

Salton Sea Research Management Committee

Request for Proposals #1

to Conduct

**An Environmental Reconnaissance
of the Salton Sea**

as Part of the NEPA/CEQA Process for the

Salton Sea Restoration Project

June 22, 1998

Study Site

The Salton Sea is the largest body of water in California. It is a hypersaline lake located in a closed desert basin east of Los Angeles and San Diego. The Sea was initially formed in 1905-1907 by flooding on the Colorado River which breached an irrigation control structure allowing virtually the full flow of the river into the Salton Basin. The Sea's current existence is primarily due to agricultural drainage from the Imperial, Coachella, and Mexicali Valleys; smaller volumes of municipal effluent and stormwater runoff also flow to the Sea.

The aquatic ecosystem of the Salton Sea is extremely eutrophic and supports a highly productive sportfishery. The Sea, and its adjacent wetlands, are a critical part of the Pacific flyway providing habitat and seasonal refuge to millions of birds of hundreds of species. Several endangered species, including the desert pupfish and the Yuma clapper rail, inhabit the greater Salton Sea ecosystem.

The Salton Sea ecosystem is an ecosystem under stress. Inevitably increasing salinity (currently about 43 ppt) may be threatening the reproductive ability of some species, particularly the sportfish. High nutrient loading creates high productivity but also causes periods of low oxygen and possibly blooms of toxic algae. Elevated selenium (derived from the Colorado River water used to irrigate the agricultural areas of the basin) may be affecting the immunocompetence and/or reproduction of some bird species. DDT residues in Salton Sea sediment (from historical use) and occasional discharges of agricultural chemicals to irrigation drains leading to the Sea may also contribute to the overall ecosystem stress. These stresses probably contribute to the recurring fish and bird die-offs in recent years.

Background

A Research Management Committee has been established and is composed of representatives from the Department of the Interior, the State of California, the Salton Sea Authority (SSA), and the Torres Martinez Indian tribe. Reporting to the Research Management Committee is the Science Subcommittee composed of technical representatives from all of the above agencies plus representatives from federal and state resource agencies and the university community.

Acting under authority of the Secretary, the Department of the Interior, in concert with the State of California and other stakeholder agencies, has initiated a National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA) process and scientific activities to guide that process in the determination of an appropriate remediation strategy. The Secretary has assembled the committees described above and has designated the Bureau of Reclamation (USBR) as the lead agency for NEPA purposes. The SSA is the lead agency for CEQA. The SSA is a joint powers agency chartered by the State of California and is comprised of the counties of Imperial and Riverside, the Imperial Irrigation District, and the Coachella Valley Water District. The Secretary has established an 18 month target for the completion of the Environmental Impact Statement/Environmental Impact Report.

General Description of Needs

Despite its size and importance, there has been surprisingly little biological/environmental research on the Salton Sea. Much of our knowledge of the Sea's ecology is dependent upon work dating back to 1961. This predates the introduction of tilapia, arguably the dominant fish species in the Sea. Since 1961, there has been additional work on salinity tolerances of the sportfish species, productivity of the sportfishery (creel surveys), and selenium concentrations in water, sediment, and biota. Many aspects of the Salton Sea's ecology however, remain largely unknown.

Any Salton Sea restoration project will have significant environmental effects which will require thorough NEPA/CEQA analysis. This RFP is intended to elicit proposals to rapidly acquire sufficient biological and environmental information in specified areas for a proper biological/environmental description of the Sea and adjacent habitats.

