PROPOSED RULE ON PRINCIPLES REQUIREMENTS AND GUIDELINES

Accordingly, the Corps proposes to add part 234 to title 33 of the Code of Federal Regulations as follows:

PART 234 – CORPS OF ENGINEERS AGENCY SPECIFIC PROCEDURES TO IMPLEMENT THE PRINCIPLES, REQUIREMENTS AND GUIDELINES FOR FEDERAL INVESTMENTS IN WATER RESOURCES

Sec.

Authority: 33 U.S.C. 701n.

§ 234.1 General.

(a) This part prescribes the Agency Specific Procedures (ASPs) for the United States Army Corps of Engineers (Corps) to execute its Civil Works mission, in accordance with the Water Resources Principles and Guidelines defined in Section 2031 of the Water Resources and Development Act (WRDA) of 2007 (Pub. L. 110-114; 42 U.S.C. 1962-3), the Principles, Requirements and Guidelines (PR&G) issued by the Water Resources Council,53 and as called

for in Section 110 of WRDA 2020 (Division AA of Pub. L. 116-260).

(b) Section 2031 of the WRDA of 2007 (Pub. L. 110-114) directed the Secretary of the Army to revise the March 10, 1983, Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies54 (P&G) for Corps use and to address the following considerations: advancements in economic and analytic techniques; public safety; low income communities; nonstructural approaches; interaction with other water resources projects and programs; integrated and adaptive management; and, use of public benefits to justify projects. The WRDA provision also provided that the Federal Objective is to reflect national priorities, encourage economic development, and protect the environment by seeking to maximize sustainable economic development, avoid the unwise use of floodplains, and protect and restore natural ecosystems.

(c) The PR&G was issued as an interagency effort to modernize the P&G. The PR&G is comprised of the Principles and Requirements (P&R)55 issued in March 2013 and the Interagency Guidelines (IG)56 issued in December 2014. The PR&G emphasizes that water resources projects should strive to meet the Federal Objective and maximize public benefits relative to public costs. The PR&G is designed to support water infrastructure projects with the greatest public benefits (economic, environmental, and social benefits) relative to costs.
(d) Congress directed the Secretary of the Army to issue ASPs to implement the PR&G in Section 110 of WRDA 2020 (Division AA of Pub. L. 116-260).

Section 234.2: Definitions

(a) **Acceptability**: The viability and appropriateness of an alternative from the perspective of the Nation's general public and consistency with existing Federal laws, authorities, and public policies. It does not include local or regional preferences for solutions or political expediency.

INTENT: This paragraph provides a definition for acceptability. This definition is provided in the P&R. Acceptability is one of four criteria to be considered when formulating an alternative. Acceptability takes into consideration the general public's perspectives in the determination of an alternative's viability and appropriateness and ensures consistency with existing Federal laws, authorities, and public policies.

(b) ***Adaptive management***. A deliberate, iterative, and scientific based process of designing, implementing, monitoring, and adjusting an action, measure, or project to address changing circumstances and outcomes, reduce uncertainty, and maximize one or more goals over time.

INTENT: This paragraph defines adaptive management. This definition is provided in the P&R and describes the process to address changes, uncertainty, and maximization of goals over time. Adaptive management should be incorporated into alternatives, where warranted, to address risk and uncertainty

(c) ***Completeness***. The extent to which an alternative provides and accounts for all features, investments, and/or other actions necessary to realize the planned effects, including any necessary actions by others. It does not necessarily mean that alternative actions need to be large in scope or scale.

INTENT: This paragraph provides a definition for completeness. This definition is provided in the P&R and describes when an alternative is complete enough to realize the planned effects. Completeness does not equate to a particular scope or scale to be considered complete. Completeness is one of four criteria to be considered when formulating an alternative.

(d) ***Effectiveness.*** The extent to which an alternative alleviates the specified problems and achieves the specified opportunities.

INTENT: This paragraph defines effectiveness. This definition is provided in the P&R and describes that an alternative is effective when it alleviates the specific problems and achieves the specified opportunities. Effectiveness is one of four criteria to be considered when formulating an alternative.

(e) ***Efficiency.*** The extent to which an alternative alleviates the specified problems and realizes the specified opportunities at the least cost.

INTENT: This paragraph defines efficiency. This definition is provided in the P&R and describes the extent to which a Federal investment is efficient such that an alternative may alleviate the specified problems and realizes the specific opportunities at the least cost.

(f) **Federal investment**. Investments made by the Corps related to water resources development projects, including flood and storm risk management, ecosystem restoration, land management activities, navigation, recreation, and hydropower.

INTENT: This paragraph provides a definition for Federal investment. The ASPs for implementing the PR&G are intended to assist in designing and evaluating potential Corps investments in water resources. Federal investments as used in PR&G is broad and intended to capture a wide array of activities (e.g., projects, programs, and plans) that the Federal government directly undertakes relating to water resources. This proposed definition is specific to the Corps' potential Federal investments. The P&R does not define Federal investments. The P&R includes Federal investments that affect water quality or water quantity. However, using this language may result in confusion. The Corps has three main Civil Works mission areas (commercial navigation, flood and storm risk reduction, and aquatic ecosystem restoration) and generally will not propose a project whose primary purpose is outside of these main missions. Many Corps flood risk management projects can be said to affect "water quantity" indirectly, insofar as they alter the timing and way that water flows in a flood. Similarly, many of the dams that the Corps has constructed (primarily to reduce flood risks or facilitate commercial navigation) also can be said to affect "water quantity" insofar as they store water to serve ancillary purposes such as hydropower, fish and wildlife, recreation, and water supply. With this in mind, the Army invites comments on whether the language provided in the P&R or other language on this issue should be included in the rule definition.

USACE QUESTIONS:

- Many Corps flood risk management projects can be said to affect "water quantity" indirectly, insofar as they alter the timing and way that water flows in a flood. Similarly, many of the dams that the Corps has constructed (primarily to reduce flood risks or facilitate commercial navigation) also can be said to affect "water quantity" insofar as they store water to serve

ancillary purposes such as hydropower, fish and wildlife, recreation, and water supply.

With this in mind, the Army invites comments on whether the language provided in the P&R or other language on this issue should be included in the rule definition.

(g) ***Federal objective.*** The fundamental goal of Federal investments in water resources. Federal water resources investments shall reflect national priorities, encourage economic development, and protect the environment. Federal investments should strive to maximize net public benefits,

INTENT This paragraph provides a definition for Federal objective, which is the conceptual goal of Federal investments in water resources. The Federal objective should result in investments which provide various public benefits, including community resilience.

(h) ***Indigenous Knowledge***. A body of observations, oral and written knowledge, innovations, practices, and beliefs developed by Tribes and Indigenous Peoples through interaction and experience with the environment. It is applied to phenomena across biological, physical, social, cultural, and spiritual systems. Indigenous Knowledge can be developed over millennia, continues to develop, and includes understanding based on evidence acquired through direct contact with the environment and long-term experiences, as well as extensive observations, lessons, and skills passed from generation to generation.

INTENT: This paragraph defines Indigenous Knowledge based on the Guidance for Federal Departments and Agencies on Indigenous Knowledge. Indigenous Knowledge shall be considered in and used to inform all aspects of the Corps' ASPs, where relevant and applicable.

(i) ***Nature-based alternatives***. An alternative comprised of actions to protect, sustainably manage, or restore natural or modified ecosystems to address societal challenges, while simultaneously providing benefits for people and the environment.

INTENT: The paragraph defines nature-based alternatives in line with federal guidelines, stressing consistency with other water resources agencies. Mandates from various Water Resources Development Acts require the Corps of Engineers to consider and

document natural and nature-based alternatives in flood and storm management projects. While nature-based alternatives are prioritized, combinations with other features are considered if fully effective solutions are unfeasible. The Army underscores a results-oriented approach, balancing the benefits of nature-based solutions with other methods, and encourages their inclusion in comprehensive recommendations.

(j) ***Non-federal interest*.** (1) a legally constituted public body (including an Indian tribe and a tribal organization (as those terms are defined in section 5304 of title 25); or (2) a nonprofit entity with the consent of the affected local government, that has full authority and capability to perform the terms of its agreement and to pay damages, if necessary, in the event of failure to perform.

INTENT: The paragraph discusses the definition and role of the "non-Federal interest" in water resources investments, particularly in Corps projects. While the term "local interest" is used in previous documentation without a clear definition, the proposed regulation aims to use "non-Federal interest" to align with Corps processes and legal responsibilities. The non-Federal interest, often the community or a state/local government agency, is typically responsible for overseeing and implementing projects, including post-construction operation and maintenance. They also share the cost burden and have input on preferred alternatives in project planning. The Army seeks feedback on whether equating the non-Federal interest with the local interest is appropriate and welcomes suggestions on how to incorporate their role in the planning process effectively.

USACE QUESTION

- The Army solicits comments on whether equating the non-federal interest with the local interest is an appropriate approach for implementation of this provision of the PR&G. The P&R provides that an alternative plan, strategy, or action that is preferred by a local interest with oversight or implementation responsibilities must be included in the final analysis.

(k) ***Nonstructural alternative***. An alternative comprised of a nonstructural approach or combination of nonstructural approaches that addresses the water resources problem.

INTENT: Nonstructural alternative. This paragraph provides a definition for nonstructural alternative. A nonstructural alternative is entirely comprised of

nonstructural approaches. The proposed regulation would require the Corps to include for consideration in the final array of alternatives a nonstructural solution, if feasible. Where a nonstructural solution is not feasible or would not be fully effective, the Corps would include for consideration in the final array an alternative that is primarily nonstructural, if feasible.

(l) ***Nonstructural approach.*** An approach that alters the use of existing infrastructure or human activities to generally avoid or minimize adverse changes to existing hydrologic, geomorphic, and ecological processes. This may include measures such as certain forms of nature-based solutions; modified floodplain practices; policy modifications; vessel speed limits; traffic management and tidal navigation restrictions; the reoperation of dams and reservoirs to restore or better mimic natural hydrology and flow patterns; invasive plant removal; signage to limit public access at an aquatic ecosystem restoration site; setbacks; elevations; relocation; and buyout/acquisition including the acquisition of flowage easements; dry flood proofing and wet flood proofing; providing flood insurance; establishing building codes for new construction; other local floodplain management practices; installing early warning systems; and developing emergency evacuation plans.

