



**US Army Corps
of Engineers®**

PLANNING BULLETIN

No. PB 2016-03

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Subject: Watershed Studies

1. Purpose: Guidance; this planning bulletin (PB) provides guidance on U.S. Army Corps of Engineers (USACE)-led single phase watershed studies, integrating recent updates in law (Water Resources Reform and Development Act of 2014 [WRRDA 2014]) and advancing the concepts of watershed planning described in Engineering Circular (EC) 1105-2-411 (Watershed Plans). Most notably, this PB updates milestone nomenclature and associated requirements, integrates Specific, Measurable, Attainable, Risk Informed, Timely (SMART) Planning principles and vertical team alignment, and provides some minor adjustments to the review and approval process. All new watershed studies initiated after the publication date of this PB, including those under the Tribal Partnership Program, shall follow the processes described in this PB. Ongoing watershed planning efforts shall embrace the concepts and comply with this PB, where possible and practical.

2. Applicability: This PB applies to all Headquarters (HQUSACE) elements, laboratories, major subordinate commands and district commands having Civil Works responsibilities.

3. References: See Enclosure 1.

4. Authority: Section 729 of the Water Resources Development Act (WRDA) of 1986, as amended; Section 203 of WRDA 2000 (Tribal Partnership Program), as amended; and other specifically authorized watershed authorities allow the United States Army Corps of Engineers (USACE) to study the water resources needs of river basins and regions of the United States, in consultation with federal, state, tribal, interstate and local governmental entities.

5. Background: Watershed Planning, as described in EC 1105-2-411 and this PB, goes beyond project planning for specific USACE projects towards more comprehensive and strategic evaluations and analyses that include diverse political, geographic, physical, institutional, technical, and stakeholder considerations. Watershed planning addresses identified water resources needs from any source, regardless of agency responsibilities, and provides a shared vision of a desired end state that may include recommendations for potential involvement by USACE, other federal agencies, or non-federal interests. Watershed studies may identify potential USACE projects consistent with priority missions; however, this is not the primary consideration of watershed planning. In conducting watershed planning, USACE uses its planning capability in a broader sense to meet the changing water resources needs of the nation (Enclosure 1.c.). Ultimately, watershed studies should inform multiple audiences and decision makers at all levels of government, and provide a strategic roadmap to inform future investment decisions by multiple agencies.

6. Integrated Water Resources Management (IWRM): IWRM is the overarching strategy of the Civil Works Strategic Plan 2014-2018 (Enclosure 1.o.). IWRM provides a holistic focus on

water resource challenges and opportunities that reflects coordinated development and management of water and related resources. The principles of IWRM are integral parts of watershed planning: focused attention on multiple objectives and tradeoffs; better accounting for uncertainty; accommodating the concepts of adaptive management; stakeholder collaboration; and systems analysis for watershed-scale planning and evaluation.

7. Incorporation of Standardized Principles: SMART Planning principles (Enclosure 1.g.) are integral to watershed planning and are a standard USACE business process. Project Delivery Teams (PDTs) are required to incorporate critical thinking, risk-informed decision making, and early and frequent vertical team engagement throughout the study process.

The following elements are key components of an effective watershed planning process, similar to the iterative six-step USACE planning process:

Six-step Watershed Planning Process:

