Florida Boating Access Facilities Inventory and Economic Study
including a Pilot Study for Lee County

Executive Summary:
Economic Value, Future Demand & Capital Budgeting for Boat Ramps

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It was Oscar Wilde who said "the cynic knows the price of everything and the value of nothing." Over the years many have replaced the word cynic with economist, perhaps with good cause. Yet today the good economist can also measure the value of most things and would agree with Wilde's sentiment that value is more important than price.

To better understand the concept of economics and its relationship to boating it is helpful to break economics into two basic components. Economics can provide an accounting of the **economic expenditures** made by boaters (covered in the full report), permitting one to track the flow of money within the economy and the ripple effect of expenditures on jobs, taxes and other businesses across the economy. Economics can also provide a measure of the **economic value** boaters gain from the experience of boating which provides critical insight into their choices of boating access. Termed "consumer surplus" by economists, this information on the economic value of boating access is key to the efficient placement and/or improvement of boating infrastructure such as location of future ramps, number of lanes and inclusion of restrooms and other site characteristics. While information about expenditures is necessary for an assessment of the flow of money within an economy, by itself it only provides a part of the economic puzzle, reflecting the cost of producing a good or service; not its value to people.

ECONOMIC MODELS

The economic models developed for this project are models of demand for public access boat ramps across the state of Florida. Similar models have been widely used by economists across the country in the fields of boating, fishing and outdoor recreation. In this study the models are designed to determine the value of boating access, the basic characteristics of the boating access sites and even the places people visit on the water. The models are capable of handling the many substitute boating sites that exist in Florida. Two economic models of boating site choice were developed, one for marine access ramps and the other for ramps providing access to freshwater only. In addition to modeling the selection of ramps, in the case of the marine access ramps, choice of water-sites were also included. These water-sites were tied to the boater's choice of ramp, with the typical ramp providing boaters an average of 20 water-site choices, although in some cases as many as 99 water-sites were available from a ramp. Characteristics of both ramps and water-sites were collected and used in the models, and included items such as number of launch lanes, size of the parking lot, and in the case of water-sites, mean water depth and presence of reefs and seagrass.

ECONOMIC VALUE OF BOAT RAMPS

The models were then estimated by using 12 months of actual ramp and water-site choices made by boaters for 3,442 marine trips and the actual ramp choices made by boaters for 1,061 freshwater trips. Looking first at the ramp and water-site characteristics (Table 1), the results show the importance of launch lanes, parking lots and their overall condition as well as the area's level of development (i.e., the number of developed facilities, such as restrooms, at a ramp). Artificial reefs, seagrass and management zoning are some of the more important characteristics in water-site selection for boaters using marine access ramps. The costs of traveling to the site (i.e., gasoline costs, wear and tear on the car etc.) also play a key role in the boater's selection of ramp and water-site. As expected, all things considered, boaters preferred near-by ramps and closer water-sites to those located further away.

The economic model can also estimate the value of changing the characteristics of either a water-site or a boat ramp and can estimate the value boaters would lose/gain by removing/adding a ramp or water-site. In the case of removing an existing ramp, this could be viewed as a measure of the consumer surplus or value that boaters derive from having access to this ramp. Because ramps and water-sites vary by their characteristics and distance from boaters we would expect their value to boaters to vary as well. The economic model was used to estimate the value of each public access ramp within Florida, and this is reported as an

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Table 1: Ramp and water-site characteristics important to boating - marine access ramps.

+ or - indicates if the effect is positive or negative

East Coast - Marine Access	
Ramp Characteristic	
Size of Parking Lot	+
Condition of Parking Lot	+
Number of Launch Lanes	+
Condition of Launch Lanes	+
Overall Ramp Development	+
Marina Presence	+
Quality of Water Sites from Ramp	+
Travel Cost	-
Water-Site Characteristic	
Navigational Aids	+
Artificial Reefs	+
Marine Protection/Conservation Zone	+
Sea Grass Present	+
Nearest Boat Ramp	+
Travel Cost	-
West Coast - Marine Access	
Ramp Characteristic	
Size of Parking Lot	+
Number of Launch Lanes	+
Condition of Launch Lanes	+
Overall Ramp Development	+
Quality of Water Sites from Ramp	+
Travel Cost	-
Water-Site Characteristic	
Navigational Aids	+
Artificial Reefs	+
Marine Protection/Conservation Zone	+
Sea Grass Present	+
Mean Depth	+
Manatee Zone Present	-
Travel Cost	-
Freshwater Access Only	
Ramp Characteristic	
Number of Launch Sites in County	+
Size of Parking Lot	+
Condition of Parking Lot	-
Condition of Launch Lanes	+
Overall Ramp Development	+
Marina Presence	+
Travel Cost	-

appendix to the final report. Likewise a county level estimate of boating access value can also be found in the final report. When these ramp values are summed across boating trips, we see the top-valued counties in terms of public boating access (Table 2).

Table 2: Total value from public access ramps - top ten counties.

