

ECONOMIC ANALYSIS OF CRITICAL HABITAT DESIGNATION FOR NEOSHO MUCKET AND RABBITSFOOT: RESPONSES TO AAC COMMENT

The Service received a number of public comments on the draft economic analysis (DEA) of critical habitat designation for the two mussels. One of the comments was provided by the Association of Arkansas Counties (AAC), which commissioned its own study ("AAC economics evaluation") of the economic impacts of the critical habitat designation. AAC compares the results of their study to the Service's DEA and concludes that the DEA "vastly understates" the costs of the regulatory action because it does not take into account direct and indirect costs to businesses, state and local governments and other private property owners resulting from section 7 consultation requirements. Specifically, the AAC evaluation estimates that for a sample of affected projects, the total cost to affected Arkansas counties would exceed \$19 million, approximately five times the cost of \$4.4 million estimated in the DEA for the entire 12-state region of the designation. Here we provide responses to the main issues raised in AAC's comment regarding the DEA. We will address all of the public comments received on the DEA in the final rule determination.

- 1. The AAC economics evaluation assumes that economic activity in the vicinity of designated critical habitat will be subject to new restrictions, prohibitions, delays, cancellations, and/or additional requirements for conservation and consultation. Affected economic activities include road and bridge improvements; timber and agricultural uses; recreational uses; water treatment and water quality investments; and mining, oil and gas, and other uses.**

The AAC economics evaluation describes the economic impacts that would occur if a variety of hypothetical scenarios were to result from the critical habitat designation (for example, if visitation at Camp Ozark declined by 25 percent; visitation at the Pond Creek National Wildlife Refuge decreased by 20 percent; an oil well is not drilled; a poultry farm is closed; the construction of a planned county-road bridge over the Osage River is delayed; or city or county discharges under the National Pollution Discharge Elimination System (NPDES) are restricted). However, AAC does not provide evidence to suggest such restrictions will actually occur as a result of the critical habitat designation.

The Service considered whether restrictions are likely to result from the designation of critical habitat and found this to be unlikely. Specifically, the Service prepared a memorandum describing the likely outcome of future section 7 consultations (see Appendix D of the DEA). As summarized in paragraphs 69 and 70 of the DEA, the Service intends to designate critical habitat in river segments that are occupied by the mussels. Once the mussels are listed as endangered or threatened under the Endangered Species Act (ESA), section 7 consultations requirements take effect. Under the ESA, the decision to list a species is based solely on science; economic impacts may not be considered.

If a listed species is present at a project site, the Service may recommend project modifications during section 7 consultation to avoid jeopardy to the species. The costs of these project

modifications will be incurred regardless of whether critical habitat is also present. The Service does not anticipate that the designation of critical habitat will add additional restrictions on top of those already resulting from the listing of the species. Thus, the incremental costs of additional regulation designating critical habitat are limited to the administrative costs to Federal agencies, State and local governments, and private entities of participating in consultations.

The Service's focus on the incremental impacts of the critical habitat designation is consistent with the U.S. Office of Management and Budget's (OMB) guidelines for best practices concerning the conduct of economic analysis of Federal regulations. OMB directs Federal agencies to measure the costs of a regulatory action against a baseline, which it defines as the "best assessment of the way the world would look absent the proposed action."¹ The baseline is the existing regulatory and socio-economic burden imposed on landowners, managers, or other resource users potentially affected by the designation of critical habitat *absent* the designation of critical habitat. The baseline includes protections afforded the species under the ESA, as well as under other Federal, State and local laws and guidelines.

OMB directs agencies to estimate the incremental effects of proposed regulations so that the agency decision-makers will understand how the world will change if the rule is implemented. In other words, baseline costs will be incurred regardless of whether the critical habitat rule is finalized. A decision not to designate will not result in avoided baseline costs. The point is to isolate only the things that will change because of the rule, so that the decision-maker has an accurate understanding of the impact of his decision.

Significant debate has occurred regarding whether assessing the impact of critical habitat designations using this incremental approach is appropriate, with several courts issuing divergent opinions. Most recently, the U.S. Ninth Circuit Court of Appeals concluded that the incremental approach is appropriate, and the U.S. Supreme Court declined to review the case (Home Builders Association of Northern California v. United States Fish and Wildlife Service, 616 F.3d 983 (9th Cir. 2010), cert. denied, 179 L. Ed. 2d 301, 2011 U.S. Lexis 1392, 79 U.S.L.W. 3475 (2011); Arizona Cattle Growers v. Salazar, 606 F.3d 1160 (9th Cir. 2010), cert. denied, 179 L. Ed. 2d 300, 2011 U.S. Lexis 1362, 79 U.S. L.W. 3475 (2011)). Subsequently, on August 28, 2013, the Service promulgated final regulations specifying that the impact analysis of critical habitat designations should focus on incremental effects (78 FR 53058).

¹ OMB, "Circular A-4," September 17, 2003, available at <http://www.whitehouse.gov/omb/circulars/a004/a-4.pdf>.