- i. Identify Problems and Opportunities: Determine problems, needs and opportunities in the watershed by involving study partners, water and related land resources interests (stakeholders), resource agencies and the public. Federal agency partnerships and expansive stakeholder involvement are necessary to collect a broad view of problems, needs and opportunities, including items that may not be seen in more conventional project planning, and reaffirm the purpose of the watershed study. Problems may include institutional barriers, where the associated opportunity is a full partnership by all relevant agencies to examine existing policies and procedures. Planning is an iterative process and the problems, opportunities, objectives, and constraints should be reassessed after key decision point milestones.
- ii. Inventory and Forecasting: Prepare a collaborative inventory of relevant water and related land resources, consistent with the needs of the study, such as: land use; multiple agency programs and capabilities; jurisdictional boundaries; demands and needs within the watershed; existing models; existing mapping and data; water supply and treatment systems; water rights; transportation systems; or any inventory consistent with the needs of the study. Some inventory and forecast activities may not be directly related to a specific geographic location, but rather would identify gaps in authorities needed to address specific problems. Reasonable efforts must be made to obtain and analyze relevant data, even where available data may be limited at the outset. Inventory is not limited to those areas used to develop analyses directly related to site-specific project planning. Include an examination of anticipated future actions, activities and outcomes that reflect reasonable risk-informed assessments, consistent with the needs of the study, with clearly described assumptions and uncertainties that allow for consideration of the likely effects of a range of activities, decisions, or other courses of action.
- iii. Identify and Screen Measures: Develop management measures based on a feature or activity at a site which addresses one or more of the planning objectives. Measures can be combined or used alone to make strategies that can be considered for recommendations. Some measures may go beyond that which can be constructed or built to include activities such as outreach, proposed regulatory actions, or a programmatic

approach to existing requirements. Measures will be screened initially by using constraints, expert judgment, metrics, and specific screening criteria to focus on those that will contribute towards meeting the planning objectives.

- iv. Formulate Initial Array of Strategies: Using the list of measures, provide a clear description of alternative approaches to address identified problems and needs, emphasizing alignment of actions of federal, tribal, state, interstate and local government entities, with an explanation of expected outcomes resulting from combinations of measures and actions considered. Strategies should be developed in the context of options or choices and their projected outcomes, and should be developed based on reputable and readily available science and technical analyses.
- v. Refine Initial Array and Evaluate Focused Array of Strategies: Evaluate the alternative strategies, in consultation with study partners, to assess how effectively the strategies address the identified problems, while focusing on the collective values, missions, and the shared vision. There may be a number of ways to address the needs within a watershed; structured assessment of the pros and cons of each strategy can be used to inform a trade-off analysis. The four Principles and Guidelines evaluation criteria (completeness, effectiveness, efficiency, and acceptability) provide a solid and flexible framework for comparing strategies from a variety of perspectives.
- vi. Strategy Comparison and Selection: Compare the strategies against one another, noting trade-offs between the strategies, and select the best suited strategy for meeting the watershed study goals and objectives. The strategies must clearly describe the overall benefits towards advancing the shared vision and a general assessment of cost effectiveness, sequencing and priority of actionable items, and associated needs. As the strategies are described in the watershed study, the primary responsible federal and non-federal partner(s) and their associated missions, authorities, programs and sources for potential future appropriations should also be identified to inform a strategic roadmap that guides implementation and provides measurable value to the nation. Throughout the collaborative study process, an attempt should be made to achieve alignment of partner agencies for the recommended actions. For actions that are controversial, or where relationships remain contentious, the watershed study should frame the recommended actions as those which would be most effective in solving the identified problems, regardless of whether the implementing agency chooses to take action.

The District Planning Chief is responsible for ensuring PDT adherence to the standardized principles and six-step process.

8. Expected Outcomes: Watershed studies provide recommendations for actions that can be taken to solve the identified problems, and the product may take the form of a watershed management plan, watershed assessment, river basin assessment, comprehensive plan, or watershed study. The conclusions and recommendations have broad implications for decision makers at all levels of government. Recommendations for improvements to the nation's water resources can include suggested strategies, policies (new policies, or revisions to existing policies), programs for local or state agencies and multi-agency partnerships, or federal and non-federal programs or projects (subject to specific authorities, analysis, or decision making

processes). Such recommendations should provide a strategic roadmap that identifies the sequencing of priorities, where federal authorities and appropriations are available, and where new ones are needed. This coordinated planning should result in an overall cost-savings to the public as government agencies work together more effectively.

Where USACE has authority, recommendations can include activities under Flood Plain Management Services, Planning Assistance to States, the Tribal Partnership Program or the Continuing Authorities Program (CAP). Watershed studies may also recommend the initiation of site-specific feasibility studies where there is potential USACE interest in projects that would require Congressional authorization. Regardless of whether there are future actions for USACE, the watershed study should provide a strategic overview that illustrates how the individual recommendations cohesively tie together to advance the shared vision and further achieve the desired end-state. Where USACE actions are recommended, it should also describe how those actions integrate with work being done by others in the watershed.

