



AGENDA REPORT
September 18, 2018

Approval of Phase II Tourism Community Development Plan Capital Projects

SUBJECT:

Approval of Phase II Tourism Community Development Plan Capital Projects

FISCAL IMPACT:

Fiscal Impact FY2018/19: A total of \$500,000 from the Capital Facilities fund for the Tourism Community Development Plan will be used for the Merritt Island National Wildlife Community Conservation Education Center. An estimated annual payment of \$1,000,000 will be used for the Indian River Lagoon Conservation Campus & Aquarium. Remaining Cash Balance of the Capital Facilities fund after all commitments is estimated at \$1,054,106.

DEPT/OFFICE:

Tourism Development

REQUESTED ACTION:

It is requested that the Board of County Commissioners approve the attached Tourism Community Development Plan Phase II capital projects. The two projects have completed the review process through the Capital Facilities Committee and Tourist Development Council. It is also requested that the Board of County Commissioners authorize the County Manager to execute necessary budget change requests and authorize the Chair to sign any documents or agreements required.

SUMMARY EXPLANATION and BACKGROUND:

Tourist Development Tax Revenues are restricted to only authorized uses, as defined by Florida Statute 125.0104, directed by Brevard County Code Chapter I 02, Article III - Local Option Tax Plan (Tourist Development Plan). In regards to Capital Facilities funding, the statute states authorized uses of these dollars are " ... to acquire, construct, extend, enlarge, remodel, repair, improve, maintain, operate or promote one or more publicly owned and operated convention centers, sports stadiums, sports arenas, coliseums, or auditoriums within the county; and further including museums, zoological parks, aquariums, fishing piers or nature centers which are publicly owned and operated or owned and operated by not-for-profit organizations and open to the public within the county."

According to the Ordinance regarding the Tourist Development Tax Budget Plan 14% or \$2,361,225 in budgeted TDT revenues in FY2018/19, can be used for tourism-related

capital facilities projects. To utilize these revenues effectively, the Tourism Community Development Plan was developed by the Tourist Development Council. On July 5, 2018, through the plan process, the Capital Facilities Committee approved these two priority projects for funding via cash reimbursement from available fund balance or the most economical funding available to the county and recommended consideration and approval of the Tourist Development Council. And on July 25, 2018, the Tourist Development Council unanimously approved these two priority projects for funding and recommended approval of the Board of County Commissioners. The Tourist Development Council must approve the complete final project package prior to disbursement of any funds. Each project package shall include, if applicable, confirmation of secured matching funds; pro forma financial statements; final master plan; compliance with Tourist Development Tax statute, including verification of public ownership and letters of support from all involved parties, including the municipality in which the project is located.

Projects must commence construction by September 18, 2020 or funding approval is withdrawn.

I. Merritt Island National Wildlife Community Conservation Education Center- \$500,000 Cash Reimbursement

(Estimated Project Funding Timeline: Jan 2019)

2. Indian River Lagoon Conservation Campus & Aquarium - \$10,000,000, Brevard Zoo to obtain best available funding, multi-year grant agreement between the County and Brevard Zoo, with a set annual amount to additionally include all costs of issuance (interest, financing fees, etc.) associated with the Zoo obtaining the \$10 million funding source.

(Estimated Project Funding Timeline: May 2019)

Both of the projects have been reviewed and analyzed by a third party, Market Feasibility Advisors, and it has been determined that both projects will advance, impact, generate, and promote tourism, as well as, economic impact in the County. Both projects have been reviewed by the County Attorney's Office and deemed permitted to be funded by Tourist Development Tax under both Florida law and the County Code based on the facts and circumstances of the projects' and/or the projects' ability to advance, generate, and promote tourism in the County referenced in the third party project tourism analysis reports. Each project's tourism impact analysis report is attached.

Contact: Stacy DeLano, Finance Director, TDO Phone/e-mail: 321-433-4470
stacy.delano@visitspacecoast.com

ATTACHMENTS:

Description

- ▣ **MFA Project & Tourism Analysis Report MINWCCEC**
- ▣ **MFA Project & Tourism Analysis Report IRLCC&A**



Tammy Rowe, Clerk to the Board, 400 South Street • P.O. Box 999, Titusville, Florida 32781-0999

Telephone: (321) 637-2001
Fax: (321) 264-6972
Tammy.Rowe@brevardclerk.us

September 19, 2018

M E M O R A N D U M

TO: Bonnie King, Tourism Development Assistant Director Attn: Stacy DeLano

RE: Item J.4., Phase II Tourism Community Development Plan Capital Projects

The Board of County Commissioners, in regular session on September 18, 2018, approved the Tourism Community Development Plan Phase II Capital Projects, to include funding for the Merritt Island National Wildlife Community Conservation Education Center with a cash reimbursement of \$500,000, and the Indian River Lagoon Conservation Campus and Aquarium of \$10 million multi-year grant agreement between the County and the Brevard Zoo, over an eight-year period, and paying \$1,250,000 a year; both Projects must commence construction by September 18, 2020, or funding is withdrawn; approved no money is to be disbursed until all secured matching funds, final master plan, financial statements, and compliance with the Tourism Development Council Statute is included and verified; and to include a finding that the Projects will advance, impact, generate, grow, and promote tourism in the County.

Your continued cooperation is greatly appreciated.

Sincerely yours,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Rowe

Tammy Rowe, Deputy Clerk

/ds

cc: Natural Resources Management Director
County Manager
Finance
Budget

**GRANT AGREEMENT BETWEEN
BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS AND
THE MERRITT ISLAND WILDLIFE ASSOCIATION INC. FOR
CONSTRUCTION AND INSTALLATION OF INDOOR AND OUTDOOR EXHIBITS**

This Grant Agreement (hereinafter the "Agreement") is made and entered into by and between the following Parties: The Board of County Commissioners of Brevard County, Florida, a political subdivision of the State of Florida (hereinafter the "GRANTOR"), and the Merritt Island Wildlife Association (MIWA), Inc., a Florida 501 (c) (3) nonprofit corporation that has been helping to support the Merritt Island National Wildlife Refuge since 1994. Their mission is to promote conservation, awareness, appreciation, and use of the Merritt Island National Wildlife Refuge (MINWR) and to support Refuge programs (hereinafter the "GRANTEE").

RECITALS

WHEREAS, pursuant to the Local Option Tourist Development Act, the GRANTOR has by resolution and ordinance, Ordinance No. 86-25, and subsequent amendments thereto, levied and imposed tourist development taxes throughout Brevard County, Florida; established the Brevard County Tourist Development Council; and implemented a tourist development plan for the use of funds derived from such taxes as set forth in Sections 102-116 through 102-125, Brevard County Code of Ordinances; and

WHEREAS, pursuant to Section 125.0104(5)(b), Florida Statutes; and Section 102-119(3)(c) of the Brevard County Code, the GRANTOR may authorize tourist development tax revenues out of the 35 percent of first two pennies of the levy earmarked to fund construction, remodeling, and improving of a nature center that is publicly owned but operated by an organization that is exempt from federal taxation pursuant to 26 United States Code 501(c)(3) and open to the public, within the boundaries of the County where the tax is levied; and

WHEREAS, the GRANTEE has requested a \$500,000 capital facilities grant to increase the number of Tourists brought to Brevard County; and

WHEREAS, the tourism grant funding will be used for construction and placement of indoor nature exhibits in the Merritt Island National Wildlife Community Conservation Education Center and outdoor exhibits to include various playscape equipment, all of which will be installed only on the publicly owned unused portion of Kennedy Space Center land managed by the United States Department of Interior as a National Wildlife Refuge; and

WHEREAS, the Tourist Development Council recommended GRANTOR approve the \$500,000 Grant at its meeting on July 25, 2018; and

WHEREAS, on September 18, 2018, the GRANTOR found that GRANTEE's facility qualified for an expenditure of Tourist Development Tax funds; and

WHEREAS, on September 18, 2018, the GRANTOR approved GRANTEE for a \$500,000 grant for the construction and installation indoor and outdoor nature exhibits as part of a nature center.

NOW, THEREFORE, the Parties agree as follows:

1. **Recitals.** The Recitals above are true and correct and incorporated into this Grant.
2. **Definitions.** The Parties agree to the following definitions:
 - a. The TOURIST DEVELOPMENT COUNCIL refers to the advisory council appointed by the Board of County Commissioners of Brevard County, Florida, pursuant to Section 125.0104(4)(e), Florida Statutes, and Section 102-120, Brevard County Code of Ordinances.
 - b. The SPACE COAST OFFICE OF TOURISM, refers to the Brevard County Tourist Development Office, a department of the Brevard County government. The Space Coast Office of Tourism will administer this grant on behalf of GRANTOR.
 - c. The term PROJECT refers to the Project described in paragraph 3 of this Agreement.
3. **Description of Project.** This grant is given for construction and installation of twelve (12) indoor nature exhibits in the new Community Conservation Education Center (CCEC) and five (5) outdoor exhibits to include nature themed children's playscape equipment. The existing indoor exhibit area is now 730 square feet and the new Community Conservation Education Center (CCEC) exhibit area will be 1,716 square feet which is a 140% increase. The twelve (12) indoor exhibits in the 1,716 sq. ft area will be designed and completed by a Florida based company, Wilderness Graphics.

The twelve (12) interior exhibits will consist of interactive technology, interpretation, static images, graphics, dioramas, immersive technology, and a geometric relief map to orient visitors. The indoor exhibits will enhance visitors' understanding of the refuge including its wildlife, management activities and recreational opportunities.

The five (5) outdoor exhibits (5,000 sq. ft.) will be constructed by Cre8play, a Minnesota based company. These consist of relevant nature/conservation/historical themed structures

that will connect children to nature and local history. The project also consists of adding display fixtures and shelving to the Nature Store which will be in the Center.

The existing visitor center has an annual visitation of 75,000. The new Community Conservation Education Center (CCEC) annual visitation is expected to increase to 100,000. Additionally, with over one 1 million visitors each year, the Merritt Island National Wildlife Refuge is the sixth 6th most visited of 566 refuges in the Nation with an annual economic impact of \$60.4M for the local community.

