4.8 VEGETATION AND WILDLIFE

4.8.1 Summary of Environmental Consequences

Significant and mitigable vegetation and wildlife impacts would occur under the No Action Alternative, Alternative 2, Alternative 3, and Alternative 4 as a result of changes in habitats and incompatibilities between restoration activities and existing resources. Alternatives 1 and 5 would result in less than significant impacts to vegetation and wildlife because the affected area would be much smaller than that of the other alternatives and would be implemented mainly within areas of existing water.

4.8.2 Significance Criteria

Significant vegetation and wildlife impacts would occur if one of the alternatives were to substantially alter the current habitats of the Salton Sea and surrounding areas, affecting forage or cover for wildlife, or in the case of protected species, resulting in direct removal of plants. Criteria used to evaluate the significance of impacts to vegetation and wildlife are derived from the legal (federal and state) requirements to protect special status species and sensitive habitats, as described in Chapter 3. Specific criteria also may take into account issues identified during public scoping of the EIS/EIR, discussions with USFWS and CDFG, and other reports addressing potential impacts of various land uses at Salton Sea on vegetation and wildlife.

An alternative could have significant vegetation and wildlife impacts if its implementation would result in any of the following:

- Harm to, harassment of, or destruction of individuals of any vegetation and wildlife species listed as endangered, threatened, or rare under federal or California law. In addition, such impacts are considered significant to other vegetation and wildlife species under the following conditions:
  - survival and reproduction of a species in the wild are in immediate jeopardy;
  - the species exists in such small numbers throughout all of or a significant portion of its range that it may become endangered if its environment worsens due to the project;
  - the species is likely to become endangered in the foreseeable future and may be categorized as threatened under federal law;
- Modification or destruction of the habitat, travel or dispersion corridors, or reproductive areas of endangered, threatened, rare, or other vegetation and wildlife species as defined in the preceding paragraphs;
- Loss of a substantial number of any vegetation or wildlife species that could affect abundance or diversity of that species beyond normal variability; or
- Measurable degradation of sensitive habitats, such as wetlands and/or other legally protected habitats.

4.8.3 Assessment Methods

Potential impacts to vegetation and wildlife are assessed by comparing proposed changes in habitat use under each of the alternatives to current and planned uses of these same areas. Existing vegetation and wildlife status, as described in Chapter 3, form the basis for assessing the significance of changes to these resources under each of the alternatives.

4.8.4 No Action Alternative

Under the No Action Alternative, significant and unmitigable impacts to vegetation and wildlife would occur. The continued increase in salinity would make the waters more and more uninhabitable for all species that use the Salton Sea. Further concentration of minerals and pollutants may cause direct mortality in those species that spend large amounts of time in or exposed to the waters.

Effect of No Action Alternative with Continuation of Current Inflow Conditions

Significant and unmitigable vegetation and wildlife resource impacts would occur under the No Action Alternative in conjunction with continuation of the current flow conditions. The salinity is expected to increase to over 52,896 mg/L, causing a loss of 348 acres of wetlands that provide habitat for the state endangered California black rail, which is also a federal species of concern and the federally listed as endangered Yuma clapper rail. The wetland plant species may be replaced by more salt-tolerant species, such as tamarisk, which provide little wildlife value.

Effect of No Action Alternative with Reduced Inflows

Significant and unmitigable impacts would be expected under the No Action Alternative with reduced inflows. Under these conditions, Sea level would drop by 9 feet. Effects of this drop would be widespread. The negative effects described above would be made more severe with salinity levels of 75,050 mg/L, which would inhibit any significant revegetation. Impacts would include vegetation losses, including 348 acres of shoreline strand wetlands and an indeterminate amount of adjacent wetlands that depend on Sea water for existence. This habitat is not likely to reestablish itself as the Sea level drops because of high levels of residual salt in the soils. In addition fluctuations in the water levels of the Sea would affect burrowing wildlife or shoreline vegetation. The drop in water level would cause downcutting of the channels of streams flowing into the Sea, thereby draining adjacent wetlands and marsh areas. The loss of some part of these wetlands would further affect species dependent on wetlands, such as the California black rail and Yuma clapper rail.

