



Feasibility Study Implementation

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Feasibility Study Execution and the 3x3x3 Rule

How can I learn more about the feasibility study process and milestones known as “SMART Planning”?

An overview of the feasibility study process and the [SMART Guide](#) is currently available on the [Planning Community Toolbox website](#). [Planning Bulletins](#) have been posted on the website to provide both information and updated guidance. Updates will continue to be posted on the site as additional [Tips, Tools & Techniques](#) are developed and refined, and as we learn from the planning efforts of ongoing studies.

[Webinars & Fact Sheets](#) provide overviews on the Foundations of SMART Planning, Milestones & Processes, Civil Works Transformation and Planning Modernization, Rescoping Charettes, and the Risk Register. Since April 2013, the Planning Community of Practice has offered a regular webinar series covering a variety of issues related to the Planning process, and the tools, policies, and lessons learned for feasibility study execution. Copies of Planning Community of Practice webinars on a variety of SMART Planning topics, and the Question/Answer session of each, will also be posted on the [SMART Guide](#).

[Planning Core Curriculum \(PCC\) courses](#) have been updated to reflect changes to the study process and new tools available to assist PDTs. Additional revisions will be made to PCC courses throughout Fiscal Years 2014 and 2015 as part of the Planning community’s comprehensive training strategy.

If you cannot find an answer to your question on the [SMART Guide](#), please let us know – there is a link for [comments and questions](#), and a member of the Planning Community of Practice will answer your question.

Why did the Corps change from the former (legacy) feasibility study process?

The Nation’s aging infrastructure, increased demands, and limited funding compel us to assess our ability to deliver studies and projects that meet the Nation’s water resources needs. We must focus our limited resources on the highest performing programs and projects within the primary water resources missions of the Corps: commercial navigation, flood risk management, aquatic ecosystem restoration, and hurricane and storm damage reduction. To achieve this, the Planning Community is improving our methods of delivery and modernizing the project planning process, both key [Civil Works Transformation](#) targets. *Why* we conduct feasibility studies is not changing; *how* we conduct them is.

What is 3x3x3?

In an 8 February 2012 [Memorandum](#), the Deputy Commanding General for Civil and Emergency Operations (DCG-CEO) stated that effective immediately all feasibility studies that have not reached the Feasibility Scoping Meeting (FSM) milestone will follow a 3x3x3 rule: be completed in no more than three years; cost not greater than \$3M; and require three levels of vertical coordination. The target length of the main report for feasibility studies will be 100 pages or less.

All studies that have been funded for greater than five years have been reviewed and assessed by the USACE vertical team and sponsors to determine if they should proceed or be terminated. All studies that are proceeding, whether currently funded or temporarily on hold, will be re-scoped in accordance to the



3x3x3 rule. Any study that exceeds the 3 years and \$3M will require justification and approval by the Deputy Commanding General for Civil and Emergency Operations (DCG-CEO). The 3x3x3 Rule Exemption Process is described in [Planning Bulletin 2012-04](#).

Is the \$3M threshold the total feasibility study cost or the federal share?

The \$3M threshold is the total feasibility study cost, including both the federal and non-federal sponsor share of the total cost. The \$3M threshold includes all costs associated with Independent External Peer Review (IEPR). *(Revised April 2014)*

When does the 3 years begin? When does it end?

The three-year completion deadline for feasibility studies is counted from the signing of the Feasibility Cost Sharing Agreement (FCSA), which initiates the feasibility phase, until the Chief of Engineers signs the Chief's Report. *(Added July 2014)*

How was the 3-year duration and \$3M threshold selected?

The three-year timeframe is not arbitrary. The [Planning Guidance Notebook](#) (ER 1105-2-100) states typical studies should be completed in 18-36 months. In addition, Section 2033(c) of Water Resources Development Act of 2007 ([WRDA](#)) directs that the benchmark goal for a study be within 2 years or generally up to 4 years.

The \$3 million target reflects the principle that studies should be scaled commensurate with complexity.

The Corps does not take a one-size fits all approach for feasibility studies. Complex studies, such as large watersheds and multi-purpose studies, may require time and funds beyond three years and three million dollars to complete, and the exemption process described in [Planning Bulletin 2012-04 exists specifically for these complex studies](#). These complex studies, lasting more than 3 years and costing more than \$3 million, are envisioned to be the exception rather than the rule. *(Updated November 2014)*

How will exemptions to the 3 year / \$3 million constraints be considered and processed?

[Planning Bulletin 2012-04](#), 3x3x3 Rule Exemption Process, explains the process for requesting an exemption from the 3x3x3 Rule. Requests will be submitted by the District Commander and endorsed to the Senior Leaders Panel by the MSC Commander.

