR/EA and Draft FNSI	30 days after receipt of Draft DPR/EA/FNSI	DG13 (Draft DPR/EA/FNSI Comments)
		Draft DPR/EA and Draft FNSI IPR Meeting	5 days after receipt of Government comments	Conference Call with updated comment matrix
	CW150	Final DPR/EA, Draft FNSI, and Public Notice of Availability (NOA)	15 days after Draft DPR/EA/FNSI IPR Meeting	DC20 (Final DPR/EA and Draft FNSI, Coordination Letters, NOA)
	CW250	Public Review Period	30 days after issuance of NOA and Mailings	
		Public Comments IPR Meeting	5 days after Public Review Period	Conference Call with updated comment matrix
	CW200	Final DPR/EA and Final FNSI	15 days after Public Comments IPR Meeting	DC21 (Final DPR/EA and Final FNSI)
	CW230	FNSI Signed	10 days after receipt of Final DPR/EA/FNSI	DG14 (District Commander Signs FNSI)
	CW160	Final DPR/EA Report Submittal	5 days after FNSI Signature	
	CW170	Final DPR/EA Report Approval and Administrative Record	30 days after Final DPR/EA Report Submittal	DG15 (SWD Memorandum); DC22 (Administrative Record)

* Government (G), Contractor (C), Sponsor (S), and Other Agency (O) deliverables are included to show the overall project schedule. **Overall project completion time from the initial start date will be approximately 28 months.

number). A detailed description of the PDT tasks and deliverables are included in **Enclosure 3** of the PMP. The period of performance for completion of the Feasibility Study is estimated at twenty-eight (28) months from the Kickoff Meeting to Final DPR/EA Approval. Should submission of project deliverables or report review times take longer than expected, the entire schedule of events may be shifted or extended. The Sponsor shall be advised as soon as possible upon any change in the project schedule. The PDT is encouraged to use project management techniques and efficiencies to shorten the overall schedule and period of performance schedule wherever possible.

6.0 FUNDING

Total costs for the Feasibility Study are estimated at **\$660,000**, with the first \$110,000 to be fully funded by the Government. The remaining **\$550,00** shall be cost shared 50/50 between the Government and Sponsor. The Sponsor shall provide the non-Federal contribution through cash and Work-In-Kind (WIK) services. Sponsor WIK services can consist of participation with the project delivery team, cost of audits performed by the Sponsor, and services/materials/products provided during the Feasibility Study. **Enclosure 4** provides a copy of the signed FCSA between the Government and Sponsor, which outlines cost-sharing responsibilities during the Feasibility Study. **Table 4** below provides a line-item description of Feasibility costs by study task/activity. **Table 5** provides a line-item description of Feasibility costs by study discipline/resource type.

Table 4. Government, Sponsor, and Total Study Costs by Study Task / Activity.			
Study Task / Activity	Government Cost	Sponsor Cost	Total Cost
Prepare, Review & Approve PMP*	\$14,000	\$0	\$14,000
Prepare, Review & Award A-E SOW*	\$14,000	\$0	\$14,000
Develop, Review & Execute FCSA*	\$25,000	\$0	\$25,000
Kickoff Meeting	\$1,000	\$1,000	\$2,000
Public & Agency Coordination	\$6,000	\$6,000	\$12,000
Topographic Surveys	\$25,000	\$25,000	\$50,000
Cultural Surveys / Coordination	\$30,000	\$30,000	\$60,000
H&H Modeling	\$40,000	\$40,000	\$80,000
Geotechnical Surveys	\$15,000	\$15,000	\$30,000
Aquatic Vegetation Surveys	\$35,000	\$5,000	\$40,000
Engineering Assessment of Dams	\$60,000	\$0	\$60,000
Bed Load Sampling	\$0	\$60,000	\$60,000
HTRW Phase I	\$12,000	\$0	\$12,000
Habitat Field Work / Future Habitat Units	\$20,000	\$7,000	\$27,000
Real Estate Activities	\$10,000	\$10,000	\$20,000
Develop Draft PPA	\$2,000	\$2,000	\$4,000
Formulate Restoration Features	\$10,000	\$10,000	\$20,000
Develop Conceptual Designs & Costs	\$10,000	\$10,000	\$20,000
Incremental Cost Analysis	\$5,000	\$5,000	\$10,000
Prepare BA / Section 7 Consultation	\$20,000	\$18,000	\$38,000
Prepare, Review & Approve AFB Report	\$6,000	\$6,000	\$12,000
Prepare, Review & Approve Draft DPR/EA	\$10,000	\$10,000	\$20,000
Prepare, Review & Approve Public DPR/EA	\$10,000	\$10,000	\$20,000
Prepare, Review & Approve Final DPR/EA	\$5,000	\$5,000	\$10,000
TOTAL STUDY COST	\$385,000	\$275,000	\$660,000

*Federal PMP, SOW and FCSA costs include \$10,000 for PRP development.

Table 5. Government, Sponsor, and Total Study Costs by discipline / resource type.			
Study Task / Activity	Government Cost	Sponsor Cost	Total Cost
Project Management*	\$80,000	\$20,000	\$100,000
Vehicles / Travel	\$2,000	\$2,000	\$4,000
Supervision & Administration	\$1,000	\$1,000	\$2,000
A-E Services	\$154,500	\$130,500	\$285,000
Contracting	\$1,000	\$1,000	\$2,000
Cultural Resources	\$30,000	\$16,000	\$46,000
Environmental	\$14,000	\$14,000	\$28,000
LAERF	\$35,000	\$5,000	\$40,000
USFWS	\$30,000	\$0	\$30,000
Real Estate	\$8,000	\$8,000	\$16,000
HTRW	\$12,000	\$0	\$12,000
Civil / Structural Engineering Review	\$5,000	\$5,000	\$10,000
Geotechnical Review	\$2,500	\$2,500	\$5,000
Cost Engineering Review	\$2,500	\$2,500	\$5,000
H&H Engineering Review	\$2,500	\$2,500	\$5,000
Geographic Information Systems (GIS)	\$2,500	\$2,500	\$5,000
Recreation Review	\$2,500	\$2,500	\$5,000
Sponsor Work-In-Kind Credit	\$0	\$60,000	\$60,000
TOTAL STUDY COST	\$385,000	\$275,000	\$660,000

*Federal Project Management cost includes \$10,000 for PRP development.

7.0 QUALITY CONTROL AND OBJECTIVES PLAN

The Quality Control and Objectives Plan (**Enclosure 5**) provides a summary of core Feasibility Study components (i.e., project management, study objectives, deliverables, reviews, and schedule). Quality Assurance of all study deliverables will be conducted by the Fort Worth District USACE. Review PDT members and their supervisors (**Table 6**) will be responsible for review and commentary on technical related products that are produced by in-house team members, the non-Federal Sponsor, and A-E firms.

As outlined in **Enclosure 5**, reviews for Feasibility deliverables shall occur at several stages during development of the DPR/EA to ensure issues are addressed before progressing further. The reviews will critique all deliverables for clarity and technical adequacy in accordance with USACE expectations, acceptability and standards of engineering practice. The review process will propose and assess modifications as necessary, and endorse the submittal documents for presentation to upper level management. The review process will include written comments, determination of responses, and follow-up on how significant comments were resolved.

In addition to the technical review process, an AFB meeting will be conducted with SWD USACE to ensure that project alternatives have been properly formulated, legal and policy issues have been identified, consensus on resolution has been reached, and SWD concurs with the plan that will likely proceed into the Design and Construction Phase.

After completion of the Final DPR/EA and FNSI, the Fort Worth District Engineer will review and sign the FNSI. Following FNSI signature, the final package will be forwarded to SWD USACE for final review and approval before proceeding into the Design & Construction phase.

Table 6. Review and Supervisory PDT Members by Name and Discipline.		
Discipline	Review Member	Supervisory Member
Sponsor PM	Melani Howard	Melani Howard
USACE PM / Planner / Environmental	Jeff Tripe	Mark Harberg
Account / Program Manager	Marcia Hackett	Elston Eckhardt
Cultural Resources	Ann Chancey	Nancy Parrish
Public Affairs	Clayton Church	Rhonda Paige
BCOE Review Coordinator	Delissa Hamilton	Debbie Castens
HTRW	Mark Vercoe	Janet Welch
GIS / Mapping	Crista Carroll	Eli Kangas
Regulatory	Jennifer Walker	Stephen Brooks
H&H	Mike Velasquez	Darlene Prochaska
Civil Design	Efren Martinez	Mark Black
Structural Engineering	Jun Robbins	John VanLeeuwen
Geotechnical Design	Josh Pickering	Ramanuja Kannan
Real Estate	Anthony Dunni	Randy Roberts
Cost Engineering	Samuel Howarth	Milton Schmidt
Office of Counsel	Kendra Laffe	Rex Crosswhite

8.0 ACQUISITION STRATEGY

Work efforts identified in this PMP will be accomplished through a combination of in-house USACE staff, private A-E contractors, local sponsor staff, and other resource agency personnel. It is estimated that approximately 30% of the work is expected to be performed by in-house USACE staff, with the remaining effort to be performed by A-E contractors and other resource agency personnel. These tasks are identified below, along with the rationale for this decision:

- **Prepare AFB, DPR/EA, and BA Reports:** This effort is expected to be a joint effort by the Fort Worth District Environmental Branch, A-E Contractor, and non-Federal Sponsor. The primary tasks/activities and associated deliverables are outlined in **Table 3** above.
- **H&H Modeling, Geotechnical Surveys, and Cultural Surveys:** The A-E contractor will be responsible for preparing and/or updating this information to support development of proposed environmental restoration features.
- **Topographic Surveys and Mapping:** If it is determined that this effort is needed, it would be performed by one of the Fort Worth District's Civil Works contracts that are available or through subcontract with the primary A-E contractor.
- **Habitat Assessment Models:** This effort will be completed by the EARIP and USFWS to assess benefits associated with proposed restoration features. The USFWS will prepare Planning Aid Letters (PAL) and a Fish and Wildlife Coordination Act (FWCA) Report to document their findings. The Fort Worth District's Environmental Branch will provide support for habitat mapping, site surveys, and development of future "with" and "without" project conditions. The non-Federal Sponsor will provide personnel to conduct native and exotic tree surveys.
- **Cultural Resources:** The Fort Worth District Cultural Resources Section will be responsible for all SHPO (State Historic Preservation Office) coordination and development of a project MOA

between the USACE, THC, and non-Federal Sponsor. The A-E contractor or sub-contractor will be responsible for conducting any necessary cultural resource surveys in areas where ground disturbance activities are anticipated.

- **Aquatic Vegetation Surveys:** This effort will be completed by the Lewisville Aquatic Ecosystem Restoration Facility (LAERF). The Fort Worth District and USFWS will also participate as needed in the vegetation surveys.

9.0 RISK ANALYSIS

Safety and health risks are considered very low since most activities will be accomplished within the office environment. Changes in scope, schedule, and costs are the biggest risks of failing to deliver the project on time and within the existing budget. Several project assumptions and constraints are documented in Section 4.0 of this PMP. If any of these assumptions are inaccurate, then scope, schedule, and budget will likely need to be reassessed. In addition, key resources have been identified as driving factors for the study. If these resources are not available when needed, the schedule could be delayed.

Potential impacts to existing Threatened & Endangered species and their critical habitat is a potential risk factor that should be considered during the Feasibility Study. At least five listed species are known to occur in the San Marcos River: Texas blind salamander, Texas wild-rice, fountain darter, San Marcos salamander, and Comal Springs riffle beetle. Of these five species, the Texas wild-rice and fountain darter will be of most concern. To determine potential impacts to listed species, the Fort Worth District will coordinate with the USFWS through the Section 7 process. Proposed project features will be designed as necessary to avoid and minimize negative impacts to listed species.

Cultural resources have been identified as a possible risk factor in terms of project implementation. Based on information from the Spring Lake Section 206 Project located just upstream, there is a strong likelihood that archeological resources are present within the study area. Thus, cultural resource mitigation could be substantial if proposed restoration features impact buried archeological resources. Cultural surveys will have to be conducted to determine potential impacts and mitigation costs. The Fort Worth District Cultural Resources Section will be responsible for coordinating these efforts.

To reduce the risk of negative impacts to the study scope, schedule and budget, coordination meetings will be held at least quarterly to discuss the study progress, and to identify any issues that may have an impact on the overall project schedule, budget and product quality. In-progress review meetings will also be held following submittal and review of major DPR/EA deliverables: Draft AFB Report, Draft DPR/EA/FNSI, Final DPR/EA Draft FNSI, and Final DPR/EA/FNSI. Changes to this PMP can be incorporated at any time and at either party's request. The USACE vertical team will also be integrated into the study process through the Division Office by conducting at least one check point meeting. An AFB Meeting will be held in which the USACE vertical team will determine if the USACE Planning Process was completed appropriately and to identify the recommended Federal plan, also known as the National Ecosystem Restoration (NER) Plan.

10.0 ENVIRONMENTAL, SAFETY, AND OCCUPATIONAL HEALTH PLAN

The USACE executes and maintains, as appropriate, programs for achieving Environmental, Safety, and Occupational Health (ESOH) objectives and targets. Implementation of the Army's policy on safety and occupational health issues and other Federal regulations and laws is outlined in Department of the Army Pamphlet 385-10, Army Safety Program, 24 August 2007. A copy of Pamphlet 385-10 can be viewed at http://www.usace.army.mil/CESO/Documents/DA%20PAM%20385_10%202024%20Aug%2007.pdf.

