SALTON SEA WATER IMPORTATION SUBMITTAL REVIEW

November 2021

Technical Memorandum (TM) #2.4

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Subject Area: Screening and Evaluation Approach

Topic: Updated Screening and Feasibility Approach

This Technical Memorandum (TM) was prepared as part of the Salton Sea Water Importation Proposal Review to provide information to support and reflect the Independent Review Panel's (Panel) evaluation of submitted ideas to restore the Salton Sea by water importation and provide the Salton Sea Management Program (SSMP) with approaches that are feasible. Parts of this TM may be used in the Panel's Screening Report, Fatal Flaw Report, Feasibility Report, and/or Summary Report (Reports). In the event that any discrepancies are found between the Reports and this TM, the Reports shall take precedence.

The purpose of this TM is to document the updated approach for evaluation of proposals in the Screening and Feasibility stages. Initially, the proposed Screening process (documented in TM 2.3) included multiple criteria that included a fatal flaw analysis. The Panel decided to modify the screening process to focus only on responsiveness to the Request for Information (RFI). All project concepts that were responsive to the RFI will be further evaluated in the fatal flaw analysis. Any concepts that are not responsive to the RFI will not receive further review or consideration.

This TM documents the Panel's updated Screening Criteria and plan for subsequent steps (Feasibility Analysis and Summary Report), and assist in structuring the Screening Report. Upon any revision and then approval of this report by the Panel, the next step will be to proceed to subjecting the submissions to the criteria and producing the Screening Report.

Parts of this TM may be used in the Panel's Screening Report, Feasibility Report, and/or Summary Report. In the event that any discrepancies are found between the Reports and this TM, the Reports shall take precedence.

1.0 Introduction to the Screening Criteria

The criteria listed below relate to submissions' responsiveness to the Requests for Information. Failure of a respondent's project concept to pass the screening phase does not constitute a judgment on the ability of the respondent to perform the submitted project, or the merit of the technologies and participants.

Components of concepts that do not pass the screening process may be revisited by the Panel at a later date. The Panel may choose to evaluate and/or recommend components of concepts that do not pass screening for use in interim and/or long-term solutions.

2.0 Updated Screening Process

The revised screening process includes two criteria based on conformance with the RFI, shown in Table 1:

Table 1: Draft Screening Criteria

No.	Category	Screening Criterion
1	Conformance With RFI	The submission must have a water importation component.
2	Conformance With RFI	The submission must be complete, with the five sections detailed in the RFI: 1. Identification of Project Team 2. Narrative description of project concept and how/when it will benefit the lake 3. Planning and design process of project 4. Cost projection 5. Plan for funding of proposed project

1. The submission must have a water importation component.

The charge of the Panel is to review project concepts for a water importation project, as stated in the RFI:

"This Request for information (RFI) outlines the information requested by CNRA to evaluate proposals for a water import project to meet long-range goals of the SSMP. The intent of the RFI process is to gather information on the proposed water import projects."

Responses that do not have a water importation component are outside the Panel's charge, and will not be considered in the fatal flaw analysis. Components of concepts that do not pass the screening process

may be revisited at a later date. The Panel may choose to evaluate and/or recommend components of concepts that do not pass screening for use in interim and/or long-term solutions.

2. ***The submission must be complete, with the five sections detailed in the RFI:***
    1. ***Identification of Project Team***
    2. ***Narrative description of project concept and how/when it will benefit the lake***
    3. ***Planning and design process of project***
    4. ***Cost projection***
    5. ***Plan for funding of proposed project***

Incomplete submittals may not have sufficient information to be reviewed completely or compared to other submissions in the fatal flaw analysis. However, if the Panel and Support Team can extrapolate from the materials submitted reasonable and consistent answers to all five sections, then the submission can be considered complete.

3.0 Feasibility Analysis

Concepts that pass the screening process will be evaluated in the fatal flaw analysis. The RFI States that required information in each response includes the planning and design process of the project including the following language on project feasibility:

"The description should include the following:

•***Project Feasibility*** *-- Documentation of the engineering feasibility of the project. Documentation should include at a minimum: system capacity; pumping requirements; channel and pipe size; water quality; other associated infrastructure such as desalinization, fish or trash screens, etc.; and expected energy use."*

The burden is on the respondents to the RFI to provide sufficient information for the Panel to evaluate the feasibility of project concepts. The burden is *not* on the Panel to prove that a concept is feasible. The respondent possesses the knowledge and expertise to demonstrate the efficacy of the concepts in its submission.

The Feasibility Analysis will be comprised of two components: Fatal Flaw Analysis and Feasibility Analysis.

3.1 Fatal Flaw Analysis

The Fatal Flaw analysis will be applied to all submissions that pass the screening process. Draft Fatal Flaw Criteria are presented in Table 2. The Panel can accept, modify, or reject these criteria, and/or identify new criteria.

Components of concepts that do not pass the Fatal Flaw Analysis may be revisited at a later date. The Panel may choose to evaluate and/or recommend components of concepts that do not pass the Fatal Flaw Analysis for use in interim and/or long-term solutions.

Table 2: Draft Fatal Flaw Criteria

No.	Category	Fatal Flaw Criterion
1	Risk	The submission is technically sound and utilizes established, non-speculative technologies.
2	Risk	The submission would not create a risk of catastrophic flooding in the Salton Sea basin in case of seismic or other extreme events.
3	Legislative	The submission will meet the State's minimum commitments to the region as stated in the Quantification Settlement Agreement.
3a	Public Health	The submission must result in improved air quality through reduction of exposed playa and/or dust control.
3b	Ecology	The submission's salinity goals and modeled outcomes are within Protected Species and Species of Importance salinity tolerance range.
4	Ecology	Any extraction or infrastructure must not cause significant ecological changes within the Biosphere Reserve of the Upper Gulf of California & Colorado River Delta.
5	Sustainability	Solutions must be viable for the project duration (until 2078).