Are Limited Reevaluation Reports, General Reevaluation Reports and watershed studies required to be 3x3x3 compliant?

The constraints of the "3x3x3 rule" – namely study completion within three years and a total cost of under \$3million – apply to all studies except watershed assessment studies. This includes all planning studies proceeding to complete a planning document, including, but not limited to: Feasibility Report leading to a Chief's Report, Limited Reevaluation Report, General Reevaluation Report, and Director's Report. If the vertical team agrees upon a specific scope for the study that necessitates a cost and/or schedule beyond the \$3 million and/or 3 years is appropriate, then an exemption will be requested per reference PB 2012-04. *(Revised April 2014)*

**Is a 3x3 Compliance Memorandum required for every study?**

Yes. All studies (except Watershed Assessments), per Planning Bulletin 2014-01, Application and Compliance of SMART Planning and the 3x3x3 Rule, should be 3x3 compliant. Prior to the Alternatives Milestone, a study is required to have an approved exemption (per PB 2012-04) or submit to the HQ Chief of Planning a 3x3 Compliance Memorandum that includes the MSC Planning Chief's endorsement of vertical alignment and a schedule – including scope and a funding stream which demonstrates completion within 3 years and \$3 million total. An example Compliance Memorandum is available on the [Planning Community Toolbox](#). (Updated November 2014)

Is the target report length of 100-pages for the main feasibility report or an integrated report/environmental document?

The target length of 100-pages is for an integrated document. Although the target does not include appendices, the full report document and appendices should not exceed a single 3-inch binder. Examples of recent integrated feasibility study reports are available on the [Planning Community Toolbox](#).

Can the feasibility document include all that is necessary to appropriately tell the planning story within 100 pages?

Yes. It is recommended to begin developing the feasibility study report from the beginning of the study: write early and often; write the report as you go; and build upon the report synopsis. Integrated feasibility study reports should focus on decisions and reasons for making those decisions more than documentation of data gathered and analysis conducted.

How many projects have completed the feasibility studies following the new process? If there aren't any yet, what is the farthest that some projects have progressed?

Since the new feasibility study process and milestones were rolled out in 2012, no studies have completed the entire process from signing the Feasibility Study Cost Share Agreement to the signed Chief's Report. As of January, 2014, several studies have reached the TSP milestone and released a draft feasibility report for concurrent review. The first Agency Decision Milestone meeting was conducted in 2013.

The Planning Community will continue to look to lessons learned and After Action Reports from these early milestone meetings to improve process efficiency and enable Vertical Team decision making at these milestone meetings.

What are the SMART Planning principles?

Originally conceived as five “imperatives for change” for the Corps of Engineers feasibility study process, these principles underlie and inform SMART planning process and tools:

- Uncertainty and Level of Detail. Balancing the level of uncertainty and risk with the level of detail of the study. The level of detail required to make planning decisions will grow over the course of the study, as the study team moves from an array of alternatives to a single recommended alternative.
- Vertical Team Integration. Early and ongoing vertical team engagement of decision makers.
- Determine Federal Interest. Identify the Federal interest early in the study, including the level of Federal and Corps interest and level of federal investment.



- Alternative Comparison and Selection. There is no single "best" plan, and there are a variety of approaches (quantitative and qualitative) to multi-criteria decision making and plan selection of the National Economic Development (NED) or National Ecosystem Restoration (NER) plan.
- Funding and Resourcing. Ensure that all resources needed for the study, including funding, human resources, data and information, are identified and available for the duration of the study.

What is SMART Planning?

SMART Planning encourages risk-informed decision making and the appropriate levels of detail for conducting investigations, so that recommendations can be captured and succinctly documented and completed in a target goal of 3 years in compliance with the 3x3x3 rule.

The online SMART Planning Guide provides a more comprehensive overview of the new feasibility study process and milestones, as well as specific tools, tips and techniques for conducting studies. The [SMART Guide](#) itself, as well as recorded [Webinars & Presentations](#), has been provided to explain the foundations of the new feasibility study milestones and processes.

[Additional Directives & Guidance](#), including several published Planning Bulletins, provide the methodology and the framework for feasibility studies, the process milestones for feasibility studies, exemption processes, and more.

The term SMART Planning is derived from an acronym frequently used in process management:

- S: Specific
- M: Measurable
- A: Attainable
- R: Risk Informed
- T: Timely



The Planning Team

The Sponsor's Role

The [Water Resources Development Act of 1986](#) established a framework for partnerships between the federal government, represented by the Corps, and non-federal interests, represented by local project sponsors. The Act gives sponsors a key role in project planning and design, balanced by requirements for greater non-federal financial shares in the costs of studies and projects.