Pamphlet 385-10 applies to the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve, unless otherwise stated. It also applies to all active duty Army military personnel at any time, on or off a Department of Defense (DoD) installation; to all Army civilian personnel in a duty status, on or off a DoD installation; and to all persons at any time on an Army installation. This program applies to all applicable Government employees and those working on behalf of DoD.

Pamphlet 385-10 establishes mandatory guidance, functions, policies and procedures for the Army's Safety Program. The goal of this pamphlet and subsequent programs is to reduce the risk of death or injury to Soldiers and civilians, and damage to vehicles, equipment and property due to accidents. This pamphlet also establishes requirements for safety and accident prevention programs on Army installations, provides guidance concerning public health and safety laws and regulations, and establishes procedures for compliance with the safety requirements of AR 385-10 and other Army safety and occupational health regulations.

The Army has an overall goal of ensuring that contracted work is performed using procedures and risk controls that ensure workers, the public and the environment are not endangered. Army contractors will be required to have an ESOH program implemented that is tailored to meet the safety requirements of each contract and the associated tasks and products of that contract. This program will be documented in the contractor's safety plan.

11.0 CHANGE MANAGEMENT PLAN

Change Management is one of the most critical activities undertaken by the PDT. It is the process by which changes in the project/study are both agreed upon and documented. Approved changes become the basis for adjusting baseline performance measures, and thus impact the performance metrics and quality objectives established for project/study success. Change management guidance is contained in the USACE Business Process (ER 5-1-11). The Change Management Plan outlines how to manage changes that exceed established thresholds in the baseline PMP. Changes that exceed the established thresholds will require re-approval of the PMP.

Changes are anything that may substantially impact the project/study scope, schedule and budget. The Change Management Plan will identify the thresholds requiring Change Management to occur. For the San Marcos River Section 206 project and CAP projects in general, any change in project scope, schedule and budget of greater than 15 % will require changes and subsequent re-approval of the PMP.

The PDT is responsible for notifying the USACE PM as soon as they become aware of any potential changes, including changes identified by resource providers. The USACE PM is responsible for overall project change control. The following steps outline the process to conduct Change Management: 1) Determine if the identified changes or corrective actions will have impacts to the baseline PMP; 2) Determine if the proposed changes exceed the project's PMP thresholds (e.g., 15%); 3) If the proposed changes do not exceed the threshold, record all changes in the baseline schedule using the issue log in P2, determine if changes need to be documented in lessons learned, and return to normal scheduled project execution and control; 4) If the proposed changes do exceed the threshold, create a new schedule in P2 based on the proposed changes, which will reflect the anticipated changes in the baseline project scope, schedule and budget; 5) Outline the proposed changes and the justification/need for the changes in a Change Request Form and submit the form for approval; 6) Following approval of the Change Request Form, document lessons learned and return to scheduled project execution and control. Completion of the PMP approval process will result in an update of the project data and an adjustment of baseline project metrics for performance measurement.

12.0 COMMUNICATIONS STRATEGY

General External Coordination Mechanisms. Coordination outside the USACE and City of San Marcos will be necessary to ensure the success of the study and to enhance communication between multiple stakeholders, resource agencies and entities that have similar objectives for environmental restoration within the Edwards Aquifer. Communication/dissemination of information between USACE and the non-Federal sponsor will be through monthly status reports and PDT meetings. Communication protocols will be similar for all other study participants, such as the USFWS, SHPO, TPWD and others, as required.

Edwards Aquifer Recovery Implementation Program (EARIP) and Ecosystem Restoration Sub-Committee. The USACE is currently participating in external meetings with entities that have similar agendas and goals with respect to environmental restoration of the Comal and San Marcos Rivers. The EARIP is a collaborative, consensus-based stakeholder process to protect and contribute to the recovery of the federally-listed species affected by the management of the Edwards Aquifer and other activities in the area, while also protecting the Edwards Aquifer as a water supply source. The EARIP Ecosystem Restoration Sub-committee was established to develop specific plans that address ecosystem restoration in the Comal and San Marcos rivers. The USACE is currently participating in monthly EARIP meetings using the business development funding account to promote coordination between resource agencies that have similar restoration goals and objectives within the Edwards Aquifer.

San Marcos River Restoration Plan Group. The San Marcos River Restoration Plan Workgroup consists of a group of resource agencies and stakeholders that have similar agendas and goals with respect to environmental restoration that is specific to the San Marcos River. The Workgroup has identified five primary restoration goals for the San Marcos River: 1) Aesthetics, Recreation and Education; 2) Bank Stabilization and Riparian Management; 3) Dam Removal/Retrofit and Fish Passage; 4) In-stream Habitat Improvement and Species Management; and 5) Stormwater Management. Coordination between the USACE Feasibility Study and the findings from the Workgroup will be critical for compatibility of proposed ecosystem restoration features, measures and plans. The USACE is currently participating in monthly Workgroup meetings using coordination funds from the San Marcos River Section 206 funding account.

Public Meetings/Workshops. These gatherings will be scheduled throughout the study period to gather input, report on study progress, or to report study findings. The USACE PM, in coordination with the non-Federal Sponsor, will arrange for and report on public meetings/workshops. It is likely that various EARIP meetings will be used present Feasibility Study findings.

Study Briefings and Fact Sheets. The USACE PM will prepare and provide study briefings and fact sheets throughout the study period for congressional representatives, state and local officials, and others, as appropriate.

Project Delivery Team (PDT) Meetings. PDT meetings will be conducted at least quarterly, or more often if deemed necessary. All meetings or phone conversations where decisions or agreements are made will be documented. Meeting minutes will be taken by at least one meeting participant. Meeting minutes will reflect actual conversations during the meeting.

13.0 VALUE MANAGEMENT

Quality is planned for, built into, and monitored throughout the planning process, which provides study structure. An integral part of such quality management is the management of the projects associated values. Value management is a process to facilitate and encourage the understanding, consideration, and

integration of the needs of all customers, team members, sponsors/partners, and stakeholders. Value Management seeks the highest value for a project by balancing resources and quality.

Public Law and Office of Management and Budget (OMB) directives require value engineering during planning and design of water resources projects. Workshops and meetings will be held throughout the Feasibility Study to discuss alternative development and conduct value management on proposed ecosystem restoration measures, features and scales. These workshops/meetings will most likely be initiated by the USACE, EARIP, and City of San Marcos as needed to refine study features and clarify any issues or concerns. Likewise, an AFB meeting will be held with the USACE Division office, which will provide the vertical team and upper management the opportunity to provide value management and quality control before recommended alternatives are developed further. The results of any value management decisions will be discussed in detail in the Feasibility Report and integrated EA that are being developed as part of this study effort.

Following the Feasibility Study, a value engineering study will be conducted at the onset of the Plans & Specifications Phase to document feasibility findings; check for changes in project assumptions, constraints and environmental conditions; and identify any potential project cost savings by adjusting project designs or construction sequencing.

14.0 PROGRAM CLOSEOUT

The Feasibility Phase will be completed following final approval of the DPR/EA by USACE SWD. Following SWD approval, the San Marcos River Section 206 Project will be ready to proceed into the Design and Implementation Phase (i.e., Plans & Specifications and Construction sub-phases). At the onset of Plans & Specifications, the Fort Worth District will request Federal funding (\$50,000) to prepare the PMP, SOW and PPA. After the PPA is executed, additional Federal (65%) and non-Federal (35%) funds will be required to initiate and complete Plans & Specifications. Following completion of Plans & Specification, LERRDs certification and receipt of Federal/Non-Federal construction funds, the project will be ready to advertise a construction contract. **Table 7** outlines the remaining project milestones following completion of the Feasibility Study.

Table 7. Design and Construction Milestones for the San Marcos River Section 206 Project.			
Design Phase		Construction Phase	
CW030	PMP Start	CW340	Real Estate Acquisition Start
CW040	PMP Approval	CW350	Sponsor Notification of Real Estate Requirements
CW070	PPA Start	CW360	Receipt of Real Estate
CW080	PPA Submittal	CW370	LERRD Credits Certified
CW090	PPA Approval	CW400	Ready To Advertise Construction Contract
CW130	PPA Execution	CW410	Sponsor Construction Funds Received
CW300	P&S Start	CW420	Construction Contract Advertisement / Request for Proposal
CW400	Ready to Advertise P&S Contract	CW430	Bid Opening
CW801	P&S Contract Award	CC800	Construction Contract Award
CW310	Draft P&S Complete (35%)	CW440	Construction Contract Notice To Proceed Issued
CW310	Draft P&S Complete (65%)	CW450	Project Physically Complete
CW310	Draft P&S Complete (95%)	CW460	CIP Asset Transfer Complete
CW320	BCOE Review Complete	CW470	Project Fiscally Complete
CW330	P&S Approval	CW480	Notice of Project Completion / Turnover to Sponsor

15.0 APPROVALS

Approval of the PMP by core, review and supervisory PDT members is documented in pages 17-19 of this PMP. Signature of the PDT members indicates acceptance and approval of this PMP as a baseline for proposed study scope, schedule and budget. Any changes in project scope, schedule and budget of greater than 15%, as outlined in Section 11.0 “Change Management Plan” above, will require changes and subsequent re-approval of the PMP.

16.0 GEOSPATIAL DATA MANAGEMENT

Geospatial Data Management is the term used to describe the collection, storage, retrieval, manipulation, and analysis of geospatial data including satellite imagery, orthophotography, land survey, and design drawings through an infrastructure of hardware (servers, storage units, computers, etc) and software (ESRI, Microstation, BIM, etc). The effective and efficient management of Geospatial Data and Management Systems (GDMS) results in an “enterprise” system where consistent and accurate geospatial data is readily available throughout all levels of the organization. The objectives of the enterprise system are to reduce costs, increase productivity, and improve product quality and decision-making. To ensure, the objectives of the enterprise system are achieved, Geospatial Data Management is incorporated into this PMP. Geospatial Data Management must include specific requirements for the acquisition and storage of geospatial data including scope, applicable documents, database description or collection criteria, metadata, data format, data accuracy, data symbology, and a data dictionary. The acquisition and storage of new geospatial data will be approved by the District’s GDMS Manager. All geospatial data loaded into the District’s geospatial data library must include metadata standards, be SDSFIE compliant, and be in the appropriate digital format. In addition, all geospatial data collected or produced for this project will be in the appropriate datum, projection system, unit of measure, survey accuracy, horizontal and vertical control approved by the end user, survey manager, City of San Marcos, and the District’s GDM&S manager.

Geospatial data will be provided by the City of San Marcos and through existing imagery that is available for use by the USACE. The Fort Worth District, Planning Technical Branch will help identify available geospatial data and help coordinate transfer of data to PDT members. The A-E Contractor in coordination with the USACE and City of San Marcos will be responsible for database management and production of required maps, imagery and shape-files required to document Feasibility Study findings.

**PROJECT MANAGEMENT PLAN AGREEMENT
SAN MARCOS RIVER SECTION 206 FEASIBILITY STUDY**

Project Management Plan Project Delivery Team Approval Checklist

Does the PMP address all elements listed below at a level of detail commensurate with the Complexity and Size of the project?

Yes	No	PMP Element
<u> X </u>	<u> </u>	Project Scope
<u> X </u>	<u> </u>	Core Project Delivery Team
<u> X </u>	<u> </u>	Critical Assumptions and Constraints
<u> X </u>	<u> </u>	Work Breakdown Structure
<u> X </u>	<u> </u>	Project Funding
<u> X </u>	<u> </u>	Project Schedule
<u> X </u>	<u> </u>	Quality Control & Objectives
<u> X </u>	<u> </u>	Acquisition Strategy
<u> X </u>	<u> </u>	Project Risk Assessment
<u> X </u>	<u> </u>	Safety/Hazard Analysis
<u> X </u>	<u> </u>	Change Management
<u> X </u>	<u> </u>	Communication Strategy
<u> X </u>	<u> </u>	Value Management
<u> X </u>	<u> </u>	Closeout Process
<u> X </u>	<u> </u>	Attachments (optional)

Overall: Did the PMP meet critical requirements?

<u> X </u>	<u> </u>	No – Return to PM with deficiencies listed (attached)
Yes	No	

Back Check: Did the PMP correct the previous deficiencies?

<u> X </u>	<u> </u>	No – Discuss deficiencies with PM for corrections
Yes	No	

Based on my review, this PMP X contains OR does not contain all essential items required to effectively manage this project.

**PROJECT MANAGEMENT PLAN AGREEMENT
SAN MARCOS RIVER SECTION 206 FEASIBILITY STUDY**

Statement of Agreement

Core Project Delivery Team

We, the undersigned, affirm our acceptance and approval of the Project Management Plan (PMP), and agree to abide by the provisions herein.

Jeff Tripe
CESWF-PER-E
Project Manager/Planning/Environmental

Rick Menchaca
City of San Marcos
City Manager

Marcia Hackett
CESWF-PM-C
Account/Program Manager

Anita Horky
CESWF-PM-C
Program/Budget Analyst

Ann Chancey
CESWF-PER-EC
Cultural Resources

June Wohlbach
CESWF-CT
Contracting

**PROJECT MANAGEMENT PLAN AGREEMENT
SAN MARCOS RIVER SECTION 206 FEASIBILITY STUDY**

Statement of Agreement

Review Project Delivery Team

We, the undersigned, affirm our acceptance and approval of the Project Management Plan (PMP), and agree to abide by the provisions herein.

