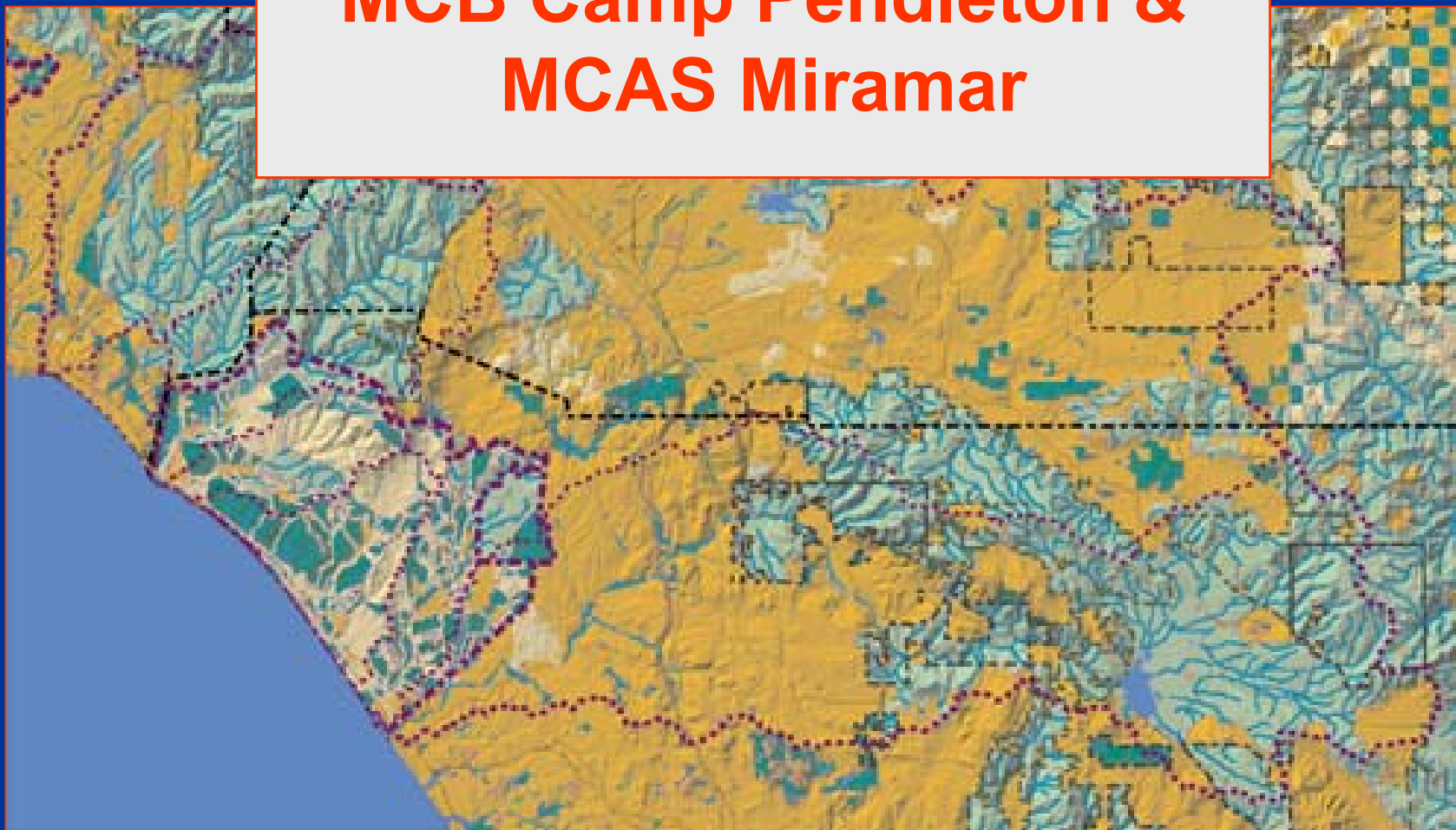




LANDSCAPE FUTURES:

