

FINAL DRAFT
Water Resources Adaptation to Climate Change Workgroup
of the
Advisory Committee on Water Information
Comments on
Revised Draft Guidance for Greenhouse Gas Emissions
and Climate Change Impacts
March 26, 2015

The Water Resources Adaptation to Climate Change Workgroup of the Advisory Committee on Water Information (ACWI) provides the following comments on the Revised Draft Guidance for Greenhouse Gas Emissions and Climate Change Impacts released for comment on December 18, 2014.

- 1) Water Use Efficiency:** The draft guidance refers to energy efficiency in several places and water use efficiency should be added in these places (see pages 21 and 30). Water use efficiency contributes to energy efficiency by requiring reduced electricity to pump and treat water, both at a site and in the larger water delivery system. In addition, in many areas of the country, reduce water availability is the most significant impact of climate change and making Federal actions as water efficient as possible makes the Federal investment/action more resilient at the same time that water use forgone at the project is available to meet other needs, including providing for ecological flows, and reducing climate stress on the entire water resource system.
- 2) Water Related GHGs and Sequestration:** The draft guidance provides helpful discussion of the GHG and carbon sequestration impacts of land management practices. But, water resources management practices also have consequences for GHG releases and have the potential for carbon sequestration and should be recognized in the guidance. For example, in the case of GHGs, recent research indicates that various reservoir management practices significantly impact methane releases from reservoirs. In the case of carbon sequestration, wetlands, especially coastal wetlands, have significant carbon sequestration benefits and actions that reduce or alter these wetlands reduce carbon sequestration while practices that promote wetland management can enhance carbon sequestration. (see suggested edit on p. 13, 17/18)

- 3) Improving Resilience of Federal Actions re Water:** The draft guidance makes a good case for considering the effects of climate change on the environmental consequences of a proposed action (both in terms of GHG releases and impacts on other environmental resources). The guidance also refers to the need to consider alternatives that make the *Federal action itself* more resilient to the changes in the environment resulting from a changing climate (e.g. site a Federal action so that it will not be inundated by storm surge or sea level rise during its life). The discussion of the need to consider the long-term resilience of actions, however, could be strengthened in several places (see attached; p 3, 8, 22).

A related comment is that language on p 24 limiting review of impacts to projects “located in areas that are considered vulnerable to specific effects of climate change...” might result in dismissing climate impacts assessment based on lack of understanding of the diverse range of impacts (i.e.; climate analysis should not be limited to pre-determined geographic areas, such as coastal areas at risk from sea level rise).

- 4) Project Planning Horizons/Coordination with P&G:** Climate changes commonly occur over planning horizons that are longer than the conventional engineering estimates of the life of a facility and defining a short time horizon (e.g.: a conventional engineer estimate of design life of 20 years) may result in missing climate related impacts to a facility that will occur beyond that period. This is especially true in the case of water facilities which are often sited based on geography (e.g. a water treatment facility may be built with a 20 year design life but, once cited and collection piping systems are lead to the site, the original facility is likely to be rebuilt periodically rather than relocated. A climate impact like sea level rise might not threaten the facility in the first 20 years, but at 60 pose a significant threat.

The final Principles and Guidelines for Water Resources speak to this question (see text in italics below), referring to “service or operational life” rather than “design life” and recognizing the scenario where an investment is likely to be renewed over time, thus expanding the planning horizon. Comparable language should be adopted in the NEPA guidance (see suggested edits on p 12; footnote 31).

Projections of future conditions should account for expected environmental, social, and economic changes as a result of climate variability and climate change. Consideration of climate-related changes to water resources is especially important for projects with relatively long (a decade or more) service or operational lives, as these projects are most likely to be affected by climate variability and change. If appropriate, predictions should consider intergenerational issues due to climate variability and change. Where the service or operational life of that investment is likely to be renewed at the same site, the effects of climate variability and change should be considered over the likely period of use of the site for the investment or a renewal of the investment...”. Page 19; final Interagency Guidelines