The role sponsors play as part of the Project Delivery Team (PDT) is described in [the Project Partnership Kit](#).

The fundamental role and responsibilities of the local sponsor in feasibility studies is unchanged in the SMART planning environment. The sponsor will:

- Enter into a feasibility cost sharing agreement (FCSA) with the Corps and provide 50% of the study costs in cash, or a combination of cash and in-kind services, in a timely manner so as not to delay the study.
- Actively participate in the discussions, decisions, reviews, etc. with the PDT and resource agencies.
- Coordinate, and possibly lead, stakeholder and public involvement efforts.
- Coordinate and lead regional and local alignment on participation and understanding of study objectives, the planning process, outcomes and recommendations.
- Work within the laws and Corps policies and guidelines to identify a plan with a federal interest, which may or may not include the locally preferred plan.
- Share knowledge and experience of the problem, project area, local conditions, environment and habitat, and design and maintenance issues related to the measures and alternatives under consideration.

Who is on the Project Delivery Team?

The study Project Delivery Team (PDT) is a multidisciplinary group assembled to develop the feasibility study. The team will be assembled to effectively and efficiently conduct and deliver the feasibility study, and will generally include staff within the district and other Corps offices, as well as project sponsor's staff, and representatives of other agencies. The PDT has ownership of the study.

The sponsor will be a member of the PDT and will play a key role throughout the entire project development process. The sponsor will share in the financial costs of studies and projects; and will provide the Corps with sponsor requirements with respect to budget, scope, quality, and schedule as well as any changes to these requirements.

Not all PDTs are the same, and the level of involvement of individual members may change over time. Some PDT members will be involved more than others, and the Project Manager will keep the PDT informed through each phase of the project.

Who is on the Vertical Team?

Although the exact makeup of the vertical team may vary from study to study depending on the complexity and scope of the study, it will include decision-makers and technical expertise from the



District, Major Subordinate Command (MSC) and Headquarters. A study's typical vertical team may include:

- Headquarters representatives, which may include Office of Water Project Review (OWPR) economics, environmental, and/or plan formulation expertise, Counsel, Real Estate, technical expertise from Engineering & Construction, the Institute for Water Resources, or other Civil Works operations.
- MSC representatives include the MSC Planning Chief and other experts. For example, a deep draft navigation study may include the plan formulation, navigation, economics, environmental and engineering MSC experts. As the MSC's representative at Headquarters, the Regional Integration Team (RIT) provides a single point of contact for the MSC at Headquarters; they also are responsible for processing all work products requiring Headquarters-level review.
- Representatives from the appropriate Planning Centers of Expertise (PCX) can provide subject-matter expertise and experience.

What is meant by Vertical Team Alignment? When does a team need alignment?

Vertical Team alignment is a checkpoint to ensure that all elements of the Vertical Team – District, Division, and Headquarters – are informed of the work done to date and the study team's proposed steps forward. Vertical Team Alignment is not review. These checkpoints also provide an opportunity for the study team to communicate the store of the study, using tools such as the Report Synopsis, Decision Management Plan and Risk Register, the study team will communicate and ensure Vertical Team concurrence on the characterization of risk and the recommended path forward to reduce – or accept – articulated study risks. Vertical Team alignment is documented in the Decision Log.

In signing the 3x3 Compliance Memorandum, the MSC Chief of Planning & Policy is endorsing Vertical Team Alignment on the scope of work on the study. Specifically, that there a federal interest that is aligned with the study authority in addressing the problem, and has the study team developed an acceptable study scope that can be completed within schedule and budget restrictions (ref. Planning Bulletin 2014-01 and Planning Bulletin 2015-01).

Before any other decision milestone (Alternatives Milestone, TSP milestone, Agency Decision Milestone, Civil Works Review Board), the decision maker may specifically request if there is Vertical Team Alignment on the characterization and proposed response to study risk (in the Risk Register), the work done to date, the proposed way forward (in the Decision Management Plan).

- Before the Alternatives Milestone, Vertical Team Alignment is required on the study team's formulation, evaluation, and selection of the array of alternatives going forward into alternatives analysis, and the criteria that will be used to evaluate and compare those alternatives.
- Before the Tentatively Selected Plan Milestone, the Vertical Team confirms that the study team applied appropriate criteria (that were supported at the Alternatives Milestone) to select the Tentatively Selected Plan.
- In advance of the Agency Decision Milestone, the Project Delivery Team will work with the Vertical Team to resolve outstanding/conflicting issues (technical, policy, or legal) raised during the concurrent review. After the Vertical Team has confirmed that the analyses in the draft report and the recommendations as a result of the concurrent reviews are compliant with policy and that there is a capable non-Federal sponsor(s) ready to support project implementation, the Milestone meeting can be scheduled.