INTENT:. These examples are not intended to be limiting but instead provide a sense of the types of actions which fall under nonstructural approaches. The Army solicits comment on whether these are appropriate examples and context for the term "nonstructural" or whether modifications should be made to any final definition or list. The nonstructural approaches are intended to apply across the Corps missions and activities that are subject to the PR&G. Nonstructural approaches are methods and practices employed to alter the use of existing infrastructure through human activities as opposed to altering physical interaction of water and land. Nonstructural approaches can include things like policy modifications or floodproofing of existing infrastructure. Alternatively, structural approaches would include things such as new construction of water resources infrastructure or structural modification to enlarge an existing dam or levee. As referenced under the nature-based alternative definition discussion in the preamble, various WRDA provisions require the Corps to incorporate nonstructural and nature- based solutions in plan formulation. Army solicits comment on whether this proposed definition best meets or enables the implementation of the PR&G to achieve long-term planning goals and objectives of the PR&G, including the avoidance of the unwise use of floodplains and the Guiding Principle of healthy and resilient ecosystems.

USACE QUESTIONS: These examples are not intended to be limiting but instead provide a sense of the types of actions which fall under nonstructural approaches.

- The Army solicits comment on whether these are appropriate examples and context for the term “nonstructural” or whether modifications should be made to any final definition or list. The nonstructural approaches are intended to apply across the Corps missions and activities that are subject to the PR&G.

- As referenced under the nature-based alternative definition discussion in the preamble, various WRDA provisions require the Corps to incorporate nonstructural and nature-based solutions in plan formulation. Army solicits comment on whether this proposed definition best meets or enables the implementation of the PR&G to achieve long-term planning goals and objectives of the PR&G, including the avoidance of the unwise use of floodplains and the Guiding Principle of healthy and resilient ecosystems.

(m) ***Public benefits.*** Encompasses economic, environmental, and social impacts, and includes those that can be quantified in monetary terms, as well as those that can be quantified or described qualitatively.

INTENT: the paragraph defines "public benefits" in the context of water and land resource project planning. It encompasses economic, environmental, and social benefits, whether quantifiable in monetary terms or described qualitatively. The goal is to maximize public benefits relative to costs. Under the P&G Federal objective, projects aim to contribute to national economic development or ecosystem restoration while protecting the environment. Public benefits include increases in the net value of goods and services, both marketed and non-marketed, accruing at the planning area and national levels. These benefits are intended for society as a whole, not solely for private individuals or entities, though they may indirectly benefit. The paragraph also discusses the inclusion of benefits to Tribal Nations, seeking comments on how these should be considered, potentially as part of the Federal trust responsibility, and whether they should be distinguished from overarching public benefits.

USACE QUESTION:

- The Army solicits comment on how benefits to Tribal Nations should be described, such as whether benefits to Tribal Nations should be considered as a Federal trust responsibility, and whether Tribal Nation benefits should be called out separately from the overarching "public benefits."

(n) ***Regulatory.*** Generally, those activities subject to legal restrictions promulgated by the Federal government.

INTENT: This paragraph defines regulatory. This definition is provided in the P&R and is a general definition of actions which are regulatory in nature promulgated by the Federal government. Regulatory can include the promulgation of regulations as well as other activities such as permit decisions.

(o) ***Resilience.*** The capacity of an ecosystem or community to respond to changes, including climate changes.

INTENT: This paragraph provides a definition for resilience. This definition is provided in the P&R and can be applied to many different areas within the proposed rule such as climate resilience, including grid resilience when relevant, ecosystem resilience, and water resilience, regarding how climate, ecosystems, and water responds to changes. The resilience of a water resource solution should be considered in alternatives analysis and tradeoffs discussion. The Corps implements four principles related to resilience: prepare, absorb, recover, and adapt. There is also a definition provided for resilience in Executive Order 13653 (78 FR 66817), which the Corps currently uses in its Resilience Initiative. The definition provides that resilience is the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions. This definition can have application to both natural and human- made entities. In addition, there is a definition of resilience provided in the National Climate Resilience Framework as well as in M-24-03, Advancing Climate Resilience through Climate- Smart Infrastructure Investments and Implementation Guidance for the Disaster Resiliency Planning Act.

USACE QUESTIONS:

- The Army solicits comments on whether the resilience definition provided in the Executive Order or the National Climate Resilience Framework or M-24-03 (Advancing Climate Resiliency through Climate Smart Infrastructure Investments)

should be included in the regulation instead of or in addition to the proposed definition.

- The Army solicits comments on whether additional concepts from these documents should be included in the rule, and if so, in what manner related to the use of resilience in the rule. The usage of the Corps' definition would be more efficient in implementation as it is familiar to the Corps and more directly relates to Corps missions; however, the proposed definition would be consistent with the PR&G and would apply resilience in a broader sense.

(p) ***Sustainable.*** The creation and maintenance of conditions under which humans and nature can coexist in the present and into future.

INTENT: This paragraph provides a definition for sustainable. This definition is provided in the P&R and refers to the conditions where humans and nature are able to coexist. The P&R generally uses the term "sustainable" in the context of seeking to maximize sustainable economic development, which is one component to achieve the Federal objective. Investments in sustainable economic development contribute to the Nation's resilience. The P&R also provides that alternative solutions should improve the economic well-being of the Nation through the sustainable use and management of water resources ensuring both water supply and water quantity. Sustainability would also incorporate the maximization of net benefits while fully considering the option of, and value of, preserving resources for future uses or non-uses, and fully considering the preferences

(q) **Tribal Nation**. An Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. 5130.

INTENT: Tribal Nation. This paragraph provides a definition for Tribal Nation. This definition is consistent with the Federal government's definition and identification of a Tribal Nation by the Secretary of Interior. This definition is also used and applied to other Corps programs, such as the Tribal Partnership Program. The Army recognizes that there are other Indigenous populations, Native Hawaiian Organizations, and non-federally recognized Tribes which may not meet the definition as proposed, and solicits comments on whether these populations should be defined separately for purposes of the PR&G. Regardless of definitions and legal authorities applied to the Civil Works programs, the Corps would ensure full outreach and coordination occurs with all Tribal

Nations, Indigenous populations, Native Hawaiian Organizations, and non-federally recognized Tribes as relevant to a particular water resources investment as described in the preamble discussion under subsection 234.6(d). Such outreach and coordination would be separate from government-to-government consultation requirements. Many of these include communities having environmental justice concerns. Environmental justice is one of the Guiding Principles of the PR&G and this proposed rule.

USACE QUESTION:

- The Army recognizes that there are other Indigenous populations, Native Hawaiian Organizations, and non-federally recognized Tribes which may not meet the definition as proposed and solicits comments on whether these populations should be defined separately for purposes of the PR&G.

(r) ***Unwise use of floodplains.*** Any action or change that diminishes public health and safety, or an action that is incompatible with or adversely impacts one or more floodplain functions that leads to a floodplain that is no longer self-sustaining or degrades ecosystem services.

INTENT: This paragraph provides a definition for unwise use of floodplain. This definition is provided in the P&R and describes conditions which result in a floodplain that is no longer self-sustaining. Seeking to avoid the unwise use of floodplains is also a component of how to achieve the Federal objective. The appropriate floodplain per this definition and application under the proposed ASPs is case-specific and should consider the scope and scale of the problem and potential benefits when determining the geographic boundary. Per the P&R, Federal actions should seek to reduce the Nation's vulnerability to floods and storms. Unwise uses include those that would significantly increase or shift flood risks to other populated areas, or otherwise would result in net adverse impacts to human health safety, welfare, property, natural resources, or the natural and beneficial functions of floodplains (e.g., natural water storage, water filtration, groundwater infiltration, sediment retention). The Army solicits comment on how evaluations of self-sustainment may occur in occupied or inhabited floodplains.

USACE QUESTION

- The Army solicits comment on how evaluations of self sustainment may occur in occupied or inhabited floodplains.

(s) ***Watershed.*** A land area that drains to a common waterbody.

Commented [JU1]: Do they define waterbody?

INTENT This paragraph provides a definition for watershed. This general definition for watershed is provided in the P&R and does not go into detail regarding a specific method or size to identify a watershed. Using a watershed approach is a Principle under P&R to ensure a more holistic view of the problem and potential solutions. The appropriate size of watershed to assess is case-specific and should consider the scope and scale of the problem and potential benefits when determining the geographic boundary.

234.3 Exceptions: Exceptions to any requirements or policy contained in this part may be requested by the Corps or the non-Federal interest or responsible Tribal, State, or local government. Exceptions must be requested in writing and will be reviewed for a decision by the Assistant Secretary of the Army for Civil Works.

234.4 Objectives and applicability

a) ***Introduction.*** The goal of Department of the Army's ASPs is to ensure that Army Civil Works consistently applies a common framework for analyzing a diverse range of water resources development projects, programs, activities, and related actions involving Federal investments.

INTENT: This paragraph of the proposed rule states the goals and objectives of the Corps' ASPs. The proposed rule would help ensure consistency and transparency in implementation of the PR&G by the Corps.

b) ***Objectives for Federal water resources investments.*** Section 2031 of WRDA 2007 (Pub. L. 110-114; 42 U.S.C. 1962-3) specifies that Federal water resources investments shall reflect national priorities, encourage economic development, and protect the environment. The Corps shall accomplish this Federal objective of water resources planning policy by:

(1) seeking to maximize sustainable economic development;

(2) seeking to avoid the unwise use of floodplains and flood-prone areas and minimizing adverse impacts and vulnerabilities in any case in which a floodplain or flood-prone are must be used; and,

(3) protecting and restoring the functions of natural systems and mitigating any unavoidable damage to natural systems.

INTENT: The proposed rule outlines the Federal objective for Federal water resources investments as mandated by WRDA 2007, emphasizing the need to reflect national priorities, encourage economic development, and protect the environment. This includes maximizing sustainable economic development, avoiding the unwise use of floodplains, and protecting/restoring natural systems while mitigating unavoidable impacts. National priorities, which evolve over time, are considered in investment decisions, with attention to stakeholder engagement and Tribal trust responsibilities. Sustainable economic development is defined as fostering coexistence of humans and nature without compromising water resource sustainability. The rule also stresses the importance of avoiding unwise use of floodplains to maintain public health and safety. Additionally, it mandates protection and restoration of natural systems, with mitigation measures as needed. The Corps aims to improve environmental conditions and consider compensatory mitigation when restoration isn't feasible, with certain projects specifically aimed at restoring aquatic ecosystems.

c) ***Net public benefits***. The Corps shall strive to maximize net public benefits to society. Public benefits encompass economic, environmental, and social goals, include monetized and un-monetized effects, and allow for the consideration of both quantified and unquantified effects. The Corps shall take a comprehensive view in evaluating net public benefits.

INTENT: The proposed rule outlines a shift towards maximizing net public benefits in water resources development projects, as mandated by WRDA 2007. Public benefits include economic, environmental, and social goals, both quantifiable and non-quantifiable. The rule emphasizes an integrated approach to evaluating projects, considering all relevant effects and avoiding a narrow focus on national economic efficiency. It introduces the concept of distributional analysis to examine regional economic benefits and encourages input from local communities. The rule acknowledges challenges in categorizing benefits and solicits comments on various aspects, including the inclusion of Tribal benefits and approaches to dealing with non-monetizable benefits. It underscores the importance of considering a comprehensive range of benefits throughout the planning process, moving beyond a sole focus on economic development

USACE QUESTION:

- Army is also soliciting comments on whether it should be acknowledged that Tribal benefits are part of the Tribal trust responsibility in implementing the PR&G and whether Tribal benefits should be called out separately from "public benefits"

d) ***Applicability***.

