

CERP Guidance Memorandum

South Florida Water Management District – Jacksonville District, U.S. Army Corps Of Engineers

CGM NUMBER-REVISION: 005.01

EFFECTIVE DATE: 05/09/2006

CATEGORY: Financial Management

SUBJECT: Total Project Cost Estimate Management

DESCRIPTION:

This memorandum provides guidance to the staffs of the Jacksonville District, U.S. Army Corps of Engineers (USACE), the South Florida Water Management District (SFWMD), and members of the Project Delivery Team (PDT) for the development, revision, and maintenance of the total project cost estimate for work to be pursued under the Design Agreement executed between the South Florida Water Management District and the Secretary of the Army for the implementation of the Comprehensive Everglades Restoration Plan (CERP).

As part of the CERP implementation, the SFWMD and the USACE have coordinated their respective project and financial information management systems to provide a joint and common data set for the analysis, performance measurement, and for certain non-proprietary reporting of program and project management information. For the purposes of this document, the term Design Coordination Team (DCT) refers to the combined project and financial management functions of the USACE and the SFWMD.

All CERP total project cost estimates will be prepared via the Microcomputer Aided Cost Engineering System (MCACES) unless otherwise stated in this guidance memoranda. All total project cost estimates shall be in a format that enables this data to be used by or transferred to other information systems as necessary.

Estimating procedures shall follow the USACE standard procedures, and conform to the most updated version of the following:

- Engineer Regulation, ER 1110-1-1300, "Engineering and Design - Cost Engineering Policy and General Requirements"

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- Engineer Regulation, ER 1110-2-1302, “Engineering and Design-Civil Works Cost Engineering”
- Engineer Instructions, EI 01D010, “Engineering Instructions-Construction Cost Estimates”

GUIDANCE:

Yellow Book Project Cost: The estimated individual project cost for a given project contained in the Central and Southern Florida Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement (referred to as the “Yellow Book”), April 1999.

CERP Total Project Cost Estimate: The initial CERP “Total Project Cost Estimate” is provided in the Yellow Book. *This estimate is a forecast of the cost of the entire program* and is reflected in April 1999 price levels. These costs are considered the “Feasibility Estimate”, which means they are preliminary project cost estimates that will be refined and adjusted as the projects progress through completion of planning, design, and through the completion of construction. These Feasibility Estimates shall be considered as the pre-design estimate. The “Feasibility Estimate” will be considered the Baseline Estimate to which all future Cost Estimates shall be compared and evaluated against for variances.

Authorized Project Cost: The cost contained in the authorizing Congressional language expressed in the appropriate price level (constant dollars). That is, a project authorized in Water Resources Development Act (WRDA) of 2000 would be at an October 1999 price level.

Cost Escalation and Price Leveling: Escalation is an allowance for changes in price levels due to inflation over a period of time. “Price Leveling” is a means to adjust the Current Approved Estimate (contained in the approved PMP) to account for the annual rate of inflation. Thus, the project cost is adjusted to reflect the change in price levels from October of the preceding year to October of the current year. Note, by convention, price levels are generally developed from the start of the Federal fiscal year (October).

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Current Project Cost Estimate (PB-3): The current cost estimate is the Yellow Book cost inflated yearly (using OMB inflation indices) into today's dollars. This estimate equates to the amount of dollars we would need today to build the project today. The PB-3 is a budget tool (EXCEL) used to estimate project costs in current dollars taking into consideration scope, cost changes and price levels—the cost from one year to the next year. The inflation indices are directed by OMB and released in the yearly budget Engineering Circular (EC) (March timeframe). Cost estimate changes should be submitted via an updated MCACES. The PB-3 is broken down by feature codes [lands, construction features (pumping plants, levees, canals), engineering and design, and supervision and administration] for each project. The lands, Engineering and Design (E&D), and Supervision and Administration (S&A) use a different inflation factor from the construction features.

