

1.1 Draft Evaluation Criteria

In 1983, the National Water Resources Council developed Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G; WRC, 1983). These guidelines apply to large Federal water projects but can be applied to any large water projects. Applying them for long-term projects for the Salton Sea makes sense if any Federal funding will be available to support construction of such projects in the future. More recent documents including Analytical Methods and Approaches for Water Resources Project Planning, National Research Council 2004, Washington, DC: The National Academies Press (<https://doi.org/10.17226/10973>) provide more detail and updated guidance.

A further update, published in March 2013, entitled Principles and Requirements for Federal Investments in Water Resources (https://obamawhitehouse.archives.gov/sites/default/files/final_principles_and_requirements_march_2013.pdf) provides updated guidance. These Principles and Requirements were established pursuant to the Water Resources Planning Act of 1965 (Public Law 89-8), as amended (42 U.S.C.1962a-2) and consistent with Section 2031 of the Water Resources Development Act of 2007 (Public Law 110-114). They supersede the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies dated March 10, 1983.

These Principles and Requirements, and the supporting Guidelines, are intended to provide a common framework for analyzing a diverse range of water resources projects, programs, activities, and related actions as identified by the agencies in the context of their missions and authorities. The Principles were, in the past, limited in application to a select number of agencies, but have since been expanded to include a large array of relevant projects, programs and activities. It is intended that these Principles and the supporting Requirements and Guidelines be applied to a broad range of investments that by purpose, either directly or indirectly, affect water quality or water quantity, including ecosystem restoration or land management activities.

Following these guidelines, plans, strategies, or actions are to be formulated in a systematic manner to ensure that a range of reasonable concepts are evaluated. The final analysis should include, at a minimum, support full disclosure and promote transparency in the decision making process. Each plan, strategy or action is to be formulated to consider the following four criteria:

- Effectiveness
- Acceptability
- Completeness
- Efficiency

1.1.1 Draft Criteria for the Salton Sea Long-Range Plan

The guidelines and criteria discussed above have been applied to develop a set of draft criteria that can be applied to evaluate actions and strategies that may be applied to the Salton Sea Long-Range Plan (LRP). It is intended that these draft criteria will be submitted for consideration, review, and comment by the Salton Sea Science Committee, Long-Range Planning Committee, and the public. Each of the four criteria categories and the specific criteria within each as applied for the Salton Sea LRP:

Effectiveness: For the Salton Sea LRP, Effectiveness will measure how well an individual or set of actions and strategies accomplishes an individual objective from the suite of the following objectives:

- Restoration of long-term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea (F&GC 2931).
- Protect or improve air quality to reduce public health consequences.
- Protect or improve water quality to provide opportunities for beneficial uses and reduce environmental consequences.

Table 1 provides a description of the specific criteria that are proposed to evaluate the Effectiveness of restoration concepts.

Acceptability: For the Salton Sea LRP, Acceptability of a set of actions and strategies will be measured by their compatibility with State law and policies applicable to the Salton Sea, such as the ability to preserve tribal heritage, provide public access, retain or enhance the local economy, and address environmental justice. Table 2 provides a description of the specific criteria that are proposed to evaluate the Acceptability of restoration concepts.

Completeness: For the Salton Sea LRP, Completeness will be assessed by how well a set of actions and strategies satisfies all the following objectives:

- Restore long-term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea (F&GC 2931)
- Protect or improve air quality to reduce public health consequences.
- Protect or improve water quality to provide opportunities for beneficial uses and reduce environmental consequences.

Table 3 provides a description of the specific criteria that are proposed to evaluate the Completeness of restoration concepts.

Efficiency: For the Salton Sea LRP, Efficiency will be measured by the estimated costs of a set of actions and strategies, the timeline for their implementation, and the benefits achieved. Table 4 provides a description of the specific criteria that are proposed to evaluate the Efficiency of restoration concepts.

