

MEMORANDUM

To: Edward Maillett, Division of Economics, US Fish & Wildlife Service
Cc: Jennifer Baxter, Industrial Economics, Inc.
From: Jason Moody, EPS
Subject: Addendum to Final Economic Analysis of Critical Habitat for the Arroyo Toad; EPS #14141
Date: April 22, 2005

In March 2005 EPS completed the Final Economic Analysis of Critical Habitat Designation for the Arroyo Toad (FEA) based on proposed critical habitat boundaries provided by the Service. In establishing the final designation for the Arroyo Toad (AT), as published in the Federal Register on April 13, 2005, the Service modified these critical habitat boundaries based on biological, economic and other considerations.¹ The purpose of this memorandum is to summarize the boundary changes contained in the final designation and discuss the implication of these changes on estimates of economic impacts.

SUMMARY OF FINAL DESIGNATION

On April 28, 2004 the Service made available for public comment a proposed Critical Habitat Designation for the Arroyo Toad. In the Notice of Availability (NOA) for the Draft Economic Analysis for the Arroyo Toad (DEA), the Service revised the April 2004 proposed designation and prepared new boundaries (referred to as the 2005 CHD reproposal). As described in the NOA, these revisions reduced the total acreage proposed for CHD and did not include any new areas. The FEA estimated economic impacts based on the 2005 CHD reproposal. In the final designation the critical habitat boundaries have been modified and reduced once again.

Table 1 presents a unit-by-unit comparison of the total acreage contained in the 2005 CHD reproposal and the final CHD. As shown, in the final designation the Service has excluded 83,849 acres from the 2005 CHD reproposal. This reduction represents approximately 88 percent of the 2005 CHD reproposal.

¹ U.S. Fish and Wildlife Service, *Endangered and Threatened Wildlife and Plant: Final Designation of Critical Habitat for the Arroyo Toad (Bufo californicus); Final Rule*, April 13, 2005.



The vast majority of acreage excluded from the final designation was done solely for economic considerations. Specifically, as noted in the Final Rule, "Exclusions pursuant to section 4(b)(2) based on economic considerations included all of Units 3, 5, 6, 7, 10, 13, 14, 15, 16, 17, 18, 19, and 22 and portions of Units 11 and 12. " Overall, exclusions due to economic considerations represent more than 85 percent of the total acreage cut from the 2005 CHD reproposal.

ECONOMIC IMPACT OF FINAL DESIGNATION

Table 2 summarizes the economic impact of the final AT CHD, by unit, for the time period 2005 through 2025. As shown, the cost associated with the final designation, discounted to present value (2004\$) using a discount rate of 7 percent, is estimated to be \$3.5 million. This includes costs lost development value due to land-set, administrative costs, costs attributable to project uncertainty and delay, and additional costs associated with the California Environmental Quality Act.

The results presented in **Tables 2** are calculated by adjusting the costs calculated in the FEA to reflect changes to CHD in the final rule. Specifically, the economic impacts associated with acres included in the final CHD are assumed to be proportional to the percentage of total proposed acres ultimately designated. This approach is deemed appropriate since 16 out of the 23 units were cut in full and contained the highest economic impacts. The boundaries were modified in six units and in one of these the acreage actually increases. However, these units have relatively small economic impacts. Consequently, a more detailed analysis of the components of economic costs in these six units would yield only minimal improved precision in the economic cost estimates.

SMALL BUSINESS IMPACTS

In addition to total economic impacts, the FEA discusses impacts to small businesses associated with AT CHD. Specifically, the FEA estimated potential impacts to small businesses in the real estate development, cattle ranching, and fruit and nut farming sectors. The exclusions in the Final Designation are expected to significantly reduce these impacts since most of the units where these activities were anticipated have been cut.

Specifically, the FEA estimated cattle ranching impacts to potential project modifications required in units 2, 5, 9, 15, 17, and 19. However, the final designation eliminates all of these units except 2 and 9. Meanwhile, all of the units that were estimated in the FEA to impact fruit and nut farming (unit 14 and units 16 through 19) have been eliminated from the final designation. Finally, FEA estimated impacts to the real estate development sector of about \$881 million are reduced to about \$2.6 million in the final designation, or about 99.7 percent.

Table 1
Proposed and Final Critical Habitat Acreages
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Critical Habitat Units	County	Unit Size (acres)		Net Change (acres) = A - B
		2005 CHD Reproposal A	Final Rule (April 2005) B	
1. San Antonio River	Monterey	0	0	0
2. Sisquoc River	Santa Barbara	5,534	4,800	734
3. Upper Santa Ynez River Basin	Santa Barbara	4,398	0	4,398
4. Sespe Creek	Ventura	4,129	4,008	121
5. Piru Creek	Ventura, L.A.	3,959	0	3,959
6. Upper Santa Clara River Basin	Los Angeles	2,290	0	2,290
7. Upper Los Angeles River Basin	Los Angeles	4,087	0	4,087
8. Black Star and Baker Creeks	Orange	172	0	172
9. San Jacinto River Basin/Bautista Creek	Riverside	683	700	(17)
10. San Juan Creek Basin	Orange, Riverside	5,635	0	5,635
11. San Mateo Basin	Orange, San Diego	4,016	0	4,016
12. Lower Santa Margarita Basin	San Diego	1,741	0	1,741
13. Upper Santa Margarita Basin	Riverside, San Diego	2,523	0	2,523
14. Lower and Middle San Luis Rey Basin	San Diego	8,761	0	8,761
15. Upper San Luis Rey Basin	San Diego	6,195	0	6,195
16. Santa Ysabel Creek	San Diego	7,982	0	7,982
17. San Diego River Basin	San Diego	2,051	0	2,051
18. Sweetwater River Basin	San Diego	7,804	0	7,804
19. Cottonwood Creek Basin	San Diego	12,611	0	12,611
20. Uppr Santa Ana Rvr. Basin/Cajon Wash	San Bernardino	1,258	1,119	139
21. Little Rock Creek	Los Angeles	941	734	207
22. Upper Mojave River Basin	San Bernardino	6,821	0	6,821
23. Whitewater River	Riverside	<u>1,952</u>	<u>333</u>	<u>1,619</u>
Totals		95,544	11,695	83,849

Table 2
Estimated Economic Impact of Final Arroyo Toad CHD
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Unit	Economic Impact from 2005 CHD Reproposal A	Final Rule Acreage as a % of 2005 CHD Reproposal Acreage B	Estimated Economic Impact of Final Rule = A * B
1	\$0	100%	\$0
2	\$588,206	87%	\$510,147
3	\$4,932	0%	\$0
4	\$7,416	97%	\$7,198
5	\$498,229	0%	\$0
6	\$17,499,109	0%	\$0
7	\$28,238,312	0%	\$0
8	\$1,895,489	0%	\$0
9	\$918	102%	\$940
10	\$54,986,031	0%	\$0
11	\$15,914,980	0%	\$0
12	\$40,220,746	0%	\$0
13	\$33,755,318	0%	\$0
14	\$135,273,657	0%	\$0
15	\$80,631,571	0%	\$0
16	\$169,944,705	0%	\$0
17	\$40,992,878	0%	\$0
18	\$95,498,085	0%	\$0
19	\$204,507,070	0%	\$0
20	\$2,936,219	89%	\$2,612,273
21	\$0	78%	\$0
22	\$26,408,914	0%	\$0
23	\$2,324,151	17%	\$396,460
Total	\$952,126,937	12%	\$3,527,018

(1) Impacts exclude historical costs.