

Planning Quick Takes: Timely Topics for Risk-Informed Planning Studies

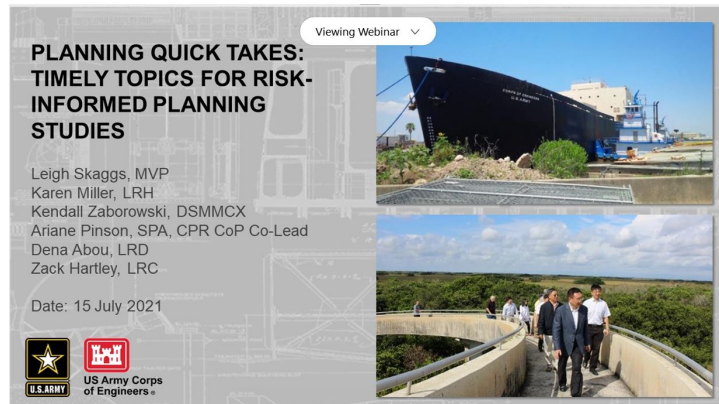
15 July 2021

Q&A Session

This webinar provided an overview of the just-completed “Planning Quick Takes: Timely Topics for Risk-Informed Planning Studies,” which was formerly known as the “Planning Mentor Handbook.” Planning Quick Takes is intended to be used by all project delivery team members and not just Planning Mentors and offers brief summaries on many risk-informed planning topics.

The webinar focused on three new topics added to the document covering Life Safety Assessment, Climate Change Assessment, and Incorporating the Four Principles and Guidelines for Water and Land Related Resources Implementation Studies (P&G) Accounts. The webinar was presented by Leigh Skaggs (Senior Planner, St. Paul District), Karen Miller (Senior Planner, Huntington District), Kendall Zaborowski (Planning Team Lead, Dam Safety Modification Mandatory Center of Expertise), Ariane Pinson (Climate Specialist, Albuquerque District), Dena Abou-El-Seoud (Senior Economist, Great Lakes & Ohio River Division), and Zack Hartley (Regional Economist, Chicago District).

This summary of the Question / Answer session of the webinar is not a transcription; questions and responses have been edited and reordered for clarity.



Life Safety Assessment

How do tolerable risk limits related to [Engineer Regulation 1110-2-1156: Safety of Dams – Policies and Procedures](#), including annual probability of failure (APF), societal F-N charts, and others fit into the tolerable risk guidelines outlined in [Planning Bulletin 2019-04: Incorporating Life Safety into Flood and Coastal Storm Risk Management Studies](#)? Are the 2019 limits on incremental risk still applicable? Neither the recently published [Levee Safety Program policy \(Engineer Circular 1165-2-218\)](#) nor Planning Bulletin 2019-04 change the tolerable risk guidelines as defined in ER 1110-2-1156. The Planning Bulletin simply asks that flood risk management and coastal storm risk management studies conduct a life risk assessment if the study recommends new levees or dams, or modify existing levees or dams.

The Four P&G Accounts

Despite the consideration of other factors, it often appears that the Net Economic Development (NED) plan is always selected. Is this the case? Are the accounts documented mainly so that sponsors can consider a Locally Preferred Plan (LPP) and to show that USACE did its due diligence?

Although NED has received priority in the past, USACE is now trying to give equal treatment to all four P&G accounts. Currently, approval from the Assistant Secretary of the Army for Civil Works (ASA(CW)) is still needed to recommend non-NED plan, such as an LPP, but the ASA(CW) did release guidance earlier in 2021 instructing USACE to comprehensively assess and document all benefit types in the plan formulation process ([Policy Directive: Comprehensive Documentation of Benefits in Decision Document](#)).

Are there any updates on quantifying impacts and benefits related to Environmental Quality (EQ) or Other Social Effects (OSE) resources that could be inputted into the NED benefit calculation?

It is important to note that each of the four P&G accounts are distinct and that anything captured in the OSE or EQ account is not utilized in the NED account. There are examples and resources in the Planning Quick Takes document to assist teams with developing metrics. In addition, it should be emphasized that quantifying and monetizing are two different things. Monetization of a benefit does not make it NED.

The most often quantified OSE benefit is life risk. Some teams have looked at using a social vulnerability metric of resilience (i.e., social vulnerability indices from the Centers for Disease Control and the Institute for Water Resources), while another study team proposed measuring OSE by calculating housing recovery as a measure of resilience. OSE can also consider the historic significance, cultural standing, and socio-economic capabilities of communities, including rural areas that have traditionally been excluded from considerations. While there is not currently an existing approved USACE model for quantitatively analyzing OSE, there are tools in the works that planners should be on the lookout for.

Slide 25 lists the four P&G accounts and then lists National Ecosystem Restoration (NER) separately. Is the discussion of NER benefits, such as habitat units and aquatic ecosystem objectives, recommended within the NED account, the EQ account, or separately?

Yes, NER is listed separately because it isn't an account established by the P&G, but rather a plan established and defined by [Engineer Regulation 1105-2-100 \(the Planning Guidance Notebook\)](#) for the first time in 2000. The NER plan is analogous to the NED plan, but for aquatic ecosystem restoration studies and projects, as opposed to studies and projects primarily deriving economic (and monetized) benefits. The NER plan reasonably maximizes ecosystem restoration benefits while passing tests of cost effectiveness and incremental cost analyses (CE/ICA), meeting planning objectives and avoiding constraints, demonstrating significance, and meeting the four P&G criteria of effectiveness, efficiency, completeness, and acceptability.

The slide is titled "INCORPORATING THE FOUR P&G ACCOUNTS" and includes a sub-header "What is It?". Below this, it states: "Principles and Guidelines (P&G) (1983) established four accounts to facilitate the evaluation and display of effects of alternative plans: NED, RED, EQ and OSE." The main content is a table with two columns: "P&G Account" and "Description".

P&G Account	Description
National Economic Development (NED)**	Increases in the net value of the national output of goods and services, expressed in monetary units.
Regional Economic Development (RED)	Changes in the distribution of regional economic activity that result from each alternative plan.
Environmental Quality (EQ)	Changes in the ecological, aesthetic, and cultural attributes of natural and cultural resources.
Other Social Effects (OSE)	Effects from perspectives that are relevant to the planning process, but are not reflected in the other three accounts.

Below the table, it references "ER 1105-2-100 (Planning Guidance Notebook)" and lists "National Ecosystem Restoration (NER)**" with the description: "Increases in the net quantity and/or quality of desired ecosystem resources."

The NER plan is analogous to the NED plan, but for aquatic ecosystem restoration studies and projects, as opposed to studies and projects primarily deriving economic (and monetized) benefits. The NER plan reasonably maximizes ecosystem restoration benefits while passing tests of cost effectiveness and incremental cost analyses (CE/ICA), meeting planning objectives and avoiding constraints, demonstrating significance, and meeting the four P&G criteria of effectiveness, efficiency, completeness, and acceptability.

Ecosystem outputs that are quantified to demonstrate the benefits of ecosystem restoration alternatives are used in CE/ICA, such as habitat units or indices of biotic integrity, are usually displayed in the EQ account. However, the EQ account may display other effects (such as impacts to resources or species) different than the ecosystem outputs used for CE/ICA, but still important to document and used to evaluate alternatives. Finally, the NER plan may also have effects in accounts such as NED, RED, and OSE that are also important to display for decision-making purposes.