4. Grant.

- a. **Grant Award and Expiration Date.** The GRANTEE must commence construction on the exhibits on or before September 18, 2020, or this grant is void. On or before December 31, 2021, GRANTEE must submit any documentation it has to GRANTOR for the reimbursement of its expenses to construct and install the indoor and outdoor exhibits in an amount not to exceed \$493,474.67 (which is the original grant award of \$500,000.00 less \$6,525.33 previously reimbursed expenses from the TDC). GRANTEE may request an extension of this expiration date from GRANTOR in writing. After the expiration date, the grant is expired and GRANTOR owes no further obligation to GRANTEE of any kind.
- b. GRANTEE agrees to advertise its venue and its programming to out-of-County Tourists.
- c. This Agreement is contingent upon the availability of adequate funding in the 35% of the first two pennies of capital facility tourist development tax funds and subject to any limitations provided by Section 125.0104, Florida Statutes, and Section 102-117(a) and Section 102-119(3)c of the Brevard County Code, as both may be amended from time to time. Should funds no longer be available, the GRANTOR shall provide written notice thereof to the GRANTEE. The Parties agree that this grant shall NOT be paid from GRANTOR's non-tourist development related revenues.
- d. GRANTEE agrees and understands that all funding authorized through this Agreement shall be used only for eligible activities in accordance with State and local law, and this Agreement. GRANTEE further warrants that it is an organization exempt from federal taxation pursuant to 26 United States Code 501(c)(3).
- e. GRANTEE warrants that the United States Department of Interior is the fee simple owner of the real property upon which the GRANTEE will perform, or cause to be performed, the construction, remodeling, and improvements which are the subject of this grant. GRANTEE warrants that the United States Department of Interior has given

GRANTEE all necessary permissions to make the construction, and installation of the indoor and outdoor exhibits.

- f. Should GRANTEE enter into a loan or other financial indebtedness to construct the Project, in the event of a default or other breach on the loan by GRANTEE, the GRANTOR shall not be held responsible for any default payments, accelerated payments, or any other penalties or fees.
- g. Termination of Grant. Upon payment of the full amount of the grant, the Parties agree that the Agreement is terminated and the Parties owe no further obligations to each other, except as follows. All provisions survive that are necessary to enforce paragraph 4.b., 12 and 13 for five years following payment of the grant.

5. Payment Procedures.

- a. The payout schedule for the Grant is contingent on the occurrence of the following events detailed below. GRANTEE must submit adequate documentation to the Space Coast Office of Tourism as follows:
 - i. An executed copy of this Agreement.
 - ii. Documentation of receipt of all necessary permitting from all appropriate regulatory bodies evidencing that all construction activities at the Project Site have conformed to applicable law.
 - iii. Submission of Adequate Documentation showing the work was performed on the publicly owned Merritt Island National Wildlife Refuge. Documentation will be submitted as required by the Office of Tourism's payment policies listed in v. below.
 - iv. Documentation/Photograph of installation of a sign, as described in paragraph 6b, that the project was partially funded with a grant from the Brevard County Tourist Development Council through Tourist Development Tax.
 - v. GRANTEE Reimbursement Process - GRANTEE may apply for reimbursement upon submission of Tourism supplied cover invoice and detailed backup showing proof of payment to include design, materials, subcontract, labor, or other related construction costs.
- b. Project Completion Requirements. Upon completion of the entirety of the project, GRANTEE will provide GRANTOR with the following documentation.
 - i. A copy of the Certificate of Completion allowing occupancy of the CCEC.
 - ii. Photographs of the completed construction and installation of the indoor and outdoor exhibits in a .jpg or .tif format.

- iii. A final project report (1-2 pages) that shall at a minimum include the GRANTEE's name, Project name, Project location/address, final cost and Tourism Grant amount, and a brief Project summary that includes how the venue is or will be marketed to Tourists.
 - c. If a question arises as to the sufficiency of GRANTEE's documentation, the Parties agree that the Space Coast Office of Tourism Executive Director shall make the final determination on the sufficiency of the documentation.
 - d. The Parties agree the GRANTOR will reject submissions for reimbursement for items not related the scope detailed above. Funds may not be used to prepare grant applications or for routine maintenance.
- 6. **Promotion & Reporting Requirements.**
 - a. The Parties agree that both Parties may advertise, promote or otherwise list this Project in either Party's promotional materials.
 - b. GRANTEE shall erect a permanent plaque in the front of the new education center which indicates the highest level of sponsorship recognition and that the project was partially funded with a grant from the Brevard County Tourist Development Council through Tourist Development Tax. In the event that GRANTEE erects a temporary construction sign, this shall also recognize the GRANTOR's participation in the project. All signs shall comply with all applicable laws and permitting procedures
 - c. All marketing and promotional advertising, including website or internet advertising of the GRANTEE that contains sponsorship information, shall refer to the Brevard County Tourist Development Council as a sponsor of the GRANTEE.
 - d. The GRANTEE will provide GRANTOR with quarterly reports to show how the overall Project is progressing. The Parties agree that any reports given to GRANTOR are public records.
- 7. **Miscellaneous Provisions.**
 - a. This Agreement shall not obligate or make GRANTOR or the GRANTEE liable to any Party other than the Parties to this Agreement. Oversight of GRANTEE staff will be the responsibility of the GRANTEE board of directors.

- b. If any provision of this Agreement is held invalid, the remainder of this Agreement shall not be affected if such remainder continues to conform to the terms and requirements of applicable law.
 - c. The Parties agree that, in the case of a dispute, the parties will first work to resolve the dispute informally. In case of legal action, each Party agrees to the following terms: To bear its own attorney's fees and costs; that venue is in a court of competent jurisdiction in Brevard County; to waive any right to a jury trial; and that this Agreement is governed according to the laws of the State of Florida.
 - d. GRANTEE agrees to comply with all federal, state and local laws, and is responsible for any and all permits, fees, and licenses necessary to perform the Grant. GRANTEE will ensure all Contractors are appropriately licensed to do the work required. Nothing in this Agreement shall be construed as a waiver by GRANTOR of any requirements for local permits, fees, and licenses.
 - e. GRANTEE shall perform the services independently under this Agreement and nothing contained in this Agreement shall be construed to be inconsistent with this relationship or status. Nothing in this Agreement shall be interpreted or construed to make GRANTEE, or any of its agents, or employees to be the agent, employee or representative of the GRANTOR.
 - f. GRANTEE shall not engage the services of any person or persons now employed by Brevard County, to provide services relating to this agreement without written consent from Brevard County. GRANTEE agrees it shall not knowingly engage the services of any person who is an unauthorized alien worker, thus constituting a violation of the employment provisions contained in 8 U.S.C. Section 1324e (Section 274A(e) of the Immigration and Nationality Act "INA"). GRANTOR shall consider GRANTEE's intentional employment of unauthorized aliens as grounds for immediate termination of this Agreement.
 - g. The waiver by the GRANTOR of any of GRANTEE's obligations or duties under this Agreement shall not constitute a waiver of any other obligation or duty of the other party under this Agreement, nor shall a waiver of any such obligation or duty constitute a continuing waiver of that obligation of duty.
8. **Indemnification and Hold Harmless.** The GRANTEE shall indemnify, defend, and hold harmless Brevard County for the negligent acts and omissions of the GRANTEE's own employees and agents in the performance of this Agreement, to the extent permitted by law,

and against any and all third-party claims, suits, proceedings, losses, liabilities, damages, fees and expenses (including reasonable attorney's fees and expenses) related to the GRANTEE's project. The GRANTEE expressly agrees that Brevard County has no liability to the GRANTEE for GRANTEE's operation of the Project. The County's indemnity and liability obligations hereunder shall be subject to the County's right of sovereign immunity and limited to the extent of the protections of and limitations on damages as set forth in Section 768.28, Florida Statutes. Nothing in this Agreement is intended to inure to the benefit of any third party for the purpose of allowing any claim which would otherwise be barred under the doctrine of sovereign immunity or by operation of law. Nothing herein shall constitute a waiver of the County's sovereign immunity. The Parties acknowledge specific consideration has been exchanged for this provision.

9. **Amendment, Assignment of Agreement.** Amendments to this Agreement may be initiated by either Party. Amendments shall be formally ratified and approved by written amendment to this Agreement by both Parties. The GRANTEE shall not assign any portion of this agreement without the written permission of GRANTOR.

10. **Insurance.** GRANTEE agrees to procure and maintain, at its own expense and without cost to GRANTOR, the following types of insurance. The policy limits required are to be considered minimum amounts:
 - a. **General Liability Insurance** policy with a **\$1,000,000** combined single limit for each occurrence to include personal injury, contractual liability, and errors and omissions coverage.

 - b. GRANTEE will provide certificates of insurance to GRANTOR demonstrating that the insurance requirements have been met prior to the commencement of work under this Grant. The insurance coverage enumerated above constitutes the minimum requirements and shall in no way lessen or limit the liability of GRANTEE under the terms of the Grant. The General Liability insurance policy shall provide that Brevard County Board of County Commissioners be an additional insured.

11. **Termination.** If either Party fails or refuses to perform any of the provisions of this Agreement, or otherwise fails to timely satisfy the Grant provisions, either Party may notify the other Party in writing of the nonperformance and terminate this Agreement or such part of the agreements as to which there has been a delay or a failure to properly perform. Such termination is effective upon the Party's receipt of the Notice of Termination. Upon termination, GRANTOR has no further obligation to GRANTEE.

12. **Right to Audit Records.** In performance of this Agreement, GRANTEE shall keep books, records, and accounts of all activities related to this Agreement, in compliance with generally accepted accounting procedures. All documents, papers, books, records and accounts made or received by GRANTEE in conjunction with this Agreement and the performance of this Agreement shall be open to inspection during regular business hours by an authorized representative of the office and shall be retained by GRANTEE for a period of five (5) years after termination of this Agreement, unless returned to GRANTOR upon completion of the contract.

13. **Public Records Disclosures.** GRANTEE agrees that Florida has broad public disclosure laws, and that any written communications with the GRANTEE, to include emails, email addresses, a copy of this Agreement, and any supporting documentation related to this Agreement are subject to public disclosure upon request, unless otherwise exempt or confidential under Florida Statute.

Public records are defined as all documents, papers, letters, maps, books, tapes, photographs, films, sound recordings, data processing software, or other material, regardless of the physical form, characteristics, or means of transmission, made or received pursuant to law or ordinance or in connection with the transaction of official business by any agency. In this case, the portion of the GRANTEE's records relating to the acceptance and use of the GRANTOR grant are public records that may be subject to production upon request. The GRANTEE agrees to keep and maintain these public records until completion of the contract. Upon completion of the Agreement, GRANTEE will transfer, at no cost, to the GRANTOR, any public records in its possession.