(1) The objectives in paragraph (b) of this section shall be embodied in all new Army Civil Works' water resources investments, which include both structural and nonstructural approaches to water resources problems. The PR&G analysis under the Corps' ASPs described in this regulation is generally required for feasibility studies, General Re-evaluation reports, Major Rehabilitation reports, Continuing Authorities Programs, significant changes to operations through re-allocation studies or Section 216 of the Flood Control Act of 1970 (Pub. L. 91-611), and any other project or program not otherwise excluded under paragraph (2) of this paragraph.

2) **Excluded activities**. The PR&G is not intended to apply to all Federal actions. The following types of Federal investments are identified as excluded from the requirements of this regulation:

(i) Regulatory actions, such as the issuance of permits associated with Section 404 of the Clean Water Act (33 U.S.C. 1344).
(ii) Real estate actions.
(iii) Planning Assistance to States program.
(iv) Flood Plain Management Services program.
(v) Section 14 of Rivers and Harbors Act of 1899 (33 U.S.C. 408) program.
(vi) Pub. L. 84-99 program.
(vii) Water Infrastructure Finance and Innovation Act Program

(viii) Environmental Infrastructure projects
(ix) Land management plans
(x) Operations and maintenance activities that are carried out in a manner consistent with the existing approved operations and maintenance manual or plan for an authorized project. This does not include significantly changed O&M plans or those changed to meet new goals which may require a new analysis under this regulation and potentially authorization.
(xi) International and Interagency Support and Support for Others actions.
(xii) Research or monitoring activities.
(xiii) Emergency actions.
(xiv) Projects, programs, or plans that meet the threshold criteria for exclusion or that fall

below the thresholds identified in Table 1. These excluded actions generally occur when investments are routine and have inconsequential effects on water resources.
(xv) Additional programs, plans, or projects which the Assistant Secretary of the Army for Civil Works has determined do not require analysis pursuant to section 3 of this regulation.

INTENT: The proposed rule delineates the scope of applicability of the PR&G (Principles, Requirements, and Guidelines) framework, particularly focusing on its application to Corps projects and programs while identifying specific exclusions. It clarifies that the PR&G will be mandatory for most Corps projects and programs unless explicitly exempted. Exemptions are based on predefined criteria, such as falling below certain thresholds or being deemed small and routine. Excluded projects are not absolved from adhering to relevant legal and regulatory requirements, emphasizing that compliance remains obligatory. The exclusions encompass a diverse array of activities, including regulatory actions, real estate decisions, technical support programs, emergency response initiatives, financial assistance schemes, land management plans, operations and maintenance tasks, monitoring endeavors, research endeavors, and international support activities. Furthermore, the proposed rule actively solicits input from stakeholders regarding potential additional exclusions, such as the inclusion of watershed studies, and seeks feedback on the appropriateness of the proposed exclusions. This engagement underscores a commitment to ensuring that the PR&G framework aligns effectively with the varied contexts and needs of Corps projects and programs.

USACE QUESTION(S):

- The Army invites comment on additional projects and programs that should be covered under the PR&G or, conversely, additional projects and programs to which the PR&G should not apply.
- The Army solicits comment on whether modifications allowed under the PL 84-99 program should not be excluded from the PR&G.
- The Army solicits comment on whether additional exclusions should be added, such as dredged material management plans, the Tribal Partnership Program, the Continuing Authorities Program, and Major Rehabilitation Evaluation Reports due to scope, scale, level of investment, project partner, technical nature of product, etc.

- the Army solicits comment on whether any of the actions identified as proposed exclusions in the rule should not be excluded, in which case the ASPs would apply to them.
- Also, the Army solicits comment on whether watershed studies should be specifically included to ensure that they align with the goals of the PR&G and result in better outcomes for integrated water resources management.

234.5 Level of analysis

a) ***Standard and scaled levels of analysis.*** Once a determination has been made that PR&G does apply, the level of analysis shall be determined. The level of PR&G analysis required will vary in scope and magnitude across programs and activities. There are two levels of analysis: "standard" and "scaled". In general, the level of analysis should be commensurate with the significance of the Federal investment in terms of dollar value and the potential environmental impacts. While there is not a clear distinction between the different levels of analysis, the two types of analysis can generally be distinguished in several ways:(1) A standard analysis seeks to evaluate all the relevant benefits and costs associated with the project or activity using original or secondary data. This type of analysis is typically used for new or significantly modified actions. The Corps would conduct a benefit-cost analysis of programs and activities that have some effect on the environment. For projects/activities that fall into the category of "standard analysis," the analysis should make significantly greater efforts to quantify and monetize impacts. The extent to which effects can and should be monetized should be made on a resource-by-resource basis and considering the estimated present value cost of the project/activity and the significance of the effects. (2) A scaled analysis is an analysis that is more limited in scope for projects, programs, or plans that have low risk/low cost, or have minimal consequences of failure, posing minimal threats to human life or safety, or do not result in significant impacts to the environment. A scaled analysis may rely on benefits function transfer methods and readily available secondary data sources. Benefits function transfer methods are used to estimate monetary values by transferring available information about relationships from studies already completed to another location, context, or issue. Best practices would be applied when using this approach to avoid

   INTENT: The PR&G framework proposes two levels of analysis based on project scope, magnitude, and federal investment significance. This approach ensures efficient decision-making, with smaller, routine activities being excluded from extensive PR&G

analysis. Activities with minimal risks undergo a scaled analysis, while those with larger potential impacts undergo standard analysis. The scaled analysis involves streamlined processes and fewer alternatives compared to standard analysis but still adheres to PR&G principles. Monetary thresholds in Table 1 of the proposed ASPs guide the determination of analysis levels. The rule invites feedback on the adequacy of benefit/cost analysis language and acceptable economic analysis methods. For scaled analysis, reliance on secondary data sources and modeling techniques is proposed, with flexibility to adapt methods as needed. Feedback on suitable analysis types for evaluating public benefits under both levels is welcomed.

USACE QUESTION(S):

- The Army solicits comment on whether the proposed rule language regarding benefits/cost analysis in this section is adequate or whether additional content or examples is needed in the rule text.
- The Army solicits comments on the types of analyses that may best be used to evaluate the full range of public benefits under both standard and scaled level of analyses.

b) ***Determining the appropriate level of analysis.*** In many cases, professional judgment and available resources will be important factors in determining the appropriate level of analysis. The Corps will ensure that cumulative effects of many small, routine actions would not in itself elevate those investments to a scaled or standard analysis. Many of those small, routine actions would be excluded from PR&G analysis.

INTENT: This section of the proposed rule outlines the process for determining the appropriate level of analysis under the PR&G framework. Factors such as project complexity, available resources, and professional judgment play crucial roles in this determination, alongside the criteria outlined in Table 1 of the proposed ASPs. While the table provides general guidance, deviations may occur based on various considerations, including the magnitude of issues addressed, environmental significance, and stakeholder concerns. Other factors, such as uncertainty in decision variables and Tribal trust responsibilities, also influence the analysis level determination. The Army seeks feedback on additional considerations for determining the analysis level and whether further clarity is necessary in this regard.

USACE QUESTIONS: Additional areas to consider include, when impacts may vary across alternatives such that analysis can help identify the best alternative, and when analysis will help the public and decisionmakers understand the effects of the project.

- Army solicits comments on additional considerations to be applied when making a determination as to the appropriate level of analysis under the PR&G, and whether additional clarity is needed on how such determinations may be made.

c) ***Scope and magnitude of analysis required.*** The threshold criteria for project, programmatic, and individual plan level analysis for Army Civil Works is shown in Table 1. These thresholds represent guidelines for the level of analysis that is likely to be most appropriate for an activity, given the level of investment in, appropriations for, or cost of that activity. In determining whether a given activity or project falls under or exceeds the financial thresholds, it is the level of present value of Federal investment that is the relevant criterion to use. However, for a particular activity, a different level of analysis may be more appropriate, and projects/programs may depart from these guidelines where such a departure is justified. In general, a scoping effort should be undertaken to evaluate the level of effort needed to analyze the full range of potential effects. Project-level analysis should generally be used for water resources investments when the Corps has discretion in site-specific investment decisions. A programmatic-level analysis generally has a broader scale and/or scope than a project-level analysis. Programmatic-level analysis generally relates to funding programs or where a proposal for a set of similar actions analyzed under one decision document may occur.

INTENT: This paragraph outlines the scope and magnitude of analysis required under the PR&G framework, with proposed Table 1 providing guidelines based on the present value of the Federal investment. The Army seeks feedback on the appropriateness of these thresholds, including whether adjustments for inflation and consideration of non-Federal costs are necessary. Operational modifications, modernization efforts, and significant O&M investments fall under the PR&G, with routine O&M activities excluded. to apply the threshold criteria, the Corps identifies the type of action (project, program, or plan) and determines the relevant level of Federal investment. Project-level analysis focuses on specific projects, while programmatic-level analysis covers sets of similar actions. The Corps prioritizes the most rigorous analysis appropriate, avoiding fragmentation of actions to circumvent analysis. Feedback is sought on clarifying distinctions between project, program, and plan criteria and potential revisions to Table 1 to better suit Corps activities.

USACE QUESTIONS:

- The Army solicits comment on whether the values provided in Table 1 are the appropriate thresholds to apply for the Corps' ASPs, and also whether the amounts should be adjusted for inflation from the original amounts provided, which were developed in 2014.
- The Army also solicits comments on whether the Corps should account for the non-Federal share of the costs in setting these thresholds, in order to reflect the cost to society (Federal plus non-Federal) of the proposed investment. In that case, the thresholds would be somewhat higher.

234.6 The planning process

a) ***Introduction.*** The following planning process will be used to implement the common framework summarized in the Interagency Guidelines for analyzing Federal investments in applicable water resources. The planning process will ensure that plan formulation, evaluation, and implementation of agency projects and programs reflect the Guiding Principles identified in the P&R: healthy and resilient ecosystems, sustainable economic development, floodplains, public safety, environmental justice, and a watershed approach. The planning process consists of a series of steps that identifies or responds to problems and opportunities, as well as specific Tribal, state, and local concerns, and, in most cases, culminates in a recommended plan. The process involves an orderly and systematic approach to making determinations and decisions at each step so that the interested public and decision-makers in the planning organization can be fully aware of the following: the basic assumptions employed; the data and information analyzed; the areas of risk and uncertainty; the reasons and rationales used; and the significant implications of each alternative. The planning process is iterative to adapt to new information and understanding. The result of the planning process is investment advice. The advice may be a recommended plan or plans that seek to maximize net public benefits in addressing the identified water resources problem and a description of the analysis of the benefits and costs of that and other potential plans.