Region including
**MCB Camp Pendleton &
MCAS Miramar**

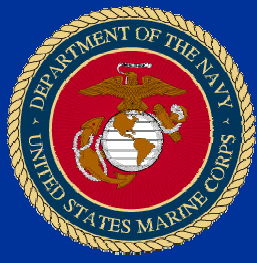


Report Documentation Page

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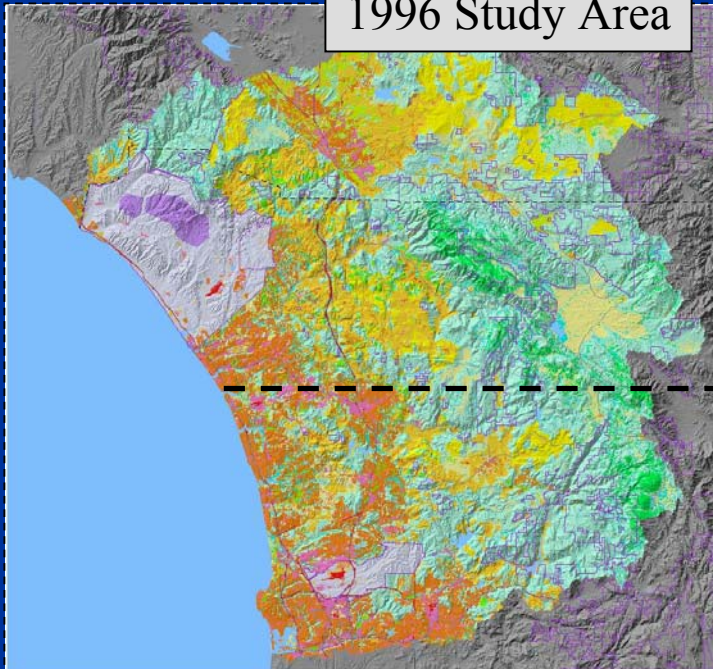
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15. SUBJECT TERMS			
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a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	UU
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			19a. NAME OF RESPONSIBLE PERSON



Study Parameters

1996 Study Area



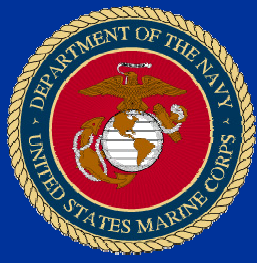
Region of MCB Camp Pendleton & MCAS Miramar

Existing Conditions 2000

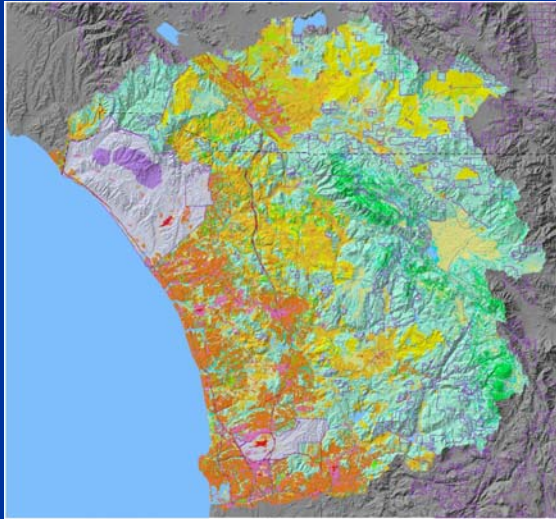
Land Use/Land Cover

Fresh Water 8181 acres (0.5%)	Forest and Woodland 60292 acres (3.5%)	Suburban and Urban 198925 acres (11.5%)
Barren and Beach 8651 acres (0.5%)	Riparian 45924 acres (2.7%)	Commercial and Industrial 46489 acres (2.7%)
Grassland 101934 acres (5.9%)	Agriculture and Golf Courses 27023 acres (1.6%)	Military Maneuver Areas 130059 acres (7.5%)
Orchards and Vineyards 30589 acres (1.8%)	Ex-Urban 86132 acres (5%)	Military Impact Areas 15661 acres (0.9%)
Sage and Chaparral 751542 acres (43.3%)	Rural 207870 acres (12%)	

