

## DETAILED STATEMENT OF WORK

Attached to and made a Part of contract No. DACW57-97-D-0004

Task Order No. DY01

### Source Water Protection Plan Perchlorate Study Lake Belton and Lake Waco, Texas

March 21, 2001

**1.0 GENERAL.** The A-E shall furnish all services, materials, supplies, plant, labor, equipment, investigations, studies, superintendence and travel, as required, for developing a Source Water Protection Plan in accordance with the original basic contract and this Detailed Statement of Work (SOW). Appendix "A" of the basic contract shall be followed for performance requirements for A-E services. Where this SOW conflicts with Appendix "A", this SOW shall govern. The A-E shall, without additional expense to the government, obtain any necessary licenses and permits, and shall comply with all Federal, State of Texas and local laws, regulations, rules and codes applicable to performance of the tasks in this SOW.

**1.1 PROJECT OVERVIEW.** Lake Belton and Lake Waco are threatened from releases of perchlorate within their watersheds. The goal of this project is to perform watershed characterization, modeling, and analysis necessary to develop a source water protection plan to ensure the safety of the sole-source drinking water supply for the communities surrounding Lake Belton and Lake Waco.

**1.2 PROJECT LOCATION.** This assessment, focusing on areas currently impacted by the release of perchlorate, or areas potentially impacted in the future, includes the Leon River Watershed, Little River Watershed, Central Watershed of the Brazos River, and the Bosque River Watershed, all under the jurisdiction of the Brazos River Authority (BRA).

**1.3 PERIOD OF PERFORMANCE.** April 2001 through September 2002.

**2.0 SCOPE.** The Scope of Work for this task order includes the tasks and schedules presented below. Once the preliminary data and model are completed, a modification to this scope of work is anticipated to include a field data collection plan, field data collection, installation of monitoring wells, development of a GIS database for the compilation of data and the final model to determine contamination pathways and potential receptors.

**2.1 Task 1 - COMMUNITY RELATIONS PLAN.** The A-E shall develop

a Community Relations Plan (CRP). This plan will guide the study team in disseminating information about the study and its progress to the general public. The CRP will include the following:

**2.1.1 Task 1.1 - DEVELOP STAKEHOLDER OUTREACH PLAN.** The A-E shall develop a database of project stakeholders based on existing sources. The CRP shall address the needs and concerns of these stakeholders. The USACE will be the primary point of contact for public information. The CRP shall establish a systematic program for keeping federal, state, county, and local elected officials informed on the project status and findings through a communication network and scheduled briefings. To develop this plan, the A-E shall conduct face-to-face interviews with 10-15 area residents and community leaders and shall incorporate workable suggestions into the final CRP. The questionnaire to be used in these interviews shall be developed by the A-E with input from both the Corps of Engineers (COE) and the BRA. The plan shall address the needs of the general public and special interest groups through a dedicated public information web site and through a series of public briefings, presentations, and special events. Project fact sheets, public information pieces, press releases, and other media material shall be identified in the plan, along with various public information dissemination and distribution options. The plan shall program the schedule of presentations and briefings in coordination with the overall project schedule and shall define the various media pieces and other deliverables associated with the stakeholder outreach efforts.

**2.1.1.1 DELIVERABLE.** The resulting CRP shall include the following sections:

- \* Table of Contents
- \* Table of Figures and/or Tables (as needed)
- \* Executive Summary
- \* Overview of Community Relations Plan
- \* History of Study to Date
- \* Community History
- \* Community Relations Activity
- \* Schedule of Community Relations Activities
- \* References and/or Appendices (as needed)

**2.1.2 Task 1.2 - DEVELOP & MAINTAIN DEDICATED PUBLIC INFORMATION WEB SITE.** The A-E shall develop a dedicated project public information web page and maintain it as part of the overall outreach program. The web page shall include various media pieces along with public reports, meeting notices and other project data. This web page will be a focal point for routine public communication and notice and shall be updated on a monthly basis. The project public information web page, hosted by the COE, will be linked to other federal, state, county, and local web sites as well as web sites of

other public interest groups and web sites related to perchlorate issues.

**2.1.3 Task 1.3 - ELECTED OFFICIALS BRIEFINGS.** This project will be of particular interest to groups of elected officials at various governmental levels. Formal briefings will be scheduled for congressional representatives and other federal officials with particular interest in the project. Specifically, the A-E shall present one scheduled Federal briefing in Washington D.C., one briefing for State, county, and local elected officials in the Waco area, and two briefings for local elected officials with special interest in this project and its progress, also in the Waco area.

