

Watershed Planning Fundamentals

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June 2, 2016



US Army Corps of Engineers
**PLANNING SMART
BUILDING STRONG**



Welcome & Logistics

- Please Sign-in so we know who you are
- Global Mute on the phone to improve sound quality. Thanks for your understanding.
- Questions welcome via chat function
 - Will address questions as time allows
- Slides and Q&A will be posted on SMART Guide
- Thank you for your time today



Watershed Planning Fundamentals

- Overview of Watershed Planning in the Corps
- Watershed Planning SMART Process
 - Initiating and Scoping Single-Phase Watershed Assessments
 - Vertical Team Engagement and Annual In-Progress Reviews
 - Visioning and the Vision Milestone
 - Conducting Watershed Assessments and the Recommendations Milestone
 - Draft Watershed Plan
 - Final Watershed Plan
- Resources

New Watershed Assessments Planning Bulletin



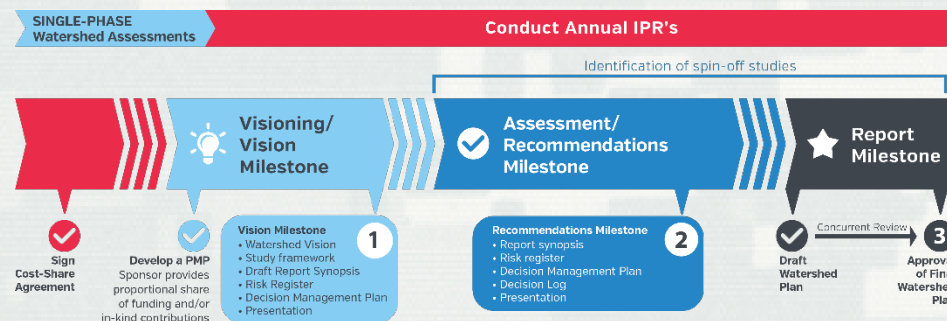
Corps Watershed Planning Overview

- **Existing guidance** -- EC 1105-2-411 reference to ER 1105-2-100 feasibility study (legacy) milestones and Appendix H for report approval – **an uneasy fit**
- In the past, watershed studies have spanned several years, experienced **scope creep**, and required large investments; many never reached completion.
- Under Civil Works Transformation, Districts were uncertain as to how to apply **SMART Planning principles** to watershed studies.
- The **value** of watershed studies has not been clearly communicated, both internally and externally
- Districts have been **inconsistently** applying watershed planning guidance
- **Vertical Team engagement** on watershed studies has been limited
- **WRRDA 2014**, Single Phase Planning applies



Corps Watershed Studies Defined

- A geographic area of **hydrologic connectivity** via overland or underground flow that human communities rely on for physical, societal and economic well being; and ecological communities rely on for sustainability.
- Part of the USACE Planning portfolio that tends to be **broad in scope and complexity**. They can identify problems within and beyond USACE mission areas, and have multiple purposes and objectives. Includes:
 - WRDA1986 Section 729 studies (as amended)
 - WRDA2000 Section 203 studies (Tribal Partnership Program)
 - Other specifically authorized river basin and regional watershed studies



SMART Watershed Planning is designed to deliver useful, high quality products to stakeholders in shorter timeframes with less cost.



Characteristics of a Watershed Study

- ✓ Collaborative Watershed Vision
- ✓ Multiple Partners and Stakeholders
- ✓ Beyond Corps mission areas
- ✓ Multi-purpose or Comprehensive Single-purpose
- ✓ Broad set of solutions for multiple stakeholders
- ✓ May not result in a Corps project