**What are the roles of U.S. Fish & Wildlife Service (FWS) and NOAA Fisheries in feasibility studies?**

Established roles of the U.S. Fish & Wildlife Service (FWS) and NOAA Fisheries under a variety of statutes in water resource development processes are retained and re-emphasized in the feasibility study process with a greater focus on early coordination. Substantive, early engagement is needed to successfully deliver projects that are not delayed by lingering conflicts. Ensuring that NOAA and FWS are fully informed and able to review and shape project proposals is more critical given reduced timeframes and the budget constraints.

With a sense of the regional portfolio, MSCs are encouraged to work with their districts and the appropriate FWS or NOAA Fisheries regional office to ensure a common understanding of regional and agency priorities, resource constraints, and expectations.

In the districts, coordination with resource agencies should begin at the outset of the scoping phase, including their participation at charettes, as applicable. Front-loading involvement provides opportunities for the consideration of avoidance of valued resources and areas with high-conflict potential prior to the commitment of significant planning investments. Enhanced early engagement will not only help avoid contentious projects or difficult Section 7 consultations, but is required if agencies are to collectively meet the goals of completing projects within 3 years and for under \$3 million.

In addition, the conservation interests of resource agencies and the development interests of water resource planners are more likely to be mutually accommodated, and at lower cost, the sooner substantive coordination envisioned by the Fish and Wildlife Coordination Act (FWCA) can begin. The Fish and Wildlife Coordination Act provides that fish and wildlife conservation is equally considered along with other project purposes. The 2003 Transfer Funding Agreement between FWS and the Corps provides procedures for the transfer of funds from the Corps to FWS for activities pursuant to the FWCA. This agreement ensures that the FWS is engaged and funded to determine the impacts of proposals on fish and wildlife and should be leveraged by Districts and FWS Field Offices.

Are there checks and balances to ensure sure the PDT and entire Vertical Team stay true to the SMART Planning concepts and don't get tied up “in the weeds”?

Recognizing and adhering to the SMART Planning concepts of risk-informed decision making and gearing the level of detail to decision at hand is a responsibility that falls on each individual in the PDT and the Vertical Team.

Just as every planner needs to know the next decision and why they need the information, each reviewer needs to know why they are asking for additional information and what decision they are trying to make. At every juncture, where more data, more time, more information is asked for the PDT should feel empowered to ask “Why do we need that data?” and “How does it influence the decision?” If concerns about level of detail are not resolved by discussions between the PDT and the Reviewer(s), then the team should follow standard issue resolution or dispute resolution processes.

At the same time the studies need to satisfy policy requirements and result in a policy compliant report in order to move forward. The Vertical Team assures that the necessary coordination and analyses are required to achieve compliance and concurrence with the recommendations.



Feasibility Study Milestones & Documentation

What is the report synopsis?

The report synopsis is a distillation of the planning process. Early in the study, it is the core of the future more comprehensive feasibility study document. Typical elements in the report synopsis include: the problems and opportunities statement; a list of planning objectives and constraints; a list of decision criteria to be used for evaluation, description of the comparison and selection of the tentatively selected plan; key uncertainties in the study; a narrative description of the without project condition; a list of planning measures already screened/eliminated from consideration; and, names of formulated plans that are under consideration.

The PDT develops the Feasibility Report in iterations, with the draft report growing over time and confirmed at each milestone. A typical approach would be:

- Scoping Charette – first draft of Report Synopsis based on available data and planning expertise. The Report Synopsis document is intended to follow the study through all levels of the planning process. Studies early in development will not have enough information to complete each section. Enter the appropriate data as it is developed.
- Alternatives Milestone Meeting – updated Report Synopsis reflecting information developed from a second iteration of the six-step planning process.
- TSP Milestone Meeting – draft Report tells the story of the Problem, the alternatives considered, the without project conditions, the comparison and evaluation of the final array of alternatives, and the rationale for the tentatively selected plan. The Report Synopsis is updated as a read ahead before the TSP Milestone Meeting.
- Agency Decision Milestone Meeting – the Report Synopsis is updated, if necessary, to reflect comments received from technical, public, and policy review.
- Civil Works Review Board – The Civil Works Review Board is convened after the final report is transmitted to HQ by the MSC and before the final report and NEPA document is released for State & Agency Review. The report synopsis has evolved into the Report Summary used by the Office of Water Project Review, the Office of the Assistant Secretary of the Army, and others.

(Revised April 2014)

Is there going to be an Agency Decision Milestone for every project under the new SMART milestone framework?

There will be an Agency Decision milestone meeting for every study under the new framework. Studies currently approaching this meeting are working closely with the PCoP and Office of Water Project Review to establish a common agenda and Standard Operating Procedures. Once tested, these will be incorporated in a future Planning Bulletin.

