

Request for Proposal
for
Levee Certification Inspection Services
for the
Southwestern Illinois
Flood Prevention District Council

October 15, 2009

Levee Certification Inspection Services

The Southwestern Illinois Flood Prevention District Council (the Council) is requesting proposals from firms or individuals to conduct certification inspections of levee systems along the Mississippi River in Madison, St. Clair and Monroe Counties. The inspections will determine compliance with regulations of the Federal Emergency Management Agency, 44 CFR 65.10 (Mapping of Areas Protected by Levee Systems).

After reviewing the proposals, the Council's Board of Directors will select a consultant from among the respondents to this RFP.

Responses to this RFP are due at the offices of the Southwestern Illinois Flood Prevention District Council on November 10, 2009 at 5:00 pm local time. Proposals not received by the deadline will be returned unopened. Facsimile or electronic responses will not be accepted, except as they are provided in addition to the required paper documents. All materials submitted in response to this RFP become the property of the Council and will not be returned.

Respondents should submit 12 copies of the submittal and one copy of any supporting materials to:

Mr. Les Sterman, Chief Supervisor of Construction and the Works
Southwestern Illinois Flood Prevention District Council
104 United Drive
Collinsville, IL 62234

Respondents should also submit an electronic copy (portable document or standard word processing format) to:

les.sterman@fpdcouncil.org

Any supplemental information, including questions and answers, about this solicitation will be provided on the website: www.ewgateway.org.

I. Background

The Southwestern Illinois Flood Prevention District Council (the Council) is seeking proposals from individuals or firms to perform certification inspections for the levee systems providing flood protection along the Mississippi River (See Figure 1). The Council was created by intergovernmental agreement between Flood Prevention Districts (FPDs) that were created in accordance with Illinois statute (70 ILCS 750) in those three counties. The Council is responsible for the reconstruction of flood protection systems along the Mississippi River in parts of three Illinois counties -- Madison, St. Clair and Monroe; and four levee districts – Fish Lake, Prairie DuPont, Metro East Sanitary District and Wood River.

Each of the FPDs has exercised its authority to impose a ¼ cent sales tax that will be used to finance capital improvements to flood prevention systems. Revenue from the sales tax, which has been collected since January 1, 2009, will be used to pay for Council administrative costs and to service debt incurred by the Council through bond issues or other borrowing for the purpose of restoring the levee systems. Estimated receipts from the tax for 2009 are approximately \$10 million.

The Federal Emergency Management Agency (FEMA) is adopting new flood insurance rate maps across the country. As part of that process, FEMA, with the help of the U.S. Army Corps of Engineers (USACE), is reassessing the condition and adequacy of existing levees to protect against a flood that has a 1% chance of being equaled or exceeded in any single year (commonly referred to as a 100-year flood or a base flood). Although the Illinois levees in question were federally authorized and built to protect against a 500-year flood, the USACE determined that there were design deficiencies and reconstruction needs that prevented them from “certifying” that these levees could protect against a base flood.

The cost of correcting design deficiencies and rebuilding facilities is massive, potentially \$500 million or more. Costs will be paid by a combination of federal funds and the proceeds of the local sales tax. Generally, the eligible federal share of costs of these projects is 65% (except for Chain of Rocks, which is 100% federally funded), which would be “matched” by a local share of 35%. The availability of federal funds, however, is determined through federal authorizing legislation (the Water Resources Development Act) and annual appropriations, so there may be significant uncertainty in the timing and amount of federal contribution to the project.

Because of the uncertainty of federal funding and the complexity and time consuming nature of the USACE design and construction process, the Council may also consider a locally managed and funded approach to design and construction or some combination of local/federal options. In anticipation of this likely outcome, the Council is seeking an independent certification inspection to identify problems in the levee systems and is embarking on a process to identify cost-effective design solutions and construction processes.