9. Requirements for Single-Phase Watershed Planning: Watershed studies will be completed in a single phase (Enclosure 1.i.). A non-federal sponsor will be required to sign a cost-sharing agreement for watershed studies to initiate USACE involvement. No work may begin on these assessments prior to execution of a cost-sharing agreement. Non-federal sponsors must be prepared to provide \$25k for initiation of the study, and additional funds if needed, to develop the Project Management Plan (PMP) (Enclosure 1.h.). Once the PMP is developed, the non-federal sponsor must provide its proportional funding or in-kind contributions consistent with federal funding and cost-sharing provisions of the study authority.

The overall scope and scale of the study, as documented in the PMP prepared by the PDT and coordinated with non-federal interests, will be validated through vertical team alignment within the first 3 to 6 months of the study. Per Enclosure 1.e., vertical team alignment should include coordination with the Chief, Office of Water Project Review (OWPR), and the District and MSC Planning Chiefs. The results of this coordination will be documented in a concurrence memorandum, similar to the watershed memorandum required by Enclosure 1.f., and signed by the MSC Planning Chief.

10. Vertical Team Engagement and Annual In-Progress Reviews (IPRs): The PDT will be held accountable for the scope, schedule and budget as presented in the PMP and at the first decision milestone. Throughout a watershed study, the PDT should engage with the USACE vertical team, especially when there is a need to deviate from previously agreed upon scope, schedule or budget, or when there are significant policy issues that need resolution. It is essential for the PDT and vertical team to meet regularly and align expectations.

At least annually, the full multi-disciplinary PDT is expected to participate in vertical team IPR meetings and/or decision point milestones, along with the multi-disciplinary Agency Technical Review (ATR) team, Planning Center of Expertise representatives, Major Subordinate Command (MSC) quality assurance reviewers, and HQUSACE RIT and policy review team members. These IPRs will offer an opportunity to discuss the study status to date, obtain vertical team alignment on decisions and any draft recommendations that would require additional USACE action, and reaffirm the overall course and direction of the study.

Read ahead documents for an IPR include: report summary, risk register, decision log and decision management plan (DMP) if needed. The PDT will present summary information on the budget expended and proposed study framework budget and schedule needed for study completion at the IPR. A Memorandum for the Record (MFR), with attached decision log if necessary, will be prepared by the District Planning Chief to memorialize the decisions made at each IPR regarding scope, schedule and budget, and any policy considerations or issues resolved. These decisions will also be recorded in the decision log. The MFR will be endorsed by the MSC Planning and Policy Chief and transmitted to the RIT for concurrence by the Chief of OWPR. The MFR should include a study schedule and funding stream to complete the draft and final watershed plans.

11. Study Milestones: There are three milestones in single-phase watershed planning: Shared Vision; Recommendations; and Final Report (see Figure 1).

a. Shared Vision Milestone: The purpose of the Shared Vision Milestone is to define the overall shared vision for the watershed, water and related resources as developed by the partners involved in the watershed study, and to present the coordinated study framework and associated activities that clearly support the shared vision. It is an opportunity for the vertical team to weigh in on the purpose of the study and the established scope, schedule and budget as informed by the shared vision process. This will be used as a reference point as the study continues; any changes to the agreed upon path will require a solid justification that will be completed and documented consistent with the IPR MFR process in section 10 of this document. The shared vision statement will be developed through close coordination with partners and stakeholders, broad enough to encompass various goals and objectives of individual partners and stakeholders, and with a sufficiently detailed description to allow for subsequent development of specific planning objectives and associated metrics.

The shared vision will be the basis for establishing the study framework. The framework will identify the roles and responsibilities of each partner in the watershed study, identifying which entity will perform certain tasks, and how the tasks will move the study closer to achieving the shared vision. This framework will also clearly identify the role that USACE will serve during the study. Execution of the tasks identified in the framework will inform the watershed study. The PDT should reach the Shared Vision Milestone within 12 months from execution of the cost-sharing agreement.