Prior to this checkpoint, the Project Delivery Team has addressed comments raised during review and the vertical team has confirmed that the analyses in the draft report and the recommendations as a result of the concurrent reviews are compliant with policy and that there is a capable non-Federal sponsor(s) ready to support project implementation.

The ADM is a decision milestone where a Panel of HQUSACE leaders will endorse the recommended plan and approve the way forward for feasibility-level design. The majority of the ADM discussion will focus on the study and project risks that are being carried forward in the study or that have arisen since



the TSP Milestone meeting. The ADM will be scalable depending on the scope, complexity, and risk of the recommended plan.

What exactly should be submitted with the draft report? Has Exhibit H-5 been superseded by Planning Bulletin 2013-03?

The Documentation in Exhibit H-5 of the Planning Guidance Notebook, Appendix H: Draft Report Policy Compliance Review Submittals, is not expected to be submitted with the draft feasibility study report and environmental documentation for concurrent review, with the following exceptions:

- The draft report submittal package will include a transmittal memo.
- Every submittal for a feasibility study following the SMART planning process, whether it is a milestone or report submittal, should include the following [read aheads](#).
 1. Report Synopsis
 2. Decision Management Plan
 3. Risk Register
 4. Decision Log
- The project study issue checklist is not required at the draft submittal, but the checklist should be have been used by the PDT to determine what major issues should be communicated to the vertical team and what policy risks should be in the Risk Register.
- The [14 January 2013 Office of Counsel memo](#) confirms that district legal sufficiency review is required prior to public release. Many studies and districts have incorporated the legal sufficiency finding as part of the District Quality Control process prior to the TSP milestone. A full, HQ Office of Counsel legal certification is not required prior to the release of the draft report and concurrent review.

What if the tentatively selected plan is not endorsed at the Agency Decision Milestone meeting?

If the recommended plan is not endorsed, the decision log will identify required actions of the team and the study will not proceed into the feasibility-level design stage until the senior leader panel endorses the recommended plan. A second milestone must be scheduled, but cannot impact the schedules of other studies. If there are significant changes to the recommended plan that had been presented in a draft report during concurrent review, the public review process may need to be repeated.

Does the Civil Works Review Board exist in the new milestone framework?

Yes. After the complete final report package has been submitted to Headquarters, the Deputy Commanding General for Civil and Emergency Operations (DCG-CEO) will convene a Civil Works Review Board (CWRB) that approves the final decision and NEPA documents and the proposed Report of the Chief of Engineers for release for State and Agency review and final NEPA review. This CWRB is complementary to the ADM and will be scalable depending on the scope, complexity, and risk of the Recommended Plan. The [CWRB standard operating procedures](#) are being updated concurrently with the development of standard operating procedures for the Agency Decision Milestone meeting to align appropriate study information at the right time for decision makers.

What does scalable mean?

In reference to the Agency Decision Milestone meeting and Civil Works Review Board, scalability is applicable to presentation length and content and in-person participation. Each feasibility study decision



milestone meeting builds on the previous milestone; this should minimize redundancy. The Civil Works Review Board district presentation starts where the Agency Decision Milestone left off: significant and high risk comments made on the Final Report; significant changes to the proposed project since the Agency Decision Milestone; and the path forward through State and Agency review. Likewise, the any Agency Technical Review, Independent External Peer Review, and Policy Review discussion focuses on review of the Final (not Draft) Report. The Agency Decision Milestone will be held virtually, and virtual participation is highly encouraged for the Civil Works Review Board. At the Civil Works Review Board, the District and MSC Commanders are expected to present in person, but other participants, including the Project Delivery Team, should keep travel to a minimum.

Can you provide a crosswalk to compare legacy milestones and new process milestones; e.g., the Alternatives Milestone is between F2 and F3?

We have deliberately avoided an explicit crosswalk between the legacy milestones and the new feasibility study process milestones because these new milestones are very different than our previous milestone structure. The new process milestone are a measure of an agreement that we make as an agency, rather than getting to a certain point and checking it off – vertical team engagement throughout the study and documentation of decisions are key elements of the milestones and the process. Further, by marking a decision point rather than briefing or task, the new feasibility study milestones are meant to underline the need to invest study resources in making the decision at hand, rather than in developing duplicative read-aheads, pre-briefings, and briefings that have come to characterize the “legacy” milestones.

How do the new feasibility study milestones and process apply to ongoing (legacy) studies?

