

Summary:

Goods and Services Provided by Forest Lands that Would Be Protected Under the Cooper Spur Settlement Agreement: An Economic Assessment

The forests that would be protected under the Cooper Spur settlement agreement provide many economically valuable goods and services. This report focuses on the current research that provides an estimation of economic values for only a few of these goods and services. Table 3 summarizes estimates for three services: the ecosystem's purification of water, which allows the Crystal Springs Water District to avoid treatment costs; the provision of wilderness recreational opportunities; and the storage of carbon.

The middle column of Table 3 shows the annual value of the water- and recreation-related services; the annual value of carbon-sequestration services is not known. The last column shows the estimated present value for each of the three services. Present value is a single amount, measured today, that is equivalent to a stream of future values. To compute the present value of the water- and recreation-related services, we use a process called discounting. For the water-related services, we look forward 20 years and use a commonly used discount rate, 3 percent per year. For the recreation-related services we also look forward 20 years, but assume that increases in the annual value of recreational opportunities, stemming from growth in the value of the different recreational activities and growth in the number of people participating in these activities, will offset the discount rate.

The actual value of all the goods and services provided by the forests that would be protected under the proposed Cooper Spur settlement probably is greater than the total shown in Table 3, insofar as many of the goods and services provided by this protected ecosystem are not included in the table. In addition, the estimate of the value of recreational opportunities probably understates the actual value because existing data fail to account for all persons using the area.

Table 3. Summary of Economic Estimates

Ecosystem Service	Estimated Value	
	Annual	Present Value ^a
Water-Purification	\$100,000 – \$200,000	\$1.5– \$3 million ^b
Recreational Opportunities	\$240,900	\$4.8 million ^c
Carbon Sequestration	N/A	\$5.1– \$9.0 million
Total	N/A	\$11.4 – \$16.8 million

Source: ECONorthwest. N/A = not available.

^a Present value is the amount today that is equivalent to a stream of future values.

^b Assuming the annual value remains constant for the next 20 years, discounted using a 3 percent discount rate.

^c Assuming the annual value grows over the next 20 years at a rate that offsets the discount rate.

Several factors indicate that the actual total value of the goods and services produced by the forests that would be protected under the proposed settlement agreement may be considerably larger than the estimates in Table 3. Among them is the fact that the area provides important wildlife habitat for economically valuable species. For example, it supports significant populations of deer and elk, which have value beyond what appears in the estimates for recreational hunting. Perhaps more important, the area provides habitat for northern spotted owls, a species listed under the federal Endangered Species Act as threatened with extinction. Several studies have found that the American public places a value on protecting this species and its habitat. In one study, researchers told participants in a nationwide survey that, on average, 21,000 acres of old-growth forest and spotted owl habitat burns each year, and asked them to describe the value they place a value on reducing the acres burned by 3,000 acres per year. Their responses indicate the value of protecting each acre of old-growth and spotted owl habitat is \$632,000 – \$1,359,000 per acre. Further research is needed before these findings could be applied to develop a reliable estimate of the value of protecting spotted owl habitat in the Cooper Spur area. The findings do indicate, however, that spotted owl habitat in the area may have a value of several million dollars.