**2.1.4 Task 1.4 - PUBLIC MEETINGS & PRESENTATIONS.** The general public and special interest groups are to be briefed on the project status and findings through a series of general public information and education meetings. These meetings should be scheduled at key milestones in the project and should generally fall into the following categories:

- \* Initial Public Information/Education Briefing - A briefing on general issues and plans at the outset of the project
- \* Presentations to Stakeholder group - Three special briefings to the Stakeholder group, community associations or other special interest groups.

**2.1.5 Task 1.5 - MEDIA.** To supplement the web site as a means of disseminating general public information, a series of printed media shall be developed for general public distribution. Files shall be in PDF format and all reproduction shall be carried out by the COE. This media should focus on general public education as to the issues and facts surrounding the project. A detailed list and scope of printed media should be included in the Community Relations Plan. The printed media shall include the following:

- \* Public Information / Public Education pieces - two modular public information / public education pieces will be developed with appropriate photos and graphics. The pieces are to define project issues, general findings and are meant to provide information to the public regarding the purpose and schedule of the study. These pieces are to be suitable in form, format and content for inclusion in various public newsletters, news supplements, utility bill stuffers, fliers, and other forms of general public printed material.
- \* Press Releases - One press release shall be prepared at an appropriate project milestone (to be determined) and in association with a special event. The press release will be handled through the USACE. The press release

will form the basis of communication with area public print media as well as radio and television media outlets.

**2.2 Task 2 - COMPILE, REVIEW, AND SUMMARIZE EXISTING INFORMATION TO CHARACTERIZE BACKGROUND CONDITIONS.**

A detailed and comprehensive compilation and review of available data coupled with a careful interpretation of relevant data is a prerequisite to development of meaningful and representative conceptual modeling (Task 3). Furthermore, a review of existing data types, utility, and spatial distribution will help focus and shape the field data collection Work Plan and Preliminary Monitoring Program that will be prepared as a modification to this scope of work. It is understood that significant data associated with previous work in the study area exists for the watershed and this data is available for this project. Furthermore, it is assumed that this data is available primarily in electronic format, including, but not limited to electronic databases and GIS coverage. The A-E shall take the lead in compiling the existing data, with assistance from both the COE and the BRA. The COE will provide all COE data and all available data from Ft. Hood.

**2.2.1 INFORMATION SOURCES.** Various sources for existing information include:

- \* EnSafe/Navy (NWIRP)
- \* CH2M Hill
- \* TNRCC
- \* Fort Hood
- \* USACE
- \* TSSWCB
- \* NRCS
- \* Black Lands Research Center
- \* Brazos River Authority
- \* City of Waco
- \* Baylor University, including Dr (s). Yelderman and Lind
- \* U.S. Geological Survey
- \* County Appraisal Districts
- \* Texas Park and Wildlife
- \* U.S. Fish and Wildlife
- \* Southern Nevada Water Authority
- \* Soil Conservation Service
- \* World Wide Web

It is anticipated that sources of data, in addition to those listed above, will be identified during the execution of this task. This scope of work does not limit the compilation of data to the entities provided in the bulleted list above. Rather, this list is meant to serve as a guide in the data compilation efforts. These data sources will be reviewed only to the extent that they are relevant to the development of the conceptual site model.

**2.2.2 DATA TYPES.** Specific data types presumed to be available from different entities are listed below. These specific sources for various data types must be first identified and later compiled for subsequent review and summary.

- \* Existing reports
- \* Electronic databases
- \* GIS coverage and themes
- \* Groundwater quality data
- \* Perchlorate plume delineation
- \* Soil and sediment data
- \* Stormwater quality data
- \* Lakes Waco and Belton water quality data
- \* Intake structure water quality data
- \* Water level data
- \* Well location and survey information
- \* Precipitation data (current and historic), as well as related weather station data
- \* Species occurrence lists
- \* Threatened and endangered species lists
- \* Geologic and geophysical data
- \* Toxicology data
- \* Land ownership, specifically landowners adjacent to streams
- \* Water budget information
- \* Lake flow pattern models
- \* Lake outflow data
- \* Flow patterns
- \* Bathymetric surveys
- \* Topographic information
- \* Regional groundwater flow data
- \* Land use data
- \* Stream gauging
- \* Runoff data

**2.2.3 DATA REPOSITORY.** Data compilation will facilitate the establishment of a data repository for all existing study area data. Data review and summary shall be focused on defining the following project components in preparation for the development of an Initial Conceptual Model (Task 3), a field data collection Work Plan and Monitoring Program (to be included as a modification to this scope of work), and eventually a Numerical Model (also to be included as a modification to this scope of work).

