

I. Introduction (USGS)

A. Background

1. **Salton Sea Ecosystem** *(Brief background on Salton Sea ecosystem, declining habitat values, air quality challenges, and restoration attempts)*
2. **Current Restoration Efforts** *(Brief overview)*
 - a) Legislation
 - b) Programmatic EIR
3. **Restoration Status**
4. **Problem** *(Description of the problem that will be solved through monitoring and assessment; problem statement)*

B. Purpose *(Description of the purpose of the monitoring and assessment plan and its relation to the overall science plan and future decisions and actions at the Sea. Explanation of why it's important and why the investment is justified)*

1. **Overarching Goal and Objectives** *(List of goals and objectives that apply to the monitoring and assessment plan; more explicit objectives identified in monitoring chapter)*
2. **Scope**
 - a) **Study Area** *(Description of the general area subject to monitoring and assessment and indication that more detailed information on geographic scope is presented in the specific sections.)*
 - b) **Constraints and Assumptions** *(Description of the limitations on the monitoring and assessment plan and its focus. List of program, environmental, engineering/physical, hydrological, climatological, and legal constraints and assumptions)*

c) **Focused Investigations** (*Description of the role of focused investigations and how it relates to the monitoring and assessment plan. Also include explanation of how focused investigations will be used in combination with monitoring data to answer key questions*)

d) **Adaptive Management** (*Description of the flexible nature of the plan and the role of adaptive management*)

e) **Implementation** (*General description of how the monitoring and assessment plan will be implemented and indication that the implementation plan will be a separate document that will include information such as management structure and estimated expenses. The MAP is not intended to include costs and or budgets.*)

3. **Document Organization and Intent** (*Description of the organization of the document, distinction between monitoring [data collection] and assessment [analysis], stand alone nature of the monitoring sections, and anticipated use [living document]*)

C. Plan Development

1. **Process and Participation** (*Description of the establishment of the FTGs, the process for developing key questions, the identification of monitoring and focused investigations, the use of conceptual models, and methods for prioritizing activities; general application of the EPA DQO process*)

a) **Focused Technical Groups** (*Description of the purpose and role of the groups; include meeting dates and list of participants as appendix*)

b) **Key Questions** (*Description of the development of key questions; include list and identification as monitoring or focused investigation in appendix*)

c) **Conceptual Models** (*Description of the role of conceptual models [include overall concept model as figure]; include set of conceptual models for each resource area in appendix*)

d) **Monitoring Activities** (*Explanation of how key questions were used to identify monitoring activities and how they will be used to identify focused investigations*)

e) **Integration** (*Description of the importance of integration and the process to ensure integration*)

2. **Prioritization Process** (*Description of the prioritization process used to select the monitoring and focused investigation activities that would be recommended for implementation based on the scientific merits and needs of this activity*)

D. Monitoring Design and Strategy (*Description of the general approach applied to the development of monitoring activities*)

1. **Retrospective Analysis** (*Explanation of retrospective analysis and description of the scope of the analysis*)

2. **Quality Assurance** (*Description of the process for quality assurance and how it's addressed in each of the monitoring activities*)

3. **External Peer Review** (*Explanation of peer review and how it's applied in the plan. Description of expected types of peer reviews and factors that will influence the level of review*)

4. **Level of Detail** (*Explanation of the level of detail provided for specific monitoring activities. Detail sufficient to clearly provide guidance on the intent and expectations of the activity, but broad enough to allow flexibility in the actual design*)

5. **Episodic and Unpredictable Events** (*Description of why collection of information from episodic events is important and how it will be accommodated by the plan*)

E. Data Management (*Description of the intent to develop data management system for the transfer, storage, and access of field information collected through monitoring. Description of DFG role in data management and storage. This section will be developed from information provided by Kristina in the data management plan. Refer to chapter on data management*)

F. Data Assessment and Analysis (*Description of the role of data assessment and analysis in the overall plan, including integration, consolidation of information, review of data quality, update of conceptual models, answering key questions, reporting, and providing management recommendations. Also describe how, with the assistance of agency staff, academics, experts, and others, the plan will be routinely updated.*)

