

# Identification of the Preferred Alternative

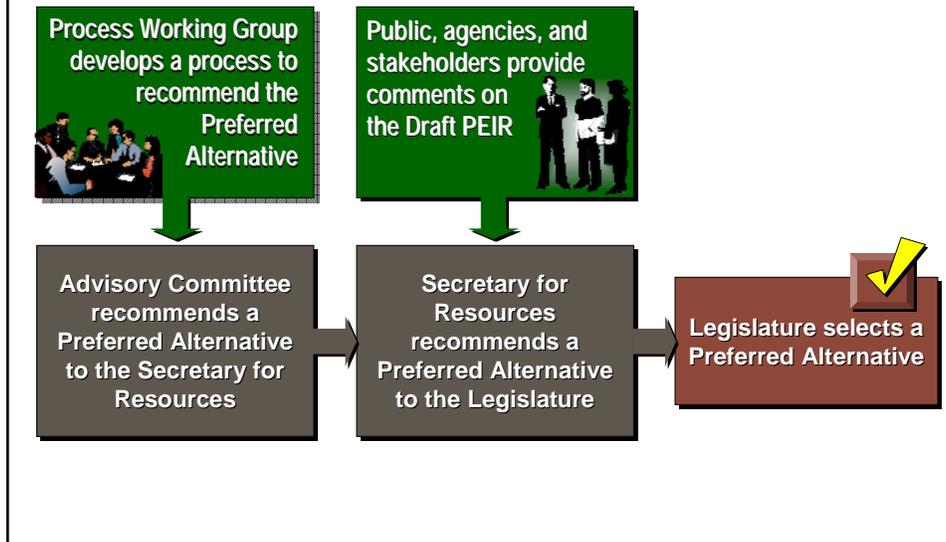


Advisory Committee  
February 27, 2007

## Presentation

- ◆ **Overview of the Process**
- ◆ **Process Working Group Results**
  - **Habitat**
  - **Air Quality**
  - **Water Quality**
- ◆ **Discussion**
- ◆ **Next Steps**

## Steps for Selecting a Preferred Alternative



## Preferred Alternative Process Working Group

### ◆ **Step 1: Identified process, attributes, and reported back to Advisory Committee**

#### ■ **Mandated by legislation**

- ❖ Restore fish and wildlife
- ❖ Mitigate air quality impacts caused by restoration
- ❖ Protect water quality

#### ■ **Non-mandated**

- ❖ Recreation and economic opportunities
- ❖ Compatibility with existing and planned land uses
- ❖ Changes to microclimate
- ❖ Adaptability to changes
- ❖ Environmental Justice effects and Hazards
- ❖ Visual and Noise during construction & implementation
- ❖ Traffic during construction & implementation

## Preferred Alternative Process Working Group - continued

### ◆ **Step 2: Advisory Committee directed Technical Working Groups to:**

- Review/add attributes
- Prioritize attributes
- Score alternatives with respect to attributes
- Provide information to Process Working Group

### ◆ **Methodology**

- Alternative descriptions as presented in Draft PEIR
- Costs and associated funding not considered at this time

## Habitat Working Group Review

## Habitat Working Group Review - Summary Statements

- ◆ **Saline Habitat Complex would provide the greatest potential for historic bird diversity and abundance with the least uncertainty and risk**
  - However, fish diversity would be low if SHC were the only habitat component
- ◆ **Deep marine sea, with saline habitat complex, could increase overall wildlife diversity (fish and birds)**
  - However, greater uncertainty and risk related to water quality issues

## Habitat Working Group Review - Summary Statements

- ◆ **Marine sea formed with a barrier or concentric levees and with depths less than 10 to 12 meters could provide fish diversity with less risk from water quality issues**
- ◆ **Preferred alternative might combine components from several alternatives**
- ◆ **Incorporating habitat management flexibility is crucial for design and operation criteria to help manage uncertainty and risk**

## Air Quality Working Group Review

### Air Quality Working Group Review - Summary Statements

- ◆ **Would be required to demonstrate conformity with the applicable SIP - could be met by extending construction period; acceptable emission offsets; modifying the approved SIP; or a combination of measures**
- ◆ **Emissions of PM10 and NOx occurring during operations would be of greater significance than emissions during peak construction because operations would be over a longer period of time**
- ◆ **Generally, restoration impacts increase relative to the complexity of the alternatives**