- POPULATION INCREASE
 - 500,000
 - 1,000,000
- UNCERTAINTIES
 - Water
 - Energy
 - Mass Transportation
 - Acceptance of high-density living
 - Public value of conservation



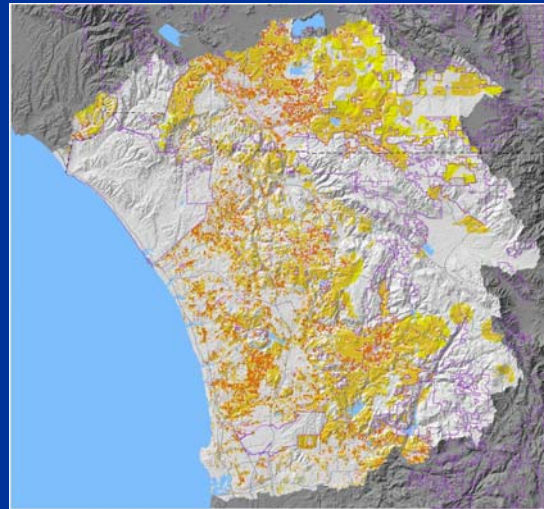
Regional Low Density (Plus 1,000,000 Population)



Region of MCB Camp Pendleton & MCAS Miramar
Existing Conditions 2000
Land Use/Land Cover

Fresh Water 3181 acres (0.5%)	Forest and Woodland 66292 acres (13.5%)	Suburban and Urban 198925 acres (11.5%)
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Sage and Chaparral 751542 acres (43.3%)	Rural 207820 acres (12%)	

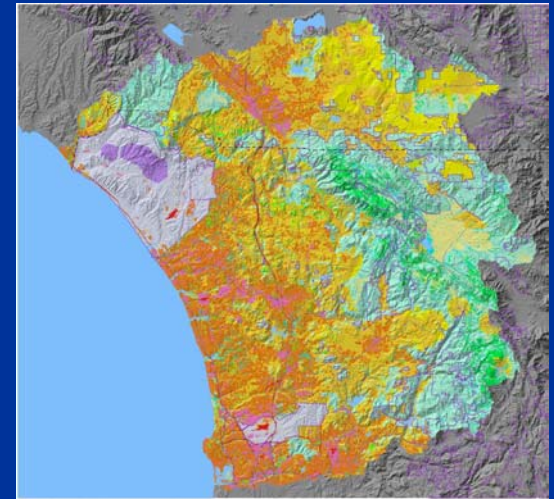
Baseline 2000



Regional Low-Density Future
1,000,000 New Residents
New Development

Ex-Urban 68602 acres (4%)	Rural 337447 acres (19.5%)
Suburban 45823 acres (3%)	Urban 14796 acres (0.9%)
Commercial 11779 acres (0.7%)	

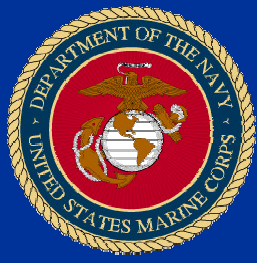
Projected Change



Regional Low-Density Future
1,000,000 New Residents
Land Use/Land Cover

Fresh Water 3181 acres (0.5%)	Forest and Woodland 66292 acres (13.5%)	Suburban and Urban 198925 acres (11.5%)
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Grassland 30777 acres (2.9%)	Agriculture and Golf Courses 23023 acres (1.6%)	Military Maneuver Areas 138299 acres (7.3%)
Orchards and Vineyards 23269 acres (1.3%)	Ex-Urban 104555 acres (6%)	Military Impact Areas 15661 acres (0.9%)
Sage and Chaparral 497716 acres (28.7%)	Rural 442326 acres (25.5%)	