- \* Study Area
- \* Contamination Source Sites
- \* History of Previous Investigations in Study Area
- \* Environmental Setting, including:
  - \* Regional Geology
  - \* Climate
  - \* Groundwater Hydrology
  - \* Surface Water Hydrology

- \* Biology
- \* Demographics/Land Use
- \* Key Stakeholders, including
- \* Water Suppliers
- \* Water Users (cities, industries, agriculture, wildlife, etc.) Federal/State/Local Governmental Agencies

**2.2.4 DELIVERABLE.** A bibliographic summary of the compiled data shall be prepared in Microsoft Excel or Microsoft Access format (1998 or later version). This summary shall include information regarding the source, the format, the type, the age, and the approximate quantity of the data. Two electronic copies of this bibliography are to be provided on a standard CD-ROM disk, one for the BRA and one for the COE.

**2.3 Task 3 - DEVELOP INITIAL CONCEPTUAL WATERSHED MODEL.** The purpose of this task is to define the preliminary Conceptual Site Model (CSM). The CSM will be a qualitative, descriptive model that is supported with appropriate graphics depicting key relationships, which will include the following:

- \* relationships between the various components of the water cycle in the study area,
- \* identification of preliminary migration pathways,
- \* identification of preliminary exposure pathways,
- \* and identification of both human and ecological potential receptors.

**2.3.1 RELATIONSHIPS.** Examples of key relationships to address during development of the conceptual model includes, but are not limited to, the:

- \* Shallow aquifer and deeper Trinity aquifer
- \* Aquifer recharge, shallow groundwater flow, and subsequent discharge
- \* Interaction of the lakes, streams, and groundwater system
- \* Nature and extent of perchlorate contamination in the watersheds
- \* Fate and transport of perchlorate in the watershed system
- \* Water budgets for the watersheds
- \* Hydraulic connectivity of various watershed components

**2.3.2 TEAM COORDINATION.** Texas Tech is concurrently performing a study of ecological and toxicological effects of perchlorate in the study area. The conceptual watershed model developed under this task description shall be fully coordinated and integrated with the work being performed by Texas Tech (TT). To facilitate this coordination, a 2-day team meeting and workshop will be scheduled prior to completion of the draft CSM to be attended by TT, Drs. Lind and Yelderman, COE, BRA, MW. Data gaps regarding physical study area characteristics, nature and extent of perchlorate

contamination, migration pathways, and exposure pathways shall be identified based on the conceptual watershed model. The identified and prioritized data gaps will serve as the basis for development of the field data collection program under a subsequent modification to this task order.

**2.3.3 DELIVERABLE.** Technical Memorandum No. 1 (TM 1) - Conceptual Site Model. The A-E shall prepare TM 1, which presents the CSM. The CSM shall include explanatory text and shall be supported with appropriate graphics, maps, and data summary tables to convey an understanding of the model to both technical and non-technical audiences. TM 1 shall also include a table that clearly lists the identified data gaps, a general description of required actions to close each data gap, and the relative importance of each data gap with regard to addressing key components of the CSM. The draft and final deliverables shall be provided as a single Adobe Acrobat (.pdf) file. A review of the draft CSM shall be scheduled to coincide with a bi-monthly team meeting to reduce the cost of travel.

**2.4 Task 4 - PROJECT REPORTING AND PAYMENT REQUESTS.** A Monthly Progress Report shall be submitted once each month during the contract period. The report shall contain the status, on a percentage basis, of the total amount of work completed. Payment requests shall also be included with the progress report and percent claimed will coincide with the Progress Report. These reports shall be E-mailed to the COE Engineering Manager as electronic Microsoft Word files, to document the status of the study and to report progress made during the past month.

