

Description of Habitat & Vegetation Types
BNP Petroleum Corp.
Manzano Project

Habitat A	Hummocky grassland with scattered minor depressions. Higher areas typically dominated by sea coast bluestem (<i>Schizachyrium scoparium</i>), Gulf-dune paspalum (<i>Paspalum monostachyum</i>), and western ragweed (<i>Ambrosia psilostachya</i>). Lower elevations typically dominated by bulrush (<i>Scirpus americanus</i>), purple mist flower (<i>Eupatorium coelestinum</i>), slim leaf dicantheleum (<i>Dicantheleum linearifolium</i>), narrow-leaf sumpweed (<i>Iva angustifolia</i>), and gulf dune paspalum. Other species include silver-leaf croton (<i>Croton punctatus</i>), sea lavender (<i>Limonium carolinianum</i>), sea oats (<i>Uniola paniculata</i>), camphor weed (<i>Heterotheca subaxillaris</i>), bushy bluestem (<i>Andropogon glomeratus</i>), long-headed rush (<i>Juncus megacephalus</i>), and white-stem wild indigo (<i>Baptista leucophora</i> var. <i>laevicaulis</i>). Vegetation coverage in this area is approximately 95-100%.
Habitat B	Depression typically dominated by bulrush, marsh-hay cordgrass (<i>Spartina patens</i>), narrow-leaf sumpweed, seashore dropseed (<i>Sporobolus virginicus</i>), sea ox-eye daisy (<i>Borrichia frutescens</i>), starrush whitetop (<i>Dichromea colorata</i>), and slim leaf dicantheleum. Scattered high areas throughout this habitat are dominated by seascoast bluestem, gulf-dune paspalum, and narrow-leaf sumpweed. Other species include fimbristylis (<i>Fimbristylis castanea</i>), purple mist flower, catch-fly (<i>Eustoma exaltatum</i>), camphor daisy (<i>Maechaeranthera phllocephala</i>), Asian coinleaf (<i>Centella asiatica</i>), and long-headed rush. Vegetation coverage in this area is approximately 75-95%.
Habitat C	Sand flat typically dominated by sea ox-eye daisy and shoregrass (<i>Monanthochloe littoralis</i>). Other species include fimbristylis, purple mist flower and narrow-leaf sumpweed. Vegetation coverage in this area is approximately 50-75%.
Habitat D	Low marsh dominated by cattails (<i>Typha domingensis</i>) and sand spikerush (<i>Eleocharis montevidensis</i>) at the lower elevations and seashore saltgrass (<i>Distichlis spicata</i>) and bulrush at the higher elevations. Vegetation coverage in this area is approximately 90-100%. Some standing water is present.
Habitat E	High marsh dominated by se ox-eye daisy, seashore saltgrass, and shoregrass. Other species include glasswort (<i>Salicornia virginica</i>) and purple mist flower. Vegetation coverage in this area is approximately 80-95%.



Habitat F	Algal flat with glasswort. Vegetation coverage 15-35%
Habitat G	High hummock field dominated by gulf-dune paspalum and camphor daisy with sea oats. Vegetation coverage in this area is approximately 60-70%.
Habitat H	Deep depression dominated by bulrush. Vegetation coverage in this area is approximately 95-100%.

Biological Opinion
Included with
Dunn Peach