



**US Army Corps
of Engineers®**
Philadelphia District

**TOOKANY CREEK
CHELTENHAM TOWNSHIP, MONTGOMERY COUNTY,
PENNSYLVANIA**

SECTION 205, FLOOD DAMAGE REDUCTION

DRAFT

PROJECT MANAGEMENT PLAN

**Philadelphia District
North Atlantic Division
March 2012**

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1.0 INTRODUCTION

Guidance contained in ER 5-1-11, dated 27 February 1998, states that each project shall be managed in accordance with a plan. The Project Manager develops this management plan with the customer and the other team members. The plan will be developed and maintained at a level of detail commensurate with the size and complexity of the project. It is a living, working level document that records the history, documents, commitments by USACE and the customer, and depicts the future direction of the project. It is a binding agreement among all elements supporting the project that details how the work will be executed and how resources will be expended. It defines the baseline scope, schedule, resources, including contingencies, and provides a configuration (change) management plan for the project.

The schedule and funding levels shall be realistic and reflect overall program and budget constraints and realities. It will consider all project requirements including real estate, planning, design, engineering, construction, environmental, operations, and other types of work whether performed by USACE, customer, or by contract.

2.0 BACKGROUND

Study Authority

The authority for this project is Section 205 of the Flood Control Act of 1948 (Public Law 80-858), as amended. Under this authority, the USACE is authorized to plan, design, and construct small flood control projects. Each project is limited to a Federal cost of not more than \$7 million, including all project-related costs for feasibility studies, planning, engineering, design, and construction.

Funding

Federal funds for \$100K were provided in past fiscal years to initiate an investigation and negotiate a Feasibility Cost Share Agreement (FCSA) with a non-Federal sponsor. Cheltenham Township has expressed interest in acting as the non-Federal sponsor for this Feasibility Study.

Study Area

Cheltenham Township is located just north of Philadelphia within the Philadelphia Consolidated Metropolitan Statistical Area, on the southeastern edge of Montgomery County in southeastern Pennsylvania. The county is bordered by the City of Philadelphia to the southeast, Chester County to the southwest, Berks County to the northwest, Lehigh County to the North and Bucks County to the northeast. The study area will comprise of the watersheds of Tookany Creek and include portions of the drainage area that extend outside of Cheltenham Township, such as portions of Abington Township and Elkins Park.

Purpose of Study

The feasibility study is the first phase of the two-phased Corps of Engineers' planning process. The purpose of the feasibility study is to evaluate all reasonable solutions to the water resource problems identified in the study area. The feasibility report provides the basis for a decision on project construction.

The Study will consider the following structural and non-structural measures:

Structural Measures

- Raise Levees
- Levees/Floodwalls
- Bridge modification

Non-structural measures

- No Action
- Flood warning system
- Floodproofing
- Permanent evacuation of the floodplain (buyout)
- Floodplain land use controls

Study Sponsor

The study sponsor is Cheltenham Township, Montgomery County, Pennsylvania.

Format of the Project Management Plan

This PMP covers project tasks and products for the Feasibility Phase. The Feasibility Phase includes all studies and investigations, plan formulation, preliminary design, and environmental assessments required to identify the most cost effective solution to address the frequent flooding that occurs along Tookany Creek and its tributaries within the study area.

Plan Formulation and Development

In the feasibility phase, the planning process identifies alternative plans that should be evaluated. The culmination of the planning process is selection of a recommended plan or the decision to recommend no action. The selection will be based on a comparison of the effects of alternative plans. The alternative plan, which maximizes the net National Economic Development (NED) benefits, will be selected. The alternative of recommending no action, i.e., selecting none of the alternative plans, will also be fully considered.

Scope of Studies

This section of the PMP provides the objectives and a description of the products to be accomplished during development of the feasibility report. Section 3 lists the specific descriptions of each study task. Section 4 lists the organizational elements responsible for each task. The study schedule is addressed in Section 5.

The objectives of the Feasibility Phase of the project are to:

- Prepare the Feasibility Report for the project
- Prepare an Environmental Assessment and NEPA documentation for the project,
- Prepare a Project Management Plan (PMP) for the Design and Implementation Phase,
- Develop other supporting plans as needed for completion of the Feasibility Report.

Views of the Sponsor

Cheltenham Township supports the study and will serve as the non-Federal sponsor.