INTENT: This proposed paragraph describes how the planning process will incorporate the Guiding Principles from the PR&G in the analysis and development of Corps Federal investments in solving water resources problems. The section describes the planning process as orderly, systematic, and iterative, and establishes the desired outcome as

investment advice in the form of a plan or plans that seek to maximize net public benefits. Investment advice supports the decision-making process. It provides analysis and a potential solution for the subject water resources problem and the Chief of Engineers uses such investment advice to make a recommendation to the Congress for consideration in the authorization process. Ultimately, the Congress decides whether or not to authorize a particular recommendation and how to consider such investment advice. The plan recommendation includes investment advice and shapes the federal role in a given planning situation. As in most Corps documents, Records Management and Freedom of Information Act (FOIA) requirements should be considered throughout the development of PR&G analysis documents, with the inclusion of an index to facilitate the collection of records for any future FOIA requests.

b) ***National Environmental Policy Act.*** Where Federal investments in water resources require analysis under NEPA and this regulation, Army Civil Works should integrate, to the extent possible, the analysis in this regulation into existing planning processes, and may integrate this regulation and NEPA analyses in a single analytical document that reflects both processes. Army Civil Works shall seek opportunities to integrate other required Federal and state environmental reviews with their combined analyses.

   - INTENT: advocates for integrating the National Environmental Policy Act (NEPA) and the Principles, Requirements, and Guidelines (PR&G) processes to produce a single analytic document, reducing duplication and workload. While striving for integration, the Corps must ensure compliance with both NEPA and PR&G, with modifications to NEPA analysis as necessary. However, compliance with NEPA and the proposed rule does not exempt the Corps from other statutory obligations or Tribal trust responsibilities. Projects involving dredged or fill material discharge would still follow EPA guidelines under the Clean Water Act. The Corps should aim to maximize integration and minimize redundancy with other federal laws and statutory provisions

c) ***Guiding principles.*** The Guiding Principles provide the overarching concepts that the Corps seeks to promote through investments in water resources.

   (1) Environmental justice. Environmental justice refers to the just treatment and meaningful involvement of all people regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people:

are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and

(i) have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices. Environmental justice shall be considered throughout the Civil Works program and in all phases of project planning and decision-making. Army Civil Works projects and programs shall advance equity by meeting the needs of communities, such as by reducing disparate environmental burdens, removing barriers to participation in decision-making, and increasing access to benefits provided by Civil Works programs, including for disadvantaged communities. The planning process shall put these communities at the front and center of studies, providing robust opportunities for effective participation in the planning and decision-making processes. Any disproportionate adverse public safety, human health, or environmental burdens of project alternatives on communities with environmental justice concerns shall be avoided, minimized, or mitigated to the greatest extent reasonable. The Corps shall ensure that communities with environmental justice concerns have meaningful opportunities to identify potential alternatives, effects and mitigation measures. The Corps shall also be transparent in fully displaying the potential effects of alternative actions on communities with environmental justice concerns.

(2) *Floodplains.* All future Federal investments in and affecting floodplains must meet some level of floodplain resilience. Alternatives affecting floodplains should aim to improve floodplain resilience if possible and also should avoid the unwise use of floodplains and/or flood- prone areas. If the areas cannot be avoided, then the alternative must minimize adverse impacts to these areas and mitigate unavoidable impacts using nature-based approaches where possible. The Corps shall identify and communicate potential adverse effects on floodplain functions for the various alternatives under consideration. Where the Corps proposes to construct a project

feature in a floodplain because that is the best way to serve a public purpose such as flood risk reduction, that proposed Corps project is not automatically considered an unwise use of the floodplains. The Corps shall strive to sustain the floodplains natural and beneficial functions to the maximum extent practicable given the project's purpose and need.

(3) *Healthy and resilient ecosystems.* Alternatives shall protect the existing functions of ecosystems and may restore the health of damaged ecosystems to a less degraded and more natural state where feasible, and in accordance with current study and cost sharing authorities. When adverse environmental impacts cannot be completely avoided, alternatives shall strive to minimize environmental impacts. When a particular alternative will cause unavoidable damage to the environment, mitigation to offset damages shall be incorporated into that alternative and evaluated as part of that alternative. In developing alternatives, consideration shall be given to ecosystem resilience, including acknowledging the value of ecosystem services to people. When evaluating alternatives, the health of the affected ecosystem shall be measured in its current condition as the baseline and projected under the alternatives being considered, including the No Action alternative.

(4) *Public safety.* Alternative solutions shall strive to avoid, reduce, or mitigate significant risks to public safety, including both loss of life and injury, and shall include measures to manage and communicate the residual risks. The impact and reliability of alternatives on significant risks to public safety must be evaluated for both existing and future conditions, considered in decision- making, and documented.

(5) *Sustainable economic development.* The Corps' investments in water resources shall encourage sustainable economic development. This is accomplished through the sustainable use and management of water resources ensuring overall water resources resilience. Sustainable economic development creates and maintains conditions under which humans and nature can coexist. Analysis under sustainable economic development shall present, where feasible, information about the environmental resources in the project area or the area where activities are occurring, and how the resources and their value might be expected to change over time. Physical capital information may also be included where relevant. Analysis shall also include information on socio-economic conditions under current and projected conditions. Economic, social, and environmental effects and benefits shall be incorporated into the analysis of alternatives.

(6) *Watershed approach.* When developing alternatives, the water resources problem being addressed should be analyzed on a watershed-based level to facilitate inclusion of a complete range of solutions, after considering the breadth of impacts across the watershed. A key aspect of the watershed approach is the analysis of information regarding watershed conditions and needs, allowing for consideration of upstream and downstream conditions and needs, consideration of other projects and actions in place, underway or planned by other agencies within the watershed, and more thoroughly addressing the potential impacts of a proposed action. The scale of the watershed used to develop alternatives can vary. The appropriately sized watershed for the need being addressed shall be a case-specific determination based on the relevant facts and circumstances. The watershed scale used to develop alternatives should encompass a geographical area large enough to ensure plans address cause and effect relationships among affected resources and activities, both upstream and downstream and cumulative in nature that are important to gaining public benefits or avoiding harms from the project. The watershed approach ensures that the interconnectedness of systems is evaluated to fully understand the root causes and symptoms of the water resources problem and the full range of potential public benefits. Communication with other agencies or Tribal, territorial, state and local government partners working in the watershed starting in the scoping phase could help realize a watershed approach. In addition, other potential investments in the watershed shall also be accounted for under the watershed approach.

INTENT: This section describes the Guiding Principles for the planning process that the P&R identifies, which are: environmental justice, floodplains, healthy and resilient ecosystems, public safety, sustainable economic development, and a watershed approach. The Guiding Principles are intended to be used as overarching concepts to promote through water resources investments.

USACE QUESTION(S):

- (environmental justice): the Army solicits comment in particular on how the navigation program can use tools and resources to directly assess and, as appropriate, demonstrate project benefits for disadvantaged communities, and other nearby communities.
- (floodplains) The Army solicits comment on particular models, tools, methodology or other information that may be helpful in assessing

ecosystem resilience, such as the use of keystone species to provide insight on resilience under changing conditions.

- (public safety): Although some other agencies use monetized life loss in various decision-making contexts, the proposed ASPs do not require monetization. The Army solicits comment on this issue.
- (public safety): The Army solicits comment on whether additional threats to public safety should be included for consideration beyond those related to natural events.
- (watershed): the Army solicits comment on example frameworks, tools, and methods for implementing a watershed approach, such as whether the Basin-Scale Opportunity Assessment led by the Department of Energy could be adapted for use under the ASPs. However, the Corps would adapt to use the best available science for such evaluations as they are developed in the future.

d) ***Collaboration.***

(1) The planning process will seek to achieve full collaboration with a wide range of affected Tribes, governmental and non-governmental stakeholders, communities with environmental justice concerns, and the public in all stages of the planning process. Collaboration with Tribes, governmental and non-governmental stakeholders, communities with environmental justice concerns and the general public throughout the planning process allows consideration of multiple perspectives and information sources (*e.g.*, Indigenous Knowledge) and shall be emphasized throughout the planning process. Collaboration with Tribes, communities, and local and state governments is a critical element to help identify specific problems, opportunities, and significant constraints within the study area, and help establish planning goals and objectives that are consistent with the objectives of this regulation and are locally appropriate. Starting at the earliest phase in the planning process, Tribes and other communities with environmental justice concerns shall have an opportunity to play a key role in identifying alternatives, enhancing the positive benefits to their communities from potential Federal investment and in describing any concerns they may have with a potential project. Such early, meaningful, and robust engagement will help identify and address problems and possible solutions and scope studies. Robust, early collaboration with Tribes does not negate the need for Tribal consultation, when appropriate.

(2) To improve federal decision-making and to promote transparency, Army Civil Works shall seek to meaningfully collaborate with other Federal and non-Federal entities. Engagement methods and scope of engagement will depend on the stage of the planning process, the issues, and the groups that will be contributing ideas and information to the planning process and shall be intentionally designed using best practices and techniques for engagement. Engagement strategies shall consider Corps, Tribal, and community resource constraints. Indigenous Knowledge, information from Tribal Nations, local and state governments, non-governmental organizations and the public shall be incorporated into problem definition and forecasting of future conditions as well as the development and analysis of alternatives. Robust engagement and transparency throughout the planning process, including during the evaluation and comparison of alternatives, will help deliver sound investment advice for water resources solutions that maximize net public benefits.

INTENT: This proposed paragraph outlines an increased focus on collaboration for the Corps to improve decision making and promote transparency.

e) ***Investigations and data collection.*** Investigations, data collection, and analysis should be ongoing and integrated early in the planning process. Investigations should be relevant to the planning objectives and constraints. The interdisciplinary study team should identify the most important areas to focus on in the study, such as: engineering and design; surface water and groundwater hydrology; hydraulics; geology; operations; water quality; land resources; power generation and conservation; economics; financing; environmental, social, and cultural impacts and mitigation; opportunities for recreation; cost estimation for construction, operation, maintenance, replacement, energy consumption; and, climate change to include greenhouse gas emissions. Investigation, data collection and analysis should leverage and incorporate information from Tribal, state, local, and non-governmental sources, and the public. Additional investigations should be performed as necessary.

INTENT: This proposed section discusses that investigations and data collection should occur early and on a recurring basis throughout the planning process. The proposed section outlines areas for the study team to consider and relevant data to collect in investigations. It recommends that the Corps leverage existing information; and conduct new investigations and data collection, where appropriate, when existing information is not present.

f) ***Identify purpose, problems, needs, and opportunities***. To identify purpose, problems, needs, and opportunities, the Corps shall:

(1) Ensure that the planning goals and objectives reflect the direction provided in the study authority.