Fully Fund Cost Estimate: The fully funded project cost estimate is the total cost to build a project based on a given schedule. The fully funded estimate takes the current project cost estimate from the PB-3 and inflates each feature based on the current schedule. The fully fund is a budget tool (EXCEL) that is broken down by feature codes (same as PB-3). Start and finish dates are applied to each feature/sub feature/contract in order to calculate the fully funded estimate. Construction features are inflated through the mid point of construction prior to award of a contract (based on start/finish dates). Once a construction contract is awarded, it will no longer be inflated. Hence the tool was developed with this in mind and only inflates to mid point, prior to award. The Fully Fund calculation will not inflate those features that have been completed or construction contracts already awarded.

902 Limit: The 902 Limit (maximum project cost) applies to authorized projects only. The 902 Limit is a maximum allowable cost for a project imposed by Section 902 of the 1986 Water Resources Development Act (P.L. 99-662). It is a numerical value specified by law, which must be computed in a legally supportable manner. It is not an estimate of the current cost of the project. The 902 Limit is a complex calculation (based on ER 1105-2-100, Appendix G) including an allowance for inflation through the construction period. The limit will then be compared to the current project estimate including inflation through the construction period. The calculation includes price leveling the authorized cost to allow for inflation. The construction component of the authorized cost will be updated to account for historical inflation using the Civil Works construction Cost Index System (CWCCIS) (EM 1110-2-1304). The Real Estate component of the authorized cost will be updated to account for historical inflation based on changes to the

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Consumer Price Index (CPI), specifically the unadjusted percentage changes reflected under the “Rent residential” expenditure category.

The 902 Limit includes the authorized cost (adjusted for inflation), the current cost of any studies, modifications, and action authorized by WRDA '86 or any later law, and 20% of the authorized cost (without adjustment for inflation). The cost of modifications required by law is to be kept separate and added to the other allowable costs. These three components equal the maximum project cost allowable by Section 902.

Cost Containment Cap (CCC): The Cost Containment Cap is the terminology being used for the maximum project cost for unauthorized CERP projects. The CCC will be calculated in the same manner as the 902 Limit applied to authorized projects. The CCC will use the Yellow Book Project Cost estimate in place of the authorized project cost. CCC was developed to enable PDT members the ability to have a means of comparing current project cost estimates with the original project cost estimates contained in the Yellow Book. It is important to refer to the unauthorized project maximum cost limit as Cost Contained Cap, not 902 Limit.

Cost Estimates Contained in Project Management Plans: During the development of the Initial Project Management Plan (PMP) for each project, a cost estimate will be developed for the initial phase (PIR/PPDR) of the project that reflects the PDT’s best professional judgment as to the cost of performing the initial phase of work covered by the PMP.

This is not a MCACES estimate of the cost of construction, but rather, an estimate of the cost of work required to complete the initial phase (PIR/PPDR) of the project by the PDT. Generally, the PMP will focus on the work necessary to complete a Project Implementation Report (PIR), or in the case of a pilot project, a Pilot Project Design Report (PPDR). A MCACES project cost estimate for the total project will not be prepared during the preparation of the PMP, and therefore, the cost estimating performed as part of the PMP development will not result in an increase in the CERP Total Project Cost Estimate.

As the PMP level cost estimate is being developed, the PDT will review the previous estimate (i.e. the Yellow Book) to determine if it adequately estimated the cost for the project phase covered by the PMP (PIR/PPDR). If the cost estimated to implement

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the work covered in the PMP exceeds the previous estimate by more than five percent (5%), the PDT must report this increase to DCT for management review prior to proceeding with the implementation of the plan. Once costs are justified and approved through the Project Change Control process (see CERP Guidance Memorandum number 7.00), the new estimate of performing the work covered in the PMP will be the new estimated cost for performing that work.

All project cost estimates will be based upon the standardized Work Breakdown Structure (WBS). The WBS identifies products beginning with the PIR or PPDR and continuing through completion of project construction. It provides a standard hierarchical product-related format to logically identify all costs throughout the project life cycle. **Increases in the estimated cost contained in the PMP should be reported to DCT as they are identified.**

Cost Estimates For Design PMP Revision: Guidance for this scheduled PMP revision will be developed as a revision to this CERP Guidance Memorandum at a later date.

Cost Estimates For Construction PMP Revision: Guidance for this scheduled PMP revision will be developed as a revision to this CERP Guidance Memorandum at a later date.