Views of Federal, State, Regional and Interested Organizations

Study efforts will be coordinated with other Federal, state and local agencies as well as interested stakeholders. The Feasibility Report and Environmental Assessment will be developed and coordinated with appropriate agencies and interested organizations.

3.0 SCOPES OF WORK

For each task that is included in the work breakdown structure (WBS), a scope of work will be developed that describes the work that is to be performed, including specific activities to be accomplished in narrative form. The scopes of work will be developed by the project delivery team (PDT) which includes the non-Federal sponsor. A brief synopsis of tasks grouped by phase of the study follows:

Development of PMP for Feasibility Study

Completed draft Feasibility Cost Share Agreement and Project Management Plan for Feasibility Study.

Phase 1 – Preliminary Screening of Alternative Plans

Given that the hydrology and hydraulics (H&H) modeling is likely to be the most critical portion of the study for the determination of existing conditions and potential solutions, this modeling will be performed in the first phase of the feasibility effort. When the H&H modeling is completed in the first phase and the potential solutions have been formulated and analyzed, USACE and the non-Federal sponsor will meet to discuss the findings and the path forward. Should the preliminary H&H modeling suggest that a cost effective solution to the flooding problems is not feasible, USACE and the non-Federal sponsor can consider termination of the study in accordance with the FCSA. If the potential solutions are considered feasible and cost effective by USACE and the non-Federal sponsor, the study can move forward in more detail as discussed under Phase 2.

Hydrologic and Hydraulic Models

Develop a hydrologic and hydraulic model for use in determining with and without project conditions. Visit site for determination of hydraulic parameters. Calibrate to USGS gages and available high water marks within the study limits. Multiple frequency water surface (or depth) profiles will be calculated and data such as elevation frequency will be provided to the economic models along with recommendations for reach index station and reference flood selections.

Problem Identification

Upon review of the without project condition, develop a matrix of problems within the study area.

Formulate Alternative Plans

These alternatives may include a combination of non-structural and structural solutions for flood damage reduction. It is anticipated that approximately three preliminary alternative plans will be examined. A conceptual design will be prepared for each alternative and preliminary costs will be calculated.

Perform Initial Screening of Alternative Plans

The alternative plans will be screened to compare their relative effectiveness in reducing flooding impacts versus their preliminary cost estimates. The plans or combination of plans that appear to have the best potential for solving the identified problems will be selected for further analyses in Phase 2.

Phase 2 – Detailed Screening of Alternative Plans

Environmental Tasks

Scope Environmental Tasks

Scoping efforts will include coordination with Federal and State resource agencies and appropriate local groups and interested individuals to identify environmental issues and concerns to be addressed during the NEPA process. Scoping efforts will include letters requesting information, telephone contacts, meetings and field visits, as appropriate.

Perform General Environmental Studies

Environmental data gathered during the scoping process will be compiled to address environmental issues and concerns. The information will be used to document both “with-” and “without-project” environmental conditions, and to provide environmental technical support during plan formulation. Additional information will be collected, as necessary, throughout the course of the Study to ensure that all environmental issues are adequately addressed. Data collection may include field visits.

Cultural Literature Search (Phase IA)

The preliminary cultural resource investigations to be conducted are required to comply with the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 Code of Federal Regulations Part 800, Protection of Historic Properties. The National Historic Preservation Act requires that all Federal undertakings be subjected to a review process to determine whether the undertaking may affect historic properties, and if historic properties are found, that the Federal agency take actions to avoid or minimize the effects of the undertaking on the historic property. The results of the cultural resource investigations will be used in project planning to minimize the potential effects of this project on significant cultural resources. For Phase IA, a records search, historical land use documentation, and State Historic Preservation Office (SHPO) consultation will be conducted to identify known and expected cultural resources in the study area. This cultural assessment will identify high, medium, and low culturally sensitive areas, in addition to identifying the existing condition, landscape, and disturbed areas. The assessment report will identify a Phase IB field strategy, if necessary.

Review of Without Project Environmental Studies

Environmental data will be compiled and documented to provide a “without-project” description of the study area. This information will be included in the Decision Document and NEPA document, and will serve as the basis for making decisions regarding development of alternative plans.