4.8.5 Alternative 1

Effect of Alternative 1 with Continuation of Current Inflow Conditions

North and South Evaporation Ponds (98kaf/y). Construction and operation of the concentration ponds under Alternative I would result in less than significant impacts to vegetation and wildlife. The evaporation ponds mostly would be constructed in existing open water habitats, thus not affecting most wildlife resources, other than birds and fish

(see preceding sections). The dikes that would be constructed in conjunction with the evaporation ponds would extend five miles seaward. This could stagnate wetland areas due to the lack of nutrient replenishment and adequate water circulation. Vegetative species using these areas may become physiologically stressed and less viable. However, this impact would offset by the reduction in salinity levels from 52,896 mg/L to 36,834 mg/L. This reduction also would benefit those wildlife species dependent on aquatic resources.

Pupfish Pond. To maintain this habitat and connectivity between the drains in this area, dikes would be constructed from the north and south ends of the southwest evaporation pond extending to the shoreline, effectively creating a nearshore habitat protection pond between the shore and the evaporation pond. Significant snag habitat on the west side of the New River and the habitat around the mouth of San Felipe Creek would also be protected within this pond. Salinity levels appropriate to maintain conditions suitable for pupfish habitat would be attained by using a pump system, bringing in Salton Sea water to mix with a smaller portion of drain water. Construction of these facilities would preserve critical nearshore habitat for wildlife species using the nearshore habitat.

North Wetland Habitat. The impacts of the North Wetland Habitat would be similar to those described above for the Pupfish Pond.

Effect of Alternative 1 with Reduced Inflows

There would be no impacts to vegetation and wildlife due to Alternative 1 with reduced inflows. Under the reduced inflow scenario, the concentration ponds would be built on lands currently in the Sea, so no impacts would occur. However, as the Sea level drops, the ponds would be left on dry land. The reduction in salinity levels from 75,050 mg/L to 45,862 mg/L would allow for revegetation of the nearshore zone benefiting those species dependent on the Sea.

Displacement Dike. This dike would be constructed in the southern portion of the Sea as shown on Figure 2.4-4. It is designed to essentially reduce the total area of the Sea, effectively displacing enough water to maintain elevations if annual inflows are reduced to 1.06 maf per year. Construction activities for the displacement dike would temporarily disturb approximately 360 on-shore acres, would take approximately 48 months to complete, and would involve a maximum of 300 to 330 workers. This feature would have little long-term effects on wildlife resource using the Sea compared to the no action alternative.

4.8.6 Alternative 2

Effect of Alternative 2 with Continuation of Current Inflow Conditions

EES Located North of Bombay Beach (150 kag/year – Showerline Technology). Construction of the EES north of Bombay Beach would have significant and unmitigable impacts on vegetation and wildlife. Each of these impacts could affect a variety of species, particularly those that use the water and shoreline areas.

The waters within the EES system would likely be highly toxic to wildlife species that come into contact with them due to the highly elevated salinity and contaminants. Species exposed to these waters also would be directly affected, and their reproductive success may be reduced.

Construction of the EES system would result in the direct loss of 7,500 acres of desert habitat and associated vegetation. The area is characterized as creosote bush scrub dominated by creosote bush, burro weed and brittle brush. The impacts that would occur include the direct loss of plants, the local wildlife species that depend on this habitat for food, cover, and reproduction, and the resultant loss of prey base for predator species. Species that may be affected include the flat tailed horned lizard and the western chuckwalla (a species of concern). In addition, the facilities would occupy a large block of land that could hinder migration or foraging patterns of wildlife that range over larger areas, such as deer, puma (a species of concern), and coyote. Because of the scale of land affected mitigation to a less than significant level would not be possible.

Additional direct losses would occur from establishing haul roads and borrow areas needed to construct the retaining dikes associated with the EES system containment ponds. The roads and borrow areas would result in an additional temporary loss of 26 acres of creosote bush habitat.

The EES would provide little long-term beneficial effects over the no action alternative under this scenario to vegetation and wildlife since the Sea's salinity levels under this alternative would only decrease from 52,896 mg/L to 45,510 mg/L.

