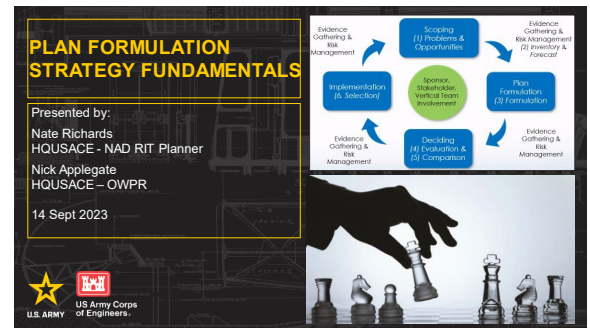


This webinar was part of the Planning Fundamental Series and offered an overview of plan formulation strategies and required plans. Senior Economist Nick Applegate (HQUSACE Office of Water Project Review) and Regional Integration Team (RIT) Planner Nate Richards (North Atlantic Division RIT) discussed the importance of critical thinking and the application of strategies that fit the study area and mission for successful plan formulation. The presenters reviewed different methods and examples for developing and executing effective plan formulation strategies, how the required alternatives in the new Planning Engineer Regulation 1105-2-103 (Policy for Conducting Civil Works Planning Studies) should factor into plan formulation, and common plan formulation problems to avoid.



This summary of the webinar chat discussion is not a transcription; comments and responses have been edited and reordered for clarity.

Formulating projects to address the (authorized) water resources problem

- The priority should be formulating to address the water resources objectives of the study. All your alternatives must meet at least one of your objectives to solve the water resource problem.
- Formulation is based on the study's Problems, Opportunities, Objectives, and Constraints (POOCs). Your opportunities and objectives can't be so bland that it leaves out crucial ties to the four accounts; you must be able to understand if your alternative is addressing the planning objectives.
- Formulated alternatives look at the problem from various angles. The four Principles & Guidelines (P&G) accounts (NED, RED, OSE, EQ) are used to categorize the pros and cons of each alternative. One of your alternatives needs to be identified as the "total net benefits" alternative, and all the alternatives need to be evaluated based on the same criteria from all four accounts.
- We do not formulate for the four accounts. The four accounts are used, along with other decision criteria, to evaluate alternatives. Put another way, we only formulate to solve our authorized study purpose, but we will evaluate plans based on decision criteria across all four accounts.
 - For example, we should not formulate stand alone Environmental Quality improvement measures/alternatives for a study with only and FRM authority. However, we should be formulating a wide variety of measures/alternatives that address FRM while and then evaluate impacts (positive and negative) to EQ.
- To reemphasize – the P&G states that the "four accounts are established to facilitate evaluation and display of effects of alternative plans."

Do plan formulation strategies focus on formulating the plans required to be identified (such as the NED plan, max total net benefits plan)?

- Your plan formulation strategies should point back to your POOCs, if they were fully developed. You aren't formulating strategies for the four accounts, you are formulating to meet your objectives which solves your problem and realizes the opportunities. The outputs alternatives are then measured using evaluation criteria which link back to the four accounts. For example, if a study team doesn't highlight the life safety risks, socially vulnerable risks, and natural resources risks in your

problem statement, then the team will generally fail to develop opportunities or objectives towards that end.

- Plan formulation strategies should be based on the planning objectives that make the most sense for the study to identify alternatives, and then identify which of those alternatives fit these required plans.
- Plan formulation and the application of plan formulation strategies is a team effort involving all the disciplines. Perhaps some disciplines are involved more than others, but they are all important.

Explanation of “Measures vs. Alternatives”

Plans that include similar measures that result in significantly different impacts or benefits are distinctly different alternatives (rather than scales). For example, a 4-mile levee and a 40-mile levee could be viewed as different alternatives (same measure) because the impact/benefits significantly differ geographically. A levee with the same length/location, but different heights is not a different alternative; it is a scaling of that measure. Similarly, elevating 1,000 structures vs. 10,000 structures in non-structural formulation are most likely different alternatives – not a scaling of a single measure or plan.

Where do the required plans fit within plan formulation strategies?

- The required alternatives are not typically viable plan formulation strategies by themselves as they will need focused sub-strategies that are directed at more specific risk drivers and objectives.
 - For example, just having a strategy called “Reasonably Maximize Net NED/NER Benefits” is not focused enough because there are too many different ways to identify that plan. Reasonably maximizing NED/NER is simply the outcome of identifying a wide array of distinctly different alternatives that achieve objectives and realize opportunities. One of those plans will reasonably maximize net NED/NER benefits.