Time is of the essence in restoring the level of protection of the levee systems in Southwestern Illinois. Until the flood protection systems are fixed, the risk of flooding and threat to public safety is elevated. Also, the reclassification of the American Bottom in Illinois as a special flood hazard area by FEMA will have a dramatic and chilling effect on economic growth, and require most homeowners to buy flood insurance at substantially increased rates, which may not be affordable for many. The hope is that the project can be substantially complete and the levees recertified in five years.

There are five levee systems included in this project (Wood River, Chain of Rocks, Metro-East Sanitary District, Prairie DuPont, and Fish Lake). Projects in those five systems are in varying stages of design and construction leading to recertification. Each of the levee systems has its own independent governance, although the Council and the FPDs have the superseding responsibility to make emergency repairs and to reconstruct the levees.

The East-West Gateway Council of Governments provided staff support to the FPDs and levee districts until the Council hired staff. EWG, on behalf of the three counties, and as part of the due diligence activities leading to the passage of the tax, retained engineering, legal and financing consultants to provide advice and counsel. The reports of the engineering and financing consultants are available on the EWG website (www.ewgateway.org) and provide useful background in describing the project.

For the last year, the Council has been working with the U.S. Army Corps of Engineers to collect subsurface data and other information to better define the problem and to arrive at a scope and cost estimate to bring the levee systems into compliance with FEMA regulation 44 CFR 65.10. Compliance with the criteria in that rule would allow FEMA to re-accredit the levees as providing adequate protection against a base flood (a flood having a one percent chance of being equaled or exceeded in any given year --sometimes known as the 100-year flood).

The certification inspection will cover all the criteria included in 44 CFR 65.10. It will include field inspection, review of existing records, analysis and complete documentation of findings. Underseepage analysis at representative locations will also be required. All of the information compiled by the USACE and by the levee districts will be made available to the contractor on this project.

This RFP will be followed shortly by a request-for-qualifications for a design consultant for the project. The Council anticipates requiring that respondents to the RFQ must also be willing to certify the levee systems for the purpose of meeting the requirements of 44 CFR 65.10. No such requirement is being made for the certification inspection contractor although it may be a consideration in the selection process.