Economic Tasks

Survey Property Owners

Over the last decade or more, the community experienced multiple flooding events, some included in Presidential Disaster Declarations and other not. During the feasibility study, a survey (or series of interviews) will be conducted with a sampling of property owners and will be focused on areas identified by Cheltenham Township as the most severely impacted neighborhoods. This effort will attempt to compile a more comprehensive accounting of all historic flood damages and potential future damages. Structural data will be collected for determination of potential flood-related improvements that may be required in the future, such as first floor elevations.

Interview Town Employees

Interviews will be conducted with township employees to establish historic costs that the township has incurred due to flood events. These costs could include things such as additional staff labor and materials for road closures, detours, debris clean up, and rescues.

Economic Analysis

The economic analysis that will be conducted in the feasibility study will determine the most appropriate method for quantifying all of the costs that occur because of the flooding events. In conjunction with the hydrologic and hydraulic analysis, the economic analysis will also consider the annual frequency of the flood events, the duration of the events, the number of properties and individuals impacted, and the type of property (primary residence, vacation residence, commercial business, etc.). The demographics of the individuals utilizing the properties (ie. adult, child, employed, retired, etc.) will be determined to help in measuring the opportunity cost of time impacted by flooding.

Perform Preliminary Economic Evaluation

Prepare Plan Alternatives and selected plan for the Economics appendix. Include tables comparing damage reduction of alternatives. Provide support for the main report.

Survey Tasks

Topographic Surveys

If survey information is not currently available for the determination of existing conditions on land or within the adjacent water bodies, land surveys may be required.

Geotechnical Tasks

Geotechnical Site Reconnaissance

Geotechnical research will be conducted to gather information to develop a subsurface investigation plan and obtain information to be utilized in the design analysis and report preparation.

Real Estate Tasks

Prepare Real Estate Requirements for Planning Estimates

Prepare a preliminary determination of requirements and costs for lands, easements, rights-of-way, relocations, and disposal areas (LERRD) for proposed alternative plans. Prepare a Real Estate Plan for selected alternative.

Plan Formulation Tasks

Plan Formulation

Those alternatives that indicated viability during the initial analysis to determine their effectiveness in satisfying the objectives of the study and potential for meeting other needs will be considered. It is anticipated that approximately three viable plans will be considered. Coordination will determine the acceptability and implementation of technically and economically feasible alternatives. Impact assessment and evaluation, as well as public desires, will guide the development of alternative plans. During this phase, further refinement of the alternatives will concentrate on:

- location of component parts of plans, and resources needed for their implementation
- technical aspects of plans' effectiveness, performance, and reliability
- costs, to include capital (with real estate), operation, maintenance, and replacement, on a total and annual basis, and the feasibility of investment
- managerial and institutional policies and programs that would affect plan development or their implementation

The final step of plan formulation will be to evaluate the results of the analysis to determine the selected plan for satisfying the needs and objectives of the study. The selected plan will then be refined in order to determine the orientation and dimensions of project features, operations and maintenance requirements, project impacts (presented in the NEPA coordination document), and final estimated feasibility costs and benefits.

Finalize Without Project Conditions

Compile and review all the without project information. Prepare write-up for existing and without project condition, which will be part of the Draft Feasibility Report and NEPA document. Write-up includes text and tables. Conduct meetings with the PDT, sponsor management, independent technical review team and other interested parties to discuss the information and verify that the information is accurate and sufficient to accomplish plan formulation and optimization.

Prepare Preliminary Design and Costs

Prepare preliminary designs and cost estimates for alternative plans developed by the project delivery team including the non-federal sponsor.

Coordinate Sponsor Management Review

Prepare and conduct a management level meeting to discuss preliminary alternatives with the non-federal sponsor's management. Incorporate sponsor management comments in the formulation process as a member of the Project Delivery Team.

Perform Plan Optimization

Annualize initial costs and future maintenance costs associated with the plan alternatives. Included will be monitoring costs associated with any hydraulic or environmental concerns. Interest during construction will be applied to the selected plan.

Evaluate Alternative Plans

Model with project conditions for alternative plans to determine the National Economic Development (NED) plan.

Draft Report Tasks

Report Preparation

This task includes writing, editing, typing, drafting, reviewing, reproducing, and assembling study reports, environmental assessments and other related documentation required for transmittal by the Philadelphia District to Corps higher authority.

