

St. Johns River Water Management District
South Florida Water Management District



Indian River Lagoon Economic Assessment and Analysis Update

Report

Presentation to the Water Resources Advisory
Commission of the South Florida Water
Management District

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Project Objective and Methods

Project objectives – Estimate economic value of Indian River Lagoon in 2007

1. Recreational Uses of the Indian River Lagoon
2. Economic contributions of Lagoon-Related:
 - Recreation expenditures by visitors and residents
 - Commercial fishing dockside value
 - Research, restoration and education expenditures

Contribution is output, income, employment and tax revenue

3. Recreational use value of existing and improved Lagoon
4. Non-use value of existing and improved Lagoon
5. Value of living on or near Lagoon

Values represent the year 2007 and the counties of the Indian River Lagoon

- Volusia
- Brevard
- Indian River
- St. Lucie
- Martin



Summary of estimation methods

Lagoon Benefit	Data and Methods
Provides recreation benefits to visitors and residents	<ul style="list-style-type: none">● Recreation surveys of 1,000 residents and 392 visitors in 2008 to obtain use and expenditure data● Surveys Include contingent valuation survey to estimate use values● Expenditures input into IMPLAN economic input / output model to estimate economic contribution
Living on or near provides aesthetic value / easy access	<ul style="list-style-type: none">● Estimated impact of Lagoon on property values using statistical analysis of 2007 property value data from the 5 county property appraiser's offices● Results used to infer value of living on or near Lagoon

Summary of estimation methods, continued

Lagoon Benefit	Data and Methods
Commercial fishing	<ul style="list-style-type: none">● 2006 landed ex-vessel value by county was input into the IMPLAN economic input / output model to estimate economic contribution
Research, restoration and education	<ul style="list-style-type: none">● Survey of agencies collected 2007 expenditure info which was input into IMPLAN economic input / output model to estimate economic contribution
Non-Use Value	<ul style="list-style-type: none">● Value of the Lagoon to residents and visitors who did not use the Lagoon for recreation in 2007● Surveys included questions to estimate non-use value

IMPLAN regional economic input – Output model estimates economic contribution

- Direct businesses – Sells goods and services to those using Lagoon
- Indirect businesses – Sells to direct businesses
- Induced businesses – Sells to indirect and induced businesses and all employees





Summary of Results



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Residents & visitors spent 10.9 million person - days recreating on Indian River Lagoon in 2007

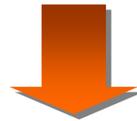
Activity	Person-Days	Activity	Person-Days
Fin Fishing	3,985,000	Swimming or Wading	2,223,000
Power boating – skiing, tubing, cruising	1,380,000	Sunset cruise or Viewing river from shore	834,000
Picnicking	758,000	Canoeing / Kayaking	561,000
Sailing on a sail boat	525,000	Shrimp netting / Fishing for clams, oysters or crabs	207,000
Parasailing, wind-surfing or kite sailing	197,000	Personal water craft – jet skis	163,000
Water fowl hunting	30,000	Total	10,863,000

\$1.4 billion spent using Indian River Lagoon in 2007 measures part of value and generates economic contributions

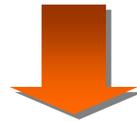
Indian River Lagoon-Related	Dollars
Resident recreation expenditures on day Lagoon used	\$271,417,000
Visitor recreation expenditures on day Lagoon used	\$532,079,000
Boat-related expenditures in Florida	\$498,000,000
Restoration, research, and education expenditures	\$91,000,000
Commercial fishing dockside value	\$3,800,000
Total expenditures and value	\$1,396,296,000

Economic contribution of \$1.4 billion in Lagoon-related expenditures and value

Itemized expenditures and value



IMPLAN Regional Input / Output Model



Direct, Indirect and Induced Income, Jobs and Tax Revenues to each county and to five county area

Economic contribution of Indian River Lagoon-related expenditures and value in 2007

Lagoon-related	Output (a)	Income (b)	Employment (c)	Tax Revenue (d)
Recreation Expenditures	\$593,000,000	\$278,000,000	8,400	\$38,000,000
Boat Expenditures	\$891,000,000	\$272,000,000	4,300	\$70,000,000
Restoration, education and research funding	\$150,000,000	\$78,000,000	2,100	\$3,500,000
Commercial fishing dockside value	\$5,700,000	\$1,700,000	156	\$145,000
Total	\$1,639,700,000	\$629,700,000	15,000	\$111,645,000

(a) Output is the value of goods and services provided in the county.

(b) Income is labor and self-employed income, rents, profits, royalties and dividends.

(c) Employment is the number of full- and part-time jobs.

(d) Tax revenue is excise taxes, property taxes, fees, licenses and sales taxes and excludes taxes on profit and income because these taxes are included under income.

2007 annual value to maintain Indian River Lagoon in its existing condition is \$3.7 billion

Indian River Lagoon-Related	2007 Value
Recreational Expenditures	\$1,302,000,000
Recreational Use Value	\$762,000,000
Non-Use Value of Lagoon	\$3,400,000
Real Estate Value (a)	\$934,000,000
Restoration, Research, Education Expenditures	\$91,000,000
Commercial Fishing Dockside Value	\$3,800,000
Income Generated in IRL Counties	\$629,700,000
Total Annual Value	\$3,725,900,000

(a) This is an annual value, not the total increase in real estate value.

Conclusions

- The Indian River Lagoon in its existing environmental condition provides \$3.7 billion per year in benefits to residents and visitors of the five county Lagoon system.
- The Indian River Lagoon generates about \$630 million in income and supports 15,000 jobs. Of this amount, at least \$358 million and 11,000 jobs accrues to residents in the 5 county Lagoon system and the rest accrues to residents in other parts of Florida.
- Recreation is the largest component of the Lagoon's economic value. An estimated 10.9 million person-days was spent recreating on the Lagoon in 2007. About 75 percent of these days were spent fin fishing, swimming or wading and power boating for water skiing, tubing or cruising.

Conclusions (continued)

- A large portion of the Lagoon's value is embedded in property values. Residents living on or near the Indian River Lagoon receive \$934 million per year in benefits associated with Lagoon aesthetics and recreational access.
- Recreational users and residents would be willing to pay about \$80 million per year to improve the environmental quality of the Lagoon. This value does not include the expected increases in recreation expenditures, real estate values, and commercial fish harvests.