1. The submission is technically sound and utilizes established, non-speculative technologies.

Submissions must be technically sound to pass the Fatal Flaw Analysis. Concept design and engineering considerations include, but are not limited to: intake structures, pumping and conveyance, energy sources, salt management strategies, constructability, and long-term operations.

The water importation project, if implemented, would be of regional economic, public health, and environmental importance and must be based on established, proven technologies. Established technologies deployed in novel ways are acceptable. Technologies that have minimal or no performance record present too much risk for a project of this immediacy, magnitude, and importance.

Failure of a submission to meet this criterion does not constitute a judgment by the Panel on the proposed technology, the technology's manufacturer/provider, or the respondent. Rather, the Panel is concerned about the amount of time it would take to establish the technical viability of emerging technologies in light of the immediate needs in the region, as well as the additional risks of scaling up emerging technologies to the capacity needed to address the region's problems.

2. ***The submission would not create a risk of catastrophic flooding in the Salton Sea basin in case of seismic or other extreme events.***

The Salton Sea's elevation is over two hundred feet below sea level. Many of its surrounding towns from Indio to Calexico and associated farmland in the Salton Basin are also at or below sea level. No project should introduce the possibility of a catastrophic flood of seawater into the basin caused by failures due to earthquakes, fire, mismanagement, or other causes.

3. ***The submission will meet the State's minimum commitments to the region as stated in the Quantification Settlement Agreement.***

The State of California, as a party to the 2003 Quantification Settlement Agreement, committed to implementing and funding necessary activities to address two problems: 1. public health concerns and 2. wildlife impacts at the Salton Sea. The submission must demonstrate a strong likelihood of meeting the State's obligations. An exception to this criterion would be a proposal that would provide incremental benefit when considered in a portfolio of approaches.

   a. ***The submission must result in improved air quality through reduction of exposed playa and/or dust control.***

Local public respiratory health has been in decline due in part to wind-borne particulate matter from the exposed playa as the lake shoreline recedes. Projects must reduce exposed playa and/or utilize dust control measures, and therefore improve air quality.

   b. ***The submission's salinity goals and modeled outcomes are within Protected Species and Species of Importance salinity tolerance range.***

Some species have special status in the Salton Sea region, among them the Desert Pupfish, American White Pelican, and Yuma Ridgway Rail**.** Any long-term project to restore the Salton Sea should result in salinity ranges consistent with their viability and the viability of their food webs. Submissions that exceed the maximum or drop below the minimum salinity needed to preserve these species should not be considered. This issue is discussed further in Technical Memo 8.2: Species Salinity Tolerance.

4. ***No extraction or infrastructure that would cause significant hydrological changes within the Biosphere Reserve of the Upper Gulf of California & Colorado River Delta***

The Biosphere Reserve of the Upper Gulf of California & Colorado River Delta is a UNESCO World Heritage Site, and consists of a core area, buffer zone, and transition area. Core areas are defined by UNESCO as:

"securely protected sites for conserving biological diversity, monitoring minimally disturbed ecosystems, and undertaking non-destructive research and other low-impact uses (such as education). In addition to

its conservation function, the core area contributes to a range of ecosystem services which, in terms of the development functions, can be calculated in economic terms (e.g. carbon sequestration, soil stabilization, supply of clean water and air, etc.)"

While some construction activity may be allowable in the buffer zone and/or core area, extraction of water and/or construction of canals within the core area that cause significant disturbance and/or result in significant hydrological changes within the Reserve are very likely to be rejected by the governing bodies responsible for the Reserve.

Additional areas adjacent to the Reserve, including the Laguna Salada, are designated as Ramsar Wetlands of International Importance. A forthcoming TM will provide additional details on the types of acceptable activities within the Reserve and Wetlands of International Importance to provide additional support for this criterion.

5. Solutions must be viable for the project duration (until 2078)

The charge of the Panel is to assess the feasibility of water importation as a long-term strategy for restoration of the Salton Sea. The study period as defined by the Salton Sea Ecosystem Restoration PEIR is consistent with the complete implementation period for the QSA, which is defined as 2003 to 2078.

3.2 FEASIBILITY ANALYSIS

A Feasibility Analysis will be completed on each submission that passes the Fatal Flaw Analysis. The Feasibility Analysis will investigate the viability of each submission to plan, construct, and operate a project. The analysis may include, but is not limited to:

1. Economic Analysis:

- Review the submitted information on total cost of construction and annual cost of operation and maintenance.
- Identify discrepancies and/or information gaps in the submitted cost estimates.
- Review submitted information on project revenue streams.

2. Technical Analysis:

- Evaluate technical feasibility of engineering components including, but not limited to:
    - Water source and extraction
    - Water quality and quantity
    - Concept design and engineering
    - Constructability
    - Long-term operations
    - Water treatment facilities

    - Power/energy requirements and generation
    - Salt/brine management
- Evaluate additional project components including, but not limited to:
    - Water and land use
    - Flood control and climate change impacts
    - Environmental parameters and impacts
    - Regulatory compliance
    - Permitting
    - Stakeholder engagement
    - Additional beneficial uses
    - Time of implementation

4.0 Next Steps

The Panel and Support Team will commence with preparation of the Screening Report. Parallel to the preparation of the Screening Report, the Support Team will continue to investigate topics to assist the Panel in the development of criteria for the Fatal Flaw and Feasibility stages of the Feasibility Analysis.