Prepare Draft EA

Compliance requirements are outlined within the provisions of NEPA, the Council on Environmental Quality regulations 40 Code of Federal Regulations 1500-1508, and the Corps ER 200-2-2, Procedures for Implementing NEPA, 1988. A NEPA document will be prepared, including an alternatives analysis, in order to evaluate the project alternative that is proposed for implementation. The analysis will investigate engineering and environmentally feasible alternatives and evaluate the beneficial and adverse impacts the proposed solution will have on the environment. Tasks include documenting and assessing the effects of the proposed Federal action and alternatives on significant natural resources and completing the EA. The focus of NEPA compliance will be to provide information to other agencies, the public, and decision-makers on the study and to ensure that the report adequately addresses environmental requirements. Coordination, compliance, and documentation of other laws and regulations that require environmental compliance actions will be completed. This includes Sections 401 and 404 of the Clean Water Act, Section 7 of the Endangered Species Act, Clean Air Act, U.S. Fish and Wildlife Coordination Act, Section 106 of the National Historic Preservation Act, Prime and Unique Farmlands, and National Pollutant Discharge Elimination System Act. All appropriate environmental documentation (e.g., water quality certificate) must be obtained and included as part of the final Feasibility Report and EA.

Prepare Project Alternatives

Prepare detailed design, including preliminary drawings, for the selected project alternative(s).

Prepare Alternative Projects Costs

Prepare cost estimates for project alternatives.

Finalize Selected Plan Preliminary Design

Finalize the preliminary designs for the selected plan.

Finalize Cost Estimates

Cost estimates will be developed in accordance with the guidance contained in ER 1110-2-1302, Civil Works Cost Engineering using the MII (MCACES Second Generation) cost estimating system. Cost estimates will be prepared for all items that are required for project construction for both Federal and non-Federal costs, including mitigation, operation and maintenance. Calculate maintenance costs and schedules for the selected project alternative (and any associated costs). Provide text sections on cost estimates, including tables of cost estimates in Civil Works Breakdown Structure (CWBS). Include in the cost estimates real estate requirements.

Prepare Draft Feasibility Report and NEPA Document

A draft Feasibility Report and National Environmental Policy Act (NEPA) environmental assessment will be prepared. The Decision Document will document technical data, tools, strategies, and methodologies used for the development and recommendation of plans and projects. Completion of the report will entail all work conducted during the study to include: problem identification, formulation and evaluation of alternative solutions, assessment of potential impacts, and determination of study conclusions and recommendations. The NEPA document will assess the environmental impacts related to the proposed plans.

Conduct District Quality Control and Agency Technical Review

District Quality Control (DQC) is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in this PMP. Agency Technical Review (ATR) is conducted by a qualified team outside of the home district and is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practice.

Finalize Draft Feasibility Report and NEPA Document

Following the District Quality Control and Agency Technical reviews, comments received on the draft Feasibility Report and Environmental Assessment will be addressed, and appropriate changes will be incorporated into the documents.

Review by NAD

NAD will review the Draft Feasibility Report and Environmental Assessment. Based on their review, comments will be provided to the district for consideration. Subsequent to this review,

NAD will allow release of the draft report for public review.

Public and Agency Review of Draft Feasibility Report and EA

The draft Feasibility Report and EA will be coordinated with Federal and State resource agencies, appropriate local groups, and interested individuals. A Public Notice announcing the availability of the draft document will be prepared and distributed. Letters of comment will be solicited during coordination of the draft report. These letters will be included in a comment/response appendix to the final report.

Final Report Tasks

Solicit Appropriate State Approvals

The draft EA will be used as technical documentation to solicit preliminary State approvals including Section 401 Water Quality Certification from the Pennsylvania Department of Environmental Protection.

Respond to Public Comments on Draft Report & EA

Address all comments received on the Draft Feasibility Report and Environmental Assessment. All comment letters will be included in an appendix to the final report, and all comments and recommendations will be addressed in a comment/response format.

Prepare Final Report & EA

Following review of the draft report and receipt of public coordination comments, the final Feasibility Report and NEPA document will be prepared. The final Feasibility Report and NEPA document will be reviewed and processed by Corps higher authority. It will serve as the decision document for plan implementation.

Final Feasibility Report & EA Reproduction

Incorporate all appropriate revisions into the Final Feasibility Report and Environmental Assessment. Reproduce or publish the Final Feasibility Report and Environmental Assessment on the internet.