## Air Quality Working Group Review - Summary Statements

- ◆ **Estimates of total PM10 and NOx emissions for all alternatives exceed local significance threshold levels**
  - For many alternatives, emissions could likely be reduced to levels below local significance thresholds by use of less-emissive equipment and/or implementation of more efficient methods of playa dust control
  - Movement of large amounts of rock and gravel may still exceed local significance thresholds for non-attainment pollutants

## Air Quality Working Group Review - Summary Statements

- ◆ **Research needed to help formulate an acceptable air quality management plan for restoration of the Salton Sea**
  - Additional air quality monitoring at sites around the Salton Sea
  - Research on playa emissivity
  - Salt chemistry and crusting dynamics
  - Pilot testing of various dust control methods and efficiencies

## Water Quality Science Panel Review

### Water Quality Science Panel Review - Selenium Summary Statements

- ◆ **In shallow water habitats, birds exposed to through food web. Selenium also mixed into the water column by winds. The longer the system operates, the greater the potential for build up. Cells may need periodic cleaning**
- ◆ **Adverse effect on some breeding birds**
  - Selenium rapidly depleted once birds are removed from a selenium source
  - Effect at Salton Sea: some level of decreased hatchability
  - Effects are limited and could be mitigated
- ◆ **If possible - avoid habitat in high selenium areas**

## Water Quality Science Panel Review - Hydrogen Sulfide Summary Statements

- ◆ **Manageable, short-term issue**
- ◆ **Deep seas would continue and may increase duration of stratification and episodic releases of hydrogen sulfide and ammonia**
- ◆ **Shallower seas (10 to 12 meters) would decrease duration of stratification and lead to more frequent mixing**
- ◆ **Hydrogen sulfide levels can be controlled to some degree with nutrient reduction**
  - **Disagreement about amount of phosphorus reduction needed to reduce hydrogen sulfide – may need up to 90% reduction**

## Water Quality Science Panel Review - Temperature Summary Statements

- ◆ **Low water temperature poses a risk to tilapia in shallow water habitats**
- ◆ **Lakes would stay warm enough in winter to support tilapia.**
- ◆ **If fish kill happens when birds are present that depend on fish (i.e., pelicans in winter), this would become an important issue**

Water Quality Science Panel Review -  
Dissolved Oxygen Summary Statements

- ◆ **Diurnal fluctuations in shallow water habitats**
- ◆ **Seasonal levels due to stratification in deep water habitats**
- ◆ **Dissolved oxygen, by itself, is not a high priority as compared to other water quality issues**

Preferred Alternative Process  
Working Group Review

## Preferred Alternative Process Working Group Review Summary Statements

- ◆ **All alternatives:**
  - **Compatible with continued agricultural land use**
  - **Compatible with existing wetlands and refuges, however, effects would occur**
  - **Neutral to camping and OHV opportunities**
- ◆ **Some alternatives would present a higher risk to workers from exposure to hazardous materials**
- ◆ **Cultural and paleontological resources would be protected under permitting requirements**

## Preferred Alternative Process Working Group Review Summary Statements

- ◆ **Some attributes were not used in scoring because:**
  - **Insufficient detail in Draft PEIR**
  - **Similar data across all alternatives**
  - **Attribute protected under all alternatives in permitting requirements**

## Overall Observations

- ◆ **Early Start Habitat and shallow saline habitat should be included in Preferred Alternative**
- ◆ **Many potential impacts can be mitigated - but all impacts cannot be equally mitigated**
  - Mitigations may be developed using additional information
- ◆ **Non-mandated recreation and economic opportunities could be incorporated in any alternative**
- ◆ **Some Details (e.g. Air Quality Management) must be developed at the project level**

## Summary of Alternative Scoring

- ◆ **No alternative rose to the top**
  - Components drove the scoring
- ◆ **Top 3 Groupings of Alternatives**
  - Alternatives 1 & 2 - Saline Habitat Complex
  - Alternatives 3 & 4 - Concentric Water Bodies
  - Alternative 5 - Marine Sea and Saline Habitat Complex

## Decisions for Preferred Alternative

- ◆ **Is Early Start Habitat included with any alternative?**
- ◆ **Shallow Saline Habitat Criteria**
  - Southern end in concentric rows? (Alts. 1, 2, or 5)
  - Throughout Sea Bed in concentric lakes? (Alt. 4)
- ◆ **Marine Sea (less than 10 to 12 meters) Criteria**
  - With straight barrier? (Alt. 5)
  - In horseshoe-shape? (combine Alts. 3 and 5)
  - Others?