Delissa Hamilton
CESWF-EC-A
BCOE Review Coordinator

Mark Vercoe
CESWF-PER-DI
HTRW

Clayton Church
CESWF-PA
Public Affairs

Phuong Tran
CESWF-PER-PT
GIS/Mapping

Jennifer Walker
CESWF-PER-RP
Regulatory

Mike Velasquez
CESWF-EC-HH
H&H Engineering

Efren Martinez
CESWF-EC-DC
Civil Engineering

Josh Pickering
CESWF-EC-DG
Geotechnical

Anthony Dunni
CESWF-RE-S
Real Estate

Jun Robbins
CESWF-EC-DS
Structural Engineering

Samuel Howarth
CESWF-EC-AC
Cost Engineering

Kendra Laffe
CESWF-OC
Office of Counsel

**PROJECT MANAGEMENT PLAN AGREEMENT
SAN MARCOS RIVER SECTION 206 FEASIBILITY STUDY**

Project Management Plan Approval Signature Sheet

Does the PMP address all elements listed below at a level of detail commensurate with the Complexity and Size of the project?

Yes	No	PMP Element
_____	_____	Project Scope
_____	_____	Core Project Delivery Team
_____	_____	Critical Assumptions and Constraints
_____	_____	Work Breakdown Structure
_____	_____	Project Funding
_____	_____	Project Schedule
_____	_____	Quality Control & Objectives
_____	_____	Acquisition Strategy
_____	_____	Project Risk Assessment
_____	_____	Safety/Hazard Analysis
_____	_____	Change Management
_____	_____	Communication Strategy
_____	_____	Value Management
_____	_____	Closeout Process
_____	_____	Attachments (optional)

Based on my review, this PMP contains all essential items required to effectively manage this project. I recommend this PMP for approval.

Peggy S. Grubbs, P.E., PMP
Chief, Programs and Professional
Support Branch

Date

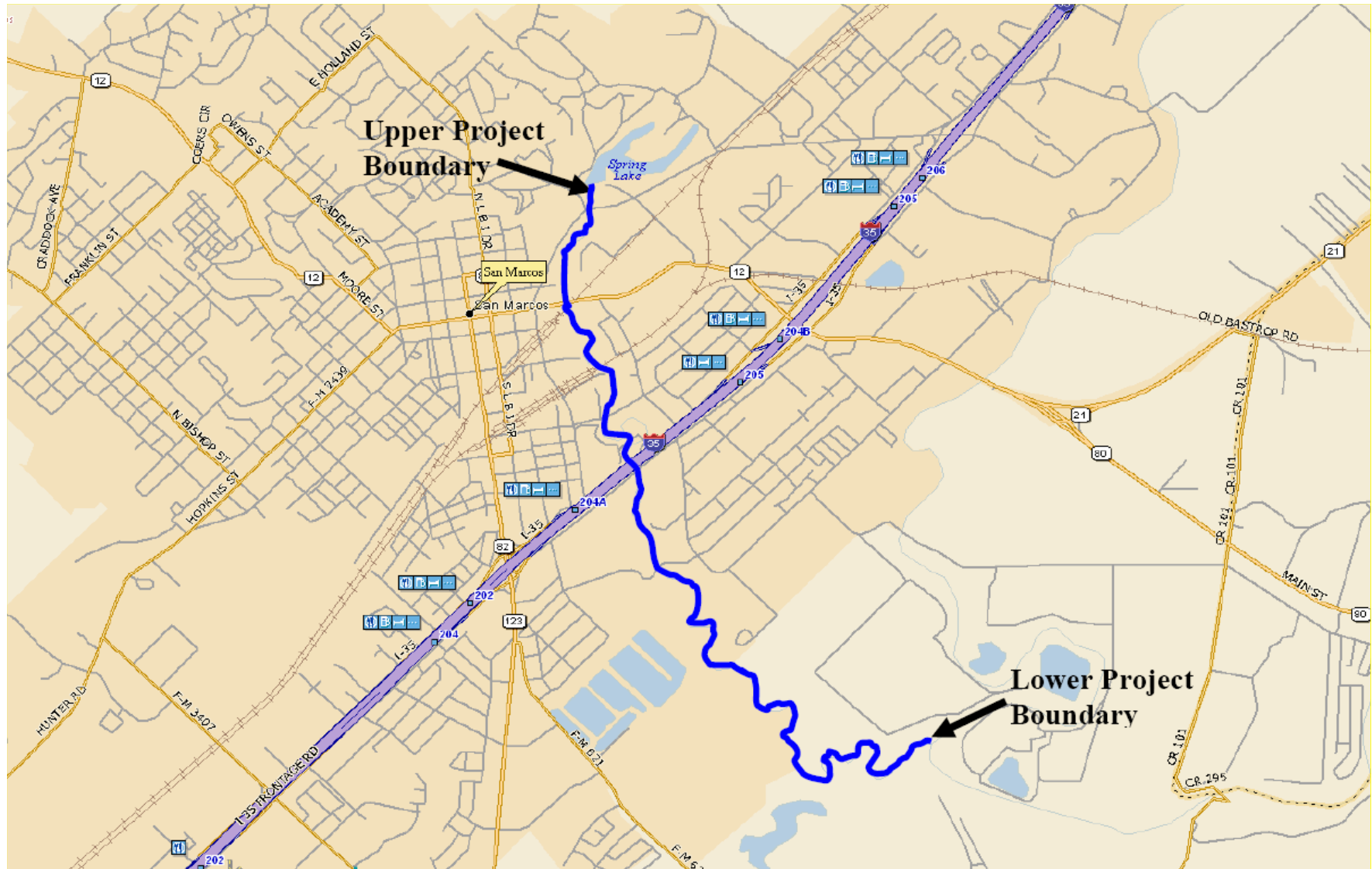
The PMP contains all essential items required to effectively manage this project. This PMP is approved.

Troy D. Collins, P.E., PMP
Deputy District Engineer for Programs
and Project Management Division

Date

ENCLOSURE 1

SAN MARCOS RIVER SECTION 206 PROJECT–DETAILED PROJECT REPORT & ENVIRONMENTAL ASSESSMENT



ENCLOSURE 2

SAN MARCOS RIVER SECTION 206 PROJECT DETAILED PROJECT REPORT & ENVIRONMENTAL ASSESSMENT

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- 1.4 STUDY LOCATION AND AREA – *identify project vicinity, location, and study area footprint.*
- 1.5 PRELIMINARY PROBLEMS, OPPORTUNITIES GOALS, AND OBJECTIVES – *identify initial problems, opportunities, goals, and objectives associated with conducting the feasibility study.*
- 1.6 PUBLIC INVOLVEMENT – *identify public involvement requirements of NEPA; the agencies that will be involved in the NEPA process; summarize any initial scoping issues and concerns.*
- 1.7 REGULATORY REQUIREMENTS – *list Federal, state, and local permits, licenses, and regulations that will be assessed in the DPR/EA for project compliance.*
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 - 5.3.1 Alternatives
 - 5.3.1.1 Scales
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SAN MARCOS RIVER SECTION 206 PROJECT DETAILED PROJECT REPORT & ENVIRONMENTAL ASSESSMENT

PROJECT DELIVERY TEAM TASKS AND DELIVERABLES

Project Management: Includes PRP Federal costs. Coordinate project tasks and progress with the City of San Marcos, A-E representatives and Fort Worth District personnel. Arrange and conduct necessary agency, sponsor and other miscellaneous meetings to be held during the feasibility study. Provide status and progress reports to the Continuing Authorities Program (CAP) Manager and upper management. Create and manage project activities, resources, and project funds in Primavera. The Project Manager shall also develop Contractor Scope of Work (SOW) , Independent Government Estimate (IGE) and ensure issuance of the A-E Task Order (TO). Process certified bills according to monthly progress of the A-E. Review and provide comments as necessary on all A-E provided submittals including the Draft Alternative Formulation Briefing (AFB) Report, Preliminary Draft Biological Assessment (BA), Draft Detailed Project Report (DPR) and integrated Environmental Assessment (EA), Draft Finding of No Significant Impact (FNSI), and Final DPR/EA/FNSI. The Project Manager will also ensure that all reviews are documented in a comment matrix and all reviews by Project Delivery Team (PDT) Team members are completed on time. These tasks will be performed by the Fort Worth District Environmental Branch.

Cost.....\$100,000

Vehicles and Travel: Funding will be provided for Fort Worth District PDT members to visit the study site and conduct any necessary database collections, surveys and environmental assessments. Funding will include any required per diem, travel costs and hotel arrangements.

Cost.....\$4,000

Supervision & Administration: Responsible for providing necessary supervision and administration activities related to the feasibility study. Provide guidance and support for documentation of 2101 schedules, any required congressional coordination, assistance with labor certification and preparation of necessary project fact sheets. These tasks will be performed by the Fort Worth District Programs and Project Management Branch.

Cost.....\$2,000

A-E Services: The action related to this Feasibility Study is to prepare a DPR that identifies feasible alternatives and scales within each ecosystem restoration measure that consist of technically sound engineering and design features; evaluates the implementation costs and habitat outputs of identified alternatives and scales; compares the effectiveness of ecosystem restoration plans for achieving desired ecosystem restoration objectives; and identifies a Recommended Plan for implementation of proposed ecosystem restoration features. The DPR will also include an integrated EA and FNSI that addresses potential social and environmental impacts associated with proposed project actions and features within the San Marcos River. Specific tasks will include conducting all Civil Design, Hydrology & Hydraulic (H&H), Geotechnical, Structural Design, Cost Estimation and Geographic Information Systems (GIS) activities associated with the feasibility study (additional details regarding specific tasks associated with these disciplines are outlined in the sections below), These tasks will be performed by an A-E in coordination with the Fort Worth District.

Cost.....\$285,000

Contracting: Responsible for reviewing PM provided A-E SOW, IGE and supplemental contracting information. Along with PM, negotiate the A-E contract. Issuance of the TO and responsible for any future modifications to the base contract. AT this time only one A-E contract has been identified for execution. These tasks will be performed by the Fort Worth District Contracting Division in coordination with the Environmental Branch.

Cost.....\$2,000

Cultural Resources: Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies seeking Federal funding and/or permits to conduct cultural resource surveys to locate, identify, and evaluate historic and prehistoric resources in advance of project approval. Cultural resources tasks include: 1) Literature searches will be conducted using State records, city and county records, historical land use records, cartographic and geographic records and informants; the study area will be reviewed to determine if National Register of Historic Places (NRHP) properties are present; if necessary these areas will also be reviewed by site visits to determine the potential for resources and areas of disturbance; 2) The data collected will be utilized to develop estimates of future field efforts (such as backhoe surveys to further evaluate sites for proper mitigation needed during construction), field methodologies to be used and associated costs for those efforts; 3) Consultation with affected Native American Indian tribal groups will be initiated to determine specific interests in the project area during the feasibility stage; initial findings and agency comments will be documented in a Cultural Resources appendix to be included in the AFB Report; 4) Evaluate the impact of alternatives and the recommended plan on historic properties in consultation with the State Historical Preservation Officer (SHPO) and provide documentation for incorporation into the Draft DPR/EA; 5) If needed, a mitigation plan report with cost estimates will be prepared to document the need for mitigating any adverse effects on historic properties listed or eligible for NRHP listing; no mitigation funds have been included in this PMP, but will be developed and negotiated with the City of San Marcos, if necessary, when the need and extent of possible mitigation actions are defined; 6) A Memorandum of Agreement (MOA) will be developed to specify the processes by which required surveys, testing, evaluation effects determination, mitigation planning, and coordination will be achieved; if needed, the MOA will contain a sampling survey strategy for the efficient planning of any further cultural resource investigations that may be needed prior to initiation of construction; the MOA will likely be between the Corps of Engineers, the Texas SHPO, City of San Marcos and any participating Native American Indian tribes. These tasks will be performed by the Fort Worth District Cultural Resources Section (or it's Contractor).

Cost.....\$46,000

Environmental Resources: Environmental studies will be performed in accordance with the National Environmental Policy Act (NEPA), ER 1105-2-100, ER 200-2-2, and other applicable laws, statutes, Executive Orders, and regulations. NEPA documentation will be integrated into the DPR/EA and coordinated with state and Federal environmental agencies and the public. Conduct necessary site visits to gather existing conditions and evaluate potential environmental restoration alternatives. Conduct field work necessary to inventory, describe and evaluate environmental elements in the specific areas of interest. This includes future without project conditions forecasting and problems and opportunities discussions. Information will be acquired on the following environmental parameters for inclusion in the DPR/EA report: 1) A general description or statement of the existing air quality and noise level conditions in the immediate project area will be prepared; any significant problems associated with existing air quality or noise level sources in the project area will be provided; 2) The existing water and sediment quality will be described for the project area and downstream areas which may be affected by the project based on all available data and previous research; 3) The existing conditions of biological resources of the project area will be described for use in the environmental assessment; the biological elements to be addressed will consist vegetation, fish and wildlife resources, Threatened & Endangered species, and aquatic resources; 4) Future without project conditions will be described and forecasted to provide future average annual habitat units for the study area; all existing and future conditions, problems

and opportunities will be documented in an appendix to be included in the AFB Report; 5) Formulation of environmental restoration alternatives; 6) Conduct office and field work in cooperation with the USFWS and TPWD to inventory, describe and evaluate the environmental impacts and benefits from each proposed restoration alternative; 7) Incremental cost analysis will be conducted to determine the most cost effective environmental alternatives; an update to the existing conditions environmental appendix will be written in order to document the alternative evaluation; 8) Perform detailed evaluations on the recommended plan; if necessary, conduct a 404(b)(1) analysis and coordinate with TCEQ and other regulatory agencies to include the state water quality certification requirements in the Notice of Availability for the Draft DPR/EA; 9) Prepare public notices, mailings, and conduct public review of the draft report; respond to public comments on the Draft DPR/EA and prepare a final report for upper Corps review and approval. These tasks will be performed by the Fort Worth District Environmental Branch (or it's Contractor).