(2) Clearly identify the purpose of the study, the role of the Federal government, as well as the views of the non-Federal interest (if any), cooperating agencies, Tribes, various stakeholders, and the public.

(3) Identify the problems and opportunities to which the agency is responding.

(4) Define the study area including activities within the watershed that are relevant to the proposed project, and areas where impacts should be avoided

(5) Describe the plans for stakeholder involvement.

(6) Prepare a summary of the planning objectives and constraints to be used in the analysis of the federal investment. This summary should include a discussion of stakeholder, partner, and public input.

(7) Include a discussion of the social and cultural context of the region and resources.

INTENT: this proposed section outlines the requirements for identifying the purpose, problems, needs, and opportunities in water resources projects, emphasizing early collaboration with Tribal Nations and stakeholders. It begins with defining water resources challenges and their causes, aligning with the project's goals, statutory authorities, and Corps requirements. The process is iterative and involves obtaining stakeholder input, with efforts to align study scoping with NEPA scoping. A watershed-based or systems approach is recommended. The section emphasizes consistency with authorizing legislation and considering alternatives beyond Corps missions if they offer community-based solutions. It also addresses limitations on the scoping process and the importance of various perspectives in understanding current conditions and potential solutions. The Corps aims to identify water resources problems and opportunities without excluding reasonable alternatives, using enhanced collaboration and considering social, cultural, and environmental aspects, including Tribal resources and environmental justice. The section concludes with the preparation of a summary of

planning objectives and constraints, including stakeholder input, and discusses the potential inclusion of other important areas identified during scoping

USACE QUESTIONS:

- The Army solicits comments on how to address specific limitations on the scoping process, due to factors such as the scope of the study authority, cost sharing requirements, non-Federal interest support, and Corps mission areas and core capabilities. For example, other Federal, state, local, or Tribal programs or projects may align with the study's goals and objectives and the consideration of these measures within an alternative may produce additional, synergistic net benefits.
- The Army solicits comment on whether there may be terms and conditions under which additional consideration may proceed that would enable the Corps to consider alternatives beyond those that the non-Federal interest supports.

g) **Inventory existing resources and forecast future conditions**. A summary of the specific economic, environmental, and social setting within the study area shall cover the condition and functional relationships of affected resources; their development potential and possible conflicts in producing affected ecosystem services; and the local situation with respect to investment, climate, markets, affected communities, and basic economic productivity.

(1) "Forecast Future Conditions" generally relates to the identification of impacts associated with the alternatives, including the No Action Alternative. Future conditions should be assessed and analyzed as part of the evaluation process and the best available data and forecast should be used to complete an analysis of these uncertain conditions.

(2) This exercise of identifying existing resources and forecasting future conditions will quantify, to the extent practicable, relevant water and related resource conditions as they currently exist within the study area and forecast future conditions over the period of analysis. This would also include resources and conditions regarding the economic, environmental, and social aspects within the study area, as well as ecosystem services and climate-related scenarios. The existing resources and future conditions will be established using generally accepted sources that are national, state, or regional in scope, such as from peer-reviewed sources or sources which are government-produced.

(3) The "without-project condition" is the most likely condition expected to exist in the future over the period of analysis in the absence of the Corps project, or program under consideration, given current laws, policies, projects under construction, and any existing

resources/conditions. It considers expected actions that may be executed by others, including potential future land use conditions, and shall consider effects of climate change using multiple scenario analyses.

(4) The "with-project condition" is the most likely condition expected to exist in the future, over the period of analysis, with a specific Corps project or program in place. It considers expected actions that may be executed by others, including potential future land use conditions, and shall consider effects of climate change using multiple scenario analyses.

(5) To ensure that the appropriate criteria and problems are incorporated into the analytical framework, a summary of the process used to define the relevant existing conditions and foreseeable future conditions shall be prepared and made available to the public and shared with stakeholders.

INTENT: To determine baselines, the Corps would identify the existing conditions and the baseline levels of ecosystems services and, to the extent practicable, identify current trends and variability in key environmental and economic indicators and conditions such as climate, population, urbanization, and land use. The current existing conditions provide the baseline for forecasting both the future with- and without-project conditions. This This proposed section describes the need to inventory existing information and resources and to forecast future conditions. This step corresponds to the NEPA identification of the affected environment. The inventory and forecast provide a basis for comparison of the effects of alternative water resources investments on objectives. The proposed section also describes the without-project condition and the with-project condition including the need to consider climate and other likely changes in establishing scenarios to compare effects of alternatives. Such evaluation and forecasting across the alternatives would confirm the problems, needs, and opportunities that the study would address in the subsequent steps. The inventory and forecast would provide information for understanding existing conditions and establishing a baseline for forecasting with- and without-project conditions. The inventory and forecast should include other related Federal and non-Federal investments within the region or watershed, which the Corps would consider to ensure consistency of purpose, maximize effectiveness, reduce costs, or identify other potential alternative solutions.

(h) Formulate alternatives. The primary goal of an alternative is to meet the objective of the

project to solve the water resources challenge as authorized, consistent with the Federal objective and Guiding Principles. The primary function of an alternative must be to alleviate unsatisfactory conditions or address a problem or opportunity that exists or will exist in the future without the programs or projects under consideration. Alternatives shall address the defined water resources challenge or function that is the subject of the analysis, and achieve multiple objectives as outlined in the P&R. Alternative formulations should focus on solutions that are feasible and meet the planning objectives. Alternatives should be formulated to meet planning objectives based on most likely future conditions expected with and without implementation of an alternative. The viability of an alternative should be determined through an evaluation of its acceptability, efficiency, effectiveness, and completeness, as required in the PR&G. The period of analysis should be the same for each alternative and sufficient to encompass the lifespan and significant long-term impacts of the project. In addition, alternatives may also include actions which are beyond the missions of the Corps where they provide solutions to the identified problem and meet the goals of the PR&G. However, such alternative shall identify the relevant parties with requisite responsibility for those actions beyond Corps missions (such as other Federal agencies and non-Federal partners), their authority for that action, the interrelation between that action and the recommended Corps project, and appropriate sequencing of implementation. For Corps investments, the Corps will be the designated lead for completing PR&G analysis.

Alternatives are to be developed in a systematic manner. A range of potential alternatives should be initially investigated reflecting a range of scales and measures, and as alternatives are refined, some would be screened out for reasons such as having excessive cost or unavoidable impacts, not sufficiently addressing the identified problem or opportunity, or other factors. The study report should include some analysis of the eliminated alternatives, and reasons for their elimination. The plans that are retained for additional analysis should determine the range of reasonable alternatives, as required for the NEPA analysis. Section 234.8 describes the alternatives required in the final array.

Consideration of nonstructural approaches and nature-based solutions that meet the planning objectives shall be an integral part in the development and evaluation of Federal investments in water resources.

Each alternative formulated for the PR&G analysis should be included in the NEPA document.

The economic, environmental, and social effects of a water resources development project are interrelated. In formulating alternatives to address the identified water resources problem or opportunity, the Corps shall consider each of these effects and maximize net public benefits.

§ 234.7. Evaluation framework.

(a) This section describes the common framework and general requirements to be used by the Corps in evaluating potential alternatives for Federal investments for their performance with respect to the Guiding Principles and their contributions to the Federal Objective to inform the overall decision-making process. Any assumptions made which are used in the analysis of alternatives shall be described in the analysis where applicable.

INTENT: The proposed Alternative Selection Procedures (ASPs) aim to establish a standardized framework and criteria for the Corps of Engineers to assess potential alternatives for federal investments. These procedures would be guided by principles and prioritize contributions to the Federal Objective. While the basic planning framework resembles existing practices, the PR&G framework introduces new focal points. Existing frameworks and practices may be utilized if they align with PR&G requirements. Corps would strive to quantify or monetize effects where feasible and appropriate, while acknowledging and describing effects that defy quantification. Economic, environmental, and social impacts would be evaluated, with a focus on those likely to influence decision-making, aiming to streamline processes and minimize unnecessary expenditures. All significant effects, whether quantifiable or not, would be accounted for, with reference to Circulars A-4 and A-94 for guidance

(b) Economic, environmental, and social effects.

(1) The Corps' analytical framework for evaluating Federal investments should focus on the key economic, environmental, and social effects that are relevant to the investment decision. Typical NEPA analyses emphasize environmental effects and benefits, including ecosystem services, and these should also be used as a core part of water resources alternatives analysis. A benefit-cost analysis would be conducted for each alternative. Ecosystem services are an important benefit cost category that should be included in the benefit-cost analysis.

In addition, the scale of an analysis can be adjusted to meet the needs of an individual project. While all analyses should share common elements, how these elements are achieved can

depend on the needs of the project. For example, while it is important to estimate how values vary across alternatives, many different metrics and methods can be used; the best approach will depend on the needs and scale of the project.

When implementing its ASPs, the Corps will consider and, where it deems appropriate, align with the latest Federal methods and guidance (for example, updated OMB Circulars and applicable interagency guidance) to ensure that the analytical framework accounts for all significant economic, environmental and social costs and benefits, including ecosystem services. Where possible, monetization enables the incorporation of the values placed on the benefits and costs evaluated, and provides a way to evaluate trade-offs in common analytical units (dollars). OMB Circulars A-4 and A-94 provide guidance on appropriate use of monetization methods. The Corps anticipates that it will not be possible to monetize all social and environmental costs and benefits of project alternatives. In these cases, the Corps should quantify the social and environmental costs and benefits and when neither monetization or quantification is possible, the Corps should qualitatively describe the social and environmental costs and benefits in sufficient detail to allow differentiation across alternatives. The relevant monetary, quantitative, and descriptive information will be considered fully in the analysis.

> INTENT: The Corps plans to comprehensively evaluate the economic, environmental, and social impacts of proposed alternatives, focusing on data crucial for estimating benefits and costs. They propose adopting finalized OMB guidance on ecosystem services for evaluating social and economic outcomes resulting from environmental changes. The evaluation methods would include traditional benefit-cost analysis and consideration of ecosystem services, which encompass both tangible and intangible benefits provided by nature. The Corps aims to ensure that all significant effects, whether quantifiable or not, are accounted for in decision-making processes. They will employ various techniques, including monetization where feasible, quantification where possible, and description of effects when neither is feasible. Additionally, they propose considering distributional weights in flood and coastal storm risk management studies to provide a more equitable assessment of project impacts on communities the analysis will include a thorough consideration of environmental and social effects alongside economic effects, aligning with the Guiding Principle of healthy and resilient ecosystems. Monetization, quantification, and qualitative information will all be considered, with professional judgment guiding the assessment of their importance To properly evaluate changes in ecosystem service value, the Corps will articulate the processes linking ecosystem structure and benefits to humans, focusing on final

endpoints to avoid double counting. They will also identify populations impacted by changes in resources, including those benefiting from non-use values.