Upon a request for public records related to this Agreement, GRANTEE will forward any such request to the GRANTOR. The GRANTOR will respond to any public records request. Upon request, the GRANTEE will provide access or electronic copies of any pertinent public records related to this Agreement to the GRANTOR within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes.

The GRANTEE agrees that Brevard County will consider all documentation the GRANTOR submits to Brevard County to support payment of this grant to be subject to public records disclosure.

IF GRANTEE HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO GRANTEE'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC

RECORDS AT THE OFFICE OF TOURISM, C/O ADMINISTRATIVE SECRETARY, 430 BREVARD AVENUE, SUITE 150, COCOA, FLORIDA 32922, PHONE (321) 433-4470.

14. **Notices.** Any notices required or permitted by this Agreement shall be in writing and shall be deemed delivered upon hand delivery, or three (3) days following deposit in the United States postal system, postage prepaid, return receipt requested, addressed to the parties at the following addresses:

GRANTEE:
Merritt Island Wildlife Association (MIWA)

c/o President
P.O. Box 2683
Titusville, Florida 32781
Phone: (321) 861-2377

GRANTOR:
Brevard County Space Coast Office of
Tourism
c/o Executive Director
430 Brevard Avenue, Suite 150
Cocoa, Florida 32922
Phone: (321) 433-4470

15. **Remedies.** The GRANTEE's remedy for default by GRANTOR shall be a claim for funds for which the GRANTOR's obligation to pay has ripened by virtue of the GRANTEE's compliance with all conditions precedent established under the terms of this Agreement. Such claims do not include consequential or special damages, and shall not exceed the total value of the Grant. The GRANTOR's remedies for default by the GRANTEE shall include, but shall not be limited to, a claim for repayment of the grant, if any funds have been extended by the GRANTOR to the GRANTEE.
16. **Effective Date.** This Agreement shall be effective on the last day the Parties execute this Grant Agreement (the "Effective Date") and the Parties shall commence the performance of their obligations under this Agreement as of such date.
17. **Entirety, Construction of Agreement, and Counterparts.** This Agreement represents the understanding between the Parties in its entirety and no other agreements, either oral or written, exist between the GRANTOR and the GRANTEE. The Parties acknowledge that they fully reviewed this agreement and had the opportunity to consult with legal counsel of their choice, and that this agreement shall not be construed against any party as if they were the drafter of this Agreement. This Agreement may be executed in counterparts all of which, taken together, shall constitute one and the same Agreement. GRANTEE warrants that it is possessed with all requisite lawful authority to enter into this Agreement, and the individual executing this Agreement is possessed with the authority to sign and bind GRANTEE. All

conditions and assurances required by this Agreement are binding on Parties and their authorized successors in interest.

(Signature Page Follows)

IN WITNESS WHEREOF, the Parties have executed this Grant Agreement on the last date written below.

MERRITT ISLAND WILDLIFE ASSOCIATION
(MIWA), INC.

Meghan Pott 7/22/2020
Witness Date

Laurilee Thompson 7/22/20
Signature and Date

Laurilee Thompson
Print/Type Name

President
Title

ATTEST:


Scott Ellis
Scott Ellis, Clerk

BREVARD COUNTY
BOARD OF COUNTY COMMISSIONERS

Bryan Andrew Lober
Bryan Andrew Lober, Chair

As approved by the Board September 18,
2018

REVIEWED FOR LEGAL FORM AND
CONTENT:

Christine M. Schverak
Christine Schverak, Assistant County
Attorney



Market & Feasibility Advisors

**Draft Final Report
Grant Application Document
Merritt Island National Wildlife Community Conservation
Education Center**

**Submitted to:
Brevard County Tourism Development Council**

**Submitted by:
Market & Feasibility Advisors**

Friday, June 01, 2018

MFA Project Number: 618



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Application Questions

1. Please provide your contact information below. Name

Chris Fairey
Merritt Island Wildlife Association
1987 Scrub Jay Way
Visitors Center
City of Titusville, FL 32781
cqfairey@cfl.rr.com
321-266-2853

2. Who is your project sponsor?

Tourist Development Council Committee Member: Laurilee Thompson

3. To determine if your project qualifies for the Tourist Tax Collection funding, please clarify the category for your project.

Nature Center

4. Has a name been chosen for this facility yet?

Yes

5. What is the name of the proposed facility?

Merritt Island National Wildlife Community Conservation Education Center (CCEC)

6. Briefly, tell us about the proposed facility.

Twelve interior exhibits will consist of interactive technology, interpretation, static images, graphics, dioramas, immersive technology and a geometric relief map to orient visitors. The exhibits themes provide a comprehensive view of the Merritt Island National Wildlife Refuge: Partnering to Protect; for Wildlife and You; For the Birds (Uniquely Florida Wildlands & Wildlife); Keep Looking Up; Estuary Lagoon Experience; Healthy Habits; Healthy People; What Do We Do for Wildlife Wall; Natural Strikes (about lightning strikes); High and Mighty (about the bald eagle); Children's Area, and Our Past, Present and Future. The five freestanding outdoor exhibits will consist of relevant nature/conservation-themed structures that will connect children to nature as they play.

7. What other facilities in Florida are most like this facility?

- Facility 1: Ding Darling National Wildlife Refuge Visitor Center, Sanibel Island, FL
- Facility 2: Everglades National Park Visitor Center, Homestead, FL
- Facility 3: Guano Tolomato Matanzas National Estuarine Research Reserve, Ponte Vedra Beach, FL

8. Who in the immediate area do you see as your biggest competition?

- Facility 1: Enchanted Forest Sanctuary, Titusville, FL
- Facility 2: Sams House at Pine Island, Merritt Island, FL
- Facility 3: Barrier Island Sanctuary, Melbourne Beach, FL



9. Is this a new or a renovated facility?

The US Fish and Wildlife Service is funding the building and MIWA is funding the exhibits, Wi-Fi and AV

10. What is the address of the facility

1987 Scrub Jay Way, Titusville, FL 32781

11. How many acres is the site for the facility?

1

12. How many square feet of interior space?

1,600

13. How many parking spaces will be needed?

100

14. Is this or will this facility be publicly owned and/or operated?

The Merritt Island CCEC is publicly owned and operated by the US Fish and Wildlife Service

15. Who will own the facility?

The US Fish and Wildlife Service

16. Who will operate the facility?

The US Fish and Wildlife Service

17. Will the facility be open to the public?

Yes

18. Will there be an entrance/admission fee?

The US Fish and Wildlife Service does not charge admissions to the visitors center and the exhibit

19. Amount?

N/A



20. What are the estimated costs of the TOTAL project?

These category amounts should reflect the total costs of the project including the costs appropriated with the requested Tourist Development Tax (TDT) funding.

Please complete all applicable amounts, if a category does not apply for this project please leave blank. If the below categories do not describe your project please click 'Other Costs' and you will be directed to additional space to enter the 'Other Costs'.

- Building/Structure Addition Costs: \$0
- Exterior Renovation Costs: \$0
- Interior Renovation Costs: \$0
- Land Acquisition Costs: \$0
- New Building/Structure Costs: \$4,060,000 provided by the US Fish and Wildlife Service
- Parking Lot Costs: \$215,000 provided by the US Fish and Wildlife Service

21. Other Costs

Please list 'Other' costs in appropriated categories.

- Other 1: Indoor exhibits \$800,000
- Other 2: Outdoor Exhibits \$200,000
- Other 3: WIFI/AV \$40,000
- Other 4: Nature Store Fixtures \$100,000

22. In total, how much funding is being requested from the Tourist Development Tax (TDT)?

\$500,000.00

23. Is Tourist Development Tax (TDT) funding necessary for this facility/project to be financially viable?

Yes

24. List the other sources of funding for this facility/project.

- Source 1: \$175,000.00 individual donations
- Source 2: \$90,000.00 Hunter Charitable Foundation
- Source 3: \$375,000.00 Florida Inland Navigation District Grant

25. List the percentage of funds by type that are currently secured and/or unsecured for this facility/project.

- Agreement: 33% Florida Inland Navigation District
- Cash-In-Hand: 23%
- Unsecured: 44%

26. What is the projected annual visitation of this facility?

100,000



27. Based on the projected annual visitation please anticipate the percentage of each age group of visitors to the facility.

- 10 & under: 3%
- 11 - 18: 2%
- Adults: 35%
- Seniors (65+): 60%

28. Which month(s) of the year are anticipated to be the MOST popular?

January, February, March, April, November, December

29. Which month(s) of the year are anticipated to be MODERATELY popular?

May, June, July, August

30. Which month(s) of the year are anticipated to be the LEAST popular?

September and October

31. What day(s) of the week are anticipated to be the MOST popular?

Sunday, Wednesday, Friday, Saturday

32. What day(s) of the week are anticipated to be MODERATELY popular?

Tuesday and Thursday

33. What day(s) of the week are anticipated to be the LEAST popular?

Monday

34. What time(s) of the day are anticipated to be the MOST popular?

10am to 2pm

35. What time(s) of the day are anticipated to be MODERATELY popular?

6am to 10am

36. What time(s) of the day are anticipated to be the LEAST popular?

6pm to 10pm

37. How long, on average, do you expect visitors to stay at the facility?

1 to 2 Hours

38. What percentage of your visitors will be from:

- In County: 30%
- Out of County: 20%
- Out of State: 40%
- International: 10%



39. What are the projected: number of room nights and lodging revenue from this project?

Room Nights: Offering a wide range of outdoor and educational activities, MINWR is the nation's seventh most visited wildlife refuge. Visitors participating in hunting, fishing, bird and wildlife watching, and wildlife photography activities fill hotel rooms year-round.

The waters of the refuge are among the most popular locations in the U.S. for nighttime bioluminescent kayakers, who occupy hotel rooms all summer and well into the fall.

With the completion of the Florida Coast to Coast Connector Bike Trail, thousands of cyclists will also be visiting the refuge.