II. Monitoring

A. Introduction (DWR and DFG w/ CH)

1. provide a brief, general description of the information in this chapter

B. Biological Resources (DFG w/ CH)

1. **Overview** (*Description of the purpose and objectives for this monitoring element. Also includes a general discussion of and reference to the conceptual model for this discipline*)
2. **Key Questions and Information Needs** (*Table summarizing key questions for this resource and the information needed to answer or contribute to answering key questions*)
3. **Geographic scope**
4. **Avian Resources Monitoring Activities (includes paragraph providing background information on subject matter)**
 - a) **Comprehensive Bird Surveys (Salton Sea shoreline)**
 - (1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)
 - (2) **Location** (*Identification of the location where monitoring activities will be conducted*)
 - (3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)
 - (4) **Protocol** (*brief summary and reference to appendices*)
 - (5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

b) Comprehensive Bird Surveys (Salton Sea open water)

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

c) Comprehensive Bird Surveys (open impoundments)

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

d) Marsh Bird Surveys (freshwater marsh)

(1) Purpose and justification *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

e) Colonial Waterbird and Shorebird Breeding Surveys (Salton Sea shoreline)

- (1) **Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) **Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) **Time period and frequency** *(Description of when and how often monitoring will be conducted)*
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- (5) **Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*
- (6) **Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*
- (7) **Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*
- (8) **Opportunities for integration**

f) Bird Counts at Roost Sites

- (1) **Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) **Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) **Time period and frequency** *(Description of when and how often monitoring will be conducted)*
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(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

g) **Bird Surveys (agricultural lands)**

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

h) **Bird Surveys (tamarisk scrub)**

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

i) Dead and Sick Bird Counts and Analysis

(1) Purpose and justification *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

5. Fish Resources Monitoring Activities (includes paragraph providing background information on subject matter)

a) Fish Surveys (Salton Sea)

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*
- (6) Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*
- (7) Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*
- (8) Opportunities for integration**

b) Fish Surveys (created saline habitats)

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) Overview of similar current monitoring activities (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) Opportunities for integration

c) Desert Pupfish Surveys

(1) Purpose and justification (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) Location (*Identification of the location where monitoring activities will be conducted*)

(3) Time period and frequency (*Description of when and how often monitoring will be conducted*)

(4) Protocol (*brief summary and reference to appendices*)

(5) Data collection/analysis (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) Quality assurance (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) Overview of similar current monitoring activities (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) Opportunities for integration

d) Fish Kill Surveys

(1) Purpose and justification (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) Location (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** *(Description of when and how often monitoring will be conducted)*

(4) **Protocol** *(brief summary and reference to appendices)*

(5) **Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) **Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) **Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) **Opportunities for integration**

6. Invertebrate Resources Monitoring Activities (includes paragraph providing background information on subject matter)

a) Water Column Phytoplankton Surveys (Salton Sea)

(1) **Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) **Location** *(Identification of the location where monitoring activities will be conducted)*

(3) **Time period and frequency** *(Description of when and how often monitoring will be conducted)*

(4) **Protocol** *(brief summary and reference to appendices)*

(5) **Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) **Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) **Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) **Opportunities for integration**

b) Water Column Phytoplankton Surveys (created saline habitats)

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*
- (6) Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*
- (7) Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*
- (8) Opportunities for integration**

c) Water Column Zooplankton Surveys (Salton Sea)

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

d) **Water Column Zooplankton Surveys (created saline habitats)**

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

e) **Water Column Macroinvertebrate Surveys (Salton Sea)**

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

f) Water Column Macroinvertebrate Surveys (created saline habitats)

(1) Purpose and justification *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

g) Benthic Macroinvertebrate Surveys (Salton Sea)

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*
- (6) Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*
- (7) Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*
- (8) Opportunities for integration**

h) Benthic Macroinvertebrate Surveys (created saline habitats)