“Legacy” studies are fully funded and are being managed to completion by December 2014. With coordination with the Vertical Team, legacy study PDTs may choose to follow either feasibility study milestones structure. Project Delivery Teams may develop their plan to transition to the SMART Planning milestones as they see fit. Teams in transition have used: In Progress Review or other meeting(s); a [planning charette](#) with the participation of the full Vertical Team; development of a path forward including a Risk Register and Decision Management Plan for discussion / concurrence with the vertical team; etc.

Legacy studies should, whenever possible, utilize SMART Planning principles, tools and techniques, applying critical thinking, using risk-informed decision-making and drafting clear and concise documentation.

Since legacy milestones (such as the Feasibility Scoping Meeting and Alternatives Formulation Briefing) are completely different than new feasibility study milestones, it is not appropriate to substitute the milestones for one another without coordination with the study’s Vertical Team. Legacy studies are expected to follow their current review plan and Project Management Plan. Project Management Plans and Review Plans should be updated if studies are rescoped.



Charettes and Other Opportunities for Vertical Team Engagement

SMART planning assumes Vertical Team integration throughout the feasibility study. How will the MSC and HQ resources handle acceleration of studies and increased demand with limited available resources?

There are and will continue to be measures taken to ensure effective participation of the Vertical Team given time and budget limitations and high workloads.

- (1) Before a planning charette or In Progress Review is scheduled, the need for the meeting should be clear. Together, the Districts, Divisions, and Headquarters, need to identify the studies are the highest priority for limited resources. For example, if a study does not have funding in place to move forward this fiscal year and is not in the budget for next year, it may not make sense to expend the resources on a charette.
- (2) The Vertical Team is expected to be able to provide more focused attention on policy discussions with the PDT due to the renewed emphasis on improved District Quality Control (DQC), with MSC Planning Chiefs ensuring that DQC is being consistently and appropriately conducted at Districts.
- (3) More frequent Vertical Team participation early in the planning process, with more teleconference milestone meetings and more effective and concise documentation provided by the PDTs will ultimately benefit the SMART Planning process by significantly reducing lengthy read-ahead and review timeframes.
- (4) The Headquarters Office of Water Project Review (OWPR) is identifying opportunities where staff at the MSC level can represent OWPR at In Progress Reviews and other in-person meetings, with those decisions documented in a Decision Log or memorandum for record (MFR).

Time intensive efforts, such as planning charettes and facilitated Value Engineering workshops, have been shown to save time when decisions can be made and a clear path forward (Decision Management Plan) agreed to in days, rather than weeks. The Planning Community of Practice will continue to develop opportunities for effective remote participation during these more time-intensive efforts.

Is a charette a requirement for my study?

A charette is not a requirement but it is highly recommended, particularly for a new start feasibility study or reconnaissance study. The Project Delivery Team (PDT) and the Vertical Team may decide that a charette is appropriate for a Legacy study that is transitioning to SMART planning milestones or rescoping to meet 3x3 guidelines.

A charette may be more efficient than a series of short in-progress review meetings in order to align the Vertical Team with the PDT, to meet the team where they are at, and agree to a plan ahead for critical decisions from that point forward to the conclusion of the feasibility study.

The [Charette Handbook](#) on the SMART Guide is a useful reference and strategic resource for both in-progress reviews and charettes, including lessons-learned from the charettes conducted to date.



Level of Detail in Feasibility Studies

Does the new feasibility study process require less detail in the feasibility phase?

No. The new feasibility study process and SMART planning principles promote frequent team communication on the risk of making decisions with information available at the time, asking the team to consider the remaining uncertainties to determine the appropriate level of detail to support the next decision, and the ultimate selection of a recommended plan. In this manner, the team will focus efforts on the identification of a reasonable and viable array of alternatives early in the study, analyze the array of alternatives with attention to NEPA compliance and other environmental considerations, select a plan, conduct concurrent review, and analyze the recommended plan (and locally preferred plan, if applicable) in detail and include important decisions made throughout the process in the final feasibility document.

Will doing less detail in the feasibility phase likely increase the amount of modifications and changes during construction of an authorized project phases?

Modifications to projects between the feasibility study report, Preconstruction Engineering and Design (PED), and Construction are likely to continue – but are not going to increase because of the new feasibility study process and application of SMART planning principles. Feasibility studies are not intended to eliminate risk; they are intended to support good decisions in spite of the uncertainties and risks.

The feasibility study will continue to be focused on developing sufficiently detailed information to distinguish between alternatives so that a recommended plan can be identified. The study tasks then turn to developing sufficiently detailed information about the recommended plan so that we can confidently report costs, benefits, and environmental & social impacts. Uncertainty will remain and will continue to be reduced during Preconstruction Engineering and Design.

The PDT can and should report the risks that accompany a given level of analysis, including the risk of construction modifications if known issues are not investigated. Choices can then be made to allocate resources to reduce the most significant risks while choosing to accept other risks.