Cost.....\$28,000

Aquatic Vegetation Surveys: The Engineer Research and Development Center (ERDC), Lewisville Aquatic Ecosystem Research Facility (LAERF) will conduct surveys of the San Marcos River to determine location and acreage of introduced and native plants, including aquatic and riparian species. Currently, 16 introduced aquatic and riparian plant species are known to occur in the San Marcos River, including *Hydrilla verticillata*, *Hygrophila polysperma*, *Eichhornia crassipes*, and *Pistia stratiotes*. Planning and implementing invasive plant control and restoration efforts will require preliminary surveys and mapping of existing vegetation. Surveys will be conducted in August 2009 using the SOG technique which has been successfully employed by LAERF. SOG consists of visual observations of aquatic vegetation recorded by GPS from a boat using a Recon handheld data logger and ProXT receiver. Geographic Information System (GIS) maps of mixed and monospecific species colonies will be constructed using ArcView GIS Version 3. A final report including maps will be submitted to the Fort Worth District and City of San Marcos. These tasks will be performed by LAERF.

Cost.....\$40,000

Fish and Wildlife Coordination: The U.S. Fish and Wildlife Service (USFWS) will participate in the quantification of existing fish and wildlife habitat and threatened and endangered species within the study area to meet requirements for Civil Works studies under the Fish and Wildlife Coordination Act (FWCA). USFWS tasks will include: 1) Attend meetings, conduct site visits, and conduct field surveys as needed to determine existing conditions; 2) Participate in identifying, projecting, and forecasting future without project conditions and problems and opportunities to improve fish and wildlife habitat; a planning aid letter (PAL) to document the environmental studies will be prepared and submitted to the Corps to assist in project planning; 3) Predicted benefits to environmental resources in the area will be investigated based on proposed environmental restoration measures and future with project forecasting will be conducted on the alternatives; 4) The USFWS will prepare a Draft FWCA Report documenting results of their studies, including habitat descriptions, species present, threatened and/or endangered species, wetlands present, etc; the Fort Worth District will assist the USFWS in the determination of the analysis method and anticipated future conditions of the project area; 5) Following the public comment period, the USFWS will finalize the FWCA Report, which will be an appendix to the Final DPR/EA; the USFWS will also provide a letter of concurrence from Texas Parks and Wildlife Department (TPWD). The above FWCA tasks will be funded through the San Marcos River Section 206 Project. In addition to the above activities, the Fort Worth District and USFWS will also need to conduct informal formal Section 7 consultations to identify, avoid, minimize and mitigate for potential impacts to Threatened & Endangered species and their habitat. The Fort Worth District will prepare a Draft Biological Assessment (BA) for review by the USFWS to initiate informal Section 7 consultation and a final BA for formal Section 7 consultation. The USFWS will prepare a Biological Opinion (BO) to document findings. The USFWS will not be funded for Section 7 requirements. These tasks will be performed by the USFWS.

Cost.....\$30,000

Real Estate: A summary of real estate tasks is outlined below: 1) Attend project coordination meetings; 2) Obtain rights of entry for feasibility level analysis if needed; an initial set of maps and drawings that delineate the real estate acquisition lines will be prepared based on technical design drawings developed by an A-E during the feasibility phase; maps and drawings will reflect the minimum real estate required for project purposes; 3) The project area for the recommended plan will be evaluated and a Gross Appraisal will be conducted; a detailed, supported appraisal of the collective real estate requirements and impact of the project, or selective portion thereof, including review and approval, will be performed as required by ER 405-1-04, (dated 30 December 2003) and policy guidance; preparation of the Gross Appraisal will involve a detailed accounting of property ownership, property evaluation for possible easement rights or acquisition of impacted project lands, preparation of a Gross Appraisal, and assessment of project Lands, Easements, Right-of Ways, Relocations, and Disposal Area (LERRD) requirements; 4) A Real Estate Plan will be prepared as an appendix to the DPR/EA that outlines the minimum real estate requirements for the proposed project, in accordance with ER 405-1-12; the Real Estate Plan contains a description of the area; the acreage and proposed estates including non-standard estates; a discussion of any land owned by the Federal government, the City of San Marcos or any public entity; an estimate of any Public Law 91-646 relocations; the baseline cost estimate for Real Estate; a discussion of the City's ability to acquire LERRD's; a discussion of mineral activity, if any, and the attitude of landowners; a detailed schedule of land acquisition; a preliminary assessment of any facilities/utilities to be relocated; and any other relevant real estate information appropriate for the project. This task will be performed by the Fort Worth District Real Estate Branch (or it's Contractor).

Cost.....\$16,000

HTRW Studies: Hazardous, toxic, and radiological waste (HTRW) investigations will be conducted in accordance with guidance provided in ER 1165-2-132. A summary of HTRW tasks is outlined below: 1) Attend project coordination meetings; 2) Conduct database/historical project records search for an existing conditions HTRW report; a small expense has been estimated for a site inspection with consideration that only minimal HTRW will be identified; however, should potential HTRW sites be identified within the project area, the first course of action will be to modify the design in order to avoid the contaminated site; if no other feasible alternatives can be identified which avoid the contamination, cost estimates will be developed, the PMP will be revised and a detailed site inspection will be conducted; 3) A report will be prepared which describes any HTRW occurrences within or nearby the project area; the report will be included as an appendix to the DPR/EA. This task will be performed by the Fort Worth District Design Investigations Section (or it's Contractor).

Cost.....\$12,000

Civil /Structural Design: Civil and structural design studies required for the DPR/EA consist of design support and the development of an engineering appendix, including design plates, a written description of the selected plan, and a cost estimate of the recommended improvements. All components of proposed alternatives and the recommended plan will be analyzed in a professional manner using accepted engineering practices and CADD standards, all in accordance with Corps of Engineers' regulations applicable to a civil works project. All civil and structural design activities will be performed by an A-E. These activities include: 1) Participate as a PDT member and participate in the preliminary designs of alternative plans; 2) Conduct an inventory of existing facilities within the study area to assist in the development of restoration alternatives. 3) Conduct site reconnaissance as necessary; 4) Develop preliminary working maps on Corps of Engineers standard size sheet 22" x 34" (trim to trim), including the standard title block with electronic CADD conformed to current Corps of Engineers standards; 5) Prepare preliminary designs for proposed restoration scales, measures and alternatives along with estimated quantities; designs will be accomplished using accepted engineering practices, in accordance with Corps of Engineers' regulations applicable to a civil works project and at a level of detail sufficient for feasibility level cost comparison; as the formulation progresses, plans which appear to best meet the

planning objectives will be refined and optimized, allowing for selection of the recommended plan; 6) For the recommended plan, a more detailed design that includes plans and profiles will be performed; details of the work will be discussed in a basis of design, which will be included as an appendix to the DPR/EA; the level of detail of the design work will be sufficient to estimate the baseline cost; the basis of design will include drawings displaying the plan, profile, and typical cross sections; quantities will be developed based on design sheets; conceptual design aspects for the recommended plan, as well as methods for operation and maintenance of the project, will be developed in conjunction with the City of San Marcos; 7) All potential utility relocations and/or bridge/dam improvements will be shown in their existing locations on the civil design plates and will be noted with relocation limits and applicable design solutions; 8) The design appendix will consist of all design data analyses, a write-up of the design features for the improved areas, and information plates pertaining to civil design of the recommended plan; the design plates will consist of a project location and vicinity map, plan and profile sheets, typical cross sections, and miscellaneous details; all plates will include horizontal alignment criteria in plan view (NAD 1983, State Plane Central Texas), vertical control information in profile view (NAVD 1988), right-of-way and construction limits, construction dimensions and legends; the written description required for the DPR/EA will include a plan description of the design features, impact of existing bridges/dams/utilities/disturbed areas and identification of waste disposal sites for excess excavation and construction debris; quantity takeoffs will incorporate designs in final form and will be shown in a cost table form. The tasks outlined in this section will be performed by an A-E with associated costs included in the A-E Services section above. The Fort Worth District Civil & Structural Design Sections will be responsible for review of contractor material and commentary on design information provided by the AE.

Cost.....\$10,000

Hydrology and Hydraulics: A report will be prepared that details the results of hydrologic and hydraulic (H&H) studies conducted during the feasibility study. All H&H activities will be performed by an A-E with review of contractor provided material by the Fort Worth District H&H Section. Proposed A-E activities are summarized below: 1) Develop Preliminary Hydraulics for the San Marcos River based on existing H&H data; update existing model based on current period of record data; 2) Develop upstream and downstream discharge frequency curves based on period of record for existing conditions and proposed alternatives; 3) Identify impacts of proposed alternatives on flood frequencies and erosion potential; 4) Develop hydrologic models to include the San Marcos River and tributaries; calibrate the model using historical and stream gauging records; 5) Compute discharges for the storms having 50, 20, 10, 4, 2, 1, 0.4, and 0.2 percent recurrence intervals (commonly referred to as the 2-, 5-, 10-, 25-, 50-, 100-, 250-, and 500-year storms) for without project conditions and proposed alternatives; 6) Identify impacts of proposed alternatives on hydrology and develop inundation delineations used in developing downstream stage-damage functions for without project conditions, proposed alternatives and the recommended plan; 7) Prepare an H&H appendix for inclusion in the DPR/EA Report. The tasks outlined in this section will be performed by an A-E with associated costs included in the A-E Services section above. The Fort Worth District H&H Section will be responsible for review of contractor material and commentary on design information provided by the A-E.

Cost.....\$5,000

Geotechnical: Geotechnical investigations and reports will be accomplished in accordance with U.S. Army Corps of Engineers (USACE) guidance. Geotechnical studies and activities are summarized below: 1) Identify and perform subsurface exploration and laboratory testing for structural alternatives such as dams, rock walls, gabions, weir structures, etc; geotechnical investigations may also include subsurface explorations of potential borrow and placement areas, if necessary; no boring or laboratory testing is currently included in this PMP estimate; 2) Develop geotechnical design parameters for placement of proposed structures, relocation of utilities, roads, parks facilities, and other existing structures, if necessary; sufficient geologic and soils information will be obtained, analyzed, and presented to support the recommended project design and baseline cost estimate; additional subsurface exploration and

laboratory testing for reanalysis will be identified if required; 3) Prepare a geotechnical appendix, suitable for incorporation with the DPR/EA. The tasks outlined in this section will be performed by an A-E with associated costs included in the A-E Services section above. The Fort Worth District Geotechnical Section will be responsible for review of contractor material and commentary on design information provided by the A-E.

Cost.....\$5,000

Cost Estimating: This activity includes all deliverables required to prepare life cycle project cost estimates needed to support the DPR/EA, and to prepare the baseline project cost estimate. Cost estimates will be developed in accordance with the guidance contained in ER 1110-2-1302, Civil Works Cost Engineering, using the MII cost estimating system. Cost estimates will include both Federal and non-Federal costs for construction, real estate, engineering and design, construction management, environmental, cultural resources and HTRW investigations and remediation, OMRR&R of proposed restoration alternatives and the recommended plan. Revisions to the estimates prepared for the draft report and comparative cost estimates used for alternative analysis will also be included. A summary of cost estimating tasks is provided below: 1) Preliminary project cost estimates will be developed to support plan formulation efforts; equipment costs will be based on EP 1110-1-8, "Construction Equipment Ownership and Operation Expense Schedule"; contingencies will be developed and applied where areas of uncertainty exist; detailed costs for non-construction cost items (i.e., lands and damages) will be provided by the Fort Worth District and incorporated into the estimate; construction estimates should also include preliminary Operation and Maintenance costs for proposed alternatives; 2) A detailed cost estimate will be prepared for the recommended plan in MII and will be documented with notes to explain the assumed construction methods, crews, sources of materials, and other specific information; labor costs will be based on the prevailing Davis-Bacon wage rates for each trade; equipment costs will be based on EP 1110-1-8; contingencies will be developed and applied where areas of uncertainty exist; detailed costs for non-construction cost items (i.e., lands and damages) will be provided by the Fort Worth District and incorporated into the estimate; 3) A detailed OMRR&R cost estimate will be made for the recommended plan; 4) a Plans & Specifications Phase (P&S) cost estimate will be prepared and revised, as necessary, to be included in total project costs; the P&S cost estimate will include all Federal costs for preconstruction, engineering and design from the date of the Division Commander's Notice to the award of the first Federal construction contract; this task will be coordinated by the Fort Worth District's Cost Engineering Section, with input from each District element responsible for a portion of the P&S investigations; 5) A fully funded cost estimate will be prepared for the recommended plan based on the project cost estimate; the project cost estimate will be updated, revised, and escalated for inflation through completion of the project; the fully funded cost estimate will be used to support the P&S PMP and upward reporting requirements. The tasks outlined in this section will be performed by an A-E with associated costs included in the A-E Services section above. The Fort Worth District Cost Engineering Section will be responsible for review and commentary on design information provided by the A-E.