A Shared Vision Milestone meeting will be held with the USACE vertical team once the typical activities and key products (listed below) have been completed. The Shared Vision Milestone will replace the annual IPR in the year it is conducted. One of the outcomes of the Shared Vision Milestone will be a determination by the vertical team as to whether there is USACE interest in continuing with the study, specifically with completing the tasks in the study framework and preparing a draft and final watershed plan. In highly organized watersheds, it may be determined that the most appropriate role for USACE is to support ongoing local efforts, in which case a watershed study may not be necessary, and/or it may be more appropriate to use other USACE authorities (Flood Plain Management Services, Planning Assistance to States, etc.). In other cases, the value that USACE brings may simply be as convener or integrator of ongoing efforts led by others such that the development of the shared vision is the end product, and no further USACE participation is warranted.

TYPICAL ACTIVITIES FOR SHARED VISION MILESTONE

- Assemble a PDT that includes participation with partners and stakeholders.
- Define the study area with partners and stakeholders to capture impacts and influences of broadly identified problems and opportunities.
- Work with partners and stakeholders, including local, state and federal agencies, Tribes and the public, to develop a concise shared vision statement.
- Develop broad study goals and objectives that capture the breadth of interests to be served.
- Document partner and stakeholder support and concurrence on the shared vision from federal and non-federal partners. Documentation of cooperation and coordination activities with required federal agencies (Departments of Interior, Commerce, Agriculture, and the Environmental Protection Agency) should be provided, even if these agencies have declined to participate.
- Develop study framework identifying the roles and responsibilities of USACE and its partners, with associated tasks that will advance the shared vision. In the study framework, describe how these tasks incrementally contribute to the shared vision.
- Consider how various agency authorities may be combined to align and prioritize future water resources actions within the watershed.

The draft read-ahead materials for the Shared Vision Milestone should be submitted to the MSC for QA review, with a courtesy copy to the Headquarters RIT, at least four weeks prior to the anticipated milestone date. The MSC will assess the District's readiness to conduct the milestone, work with the District to resolve issues, and coordinate with the RIT to schedule the meeting. Final read-ahead materials should be provided to all parties two weeks prior to the milestone date.

Any amendments to the PMP and/or cost-share agreement will be discussed at the Shared Vision Milestone meeting to validate vertical team alignment with the PDT and non-federal interests on the remaining scope of investigations, specifically time and funding necessary to complete the study. The Chief of the Office of Water Project Review (OWPR) will determine whether continued USACE involvement beyond the Shared Vision Milestone is warranted. This decision will be based on the information provided in the study framework, which should clearly identify the role that USACE will serve during the study and the need for federal involvement in addressing the identified problems. A Memorandum for Record (MFR) will be prepared by the District Planning Chief to memorialize the decisions made in the Shared Vision Milestone meeting. The MFR will be endorsed by the MSC Planning Chief and transmitted to the RIT for concurrence by the Chief of OWPR. The MFR should include a study schedule and funding stream to complete the draft and final watershed plans.