Does the SMART Planning approach move detail to the “Pre-Construction Engineering & Design” (PED) phase that could significantly change the project itself or its costs?

The SMART Planning process is designed to ensure that no less detail is directed toward the team preparation of the recommended plan (and locally preferred plan, if applicable) during the feasibility study. The level of detail will be limited to a single alternative or small set of alternatives. [Engineering within the Planning Modernization Paradigm - Engineering and Construction Bulletin \(ECB\) 2012-18](#), dated 18 May 2012, outlines concepts and goals, defines a philosophy, and provides guidance for engineering efforts associated with feasibility studies under SMART Planning.

The contingencies at the draft report may be higher than draft reports in the past because there is still engineering and cost detail to be developed after the tentatively selected plan has been endorsed. The final report, though, will be in line with the level of detail required by cost engineering, real estate, and engineering regulations for final doc/recommendation. Having concurrent review technical, policy, legal, public and Independent External Peer Review (IEPR), if applicable, comments at once, with vertical team alignment and endorsement of a recommended plan, will allow for improvement in the team's



understanding of the comments that need to be addressed during the feasibility-level design of the recommended plan.

At most, the risk of significant change to the project or its costs during Pre-Construction Engineering & Design (PED) would remain the same when comparing the legacy process to the SMART process, but will more likely have less risk of project changes when the team has used tools such as the decision management plan and risk register, and engaged early and often with the Vertical Team. Shortened average timeframes for studies will also reduce the risk of significant factors changing between the development of a recommended plan and PED.

To meet the 100-page total report length, will significant analysis have to be cut from the report?

Districts should use SMART Planning principles to determine what is relevant to making risk-informed decisions instead of simply cutting portions of the report detail out. Data gathering and analyses should focus on areas critical to differentiating between alternatives. A risk-based decision making approach and the engagement (and concurrence) of the Vertical Team and other Corps disciplines/Communities of Practice in those decisions are crucial.

An Integrated Report Format and Content Outline, PowerPoint deck on Documenting Decisions: Tips, Tools, Techniques and Lessons Learned in Report Writing, and examples of draft feasibility study reports are available on the [Planning Community Toolbox](#).

Information that is common to all the alternatives should be acknowledged (i.e., what is the minimal level of detail that is acceptable?). This could help define what components, at a minimum, must be included in feasibility studies.

Additional analysis and detail can be included in the appendices if it is necessary to tell the story of the recommended plan.



Feasibility Study Review

Does Agency Technical Review take place only on the draft report between the TSP milestone and the Agency decision milestone? Should ATR be conducted on the feasibility-level design of the Recommended Plan as well?

Agency Technical Review (ATR) is part of the concurrent review required once the draft report is released for public review at the TSP milestone. However, since the ATR lead is involved in the study from the start, they will advise the PDT when additional review is needed. This could be on modeling results prior to the TSP milestone or on cost estimates and design during the Feasibility Level Design phase. The ATR Lead will decide what aspects of the study, including the final design, need further review using risk informed decision making.

Is there a difference between legacy and SMART planning study review requirements?

Fundamental review requirements remain the same, although review *processes* differ for legacy and feasibility studies. Updates have been made to [Guidance on Water Resource Policies and Authorities: Civil Works Review](#) (EC 1165-2-214, December 2012) to reflect current review requirements.

How are reviews conducted in SMART Planning feasibility studies?

Feasibility study review includes both internal (USACE) and external review processes, all detailed in the study's Review Plan.

Internal review includes quality control and quality assurance (QA/QC), technical, legal, and policy review. External reviews include public review required by NEPA and independent external peer review (IEPR), if needed.

District Quality Control (DQC) throughout the study is critical to the success of SMART Planning, as it ensures that other reviews – technical, policy, legal – can focus on their charges.

Early engagement of the ATR Lead and formulation of appropriate charge questions for the IEPR panel allow targeted technical review when it is necessary to inform the decision in the study. This targeted review may occur prior to the concurrent review of the draft report, or during development feasibility-level cost and design for the recommended plan.

SMART Planning includes one-time concurrent review that includes Agency Technical Review (ATR), legal, policy, and public review along with IEPR, if needed. This occurs after the PDT and Vertical Team have identified a Tentatively Selected Plan and completed the draft report. Review comments will be addressed before the Agency Decision milestone.

Updated [Guidance on Water Resource Policies and Authorities: Civil Works Review](#) (EC 1165-2-214, December 2012) includes consideration of the new feasibility study process, milestones and concurrent review.



Corps and Federal Guidance and Regulations and SMART Planning

Will the SMART Planning process require changes to existing legislation, policy, and guidance?