Cumulative Result



Alternative Futures '04

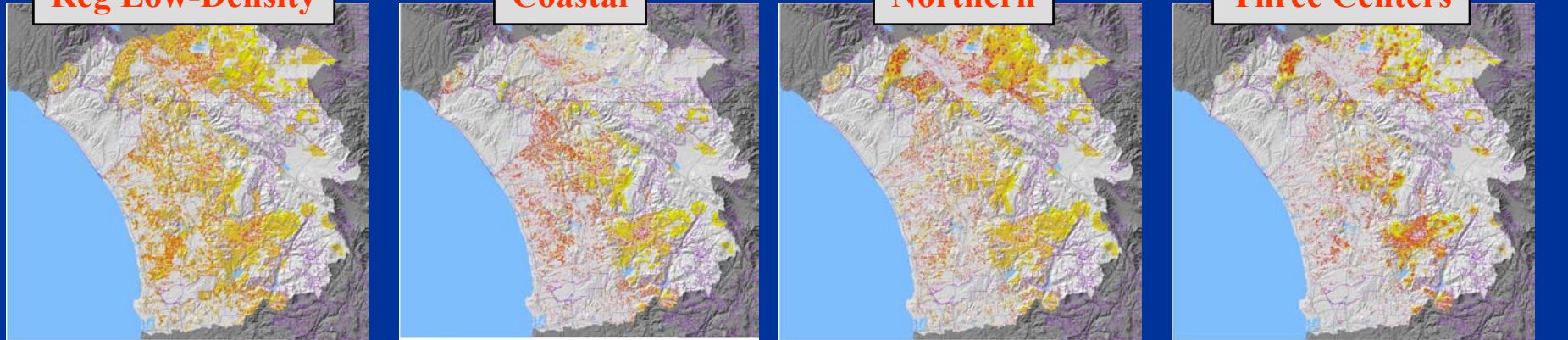


Reg Low-Density

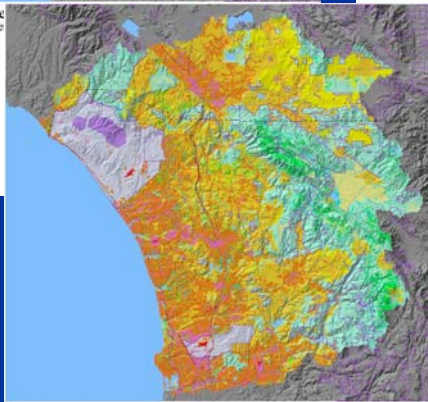
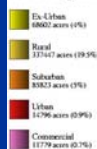
Coastal

Northern

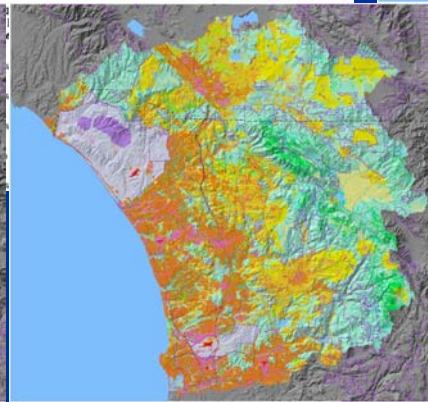
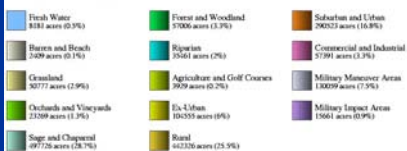
Three Centers



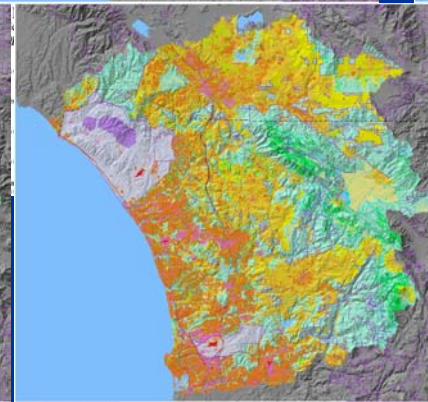
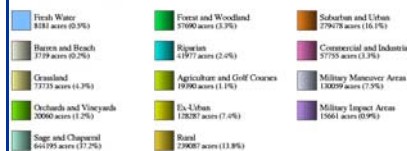
**Regional Low-Density
1,000,000 New Resident
New Development**