KEY PRODUCTS FOR THE SHARED VISION MILESTONE

- **Shared vision statement.** This is defined as a collaborative effort involving the partner(s) and other stakeholders.
- **Study framework.** This identifies and documents the roles and responsibilities of each partner in the study, outlines the major tasks and activities each agency will undertake, and specifically addresses whether USACE will play a lead or supporting role.
- **Draft Report Summary.** The Report Summary should include:
 - Shared Vision statement.
 - At least one watershed-scale iteration of the six-step planning process described earlier, with goals that align with the shared vision, and established problems, opportunities, objectives and constraints.
 - Baseline conditions and future without-project forecasts utilizing existing data.
 - Data, tool, and model inventory, assessment and gap analysis.
 - Confirmation of continued USACE participation in the watershed and future direction of the study.
- **Presentation.** This presentation should summarize concisely the shared vision statement; study framework; problems, opportunities, objectives and constraints; a brief summary of historic, existing and future without-project conditions; data inventory and analysis; and a recommendation on whether USACE should continue with the watershed study.
- **Risk Register.** This is an important tool for identifying and managing study risks, allowing the vertical team to make decisions on how those risks are to be managed.
- **Decision Management Plan.** This is a strategic document that describes the work that will be done by the PDT in reaching the next significant planning decision. Vertical team concurrence is vital. Each DMP clearly describes how decision information will be used in the planning process, before the work is actually completed.
- **Decision Log.** This is a tool to document major decisions made through the planning process. Vertical team members must sign or initial (digital signatures or emails are acceptable) the Decision Log before an IPR or Milestone is concluded.
- **Review Plan.** The Review Plan describes the scope of review for the watershed study and is a component of the Quality Management Plan in the PMP.
- **Public Involvement Plan.** The public involvement plan documents an effective public involvement strategy as an integral part of the planning process.

b. Recommendations Milestone: Following successful completion of the Shared Vision Milestone, the PDT will complete the tasks identified in the study framework that inform the watershed study. When sufficient analysis has been conducted to develop recommendations, a Recommendations Milestone will be held. The purpose of the Recommendations Milestone is to ensure vertical team concurrence on recommended strategies that meet the study goals and objectives. The Recommendations Milestone will replace the annual IPR in the year it is conducted.

At the Recommendations Milestone meeting, the Chief of Planning and Policy Division, HQUSACE, will make the determination whether or not to endorse the recommendations and the proposed way forward to complete the final watershed study. This vertical team engagement

prior to the release of the draft watershed plan will ensure alignment with USACE policies and inform USACE communications with external agencies.

TYPICAL ACTIVITIES FOR RECOMMENDATIONS MILESTONE

- Define the hydrologic unit study area.
- Investigate the problems, needs, and opportunities of a watershed, including but not limited to: flood risk management, environmental restoration, water quality, water supply, drought preparedness, recreation, and navigation.
- Research historic and current conditions and uses of the watershed.
- Develop a qualitative assessment of the cumulative effects of various activities in the watershed.
- Determine the likely future conditions and potential future changes/initiatives in the watershed based upon proposed activities and development, including the identification of resource uses, needs, and conflicts.
- Evaluate alternative uses of the resources including the positive and negative effects on economic development, the environment and social well-being based upon factual scientific, social and economic information.
- Prioritize water and land-related resource problems and opportunities.
- Identify and evaluate conflicting uses and monetary and non-monetary tradeoffs among conflicting uses.
- Work with stakeholders to collectively develop possible project measures for recommended future activities.
- Complete a qualitative assessment of the cumulative effects of various activities in the watershed.
- Work with stakeholders to collectively determine actions to recommend in a watershed study / watershed plan.
- Complete a qualitative assessment of alternative / strategy costs, benefits and potential environmental impacts of any recommended activities.
- Use a decision framework and stakeholder involvement to justify recommendations and to explain how recommended activities would systematically improve integrity of the watershed, advance the shared vision.
- Determine the strategic roadmap for implementing activities, programs or construction activities associated with expected outcomes, identify which agencies are best suited for accomplishing such activities, and provide general statements of support from these agencies.
- Qualitatively describe how the strategic roadmap and recommendations are addressing the overall federal interest from the perspective of the federal family, and why involvement by the federal government is warranted.
- Report the findings of these analyses through preparation of a watershed study / watershed plan.
- Pursue any studies, projects or programs for which USACE has authority under normal budget development process (subject to specific authorities, analysis, or decision making processes).

Within 60 days of a successful Recommendations Milestone, a report documenting the findings of the analyses should be developed. In most cases, this will be a Draft Watershed Plan, which will describe the problems, opportunities, objectives, constraints and watershed goals and how the recommended alternatives and/or strategies advance the shared vision. A description of the data, models or other information that were used to support the inventory and forecast, and

evaluation and comparison of alternatives should be provided. A description of how this study provided value to the nation should also be provided, describing the unique characteristics or outcomes of the study and how this information can be used to inform future investment decisions, management and planning efforts in the watershed. Watershed plans should identify actions to be undertaken by the various partners and stakeholders in order to meet the objectives of the study. The planning document may or may not recommend further USACE studies, projects or programs. Budgetary priority for watershed studies will not be based upon the potential for future USACE projects (Enclosure 1.n.).