Apply Principles
of Integrated
Water Resources
Management

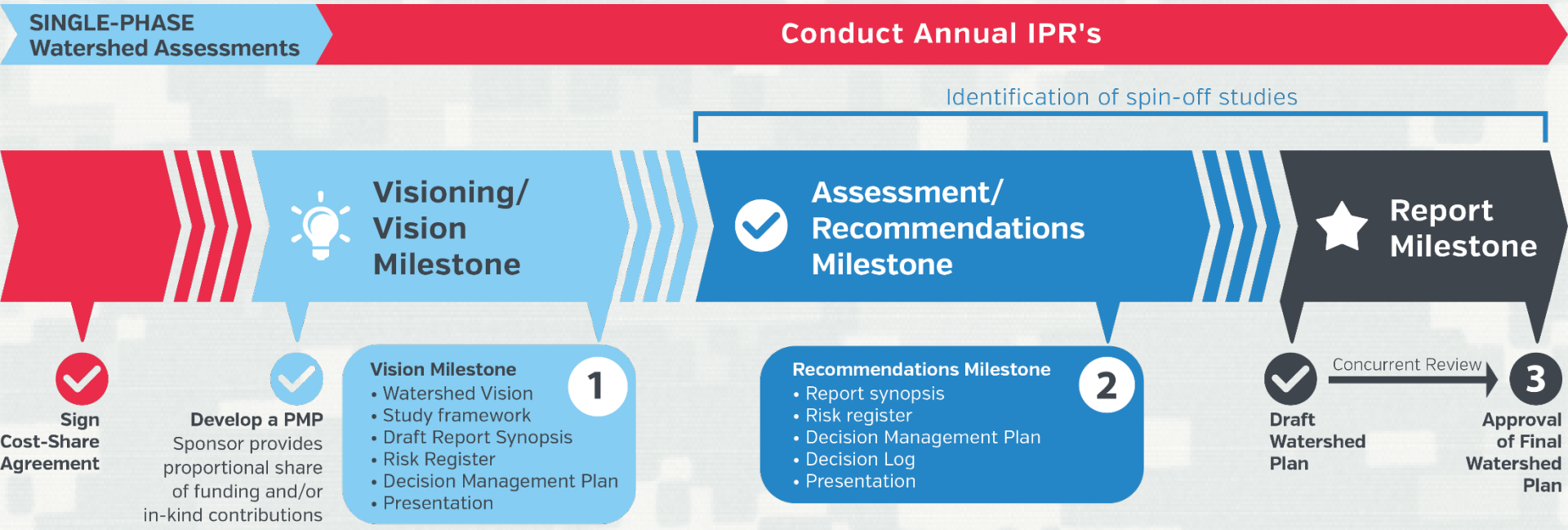


Integrated Water Resources Management (IWRM)

- 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.



SMART Watershed Planning Process



Watershed Planning Six Step Planning Process

1. Identify Problems and Opportunities
2. Inventory and Forecasting
3. Identify and Screen Measures
4. Formulate Initial Array of Alternatives / Strategies
5. Refine Initial Array & Evaluate Focused Array of Alternatives / Strategies
6. Strategy Comparison & Selection

Vision Milestone:

Steps 1 – 3: Major Focus

Steps 4 – 6: Minor Focus

Recommendations Milestone:

Steps 1 – 3: Minor Focus

Steps 4 – 6: Major Focus

Draft Watershed Plan

Steps 1-6

Final Watershed Plan

Steps 1-6



Key Activities to Initiating Watershed Assessments

Initiate Study

Vision

Assessment

Draft
Watershed Plan

Final
Watershed Plan

- ✓ Identify non-Federal sponsor(s)
- ✓ Determine Federal interest in the watershed
- ✓ Negotiate & execute Cost-Sharing Agreement for watershed studies (model)
- ✓ Develop PMP with Public Involvement Plan
- ✓ Prepare a Review Plan

- No work may begin prior to execution of a cost sharing agreement
- Validate vertical team alignment on the PMP within 3-6 months
- \$25K cash from Sponsor to develop PMP
- Remaining share of funding is provided once the PMP is developed



Developing a Vision Statement

Initiate Study

Vision

Assessment

Draft
Watershed Plan

Final
Watershed Plan

- The Vision milestone is the **most critical**
- Purpose is to define the overall **vision** of the stakeholder group and present the **study framework**
- Clearly identifies how the framework and associated activities support the **collaborative watershed vision**
- Defines **USACE role**



Vision Statement Examples



Vision Statement

Water in the West is an increasingly scarce and precious resource, given population growth and an expanding range of often competing economic and ecological demands, as well as changing social values. Surface and ground water supplies in many areas are stressed, resulting in a growing number of conflicts among users and uses. A secure and sustainable future is increasingly uncertain given our climate, aging and often inadequate water infrastructure, limited knowledge regarding available supplies and existing and future needs and uses, and competing and sometimes un-defined or ill-defined water rights. Effectively addressing these challenges will require a collaborative, cooperative effort among states and stakeholders that transcends political and geographic boundaries.