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*
- (6) Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

i) Pileworm Surveys (Salton Sea)

(1) Purpose and justification *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

j) Vector (mosquito) Monitoring

(1) Purpose and justification *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) **Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) **Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) **Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) **Opportunities for integration**

C. Hydrology and Water Quality (DWR w/ CH)

1. Overview

2. Key Questions and Information Needs

3. Geographic Scope

4. Surface Water Monitoring Activities

a) **Measurement of Surface Water Flows (gaging)**

(1) **Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) **Location** *(Identification of the location where monitoring activities will be conducted)*

(3) **Time period and frequency** *(Description of when and how often monitoring will be conducted)*

(4) **Protocol** *(brief summary and reference to appendices)*

(5) **Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) **Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) **Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

b) Measurement of Salton Sea Water Surface Elevation

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*
- (6) Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*
- (7) Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*
- (8) Opportunities for integration**

5. Groundwater Monitoring Activities

a) Measurement of Shallow Groundwater Levels and Quality

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

6. Hydrodynamics Monitoring Activities

a) In-Sea Temperature and Current Monitoring

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

7. Water and Sediment Quality Monitoring Activities

a) Inflow Water and Sediment Quality Sampling and Analysis

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

b) Salton Sea Water and Sediment Quality Sampling and Analysis

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

- c) **Selenium Sampling and Analysis (water, sediment, and biota)**
- (1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)
 - (2) **Location** (*Identification of the location where monitoring activities will be conducted*)
 - (3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)
 - (4) **Protocol** (*brief summary and reference to appendices*)
 - (5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)
 - (6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)
 - (7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)
 - (8) **Opportunities for integration**

D. Geography and Geology (DWR)

1. **Overview**
2. **Key Questions and Information Needs**
3. **Geographic scope**
4. **Geography Monitoring Activities**
 - a) **Bathymetry**

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

b) Land Surface Elevation

(1) Purpose and justification *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

c) Land Use

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*
- (6) Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*
- (7) Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*
- (8) Opportunities for integration**

d) Land Cover

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*
- (6) Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

e) Snags and Island Surveys (Salton Sea nearshore)

(1) Purpose and justification *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices))*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

5. Geology Monitoring Activities

a) Landslides and Slumps

(1) Purpose and justification *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

b) Sedimentation Rate

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

c) Ongoing seismic monitoring will be incorporated into the overall network.

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*
- (3) Time period and frequency** *(Description of when and how often monitoring will be conducted)*
- (4) Protocol** *(brief summary and reference to appendices)*
- (5) Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*
- (6) Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*
- (7) Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*
- (8) Opportunities for integration**

E. Air Quality and Climate (DWR w/ CH)

- 1. Overview**
- 2. Key Questions and Information Needs**
- 3. Geographic scope**
- 4. Monitoring Activities**

a) Ambient Air Quality Monitoring

- (1) Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*
- (2) Location** *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

b) Chemical Analysis of Collected Dust Samples

(1) Purpose and justification *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location *(Identification of the location where monitoring activities will be conducted)*

(3) Time period and frequency *(Description of when and how often monitoring will be conducted)*

(4) Protocol *(brief summary and reference to appendices)*

(5) Data collection/analysis *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) Quality assurance *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) Overview of similar current monitoring activities *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) Opportunities for integration

c) Surface Meteorological Monitoring

- (1) Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)
- (2) Location** (*Identification of the location where monitoring activities will be conducted*)
- (3) Time period and frequency** (*Description of when and how often monitoring will be conducted*)
- (4) Protocol** (*brief summary and reference to appendices*)
- (5) Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)
- (6) Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)
- (7) Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)
- (8) Opportunities for integration**

d) Particle Deposition Sampling and Analysis

- (1) Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)
- (2) Location** (*Identification of the location where monitoring activities will be conducted*)
- (3) Time period and frequency** (*Description of when and how often monitoring will be conducted*)
- (4) Protocol** (*brief summary and reference to appendices*)
- (5) Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)
- (6) Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) Overview of similar current monitoring activities (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) Opportunities for integration

e) Upper Air Meteorological Monitoring

(1) Purpose and justification (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) Location (*Identification of the location where monitoring activities will be conducted*)