County Name	Total Ramp Access Value/2006$/yr
Pinellas	83,255,000
Miami-Dade	57,655,000
Volusia	57,308,000
Hillsborough	53,868,000
Brevard	50,625,000
Monroe	49,161,000
Broward	48,455,000
Lee	45,099,000
Palm Beach	41,553,000
Citrus	36,849,000

These counties include Pinellas, Miami-Dade, Volusia, Hillsborough, Brevard, Monroe Broward, Lee, Palm Beach and Citrus. If one adds up the 67 county level values it is possible to determine a lower bound value for public access ramps for both freshwater and marine settings. Doing so reveals that the estimated consumer surplus (value) to boaters (i.e., the value above and beyond expenditures) is at least $232 million per year for access to freshwater ramps and at least $788 million per year for access to marine ramps. These are values to the boating public above and beyond their spending on boating. Taken in total, public access ramps provide boaters over one billion dollars of value annually. That averages out to about $82 of value for each marine ramp trip and $77 for each freshwater ramp trip.

Estimates of ramp value can provide useful information to policy makers. For example (see Case Study 3 in the full report) if officials were to evaluate the economic effect of closing public boating access at the Hickory Bait and Tackle located at Weeks Landing in Lee county, they could use the ramp-level estimate of consumer surplus ($0.36 per trip) times the number of boating trips (588,000) to estimate the annual loss ($212,000) due to this action. When this loss is viewed as an indefinite and repeating occurrence to boaters (i.e., it repeats annually), it translates into a large loss of value ($7,066,000, based on a 3% discount rate). Similar estimates of economic benefits are possible for changing ramp characteristics, such as improving parking or adding a restroom, and even the opening of new ramps. Having this ability to determine the potential loss or gain in value for varying policy scenarios adds an important evaluation tool to the planner's tool chest.

FUTURE DEMAND

Present day estimates of boater demand are important, however to paint a more complete picture of demand one must also consider the possibility that demand may change over time. As one would expect, it is common to see the demand for most goods and services change over time. This can result from people changing their preferences for things and/or changes in the demographic composition of people in the economy. While it's difficult to anticipate how future preferences will change, it is possible to project changes in people by looking at demographic projections. Insofar that boating is highly correlated to gender and race/ethnicity (most commonly male, white non-Hispanic); it is possible to predict future demand across the state by tracking projected demographic shifts. Using results of the economic model and tying this to the statewide demographic projections to the year 2025 provided by the Bureau of Economic and Business Research Unit at the University of Florida, it is possible to predict county level boating demand 16 years hence. Statewide, demand is expected to decrease by about 1.8%, however in some counties demand could fall by as much as 18% (Broward) and other counties could see increases in demand as high as 11% (Sumter). A list of the counties expecting the largest decrease and increase in boating demand can be found in Table 3.

Table 3: Projected percentage changes in boating demand - ten counties with largest decreases and increases (present day - 2025).

County	Projected Decrease in Demand
Broward	18.86%
Duval	17.42%
Monroe	16.83%
Palm Beach	12.49%
Gadsden	12.41%
Leon	11.66%
Wakulla	8.08%
Nassau	7.68%
Miami-Dade	7.01%
Baker	6.89%
County	**Projected Increase in Demand**
Sumter	10.96%
Lake	9.80%
Lee	8.96%
Marion	8.21%
Osceola	7.56%
Desoto	7.38%
Citrus	6.98%
Hendry	6.80%
Hernando	6.37%
Levy	5.48%

CAPITAL BUDGETING

The projected changes in boating demand around the state make it possible to approximate the likely capital investments that will be needed to accommodate future use. Assuming the desire is to maintain boating access capacity at 2006 levels, then capital investments for freshwater and marine access statewide would fall in the range of $68 million and $111 million over the next 16 years.

Table 4: Capital budget projections to 2025 – top ten counties (freshwater and marine access).

Marine Access		
County	**Lower Bound**	**Upper Bound**
Lee	$12,636,000	$20,702,000
Collier	$5,431,000	$8,899,000
Citrus	$4,279,000	$7,011,000
Levy	$3,234,000	$5,299,000
St. Johns	$3,079,000	$5,087,000
Hernando	$2,450,000	$4,013,000
Charlotte	$1,810,000	$2,965,000
Flagler	$1,770,000	$2,925,000
Walton	$1,663,000	$2,709,000
Sarasota	$1,347,000	$2,206,000
Freshwater Access		
County	**Lower Bound**	**Upper Bound**
Lake	$8,333,000	$13,235,000
Osceola	$2,568,000	$4,080,000
St. Johns	$2,389,000	$3,914,000
Alachua	$1,978,000	$3,241,000
Sumter	$1,265,000	$1,955,000
Highlands	$1,177,000	$1,819,000
Walton	$1,057,000	$1,661,000
Marion	$1,038,000	$1,605,000
Glades	$797,000	$1,217,000
Washington	$790,000	$1,242,000

Counties with the largest marine access capital needs include Lee, Collier and Citrus. For counties with ramps that have freshwater access only, the three largest projected capital needs are found in Lake, Osceola and St. Johns counties. Table 4 lists the counties with the largest projected capital budget needs for both freshwater and marine access. St. Johns and Walton counties make the top ten lists for both freshwater and marine access.

This project was conducted by a team of researchers led by the Urban Harbors Institute of the University of Massachusetts Boston, and included the Recreational Marine Research Center at Michigan State University, Bordner Research, Inc., Resource Economics Research, LLC, Environmental Economics, Inc., the Catanese Center for Urban and Environmental Solutions at Florida Atlantic University, and the Planning and Zoning Center of the Land Policy Institute at Michigan State University.