Central Valley Integrated Flood Management Study Vision



Federal and State governments share a vision for an integrated flood management system in the Central Valley to provide for safe, healthy and thriving communities while protecting and restoring the environment. The problem is so overwhelming that achievement of this shared vision can only be through pursuit of mutual priorities. The State's flood risk management priorities of public safety, environmental stewardship, and economic stability match the Federal administration's priorities of protecting the American people, restoring and protecting the environment, and improving the nation's economy.



Key Activities to Prepare for a Vision Milestone

Initiate Study

Vision

Assessment

Draft
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Final
Watershed Plan

- 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 to develop a **concise watershed vision statement**.
- Develop **broad study goals and objectives** that capture the breadth of interests to be served.
- Document **partner and stakeholder support**.
- Develop **study framework** identifying the **roles and responsibilities of USACE** and its partners, with associated tasks that will advance the watershed vision. In the study framework, describe how these tasks incrementally contribute to the vision.
- Consider how **various agency authorities** may be combined to align and prioritize future water resources actions within the watershed.



Key Activities for a Study Framework

Initiate Study

Vision

Assessment

Draft
Watershed Plan

Final
Watershed Plan

- ✓ Develop, document study schedule & budget
- ✓ Document agency roles & responsibilities
- ✓ Document USACE-specific roles and responsibilities
- ✓ Identify anticipated outputs and **value** of the study
- ✓ Document stakeholder support

The Vision Milestone is a Vertical Team/PDT accountability checkpoint:

- ✓ the PDT is accountable for maintaining the agreed upon scope, schedule and budget for the remainder of the study.
- ✓ At minimum, the scope, schedule and budget will be discussed again at annual IPR's



Key Products for a Vision Milestone

Initiate Study

Vision

Assessment

Draft
Watershed Plan

Final
Watershed Plan

- Watershed vision statement
- Study Framework
- Data Management Plan
- Public Involvement Plan
- Review Plan
- SMART Planning Tools:
 - Report Synopsis
 - Presentation
 - Risk Register
 - Decision Management Plan
 - Decision Log



Partnership Decisions and Vertical Team Buy-In

Initiate Study

Vision

Assessment

Draft
Watershed Plan

Final
Watershed Plan

- ✓ Concurrence on USACE role in the watershed Vision
- ✓ USACE Commitment to execute USACE role in study
- ✓ Concurrence on study Framework
- ✓ Agreement on path to complete Final Watershed Plan

Review and Approval
MFR: signed by District Planning Chief, endorsed by MSC Planning Chief, with concurrence by the HQ OWPR Chief



Regularly Held In-Progress Reviews

Initiate Study

Vision

Assessment

Draft
Watershed Plan

Final
Watershed Plan

Read Aheads

- Report Synopsis
- Risk Register
- Decision Management Plan
- Decision Log

Discussion Topics

- Current study status
- Consistency with watershed vision & study framework
- Summary of any proposed modifications to scope, schedule, or budget
- Summary of any policy considerations or issues and proposed resolution
- Updated assessment of stakeholder support

Review and Approval

Vertical team concurrence on modifications to USACE scope, schedule or budget, or policy issues, documented with a memorandum for record



Key Activities for the Watershed Assessment

Initiate Study

Vision

Assessment

Draft
Watershed Plan

Final
Watershed Plan

- Complete tasks outlined in the PMP
- Coordinate as needed with applicable **Planning Centers of Expertise**
- Conduct **peer review**, as outlined in the Review Plan
- Planning process: Complete at least one iteration of the **six step planning process**, with emphasis on comparing and evaluating alternative strategies

- Develop a complete list of recommendations, for USACE implementation as well as for other agencies to implement
 - ✓ Conduct a **Recommendations Milestone**
 - ✓ Determine level of stakeholder support & document
- Update the watershed report synopsis to include all information needed for a **Draft Watershed Plan**
- Determine appropriate levels of review for the Draft Watershed Plan and engage review team members
- Update **Risk Register, Decision Management Plan, Decision Log & Review Plan**, as needed