**2.5 MEETINGS.** For estimating purposes, the following is a list of meetings to be attended by the A-E.

- \* one Federal briefing in Washington D.C.
- \* one briefing for State, county, and local elected officials in the Waco area
- \* two briefings for other interested local officials in the Waco area
- \* one initial Public Information/Education Briefing in the Waco area
- \* Three presentations to Stakeholder group in the Waco area
- \* one two-day team meeting to coordinate work on the CSM at the COE in Fort Worth
- \* five bi-monthly team meetings scheduled to coincide with the Navy's Restoration Advisory Board (RAB) meetings for the Naval Weapons Industrial Reserve Plant
- \* one meeting concurrent with a bi-monthly team meeting noted above, to review the draft CSM

**3.0 DELIVERY SCHEDULE.**

**3.1 Task 1.1: STAKEHOLDER OUTREACH PLAN.**

**3.1.1 Task 1.1: DRAFT STAKEHOLDER OUTREACH PLAN.** Four copies of the draft Stakeholder Outreach Plan shall be submitted within 45 calendar days from award of this task order. Two copies to the BRA and two copies to the COE.

**3.1.2 Task 1.1: FINAL STAKEHOLDER OUTREACH PLAN.** Four copies of the Final Stakeholder Outreach Plan shall be submitted within 15 calendar days from receipt of comments. Two copies to the BRA and two copies to the COE.

**3.2 Task 1.2: DEVELOP & MAINTAIN DEDICATED PUBLIC INFORMATION WEB SITE.** The web page shall be accessible to the public within 60 calendar days from task order award. The web page shall be updated, as a minimum, once a month, to provide the public with current information about the study.

**3.3 Task 1.3:ELECTED OFFICIALS BRIEFINGS.** The schedule for this task shall be determined.

**3.4 Task 1.4: PUBLIC MEETINGS & PRESENTATIONS.** The schedule for this task shall be determined.

**3.5 Task 1.5: MEDIA.** The schedule for this task shall be determined.

**3.6 Task 2: COMPILE, REVIEW, AND SUMMARIZE EXISTING INFORMATION TO CHARACTERIZE BACKGROUND CONDITIONS.** An electronic bibliography from this task shall be completed within 180 calendar days from the task order award with one electronic copy sent to the BRA and one to the COE.

**3.7 Task 3: DEVELOP INITIAL CONCEPTUAL WATERSHED MODEL.** The model shall be completed within 275 days from task order award.

**3.8 Task 4: PROJECT REPORTING.** The A-E shall submit nine monthly reports due on or before the twelfth day of each month.

**4.0 PROJECT COORDINATOR AND/OR MANAGER.**

**4.1 CONTRACTOR PROJECT MANAGER.** The A-E shall appoint a Project Manager to serve as a single point of contact and liaison between the A-E and the Contracting Officer and/or his representative(s) during the execution of the task order. The A-E's Project Manager shall be responsible for coordinating the work performed under this task order and ensuring work will be accomplished with technical accuracy and minimal conflicts, errors, and omissions. The A-E shall immediately furnish the name of the designated individual in writing to

the Government's Engineering Manager upon award of the task order.

**4.2 GOVERNMENT MANAGERS.** The Government's Engineering Manager for this effort is Mr. Henry Kasten, P.E., Environmental Design Branch (CESWF-PER-D), telephone 817-978-3977, extension 1648. Any questions about contract procedures should be directed to the COE Engineering Manager. The Government's Technical Manager for this effort is Mr. Wayne Elliott, P.E., Environmental Design Branch (CESWF-PER-DI), telephone 817-978-3221, extension 1666 (FAX No. - 2991). Mr. Elliott is responsible for coordinating with the A-E, and the stakeholders to ensure the technical requirements of the task order are met upon its completion.

**5.0 MEETING MINUTES AND CONFIRMATION NOTICES.** The A-E shall provide a record of all conferences, meetings, discussions, verbal directions, telephone conversations, etc., participated in by the A-E and/or his representatives on matters relative to this Task Order and the work. These records, entitled "CONFIRMATION NOTICES", shall be numbered sequentially and shall fully identify participating personnel, the subject discussed and any conclusions reached. The A-E shall forward to the Engineering Manager, not more than five calendar days after preparation, an electronic copy (E-mail) of each confirmation notice.

**6.0 POC.**

**6.1 POC For BRA.**

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**6.2 POC For COE - ENGINEERING MANAGER.**

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**6.3 POC For COE - TECHNICAL MANAGER.**

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