Where Water Meets Dust: Regenerative Landscape Strategies for the Salton Sea California's largest lake formed by accident in 1905 in the low desert of Imperial Valley. The Salton **SALTON SEA RECESSION** SALTON SEA FORMATION & HYDROLOGY Sea grew and supported tourism and a massive population of migratory birds until depleting water inputs and high temperatures caused the Sea to recede and its salinity to exceed thresholds for Canals and laterals most fish species. COLORADO RIVER 700s Prehistoric Lake distribute water to Cahuilla Extents Today, precious water pours out of agricultural drains meant to maintain the Sea's water level agricultural fields Because they were built before the Sea's decline, the drains fall short of the current shoreline and flow over exposed hypersaline lakebed, forming a complex of unstable wetlands and dry playa. Invasive salt-tolerant tamarisk dominates the wetlands, and the playa, saturated with pollutants from runoff, becomes airborne in windy conditions, posing serious health risks for residents of the Valley. Under the wetlands and exposed lakebed, vast geothermal resources through drains to the SALTON SEA encourage a hopeful economic future 1905 Colorado River Salton Sea carrying salts and pollutants Levee Breach Forms **Future Salton** Inspired by dust mitigation and desert water harvesting tactics from across the globe, Salton Sea new land systems might restore native desert habitats, promote environmental Sea Shrinks to justice, and make space for geothermal industry. The proposed landscape Two Basins strategies seek to conserve water and regenerate healthy soil and native habitats Managed marshes COLORADO RIVER via multi-functional and adaptive networks of land forming, surface roughening, Old drains fall short 2050 Salton water treatment, and water control of retreating sea 1905-2025 Canal and Geothermal plants **Sea Predicted** Drainage System to Recession 2050 SHORELINE Salton Sea 2025 Salton 2003 Salton Sea Level SALTON SEA Sea Shoreline * Colorado Water Diversion to San Diego begins under QSA. Receding water exposes hypersaline lakebed MAP LEGEND Dust poses serious Geothermal Power Plant health risks COLORADO RIVER All-American Canal Rivers and Canals Wetlands form at the **All-American Canal** end of drains Ditch Conveyance Agriculture Urban Area SALTON SEA Exposed playa contains Wetland and Playa Complex high concentrations of metals and salts LANDSCAPE STRATEGIES KEY 2025 SHORELINE Existing Cattail Marsh Existing Iodine Bush Shrub Wetland Existing Tamarisk Wetland Existing Playa Proposed Dune Treatment Proposed Furrow Treatment Proposed Ephemeral Marsh Proposed Ephemeral Shrub Wetland Proposed Drain Water Treatment Corridor Proposed Gravel Road with Water Harvesting Proposed Berm with Water Harvesting Proposed Regenerative Agriculture **Proposed Geothermal Facility** 1978 SHORELINE PROPOSED REGENERATIVE STRATEGIES - 2025 HISTORIC SALTON SEA **PRESENT Existing Conditions** Proposed Hydrologic and Circulation Framework **Proposed Landscape Conversions** Existing Cattail Marsh --> Existing Tamarisk Wetland --> **Existing Cattail Marsh** Proposed Drain Water Treatment Corridor **Proposed Dune Treatment Proposed Ephemeral Marsh** Cattail Marsh Treatment Wetland Living Cattail Water Catchment Desert Marsh Species Depression Beneath Dune Culvert to Drain Corridor Shrub Scrub Treatment Wetland Culvert to Drain Corridor Rock Drop Secondary Channel Saline Topsoil Scraped Low Desert Scrub and Shaped into Dunes Berm Road Berm Road : Secondary Channel Pre-Existing Marsh Tertiary Channel Secondary Channel Berms Between Management Areas Furrow **Existing Iodine Bush Shrub Wetland** Regenerative Impacts: Regenerative Impacts: and Drain Soil Chemistry Soil Chemistry Water Harvesting Regenerative Impacts: Water Treatment 000 Water Treatment Wind Abatment Water Harvesting 000 Water Treatment ••• Existing Iodine Bush Shrub Wetland --> Existing Playa --> **Existing Tamarisk Wetland Proposed Ephemeral Shrub Wetland Proposed Furrow Treatment** Living Tamarisk **Proposed Gravel Road with Water Harvesting** K Proposed Berm with Water Harvesting Desert Shrub Wetland Species Secondary Channel Dead Tamarisk Culvert to Drain Corridor Water Catchment and Drain Culvert to Drain Corridor Water Catchment Ditch Secondary Channel Depression Low Desert Scrub : Furrows Gravel Road Over Berm Berm Road Desert Tree Species Ephemeral Pools Amended Planting Pit Desert Tree D Existing Playa Salton Sea Regenerative Impacts: Regenerative Impacts: Regenerative Impacts: Regenerative Impacts: Soil Chemistry Soil Chemistry Soil Chemistry Soil Chemistry Hypersaline Playa Wind Abatment Wind Abatment Wind Abatment Water Harvesting • • • Water Harvesting Water Harvestina Water Harvesting ••• Habitat Function ● ● ○ Habitat Function Habitat Function Habitat Function • O O Water Treatment • O O Water Treatment Water Treatment 000 Water Treatment 000

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