USACE QUESTIONS

- The Corps solicit comments on any specific tools and methodologies for quantifying or monetizing economic, environmental, and social effects.

(c) ***Best available actionable science and commensurate level of detail***.

Analysis to support the evaluation of alternatives shall use the best available actionable science, to include Indigenous Knowledge, data, analytical techniques, procedures, models, and tools in ecology, hydrology, economics, engineering, biology, and other disciplines to the extent that sufficient funding is available and to the extent such information is relevant and appropriate to the subject investment. To the extent feasible, the effects of the alternatives should be monetized. Effects will be monetized, quantified or described, in that order.

The level of detail required to support alternative analyses may vary but should be sufficient to inform the decision-making process efficiently and effectively. The level of detail, scope, and complexity of analyses should be commensurate with the scale, impacts, costs, scientific complexities, uncertainties, risk, and other aspects (e.g., public concern) inherent in potential decisions.

INTENT: emphasizes the importance of utilizing the best available actionable science and Indigenous Knowledge to evaluate alternatives in water resources investment decisions. It suggests using consistent methodologies and established tools to ensure coherence across decisions, while remaining adaptable to new scientific developments. The level of detail and complexity of analyses should match the scale and scope of the decision, avoiding unnecessary costs. For smaller studies, existing data sources should be utilized pragmatically, with decisions made based on acceptable information. Future conditions and uncertainties should also be addressed in the analysis.

(d) ***Risk and uncertainty.*** When analyzing potential Federal water resource investments, the Corps shall identify, describe, and quantify (if feasible), areas of risk and uncertainty and consider them in decision making. Risks and uncertainties shall be identified and described in a manner that is clear and understandable to the public and decision-makers. This includes describing the nature, likelihood, and magnitude of risks, as well as the

uncertainties associated with key supporting data, projections, and evaluations of competing alternatives. When there are considerable uncertainties concerning the ability of an alternative to function as desired (e.g., produce desired outputs and/or the general acceptability of the alternative) the option of pursuing improved data or models should be considered. Reducing risk and uncertainty may involve increased costs or loss of benefits. The advantages and costs of reducing risk and uncertainty should be explicitly considered in formulating alternatives and the overall decision-making process.

INTENT: The excerpt outlines the necessity of identifying, describing, and quantifying risks and uncertainties in decision-making processes, particularly regarding water resource investments. It emphasizes aligning with Circulars A-4 and A-94 for risk assessment and transparency. Risks and uncertainties should be communicated plainly and made relevant to alternative comparisons, potentially involving the public in understanding them. The Corps aims to improve data and models to reduce risks and uncertainties, although this may incur additional costs. Steps for evaluating risks include identifying harmful outcomes, their likelihood, and magnitude.

USACE QUESTIONS

- The Corps seeks comments on frameworks like Climate Risk Informed Decision Analysis (CRIDA) to enhance risk-informed planning, which emphasizes collaboration and scenario planning to address a range of future risks.

(e) ***Adaptive management.*** Adaptive management measures shall be clearly identified and evaluated as part of alternatives to the extent that such measures are commensurate with the significance of the proposed activity and available resources. Adaptive management measures are particularly useful when making management choices in the face of uncertainty, such as when detailed information and tools are not readily available

INTENT: Adaptive management is defined under the proposed rule at 234.2(b). As cited in the PR&G, adaptive management is highlighted as a tool in the proposed rule to help reduce or manage within uncertainties. The proposed rule calls for adaptive management measures to be clearly identified and evaluated as part of the alternatives. It should be considered throughout the process and should be employed as soon as triggers are identified which necessitate such measures. Post-construction adaptive management to address unforeseen conditions or impacts of the project should also be included in Corps recommendations for project authorization.

(f) ***Climate change.*** Conditions resulting from a changing climate shall be identified and accounted for in all stages of the planning process; uncertainties associated with climate change will be identified and described. Analysis of climate change impacts shall reflect best available actionable science and will leverage region-specific information from federal, Tribal, state, local, and non-governmental partners. The Corps shall incorporate a climate-informed science approach considering impacts such as inland and coastal climate change impacts on flood and drought hazards using the most up-to-date science, policies, and tools available. The Corps shall also ensure climate resilience and adaptation is incorporated and considered throughout the planning process and across alternatives, including a discussion on how climate, drought, and ecosystem resilience may intersect for that particular action and can contribute to the economic vitality and water resources resilience of the Nation. The changing climate should inform the understanding of water resource needs and how those needs can potentially be addressed.

INTENT: proposed paragraphs emphasize the importance of integrating considerations of climate change, water availability, water use, and resilience throughout the planning process. This involves utilizing the best available actionable science and local information on future climate change impacts. By following this approach, as outlined in the ASA(CW) Climate Preparedness and Resilience Policy Statement, the Corps can avoid constantly reacting to new scientific findings. Instead, it ensures a more stable planning framework that incorporates climate change considerations without needing frequent adjustments. The evaluation process should address the interconnectedness of flood-related climate change, drought, water availability, and ecosystem resilience, considering their impacts on economic, environmental, and social benefits of water resources investments. Moreover, the evaluation should acknowledge the environmental justice implications of climate change effects on water availability and their impact on wetlands, river systems, and associated biodiversity. Resilience should be evaluated under both drought and flooding scenarios, especially for projects serving multiple purposes. Lastly, when designing solutions for water resource problems, the consideration of competing demands and multiple uses of water resources is crucial, emphasizing the significance of water availability, use, and resilience, particularly for multifunctional projects.

(g) ***Water availability, water use, and resilience.*** Water availability and efficient use of water shall be considered in alternative designs, as shall resilience, when applicable to the project purpose. The analysis shall consider water availability, water use, and resilience over a

range of conditions, from too little in drought and multiple use scenarios to too much in flood scenarios. The consideration of multiple uses and competing demands on water resources shall be taken into account when designing solutions to water resources problems.

INTENT: proposed paragraphs emphasize the importance of integrating considerations of climate change, water availability, water use, and resilience throughout the planning process. This involves utilizing the best available actionable science and local information on future climate change impacts. By following this approach, as outlined in the ASA(CW) Climate Preparedness and Resilience Policy Statement, the Corps can avoid constantly reacting to new scientific findings. Instead, it ensures a more stable planning framework that incorporates climate change considerations without needing frequent adjustments. The evaluation process should address the interconnectedness of flood-related climate change, drought, water availability, and ecosystem resilience, considering their impacts on economic, environmental, and social benefits of water resources investments. Moreover, the evaluation should acknowledge the environmental justice implications of climate change effects on water availability and their impact on wetlands, river systems, and associated biodiversity. Resilience should be evaluated under both drought and flooding scenarios, especially for projects serving multiple purposes. Lastly, when designing solutions for water resource problems, the consideration of competing demands and multiple uses of water resources is crucial, emphasizing the significance of water availability, use, and resilience, particularly for multifunctional projects.

(h) ***Nonstructural and nature-based solutions.*** Nonstructural measures alter the use of existing infrastructure or human activities to generally improve or avoid or minimize adverse changes to existing hydrologic, geomorphic, and ecological processes. Nonstructural measures may be combined with fewer or smaller traditional structural project components to produce a complete alternative plan or may be used instead of a structural project. In the development of alternatives, the use of natural systems, ecosystem processes, and nature-based solutions shall be considered, where feasible and consistent with the purpose of the water resources study. Full consideration and reporting on nonstructural and nature-based alternative actions shall be an integral part of the evaluation of Federal water resource investment alternatives, and a full nonstructural in addition to a full nature-based alternative will be included in the final array of alternatives.

Nonstructural and nature-based aspects should also be included in the other alternatives in the final array when appropriate.

INTENT: Nonstructural and nature-based alternatives. This proposed paragraph further describes requirements to develop alternatives that use nonstructural measures to address the water resources problem. Nonstructural approaches are defined at section 234.2(l) of the proposed rule text. The Corps led a large, diverse collaboration that developed and published (2021) the International Guidelines on Natural and Nature-Based Features for Flood Risk Management. In addition, a Report on nature-based solutions was recently issued to assist Federal agencies in moving ahead on implementing nature-based solutions to solve water resources challenges, where appropriate, titled "Opportunities to Accelerate Nature-based Solutions: A Roadmap for Climate Progress, Thriving Nature, Equity, & Prosperity." The proposed paragraph requires the consideration of natural systems, ecosystem process and nature- based approaches throughout alternatives development where they are feasible and consistent with the study purpose. A full nonstructural alternative and a full nature-based solutions alternative would also be included in the final array of alternatives. In some cases, these may be one and the same.

(i) ***Tribal treaty rights.*** Alternatives for water resources investments must be consistent with protection of Tribal treaty rights. Analyses should identify Tribal treaty rights that preclude selection of an otherwise viable alternative.

INTENT: This proposed paragraph provides that any alternatives for water resources investments must protect Tribal treaty rights. Each treaty is unique and must be analyzed to ensure any possible impacts, as well as benefits, to treaty rights are fully understood and accounted for in the alternative evaluations. The Corps would ensure consistency with the "Memorandum of Understanding Regarding Interagency Coordination and Collaboration for the Protection of Tribal Treaty Rights and Reserved Rights" during the evaluation framework process. The Corps commits to enhancing interagency coordination and collaboration to protect Tribal treaty and reserved rights and to fully implement Federal government treaty obligations. If Tribal treaty rights preclude selection of an otherwise viable alternative, the Corps would disclose as such. The Corps also commits to following the "Best-Practices for Identifying and Protecting Tribal Treaty Rights, Reserved Rights, and Other Similar Rights in Federal Regulatory Actions and Federal Decision-Making

(j) ***State water law.*** Alternatives for water resources investments must be consistent with State water laws, water rights, and decrees to the extent these do not conflict with federal laws and regulations. Analyses should identify legal constraints that preclude selection of an otherwise viable alternative.

INTENT: State water law and International obligations. These proposed paragraphs provide that the alternatives for Federal investments must ensure compliance with State water laws to the extent they do not conflict with Federal laws and regulations as well as treaty and other international obligations, and if any constraints within that compliance require an otherwise viable alternative to not be carried forward then the Corps would disclose as such.

(k) ***International obligations.*** Alternatives for water resources investments must be consistent with meeting treaty and other international obligations. Analyses should identify international obligations that preclude selection of an otherwise viable alternative.

INTENT: State water law and International obligations. These proposed paragraphs provide that the alternatives for Federal investments must ensure compliance with State water laws to the extent they do not conflict with Federal laws and regulations as well as treaty and other international obligations, and if any constraints within that compliance require an otherwise viable alternative to not be carried forward then the Corps would disclose as such.