The Draft Watershed Plan report will provide information that assists in the understanding of the relationships between potential next steps and water resources priorities for the watershed. The information is intended to provide partners and other decision makers with a risk-informed understanding of actions that could be taken, accounting for study risks, implementation risks and potential outcome risks associated with the performance of any future projects, to the extent this information is known.

KEY PRODUCTS FOR RECOMMENDATIONS MILESTONE

- **Draft Report Summary.** The Report Summary describes the important elements of the planning work completed to this point of the study. The summary highlights key areas of uncertainty and how it has been addressed in order to manage study risks. The summary documents the rationale for PDT decisions and is a living document intended to follow the study through the duration of the planning process.
- **Presentation.** This presentation should summarize concisely the shared vision statement; progress on / status of the study framework; problems, opportunities, objectives and constraints; a brief summary of historic, existing and future without-project conditions; an overview of the planning process, to include development of measures and alternatives or strategies, the screening process and evaluation criteria, evaluation and comparison of alternatives or strategies with a description of tradeoffs, and the selected strategies.
- **Risk Register.** This is an important tool for identifying and managing study risks, allowing the vertical team to make decisions on how those risks are to be managed.
- **Decision Management Plan.** This is a strategic document that describes the work that will be done by the PDT in reaching the next significant planning decision. Vertical team concurrence is vital. Each DMP clearly describes how decision information will be used in the planning process, before the work is actually completed.
- **Decision Log.** This is a tool to document major decisions made through the planning process. Vertical team members must sign or initial (digital signatures or emails are acceptable) the Decision Log before an IPR or Milestone is concluded.
- **Review Plan.** The Review Plan describes the scope of review for the watershed study and is a component of the Quality Management Plan in the PMP.
- **Public Involvement Plan.** The public involvement plan documents an effective public involvement strategy as an integral part of the planning process.

District Quality Control (DQC) will be conducted on technical products during their development, and Agency Technical Review (ATR) will be conducted after their development, to assure the quality and credibility of the scientific information. The DQC will be completed prior to the Recommendations Milestone meeting, as will any ATR on technical products, models or analyses that are particularly complex and would benefit from a technical review prior

to other reviews (public, policy, etc.). Formal Type I Independent External Peer Review (IEPR) is not required for watershed studies. Situations may arise, however, where complex technical analyses or novel scientific methods would benefit from a review by external experts. Such external peer review is not considered Type I IEPR. A risk-informed recommendation as to whether experts outside USACE will be brought in for review will be documented in the review plan.

c. Report Milestone: When the Draft Watershed Plan has been prepared, it will be released for a 30-day (minimum) concurrent public, technical, legal, and policy review period, including review by the federal and non-federal partners. HQUSACE review role is to ascertain that appropriate considerations have been made and that study conclusions are consistent with overall USACE policy. Use of MSC reviewers as members of the HQUSACE policy review team will be at the discretion of the Chief, OWPR and other HQUSACE functional chiefs (Enclosure 1.j.). Per the authorizing language of Section 729, WRDA 1986, watershed studies should be carried out in cooperation and coordination with the Secretary of the Interior; the Secretary of Agriculture; the Secretary of Commerce; the Administrator of the Environmental Protection Agency; and the heads of other appropriate agencies; and in consultation with federal, tribal, state, interstate, and local governmental entities. In essence, the “public” identified for public review may vary from study to study, but at a minimum it should include the members of these partnering government agencies, as appropriate. Once the review period has closed and the PDT has adequately addressed the comments, any changes will be incorporated into the Final Watershed Plan.