Table 1. Draft Effectiveness Criteria

Criterion	Description
Total Habitat Area	Total area of habitat that will support a fish population as a food source for piscivorous birds. To support saltwater fish, salinities would ideally be near ocean salinities of 35 PPT, at least 20 PPT, and no more than about 60 PPT.
Area of Shallow Habitat (0-1 foot)	Total area of habitat that will support a fish population as a food source for wading birds, expected to be the area between the shoreline and the one-foot depth contour.
Area of Deep Water Habitat (>6 feet)	Total area of habitat that will support a fish population as a food source for diving birds, expected to be the area deeper than the six-foot depth contour.
Length of Shoreline Habitat	Total length of shoreline habitat that will support a fish population as a food source for wading birds.
Ability for Natural Sequestration of Selenium	The ability of inflowing waters that may contain selenium to enter a marine water body with conditions like the past where selenium is sequestered in the sediments through natural transfer processes.
Long Term Ability to Improve Water Quality	The extent that the actions and strategies improve water quality either in the inflowing waters or within the water bodies or habitat areas with the Salton Sea footprint.
Area of Exposed Playa Remaining	Total area of exposed playa remaining; actions and strategies that have the least total exposed area would score highest.
Area of Higher Emissive Playa Remaining	Total area of higher emissive playa remaining; actions and strategies that have the least emissive exposed area would score highest.
Pupfish Habitat and Connectivity	Extent of pupfish connectivity between drains and inlets with water quality that can support pupfish; actions and strategies that maintain the highest amount of suitable connectivity would score highest.

Table 2. Draft Acceptability Criteria

Criterion	Description
Ability to Preserve Tribal Heritage	The extent to which the actions and strategies preserve or restore tribal uses and access to the lake and do not adversely affect sacred places or cultural sites. Evaluation of this criterion will be informed through government to government consultation between the California Native American Tribes and the State.
Access and Recreation	The extent to which the actions and strategies could increase access to diverse active and passive recreational opportunities and could include project elements such as parks and trails, beaches, new community gathering spaces, recreational or educational facilities that increase or expand access for community members to State parks or other recreational facilities.
Sustainable Economic Development	The extent to which the actions and strategies directly or indirectly provide or allow for sustainable economic development benefits to frontline communities at the Sea.
Environmental Justice	The extent to which actions and strategies provide fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. Restoration concepts that provide co-benefits by alleviation of multiple stressors within frontline communities, such as reducing pollution burdens, improving access to parks and open space, or other environmental benefits, and concepts planned in development in collaboration with frontline communities through meaningful community engagement and broad community support, and engagement process was inclusive of frontline communities would score high for this criterion.

Table 3. Draft Completeness Criteria

Criterion	Description
Completeness: Meets all individual objectives	An action or strategy that achieves all of the following objectives would receive a “complete” score: Restoration of long-term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea (F&GC 2931); Protection or improvement of air quality to reduce public health consequences; and protection or improvement of water quality to provide opportunities for beneficial uses and reduce environmental consequences.

Table 4. Draft Efficiency Criteria

Criterion	Description
Timeframe for Complete Solution	The timeframe for a set of the actions and strategies to be completed and commissioned; when compared to another set of the actions and strategies, a shorter timeframe would score higher.
Capital Cost	The estimated total capital construction costs in 2022 dollars for a set of the actions and strategies.
Operation, Maintenance, Energy and Repair (OMER) Cost	The estimated total annual OMER costs in 2022 dollars for a set of the actions and strategies
Present Value (PV) Cost Per Acre of Habitat	The estimated total PV cost which represents the present value of capital construction and long-term OMER costs in 2022 dollars (i.e. the amount needed now to pay for construction and establish a fund for OMER in perpetuity), divided by the acres of habitat achieved by a set of actions and strategies.
Provides Incremental Benefits with Incremental Funding	The extent to which incremental funding for a set of actions and strategies can result in incremental benefits.
Proven Technology/Reduced Risk	Whether a solution uses untested technologies or technologies that have a high measure of construction and operational risk.
Water Supply Risk	The extent to which the actions and strategies can perform as designed under a wide range of future inflows. Restoration concepts that can perform as planned under a wider range of future inflow conditions would score higher than those that have a narrower range with a higher minimum water requirement.