(l) ***Timing.*** The period of analysis for alternatives shall be documented clearly and with the appropriate justification in the analysis and used to evaluate each alternative.

INTENT: This proposed paragraph provides in the regulation what is also discussed in section 234.6(g) regarding the period of analysis for review of alternatives. The time period selected would be documented with appropriate supporting information. The same timeframe would be used across all alternative evaluations. The Corps currently uses a 50-year timeframe for the period of analysis (see ER 1105-2-100 section 2-4j). Under the proposed regulation, a better approach may be for the Corps to consider a period of analysis sufficient to capture all important effects of each alternative.

USACE QUESTIONS

- The Army solicits comment on whether there should be an upper limit established for the period of analysis.
    - If an upper limit is established, the Army solicits comment on whether the Corps' current timeframe is the appropriate period of analysis for implementing the Corps' ASPs.
- The Army solicits comment on whether there should be an upper limit established for the period of analysis.
    - If an upper limit is established, the Army solicits comment on whether the Corps' current timeframe is the appropriate period of analysis for implementing the Corps' ASPs purpose and need of the proposed investment. The Corps recognizes the importance of consistency and comparability in evaluating alternatives and projects.

§ 234.8. Final Array of Alternatives.

(a) The final array of alternatives shall include, at a minimum, the following six alternatives:

1. A no action alternative.
2. A nonstructural alternative: An alternative, if one exists, that can effectively address the problem through the feasible use of nonstructural approaches.
3. A nature-based solution alternative: An alternative, if one exists, that can effectively address the problem through the feasible use of nature-based solutions (including natural systems and ecosystem processes).
4. An environmentally preferred alternative.
5. An alternative that seeks to maximize net public benefits.
6. An alternative that is locally preferred. If this alternative differs from the net public benefits alternative, it will be required to have a comparable level of detail and analyzed using the same analytical framework as the net public benefits alternative.

(b) The nonstructural and nature-based alternatives do not preclude consideration of these elements in other alternatives. Nonstructural measures and nature-based solutions shall be considered as components of the other alternatives in the final array, essentially providing an integrated or "hybrid" of gray (hard) infrastructure with these other measures.

(c) The same alternative may be identified as more than one of these required alternatives.

(d) Mitigation of unavoidable adverse effects associated with each alternative must be included in the alternative and in the analyses.

(e) If an alternative requires changes in existing laws, regulations, or policies, those changes must be clearly identified and explained.

(f) The discussion of the final array of alternatives should include the primary purpose of the analysis; the geographic size of the study area; the types of impacts; number of people potentially affected and anticipated degree of impact; environmental justice considerations; and the size and location of communities potentially affected including the presence of Federally recognized Tribes or Tribal members; and the type of data and information available from Indigenous Knowledge, collaboration, public involvement, and previous studies.

INTENT: This proposed paragraph outlines the requirements for the final array of alternatives in the Alternative Study Plans (ASPs) for water resources development projects. It mandates the inclusion of six types of alternatives: a no action alternative, fully nonstructural alternative, fully nature-based alternative, environmentally preferred alternative, alternative maximizing net public benefits, and a locally preferred alternative. Each alternative must be developed with comparable rigor and detail. The no action alternative describes conditions without Federal investment, while the fully nonstructural and nature-based alternatives focus solely on those approaches. Feasibility is a consideration for these alternatives, acknowledging technological or legal limitations. Additionally, nonstructural and nature-based solutions can be components of other alternatives. The environmentally preferred alternative prioritizes environmental benefits, while the alternative maximizing net public benefits seeks the greatest overall societal benefits. The locally preferred alternative reflects the preference of the non-federal interest, defined as the local interest in the PR&G. Alternatives may overlap, and mitigation for adverse effects must be included. Any necessary changes in law, regulations, or policy must be identified. Finally, a summary of the final array should describe its purpose, study area, and impacts.

§ 234.9. Evaluate Effects of Alternatives.

(a) ***Analysis of alternatives.*** For the final array of alternatives, the analysis should describe, evaluate, and estimate the key social, environmental and economic effects, and assess the contributions of each alternative to the Guiding Principles.

INTENT: These sections of the proposed ASPs establish the general framework for the analysis of the effects of the final array of alternatives. The analysis must evaluate how an alternative's benefits compare to its costs, how they perform with respect to the PR&G's Guiding Principles, how they perform against the objectives of the study, and how they perform against the prescribed formulation criteria of completeness, effectiveness, efficiency, and acceptability. Therefore, the final array of alternatives will be assessed in a manner to best inform decision-making. The objectives of the study may be related or stem from the project's purpose and need but must be clear and focused so that they can be used to evaluate alternatives. The Army notes that there can be tension between a plan that is efficient versus one that is robust or resilient. Ensuring that both resilience and uncertainty are accounted for in any decision- making framework is important.

(b) ***Evaluation procedures.*** In addition to assessing how alternatives perform with respect to the Guiding Principles, the evaluation procedures shall incorporate methods to evaluate:

1. How public benefits of an alternative compare to its costs, including all important social, environmental and economic benefits and costs.
2. How alternatives perform against the objectives of the study.
3. How alternatives perform against the four formulation criteria: completeness, effectiveness, efficiency, and acceptability.

INTENT: against the prescribed formulation criteria of completeness, effectiveness, efficiency, and acceptability. Therefore, the final array of alternatives will be assessed in a manner to best inform decision-making. The objectives of the study may be related or stem from the project's purpose and need but must be clear and focused so that they can be used to evaluate alternatives. The Army notes that there can be tension between a plan that is efficient versus one that is robust or resilient. Ensuring that both resilience and uncertainty are accounted for in any decision- making framework is important.

(c) ***Consideration of benefits and costs.*** The report should fully account for the effects to society of alternative plans and their respective contributions to the Federal Objective, relative to the No Action alternative. The analysis will evaluate the economic benefits and costs, environmental benefits and costs, and social benefits and costs of alternatives, regardless of how they are included (monetized, quantified or described).

To the extent practicable, such costs and benefits must be quantified in a scientifically valid and acceptable way, and such quantified costs shall be monetized where practicable. When monetization or quantification is not possible, costs and benefits must be described in sufficient detail to enable the decision-maker to understand the importance and magnitude of potential changes. For monetized costs and benefits, the present value cost of each alternative must be compared to the present value of the benefit to the public for monetized costs and benefits. For quantified but not monetized benefits and costs, the Corps would present the information on an average annual basis, and would also describe how the benefits and costs would accrue over the period of analysis. For qualitatively described benefits and costs, expectations would be described across the period of analysis. The effects of alternative plans are displayed in terms of costs and benefits.

> INTENT: The proposed paragraph outlines a framework for fully assessing the costs and benefits of alternatives in planning processes. It suggests three categories: economic, environmental, and social, aligning with sustainable development principles. Alternatively, there's a consideration to eliminate categorization for easier comparison, though this may obscure certain costs and benefits. The paragraph stresses the need for quantification and monetization of costs and benefits, with qualitative aspects providing additional context. It emphasizes avoiding double counting and ensuring thorough consideration of all effects, as required by NEPA and the Flood Control Act of 1970. The paragraph highlights the importance of discounting future values for present analysis and seeks input on selecting discount rates. While specific evaluation tools aren't mandated, the Corps commits to using the best available methods to adapt to evolving knowledge and science. The framework includes assessing costs and benefits under economic, environmental, and social effects, possibly drawing from existing tools but remaining open to new methods. It emphasizes the need for justifying chosen analytical techniques and welcomes the use of innovative methodologies. The PR&G doesn't dictate selecting a specific alternative but advocates evaluating a range of options considering their interrelated impacts and maximizing public benefits relative to costs.

USACE QUESTIONS:

- The Army is soliciting comment on whether to eliminate the three categories to simply account for all costs and benefits without further categorization which

may make it easier to avoid double counting, noting though that certain costs and benefits may not be as visible if they are not specifically called out in a category. Distributional analyses, including an analysis of regional economic benefits, maybe used to further compare alternatives in some cases (see Section 234.10).

- The Army solicits comment on whether the selection of discount rates, and consideration of declining discount rates should follow the guidance in OMB Circulars A-4 and A-94 (appendix C: discount rates for cost-effectiveness, lease-purchase, and related analyses for OMB circular No. A-94).

§ 234.10. Compare Alternatives.

(a) ***Comparing alternatives.*** Alternatives shall be compared to each other and to the No Action alternative and shall include a comparison of the ability of the alternatives to perform under changing conditions, including climate change. The alternative (or alternatives) that reasonably meets the Federal objective and maximizes net public benefits shall be identified. In addition, alternatives may be evaluated with respect to other considerations, including distributional effects, separately. These considerations may include:

1. Temporal. Certain effects may occur at different points in time.
2. Spatial. Certain costs, benefits, and transfers may accrue to different regions. Regional-scale analyses may be useful to inform regional level economic development objectives.
3. Beneficiaries. Tribal Nations and stakeholders (including other governmental agencies and communities with environmental justice concerns) may indicate different tradeoffs among the various benefits and costs of a federal action. Robust engagement at this stage shall focus on eliciting preferences among the alternatives, their component elements, and their effects. When calculating net benefits, these distributional effects can be examined using techniques like income weighting.

INTENT: the proposed Army Strategic Plan (ASP) section emphasizes the importance of comparing different plans against each other and against a baseline, considering factors like adaptability and resilience to climate change and other risks. The goal is to identify the plan that maximizes net public benefits. Robust engagement with Tribal Nations and stakeholders is encouraged to incorporate diverse perspectives and information into decision-making. The Army seeks input on decision-making frameworks, such as multi-criteria decision analysis (MCDA) and structured decision making (SDM), to ensure

objective and consistent project proposals. Examples of decision frameworks used in previous Corps projects include the City Resilience Framework and Robust Decision-making (RDM) methods. These frameworks help assess various factors like system performance, risk management, and economic consequences to inform decision-makers and stakeholders effectively. The Corps aims to use a combination of quantitative and qualitative data to evaluate alternatives thoroughly and make sound investment recommendations, recognizing that no single plan may be the best and that multiple criteria should be considered in decision-making. Feedback on these frameworks and alternative methods is welcomed to enhance the ASPs' decision-making process for complex, multi-dimensional problems.

USACE QUESTION:

- The Corps solicits comment on how it could compare alternatives and develop a recommendation.
- The Army solicits comment on whether the City Resilience Framework align with the PR&G Guiding Principles and could be employed in a decision framework under the proposed ASPs.
- The Army solicits comments on the various frameworks and methods listed above as well as other alternative frameworks that may be employed in the ASPs decision-making process when facing a multi-dimensional problem with complex tradeoffs between monetary and non- monetary outputs and quantitative and qualitative data, which would support objective analysis and sound decision-making.