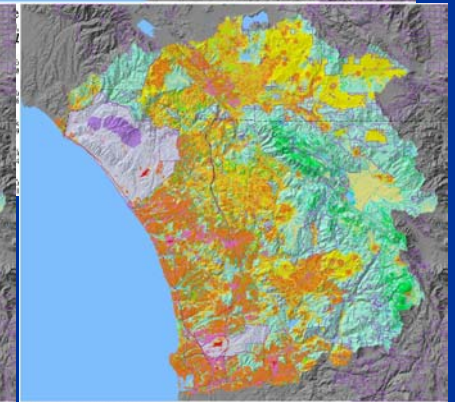
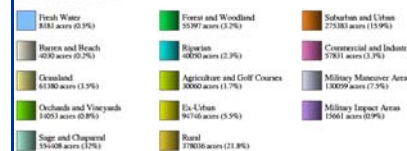
**Regional Low-Density Future
1,000,000 New Residents
Land Use/Land Cover**



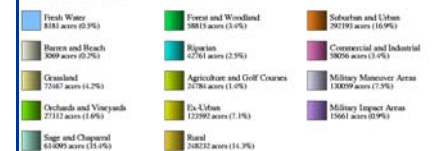
**Coastal Future
1,000,000 New Residents
Land Use/Land Cover**



**Northern Future
1,000,000 New Residents
Land Use/Land Cover**



**Three-Centers Future
1,000,000 New Residents
Land Use/Land Cover**

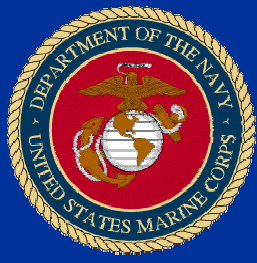




Percentage of Habitat on USMC Lands



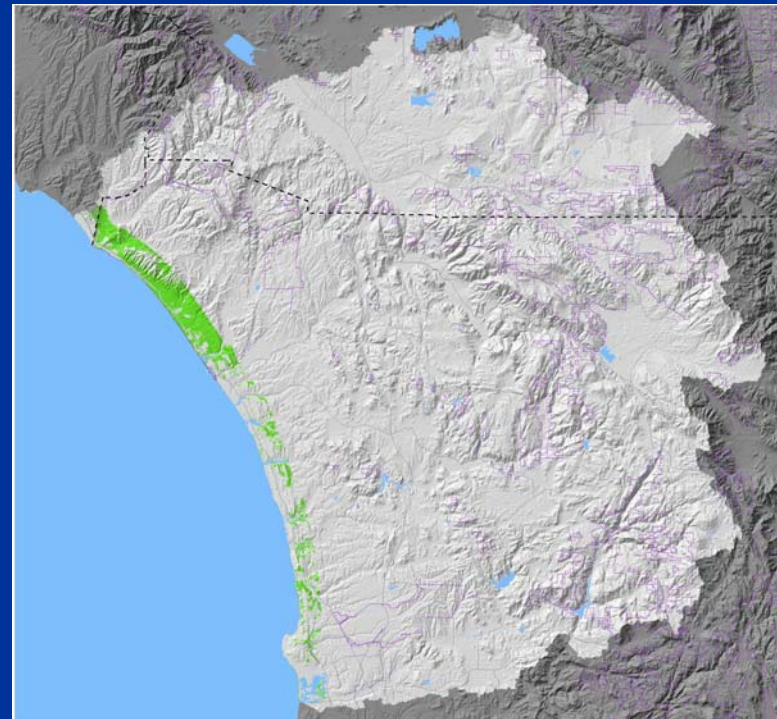
SPECIES	2000	Coastal	Northern	Reg Low-Density	Three Centers
Fairy Shrimp	70.1	81.7	79.1	82.3	70.1
Ca gnatcatcher	33.1	37.7	36.6	50.4	34.0
Western snowy plover	45.3	47.3	46.9	46.4	45.3
SW willow flycatcher	18.2	19.8	21.2	23.9	20.1
Least Bells vireo	15.9	17.5	18.5	20.8	17.6
Cougar	9.5	10.3	12.1	12.4	10.9
Argentine ant	5.4	4.0	3.2	3.2	3.7



