

MEMORANDUM | 30 November 2005

TO Edward Maillett, USFWS

FROM Leslie Genova, Industrial Economics, Incorporated (IEc)

SUBJECT Estimated Economic Impacts of Conservation Efforts in Designated Critical Habitat for the Southwestern willow flycatcher

SUMMARY OF FINDINGS The purpose of this memorandum is to provide information on the economic impacts of potential flycatcher conservation efforts within or affecting areas included in the final critical habitat designation for the flycatcher, as described in the Final Rule.¹

The September 2005 Final Economic Analysis (FEA) of Proposed Critical Habitat Designation for the Southwestern willow flycatcher provided a forecast of economic impacts that could occur in areas originally proposed for designation (as described in the Proposed Rule).² That is, the geographic scope of the September FEA was consistent with the Proposed Rule, but does not reflect changes made by the Service to the critical habitat areas in the Final Rule. This memorandum updates those economic impact estimates to reflect the final rule.

Specifically, the Service excluded six stream reaches in their entirety and portions of most other reaches from the final designation. In total, the number of river miles included were reduced from 1,555 to 738, or by 53 percent. Details of the geographic scope of final critical habitat and reasons for the various exclusions are contained in the Final Rule.

Exhibit 1 provides an estimate of the economic impacts of flycatcher conservation efforts in areas included in the final designation of critical habitat for the flycatcher. The annualized value (assuming a seven percent discount rate) of future costs is estimated to be \$6.8 million to \$9.5 million.

¹ USFWS, Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for the Southwestern willow flycatcher (*Empidonax traillii extimus*); Final Rule, published in the *Federal Register* on October 19, 2005, Vol. 70, No. 201.

² USFWS, Endangered and Threatened Wildlife and Plants: Proposed Designation of Critical Habitat for the Southwestern willow flycatcher (*Empidonax traillii extimus*); Proposed Rule, published in the *Federal Register* on October 12, 2004, Vol. 69, No. 196.

DISCUSSION

To estimate the impacts of the Final Rule, costs associated with the six excluded stream reaches were removed from our earlier cost estimates. Other costs were excluded from the final cost estimates as a result of specific exclusions made in each of those stream reaches. Significant cost changes are detailed in the following paragraphs.

The majority of future impacts estimated in the FEA stemmed from water management activities. Due to significant uncertainty regarding likely implementation of flycatcher conservation for these activities we forecast water management costs under two scenarios. Under Scenario 1 water operators were assumed to pursue and successfully obtain an Incidental Take Permit. Costs under this scenario were principally associated with the implementation of the Lower Colorado MSCP which was excluded from the Final Rule. Scenario 2 considered the potential costs of changes in water management activities that may have been imposed on water managers and users. Costs were quantified for eight facilities across five management units, and were primarily associated with the facilities themselves. These costs principally resulted from an assumed reduction in reservoir storage capacity that would result in a loss of water from human beneficial use. Scenario 2 also considered impacts on hydroelectric production, flood control capability and groundwater pumping. Because the Final Rule excludes areas within conservation pools of reservoirs, costs associated with changes to reservoir operations do not apply to the Final Rule. Thus, costs associated with water operations changes under Scenarios 1 and 2 are excluded from final cost estimates.

In addition, some easily identifiable areas (stream reaches) were excluded from the Final Rule. Costs associated with these areas were removed from final cost estimates. For example, lands associated with a potential transportation project under the Orange County Transportation Corridor Agencies were removed from the Final Rule, as were lands associated with Camp Pendleton. Thus, costs associated with these landowners were removed from final cost estimates.

Exclusions for some land use activities, such as livestock grazing, were less easily identifiable without additional intensive analysis. To roughly estimate the final costs associated for these activities and landowners, Final Rule costs were assumed to be reduced proportionally to the number of stream miles excluded from the Final Rule. For example, if the length of a designated stream reached was reduced by 43 percent in the Final Rule, costs associated with reductions in grazing efforts were assumed to be reduced by 43 percent. While this method of cost allocation is somewhat rough, it is expected to be reasonably accurate for those activities that are distributed throughout proposed stream reaches.

EXHIBIT 1

ECONOMIC IMPACTS OF CONSERVATION EFFORTS FOR THE SOUTHWESTERN WILLOW FLYCATCHER WITHIN AREAS DESIGNATED AS FINAL CRITICAL HABITAT

MANAGEMENT UNITS		IMPACTS ASSOCIATED WITH THE FINAL CHD (ANNUALIZED USING A 7 PERCENT DISCOUNT RATE)		IMPACTS ASSOCIATED WITH THE FINAL CHD (ANNUALIZED USING A 3 PERCENT DISCOUNT RATE)	
		LOW	HIGH	LOW	HIGH
Coastal	Santa Ynez	\$ 18,000	\$ 94,000	\$ 14,000	\$ 71,000
California	Santa Ana	\$ 712,000	\$ 1,025,000	\$ 534,000	\$ 759,000
	San Diego	\$ 393,000	\$ 556,000	\$ 288,000	\$ 399,000
Basin and Mojave	Owens*	\$ 0	\$ -	\$ -	\$ -
	Kern	\$ 42,000	\$ 172,000	\$ 23,000	\$ 163,000
	Mohave	\$ 473,000	\$ 628,000	\$ 470,000	\$ 558,000
	Salton	\$ 35,000	\$ 66,000	\$ 28,000	\$ 107,000
Lower Colorado	Little Colorado	\$ 75,000	\$ 116,000	\$ 46,000	\$ 88,000
	Virgin	\$ 40,000	\$ 108,000	\$ 29,000	\$ 50,000
	Middle Colorado*	\$ -	\$ -	\$ -	\$ -
	Pahrnagat*	\$ -	\$ -	\$ -	\$ -
	Bill Williams	\$ 16,000	\$ 73,000	\$ 10,000	\$ 43,000
	Hoover to Parker*	\$ -	\$ -	\$ -	\$ -
	Parker to Southerly*	\$ -	\$ -	\$ -	\$ -
Gila	Verde	\$ 148,000	\$ 464,000	\$ 90,000	\$ 345,000
	Roosevelt	\$ 66,000	\$ 184,000	\$ 44,000	\$ 127,000
	Middle Gila/San Pedro	\$ 101,000	\$ 438,000	\$ 69,000	\$ 245,000
	Upper Gila	\$ 146,000	\$ 382,000	\$ 111,000	\$ 242,000
Rio Grande	San Luis Valley*	\$ -	\$ -	\$ -	\$ -
	Upper Rio Grande	\$ 20,000	\$ 59,000	\$ 15,000	\$ 33,000
	Middle Rio Grande	\$ 4,394,000	\$ 4,642,000	\$ 4,096,000	\$ 4,192,000
	Multiple Mus	\$ 170,000	\$ 539,000	\$ 122,000	\$ 384,000
	Total Annualized	\$ 6,849,000	\$ 9,545,000	\$ 5,989,000	\$ 7,806,000

*Excluded from the Final Rule