Because of the extremely short timeline, the performance of these reconnaissance studies will be closely monitored:

- Data collection is expected to be complete within one year of contract award and final reports submitted three months thereafter.
- All contractors will be required to work with the Science Subcommittee to make data available in a timely manner throughout the course of the study. The Science Subcommittee reserves the right to redistribute data to other contractors for use in their studies before final reports are prepared by contractors originating the data.
- All data must be submitted in GIS-compatible format including GPS coordinates for all sampling sites and appropriate metadata. Information on Federal Geographic Data Committee metadata standards can be obtained from the National Geospatial Data Clearinghouse:

FGDC Secretariat
c/o U.S. Geological Survey
590 National Center
Reston, VA 22092
voice: (703) 648-5514
fax: (703) 648-5755
email: gdc@usgs.gov
web: <http://fgdc.er.usgs.gov>

Areas of Study

The Science Subcommittee has identified the following areas as foci for study. In addition to field studies, the work within each study area should include preparation of a detailed review of relevant information including published and 'gray' literature. The Science Subcommittee recognizes that delineation of some study areas is somewhat arbitrary and will consider alternatively organized proposals.

An initial appropriation in the range of \$750,000 to \$1,500,000 is anticipated for reconnaissance studies. The Science Subcommittee and the Research Management Committee will allocate the appropriated funds among study areas based on breadth and quality of proposed studies. The Science Subcommittee and Research Management Committee reserve the right to alter the total amount awarded due to budget considerations and/or in response to specific proposals.

Biological & Physical Limnology

A comprehensive description of the Salton Sea's planktonic and benthic communities is sought. The Sea should be sampled over its full range of depths and substrate types and all species taxonomically identified. For principal species seasonal sampling should be conducted to elucidate population cycles.

This area of study also encompasses collection of general physical information on the Salton Sea water column including data on temperature, salinity, and light penetration to the extent necessary to explain species distributions. Comprehensive water quality analyses including major ions, nutrients, trace metals, and organic contaminants is also needed on both the Sea and its principal tributaries.

Fish Community

Detailed information, both spatial and temporal, on habitat use, particularly spawning, is needed for game and sensitive fish species. For the sciaenid species (orangemouth corvina, *Cynoscion xanthulus*, and croaker, *Bairdiella icistia*) this could be accomplished via movement studies utilizing hydroacoustic techniques. Distribution studies of planktonic fish eggs for these species plus the sargo (*Anisotremus davidsonii*) may also be appropriate. Aerial surveys may be the most efficient mechanism for determining nesting grounds of tilapia (*Oreochromis mossambicus*). The most critical needs for the endangered desert pupfish (*Cyprinodon macularius*) are determining the use (breeding, feeding, etc.) made by this species of shoreline pools, irrigation drains, and natural creeks and to what extent movement among these systems is important to the survival of the species.

Avian Community

A full account of bird use of the Salton Sea and associated habitats is sought. Since bird use varies widely through the year, this study will require frequent censuses at multiple sites around the Sea for an entire year. Habitat use by sensitive (including the endangered Yuma clapper rail *Rallus longirostris yumaensis*) and game species should be emphasized. Newly collected information should be integrated with historical data to provide the best possible picture of seasonal and spatial distribution patterns, allowing assessment of the relative importance of habitat sites around the Sea.

Vegetation Mapping

A map of the dominant vegetation communities surrounding the Salton Sea and along the lowest portions of the Sea's principal tributaries is required to determine the extent and distribution of riparian/wetland habitat around the Sea. Habitat delineation must be based on published standards. The resolution of the resulting map must be adequate to identify habitat components of threatened, endangered and other sensitive species. There should also be an appropriate level of ground-truthing.

Sediment Contaminants

Information is needed on concentrations of contaminants, including trace elements such as selenium and anthropogenic organic compounds such as agricultural pesticides and herbicides, and their residues, in the bottom sediment of the Salton Sea. Sampling should be conducted at a full range of depths and distances from inflows. This study area also includes physical characterization of the Sea's sediment (particle size, composition, etc.).

Microbial Pathogens

Information regarding the occurrence and distribution of biological disease agents in the Salton Sea is needed. A comprehensive evaluation of microbial pathogens present in the waters and sediments of the Sea and its tributaries is sought. This study area encompasses agents capable of causing disease in fish, birds, and humans. This study area does not extend to evaluation of fauna affected by disease agents.