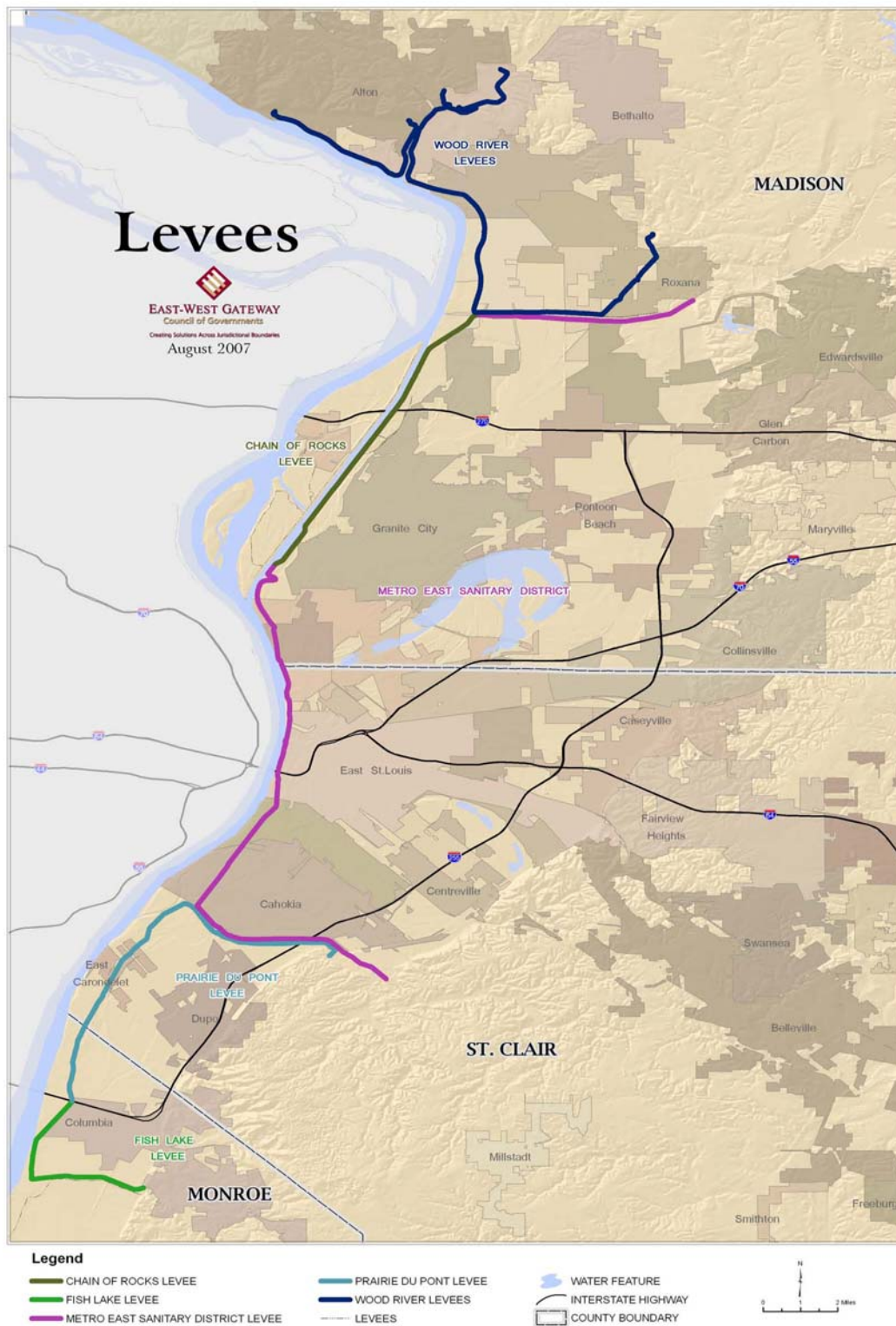


Figure 1
Levees Owned by Affected Levee Districts

II. Scope of Work

The contractor will be required to address all elements of the flood protection evaluation criteria described in 44 CFR 65.10. The following scope of work describes major work tasks necessary to meet those requirements, and responses should include these tasks or equivalent. Respondents may propose on these work tasks or may develop an alternative organization of tasks that will fulfill all of the requirements of the subject regulation. Respondents are encouraged to explore alternative methodologies that will produce reliable and acceptable products, while reducing the time and cost of the inspection.

Respondents should assume that they will have full access to data, records and analyses in the possession of the USACE, the levee districts or any other public agency relevant to completing the scope of work. Respondents should also assume that they will be granted timely and complete access to the levees and other properties that are the subject of the inspection.

- 1. Collect Existing Data.** The consultant will collect data relevant to the inspection, including, but not limited to the following:
 - a. Operations and maintenance manuals
 - b. Performance reports
 - c. Engineering and design documents (e.g., and assessment of the flood hazard, structural components, interior drainage components, geotechnical configuration and placement)
 - d. Construction records and as-built drawings
 - e. Surveys of top of protection
 - f. Flood insurance study text and maps
 - g. Current hydrologic and hydraulic modeling results
 - h. Base maps showing cross-section locations, construction techniques, and inspection reports
 - i. Flood-fighting, maintenance, repair, modification, and rehabilitation records
 - j. Annual and after-even inspection documentation
 - k. Permits for utility crossings (including encroachments)
- 2. Conduct Field Inspection to Verify and Supplement Secondary Source Documentation.** Site visits will be conducted by an appropriately staffed team and shall be coordinated with the Council and the affected levee districts. The inspection team shall be composed of individuals qualified by experience in the project management, design, construction, and operation of flood control projects, specifically levee systems, and of individuals with appropriate specialized knowledge in geotechnical, hydraulic, embankment, and structural design. The consultant shall document the conditions of levees and other facilities through visual assessment and photo-documentation. An inspection log will be maintained to ensure that all the above ground structural, hydraulic, and

geotechnical conditions are documented. Items of significance shall be geo-referenced during the inspections to ensure that the data will be readily accessible. Sufficient photos shall be taken and notes annotating the existing conditions prepared to enable future reference and certification planning, and to assist in decisions regarding the necessity of additional detailed topographic and geotechnical investigations and testing of levee materials, and identification of current maintenance needs.