Cost.....\$5,000

Geographic Information Systems: The identification and evaluation of alternative reallocation measures will utilize geospatial data and analyses. The following is a brief description of the known requirements at this time: 1) *Establish Baseline Map* – A thorough search of available existing geospatial data will be completed; the search will include, but is not limited to, the District's spatial data library, the ERDC Topographic Engineering Center, National Spatial Data Clearinghouse, National Geospatial Intelligence Agency, U.S. Geological Service, as well as state, regional, and local governmental agencies; geospatial data needs will be identified and data acquired; the data will be organized in a corporate geospatial library; aerial photography will be rectified into the correct format; a baseline map of the project area will be established and disseminated to the PDT; 2) *Add Data Layers* – Numerous data layers (geo-referenced) will be added to the baseline map to include contours, flood elevations; buildings and other development, roads and bridges, utilities, property parcels and tracts, current and potential flowage

easements, socio-economic characteristics, approximate known or potential cultural sites, approximate known or potential HTRW sites, and other features which can be spatially referenced and potentially impacted; 3) *Ecological Analysis* – GIS tools and techniques will be utilized in estimating existing and proposed environmental habitats; estimated GIS quantities will then be used to forecast future with project conditions; 4) *Maps & Figures* – The study will require the production of numerous maps, figures, etc., for reports, briefings, meetings, etc. The tasks outlined in this section will be performed by an A-E with associated costs included in the A-E Services section above. The Fort Worth District Technical Planning Section will be responsible for storing GIS data, helping with GIS issues and commentary on design information provided by the A-E.

Cost.....\$5,000

Recreation Design: The Feasibility Study will also include development and analysis of recreation alternatives. This work item includes tasks necessary to evaluate the impact of proposed alternatives on recreation and related activities in the study area and to investigate opportunities for addition of recreation features associated with the recommended plan. The Federal Water Project Recreation Act of 1965 (PL 89-72) requires that full consideration be given to the opportunities that Federal multi-purpose projects afford for outdoor recreation and associated fish and wildlife. The Water Resources Development Act of 1990 directs that recreation will be considered as an equal project purpose along with environmental restoration and flood control on Federal projects. Recreation tasks will include: 1) Develop an inventory and cost of relocation of impacted public recreational facilities, park roads and bridges, and service drops for utilities; this effort will be performed in coordination with Civil Design, Structural Design and Cost estimating efforts; 2) A draft recreation appendix will be included and documented in the AFB Report and draft -final DPR/EA. The tasks outlined in this section will be performed by an A-E with associated costs included in the A-E Services section above. The Fort Worth District Environmental Branch will be responsible for review of contractor material and commentary on A-E design information.

Cost.....\$5,000

Sponsor Work-in-Kind Credit: The City of San Marcos shall serve as a PDT member and attend necessary project meetings and other project management duties as necessary. The City of San Marcos in coordination with the Texas Rivers Institute shall conduct bed load sampling of the San Marcos River to determine substrate type and depth. Results shall be used to help identify locations for excess sediment removal within the San Marcos River. The City of San Marcos shall provide necessary real estate information for use in preparing the gross appraisal for project lands. The City of San Marcos shall serve as a cooperating entity during cultural resource coordination with the SHPO and preparation of the MOA. The tasks outlined in this section will be performed by the City of San Marcos with associated costs included in the Sponsor Work-In-Kind Credit section above. The Fort Worth District Environmental Branch will be responsible for review of sponsor material provided by the City of San Marcos.

Cost.....\$60,000

Total Cost Shared Feasibility Study Costs.....\$550,000

Federal PMP, FCSA, SOW, IGE and PRP Costs.....\$110,000

TOTAL PROJECT COSTS.....\$660,000

ENCLOSURE 4

AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
THE CITY OF SAN MARCOS, TEXAS
FOR THE
SECTION 206 AQUATIC ECOSYSTEM RESTORATION STUDY,
SAN MARCOS RIVER, SAN MARCOS, TEXAS

THIS AGREEMENT is entered into this 30th day of SEP, 2008 by and between the Department of the Army (hereinafter the “Government”), represented by the U.S. Army Engineer, Fort Worth and the City of San Marcos, Texas (hereinafter the “Non-Federal Sponsor”), represented by the City Manager.

WITNESSETH, THAT:

WHEREAS, the Government received a letter, dated September 9, 2003, from the City of San Marcos in which it stated its desire to participate in a feasibility study for aquatic ecosystem restoration at the San Marcos River in San Marcos, Texas, and in which it acknowledged its financial responsibilities for the study and a project, if one is recommended;

WHEREAS, Section 206 of the Water Resources Development Act of 1996, Public Law 104-303, as amended (33 U.S.C. 2330; hereinafter “Section 206”) provides that \$25,000,000 in Federal funds are authorized to be appropriated for each *fiscal year* to carry out projects for aquatic ecosystem restoration and no more than \$5,000,000 in Federal funds may be allotted for a project at any single locality;

WHEREAS, the Government initiated a feasibility study, to be initially Federally funded up to \$100,000, and during this Federally funded portion the Government determined that the costs of the feasibility study would exceed \$100,000;

WHEREAS, the Government and the City of San Marcos desire to enter into an agreement (hereinafter the “Agreement”) to complete the feasibility study (hereinafter the “Study” as defined in Article I.A. of this Agreement) and to share equally the costs of the Study that exceed \$100,000;

WHEREAS, Section 105(a) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2215(a)), specifies the cost-sharing requirements applicable to the Study;

WHEREAS, the Non-Federal Sponsor desires to provide in-kind contributions (hereinafter the “*non-Federal in-kind contributions*” as defined in Article I.I. of this Agreement)

that are necessary to prepare the feasibility report and to receive credit for such contributions toward the amount of its required contribution for the *Study*;

WHEREAS, the Non-Federal Sponsor may provide up to 100 percent of its required contribution for the *Study* as *non-Federal in-kind contributions*;

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 *Study* in accordance with the terms of this Agreement; and

WHEREAS, the Government and the Non-Federal Sponsor, in connection with this Agreement, desire to foster a partnering strategy and a working relationship between the Government and the Non-Federal Sponsor through a mutually developed formal strategy of commitment and communication embodied herein, which creates an environment where trust and teamwork prevent disputes, foster a cooperative bond between the Government and the Non-Federal Sponsor, and facilitate the successful *Study*.

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

ARTICLE I – DEFINITIONS

A. The term “*Study*” shall mean the activities and tasks required to identify and evaluate alternatives and the preparation of a decision document that, when appropriate, recommends a coordinated and implementable solution for aquatic ecosystem restoration at the San Marcos River, San Marcos, Texas. The term includes the *non-Federal in-kind contributions* described in paragraph I. of this Article.

B. The term “*total study costs*” shall mean the sum of all costs incurred by the Non-Federal Sponsor and the Government in accordance with the terms of this Agreement directly related to performance of the *Study* plus the costs of the *Study* incurred by the Government prior to the effective date of this Agreement. Subject to the provisions of this Agreement, the term shall include, but is not necessarily limited to: the Government’s costs of plan formulation and evaluation, including applicable economic, engineering, real estate, and environmental analyses; the Government’s costs of preparation of the decision document for the *Study*; the costs of the *non-Federal in-kind contributions* determined in accordance with Article II.B.3. of this Agreement; the Government’s costs of independent technical review and other review processes required by the Government; the Government’s supervision and administration costs; the Non-Federal Sponsor’s and the Government’s costs of participation in the Study Coordination Team in accordance with Article III of this Agreement; the Government’s costs of contract dispute settlements or awards; and the Non-Federal Sponsor’s and the Government’s costs of audit in accordance with Article VI.B. and Article VI.C. of this Agreement. The term does not include the first \$100,000 incurred by the Government for the *Study*; any costs of dispute resolution under Article V of this Agreement; any costs incurred as part of reconnaissance studies or feasibility studies under any other agreement or program; the Non-Federal Sponsor’s costs of negotiating this Agreement; or any costs of negotiating a project cooperation agreement for design and construction of a project or separable element thereof.

C. The term “*period of study*” shall mean the time from the effective date of this Agreement to the date that the decision document for the study is duly approved by the Government or the date that this Agreement is terminated in accordance with Article IX of this Agreement.

D. The term “*financial obligations for the study*” shall mean the financial obligations of the Government and the costs for the *non-Federal in-kind contributions*, as determined by the Government that result or would result in costs that are or would be included in *total study costs*.

E. The term “*non-Federal proportionate share*” shall mean the ratio of the sum of the costs included in *total study costs* for the *non-Federal in-kind contributions*, as determined by the Government, and the Non-Federal Sponsor’s contribution of funds required by Article II.B.1.b. of this Agreement to *financial obligations for the study*, as projected by the Government.

F. The term “*Federal program funds*” shall mean funds provided by a Federal agency, other than the Department of the Army, plus any non-Federal contribution required as a matching share therefore.

G. The term “*fiscal year*” shall mean one year beginning on October 1 and ending on September 30.

H. The term “*PMP*” shall mean the project management plan, and any modifications thereto, developed by the Government, and agreed to by the Non-Federal Sponsor, that specifies the scope, cost, and schedule for *Study* activities and guides the performance of the *Study* through the *period of study*.

I. The term “*non-Federal in-kind contributions*” shall mean planning, supervision and administration, services, materials, supplies, and other in-kind services that are performed or provided by the Non-Federal Sponsor after the effective date of this Agreement in accordance with the *PMP* and that are necessary for performance of the *Study*.

J. The term “*Section 206 Annual Program Limit*” shall mean the statutory limitation on the Government’s annual appropriations for planning, design, and construction of all projects implemented pursuant to Section 206 of the Water Resources Development Act of 1996, Public Law 104-303, as amended (33 U.S.C. 2330). As of the effective date of this Agreement, such limitation is \$25,000,000.

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

A. The Government, subject to receiving funds appropriated by the Congress of the United States (hereinafter the “Congress”) and using those funds and funds provided by the Non-Federal Sponsor, expeditiously shall conduct the *Study*, applying those procedures usually applied to Federal projects, in accordance with Federal laws, regulations, and policies. The Non-Federal Sponsor expeditiously shall perform or provide the *non-Federal in-kind contributions* in accordance with applicable Federal laws, regulations, and policies.

1. The Government shall not issue the solicitation for the first contract for the *Study* or commence the *Study* using the Government's own forces until the Non-Federal Sponsor has confirmed in writing its willingness to proceed with the *Study*.

2. To the extent possible, the Government and the Non-Federal Sponsor shall conduct the *Study* in accordance with the *PMP*.

3. The Government shall afford the Non-Federal Sponsor the opportunity to review and comment on all products that are developed by contract or by Government personnel during the *period of study*. The Government shall consider in good faith the comments of the Non-Federal Sponsor, but the final approval of all *Study* products shall be exclusively within the control of the Government.

4. The Government shall afford the Non-Federal Sponsor the opportunity to review and comment on the solicitations for all Government contracts, including relevant scopes of work, prior to the Government's issuance of such solicitations. To the extent possible, the Government shall afford the Non-Federal Sponsor the opportunity to review and comment on all proposed contract modifications, including change orders. In any instance where providing the Non-Federal Sponsor with notification of a contract modification is not possible prior to execution of the contract modification, 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 or commencement of work on the *Study* using the Government's own forces, execution of contract modifications, resolution of contract claims, and performance of all work on the *Study*, except for the *non-Federal in-kind contributions*, shall be exclusively within the control of the Government.

5. At the time the U.S. Army Engineer, Fort Worth District (hereinafter the "District Engineer") furnishes the contractor with the Government's Written Notice of Acceptance of Completed Work for each contract awarded by the Government for the *Study*, the District Engineer shall furnish a copy thereof to the Non-Federal Sponsor.

6. The Non-Federal Sponsor shall afford the Government the opportunity to review and comment on the solicitations for all contracts for the *non-Federal in-kind contributions*, including relevant scopes of work, prior to the Non-Federal Sponsor's issuance of such solicitations. To the extent possible, the Non-Federal Sponsor shall afford the Government the opportunity to review and comment on all proposed contract modifications, including change orders. In any instance where providing the Government with notification of a contract modification is not possible prior to execution of the contract modification, the Non-Federal Sponsor shall provide such notification in writing at the earliest date possible. To the extent possible, the Non-Federal Sponsor also shall afford the Government the opportunity to review and comment on all contract claims prior to resolution thereof. The Non-Federal Sponsor shall consider in good faith the comments of the Government but the contents of solicitations, award of contracts or commencement of work on the *Study* using the Non-Federal Sponsor's own forces, execution of contract modifications, resolution of contract claims, and performance of all

work on the *non-Federal in-kind contributions* shall be exclusively within the control of the Non-Federal Sponsor.

7. At the time the Non-Federal Sponsor furnishes a contractor with a notice of acceptance of completed work for each contract awarded by the Non-Federal Sponsor for the *non-Federal in-kind contributions*, the Non-Federal Sponsor shall furnish a copy thereof to the Government.