(b) ***Tradeoffs.*** Tradeoffs among potential alternatives will be assessed and described throughout the decision-making process and in a manner that informs decision-making. Based on the available analytical information, the Corps would use its professional judgment in making its recommendations on decisions among tradeoffs. The tradeoff displays shall be understandable, transparent, and constructed in a generally consistent fashion for all analyses. The analysis shall include a combination of both tables and explanatory materials to help inform a decision. Displays shall facilitate the evaluation and comparison of alternatives necessary to make the following determination and reflect the following:

1. The effectiveness of alternatives in solving the water resources problem and taking advantage of the opportunities identified in the planning process.

2. What must be given up in monetary and nonmonetary terms to enjoy the benefits of the various alternatives, relative to the baseline.
3. The differences among alternatives.

INTENT: Tradeoffs. Tradeoffs are anticipated and expected for the implementation of the ASPs regarding the potential alternatives. Tradeoffs are assessed from the perspective of the specific circumstances of each study, including the study area, resources, impacted populations, and study authority, to form the basis for deciding which plan best addresses the Federal Objective and Guiding Principles. The Army solicits comment on whether the Corps should pursue a more straightforward approach, using maximizing the net benefits as a primary metric for use in comparing the alternatives and evaluating the tradeoffs, and to clarify the decision framework. The tradeoffs would be described throughout the decision-making process to ensure an informed decision. They should describe the effectiveness of the alternatives in solving the water resources problems, the tradeoffs in monetary and nonmonetary terms of what must be given up to enjoy the benefits of the alternatives in relation to the baseline, and the differences among the alternatives. These factors will ensure the tradeoffs are fully described, contemplated, and understood for decision-making. Consideration should be given for whether some effects measured are more relevant than others, and whether others are more incidental in nature which should be noted and separated. The Corps would note effects that are irreversible or that have high end-of-lifecycle costs to reverse (including decommissioning costs). Different project elements may be justified on different types of public benefits, which should be described. Tradeoffs may be identified on the basis of both quantifiable and unquantifiable terms. In addition, each separable project element's goals and objectives should be identified to provide a rationale for inclusion or exclusion from the alternative. Tradeoffs among potential alternatives and their anticipated effects may require professional judgment when a computationally driven "best" answer is not clear. Tradeoffs must be understandable and transparent, and the analysis should be conducted in a consistent manner across alternatives. The level of detail in assessing separable components and the associated description of the specific tradeoffs among the goals and objectives of the investment decision should be sufficient to inform the decisions to be made and to provide transparency to the decision-making process. The frameworks discussion provided earlier in the preamble at 234.10(a) may also be helpful in evaluating these tradeoffs.

USACE QUESTIONS:

- The Army solicits comment on whether the Corps should pursue a more straightforward approach, using maximizing the net benefits as a primary metric for use in comparing the alternatives and evaluating the tradeoffs, and to clarify the decision framework.

(c) ***Information for inclusion in the analysis.*** To promote consistency across the Corps, the following tables and information shall be included in the analysis and in the documentation prepared for a decision process:

1. Criteria. The analysis must explicitly address the extent to which an alternative achieves each of the following criteria: completeness, effectiveness, efficiency, and acceptability. This evaluation must be systematic and can include both quantitative and qualitative components.
2. Effects matrix. A matrix summarizing the tradeoffs, relative to the baseline, effect-by-effect must be included in the integrated report.
3. Additional trade-off displays. Additional text and tables should display other important trade-offs, e.g., trade-offs along temporal, spatial, and beneficiary dimensions.
4. Summary table. A summary table displaying the economic, environmental, and social costs and benefits as measured (monetized, quantified, quantitative) for each alternative. In addition, the summary table will display the economic, environmental, and social costs and benefits which were derived qualitatively. The summary table will also separately include information on level of risk or uncertainty for each alternative.
5. Achievement of objectives table. A table indicating the extent to which the Guiding Principles have been achieved.

INTENT: The paragraph outlines the inclusion of various information and tables in the analysis to ensure consistency and transparency in comparisons across different studies, aligning with other Federal agency approaches. The information aims to demonstrate how alternatives achieve four evaluation criteria: completeness, effectiveness, efficiency, and acceptability, incorporating content from Guiding Principles and the evaluation framework. Tables describing resource/ecosystem tradeoffs and financial elements of alternatives would be included, with consideration given to economic, environmental, and social effects. An ecosystem service framework would guide the construction of these tables, but flexibility is allowed to include other relevant effects. Quantitative and qualitative measures, along with estimates of certainty, would be provided, and non-monetized benefits and costs would be addressed. The Army would

utilize scientifically acceptable data, including Indigenous Knowledge, and consider tools to assess perceived risk and community concerns. Collaboration among agencies is encouraged to develop common displays for transparency in decision-making processes.

USACE QUESTION:

- The Army solicits comment on the tools, methods, and processes for assessing the tradeoffs to best elicit preferences resulting in the most informed recommendations in a consistent manner, although regional variation is expected by the nature of water resources and their challenges having great variation across the Nation.

6. ***Risk and uncertainty.*** Knowledge of risk and uncertainty and the degree of reliability of the estimated consequences will better inform decision making. Risk and uncertainty are inherent in economic analyses as well as the analysis of physical and biological factors, no matter the technique or methodology employed. Areas of risk and uncertainty will be described clearly, so that decisions can be made with knowledge of the degree of reliability of the estimated consequences and of the effectiveness of alternatives.

   INTENT: This section also requires a description of areas of risk and uncertainty with sufficient detail so that decisions can be made with knowledge of the degree of reliability and the limits of available information, recognizing that even with the best available engineering and science, risk and uncertainty will always remain. The economic analyses need to reflect the uncertainty inherent in the data or various assumptions as to future economic, demographic, environmental, and technological trends. The environmental analyses also should account for the uncertainties. Various projections and assumptions of reasonable alternative forecasts, if realized, should be analyzed to determine if they would appreciably affect estimated results. From the vantage point of one who is deciding whether to propose or make a particular investment, the risk and uncertainty in the outcome tend to increase over time. The risk and uncertainty include the extent to which the underlying assumptions that drive the predicted benefits and costs may overstate or understate the actual benefits and costs. To address this concern (at least in part), the Corps may include an estimate of the return on investment under current conditions both in its flood and coastal storm risk management project studies, and in its commercial navigation studies. The Army solicits comment on this approach. This could show the extent to which the estimated benefits assume a change in current conditions in the future:

For flood and storm damage reduction studies, this analysis may help communities and decision makers understand the extent to which the Corps estimates that the current flood risk is likely to increase due to climate change and how quickly that risk may change.

For commercial navigation studies, this analysis may enable decision makers to understand the extent to which the Corps could (or could not) justify the proposed navigation investment under current conditions. This analysis could help in establishing priorities for investment, and would underscore the extent to which a study relies on an assumed sustained long-term growth in future traffic .

USACE QUESTIONS:

- The risk and uncertainty include the extent to which the underlying assumptions that drive the predicted benefits and costs may overstate or understate the actual benefits and costs. To address this concern (at least in part), the Corps may include an estimate of the return on investment under current conditions both in its flood and coastal storm risk management project studies, and in its commercial navigation studies. The Army solicits comment on this approach.

§ 234.11. Select the Recommended Plan.

(a) ***Recommended plan.***

1. Plan selection will require decision-makers to assess tradeoffs and to consider the extent of both monetized and non-monetized effects. The basis for selection of the recommended plan should be fully reported and documented in a transparent manner, including the criteria and considerations used. This section must provide a discussion about the extent to which the alternatives achieve the Federal objective and maximize net public benefits to society. If the basis for selecting the recommended plan depends on non-monetized benefits or costs, the report must include an explanation of the relative importance of these benefits/costs and why they are not monetized. This section will include a summary of elicited Tribal Nation and stakeholder perspectives on the alternatives and their effects.
2. The Corps should recommend a decision to either: 1) implement an alternative project, program, or plan, or 2) take no Federal action. Federal investments should seek to meet water resource objectives and maximize net public benefits, relative to public costs. It is possible that more than one alternative might “reasonably and approximately” meet these

conditions. “Net public benefits” implies that the anticipated benefits will be presented relative to the costs associated with the accrual of those benefits. Net public benefits can include both quantified and non-quantified benefits. Any recommendation for authorization will clearly delineate the federal water resource project(s) being recommended for authorization and Corps implementation and any condition precedent for construction, with specificity.

INTENT: The final part of the proposed ASP’s planning section describes how to recommend a decision to either: 1) implement an alternative project or program; or 2) take no Federal action. Federal investments would seek to achieve the Federal objective and maximize net public benefits, as measured by the economic, environmental, and social costs and benefits to the Nation. The Corps would clearly identify the alternative that achieves the water resources objectives and reasonably maximizes the public benefits to the Nation relative to costs. In addition, this proposed rule makes clear that more than one alternative in the final array may meet these conditions; for example, the non-federal interest locally preferred alternative may equate to the alternative which meets objectives and maximizes net public benefits. Decisions or recommendations involving Federal investments affecting water resources would be made through a dynamic process, both iterative and progressive. The process should be responsive to significant changes in information, conditions, and/or objectives. These can occur at any point in the process and, depending on the potential consequences of the changes, may dictate that previous decision points, assumptions, and forecasts be reviewed in light of these changes. Plan selection requires decision-makers to assess tradeoffs and to consider the extent of both monetized and non-monetized effects. The plan selection must disclose the criteria and considerations used to be transparent to the public in how the recommended plan was selected. In addition, the summary of Tribal and stakeholder engagement and their reflections on the various alternatives should be included in the plan selection. The selected plan recommendation would provide a complete discussion of the tradeoffs involved in making a decision regarding the proposed Federal investment; a discussion of how economic, environmental, and social benefits (monetized, quantified and described) justify the costs (monetized, quantified and described); and adequately attain the goals outlined in the Guiding Principles, recognizing how tradeoffs between the various goals affect the level of attainment within each Guiding Principle. If the basis for plan selection depends on non-monetized benefits or costs, the report would describe the benefit-cost analysis conducted for the alternative being selected which would include an explanation of the

relative importance of these benefits/costs and why they are not monetized. Through this process, the PR&G helps the Federal government improve decision-making by accounting for long-term costs and benefits; developing investments to withstand or adapt to climate change; creating better, more resilient communities; and avoiding conflicts and project delays by including local input.

(g) ***Exceptions.*** A recommended plan for a federal water resources investment that does not maximize net public benefits requires an exception from the Assistant Secretary of the Army for Civil Works. Requests for exception should describe the project or activity, the rationale for the exception, and present relevant data and analysis to support the request.

INTENT: The proposed rule allows for exceptions for the recommended plan to maximize net public benefits; however, such exceptions must be approved by ASA(CW). This proposed policy underscores the importance of the PR&G approach to put forth the recommended plan that maximizes net public benefits.

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