North Wetland Habitat. The impacts of the displacement dike would be similar to those described under Alternative 1.

Effect of Alternative 2 with Reduced Inflows

The impacts of Alternative 2 with reduced inflows would be similar to those described for Alternative 2 with current inflow conditions. The salinity in the Salton Sea under this scenario would be reduced from 75,050 mg/L to 53,726 mg/L, providing beneficial impacts to vegetation and wildlife that depend on the Sea's viability.

Displacement Dike. The impacts of the displacement dike would be similar to those described under Alternative 1under the low flow conditions.

Import Flood Flows. In addition to those actions described above, Alternative 2 with reduced inflows would include augmenting inflow to the Sea by using flood flows from the Colorado River. Colorado River flood flows are generally available approximately every three to seven years. The flood flows would eventually be released through the Alamo River and Coachella Evacuation Channel. Up to 300,000 acre-feet or a total of 1250 cfs could be available during flood releases over a one to four month period. Release of these high flows over an extended period would cause increased erosion in

the Alamo River causing a degradation or loss of wetland habitat impacting wildlife species dependent on that habitat.

4.8.7 Alternative 3

Effect of Alternative 3 with Continuation of Current Inflow Conditions

EES located at the Salton Sea Test Base (150kaf/year) – Showerline technology). Construction of the EES on the former Salton Sea Test Base would alter the habitats in this area. Construction of the EES at this site would affect approximately 7,500 acres of currently undeveloped land. The area is characterized as creosote bush scrub dominated by creosote bush, burro weed and brittle brush. As with the EES at Bombay Beach, significant and unmitigable vegetation and wildlife impacts would occur in conjunction with this project, and these impacts would be similar to those outlined for Bombay Beach.

North Wetland Habitat. Impacts for the North Wetland Habitat would be similar to those described under Alternative 1.

Effect of Alternative 3 with Reduced Inflow Conditions (1.06 MAFY)

As with the EES at Bombay Beach, significant and unmitigable vegetation and wildlife impacts would occur in conjunction with this project, and these impacts would be similar to those outlined for Bombay Beach.

Displacement Dike. Impacts for this facility would be similar to those described under Alternative 1 with reduced inflow conditions.

Import Flood Flows. The impacts of the import flood flow feature would be similar to those described under Alternative 2 with reduced inflow conditions.

4.8.8 Alternative 4

Effect of Alternative 4 with Continuation of Current Inflow Conditions

South Evaporation Pond (68 kaf/year) and an EES located at Salton Sea Test Base (100 kaf/year – Showerline Technology. Construction of the concentration ponds and the EES at the former Salton Sea Test Base would result in significant and unmitigable vegetation and wildlife impacts, which would be the similar to the combined impacts described above under alternatives 1 and 3. The combined effects of potential resource damages from the EES and concentration ponds under Alternative 4 would be more severe than those under the No Action Alternative and alternatives 1, 2, and 3. A total of 7,500 acres of desert habitat would be permanently lost, and 306 acres would be temporarily lost. The area is characterized as creosote bush scrub dominated by creosote bush, burro weed and brittle brush.

The beneficial impacts of this alternative would be the reduction in the salinity levels from 52,896 mg/L to 39,566 mg/L providing beneficial impacts to vegetation and wildlife that depend on the Sea's viability.

Pupfish Pond. The impacts of the pupfish pond would be similar to those described under Alternative 1under the low flow conditions.

North Wetland Habitat. Impacts for the North Wetland Habitat would be similar to those described under Alternative 1.

Effect of Alternative 4 with Reduced Inflows

Construction of the concentration ponds and the EES at the Salton Sea Test Base would result in significant and unmitigable vegetation and wildlife impacts. Impacts would be the same as those described above under alternatives 1 and 3. The combined effects of potential resource damages from the EES and concentration ponds under Alternative 4 would be more severe than those under the No Action Alternative and alternatives 1, 2, and 3. Salinity levels would be reduced from 75,050 mg/L to 47,467 mg/L providing beneficial impacts to vegetation and wildlife that depend on the Sea's viability.

Displacement Dike. Impacts for this facility would be similar to those described under Alternative 1 with reduced inflow conditions.