Conservation Potential

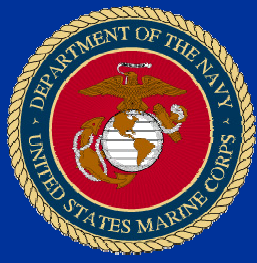
- Recovery Plan Objectives

- Pacific pocket mouse
- Stephens kangaroo rat
- Vernal Pool species
- Arroyo toad



Region of MCB Camp Pendleton & MCAS Miramar
Existing Conditions 2000
Pacific Pocket Mouse Vegetated Land

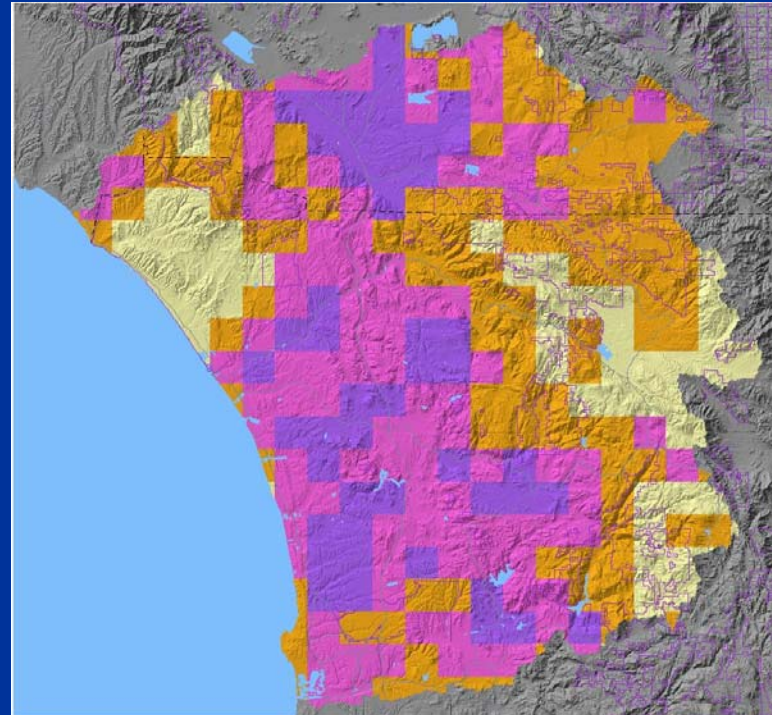
Coastal Vegetated Land
32555 acres (1.9%)



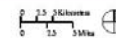
Associated Products



- Air Quality
 - Assessment
 - Predictive Model



Regional Low Density Future
1,000,000 New Residents
NO_x Change



	No Change 277674 acres (16%)
	Gain of 0 to 60 kg/day 585242 acres (33.8%)
	Gain of 60 to 250 kg/day 575145 acres (33.2%)
	Gain of Greater than 250 kg/day 295989 acres (17.1%)

Desert Research Institute
Harvard University
University of Florida

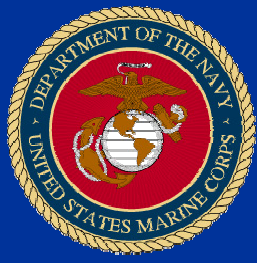


Predicted Max Ozone (ppb) Values



(5 simulations and episode days)

Simulations	July 7		July 8		July 9		July 10		July 11	
	Max O ₃	Diff.	Max O ₃	Diff.	Max O ₃	Diff.	Max O ₃	Diff.	Max O ₃	Diff.
Base Case	115	-	132	-	129	-	135	-	121	-
Coastal Future (1,000k)	128	13	134	2	136	7	143	8	128	7
Northern Future (1,000k)	138	23	134	2	142	13	146	11	133	12
Regional Low Density Future (1,000k)	150	35	134	2	142	13	146	11	137	16
Three Centers Futures (1,000k)	139	24	134	2	141	12	146	11	134	13



