

## **ECONOMIC VALUE /CONSUMER SURPLUS**

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The Florida Fish and Wildlife Conservation Commission have completed two major economic studies concerning wildlife related recreation. In 2001 the Commission completed the economic study on boat ramps and piers entitled Assessing the Economic Impact and Value of Florida's Public Piers and Boat Ramps and in 2003 the economic study of selected wildlife management areas entitled The Economics of Selected Florida Wildlife Management Areas. The summary report for these economic studies may be viewed on the Commissions web site or by contacting the Commissions Chief Economist for individual copies. Information concerning economic value from these studies is provided here to aid researchers and the public in gaining a better understanding of economic value estimates derived from these research efforts and to underscore the importance of conservation. The U.S. Fish and Wildlife Service provide economic values for wildlife watching and bass fishing.

### **ECONOMIC VALUE/CONSUMER SURPLUS**

A less apparent application of economic research is the concept of economic value or consumer surplus. This has not so much to do with the actual dollars spent in an area, but with the value derived by users of various resources. Expenditures and economic values are two widely used but distinctly different measures of economic value. The dollars (expenditures) spent on an activity, or in a particular area, do not represent the value of those choices to the consumer – in fact they tend to underestimate them.

Economic value is measured as participants' willingness to pay for wildlife related recreation over and above what they actually spend to participate. Economic value is an economic measure of an individual's satisfaction after all costs of participation have been paid. All economic value estimates provided here are the outputs produced by revealed preference models. As such, these models measure actual consumer behavior and are not the subject of hypothetical analysis.

## BOAT RAMPS AND PIERS (Nominal Year 2001)

A valuation model is designed to calculate the potential gain in value to all recreational boaters and pier users in the surrounding area by the creation of an additional ramp or pier. There are literally hundreds of possible comparisons. For purpose of illustration, the example provided will demonstrate the gains in value by adding a ramp to the Tallahassee, Palm Beach and St. Pete Beach areas and a pier to the Tallahassee, Redington Beach and Lake Okeechobee areas.

**TABLE I**  
**ANNUAL VALUE GENERATED PER YEAR FOR ONE ADDITIONAL**  
**BOAT RAMP FOR THREE SELECTED CITIES**

<b>Location</b>	<b>Number of Ramps In Market</b>	<b>Value Per Visit</b>	<b>Annual Number of Visits In Market</b>	<b>Annual Economic Value Per Ramp In Market Area</b>
Tallahassee	25	\$0.19	90,625	\$17,436
Palm Beach	37	\$0.14	175,676	\$25,824
St. Pete Beach	46	\$1.54	218,408	\$336,348

**TABLE II**  
**ANNUAL VALUE GENERATED PER YEAR FOR ONE ADDITIONAL**  
**PIER FOR THREE SELECTED CITIES**

<b>Location</b>	<b>Number of Piers in Market</b>	<b>Value Per Visit</b>	<b>Annual Number of Visits In Market</b>	<b>Annual Economic Value Per Ramp In Market Area</b>
Tallahassee	1	\$1.92	9,957	\$17,436
Reddington Beach	15	\$0.80	73,500	\$58,800
Lake Okeechobee	2	\$0.59	9,327	\$5,500

**SELECTED FLORIDA WILDLIFE MANAGEMENT AREAS (Nominal Year 2003)**

The scope of the wildlife management study incorporated 17 of the approximately 131 wildlife management areas in Florida.

**TABLE III  
AVERAGE CONSUMER SURPLUS BY  
CONSUMPTIVE AND NONCONSUMPTIVE USE**

WMA	Consumptive Use	NonConsumptive Use	Total Consumer Surplus
Andrews	\$263,024	\$274,459	\$537,482
Apalachicola River	\$3,301,784	\$5,300,768	\$8,602,552
Aucilla	5,930,751	\$9,521,380	\$15,452,131
Babcock/Webb	\$6,350,477	\$2,840,103	\$9,190,580
Caravelle Ranch	\$182,827	\$75,184	\$258,011
Chassohowitzka	\$551,700	\$246,735	\$798,435
Corbett	\$6,197,518	\$3,183,447	\$9,380,965
Everglades	\$47,857,524	\$24,582,727	\$72,440,251
Guana River	\$1,336,158	\$549,473	\$1,885,632
Half Moon	\$1,307,972	\$537,882	\$1,845,855
Hilochee	\$31,314	\$32,675	\$63,989
Joe Budd	\$1,550,335	\$637,550	\$2,187,885
Rotenberger	\$53,294	\$27,375	\$80,669
Three Lakes	\$1,425,337	\$637,449	\$2,062,785
Triple N Ranch	\$85,464	\$89,179	\$174,643
<b>TOTAL</b>	<b>\$77,754,276</b>	<b>\$50,600,204</b>	<b>\$128,354,480</b>

**TABLE IV  
LOWER BOUNDS ON CONSUMER SURPLUS FOR  
RURAL AND URBAN AREAS BY  
CONSUMPTIVE AND NON-CONSUMPTIVE USE**

	Consumptive Use	Non-consumptive Use	Total Consumer Surplus
Urban	\$47,253,308	\$29,609,504	\$76,862,812
Rural	\$5,541,213	\$2,640,249	\$8,181,462
	\$52,794,521	\$32,249,753	\$85,044,274

**TABLE V  
DISTRIBUTION PERCENTAGE**

	Consumptive Use	Non-consumptive Use	Total Consumer Surplus
Urban	89.5 %	91.8 %	90.5 %
Rural	10.5 %	8.2 %	9.5 %

## WILDLIFE WATCHING

TABLE VI  
WILDLIFE WATCHING NET ECONOMIC  
VALUES PER DAY 2001

State Resident Values	Out-of State Values (non-residents)
Dollars Per Day <b>\$41.00</b>	Dollars Per Day <b>\$192.00</b>

## BASS FISHING

TABLE VII  
BASS FISHING NET ECONOMIC  
VALUES PER DAY 2001

State Resident Values	Out-of State Values (non-residents)
<b>\$67.00</b>	<b>\$53.00</b>

References: Boat Ramps and Piers: Thomas, Michael, Ph.D., and Nick Stratis, Ph.D., Assessing the Economic Impact and Value of Florida's Public Piers and Boat Ramps. The Florida Fish and Wildlife Conservation Commission, Tallahassee Florida. March 2001.

Wildlife Management Areas: Harding, David, Ph.D, and Michael Thomas, Ph.D., The Economics of Selected Florida Wildlife Management Areas. The Florida Fish and Wildlife Conservation Commission, Tallahassee, Florida. August 2003.

Bass Fishing and Wildlife Viewing: Aiken Richard and Genevieve Pullis La Rouche, Net Economic Values for Wildlife Related Recreation 2001. Division of Federal Aid, U.S. Fish and Wildlife Service, Washington, D.C. 2001.