Import Flood Flows. The impacts of the import flood flow feature would be similar to those described under Alternative 2 with reduced inflow flow conditions.

4.8.9 Alternative 5 with Continuation of Current Inflow Conditions

EES Located Within the North Evaporation Pond (150 kaf/year EES – Ground Mounted Spray Technology. Under Alternative 5, EES would be constructed within the north evaporation pond and ground mounted spray units would replace the tower and showerline units proposed for Alternatives 2 and 3. Construction and operation of the concentration ponds under Alternative 5 would result in significant and mitigable impacts to wildlife and vegetation, the result of direct loss of habitat due to construction activities. Beneficial impacts would occur to species dependent upon the Salton Sea, as the operation of the ponds would reduce the salinity levels to 40,841 mg/L compared to 52,896 mg/L under no action conditions. Aquatic resources are expected to significantly benefit by this reduced salinity which would benefit those wildlife species dependent on the aquatic ecosystem of the Sea.

The level of the Salton Sea would drop by approximately 9 feet significantly impacting nearshore habitat. Approximately 600 acres of this habitat would be lost and the impacts would be similar to those described under the No Action Alternative under low flow conditions.

Construction and use of a haul road would affect wildlife species by direct loss of habitat, disruption of migratory patterns, and by noise that would be introduced into upland habitat areas. These effects would be mitigable if destruction of habitat is minimized and the road is removed and the footprint is restored to current conditions as quickly as possible.

North Wetland Habitat. Impacts for the North Wetland Habitat would be similar to those described under Alternative 1 with reduced inflow conditions.

4.8.10 Alternative 5 with Reduced Inflow Conditions

Impacts would be the same as those described above in the current inflow scenario, except that salinity levels would be reduced to 46,175 mg/L from 75,050 under the not action alternative. Although most aquatic prey species can survive at this level, their populations would be stressed. However, there still would be an overall beneficial impact to wildlife species dependent on the aquatic ecosystem. The Sea level would be lowered by three feet over the 30-year period with little or no impacts to nearshore habitat.

Displacement Dikes. Impacts for the displacement dike would be similar to those described under Alternative 1 with reduced inflow conditions.

Import Flood Flows. The impacts of the import flood flow feature would be similar to those described under Alternative 2 with reduced inflow flow conditions.

4.8.11 Cumulative Effects

There would be little cumulative effects on the vegetation and wildlife from constructing the concentration ponds and other proposed project features, except for the EES. However, the significant effects on vegetation and associated wildlife that would occur from constructing the concentration ponds and the EES which would combine with the effects of other proposed developments in the basin to put further pressure on these resources.

4.8.12 Mitigation Measures

Critical habitats in the vicinity of the Salton Sea would not be adversely affected by project activities under the alternatives due to their locations away from affected areas. These habitats include desert fan palm oasis woodland and various stages of desert dunes. However, some vegetation species may be displaced or physiologically stressed due to project activities. Mitigation measures for these species are described here.

- Enhance adjacent areas to serve as supplemental habitats/potential areas for expansion;
- create new suitable areas to serve as locations for the vegetation species to exist;
- avoid vegetation and habitats where possible during construction, material transport, dumping, and borrow activities; and
- place the haul road so that it causes minimal disturbance to existing biological resources.

Construction and operation of facilities associated with the proposed alternatives may adversely affect some wildlife species. In order to mitigate for any impacts, the following are proposed:

- Avoid habitats and areas known to be important to area wildlife where possible;
- restore any disturbed habitats or critical areas;
- introduce supplemental habitat components, such as artificial burrows and cover, to provide adequate resources for potentially displaced individuals;
- relocate wildlife species found in areas potentially affected by construction and operation of the facilities, including those individuals occurring near roads and thoroughfares where possible;
- establish an active monitoring program to assess wildlife conditions during and after project implementation, to also include impacts from noise;
- construct fencing or other barriers to prevent wildlife from entering hazardous areas or environments, such as the potentially toxic concentration ponds with care taken to avoid impacting local and regional migration patterns; and
- restore to the extent possible temporary construction roads, haul roads, and borrow area.