1996/2004 Assessments

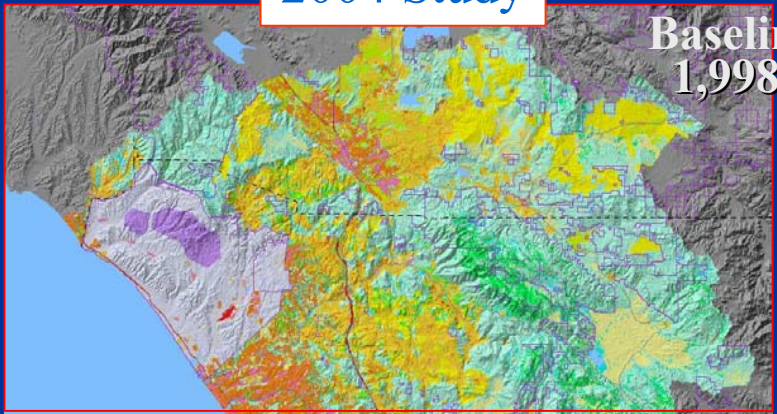
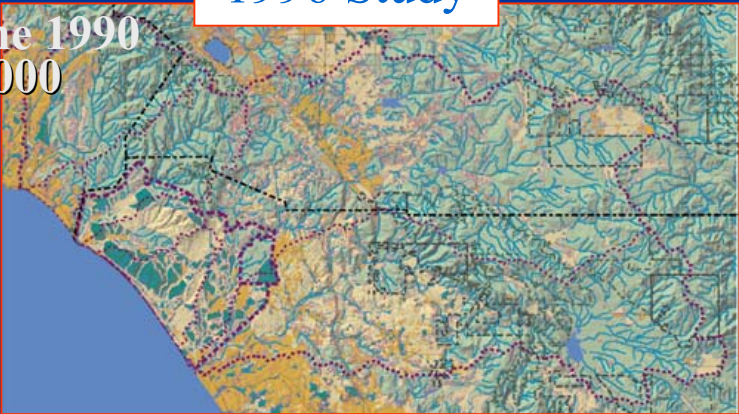
Landscape Ecological Pattern

1996 Study

2004 Study

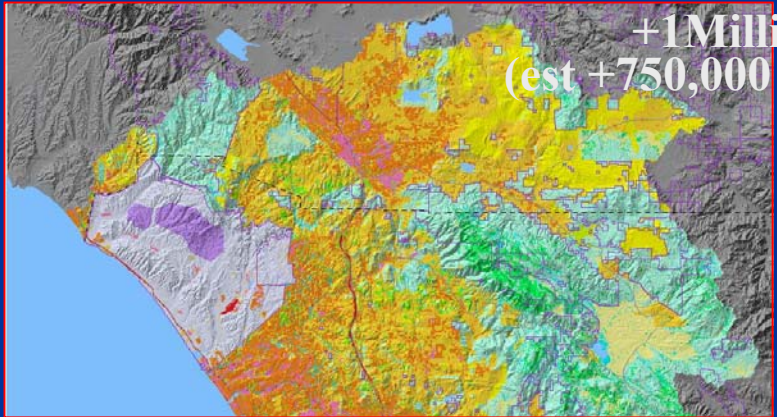
Base-line 1990
1,702,000

Baseline 2000
1,998,000



Build-Out 2030
+1 Million

+1 Million
(est +750,000 by 2020)