It is difficult to calculate the total number of room nights the wildlife refuge generates and even more of a challenge to quantify the number of hotel rooms that will be filled due to the new exhibits in the CCEC. However, there is no question that the new exhibits at the CCEC will certainly enhance the nature-based experiences enjoyed by MINWR visitors. It can be said with certainty that the 6day 2018 Space Coast Birding and Wildlife Festival, which depended heavily on activities at MINWR, generated 2,135 hotel/motel room nights with an additional 22 people staying in campgrounds.

The U.S. Fish and Wildlife Service 2013 Banking on Nature Report estimated an economic impact of \$60.4 million for Brevard and Volusia counties from MINWR recreational visits. Much of that was from hotel/motel revenue.

Lodging Revenue: Same as room nights

40. What are the expected annual operating costs?

\$170,000.00 Annual operating costs for the indoor exhibits, outdoor exhibits, AV, Wi-Fi and Nature store is 2 employees for the US Fish and Wildlife Service, 1 FT & 2 PT MIWA employees and the janitorial support

41. How many full-time employees?

4

42. Will alcohol be served on the premises?

No

43. Will your facility need security?

Yes

44. Will there be any live animals in or on the premises?

No

45. What type and approximately how many animals will be on the premises?

N/A

46. When do you anticipate being able to provide final and complete project package, to include, if applicable, confirmation of matching funds; pro forma financial statements; and final master plan?



Within the next 3 months

47. When is the expected date of the facility to be operational?

10/01/2020

48. Do you have any other businesses in Brevard County?

No

49. Please list the names and locations of your businesses.

N/A



Economic & Fiscal Impacts

Brevard County, Economic & Fiscal Impacts

MFA was tasked to assess the economic and fiscal impact of three proposed developments in Brevard County.

The impact area is defined as Brevard County, Florida.

The model assumes that **all** spending is local given the economic sector in which the spending occurs is present in the defined impact area thus eliminating competition resulting in the maximum possible impact.

If an economic sector is not present in the impact area, the spending for this sector “leaks” out of the impact area and has no impact there.

Impact Model Inputs

The impact model inputs are based on data gathered from the four proposed developments and the spending characteristics of domestic visitors to Florida. The following two table summarize gathered input data.

Merritt Island National Wildlife Community Conservation Education Center

Construction (One-Time Impact)

Table 1.: Preliminary Construction Impacts			
Impact Type	Employment	Income	Economic Activity
Direct Effect	40	\$1,922,607	\$5,275,000
Indirect Effect	8	\$385,708	\$1,009,306
Induced Effect	13	\$479,870	\$1,521,535
Total Effect	61	\$2,788,185	\$7,805,841

Source: IMPLAN, MFA, BLS, Merritt Island Wildlife Association

Construction (One-Time Impact) Tax Revenues

Table 2.: Preliminary Construction Impacts Estimated Tax Revenue	
Total State and Local Tax	\$214,394
Total Federal Tax	\$635,119

Source: IMPLAN, MFA, BLS, Merritt Island Wildlife Association



Operations (Annual Reoccurring Impact)

Table 3.: Preliminary Operations Impacts			
Impact Type	Employment	Income	Economic Activity
Direct Effect	2	\$62,227	\$142,018
Indirect Effect	0	\$12,617	\$35,953
Induced Effect	0	\$15,630	\$49,568
Total Effect	3	\$90,473	\$227,540

Source: IMPLAN, MFA, BLS, Merritt Island Wildlife Association

Operations Tax Revenues (Annual Reoccurring Impact)

Table 4.: Preliminary Operations Impacts Estimated Tax Revenue	
Total State and Local Tax	\$9,899
Total Federal Tax	\$20,456

Source: IMPLAN, MFA, BLS, Merritt Island Wildlife Association

Visitation/Attendance (Annual Reoccurring Impact)

Table 5.: Preliminary Visitation Impacts			
Impact Type	Employment	Income	Economic Activity
Direct Effect	91	\$2,009,090	\$5,610,290
Indirect Effect	12	\$421,291	\$1,375,675
Induced Effect	14	\$505,739	\$1,603,637
Total Effect	116	\$2,936,120	\$8,589,602

Source: IMPLAN, MFA, BLS, Merritt Island Wildlife Association

Visitation Tax Revenues (Annual Reoccurring Impact)

Table 6.: Preliminary Visitation Impacts Estimated Tax Revenue	
Total State and Local Tax	\$541,678
Total Federal Tax	\$716,595

Source: IMPLAN, MFA, BLS, Merritt Island Wildlife Association

Please Note:

- The assessment assumes that all goods and services will be purchased in the impact area given that the demanded economic sector/industry is present. Thus, the model does not account for competition in the marketplace. For example, it assumes that a service will be acquired within the impact area even though it might be less expensive to purchase it outside of it. This means that the assessment reflects the maximum impact based on the current local economy.
- Ongoing Impacts reflect a snapshot based on the data provided. Those impacts are subject to change in the future based on visitor/attendee numbers, vacation/recreation budgets, consumer behavior, changes in operational spending and inflation as well as changes in tax rates and legislation.



Economic and Fiscal Impact Assessments

An impact analysis begins by identifying the economic activity, such as capital improvement projects, operational expenditures, expenditures on programs, or increased sales from a new initiative. Such activity is then assigned to the appropriate industry/economic sector. In this case these are the four projects the applicants are developing.

The underlying economic rationale is that new expenditures in a region drive the demand for goods and services and lead to economic growth. The logic of the model is that any additional demand in any economic sector or institution triggers economic responses from other sectors and institutions through the linkages in an input-output matrix. This is often called the ripple effect, since it is similar to the cascade of waves that form when a stone is thrown into a lake.

The economic and fiscal impact of any project and its surrounding community is measured by deviation in economic activity (output), and the associated changes in jobs (employment), income (wages), and related tax revenues.

As a dollar flows through an economy, it touches various industries, some local and some non-local. The portion of a dollar spent locally turns over again. At each iteration, a portion of the economic activity spurs additional economic activity in the area, while some of the economic activity "leaks" to another area. The multipliers capture this iterative process until the whole dollar is "leaked."

While the dollar "ripples" through the local economy, it has different effects in different economic sectors that are determined by a multiplier. A large impact area (such as a state) or an economically diverse area (such as an urban center) may have high multipliers because a greater portion of activity required to support the change in final demand would come from within the impact area's boundaries. For a small impact area, a rural impact area a less diverse economy such as a single county or zip code, multipliers could be lower.

The impact model includes information for 536 different industries/economic sectors, generally at the three- or four-digit Standard Industrial Classification (SIC) level – called the NAICS codes. The multipliers are then selected based on the impact area's geography and are applied to each industry sector present in the defined impact area to calculate impacts.

Regional input-output (I-O) multipliers systematically analyze economic impacts and account for inter-industry relationships within and between regions. These multipliers are unique to each industry sector and are geography based on the economic make-up of the locality. Thus, a construction project will have a greater local impact on an area that has a concentration of construction material suppliers, whereas a change to a banking policy will have a greater impact on an area with a concentration of financial institutions.



One-Time and Ongoing Impacts

There are two principal types of impacts: one-time impacts, such as those associated with a construction project, which end when the construction is completed, and ongoing impacts, which continue annually, such as those from the operation of a long-standing program, retailer, or other facility.

For example, the addition of new attractions, amenities, programs or facilities to Brevard County would have:

- a one-time effect during the construction phase, and
- on-going annual effects due to additional visitor spending, either onsite (concessions, souvenirs) or in adjacent restaurants, retail stores and/or hotels, as well as changes (increases) in the operational expenditures by the attractions to maintain and operate those new amenities or facilities

There are three types of impacts

Direct Impact

A direct impact is the change in sales, income, and jobs in those businesses or agencies that directly receive revenues from an operator/owner of an attraction. For example, the economic activity of the construction company building a new sports facility or parking deck would be a direct impact.

Indirect Impact

An indirect impact is the change in sales, income, and jobs in those businesses or agencies that supply the businesses or agencies receiving direct impacts. For example, if a steel fabrication plant in the impact area produces the steel that is sold to the construction company that builds sports facility or parking deck, the economic activity at the steel fabrication plant is an indirect impact.

Induced Impact

Induced impact measures ripple effects of wages in the local economy. As employees are paid by the businesses and agencies directly or indirectly impacted, there is an increase in household income, which is then spent, at least in part, in the impact area, which represents the induced impact.

The result of all of the three types of impacts above is the total economic impact -- the sum of direct, indirect, and induced impacts and are measured in changes to the economic activity (output), and the associated changes in jobs (employment), income (wages), and related federal, state and local tax revenues.

The model also allows to account for competition in the market place. If it is set to 100% local purchase, as it is in this case, it assumes that all expenditures are made within the impact area, given all economic sectors affected are present, thus eliminating competition and resulting in the highest possible impact. For example, instead of purchasing concrete from a business in outside of Brevard County for a lower price, the concrete will be purchased from a business within the impact area despite a higher price.

This is an economic model; thus, it does not measure social impacts of the new attractions and facilities such as the increase in quality of life through and becoming a more attractive county to live in. It also does not account for follow up investments that are likely to happen triggered by the increased visitation to the County.



Supporting Documentation

Merritt Island National Wildlife Refuge (MINWR) Community Conservation Education Center (CCEC) Exhibits, wireless internet, audio-visual and nature store fixture Project Proposal
May 2, 2018

The proposed project includes the design, manufacture and installation of 12 indoor exhibits, 5 outdoor exhibits, wireless internet and audio-visual equipment, and fixtures for the nature store for the future Merritt Island National Wildlife Refuge (MINWR/Refuge) Community Conservation Education Center (CCEC). The exhibits will serve as the focal point of the CCEC, providing an exceptional platform to engage and educate visitors about the unique Indian River Lagoon ecosystem, challenges the estuary faces and what people can do to help, and the cultural and natural history of the local coastal environment.

The new MINWR CCEC will serve residents and visitors of the Titusville-Melbourne-Orlando-Daytona Beach urban area, connecting people through interactive and dynamic indoor and outdoor exhibits to the history, habitats, wildlife and compatible recreational outdoor activities available in this unique Florida coastal landscape. The CCEC will contribute to the environmental, social and economic sustainability of the Refuge and local communities by attracting a diverse audience to learn about and experience the Refuge and its natural resources. The CCEC will include large indoor and outdoor exhibit areas designed to educate visitors about the Indian River Lagoon, threatened and endangered wildlife species, and unique coastal habitats protected by the Refuge as well as recreational opportunities.