Maintenance of Total Project Cost Estimate: For each CERP project, the PDT may assign one person (or more if necessary) to be responsible for the total project cost estimate. This designated person(s) will be responsible for producing, documenting, monitoring, updating and tracking all variances for the cost estimates associated with the project (e.g. PED, construction, construction management, real estate/land acquisition, monitoring, etc.) While these duties may be delegated, the project manager retains full responsibility for its accuracy.

Frequency of Total Project Cost Estimate Updates/Revisions: Cost estimate revisions for planning, engineering, design, construction, and construction management shall generally be prepared at the 30%, 60% and 100% (Final) of completion of project planning and design documents. In addition, Total Project Cost estimate revisions shall be made upon award and completion of major components to reflect the actual award and/or completed contract amount. The Total Project Cost

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Estimate may be updated at times as required and should follow the standard procedure and format as outlined within this document.

Cost Change Management: It is recognized that during the lifecycle of a project's development, cost estimates may change. Project Managers are required to track and manage project costs including project contingency reserves. Sufficient detail shall be provided to document the cause of any change and the units and unit price applicable. In addition, upon acceptance, a revised estimate will be incorporated into the automated project management scheduling software (currently Primavera P3e) to reflect the revision and facilitate the reporting of a Master Program Implementation Schedule. Changes in individual project cost estimates will be handled in the following manner. Specific guidance on CERP Change Control Procedures is provided in CERP Guidance Memorandum: Project Change Control CGM Number 007.00, and is provided in general terms below.

Increases in Cost Estimates: In the event that a project cost estimate increases, the Project Managers shall utilize the individual project contingency to the maximum extent possible to meet the additional funds requirement. Upon full utilization of the individual project contingency, Project Managers will make a request to draw the additional funds required from the program management reserve. This request will conform to the CERP Change Control Procedures. In the event that management reserve funds are not available, a program cost increase will be pursued. Of note, as project cost estimate increases are identified (formally or informally), Project Manager's will inform the DCT of the potential project cost increase. This notification will be an impact assessment to include cash flow comparisons and recommended funding sources required for the change.

Decreases in Cost Estimates: In the event that a project cost estimate decreases, the funds recouped from the change will be maintained in the project's contingency reserve to the extent that the original estimated contingency percentages are maintained. Estimate savings in excess of the established percentage or available upon completion of the PED, Construction and Construction Management features shall be made available to the program contingency reserve to be manage across the entire Program.

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APPLICATION: Effective as of the date indicated on this CERP Guidance Memorandum, the staffs of both agencies will implement this guidance in accordance with the information provide herein. PDT's should manage costs to provide cost effective projects that strive for simpler, non-structural, and natural system solutions that consider efficiencies in total lifecycle costs.

Reporting – DCT will insure that updated project cost estimates are included in the next CERP financial statements or cash flow reports, as required by either the USACE or SFWMD.

Approvals – Prior to approving the Total Project Cost Estimate revision, both parties (USACE and SFWMD) shall be in agreement with the estimate revision and have sufficient detailed backup to document the revision. The revision of the Total Project Cost Estimate shall be accompanied by written approval by both agencies.

Coordination and Interfaces - As required, all estimate updates and forecasts shall be provided in an electronic format and written (hardcopy) format. The electronic format shall be provided to facilitate the downloading of data into the scheduling and accounting systems for both the USACE and SFWMD. Information will be provided in MCACES estimating software.

Documentation - DCT will serve as the repository for the review, analysis, and approval of all program cost estimates and their revisions. Updates to the overall CERP estimates will be coordinated through DCT and provided to each agencies Financial Management/Budget functions, as required. All estimate revisions shall be provided for the use and review of DCT. The storage and dissemination of data outside the PDT internal usage shall be the responsibility of DCT. Security and distribution shall be the responsibility of the DCT function.

Consultant Contracts - All CERP consultant contracts will include language requiring that deliverables comply with the guidance contained in this document pertaining to cost estimating for planning, engineering, design, and construction estimates to facilitate the cost estimating function and reviews.

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APPROVALS:



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South Florida Water Management District

DATE: 5/5/06



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DATE: 5/9/06

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