8. Notwithstanding paragraph A.4. and paragraph A.6., if the award of any contract for work on the *Study*, or continuation of work on the *Study* using the Government's or the Non-Federal Sponsor's own forces, would result in *total study costs* exceeding \$352,000.00, the Government and the Non-Federal Sponsor agree to defer award of that contract, award of all remaining contracts for work on the *Study*, and continuation of work on the *Study* using the Government's or the Non-Federal Sponsor's own forces until such time as the Government and the Non-Federal Sponsor agree in writing to proceed with further contract awards for the *Study* or the continuation of work on the *Study* using the Government's or the Non-Federal Sponsor's own forces, but in no event shall the award of contracts or the continuation of work on the *Study* using the Government's or the Non-Federal Sponsor's own forces be deferred for more than three years. If the Government and the Non-Federal Sponsor agree to not proceed or fail to reach agreement on proceeding with further contract awards for the *Study*, or the continuation of work on the *Study* using the Government's or the Non-Federal Sponsor's own forces, the parties shall terminate this Agreement and proceed in accordance with Article IX.D. of this Agreement.

B. The Non-Federal Sponsor shall contribute 50 percent of *total study costs* in accordance with the provisions of this paragraph.

1. The Non-Federal Sponsor shall provide a contribution of funds as determined below:

a. If the Government projects at any time that the collective value of the Non-Federal Sponsor's contributions listed in the next sentence will be less than the Non-Federal Sponsor's required share of 50 percent of *total study costs*, the Government shall determine the amount of funds that would be necessary to meet the Non-Federal Sponsor's required share without considering the credit the Government projects will be afforded for the *non-Federal in-kind contributions* pursuant to paragraph B.4. of this Article. The Government shall determine the amount of funds that would be necessary by subtracting from the Non-Federal Sponsor's required share of 50 percent of *total study costs* the collective value of the Non-Federal Sponsor's contributions under Article III and Article VI of this Agreement.

b. The Non-Federal Sponsor shall provide funds in the amount determined by this paragraph in accordance with Article IV.B. of this Agreement. To determine the contribution of funds the Non-Federal Sponsor shall provide, the Government shall reduce the amount determined in accordance with paragraph B.1.a. of this Article by the amount of credit the Government projects will be afforded for the *non-Federal in-kind contributions* pursuant to paragraph B.4. of this Article.

2. The Government, subject to the availability of funds and as limited by paragraph B.5. of this Article and the *Section 206 Annual Program Limit*, shall refund or reimburse to the Non-Federal Sponsor any contributions in excess of 50 percent of *total study costs* if the Government determines at any time that the collective value of the following has exceeded 50 percent of *total study costs*: (a) the Non-Federal Sponsor's contribution of funds required by paragraph B.1.b. of this Article; (b) the amount of credit to be afforded for the *non-Federal in-kind contributions* pursuant to paragraph B.4. of this Article; and (c) the value of the Non-Federal Sponsor's contributions under Article III and Article VI of this Agreement.

3. The Government shall determine and include in *total study costs* any costs incurred by the Non-Federal Sponsor for *non-Federal in-kind contributions*, subject to the conditions and limitations of this paragraph. 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 amount of costs to be included in *total study costs* for *non-Federal in-kind contributions*.

a. Acceptance by the Government of *non-Federal in-kind contributions* shall be subject to a review by the Government to verify that all economic, engineering, real estate, and environmental analyses or other items performed or provided as *non-Federal in-kind contributions* are accomplished in a satisfactory manner and in accordance with applicable Federal laws, regulations, and policies, and to verify that all analyses, services, materials, supplies, and other in-kind services provided as *non-Federal in-kind contributions* are necessary for the *Study*.

b. The Non-Federal Sponsor's costs for *non-Federal in-kind contributions* that may be eligible for inclusion in *total study costs* pursuant to this Agreement shall be subject to an audit in accordance with Article VI.C. of this Agreement to determine the reasonableness, allocability, and allowability of such costs.

c. The Non-Federal Sponsor's costs for *non-Federal in-kind contributions* that may be eligible for inclusion in *total study costs* pursuant to this Agreement are not subject to interest charges, nor are they subject to adjustment to reflect changes in price levels between the time the *non-Federal in-kind contributions* are provided and the time the costs are included in *total study costs*.

d. The Government shall not include in *total study costs* any costs for *non-Federal in-kind contributions* paid by the Non-Federal Sponsor using *Federal program funds* unless the Federal agency providing the Federal portion of such funds verifies in writing that expenditure of such funds for such purpose is expressly authorized by Federal law.

e. The Government shall not include in *total study costs* any costs for *non-Federal in-kind contributions* in excess of the Government's estimate of the costs of the *non-Federal in-kind contributions* if the services, materials, supplies, and other in-kind services had been provided by the Government.

4. The Government, in accordance with this paragraph, shall afford credit toward the amount of funds determined in accordance with paragraph B.1.a. of this Article for the costs of the *non-Federal in-kind contributions* determined in accordance with paragraph B.3. of this Article. However, the maximum amount of credit that can be afforded for the *non-Federal in-kind contributions* shall not exceed the least of the following amounts as determined by the Government: the amount of funds determined in accordance with paragraph B.1.a. of this Article; the costs of the *non-Federal in-kind contributions* determined in accordance with paragraph B.3. of this Article; or 50 percent of *total study costs*.

5. Notwithstanding any other provision of this Agreement, the Non-Federal Sponsor shall not be entitled to reimbursement of any costs of *non-Federal in-kind contributions* determined in accordance with paragraph B.3. of this Article and included in *total study costs* that exceed the amount of credit afforded for the *non-Federal in-kind contributions* determined in accordance with paragraph B.4. of this Article and the Non-Federal Sponsor shall be responsible for 100 percent of all costs of *non-Federal in-kind contributions* included in *total study costs* that exceed the amount of credit afforded.

C. Notwithstanding any other provision of this Agreement, Federal financial participation in the *Study* is limited by the following provisions of this paragraph.

1. In the event the Government projects that the amount of Federal funds the Government will make available to the *Study* through the then-current *fiscal year*, or the amount of Federal funds the Government will make available for the *Study* through the upcoming *fiscal year*, is not sufficient to meet the Federal share of *total study costs* that the Government projects to be incurred through the then-current or upcoming *fiscal year*, as applicable, the Government shall notify the Non-Federal Sponsor in writing of such insufficiency of funds and of the date the Government projects that the Federal funds that will have been made available to the *Study* will be exhausted. Upon the exhaustion of Federal funds made available by the Government to the *Study*, future performance under this Agreement shall be suspended and the parties shall proceed in accordance with Article IX.C. of this Agreement.

2. If the Government determines that the total amount of Federal funds provided by Congress for all studies and projects implemented pursuant to Section 206 has reached the *Section 206 Annual Program Limit*, and the Government projects that the Federal funds the Government will make available to the *Study* within the *Section 206 Annual Program Limit* will not be sufficient to meet the Federal share of *total study costs*, the Government shall notify the Non-Federal Sponsor in writing of such insufficiency of funds and of the date the Government projects that the Federal funds that will have been made available to the *Study* will be exhausted. Upon the exhaustion of Federal funds made available by the Government to the *Study* within the *Section 206 Annual Program Limit*, future performance under this Agreement shall be suspended and the parties shall proceed in accordance with Article IX.C. of this Agreement.

D. Upon conclusion of the *period of study*, the Government shall conduct an accounting, in accordance with Article IV.C. of this Agreement, and furnish the results to the Non-Federal Sponsor.

E. The Non-Federal Sponsor shall not use *Federal program funds* to meet any of its obligations for the *Study* under this Agreement unless the Federal agency providing the Federal portion of such funds verifies in writing that expenditure of such funds for such purpose is expressly authorized by Federal law.

F. This Agreement shall not be construed as obligating either party to implement a project. Whether the Government proceeds with implementation of the project depends upon, among other things, the outcome of the *Study* and whether the proposed solution is consistent with the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and with the budget priorities of the Administration.

ARTICLE III - STUDY COORDINATION TEAM

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

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

C. Until the end of the *period of study*, the Study Coordination Team shall generally oversee the *Study*, including matters related to: plan formulation and evaluation, including applicable economic, engineering, real estate, and environmental analyses; scheduling of reports and work products; independent technical review and other review processes required by the Government; completion of all necessary environmental coordination and documentation; contract awards and modifications; contract costs; the Government's cost projections; the performance of and scheduling for the *non-Federal in-kind contributions*; determination of anticipated future requirements for real property and relocation requirements and performance of operation, maintenance, repair, rehabilitation, and replacement of the proposed project including anticipated requirements for permits; and other matters related to the *Study*. This oversight of the *Study* shall be consistent with the *PMP*.

D. The Study Coordination Team may make recommendations to the District Engineer on matters related to the *Study* that the Study Coordination Team generally oversees, including suggestions to avoid potential sources of dispute. The Government in good faith shall consider the recommendations of the Study Coordination Team. The Government, having the legal authority and responsibility for performance of the *Study* except for the *non-Federal in-kind contributions*, has the discretion to accept or reject, in whole or in part, the Study Coordination Team's recommendations. On matters related to the *non-Federal in-kind contributions*, that the Study Coordination Team generally oversees, the Study Coordination Team may make recommendations to the Non-Federal Sponsor including suggestions to avoid potential sources of

dispute. The Non-Federal Sponsor in good faith shall consider the recommendations of the Study Coordination Team. The Non-Federal Sponsor, having the legal authority and responsibility for the *non-Federal in-kind contributions*, has the discretion to accept or reject, in whole or in part, the Study Coordination Team's recommendations except as otherwise required by the provisions of this Agreement, including compliance with applicable Federal, State, or local laws or regulations.

E. The Non-Federal Sponsor's costs of participation in the Study Coordination Team shall be included in *total study costs* and shared in accordance with the provisions of this Agreement, subject to an audit in accordance with Article VI.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs. The Government's costs of participation in the Study Coordination Team shall be included in *total study costs* and shared in accordance with the provisions of this Agreement.

ARTICLE IV - METHOD OF PAYMENT

A. In accordance with the provisions of this paragraph, the Government shall maintain current records and provide to the Non-Federal Sponsor current projections of costs, financial obligations, the contributions provided by the parties, the costs included in *total study costs* for the *non-Federal in-kind contributions* determined in accordance with Article II.B.3. of this Agreement, and the credit to be afforded for the *non-Federal in-kind contributions* pursuant to Article II.B.4. of this Agreement.

1. As of the effective date of this Agreement, *total study costs* are projected to be \$350,000; the value of the Non-Federal Sponsor's contributions under Article III and Article VI of this Agreement is projected to be \$5,000; the amount of funds determined in accordance with Article II.B.1.a. of this Agreement is projected to be \$170,000; the costs included in *total study costs* for the *non-Federal in-kind contributions* determined in accordance with Article II.B.3. of this Agreement are projected to be \$0; the credit to be afforded for the *non-Federal in-kind contributions* pursuant to Article II.B.4. of this Agreement is projected to be \$0; the Non-Federal Sponsor's contribution of funds required by Article II.B.1.b. of this Agreement is projected to be \$170,000; and the *non-Federal proportionate share* is projected to be 49 percent. These amounts and percentage are estimates subject to adjustment by the Government, after consultation with the Non-Federal Sponsor, and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

2. By January 2009 and by each quarterly anniversary thereof until the conclusion of the *period of study* and resolution of all relevant claims and appeals, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of the following: *total study costs*; the value of the Non-Federal Sponsor's contributions under Article III and Article VI of this Agreement; the amount of funds determined in accordance with Article II.B.1.a. of this Agreement; the costs included in *total study costs* for the *non-Federal in-kind contributions* determined in accordance with Article II.B.3. of this Agreement; the credit to be afforded for the *non-Federal in-kind contributions* pursuant to Article II.B.4. of this Agreement; the Non-Federal Sponsor's contribution of funds required by Article II.B.1.b. of this Agreement; the total contribution of

funds required from the Non-Federal Sponsor for the upcoming contract and upcoming *fiscal year*; and the *non-Federal proportionate share*.

B. The Non-Federal Sponsor shall provide the contribution of funds required by Article II.B.1.b. of this Agreement in accordance with the provisions of this paragraph.

1. Not less than 45 calendar days prior to the scheduled date for issuance of the solicitation for the first contract for work on the *Study* or commencement of work on the *Study* using the Government's own forces, 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: (a) the projected *non-Federal proportionate share of financial obligations for the study* to be incurred for such contract; and (b) the projected *non-Federal proportionate share of financial obligations for the study* using the Government's own forces through the first *fiscal year*. Not later than such scheduled date, the Non-Federal Sponsor shall provide the Government with the full amount of such required funds by delivering a check payable to "FAO, USAED, Fort Worth M2" to the District Engineer, or verifying to the satisfaction of the Government that the Non-Federal Sponsor has deposited such required funds in an escrow or other account acceptable to the Government, with interest accruing to the Non-Federal Sponsor, or by presenting the Government with an irrevocable letter of credit acceptable to the Government for such required funds, or by providing an Electronic Funds Transfer of such required funds in accordance with procedures established by the Government.