PREPARING THE REPORT: CONSIDER FUTURE USES

- Provide a meaningful report to inform multiple audiences and decision makers at all levels of government: local, state and federal, including HQUSACE, ASA-CW, federal family and Congress.
- Provide a strategic roadmap identifying recommended phases of implementation for greatest success to inform future investment decisions by multiple agencies.
- Describe why this study warrants federal engagement. How can the federal family help overcome institutional barriers and solve technical problems?
- Describe how problems can be solved across multiple agencies.

The District Commander will concurrently submit the Final Watershed Plan to the MSC Planning and Policy Chief and the appropriate RIT. The Division Commander will endorse the document once appropriate QA has been completed. The RIT will log the final report for HQUSACE policy review, which will culminate in a documentation of review findings that will accompany the final watershed study package to the Chief of Planning and Policy Division, HQUSACE. The RIT will also draft a transmittal memo from the Director of Civil Works to the Assistant Secretary of the Army for Civil Works (ASA-CW). After the Chief of Planning and Policy Division, HQUSACE, approves the Final Watershed Plan, the RIT will route the transmittal memo and required enclosures through the Director of Civil Works to the ASA-CW for transmittal to Congress for information in response to the study authority and to the Office of

Management and Budget for information. The PMP will include a provision for this coordination with ASA-CW staff, similar to the processing of a Director's Report.

ASA-CW FINAL WATERSHED STUDY SUBMITTAL REQUIREMENTS

- Transmittal memo
- Final Watershed Study / Plan*
- Summary of key findings and overall value of the study to the watershed and the stakeholders, including a clear description of the federal interest
- Documentation of Review Findings
- Copies of ATR, Policy and Legal certifications, Policy review, and model cert(s), as applicable
- Draft transmittal letters to the President of the Senate & the Speaker of the House of Representatives
- The District should provide letters of support or concurrence from any agencies or organizations identified in the Watershed Plan as having part in any of the recommended actions
- The District should provide documentation of coordination with required federal agencies (Departments of Interior, Commerce, Agriculture, and the Environmental Protection Agency). If any of these agencies have declined to participate, then documentation of that should be provided as well.
- A briefing presentation (upon additional request by the ASA(CW))

**A minimum of two hard copies and three electronic copies shall be provided to ASA-CW*

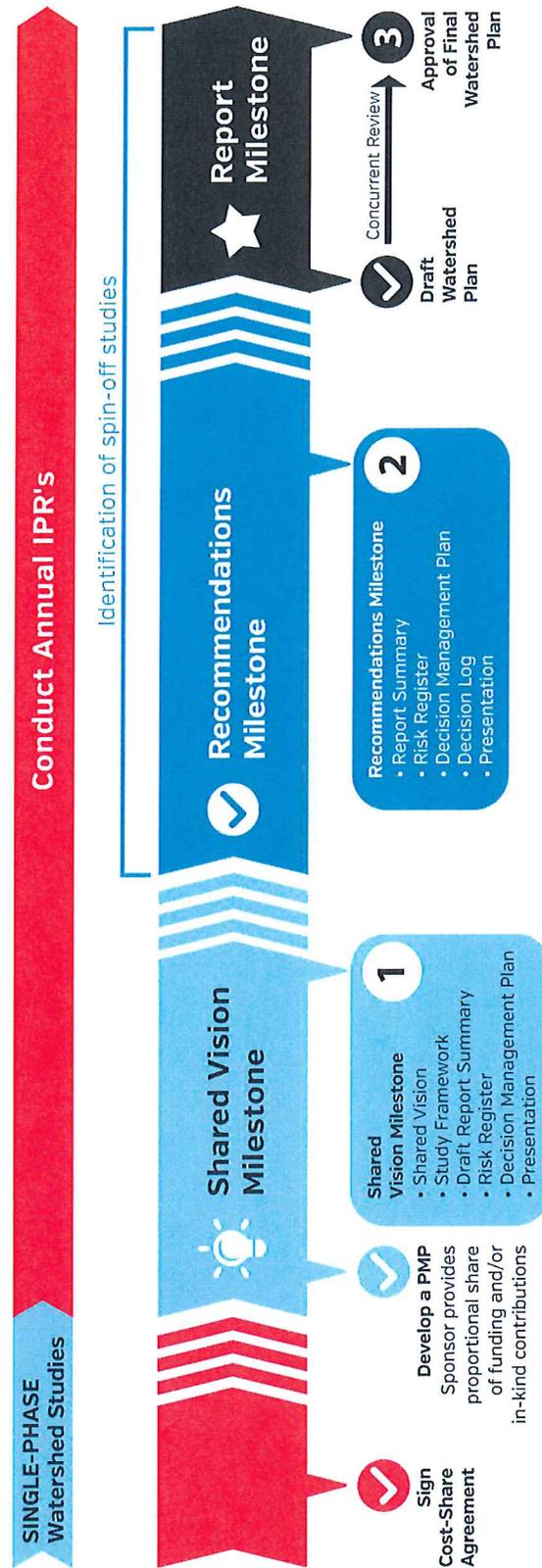
12. Considerations for Additional Study Recommendations: Section 729 of WRDA 1986 does not provide authority for feasibility studies, but there may be cases where feasibility study authority already exists for the study area of interest. In other cases, new study authority is needed. Consult current budget guidance to determine how "spin-off" and "new start" studies identified through watershed studies should be identified in the budget development process.

