



CESU Final Report Summary for Net Benefits of Recreational Fishing, Beachgoing, and Boating in the Great Lakes, Upper Mississippi River, and Ohio River Basins: A Review of the Literature - W912HZ-11-2-0030 (Report C)

Purpose: This report reviews the recreational valuation literature on fishing, beachgoing, and boating in the Great Lakes, Upper Mississippi River, and Ohio River Basins. Its purpose is to determine whether the existing literature is sufficient to: (a) estimate the current net value of these activities in the study region; and (b) estimate how these values might change with the introduction of aquatic nuisance species (ANS).

Location: Great Lakes, Upper Mississippi River, and Ohio River Basins.

Methods: Estimating the net value of a recreational activity requires: (a) an estimate of the average net value per day; and (b) an estimate of the total number of days taken to engage in that activity. In surveying the relevant literature, Cornell University (CU) adopted the following premises:

- No single study is sufficient to estimate a comprehensive net value of recreational fishing, beachgoing or boating in either the Great Lakes Basin or the Upper Mississippi and Ohio River Basins. Although a number of studies have estimated the net value per day for these activities, they have been limited in their geographic coverage. Because recreational values can be expected to vary in different parts of our study region, none of these existing individual studies can be used as an estimate of the average net value per day estimate for the entirety of either or both basins.
- However, if a sufficient number of studies is conducted within a region, even if each of those studies is limited in its geographic focus, these studies can, considered as a set, help determine the range of net values per day that might be expected for the region. This range of net values per day can be multiplied by the number of days users take part in the activity to approximate the total annual recreation net value.

Results:

Too few studies of the net value of beachgoing and boating have been conducted within the study region to establish the range of net values per day of these activities. Therefore, based on the existing literature, it is not possible to estimate the total annual net value of either beachgoing or boating in either the Great Lakes Basin or the Upper Mississippi and Ohio River Basins.

- For the Great Lakes, however, a sufficient number of studies have been conducted to establish that the net value per day of recreational fishing likely falls between \$20 and \$75 (\$2012). When the endpoints of this range are multiplied by the USFWS estimate of about 18 million angler days in the Great Lakes in 2006, it results in an estimate of the aggregate annual

net value of recreational fishing in the Great Lakes of \$360 million to \$1.35 billion (\$2012).

- It is important to note that this range is an estimate of net value, which is distinct from other economic measures that may have been reported such as expenditures and economic impacts. Cornell reports net values in this report because, according to economic theory and Federal regulation, net value is considered the appropriate measure for assessing the benefits of public policy alternatives.

Estimating the change in net value of an activity in response to ANS requires estimates of how: (a) resource quality would change in response to ANS (e.g., the change in the numbers of fish that anglers would catch); (b) the average net value per day would change as resource quality changed; and (c) the total number of trips to engage in that activity would change. With regard to estimating how the net values of recreational activities would change if ANS were introduced:

- Insufficient evidence exists in the literature to address any of these questions and, consequently, it is not possible based on the existing literature to estimate how the total annual net value of recreational fishing, beachgoing, or boating would change if ANS were introduced in to the Great Lakes and/or the Upper Mississippi and Ohio River Basins

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