

Table X-39 presents the estimated values for wetlands restoration for the North Atlantic Region. EPA estimated that between 25,589 and 43,813 acres of restored tidal wetlands is required to offset average annual impingement and entrainment losses to winter flounder. Based on the estimated value per acre to residents of counties abutting affected water bodies, the total value of restoring 25,589 acres of coastal wetlands (after adjusting for the estimated portion attributable to fish production services) is \$77 million per year, whereas nonuse only value is \$74 million. For all households residing within 32.43 miles of affected water bodies, the total value of restoring 25,589 acres of coastal wetlands ranges from \$129 million to

\$266 million per year, whereas the nonuse only value ranges from \$124 million to \$254 million for fish habitat only. Figures are given in 2002 dollars.

Based on the estimated value per acre to residents of counties abutting affected water bodies, the total value of restoring 43,813 acres of coastal wetlands is \$132 million per year, whereas nonuse only value is \$127 million, adjusted to fish production services only. For all households residing within 32.43 miles of affected water bodies, the total value of restoring 43,813 acres of coastal wetlands ranges from \$222 to \$455 million per year, whereas the nonuse only value ranges from \$212 to \$436 million, adjusted to fish production services only. Figures are given in 2002

dollars. This analysis does not include fish or shellfish losses caused by thermal discharges which are covered under section 316(a).

EPA estimated the total WTP value for the amount of habitat required to offset baseline impingement and entrainment losses in the North Atlantic region by adding the SAV and wetland values presented in Table X-38 and Table X-39. Based on the estimated value per acre to residents of counties abutting the affected water bodies, the total value of habitat required to offset impingement and entrainment losses in the North Atlantic region ranges from \$79 million to \$511 million per year, whereas nonuse only value ranges from \$76 million to \$482 million.

TABLE X-39.—WTP VALUES FOR WETLANDS RESTORATION OF FISH FOR THE NORTH ATLANTIC REGION (2002\$)

Species Benefitting from tidal wetlands restoration	Acres of required wetlands restoration	Total willingness to pay per acre per year	
Counties Abutting Affected Water Bodies			
Winter flounder	25,589 acres	Total Value	\$77,194,196
Atlantic silverside		Nonuse Value	73,982,015
Striped killifish	43,813 acres	Total Value	132,170,436
		Nonuse Value	126,670,601
All Households Residing Within 32.43 Miles of Affected (Low Estimate)			
Winter flounder	25,589 acres	Total Value	\$265,877,962
Atlantic silverside		Nonuse Value	254,814,331
Striped killifish	43,813 acres	Total Value	455,231,200
		Nonuse Value	436,288,260
All Households Residing Within 32.43 Miles of Affected Water Bodies (Low Estimate)			
Winter flounder	25,589 acres	Total Value	\$129,445,085
Atlantic silverside		Nonuse	124,058,656
Striped killifish	43,813 acres	Total Value	221,633,417
		Nonuse Value	212,410,876

The values in Table X-39 do not account for all species lost to impingement and entrainment in the North Atlantic Region (e.g., tautog) and include benefits for species not affected by impingement and entrainment. EPA continues to evaluate this approach as an alternative for estimating comprehensive non-use benefits associated with this regulation.

e. Estimates of the Value of the Preferred Option for the North Atlantic Region

Table X-40 shows the percent reduction in impingement and

entrainment losses for each of the affected species included in this analysis. The preferred option is expected to reduce impingement and entrainment losses by 18.4 to 23.8 percent, depending on species. EPA applied the percent reduction for the species that determined the number of acres of restoration required. For tidal wetlands, winter flounder required the largest number of acres of restoration. Accordingly, EPA used the 18.73% reduction in impingement and entrainment for winter flounder to calculate the benefits of the preferred technology. Similarly, EPA used the

18.97% reduction for northern pipefish to estimate benefits of the lower bound estimate of SAV restoration, and the 23.75% reduction for scup to estimate upper bound benefits for SAV.

TABLE X-40.—REDUCTIONS IN IMPINGEMENT AND ENTRAINMENT LOSSES WITH THE PREFERRED OPTION

Species	Percent reduction
Winter flounder	18.73
Atlantic silverside	21.78