Brief DE and Obtain Signature

Brief the District Engineer regarding the project conclusions and recommendations. Obtain the District Engineer's signature on the Final Feasibility Report and Finding of No Significant Impact.

Approval of Feasibility Report by NAD

NAD approves Final Feasibility Report and EA.

Ongoing Tasks

Project Management

This effort includes frequent coordination with technical elements, responses to congressional or

other study related inquiries, maintaining open dialogue with the sponsor and others, allocating funds, coordinate schedules, advising the sponsor of funding required. Considerable effort will be placed on coordinating team efforts; meeting with the sponsor and potential partner agencies and organizations. This task includes coordinating, arranging, and facilitating regular team meetings and briefing Corps of Engineers staff and the non-federal sponsor on study progress. The project manager will also ensure that all data collection activities are proceeding as scheduled and that the information collected is properly disseminated. In addition, a fully coordinated work plan including schedules, scopes of tasks, and management and financial reports for the Corps' network analysis (P2) and financial management systems (CEFMS) will be developed and maintained.

Study Management/ Sponsor Coordination

Study management entails coordinating all aspects of the project with the Project Delivery Team including documentation, upper level management and sponsor management reviews from the point of initiation through the review process to completion of the Decision Document. Much of the task in the first part of the study will be ensuring that the work plans developed by the technical elements meet the expectations of management. This task includes preparation and monitoring progress of tasks, and associated reporting requirements. It includes daily coordination with technical elements, response to inquiries and coordination with sponsor management and North Atlantic Division (NAD). The task also includes monitoring, updating, and reporting on financial progress.

District Quality Control/ATR

The District will conduct an internal review at decision points in the development of the Feasibility Report. NAD will coordinate the establishment of an Agency Technical Review (ATR) team for the review process. This review will be conducted to satisfy quality assurance and quality control guidance and regulations.

4.0 RESPONSIBILITY ASSIGNMENT

Team Member Identification and Responsibilities

Following receipt of funding for the study, an inter-disciplinary study team will be formed to evaluate the problems and needs in the study area and to coordinate the scope of the Feasibility Report. The team initially consisted of planning and environmental representatives, but has been expanded to include personnel from all technical and other disciplines necessary to conduct and complete the Feasibility Report. Team members will meet on a periodic basis to discuss specific work tasks, schedules, progress, and overall project status, as required. The Project Delivery Team (PDT), which includes the sponsor, will also participate in field trips and meetings with stakeholders, the public and other agencies, as required.

In addition, an Agency Technical Review (ATR) Team will be formed. ATR team members will be selected based on their experience and technical expertise, relevant to the needed Feasibility Report components. All ATR Team members will have extensive experience and be considered

senior specialists. The ATR Team will be provided with complete project development documentation, and conduct their reviews with complete independence. It is anticipated that the ATR Team will have five members.

| PROJECT DELIVERY TEAM | | |
|------------------------------|-------------|----------------------|
| Discipline | Name | Office/Agency |
| Hydrology & Hydraulics | TBD | CENAP-EC-EH |
| Environmental | TBD | CENAP-PL-E |
| Economics | TBD | CENAP-PL-D |
| Civil Engineering | TBD | CENAP-EC-EC |
| Cost Engineering | TBD | CENAP-EC-EE |
| Geotechnical | TBD | CENAP-EC-DG |
| Geo-Environmental | TBD | CENAP-EC-EV |
| Real Estate | TBD | CENAB-RE-C |
| Project Manager | TBD | CENAP-PL-PS |
| | | |
| Non Federal Sponsor | TBD | Cheltenham Township |

5.0 STUDY SCHEDULE

Schedule Development

A preliminary schedule will be developed and entered into the Corps' P2 Network Analysis System.

This schedule will be revised and updated as needed based on execution of the Feasibility Cost Share Agreement and receipt of necessary study funds.

Funding Constraints

Federal funds in the amount of \$100,000 have been allocated to date to begin preliminary work on the feasibility study. No additional work beyond this amount can be undertaken without the execution of the Feasibility Cost Share Agreement and receipt of non-federal funds or work in kind from the cost-sharing partner.