The U.S. Fish & Wildlife Service is funding 100% of the \$4.06 million cost of construction of the building as well as associated parking and road enhancements, but does not have funds for the exhibits, wireless internet, specialized audio-visual equipment or nature store fixtures. The Merritt Island Wildlife Association (Friends of the Refuge) initiated a capital campaign to secure the needed additional funding of \$1.14 million dollars. Phase 1 of construction of the building is slated to begin in mid-2019. We are requesting a grant of \$500,000 which is 44% of the cost of the additional components for the new CCEC.

MINWR encompasses 140,000 acres on the northern end of Merritt Island in Brevard and Volusia Counties, overlaying Kennedy Space Center's non-operational lands. The Refuge lies within one of the most productive estuaries in the country, the Indian River Lagoon system (IRL), which has more species of plants and animals than any other estuary in North America. The Refuge faces the Atlantic Ocean and includes three major water bodies: the Indian River Lagoon, Mosquito Lagoon and Banana River. Twenty-two percent of the IRL system, including 129 miles of IRL shoreline are protected within the Refuge; 23,000 acres of impoundments connect to the IRL through culverts. A wide array of habitats exists on the Refuge, including beach and dune systems, estuarine waters, forested and non-forested wetlands, impounded wetlands and upland shrublands and forest. These diverse habitats support more than 1,000 species of plants and more than 500 species of fish and wildlife, including a variety of waterfowl, shorebirds, and neotropical migratory birds, as well as 10 federally listed species. More than 300 species of birds (resident and migratory) have been identified using the Refuge. Popular with anglers, hunters, kayakers, birders, wildlife enthusiasts, and photographers, MINWR is the 7th most visited refuge in the national wildlife refuge system (566 refuges). 1.2M people came to the Refuge in 2017. The U.S. Fish and Wildlife Service 2013 Banking on Nature Report estimated an economic impact of \$60.4 million for Brevard and Volusia counties from MINWR recreational visits.

Serving as the Eastern Gateway for the 256-mile-long Florida Coast to Coast Connector Bike Trail, MINWR will welcome more visitors in the future as paved trails are completed and biking is added to the recreational activities. An increase in the amount of rocket launches at Kennedy Space Center and additional cruise ships coming into nearby Port Canaveral hold the promise of even larger numbers of sightseers utilizing the Refuge, resulting in greater economic benefits to surrounding communities.



Market & Feasibility Advisors



**United States Department of the Interior
FISH AND WILDLIFE SERVICE**

Merritt Island National Wildlife Refuge
P. O. Box 2683
Titusville, Florida 32781
(321) 861-0667, (321) 861-1276 FAX



In Reply Refer to:
FWS/R4/RF/MINWR

April 26, 2018

Chris Fairey, President
Merritt Island Wildlife Association
P.O. Box 2683
Titusville, FL 32781

Chris:

Since 1994, the Merritt Island Wildlife Association (MIWA) has partnered with the U.S. Fish and Wildlife Service at Merritt Island National Wildlife Refuge (MINWR) to promote conservation, awareness, appreciation, and support of MINWR programs.

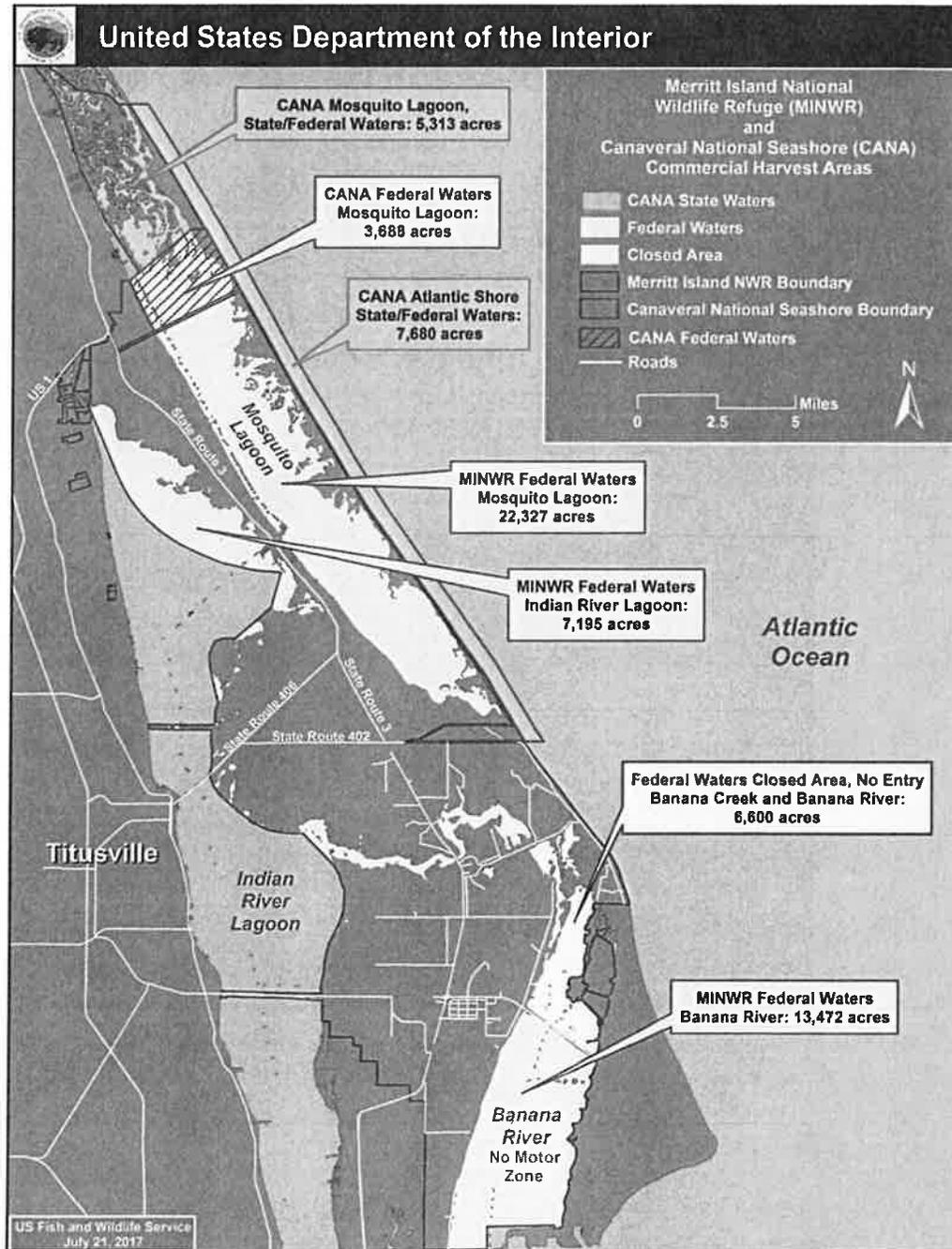
The design phase of the new MINWR Community Conservation Education Center (CCEC) is scheduled to begin this summer, with construction planned for early 2019. The U.S. Fish and Wildlife Service has committed \$4.06 million to the construction of this facility. Unfortunately, federal funding is not available for planning, construction and installation of exhibits in the CCEC. The purpose of the CCEC is to connect people to the history, habitats, wildlife, and recreational opportunities available in and around MINWR. The exhibits are needed to expand the visitor experience beyond the visitor center and into the refuge's natural and historic landscapes, fostering conservation and stewardship ethics.

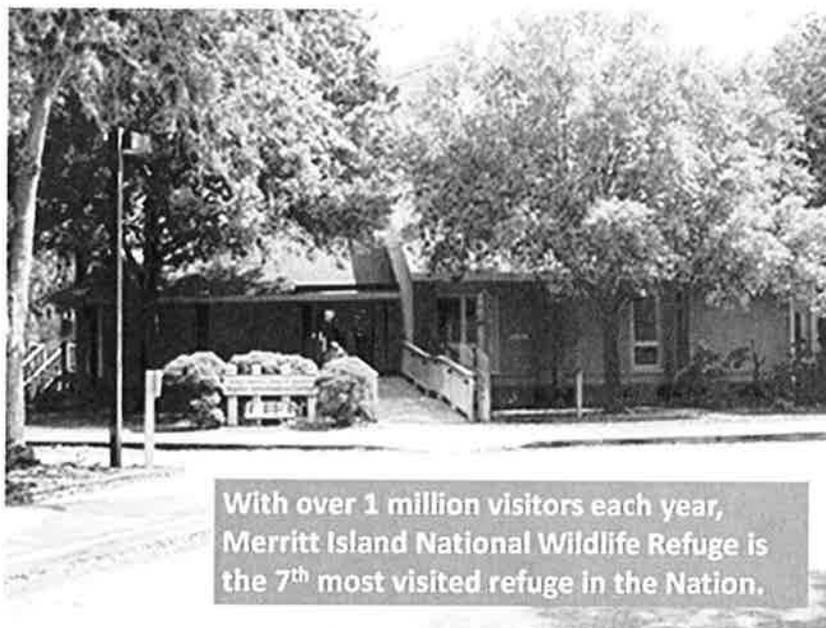
The U.S. Fish and Wildlife Service appreciates MIWA's commitment to the Refuge and to funding the exhibits for the CCEC. MIWA has worked actively and collaboratively with the Refuge staff to support the planning and acquisition of the exhibits. Your fundraising efforts and close coordination with the local communities in building support for the CCEC exhibits is greatly appreciated. Without MIWA's efforts, we would have little hope of having quality educational exhibits for the new facility.

We look forward to working together with MIWA to provide a state-of-the-art nature-based educational facility which will serve our local communities and their visitors for many years.