Air Quality

Baseline measurements of air quality parameters, particularly suspended particle concentrations, in the immediate vicinity of the Sea are required. Investigations of the relationship among wind speed and direction, sediment composition, and suspended particle concentrations are of special interest.

Submission of Proposals

The required proposal format is provided as attachment A to this RFP. Three paper copies of each proposal and one electronic version on 3.25" IBM-formatted diskette (WordPerfect 6.1 or earlier or Microsoft Word for Windows 6.0) should be submitted by mail postmarked no later than July 31, 1998 to:

Dr. John Elder Chair, Science Coordinator
Salton Sea Science Subcommittee
U.S. Geological Survey
8505 Research Way
Middleton, WI 53562-3581
email: jfelder@usgs.gov

On July 8, 1998 a pre-submittal workshop will be held at the Ontario Red Lion, Strawberry Peak Room, from 1:00 to 3:00 p.m. for the purpose of answering general questions about this RFP. A separate pre-bid meeting will be held with potential EIS/EIR contractors in the same room from 10:00 a.m. to noon. Potential submitters are encouraged to submit questions in advance of the workshop. Written questions will be accepted at the workshop and all questions received before and at the workshop will be addressed. A record of the workshop will be posted on the Salton Sea page of the U.S. Bureau of Reclamation's Lower Colorado River Region website:

<http://www.lc.usbr.gov>.

Proposals may address any or all of the above areas of study in any combination. Submissions may also address portions of the identified study areas. In such cases the Science Subcommittee may request two or more investigators to resubmit a single collaborative proposal in order to achieve the highest quality science and greatest efficiency of effort. Proposals must include a separate budget for each proposed area of study.

If this solicitation is amended then all terms and conditions that are not modified remain unchanged.

Evaluation of Proposals

The Science Subcommittee will perform an initial screening of each proposal for general compliance with this guidance and relevance. Relevance shall be evaluated using the following criteria:

1) is the proposal responsive to the RFP, i.e. does it show understanding of the needs identified in the RFP?

2) will the proposed products provide information that significantly contributes to resolving the identified needs?

3) will the proposed products provide timely input to the NEPA/CEQA process? and *Only first round rejection criteria*

4) inclusion of an appropriate quality assurance statement.

Suitable proposals will then be reviewed in depth by at least two technical peer reviewers at least half of whom will be outside (non-Science Subcommittee member) reviewers with no direct stake in investigations or remediation of the Salton Sea. Technical peer reviewers will score each proposal for:

1) technical quality of the proposal and

2) quality of staff and facilities.

The Science Subcommittee will then consider the results of the technical peer reviews and develop recommendations to the Research Management Committee based on:

1) cost - is the cost of the proposed study reasonable, relative to the benefits of the products to be generated?

2) multi-disciplinary approach - does the proposed study incorporate a significant degree of multi-disciplinary participation and approach, thus strengthening its potential to identify and describe relations among environmental factors?

3) reliability - does the proposal submitter have a proven history of timely project completion? and

4) overall relevance - does the proposed study contribute significantly to the overall needs of the reconnaissance program?

The Science Subcommittee reserves the right to recommend approval of portions of proposals. Funding decisions will be made by the Research Management Committee.

Contract Obligations

Receipt of a funding award will obligate the contractor to the following:

1) *Adherence to established standards:* The Research Management Committee and the Science Subcommittee are committed to high quality science. As key inputs to the decision-making process, environmental data must be accurate and reliable. Therefore, each proposal is expected to contain a Quality Assurance statement briefly describing how the proposed approach will produce valid and high quality data and how any limitations to the use of these data will be identified. All funded proposals will be required to produce an acceptable Quality Assurance Project Plan (QAPP) including periodic QA/QC review and evaluation prior to initiation of work. Additional guidance in preparation of the QA statement as well as the complete QAPP may be obtained from the QA coordinator:

Barry H. Gump, Ph.D.
California Department of Water Resources
1020 Ninth Street
Sacramento, CA 95814
voice: (916) 327-1750
fax: (916) 327-1648
email: bgump@water.ca.gov

or from *EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations, EPA QA/R-5, October 1997* which is available on the internet at:

http://es.epa.gov/ncercqa/qa/qa_docs.html#R-5.