2. Thereafter, until the work on the *Study* is complete, the Government shall notify the Non-Federal Sponsor in writing of the funds the Government determines to be required from the Non-Federal Sponsor, and the Non-Federal Sponsor shall provide such funds in accordance with the provisions of this paragraph.

a. The Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the scheduled date for issuance of the solicitation for each remaining contract for work on the *Study*, of the funds the Government determines to be required from the Non-Federal Sponsor to meet the projected *non-Federal proportionate share of financial obligations for the study* to be incurred for such contract. No later than such scheduled date, the Non-Federal Sponsor shall make the full amount of such required funds available to the Government through any of the payment mechanisms specified in paragraph B.1. of this Article.

b. The Government shall notify the Non-Federal Sponsor in writing, no later than 60 calendar days prior to the beginning of each *fiscal year* in which the Government projects that it will make *financial obligations for the study* using the Government's own forces, of the funds the Government determines to be required from the Non-Federal Sponsor to meet the projected *non-Federal proportionate share of financial obligations for the study* using the Government's own forces for that *fiscal year*. No later than 30 calendar days prior to the beginning of that *fiscal year*, the Non-Federal Sponsor shall make the full amount of such required funds for that *fiscal year* available to the Government through any of the payment mechanisms specified in paragraph B.1. of this Article.

3. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary, when considered with any credit the Government projects will be afforded for the *non-Federal in-kind contributions* pursuant to Article II.B.4. of this Agreement, to cover: (a) the *non-Federal proportionate share of financial obligations for the study* incurred prior to the commencement of the *period of study*; and (b) the *non-Federal proportionate share of financial obligations for the study as financial obligations for the study* are incurred. If at any time the Government determines that additional funds will be needed from the Non-Federal Sponsor to cover the Non-Federal Sponsor's share of such financial obligations for the current contract or to cover the Non-Federal Sponsor's share of such financial obligations for work performed using the Government's own forces in the current *fiscal year*, 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 15 calendar days from receipt of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of such additional required funds through any of the payment mechanisms specified in paragraph B.1. of this Article.

C. Upon conclusion of the *period of study* and resolution of all relevant claims and appeals, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. If outstanding relevant claims and appeals prevent a final accounting from being conducted in a timely manner, the Government shall conduct an interim accounting and furnish the Non-Federal Sponsor with written notice of the results of such interim accounting. Once all outstanding relevant claims and appeals are resolved, the Government shall amend the interim accounting to complete the final accounting and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. The interim or final accounting, as applicable, shall determine *total study costs*, each party's required share thereof, and each party's total contributions thereto as of the date of such accounting.

1. Should the interim or final accounting, as applicable, show that the Non-Federal Sponsor's total required share of *total study costs* exceeds the Non-Federal Sponsor's total contributions provided thereto, the Non-Federal Sponsor, no later than 90 calendar days after receipt of written notice from the Government, shall make a payment to the Government in an amount equal to the difference by delivering a check payable to "FAO, USAED, Fort Worth M2" to the District Engineer or by providing an Electronic Funds Transfer in accordance with procedures established by the Government.

2. Should the interim or final accounting, as applicable, show that the total contributions provided by the Non-Federal Sponsor for *total study costs* exceed the Non-Federal Sponsor's total required share thereof, the Government, subject to the availability of funds and as limited by Article II.B.5. of this Agreement and the *Section 206 Annual Program Limit*, shall refund or reimburse the excess amount to the Non-Federal Sponsor within 90 calendar days of the date of completion of such accounting. In the event the Non-Federal Sponsor is due a refund or reimbursement and funds are not available to refund or reimburse the excess amount to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund or reimbursement.

ARTICLE V - 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. Each party shall pay an equal share 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 VI - 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, or 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, or other evidence in accordance with these procedures and for a minimum of three years after completion of the accounting for which such books, records, documents, or other evidence were required. 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, records, documents, or other evidence.

B. In accordance with 32 C.F.R. Section 33.26, the Non-Federal Sponsor is responsible for complying with the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507), as implemented by 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 *Study* shall be included in *total study costs* and shared in accordance with the provisions of this Agreement.

C. In accordance with 31 U.S.C. 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 Amendments of 1996. 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 study costs* and shared in accordance with the provisions of this Agreement.

ARTICLE VII - FEDERAL AND STATE LAWS

In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and the Government shall 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 and Army Regulation 600-7, entitled “Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army”.

ARTICLE VIII - 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 the other party may have to seek relief or redress against that contractor either pursuant to any cause of action that the other party may have or for violation of any law.

ARTICLE IX - TERMINATION OR SUSPENSION

A. Prior to conclusion of the *period of study*, upon 30 calendar days written notice to the other party, 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 either the Government or the Non-Federal Sponsor elects to terminate this Agreement.

B. If at any time the Non-Federal Sponsor fails to fulfill its obligations under 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 performance of the *Study* 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 *Study*.

C. In the event future performance under this Agreement is suspended pursuant to Article II.C. of this Agreement, such suspension shall remain in effect until such time that the Government notifies the Non-Federal Sponsor in writing that sufficient Federal funds are available to meet the Federal share of *total study costs* the Government projects to be incurred through the then-current or upcoming *fiscal year*, or the Government or the Non-Federal Sponsor elects to terminate this Agreement.

D. In the event that this Agreement is terminated pursuant to this Article, the parties shall conclude their activities relating to the *Study* and conduct an accounting in accordance with Article IV.C. of this Agreement. To provide for this eventuality, the Government may reserve a percentage of total Federal funds made available for the *Study* and an equal percentage of the

total funds contributed by the Non-Federal Sponsor in accordance with Article II.B.1.b. of this Agreement as a contingency to pay costs of termination, including any costs of resolution of contract claims and contract modifications. Upon termination of this Agreement, all data and information generated as part of the *Study* shall be made available to the parties to the Agreement.

E. Any termination of this Agreement or suspension of future performance under this Agreement in accordance with this Article shall not relieve the parties of liability for 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 X - 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 delivered personally or sent by telegram or mailed by first-class, registered, or certified mail, as follows:

If to the Non-Federal Sponsor: City Manager
City of San Marcos
630 E. Hopkins
San Marcos, TX 78666

If to the Government: District Engineer
ATTN: CESWF-PM-C
U.S. Army Engineer District, Fort Worth
P.O. Box 17300
Fort Worth, TX 76102-0300

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 XI - 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 XII - THIRD PARTY RIGHTS, BENEFITS, OR LIABILITIES

Nothing in this Agreement is intended, nor may be construed, to create any rights, confer any benefits, or relieve any liability, of any kind whatsoever in any third person not party to this Agreement.

ARTICLE XIII - OBLIGATIONS OF FUTURE APPROPRIATIONS

A. Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the City of San Marcos of the State of Texas where creating such an obligation would be inconsistent with applicable laws and/or the Constitution of the State of Texas.

B. The Non-Federal Sponsor intends to fulfill its obligations under this Agreement. The Non-Federal Sponsor shall include in its budget request or otherwise propose appropriations of funds in amounts sufficient to fulfill these obligations for that year, and shall use all reasonable and lawful means to secure those appropriations. The Non-Federal Sponsor reasonably believes that funds in amounts sufficient to fulfill these obligations lawfully can and will be appropriated and made available for this purpose. In the event funds are not appropriated in amounts sufficient to fulfill these obligations, the Non-Federal Sponsor shall use its best efforts to satisfy any requirements for payments or contributions of funds under this Agreement from any other source of funds legally available for this purpose. Further, if the Non-Federal Sponsor is unable to fulfill these obligations, 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 Government (Department of the Army).

DEPARTMENT OF THE ARMY

BY: _____

Christopher W. Martin
District Engineer

DATE: _____

30 SEP08

CITY OF SAN MARCOS, TEXAS

BY: _____

Rick Menchaca,
City Manager

DATE: _____

9/29/08

CERTIFICATE OF AUTHORITY

I, Michael J. Cosentino, do hereby certify that I am the principal legal officer of the City of San Marcos, that the City of San Marcos 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 Marcos in connection with the feasibility study for the Section 206 Aquatic Ecosystem Restoration Study of the San Marcos River, San Marcos, Texas, and to pay damages, to the extent permitted by law and subject to appropriation of lawfully available funds under the laws and Constitution of the State of Texas, if necessary, in the event of the failure to perform in accordance with the terms of this Agreement and that the persons who have executed this Agreement on behalf of the City of San Marcos have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this
29th day of September 2008.



Michael J. Cosentino, City Attorney

CERTIFICATION REGARDING LOBBYING

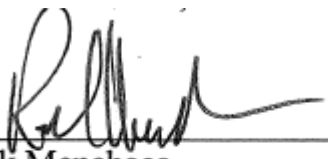
The undersigned certifies, to the best of his or her knowledge and belief that:

(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.

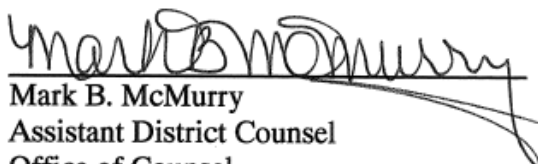
This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification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



Rick Menchaca,
City Manager
DATE: 9/29/08

CERTIFICATION OF LEGAL REVIEW

The draft Agreement Between the Department of the Army and the City of San Marcos, Texas, for the Section 206 Aquatic Ecosystem Restoration Study, San Marcos River, San Marcos, Texas, has been fully reviewed by the Office of Counsel, USAED, Fort Worth District, Fort Worth, Texas, and contains no deviations from the Section 105(a) - WRDA 86, As Amended Model Agreement for Cost Shared Feasibility Studies of Proposed Projects under the Continuing Authorities Program and Cost Shared Feasibility Studies under Other Program Authorities That Do Not Require Additional Authorization to Implement Projects, dated July 24, 2007.


Mark B. McMurry
Assistant District Counsel
Office of Counsel

Date: 9/25/2008

ENCLOSURE 5

SAN MARCOS RIVER SECTION 206 PROJECT DETAILED PROJECT REPORT & ENVIRONMENTAL ASSESSMENT

QUALITY CONTROL AND OBJECTIVES PLAN

PROJECT:

San Marcos River Section 206 Aquatic Ecosystem Restoration; Feasibility Phase; Integrated Detailed Project Report (DPR) and Environmental Assessment (EA).

PROJECT PARTNERS:

- Federal “Government” – Fort Worth District, U.S. Army Corps of Engineers (USACE)
- Non-Federal “Sponsor” – City of San Marcos

PROJECT DESCRIPTION:

The overall project goal is the restoration and enhancement of aquatic and terrestrial resources on specified tracts of land along the San Marcos River in San Marcos, Texas. The purpose of this project is to restore in-stream aquatic habitats, wetland resources, water quality conditions, and bottomland communities to benefit resident and migratory wildlife species and recreational/educational interests within the projects Region of Influence (ROI). The City of San Marcos is the non-Federal Sponsor who will provide the lands for the recommended plan and will be responsible for final operation and maintenance of the project.

FEASIBILITY STUDY MANAGEMENT:

For this project, Jeffery A. Tripe is designated as the USACE Project Manager (PM) and Ms. Melani Howard as the Sponsor PM. Together, they will assure full commitment of Government and Sponsor resources, and perform the following major duties for successful project completion:

- Finalize the schedule for project completion and establish milestone dates.
- Establish a budget for the project along with cost control and invoicing procedures.
- Establish methods and formats for project status reviews.
- Execute required project agreements (i.e., Feasibility Cost Sharing Agreement, FCSA).
- Establish a budget for the project along with cost control and invoicing procedures.
- Manage day-to-day work activities, assigning personnel as needed to meet schedule.
- Coordinate with and monitor progress of in-house and contractor work.
- Prepare pertinent meeting agendas, meeting minutes, interoffice memoranda, letters, and other information necessary to document approval of work items or key discussions regarding the study work, scope, schedule or budget.
- Prepare, finalize, and implement the Project Management Plan (PMP), Quality Control Plan (QCP), and any required Architectural-Engineer (A-E) scopes of work (SOW).

STUDY CONTACTS:

Mr. Jeffry A. Tripe
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Fort Worth District, USACE
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Fort Worth, Texas 76102-0300
Phone: (817) 886-1716

Ms. Melanie Howard
Watershed Protection Manager
City of San Marcos
630 East Hopkins
San Marcos, Texas 78666
Phone: 512-393-8410

STUDY OBJECTIVES:

The Government and Sponsor shall be responsible for completion of Feasibility Study objectives as defined by the USACE six-step planning process. Completion of the planning objectives will result in a final DPR/EA report, which documents the planning process, formulation of the recommended plan, and recommendations of the District Engineer.

- **Step 1:** Specification of Water and Related Land Resources Problems and Opportunities Associated with the Federal Objective and Specific State and Local Concerns.
- **Step 2:** Inventory, Forecast, and Analysis of Water and Land Resource Conditions within the Planning Area Relevant to the Identified Problems and Opportunities.
- **Step 3:** Formulation of Alternatives.
- **Step 4:** Evaluation of the Effects of the Alternatives.
- **Step 5:** Comparison of Alternatives.
- **Step 6:** Select a Recommended Plan Based Upon Comparison of “Best Buy” Plans.