Factors to be evaluated during site visits include:

- a. Evidence of settlement of the levee, or displacement of the vertical and horizontal alignment of the levee embankment, crest, slope, or toe.
- b. Evidence of erosion of the waterside and landside levee embankment slopes
- c. Unacceptable encroachments upon the levee such as excavation, backfilling of material or debris adjacent to the levee, tilling or other agricultural operations adjacent to the levee, structures, and/or utility installations.
- d. Evidence of slope stability problems, such as degradation or displacement of embankment protection materials, slope failure, sloughing or erosion of embankment or abutment slopes
- e. Trees or vegetation other than grasses growing on the levee or within 15' of the toe of the levee, evidence of felled trees with roots not grubbed out or the embankment repaired
- f. Evidence of embankment cracking, rutting depressions, or breaching
- g. Evidence of seepage through or under the embankment, or boils on the landside of the levee
- h. Closure structures such as street gates and/or railroad gates, interior drainage structures, i.e. flap gates, sluice gates, stoplog structures, etc., associated hoists and operating machinery, pumping stations and piping, that are inoperable or in need of repair
- i. Accumulation of debris and sedimentation in the channel the either results in flows being directed toward the levee or the waterside channel bank, or that reduces the capacity of the channel to convey flood flows
- j. Presence or evidence of burrowing animals
- k. Joints and joint materials, including relative movement at joints between structures or portions of structures

- 3. Perform Hydrologic and Hydraulic Analysis to Verify Adequacy of Levee Height to Contain the Base Flood.** The consultant will use accepted methodologies and the most current hydrologic and hydraulic data to do a statistical assessment of water levels for the present conditions during various potential events. The analysis should address the likelihood of a range of potential events (precipitation, snowmelt, etc.) that alone, or in concert with another type of event, produce a level of flooding that must be considered to evaluate the 1% chance exceedance performance for a levee system. The analysis

must also include consideration of whether or not different types of events can be treated as statistically independent, or if there is a statistical dependence of one type of event on another.

- 4. Perform Interior Drainage Analysis.** An analysis using accepted methodologies will be conducted that identifies the sources and magnitude of interior flooding that will be affected by the levee system. This analysis must be based on individual and joint probability of interior and exterior flooding and must include delineation of areas landward of the levee where interior runoff may pond. The consultant should evaluate the current adequacy of the interior drainage system (culverts, canals, ditches, storm sewers, drainage structures with associated gates and valves, pump stations, etc.) to convey water from rainfall or seepage to outside the protected area.
- 5. Conduct Geotechnical Analyses to Determine Critical Deficiencies.** An analysis will be developed using accepted methodologies to evaluate embankment and foundation stability, including expected seepage during base flood conditions. The analysis should determine whether seepage into or through the levee foundation and embankment will jeopardize the stability of the embankment or foundation. The contractor may consider recent underseepage analyses done by the USACE, but should also produce an independent analysis of underseepage in representative locations throughout the levee system for comparison and validation purposes. Should the independent analyses show significant variability from those done by the USACE the contractor may propose a more extensive underseepage analysis.
- 6. Produce a Certification Inspection Report.** The contractor will produce a certification report addressing all requirements of 44 CFR 65.10 and describing all deficiencies disclosed in the inspection. The report shall include complete documentation of data, assumptions, observations, and methods to serve as a full record of the inspection process and findings.