Sincerely,

Layne L. Hamilton
Refuge Manager





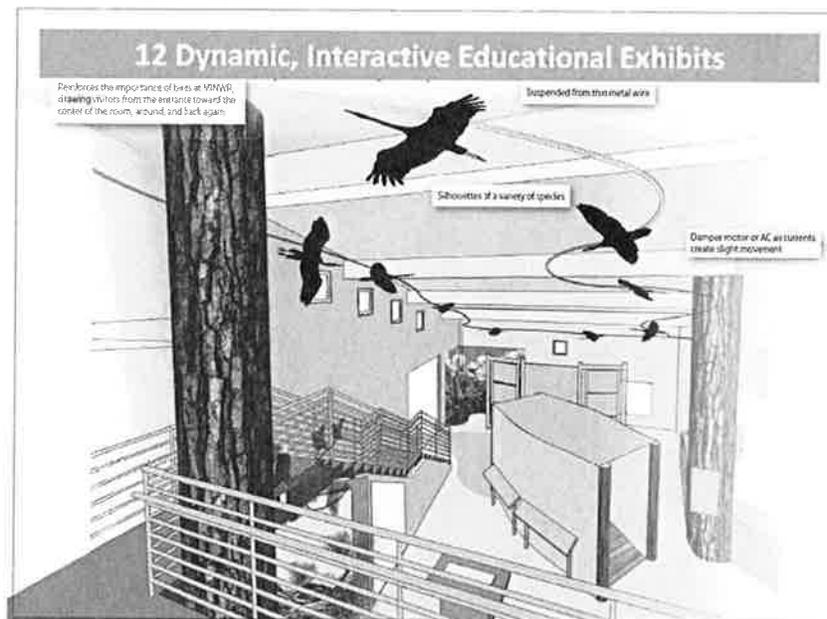
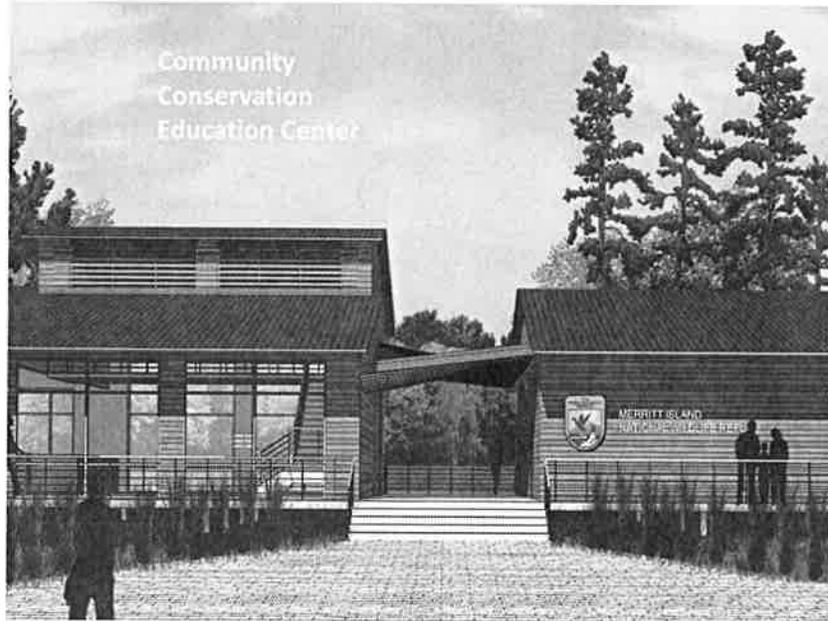
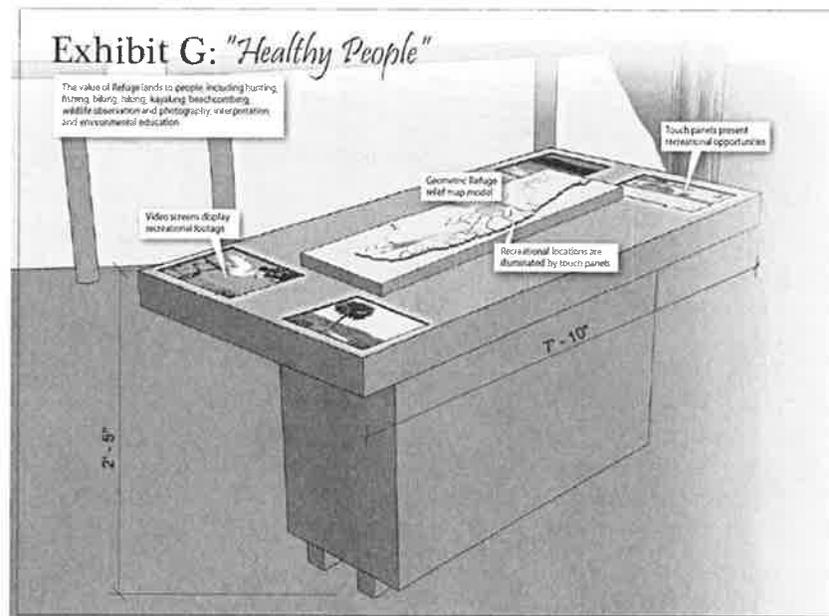


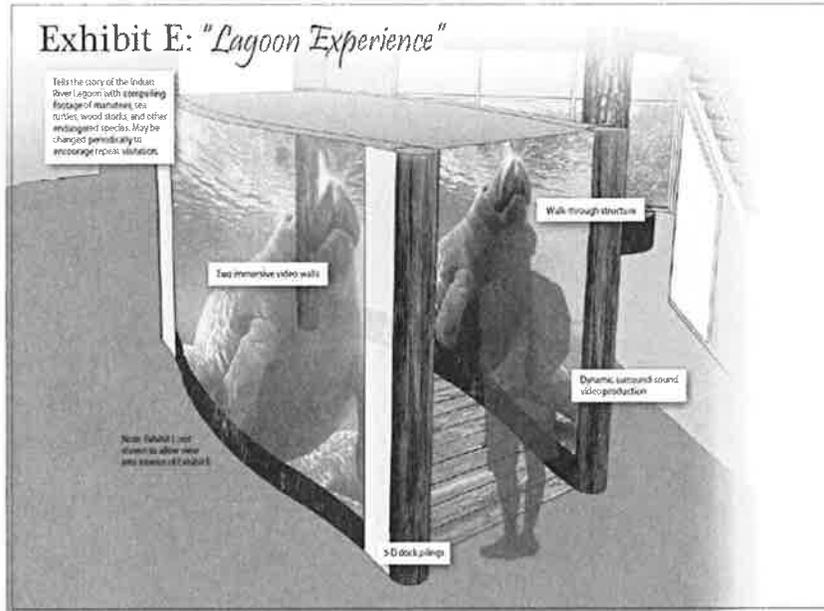


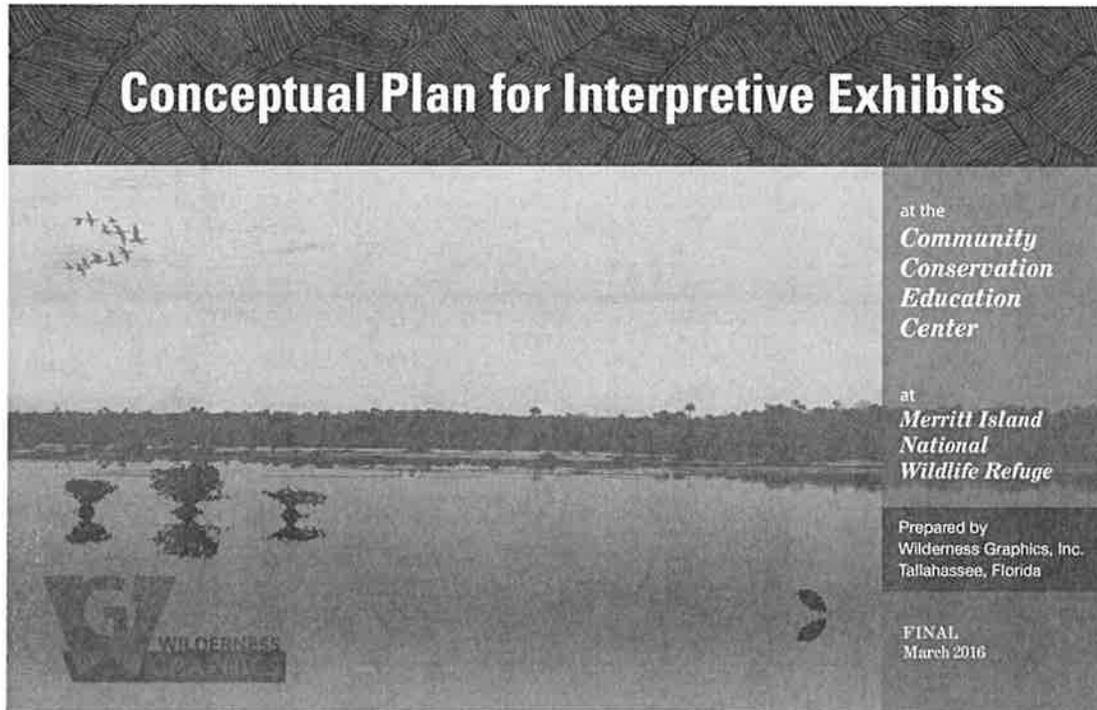
Exhibit K: "Children's Corner"



Exhibit G: "Healthy People"







MERRITT ISLAND NATIONAL WILDLIFE REFUGE

Just off Florida's east central coast lies a unique community of people, lands, waters, and wildlife. The Merritt Island National Wildlife Refuge, in partnership with area agencies, works to preserve and protect this special system. Established in 1963, the Refuge is as an overlay of NOAA's John F. Kennedy Space Center (KSC). The lands and waters of KSC primarily support the national space program and secondarily serve as a wildlife refuge. The National Park Service co-manages 34,000 acres with the Refuge as part of the Canaveral National Seashore and KSC. This unique 3-way partnership provides a buffer for space-related activities, while protecting one of the largest tracts of undeveloped coastal habitats in the eastern U.S. and providing unparalleled outdoor recreational opportunities.

The Refuge's 140,000 acres lie within one of the most productive estuaries in the country, the Indian River Lagoon. The lagoon supports more species of plants and animals than any other estuary in North America. The Refuge boasts a wide array of habitats that support more than 1,000 species of plants and more than 500 species of fish and wildlife. Habitat for 16 federally listed threatened and endangered species is also managed and protected on the Refuge.

Merritt Island NWR also welcomes over 1 million visitors each year. The existing visitor center hosts more than 80,000 visitors annually, including over 3,000 school children. The Refuge is one of the top tourist destinations in Brevard County. To accommodate and inspire this vibrant and growing community, a new building and interpretive program is planned, to be completed in 2016. The Community Conservation Education Center will offer state-of-the-art exhibits to engage and educate. Displays will bring the natural world indoors, incorporating the sights and sounds of nature, as well as send visitors outdoors to enjoy the Refuge.

THEMES

At Merritt Island National Wildlife Refuge—
"Wildlife Comes First."