Key Activities to Prepare for the Recommendations Milestone

Initiate Study

Vision

Assessment

Draft
Watershed Plan

Final
Watershed Plan

- Define the **hydrologic unit** study area.
- Investigate the **problems, needs, and opportunities** of the watershed
- Research **historic and current conditions**
- Develop qualitative assessment of **cumulative effects** of ongoing activities
- Determine **likely future conditions**
- Evaluate **alternative uses of the resources**
- **Prioritize** problems and opportunities

- Identify and evaluate **conflicting uses** and monetary and non-monetary **tradeoffs** among conflicting uses
- Work with stakeholders to **develop measures**
- Work with stakeholders to **determine actions to recommend**
- 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**
- Determine the best **schedule for implementing** activities
- **Report the findings of the analyses** through the draft watershed plan



Key Products for a Recommendations Milestone

Initiate Study

Vision

Assessment

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Final
Watershed Plan

- Results of Targeted ATR, as applicable
- Data Management Plan
- Public Involvement Plan
- Assessment of stakeholder support
- Review Plan
- SMART Planning Tools:
 - Report Synopsis
 - Presentation
 - Risk Register
 - Decision Management Plan
 - Decision Log

Review and Approval
Approval by HQ
Planning & Policy Chief
on recommendations & path
to Final Watershed Plan.



Key Activities for Preparing a Draft Watershed Plan

Initiate Study

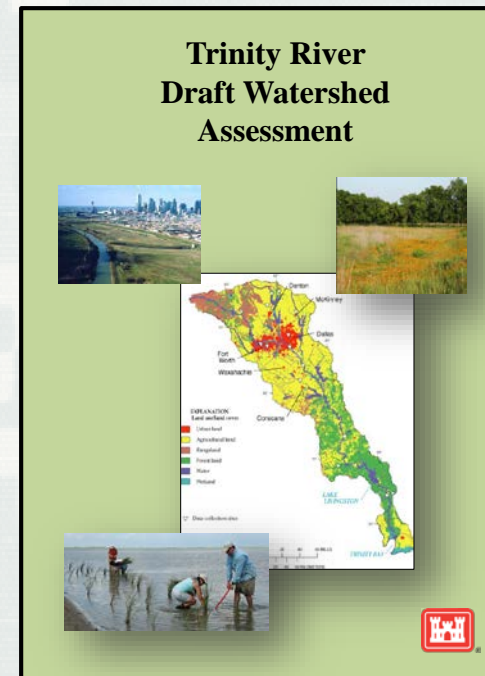
Vision

Assessment

Draft
Watershed Plan

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Watershed Plan

- Finalize recommendations
- Coordinate as needed with applicable Planning Centers of Expertise
- Update Risk Register, Decision Management Plan & Decision Log, as needed
- Finalize Draft Watershed Plan and release for **concurrent public, policy, QA, legal and ATR review** (as required)
- Share findings with the public



Final Watershed Plan Actions

Initiate Study

Vision

Assessment

Draft
Watershed Plan

Final
Watershed Plan

Decisions to be Made

- ✓ Conclude Study

Deliverables

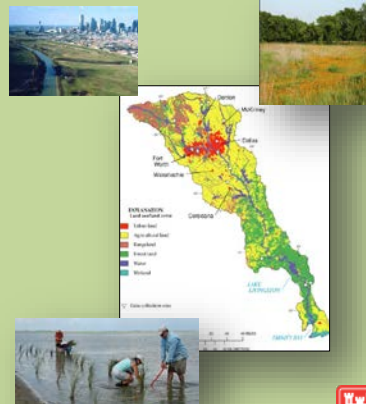
- Final Watershed Plan / Report
- ATR/Policy/Legal certifications
- Report/Information to Congress
- Lessons Learned

Next Steps

- ✓ Identify existing and needed authorities for any “spin-off” new start or new phase studies

- **Review and Approval**
- Approval by HQ Planning & Policy Chief
- Clearance from ASA-CW
- Information to OMB
- Report to Congress