- 2. The AAC economics evaluation asserts that the DEA is flawed because it limits the physical scope of its enquiry to the riparian watersheds and the Census tracts included in those watersheds. It argues that standard practice for economic impact analysis has been to use county boundaries or a defined local market area as the basis for any comprehensive evaluation of costs and benefits. The use of such narrow boundaries is an attempt to limit the estimated effects by omitting consideration of the interconnectedness of modern economies.**

The AAC economics evaluation is correct that the DEA defines its “study area” as including the watersheds encompassing the proposed critical habitat (either the fourth level (8-digit) or sixth level (12-digit) Hydrologic Unit Code (HUC) watersheds defined by the U.S. Geological Survey (USGS)). The study area is used to identify projects (e.g., oil wells, roads, bridges, etc.) that have a hydrologic connection to the critical habitat. For example, these projects may be sufficiently close to a critical habitat river segment that runoff from the construction site would increase sediment loads to the river, potentially affecting the mussels. If such a hydrologic connection exists, then these projects are more likely to require consultation. Defining the study area more broadly would result in the inclusion of projects with no hydrologic connection to proposed critical habitat, and thus no reason for consultation.

Importantly, while the identification of projects possibly requiring consultation is limited to the study area, the consideration of economic impacts that might result if these projects are modified is not limited to this geographic area. In the case of the two mussels, incremental project modifications are unlikely. Incremental costs are limited to administrative costs, which would be incurred by the agencies or private entities pursuing the projects, regardless of where those entities are headquartered.

For other economic analyses of critical habitat prepared by the Service, where project modifications have the potential to result in broader economic costs, the Service’s analyses estimate costs at the county or regional level (see, for example, *Economic Analysis of Critical Habitat Designation for La Graciosa Thistle: Final Economic Analysis*, July 27, 2009; or *Economic Analysis of Critical Habitat Designation for the Peirson’s Milk-vetch*, January 10, 2008).

- 3. The AAC economics evaluation estimates the economic impacts of hypothetical project modifications using IMPLAN multipliers. Such analysis measures the change in economic output resulting from a policy change. The authors argue that such multiplier analysis is the appropriate framework for answering impact analysis questions, noting that the U.S. Department of Transportation (DOT) recommends this approach for construction planning.**

The AAC economics evaluation is correct that economic impact analyses often rely on input-output or multiplier analysis using tools such as IMPLAN. Examples of such analyses include estimates of the changes in economic output generated by the construction of a new stadium or the loss of a manufacturing facility. For example, assume a manufacturing facility will close as the result of a public policy decision. The direct loss of that facility, in terms of output, can be measured in terms of the lost revenues from halting production of the goods produced at the

facility and/or lost jobs. IMPLAN also estimates the lost revenues and jobs associated with the suppliers and vendors who sell products to that manufacturing facility. Finally, IMPLAN measures induced effects in terms of reduced household consumption arising from changes in employment. Many local and State governments use such regional impact analysis to estimate potential changes in economic activity of capital projects.

This type of analysis is useful for understanding how an initial shock to an economy may disrupt economic activity. However, it has several important limitations. First, the type of analysis presented by the AAC economics evaluation does not allow for adjustments by the economy in response to the initial shock. For example, employees who lose their jobs when the manufacturing facility closes may find new employment elsewhere inside or outside the study area. Additional inputs to production used to generate the lost output may be put to other uses, mitigating the long-run impacts. Geographic shifts in the use of resources for production may result in large distributional losses or gains in different communities without resulting in large net change overall in economic output over multiple regions. As a result, tools such as IMPLAN are commonly used to measure the distributional effects of a policy measure, rather than the net effect.

In contrast, the conduct of economic analysis of proposed Federal regulations is subject to the direction provided by Executive Order 12866 and associated guidance provided by OMB in *Circular A-4*. As described in *Circular A-4*, "opportunity cost" is the appropriate concept for valuing benefits and costs of regulatory actions. Costs are incurred when resources are used for one purpose and hence cannot be used for another purpose. The opportunity cost is the value of the benefit that could have been provided by devoting the resources to their best alternative use. Estimates of the change in opportunity cost are sometimes referred to as economic efficiency effects or changes in social welfare.

For example, assume section 7 consultations are required prior to drilling at oil and gas sites potentially affecting the mussels. If delays caused by section 7 consultation cause oil and gas operators to forego activity without pursuing production at substitute sites, the net change in oil and gas production at a national level would represent the opportunity cost of the regulation. If operators pursue production at substitute sites, resulting in no net change in production but redistributing activity away from sites near the mussels, then the marginal cost of reduced profitability associated with the next best alternative location represents the opportunity cost. In either case, the resources used to produce the oil and gas (e.g., materials and labor necessary to drill for and transport the oil and gas) are not lost to society. Rather, these resources are still available for other productive uses. As a result, estimates of changes in efficiency effects, or social welfare, are fundamentally different than the estimate of the distributional effects using tools like IMPLAN, and the results are not directly comparable.

DOT recognizes the difference between these approaches. It has promulgated significant guidance on the conduct of economic analysis of regulatory actions that is consistent with Executive Order 12866 and *Circular A-4*. Significantly, over the past five years DOT has

overhauled its grant application and evaluation process and now requires applicants (generally states and municipalities) to prepare economic analyses estimating the change in social welfare of proposed projects (see DOT TIGER Grants at <http://www.dot.gov/tiger>). The guidance provided to applicants on the estimation of costs and benefits is the same guidance used to prepare regulatory impact analyses subject to Executive Order 12866, and follows the same principals applied in the mussels DEA.

Given that the designation of critical habitat for the mussels is unlikely to result in additional project modifications, the types of distributional effects measured using IMPLAN are likely to be minimal. The opportunity cost of the regulation is limited to the resources (primarily labor) needed to address the administrative requirements of the section 7 process. Thus, the DEA appropriately captures the incremental opportunity costs of the proposed regulation.