Moreover, the Refuge embodies the vision that—
"Creating a better world requires teamwork,
partnerships, and collaboration."
—Simon Mainwaring

OBJECTIVES

The Community Conservation Education Center will serve a valuable and much-needed purpose. As a central community resource, the Center will welcome students, residents, and tourists, alike, drawing people of all ages, ethnicities, learning levels, and backgrounds. Exhibits will offer information, innovation, and ideas that inspire and incite, and that foster an appreciation for the area's history, technology, and the natural world. Exhibits will help visitors forge an emotional and intellectual connection with the USFWS, the Refuge and its partners, and the local community, encouraging them to explore and support these valuable resources.



GOALS

After exploring the Community Conservation Education Center, visitors will:

- Realize that the surrounding lands are protected by a vital partnership between the Merritt Island National Wildlife Refuge, the National Park Service, and the Kennedy Space Center.
- Appreciate the work of local community groups and initiatives in protecting and preserving this unique coastal.
- Know that Merritt Island NWR is part of the National Wildlife Refuge System and appreciate its history and mission.
- Be aware of the opportunities for fishing, hunting, wildlife observation, photography, environmental education, and interpretation available at the Refuge, as well as new biking and kayaking amenities.
- Understand that Merritt Island NWR lies within the Indian River Lagoon, one of the most productive estuarine systems in the United States.
- Have learned about the variety and importance of coastal habitats, such as beach, marsh, shrub/scrub, hammock, and flatwoods.
- Have a greater appreciation for area wildlife, such as fish, snakes, lizards, raccoons, and resident and migratory birds.
- Understand what local species are federally listed as threatened and endangered, such as the Florida scrub jay and West Indian manatee, and what needs to be done to protect them.
- Have a knowledge of the cultural history of the area, including the changing land use.
- Better understand refuge management practices and how they improve habitat.
- Have been exposed to the idea of climate change and the role of the USFWS.
- Think about what they can do at home and in their communities to promote stewardship of the natural world.
- Have a greater appreciation for the uniqueness of the area and be motivated to learn more.
- Leave with positive feelings about their visit and the Merritt Island NWR, having been engaged in interactive and informative exhibits.
- Want to return for another visit and encourage others to visit, too.
- Be motivated to visit area venues and other refuges across the country.
- Be inspired to volunteer at Merritt Island NWR or at a refuge in their own state.

EXHIBIT CONCEPTS

The following outlines the approach for exhibits at the Merritt Island NWR Community Conservation Education Center. These are general descriptions that will be modified and refined in Phase 2 of the exhibit development process. Exhibits are based on conceptual building plans provided and will be updated during Phase 2, as building designs progress. These concepts assume a 1,267-sq-ft exhibit area with a slanted vaulted ceiling, staircase, information desk, and second-floor viewing area. The final conceptual plan will include lighting and electrical details to enable building contractors to provide these necessities for the exhibit area.

GOING GREEN

Reuse and recycle of materials is an important component of green design and fulfills LEED-certification requirements. Components of existing displays, such as the eagle tree and nest and taxidermy specimens, should be repurposed in the new exhibit space.

Floor Plan

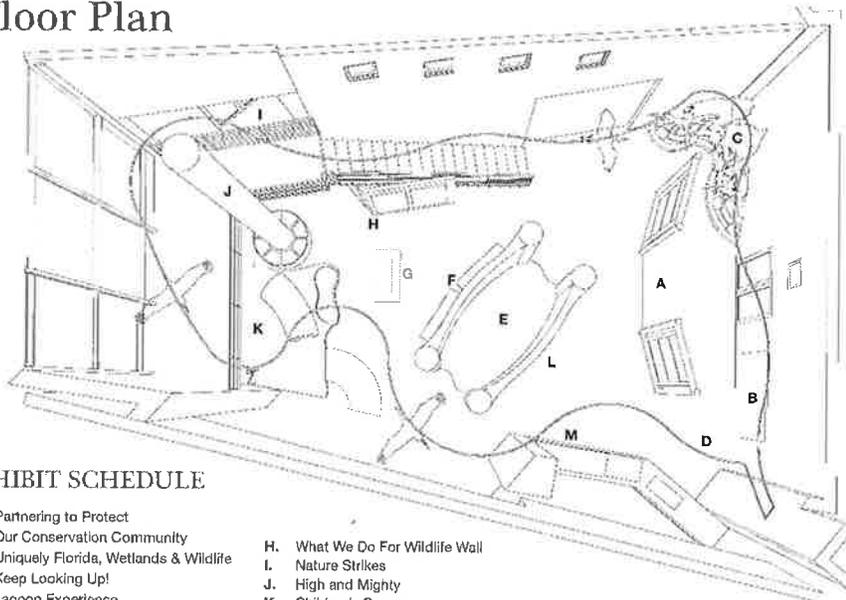


EXHIBIT SCHEDULE

- | | |
|--|----------------------------------|
| A. Partnering to Protect | H. What We Do For Wildlife Wall |
| B. Our Conservation Community | I. Nature Strikes |
| C. Uniquely Florida, Wetlands & Wildlife | J. High and Mighty |
| D. Keep Looking Up! | K. Children's Corner |
| E. Lagoon Experience | L. Our Past, Present, and Future |
| F. Healthy Habitats | M. Going Green |
| G. Healthy People | |



MERRITT ISLAND OFFICE
3415 GARDNER DRIVE
MERRITT ISLAND, FL 32953

Project Name

Merritt Island National Wildlife Refuge
Community Conservation Education Center
Merritt Island, Florida

2/28/2013

REV: 2/27/2013

DRAWN BY: AW

SCALE: 1/8"

DATE: 2/27/13

3 OF 19



Flooring Plan

Colorful vinyl tiles, mammalian, or effie decorative flooring would add visual interest to the space. Sky blue, turquoise, blue-green, pine green, and sandy soil beige would respond to oak themes. Colorful flooring could be continued into the Bookery to connect the two spaces and draw visitors inside.

MARKET & FEASIBILITY ADVISORS	
1000 W. GORHAM AVENUE	
TALLAHASSEE, FLORIDA 32304	
Phone: 904.209.1100	
Fax: 904.209.1101	
www.mfallc.com	
Project Name	
Merritt Island National Wildlife Refuge Community Conservation Education Center Merritt Island, Florida	
DATE	01/11/10
REV	1 11/10
DRAWN BY	AA, MH
NO SCALE	
DATE	01/11/10
4 OF 19	

Exhibit A: "Partnering to Protect"

Welcomes visitors and introduces the unique partnership of USFWS, KSC, and NPS, with a dynamic point-counterpoint, multi-perspective video production.

Graphic Panel: Welcome to the Refuge

Two video monitors

Graphic Panel: National Park Service

Graphic Panel: US Fish & Wildlife Service

Graphic Panel: Kennedy Space Center

Colorful acrylic panels

May be inset with motion-activated screens displaying refuge landscapes

Open acrylic display allows views through

Back (viewed as leaving) "Head Out" "On Your Next Adventure"

19'

10'

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1000 W. GORHAM AVENUE	
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DRAWN BY	AA, MH
NO SCALE	
DATE	01/11/10
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Partnership Logo

Illustrations in Exhibit A or B: The logo, individual logos, and colors will be carried throughout the exhibits.

MARKET & FEASIBILITY ADVISORS
12077 TAMPA AVENUE
TALLahassee, FL 32909
813-291-1111
www.mfallc.com

Merritt Island National Wildlife Refuge
Community Conservation Education Center
Merritt Island, Florida

DATE: 10/1/16
REV: 10/1/16
DRAWN BY: SHS
NO SCALE
DATE: 10/1/16

6 OF 19

Exhibit B: "Our Conservation Community"

Benefits of conservation partnerships for wildlife and the local community, volunteer opportunities and conservation events, and ideas for personal ethical outdoor behavior (a theme carried throughout the exhibits).

Locations of vital community partners and venues indicated

4' - 6 1/8"

7' - 5 3/16"