Trinity River Final Watershed Assessment

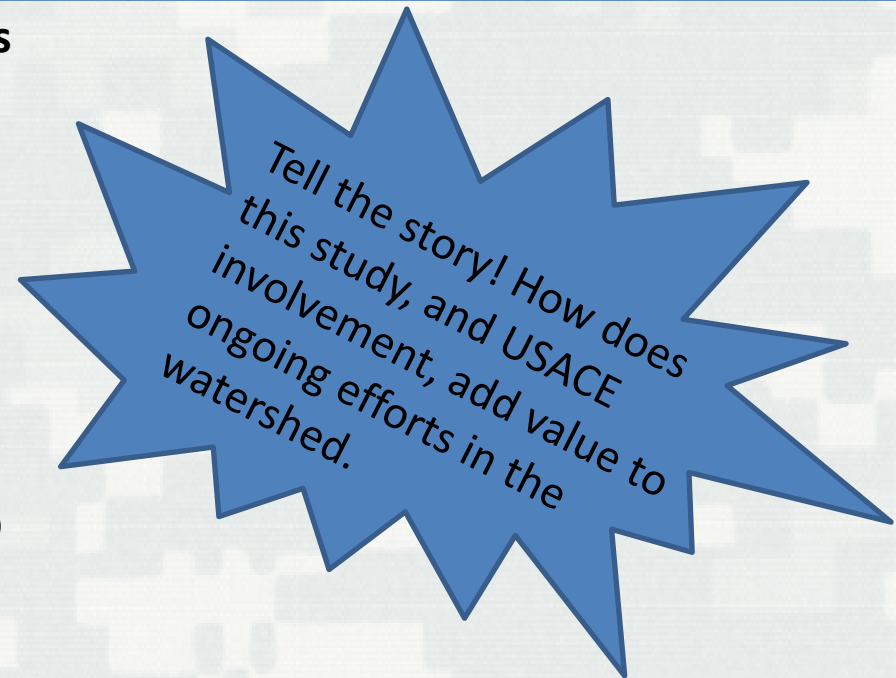


ASA(CW) Perspectives

Initiate Study	Vision	Assessment	Draft Watershed Plan	Final Watershed Plan
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Provide a Meaningful Report: Consider Future Uses

- 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** to inform future multi-agency investment decisions.
- 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**.



ASA(CW) Final Watershed Plan Submittal Requirements

Initiate Study

Vision

Assessment

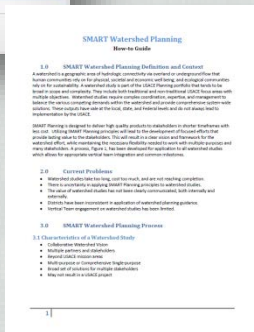
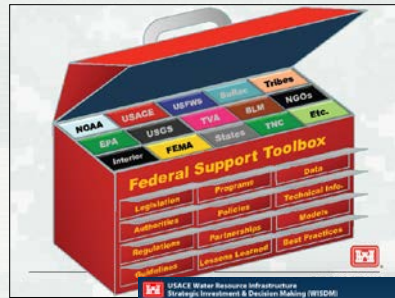
Draft
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- Transmittal memo
- Final Watershed Assessment / Plan
- Summary of key findings and overall utility/value of the study to the watershed and the stakeholders, including a clear description of the Federal interest therein
- Documentation of Review Findings
- Copies of ATR and Legal certifications, Policy review, IEPR certification or rationale for not conducting IEPR (as part of the approved Review Plan), and model cert(s), as applicable
- Draft transmittal letters to the President of the Senate & the Speaker of the House of Representatives
- Letters of support or concurrence from any partner agencies or organizations identified in the Watershed Assessment as having part in any of the recommended actions
- Documentation of coordination with required Federal agencies (Depts of Interior, Commerce, Agriculture, and the Env. 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))



Watershed Planning Resources



- Online Tools
 - Planning Community Toolbox (<http://planning.usace.army.mil/toolbox>)
 - Federal Support Toolbox (watertoolbox.us)
 - US Participation Playbook (<http://participation.usa.gov/>)
- Expert Cadre / Watershed Planning CoP (informal)
- Collaboration & Public Participation Center of Expertise at IWR (CPCX)
- Shared Vision Planning
- Technical Services
 - Floodplain Management Services
 - Silver Jackets, Non-structural / Interagency pilot studies
 - Planning Assistance to States
 - Tribal Partnership Program (TPP)



Questions?

Type questions in the chat box.
We will answer as many
as time allows.

For more information:
<http://www.corpsplanning.us>



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