Study Milestone Schedule

| <u>Major Project Milestones</u> | <u>Estimated Start Date</u> |
|---|------------------------------------|
| Submit FCSA and PMP to NAD | April 2012 |
| FCSA Execution | May 2012 |
| Existing Conditions Modeling (H&H) | December 2012 |
| Preliminary Screening of Alternative Plans | January 2013 |
| Detailed Screening of Alternative Plans | July 2013 |
| Submit Draft Feasibility Report to Division | December 2013 |

| | |
|---|---------------|
| Public Notice/ Public Review | February 2014 |
| District Engineer Signs Feasibility Report | May 2014 |
| Division Engineer Approves Feasibility Report | June 2014 |

A detailed study schedule which incorporates the above milestones will be developed for the Feasibility Report. The project network analysis and baseline schedule will be utilized by the Project Manager and technical study team members in assessing the study progress and to prepare required management reports.

6.0 STUDY COST ESTIMATE

Budget

Initial budgetary information estimates are shown below. The feasibility phase is cost-shared equally between the Federal government and non-Federal sponsor after an initial allotment of \$100,000 in Federal funds. The 100% fully federally funded share of the feasibility phase (\$100,000) was used to preliminary evaluate project alternatives along Brookdale Avenue and Church/Shoemaker Road, and coordinate this project management plan and feasibility cost share agreement. The Non-Federal sponsor plans to contribute \$15,000 for project management.

| Activity | Federal | Non-Federal | | Totals |
|---|-----------|-------------|----------|-----------|
| | Cash | Cash | In Kind | |
| Preliminary Investigation, PMP Preparation, Cost Share Agreement Coordination | \$100,000 | \$0 | \$0 | \$100,000 |
| Phase 1 | | | | |
| Hydrology & Hydraulics Modeling | \$80,000 | \$80,000 | \$0 | \$160,000 |
| Civil Engineering | \$12,500 | \$12,500 | \$0 | \$25,000 |
| Cost Engineering | \$12,500 | \$12,500 | \$0 | \$25,000 |
| Economics | \$10,000 | \$10,000 | \$0 | \$20,000 |
| GIS Technical Support | \$10,000 | \$10,000 | \$0 | \$20,000 |
| Project Management | \$20,000 | \$15,000 | \$5,000 | \$40,000 |
| Phase 2 | | | | |
| Project Management | \$50,000 | \$30,000 | \$20,000 | \$100,000 |
| Environmental & Cultural | \$25,000 | \$25,000 | \$0 | \$50,000 |
| Hydrology & Hydraulics | \$15,000 | \$15,000 | \$0 | \$30,000 |
| Economics | \$15,000 | \$15,000 | \$0 | \$30,000 |
| Cost Engineering | \$25,000 | \$10,000 | \$5,000 | \$40,000 |
| Civil Engineering | \$30,000 | \$30,000 | \$0 | \$60,000 |
| Land Surveys | \$15,000 | \$15,000 | \$0 | \$30,000 |
| Geotechnical Engineering | \$12,500 | \$12,500 | \$0 | \$25,000 |
| Real Estate | \$10,000 | \$10,000 | \$0 | \$20,000 |

| | | | | |
|----------------------|-----------|-----------|----------|-----------|
| Administrative & ATR | \$20,000 | \$20,000 | \$0 | \$40,000 |
| Total | \$462,500 | \$322,500 | \$30,000 | \$815,000 |

7.0 - PROJECT COMMITMENTS

Cheltenham Township has indicated their interest in pursuing a cost-shared Feasibility Study and has indicated their willingness to commit 50 percent of the estimated total feasibility phase costs totaling \$815,000, with the first \$100,000 being a 100% Federal responsibility. The cost-sharing agreement will show that the total cost to be shared is \$715,000. Therefore, the total commitment required by Cheltenham Township is \$357,500.

8.0 – PROJECT ACQUISITION PLAN

An acquisition plan will be prepared by the Philadelphia District in accordance with Federal Acquisition Regulations (FAR) and EFAR once in the Plan and Specifications phase to assure that services and construction required as part of the project are accomplished in a timely manner and at a reasonable cost using full and open competition. It is anticipated that a construction contract will be a fixed price, competitive procurement. Plans and Specifications will be prepared by in-house hired labor. If additional contract work is anticipated following the feasibility phase the acquisition plan will be revised and updated.

