

Chincoteague National Wildlife Refuge

Description

Chincoteague NWR is a 14,014-acre refuge on the Maryland-Virginia border. It encompasses the southern end of Assateague Island, a mid-Atlantic, coastal barrier island, and includes several other units on other islands in the vicinity. The refuge was established in 1943 to provide wintering and migration habitat for migratory birds. Its mission now includes preservation of endangered species, maintenance of indigenous species, and wildlife-oriented public use. The area is a popular tourist destination for birding, wildlife, sandy beaches, and wild horses like those featured in the “Misty” books. It is within a short drive of the Baltimore-Washington metro area and several beach resorts. It is one of the most heavily used refuges in the system with 1.5 million visits a year.

The refuge encompasses ocean beach, dune, maritime forest, tidal marsh, and freshwater moist soil habitats. Its diverse biota presents unique management challenges. Over 1 million visitors come to enjoy the beach and its wildlands aspects. The National Park Service operates the recreational beach section of the refuge. An auto route is closed to automobiles part of each day to permit use by bicyclists and pedestrians. Several nature trails are available. Off-road vehicles are tightly restricted but are permitted on parts of the beach in some seasons. Surf casting is a popular activity and freshwater fishing is permitted in a refuge impoundment. Limited hunts for sika (a small, oriental elk species introduced to the island) and waterfowl occur in the fall and winter.

Area Economy

The town of Chincoteague, in Accomack County, Virginia, is the gateway to the refuge. Like many Atlantic seaside towns, it has outgrown its Main Street in recent years. The road to the refuge is lined with restaurants, motels, and gift shops. The town’s economy is dominated by tourism and so is highly seasonal. Away from the oceanside, the region is largely agricultural, with the exception of N.A.S.A.’s Wallops Island Flight Center. Table 1 shows a summary of the area economy for 2001. Accomack County’s population has grown by 10 percent since 1995 while the population of neighboring Worcester County, Maryland, has increased by 16.1 percent. Overall, the area population increased by 13.4 percent from 1995 to 2001. During the same time period, area employment increased by 9 percent, lagging slightly behind employment gains in Maryland and Virginia. Per capita income in the area remained steady from 1995 to 2001, showing a slight increase of 2.7 percent. This compares with a 13.9 percent increase for Maryland, a 15 percent increase for Virginia and a 12.5 increase for the nation as a whole.

Table 1. Chincoteague NWR: Summary of Area Economy, 2001.
(Population and Employment in '000's; Per Capita Income in 2002 dollars)

County	Population		Employment		Per Capita Income	
	2001	Percent change 1995-2001	2001	Percent change 1995-2001	2001	Percent change 1995-2001
Worcester MD	47.8	7.2%	32.7	13.1%	\$27,767	5.2%
Accomack VA	38.6	10.3%	17.3	2.0%	\$18,624	-0.8%
Area Total	86.4	13.4%	50.1	9.0%	\$23,195	2.7%
MD	5,386.1	6.2%	3,128.4	11.9%	\$35,836	13.9%
VA	7,196.8	7.9%	4,445.1	12.7%	\$32,849	15.0%
	285,317.6	7.2%	167,535.6	12.2%	\$30,894	12.5%

Source: U.S. Department of Commerce 2003.

Activity Levels

Since the late 1980s visitation to Chincoteague has been level, with approximately 1.5 million visits each year. More than half of these visitors come during June, July, and August; less than a tenth during December, January, and February. For the purposes of this analysis, non-consumptive visits are converted to refuge visitor days, defined as 8 hours of recreation activity per day. In summer, most visitors come from more than 30 miles away. This is balanced by more local visitation during the winter months. Refuge staff estimates that 90 percent of non-consumptive visitors are non-residents.

Hunting comprises a fairly small portion of refuge use. Migratory birds accounted for 242 visits and big game hunting accounted for 759 visits. About 70 percent of all hunters are non-resident.

Surf fishing is very popular in the area. Recreational clamming is also popular. Ninety percent of saltwater fishing visitation is estimated to be by non-residents. All fishing is assumed to use a whole recreational day.

Regional Economic Analysis

Table 2 shows visitor recreation expenditures for FY 2002. Non-consumptive-use visitors to Chincoteague spent over \$32 million in the region. Saltwater anglers spent an additional \$8 million. Hunters' spending was a relatively modest \$39,000. Clearly, non-consumptive users are major contributors to the regional economy.

Activity	Resident	Non-Resident	Total
Non-consumptive	\$638.6	\$31,658.1	\$32,296.7
Hunting			\$0.0
Big game	\$2.7	\$24.5	\$27.2
Small game	\$0.0	\$0.0	\$0.0
Migratory waterfowl	\$0.6	\$11.1	\$11.7
total hunting	\$3.3	\$35.6	\$38.9
Fishing	\$602.8	\$7,385.3	\$7,988.1
Total	\$1,248.0	\$39,114.6	\$40,362.6

Because of the area's isolation, less than half of the total amount stayed in the local economy. Table 3 summarizes the total economic impacts associated with refuge visitor spending. The high leakage led to a comparatively low multiplier effect; only \$27.2 million in total final demand was generated through recycling non-resident spending in the economy. This is the total monetary value of economic activity generated in the area by non-resident refuge visitor spending. Nevertheless, this meant more than \$12 million in new employee compensation and 590 new jobs (full-time, part-time, and seasonal).

	Non-Residents	Total
Final Demand	\$27,158.8	\$28,227.2
Jobs	590	617
Job Income	\$12,033.2	\$12,485.5

Residents add only another \$1.2 million in spending to the total. So Chincoteague's visitation is highly important to the local economy.

Table 4 shows total economic effects (total final demand plus net economic value) compared with the refuge budget for FY 2002. The Fish and Wildlife Service spent \$2.4 million to operate Chincoteague during FY 2002. (Budget data are from the RMIS database and include 1260 staff funding, 1260 nonstaff funding, and other staff funding.) This spending provides additional jobs and income to area businesses. Visitors also derive value from their activity at the refuge. The figure for net economic value shown in Table 4 is derived by multiplying net economic values for hunting, fishing, and non-consumptive recreation use per day by estimated refuge visitor days for that activity. The net economic value is \$31.9 million, more than \$24 million of which was attributable to non-consumptive users. This figure is combined with the estimate of total final demand and divided by the refuge budget

for FY 2002. The overall ratio of economic effects per dollar of budget expenditures is very high, reflecting intensive public use and highly accessible natural amenities. The ratio is overstated to some extent because the budget figure does not include National Park Service operations at the recreational beach. This ratio is provided only for the purpose of broadly comparing the magnitude of the economic effects resulting from refuge visitation to total budget expenditures and should not be interpreted as a benefit-cost ratio.

Table 4. Chincoteague NWR: Summary of Economic Effects of Refuge Visitation (2002 \$,000)				
	FY 2002 Budget	Final Demand	Net Economic Value	Economic effects per \$1 budget expenditure
Chincoteague NWR	\$2,382.8	\$28,227.2	\$31,895.2	\$25.23