(3) Time period and frequency (*Description of when and how often monitoring will be conducted*)

(4) Protocol (*brief summary and reference to appendices*)

(5) Data collection/analysis (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) Quality assurance (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) Overview of similar current monitoring activities (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) Opportunities for integration

f) Microclimate Monitoring

(1) Purpose and justification (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) Location (*Identification of the location where monitoring activities will be conducted*)

(3) Time period and frequency (*Description of when and how often monitoring will be conducted*)

(4) Protocol (*brief summary and reference to appendices*)

(5) **Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) **Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) **Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) **Opportunities for integration**

g) Threshold Wind Velocity Measurements

(1) **Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) **Location** *(Identification of the location where monitoring activities will be conducted)*

(3) **Time period and frequency** *(Description of when and how often monitoring will be conducted)*

(4) **Protocol** *(brief summary and reference to appendices)*

(5) **Data collection/analysis** *(Description of the data to be collected and the expected use of these data in subsequent analyses)*

(6) **Quality assurance** *(Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP)*

(7) **Overview of similar current monitoring activities** *(Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan)*

(8) **Opportunities for integration**

h) Chemical and Physical Analysis of Playa

(1) **Purpose and justification** *(Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met)*

(2) Location (*Identification of the location where monitoring activities will be conducted*)

(3) Time period and frequency (*Description of when and how often monitoring will be conducted*)

(4) Protocol (*brief summary and reference to appendices*)

(5) Data collection/analysis (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) Quality assurance (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) Overview of similar current monitoring activities (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) Opportunities for integration

i) Sand Surveys

(1) Purpose and justification (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) Location (*Identification of the location where monitoring activities will be conducted*)

(3) Time period and frequency (*Description of when and how often monitoring will be conducted*)

(4) Protocol (*brief summary and reference to appendices*)

(5) Data collection/analysis (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) Quality assurance (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) Overview of similar current monitoring activities (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) Opportunities for integration

F. Socioeconomics (USGS)

1. Overview

2. Key Questions and Information Needs

3. Geographic scope

4. Monitoring Activities

a) Demographic monitoring

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

b) Economic monitoring

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

c) Human perception monitoring

(1) **Purpose and justification** (*Description of reason for monitoring, why it's necessary, linkage to management or decision making, and the objectives to be met*)

(2) **Location** (*Identification of the location where monitoring activities will be conducted*)

(3) **Time period and frequency** (*Description of when and how often monitoring will be conducted*)

(4) **Protocol** (*brief summary and reference to appendices*)

(5) **Data collection/analysis** (*Description of the data to be collected and the expected use of these data in subsequent analyses*)

(6) **Quality assurance** (*Description of data quality expectations and recommended procedures if appropriate, including development of a QAPP*)

(7) **Overview of similar current monitoring activities** (*Overview of related current monitoring activities and description of if and how information from these sources will be integrated into the plan*)

(8) **Opportunities for integration**

III. Data Integration, Assessment, Prioritization, and Reporting (USGS)

A. Data Integration *(This section will be developed from information presented in previous sections under the “opportunities for integration” heading.)*

B. Data assessment (developed by all)

C. Prioritization (developed by all)

D. Reporting *(results of data collection, analysis, and assessment will be distributed to scientists, managers, stakeholders, and the general public. Included in the reporting section will be a paragraph communicating the intent to also provide recommendations for making adjustments to the monitoring and assessment plan as needed and as supported by assessment of data collected through the MAP.)*

IV. Data Management (DFG w/ CH) *(Overview of the role and importance of data management and how the data will be organized and made accessible. Emphasize the importance of geo-referenced information. Refer to data management plan in appendix)*

V. References (DWR and DFG, w/ CH)

VI. Appendices (DWR and DFG, w/ CH)

A. FTG Key Questions

B. Conceptual Models

C. Protocols

D. Data Management Plan