

Desert Tortoise Habitat Restoration

The Department of Fish and Game augmented on-going habitat restoration efforts undertaken by the Desert Tortoise Preserve Committee, Inc (DTPC) at a desert tortoise natural area near California City, CA. The area is in the northwestern Mojave Desert on the western edge of the Rand Mountains in eastern Kern County. The so-called Camp "C" is approximately 32 acres and served as the city-owned public recreation area that was frequently used by off-highway vehicle users. Over the years, the habitat in and around the campground experienced significant degradation. In 2005, Camp "C" was donated to DTPC, and about 35% of the land was almost completely devoid of vegetation and was highly compacted. Camp "C" is about one mile east of the Desert Tortoise Research and Natural Area.

Funding for protective fencing and habitat improvements has also come from the U.S. Department of Agriculture's Natural Resource Conservation Service and the Defenders of Wildlife. DTPC habitat improvements use a three-pronged approach of installing vertical mulch, installing horizontal mulch, and creating catchment islands.

Catchment Islands- The "islands" are expected to spread seed and naturally restore the entire area. With limited resources and a difficult restoration, this may be the best bet for long term success. Restoration islands will constitute about 20-30% of the total project area, and are spaced about evenly from each other and from the project boundary. With a smaller area, it may be feasible to plant container plants and provide occasional water. Live plantings were fenced for extra protection. Plantings used plants locally grown and of local genetic origin. Monitoring was performed to ensure the islands are successful, and eventually, are spreading.



Construction of a catchment island (left) and a completed catchment island (right)

Vertical Mulch- Material was collected within a thirty mile radius of the project area. Sticks and other mulching materials were placed upright in the soil and in the landscape in a natural fashion, especially in OHV- impacted areas, man-made dirt routes, and along the fence line. The vertical mulch will not grow, but creates mental barriers to people, and creates microclimate and micro-topography, which encourages natural collection and growth of seeds, increasing soil moisture storage capacity, and recruiting burrowing mammals to naturally

decompact the soils.



The construction of a vertical mulch installation (left) and completed vertical mulch installation (right)

Horizontal Mulch- Material was collected within a thirty mile radius of the project area. Sticks and other mulching materials were placed directly on the ground without penetrating the soils surface. The horizontal mulch will not grow, but creates mental barriers to people, and creates microclimate and micro-topography, which encourages natural collection and growth of seeds, increases soil moisture storage capacity, and recruits burrowing mammals to naturally decompact the soils.



Completed horizontal mulch installation