The new feasibility study process has been implemented in large part without modifications to existing legislation, policies, or guidance. Several [Planning Bulletins](#) have been published to assist Project Delivery Teams in conducting feasibility studies.

If you feel a specific change to policy or guidance is needed, please contact the Planning Community of Practice through the [Comments or Questions](#) page of the online SMART Planning Guide on the Planning Community Toolbox.

The Planning Community of Practice will continue to incorporate SMART planning principles and processes into Corps of Engineers policy and guidance revisions.

How do NEPA and other environmental compliance requirements fit into the new feasibility study process?

The feasibility study process will continue to meet the requirements of NEPA and other applicable environmental laws and policies, including [Engineer Regulation \(ER\) 200-2-2 \(Procedures for Implementing NEPA\)](#) and [ER 1105-2-100 \(Planning Guidance Notebook\)](#), offering opportunities to encourage efficient and thorough environmental reviews that will result in quicker and better-informed decisions. This approach falls in line with the White House Council on Environmental Quality ([CEQ](#)) [steps to modernize and reinvigorate NEPA](#), including a March 2013 publication of two new handbooks that encourage more efficient environmental reviews under the National Environmental Policy Act (NEPA) by integrating the NEPA process with the [National Historic Preservation Act \(NHPA\) Section 106 review process](#) and [California Environmental Quality Act \(CEQA\) review processes](#).

The NEPA compliance process is typically used as the vehicle for achieving compliance not only with the CEQ regulations (40 CFR parts 1500-1508), but also with a range of other environmental laws and executive orders, including but not limited to Section 7 of the Endangered Species Act, Section 106 of the National Historic and Preservation Act, Section 404(b) of the Clean Water Act, air quality conformity requirements under the Clean Air Act.

The feasibility study process does not eliminate detail from the integrated feasibility report/NEPA document; it is about developing the data at the right time and for the right alternatives as the study is conducted. A rigorous and credible comparison of alternatives will still be required. However, instead of a “rigorous” comparison of numerous alternatives, some of which would never be carried out based on technical, economic or environmental reasons, only those alternatives that are implementable would get the rigorous review. This is in alignment with NEPA, which indicates that when faced with a very large number of possible alternatives, you need only evaluate a reasonable range of alternatives. More information is provided in a SMART Planning white paper on [Environmental Evaluation and Compliance](#).



How do we transition to 3x3x3 / SMART studies started under the current P&G, acknowledging that new Principles and Requirements and Interagency Guidelines have been published?

At this point, the 1983 Principles and Guidelines for Water and Land Related Resources Implementation Studies (P&G) continue to apply to all studies evaluating proposed water resource development projects. For studies transitioning to SMART planning, or beginning as SMART Planning studies, our guidance is – and continues to be - in the current Planning Guidance Notebook (ER 1105-2-100).

The “Principles and Requirements for Federal Investments in Water Resources” published in March 2013 will not take effect until 180 days after the publication of the final Interagency Guidelines (published in December 2014). In accordance with Congressional direction, the Corps will meet with both Congressional authorizers and appropriators within 120 days of the release of the Interagency Guidelines to review the Principles, Requirements, and Guidelines (PR&G) and how it responds to WRDA 2007 direction, as well as the National Academy of Sciences and public reviews. The Corps does not plan to draft Agency Specific Procedures until discussions with Congress are complete.

Although the Planning Guidance Notebook provides a lot of flexibility regarding benefit categories that are included in the recently released Principles and Requirements, specific changes and updates to Corps guidance to reflect the 2014 Principles, Requirements, and Guidelines will follow development of Agency Specific Procedures. (*Revised January 2015*)

Will the Planning Guidance Notebook be updated to reflect SMART Planning processes and milestones?

Yes. Updates to the [Planning Guidance Notebook](#) are beginning with Appendices G and H, with a more comprehensive update to follow. With the exception of direct references to legacy milestones such as the Alternatives Formulation Briefing, the fundamentals of the Planning Guidance Notebook are still applicable to current feasibility studies. The fundamental [Six-Step Planning Process](#) has not changed.

Has the Corps of Engineers published guidance related to SMART Planning or 3x3x3?

In addition to the February 2012 memorandum from the Deputy Commanding General of Civil and Emergency Operations, several Planning Bulletins, an Engineering and Construction Bulletin, a Real Estate Policy Guidance Letter, a memorandum from Chief Counsel, and Civil Works Review guidance (EC 1164-2-214) have been issued to provide guidance to the field in the implementation of feasibility studies. These are available on the [Additional Directives & Guidance](#) page of the Planning Community Toolbox’s SMART Guide as well as in the “[Planning Bulletins](#)” section of the Planning Community Toolbox.