9.0 - PROJECT QUALITY CONTROL PLAN

The project manager and the PDT develop and implement the PMP. All feasibility reports require review and the subject report will be approved at the Division level with Agency Technical Review (ATR) performed by Corps' personnel external to the Philadelphia District and the Project Delivery Team. The Agency Technical Review confirms the proper selection and application of clearly established criteria, regulations, laws, codes, principles, and professional procedures. The ATR also confirms the utilization of clearly justified and valid assumptions. Policy compliance review examines the development and application of decision factors and assumptions used to determine the extent and nature of Federal interest, project cost sharing and cooperation requirements, and related issues. It also ensures the uniform application of clearly established policy and procedures nationwide, and that the proposed action is consistent with the overall goals and objectives of the Corps' Civil Works program.

Responsibilities of the Project Manager

- Develop the PMP and the Peer Review Plan with the PDT and the ATR Team Leader
- Keep the PDT and the ATR Team Leader informed concerning study progress and the availability of items and findings to be reviewed
- Ensure that ATR review team comments are addressed in a timely manner by the appropriate PDT member
- Elevate unresolved comments up the chain of command for resolution
- Maintain a documented record of comment resolution

Responsibilities of the Project Delivery Team

- Develop and evaluate alternative plans
- Address ATR review comments in a timely manner

- Assist the Project Manager and Agency Technical Review Team Leader

Responsibilities of the ATR Team Leader

- Develop the Peer Review Plan with the Project Manager
- Facilitate requests for review team members through the functional chiefs
- Verify the expertise and experience of the review team nominees and assure their independence
- Evaluate review team comments before forwarding to the project manager to ensure that they are: clearly stated; based on guidance, regulation, or scientific/engineering principles; significant; and contain specific action to resolve the concern
- Ensure that reviews are promptly completed and forwarded to the project manager in a timely manner

Responsibilities of the District Branch/Section Chiefs

- Select technical review team members
- Assist in the resolution of review comments elevated by the project manager

Responsibilities of the Chief of Planning

- Approve selection of technical review team members
- Final arbiter of unresolved issues between the study and review teams
- Certifies the District Engineer's Statement of Technical Review

Responsibility of District Counsel – Legal review/certification

Responsibility of the District Commander - Certifies Statement of Technical Review.

10.0 - PERFORMANCE MEASUREMENT

Government performance will be measured monthly and at the conclusion of the FY with respect to identified milestones, Command Management Review indicators are used for Civil Works studies, and CEFMS/P2 schedules for fiscal execution with a goal of attaining a green rating in all indicators.

11.0 – RISK ASSESSMENT

There is some risk that the parties will be unable to agree to an acceptable scope for the feasibility study within the timeframe specified. However, it is expected that Federal and non-Federal funds will be available in Federal fiscal year 2012 to proceed with the study.

12.0 - CHANGE CONTROL PLAN

If, at any time, during the execution of this project, it becomes apparent that a commitment by either the Corps or the sponsor will not be met, or that the completion of a task will be delayed, or there is a change in the estimated cost which exceeds the contingencies available, the PDT will assess whether the delay can be recovered, or the costs recouped. The recovery plan will be documented in a revision to the PMP. If the completion schedule or cost estimate cannot be

maintained, a revised schedule and/or cost estimate will be documented in the PMP.

13.0 - COMMUNICATIONS PLAN

Throughout the feasibility phase, the District will be in contact with the non-Federal sponsor, and other entities with potential interest in the study to apprise them of study status and receive input on problems and needs of interest for Federal consideration. Further coordination will be held during refinement of the scope and costs of the feasibility phase effort and the responsible entities for accomplishment of tasks. During the conduct of the feasibility efforts, regular meetings and coordination will occur to review the progress of study efforts, conduct public involvement activities as outlined in this PMP, and set direction for further studies. This negotiated PMP, which is part of the Feasibility Cost Sharing Agreement, will also outline a schedule for non-Federal funding and in-kind services during the accomplishment of the study.

14.0 - REPORTING REQUIREMENTS

Informal reporting of field trips, telephone conversations, meeting minutes, etc. will be recorded by the project manager, and coordinated and distributed as necessary. Formal communication will be documented in Memorandums or letters as appropriate. Monitoring results and project status will be reported to the District Project Review Board monthly. All upward reporting will be in accordance with ER 5-7-1.

15.0 - PROJECT DELIVERY TEAM COMMITMENT

This PMP has been prepared in accordance with the guidance: ER 5-1-1, subject: Program and Project Management. PDT members are committed to accomplishing the goals of the Study.