III. Content of Response

Proposals in response to this request should be directed to Les Sterman, Chief Supervisor of Construction and the Works, Southwestern Illinois Flood Prevention District Council, 104 United Drive, Collinsville, IL 62234, no later than 5:00 p.m. local time November 10, 2009. Proposals received after this time will be returned unopened. Twelve (12) copies of the proposal should be enclosed, along with a letter from a firm principal committing the proposal for a minimum of 90 days. An electronic copy of the proposal should be sent by email to les.sterman@fpdcouncil.org. The following items must be addressed in all proposals:

1. Scope of Work. The FPD Council staff has developed a general scope of work included herein. Proposals should indicate if the respondent is proposing on this scope or an alternative that will fully respond to FEMA's levee certification criteria. Respondents may include further detail regarding specific methodologies or approaches being proposed.
2. Project Schedule. Time is of the essence in completing this project. Proposals should include a detailed schedule, including a description of key assumptions, critical milestones and deliverables, a discussion of externalities that might affect the schedule, etc.
3. Contract Price. Proposals should include an estimate of the cost of services to be provided. Also required is a schedule by task of staffing level, equipment, services, and corresponding costs.
4. Qualifications. Proposals should indicate qualifications of the respondent(s) in levee inspection, geotechnical engineering, hydrologic and hydraulic analysis and other disciplines appropriate to this project, as well as specific prior experience and qualifications of the firm and assigned personnel applicable to this project. Proposals should also include the following:
 - a. resumes of key personnel to be assigned to the project
 - b. references
 - c. sample of previous work
5. Conflict of Interest Disclosure. Respondents should indicate whether they have interests or clients who might benefit financially, directly or indirectly, now or in the future, from this project and whether they have clients whose interests might coincide or conflict with the Council's.

IV. Evaluation Criteria

Proposals will be evaluated according to the following factors, in order of priority:

- A. Specialized experience and technical competence of the contractor(s) and assigned staff relative to the task requirements outlined in Section II of this RFP.
 - 1. Experience of the contractor(s) and subcontractor(s)
 - 2. Experience of the project manager
 - 3. Experience of other assigned individuals
- B. Quality of the Approach to the Project
 - 1. Understanding of FEMA requirements and regulations
 - 2. Understanding of the proposed scope of work
 - 3. Responsiveness of the proposed scope of work to the Council's requirements.
 - 4. Project schedule.
 - 5. General understanding of conditions related to this project, and the Council's needs and interests.
- C. References reflecting the previous work experience of the project team and satisfactory accomplishment of contract responsibility.
 - 1. Quality of final products
 - 2. Ability to meet work schedules
 - 3. Responsiveness to client input
- D. Willingness to certify compliance of the levee systems with 44 CFR 65.10 after completion of the levee restoration project.

V. Selection Procedure

The Council will follow a qualification-based procedure in selecting the Consultant to conduct this project. The evaluation criteria noted in Section IV will form the basis for making an initial selection. The Council will enter into negotiations with the initially selected Consultant to arrive at a scope of work and contract price. The agreed upon contract price will include fair and reasonable compensation for the services that are to be provided by the selected Consultant. In the event that a mutual agreement on scope and price is not possible, the Council will select the next highest ranked Consultant from the remaining respondents in the manner identified above and enter into negotiations for the scope and contract price.

This request does not commit the Council to award a contract, to pay any costs incurred in preparation of a response to this invitation, or to procure or contract for services or supplies. The Council reserves the right to accept or reject any or all responses received as a result of this request, or to cancel this request in part or in its entirety if it is in the best interest of the Council to do so. Respondents shall not offer any gratuities, favors or anything of monetary value to any officer, employee, agent, or director of Council for the purpose of influencing favorable disposition toward either their proposal or any other proposal submitted as a result of the Request For Proposal.

The Council reserves the right to suggest to any or all respondents to this RFP that such respondents form into teams of consulting firms or organizations deemed to be advantageous to the Council in performing the scope of work. The Council will suggest the formation of such teams when such relationships appear to offer combinations of expertise or abilities not otherwise available. Respondents have the right to refuse to enter into any suggested relationship.

All proposals submitted hereunder become the exclusive property of the Council.

IX. Other Information

Inquiries about this request should be directed to Les Sterman at the following electronic mail address: les.sterman@fpdcouncil.org. Additional information or clarification will be posted at the website www.ewgateway.org as needed.