Isolated Natural Vegetation
 Contiguous Natural Vegetation
 Built Landscape

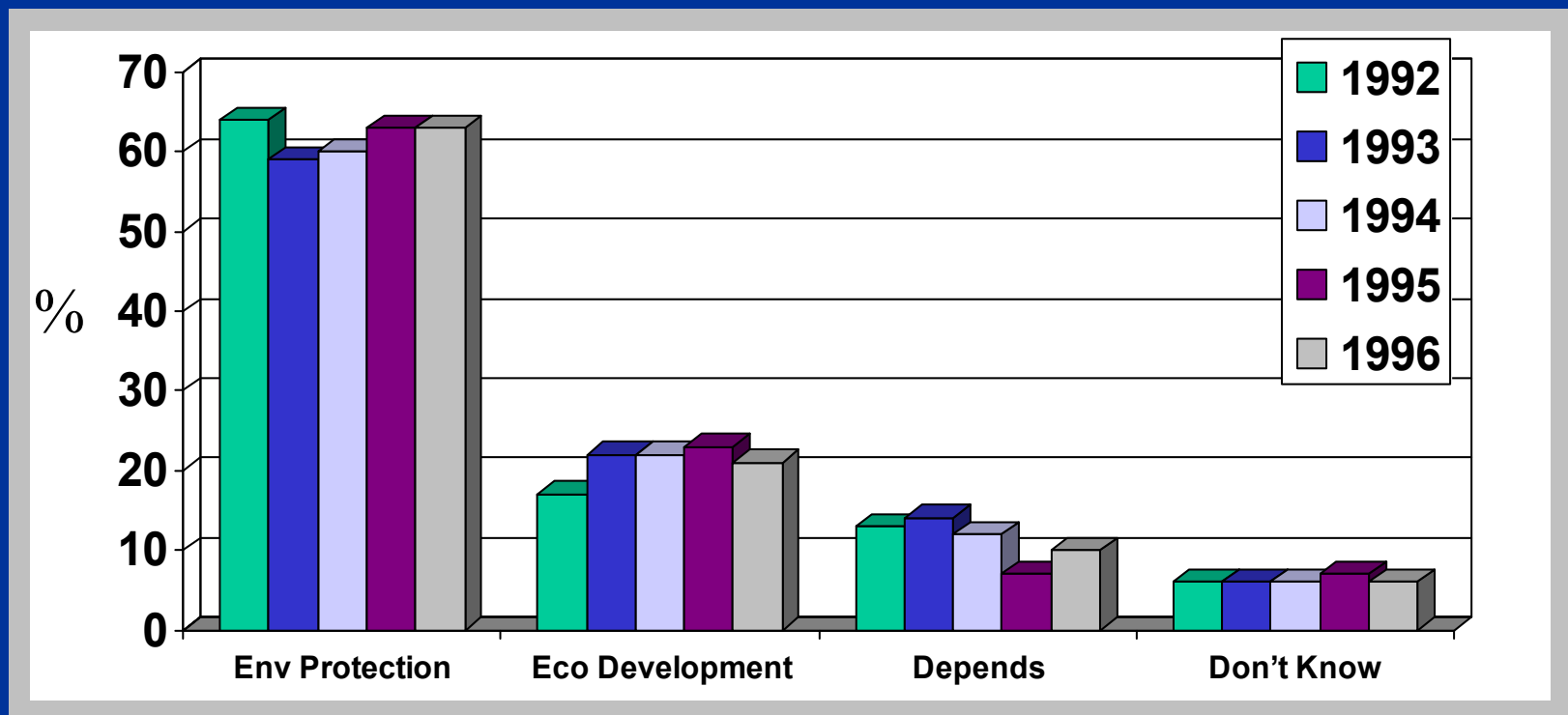
 Fresh Water 8181 acres (0.5%)	 Forest and Woodland 57006 acres (3.3%)	 Suburban and Urban 290323 acres (16.8%)
 Barren and Beach 2409 acres (0.1%)	 Riparian 35461 acres (2%)	 Commercial and Industrial 57391 acres (3.3%)
 Grassland 50777 acres (2.9%)	 Agriculture and Golf Courses 3929 acres (0.2%)	 Military Maneuver Areas 130099 acres (7.5%)
 Orchards and Vineyards 23269 acres (1.3%)	 Ex-Urban 104555 acres (6%)	 Military Impact Areas 15661 acres (0.9%)
 Sage and Chaparral 697726 acres (28.7%)	 Rural 442326 acres (25.5%)	



Environment Vs. Development



When it is impossible to find a reasonable compromise between economic development and environmental protection, which do you usually believe is more important: economic development or environmental protection?



National Environmental Education and Training Foundation
The Fifth Annual Survey of Adult Americans
December 1996