13. The point of contact for watershed studies is Ms. Susan B. Hughes, 202-761-4121.



THEODORE A. BROWN, P.E.
Chief, Planning and Policy Division
Directorate of Civil Works

Figure 1. Watershed Study Process



Enclosure 1: References

- a. Engineer Regulation (ER) 1105-2-100, 20 November 2007, subject: Planning Guidance Notebook
- b. Engineer Circular (EC) 1165-2-214, 15 December 2012, subject: Civil Works Review
- c. Engineer Circular (EC) 1105-2-411¹, 15 January 2010 (expired 15 January 2012), subject: Watershed Plans.
- d. Planning Bulletin (PB) 2015-02, 7 May 2015, Single Phase Planning Studies
- e. Planning Bulletin (PB) 2015-01, 9 October 2014, Vertical Team Alignment in Study Scoping
- f. Planning Bulletin (PB) 2014-01, 14 March 2014, subject: Application and Compliance of SMART Planning and the 3x3x3 Rule
- g. Planning Bulletin (PB) 2012-02, Reissue #2: Reissued 04 March 2014, Planning SMART Guide.
- h. Memorandum, CECW-P, 24 June 2015, subject: Model Watershed Cost Share Agreement
- i. Memorandum, CECW-P, 9 April 2015, subject: Implementation Guidance for Section 1002 of the Water Resources Reform and Development Act (WRRDA) of 2014 – Consolidation of Studies
- j. Memorandum, CECW-PC, 2 July 2014, subject: Application and Compliance of SMART Planning and the 3x3x3 Rule to Watershed Assessment Studies
- k. Memorandum, CECW-P, 16 May 2008, subject: Implementation Guidance for Section 2011 of the Water Resources Development Act of 2007 (WRDA 2007), Tribal Partnership Program
- l. Memorandum, CECW-PB, 7 March 2008, subject: Implementation Guidance for Section 2010 of the Water Resources Development Act of 2007 (WRDA 2007) – Watershed Authorities and River Basin Assessments
- m. Memorandum, CECW-PG, 8 January 2002, subject: Implementation Guidance for Section 203 of the Water Resources Development Act of 2000 (WRDA 2000), Tribal Partnership Program
- n. Memorandum, CECW-BW, 29 May 2001, subject: Implementation Guidance for Section 202 of the Water Resources Development Act of 2000 (WRDA 2000), Watershed and River Basin Assessments, which Amends Section 729, WRDA 86, Study of Water Resources Needs of River Basins and Regions
- o. Engineer Pamphlet (EP) 1165-2-503, 31 December 2014, Sustainable Solutions to America's Water Resources Needs: Civil Works Strategic Plan 2014-2018

¹ Although the EC has expired, it should be referenced as background information until such time as it is replaced by an ER.