STUDY DELIVERABLES:

Major products of the planning process shall include: (1) a DPR prepared in accordance with the requirements of ER 1105-2-100; (2) an EA and decision document with all National Environmental Policy Act (NEPA) documentation; and (3) conceptual level technical appendices documenting feasibility of recommended restoration features. Additional technical appendices shall be prepared as needed to support the conclusions and recommendations contained in the DPR/EA. Iterations of the DPR/EA and Finding of No Significant Impact (FNSI) will include:

- **Draft Alternative Formulation Briefing (AFB) report.** Following identification of a recommended plan, a Draft AFB report will be prepared. The report will consist of the first six chapters of the DPR/EA: Introduction, Existing Conditions Inventory, Resource Significance, Existing Degradation & Project Planning Criteria, Formulation of Project Features, and Evaluation & Comparison of Project Features. The report will be used to conduct the AFB meeting with the Southwestern Division (SWD) USACE.
- **Draft DPR/EA with Draft Finding of No Significant Impact (FNSI).** Following the AFB and Recommended Plan Meetings, a Draft DPR/EA and Draft FNSI will be prepared to include: an Executive Summary, Introduction, Existing Conditions Inventory, Resource Significance, Existing Degradation & Project Planning Criteria, Formulation of Project Features, Evaluation &

Comparison of Project Features, Description of the Recommended Plan, Environmental Consequences, Environmental Compliance, Project Implementation, Public & Agency Coordination, Conclusions & Recommendations, List of Preparers, References, and associated tables/figures/appendices.

- **Final DPR/EA with Draft FNSI.** Following review of the Draft DPR/EA and Draft FNSI, final adjustments will be made to the document. The Final DPR/EA and Draft FNSI will be routed through the Fort Worth District USACE to have the DPR/EA signature page signed. Copies will then be prepared for distribution during the public review period to interested entities, City of San Marcos, resource agencies, and other designated points of contact.
- **Final DPR/EA with Final FNSI.** Following the public review period, all public comments will be documented and addressed as necessary. The Government will finalize the FNSI and any required changes to the Final DPR/EA based on the public comments. The Final FNSI will then be provided to the District Engineer for signature and forwarded to the SWD USACE for final approval.

Supporting appendices to the DPR/EA will include at minimum:

- Existing conditions documentation with site photographs and mapping.
- U.S. Fish and Wildlife Service (USFWS) Fish and Wildlife Coordination Act Reports (FWCA), supporting Planning Aid Letters (PAL); List of Threatened & Endangered (T&E) species, and documentation of Section 7 consultation with a Biological Opinion (BO).
- Existing cultural resources data and Memorandum of Agreement (MOA) with the Texas Historical Commission (THC).
- Hazardous, Toxic, and Radio-Active Waste (HTRW) documentation.
- Supporting Hydrologic & Hydraulic (H&H), Geotechnical, and Engineering data.
- Incremental Cost Analysis (ICA) information with supporting habitat assessment data and conceptual cost estimates.
- Conceptual level design details for recommended restoration features.
- Plans for recommended restoration features (i.e., planting and demolition plans).
- Gross appraisal of proposed restoration Lands, Easements, Rights-of-Way, Relocations, and Disposal Areas (LERRDs) with project real estate plan.
- Draft Project Partnership Agreement (PPA) and Sponsor Letter of Intent (LOI).
- Documentation of National Environmental Policy Act (NEPA) compliance and pertinent project correspondence.

QUALITY REVIEWS:

Quality Assurance of all project deliverables will be conducted by the Fort Worth District USACE. Review Project Delivery Team (PDT) members and their supervisors (**Table 1**) will be responsible for review and commentary on technical related products that are produced by in-house team members, the non-Federal Sponsor, and any Architectural-Engineering (A-E) firms. Reviews for Feasibility deliverables shall occur at several stages during development of the DPR/EA to ensure questions and issues are addressed before progressing to the next level.

The reviews will critique all deliverables for clarity and technical adequacy in accordance with USACE expectations, acceptability and standards of engineering practice. The review process will propose and assess modifications as necessary, and endorse the submittal documents for presentation to upper level management. The review process will include written comments, determination of responses, and follow-up on how significant comments were resolved.

Table 1. Review and Supervisory PDT Members by Name and Discipline.		
Discipline	Review Member	Supervisory Member
Sponsor PM	Melani Howard	Melani Howard
USACE PM / Planner / Environmental	Jeff Tripe	Mark Harberg
Account / Program Manager	Marcia Hackett	Kevin Craig
Cultural Resources	Ann Chancey	Nancy Parrish
Public Affairs	Clayton Church	Rhonda Paige
BCOE Review Coordinator	Delissa Hamilton	Debbie Castens
HTRW	Mark Vercoe	Janet Welch
GIS / Mapping	Phuong Tran	Eli Kangas
Regulatory	Jennifer Walker	Stephen Brooks
H&H	Mike Velasquez	Darlene Prochaska
Civil Design	Efren Martinez	Mark Black
John VanLeeuwen	Jun Robbins	John VanLeeuwen
Geotechnical Design	Josh Pickering	Ramanuja Kannan
Real Estate	Anthony Dunni	Randy Roberts
Cost Engineering	Samuel Howarth	Milton Schmidt
Office of Counsel	Kendra Laffe	Rex Crosswhite

An Alternative Formulation Briefing (AFB) will be conducted with SWD USACE following identification of a recommended plan. The purpose of the briefing will be to review the first six chapters of the DPR/EA: Introduction, Existing Conditions Inventory, Resource Significance, Existing Degradation & Project Planning Criteria, Formulation of Project Features, and Evaluation & Comparison of Project Features. The briefing is required to ensure that project alternatives have been properly formulated, legal and policy issues have been identified, consensus on resolution has been reached, and SWD concurs with the plan that will likely proceed into the Design and Construction Phase. Following approval of the AFB report, the Feasibility Phase will continue with development of the Draft DPR/EA and Draft FNSI.

Upon completion of the Final DPR/EA and FNSI, the document will be forwarded to the District Engineer to sign and execute the FNSI. The final package will then be forwarded to SWD USACE for final review and approval before proceeding into the Design & Construction phase.

MILESTONE SCHEDULE:

Table 2 below outlines the current schedule for completion of major milestones as defined by the USACE standard Civil Works (CW) Work Breakdown Structure (WBS) for use in monitoring the progress of the Feasibility Study and for submittal to higher Corps authorities for project authorization. The CW WBS milestones shall be progressed and monitored by the USACE PM using the Corps Primavera Project Manager (P2).

Table 2. Outline of CW WBS Milestones During the Feasibility Study		
WBS Code	Milestone Description	Scheduled Completion Date
CW000	Federal Interest Determination (FID)	September 2003*
CW060	FID Guidance Memo	October 2003*
CW110	Feasibility Approval	October 2003*
CW030	PMP Start	April 2008*
CW070	Agreement Start (FCSA)	July 2008*
CW080	Agreement Submittal (FCSA)	September 2008*
CW090	Agreement Approval (FCSA)	September 2008*
CW130	Agreement Execution (FCSA)	September 2008*
CW140	Start DPR/EA Report	August 2009
CW040	PMP Approval	January 2010
CW400	Ready to Advertise AE Contract	February 2010
CW801	AE Contract Award	March 2010
CW190	Alternative Formulation Briefing (AFB)	September 2010
CW060	AFB Guidance Memo	September 2010
CW150	Draft DPR/EA Report Submittal	January 2011
CW250	Public Review Period Start	January 2011
CW200	EA & FNSI Complete	April 2011
CW230	FNSI Signed	May 2011
CW160	Final DPR/EA Report Submittal	June 2011
CW170	Final DPR/EA Report Approval	July 2011

* Represents Feasibility Phase milestones with actual completion dates.

DETAILED STUDY SCHEDULE:

Table 3 below outlines the detailed schedule of work for all activities required to complete the USACE six-step planning process. The milestones following the A-E Contract Award are also included. The table includes Government, Sponsor, A-E, and PDT activities to show the impact of all deliverables on the project schedule. Activity durations are based on best professional judgment and a five day workweek with holidays. Overall project completion time from the initial start date is estimated to be approximately 28 months. The completion time is based on a fully-funded Feasibility Phase. Therefore, delays in Federal appropriations or receipt of non-Federal funds will result in overall project delays.

Table 3. Proposed Schedule of Work for the San Marcos River Section 206 Aquatic Ecosystem Restoration Project.				
Planning Steps	Milestone	Activity Description	Activity Duration**	Meeting Type / Deliverables*
	CW400	Ready to Advertise AE Contract	February 2010	
	CW801	AE Contract Award / Notice to Proceed	March 2010	
Step 1		Kickoff Meeting / Critical Path Method (CPM) / Quality Control Plan (QCP)	10 days from Notice to Proceed / Contract Award	Kickoff Meeting at the City of San Marcos; DC1 (CPM); DC2 (QCP)
		Meeting Minutes / USACE Review / Incorporation of Comments	10 days after Kickoff Meeting	DC3 (Meeting Minutes)
		Public / Agency Coordination / Mailing List	20 days after Kickoff Meeting	DC4, DG1, DS1 (Mailing List)
		Agency Letters / Initiate Informal Section 7 Consultation	15 days after Preparation of the Mailing List	DC5 (Coordination Letters)
Step 2		Exiting Conditions Inventory / Background Database Collection	120 days after Agency Letters	DC6 (Surveys); DC7 (Modeling); DC8 (Cultural); DG2 (Phase I); DO1 (PAL)
		Institutional, Public, and Technical Significance / Recognition	30 days after Existing Conditions Inventory	To be included in DPR/EA text
		Existing Degradation and Project Planning Criteria	30 days after Resource Significance documentation	To be included in DPR/EA text; DG3, DO2 (Future “without” Project)
Step 3		Formulation of Project Features	90 days after Degradation and Project Planning Criteria	DC9 (Outline of project features with conceptual construction methods)
Step 4 and 5		Evaluation & Comparison of Project Features	30 days after Project Formulation	DC10 (Construction Costs); DG4, DO3 (Future “with” Project); DG5 (ICA)
		Draft Alternative Formulation Briefing Report	30 days after receipt of ICA results	DC11 (Draft AFB Report)
		USACE Review of Draft AFB Report	30 days after receipt of Draft AFB Report	DG6 (Draft AFB Report Comments)
		Draft AFB In-Progress Review (IPR) Meeting	3 days after receipt of Government Comments	Conference call with updated comment matrix
		Check-Copy AFB Report	15 days after IPR Meeting	DC12 (Check-Copy AFB Report)
		SWD Review of Check-Copy AFB Report	30 days after receipt of Check-Copy AFB Report	
	CW190	AFB Meeting with SWD	5 days after SWD review of Check-Copy AFB Report	DG7 (Check-Copy Report Comments)
		Check-Copy IPR Meeting	3 days after AFB Meeting with SWD	Conference call with updated comment matrix
		Final AFB Report	15 days after IPR Meeting	DC13 (Final AFB Report)
	CW060	Guidance Memo (AFB)	30 days after Final AFB Report	DG8 (AFB Guidance Memorandum from SWD)
Step 6		Selection and Description of Recommended Restoration Plan	5 days after receipt of AFB Guidance Memo	Recommended Restoration Plan Meeting at Corps
		Description of Recommended Restoration Plan	30 days after Recommended Restoration Plan Meeting	DC14 (Designs); DC15 (Construction Costs); DG9 (RE Plan & Gross Appraisal)
		Environmental Consequences	60 days after Recommended Restoration Plan Meeting	DG10 (Cultural-Geotech Results); DC16 (Preliminary Draft Biological Assessment)
		USACE Review of Preliminary Draft BA	30 days after receipt of Preliminary Draft BA	DG11 (Preliminary Draft BA comments)
		Draft BA	15 days after receipt of Government Comments	DC17 (Draft BA)
		USFWS Review of Draft BA	45 days after receipt of Draft BA	DO4 (USFWS comments on Draft BA)
		Final BA / Initiate Formal Section 7 Consultation	15 days after receipt of USFWS comments	DC18 (Final BA)
		USFWS Draft Biological Opinion (BO)	90 days after Initiation of Formal Consultation	DO5 (Draft BO)
		USACE Review of Draft BO	45 days after receipt of Draft BO	DG12 (Draft BO comments)
		USFWS Delivers Final BO / End Formal Section 7 Consultation	45 days after receipt of Draft BO	DO6 (Final BO)
		Draft DPR/EA and Draft FNSI	15 days after Recommended Restoration Plan Meeting	DC19 (Draft DPP/EA and Draft FNSI,
		USACE Review of Draft DPR/EA and Draft FNSI	30 days after receipt of Draft DPR/EA/FNSI	DG13 (Draft DPR/EA/FNSI Comments)
		Draft DPR/EA and Draft FNSI IPR Meeting	5 days after receipt of Government comments	Conference Call with updated comment matrix
	CW150	Final DPR/EA, Draft FNSI, and Public Notice of Availability (NOA)	15 days after Draft DPR/EA/FNSI IPR Meeting	DC20 (Final DPR/EA and Draft FNSI, Coordination Letters, NOA)
	CW250	Public Review Period	30 days after issuance of NOA and Mailings	
		Public Comments IPR Meeting	5 days after Public Review Period	Conference Call with updated comment matrix
	CW200	Final DPR/EA and Final FNSI	15 days after Public Comments IPR Meeting	DC21 (Final DPR/EA and Final FNSI)
	CW230	FNSI Signed	10 days after receipt of Final DPR/EA/FNSI	DG14 (District Commander Signs FNSI)
	CW160	Final DPR/EA Report Submittal	5 days after FNSI Signature	
	CW170	Final DPR/EA Report Approval and Administrative Record	30 days after Final DPR/EA Report Submittal	DG15 (SWD Memorandum); DC22 (Administrative Record)

* Government (G), Contractor (C), Sponsor (S), and Other Agency (O) deliverables are included to show the overall project schedule. **Overall project completion time from the initial start date will be approximately 28 months.