2) *Data sharing:* The nature of the Salton Sea Remediation Project requires conservation of effort in the forms of avoiding duplication of effort, taking advantage of information as it becomes available, and seeking synergistic opportunities for scientific productivity. Contractors are expected to convey significant findings to the Science Subcommittee and to each other as they make discoveries and to share baseline data as it is developed. The highest level of professional ethics is expected in the use of such information by all parties. Contractors are also required to share their data with the Science Subcommittee when specific requests are made.

3) *Participation in records and archiving systems:* Contractors will provide and follow a data records system and a materials archiving plan acceptable to the Science Subcommittee. The records system is intended to provide data compatibility and accessibility among studies and the archiving plan provides reference material, standards, and samples for future Salton Sea investigations. Approval for approaches must be obtained prior to initiation of work.

Attachment A

Format for Proposals

In general, proposals should be printed on 8.5 x 11 inch paper at 12 point font size with one inch margins. Maximum page lengths for each section are given parenthetically and are applicable per study area. Unnecessarily elaborate proposals beyond those sufficient to present a complete and effective response to this RFP are not desired and may be construed as an indication of lack of cost consciousness.

Proposers who include data which they do not want disclosed to the public must add the following statement to the title page:

“This proposal includes data that shall not be disclosed outside the reviewing government agencies and their agents and shall not be duplicated or used, in whole or in part, for any purpose other than to evaluate this proposal. If however, a contract is awarded to this proposer as a result of, or in connection with, the submission of these data, the government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting agreement. This restriction does not limit the Research Management Committee’s right to use information contained in these data if it is obtained from another source without restriction.”

Each page of the proposal which contains data the proposer wishes to restrict must be marked with the following legend:

“Use or disclosure of data contained on this page is subject to the restriction on the title page of this proposal.”

Title Page: Descriptive title of proposed study plus name and affiliation of principal investigator(s) and all contact information including mailing address(es), voice and fax phone numbers, and email address(es).

Summary: Brief description of proposed study. (1 page)

Objectives: Specific accomplishments to be realized. (1 page)

Narrative: The narrative should demonstrate a knowledge of the relevant published literature and clearly describe a technical approach that is both scientifically and statistically sound. Sufficient detail should be included such that moderately informed scientific peers can readily visualize the scope of the proposal. Sampling methodology and frequency should be specified. A quality assurance statement is required. (15 pages including bibliography, charts, maps and any other visual aids)

Milestones and Products: A schedule of key accomplishments, reports, datasets, and other tangible outcomes from the study. (2 pages)

Staffing: A table showing the proposed staffing, principal duties of each staff member, and the time allocation of all scientific staff must be included. Resumes should be provided for the principal investigator and all co-investigators and should focus on education, recent positions, relevant experience and accomplishments, and recent and relevant publications. (1 page + 3 pages for each resume)

Experience: A list of projects completed by the submitting entity and/or principal investigators which demonstrates the ability to complete projects on a timely basis. (1 page)

Facilities: The proposal should contain a description of the facilities and major pieces of equipment proposed for the research. The description should be sufficiently detailed to allow the technical peer reviewers to determine adequacy with respect to accomplishing the proposed objectives. (2 pages)

Budget: A comprehensive budget covering all proposed activities must be included. The budget must, at a minimum, include the following elements (2 pages):

- 1) Personnel - by staff member;
- 2) Travel - separate travel for field work from travel for other purposes;
- 3) Equipment - purchases and rental;
- 4) Supplies - major items or categories;
- 5) Contract services - itemize by purpose and subcontractor;
- 6) Indirect costs including overhead - provide basis for figure;
- 7) Other - substantial costs not included above.