Interpretive panels

Mechanical interactives

Bulletin or magnetic board or electronic display

HOW TO HELP

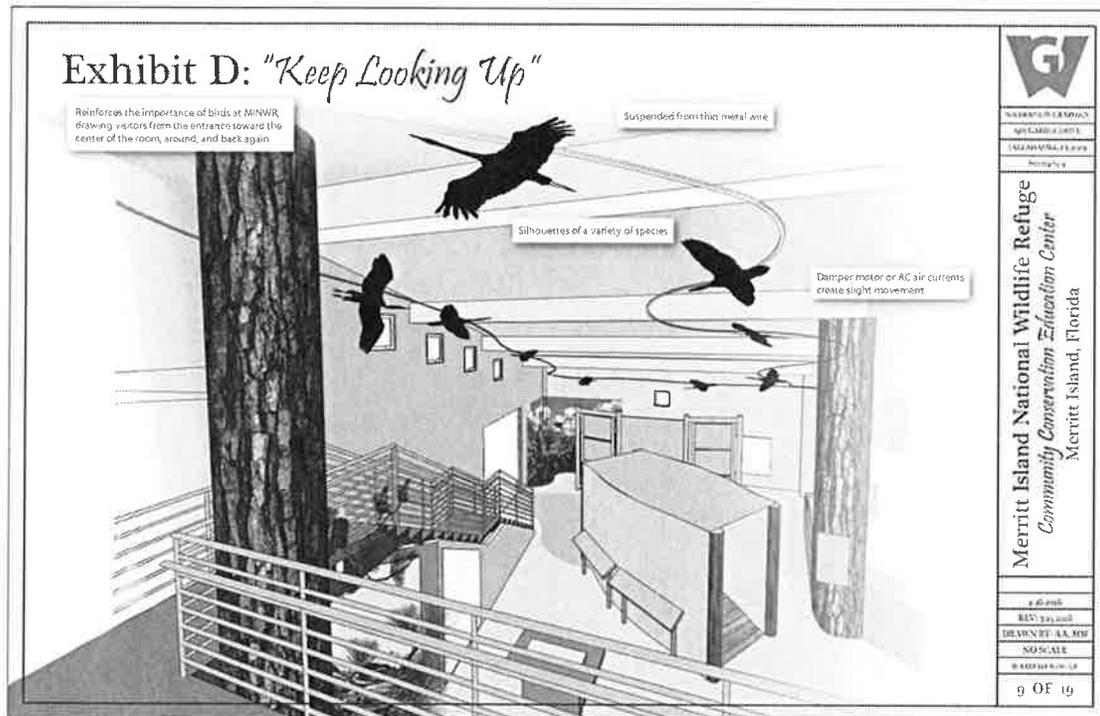
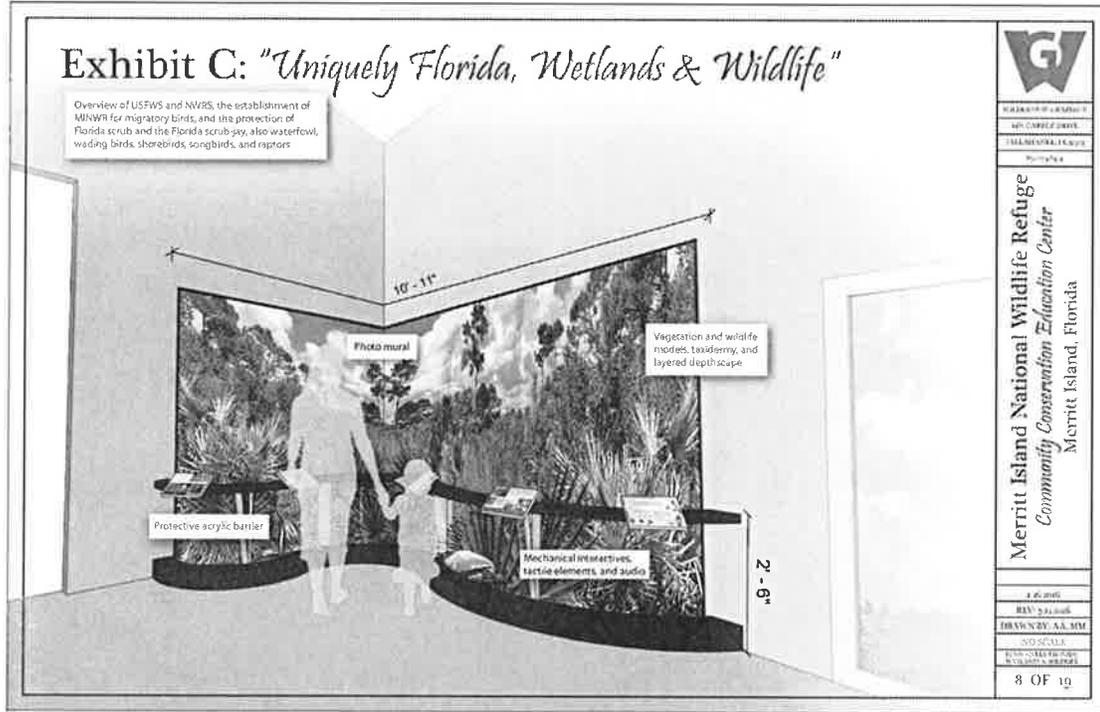
Multilayers

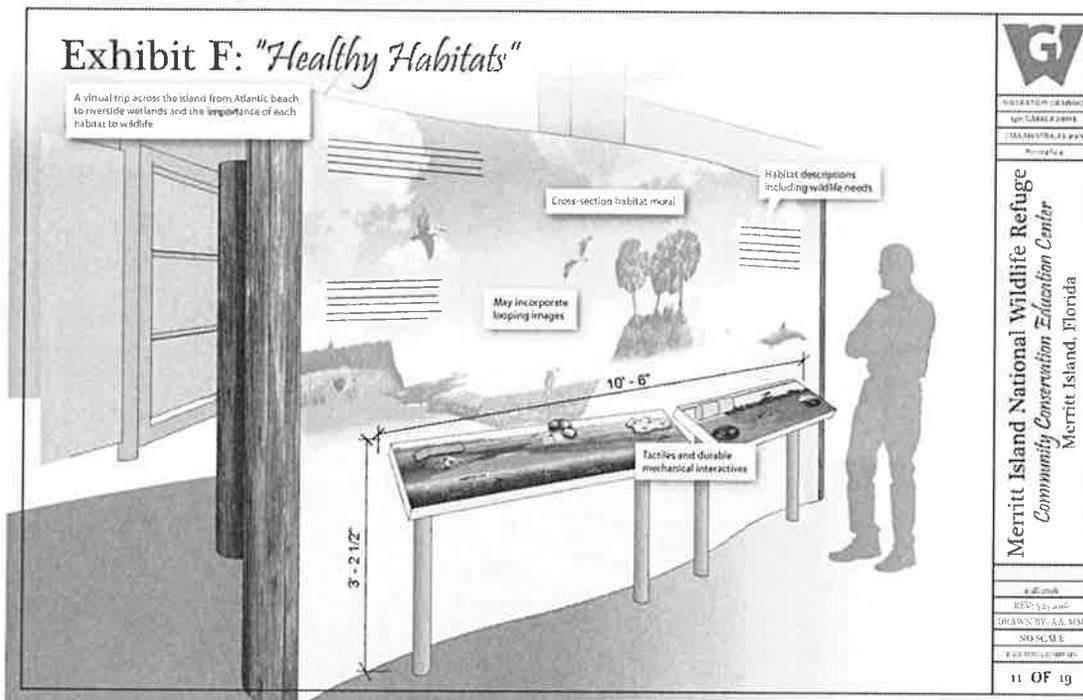
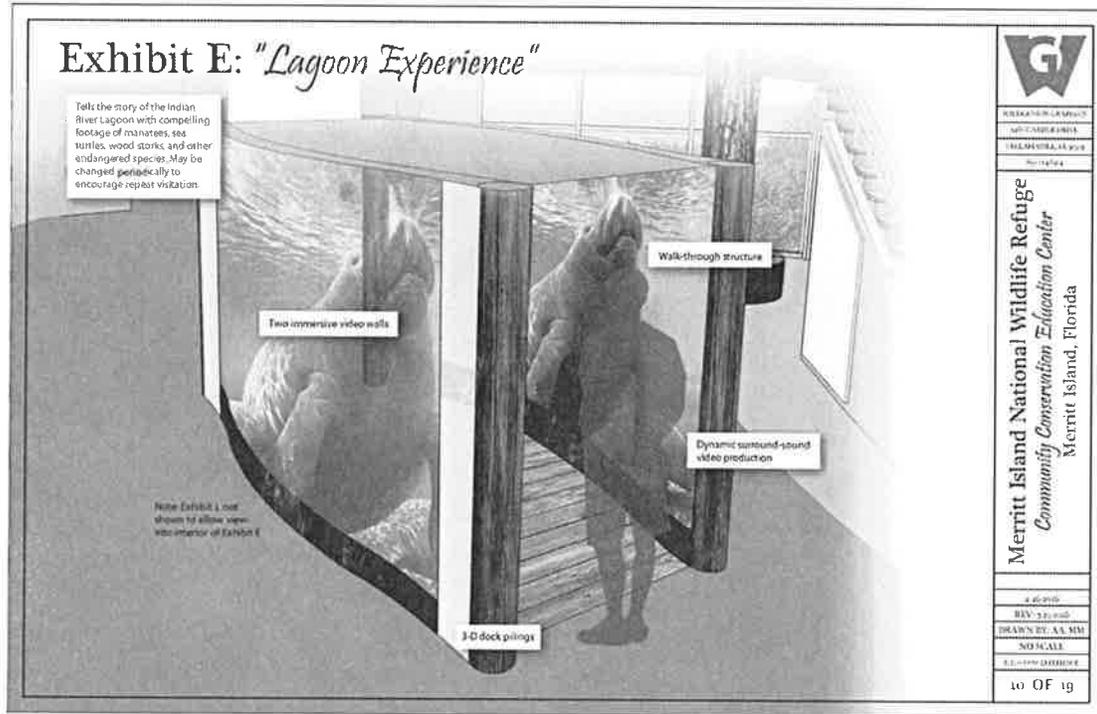
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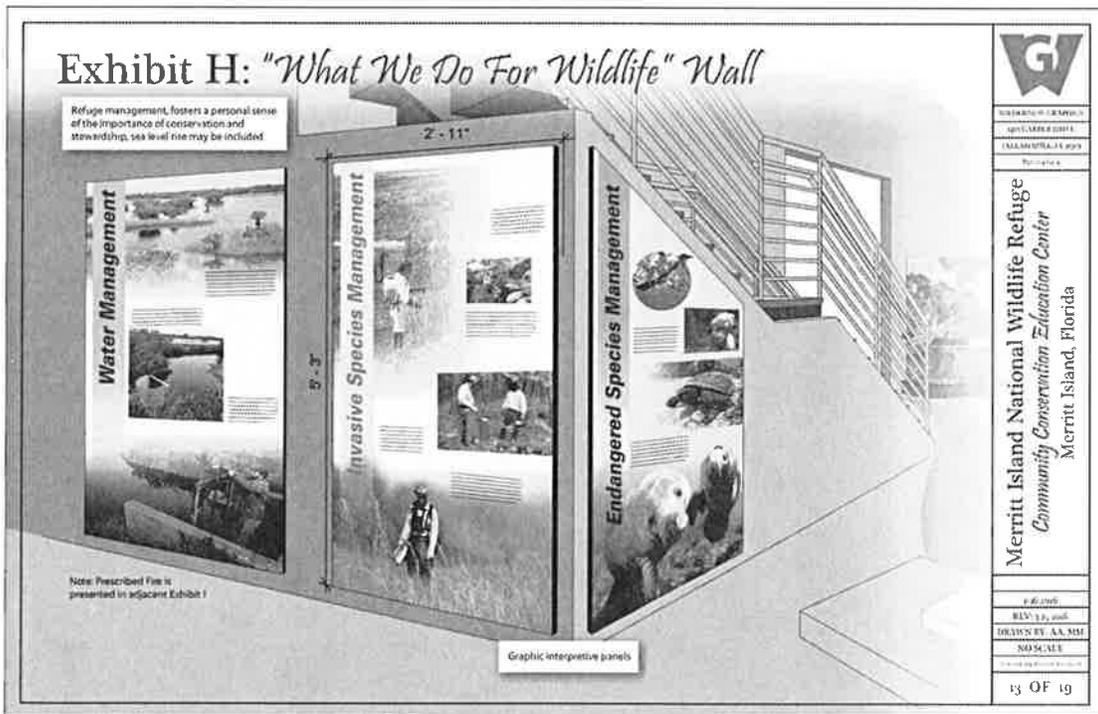
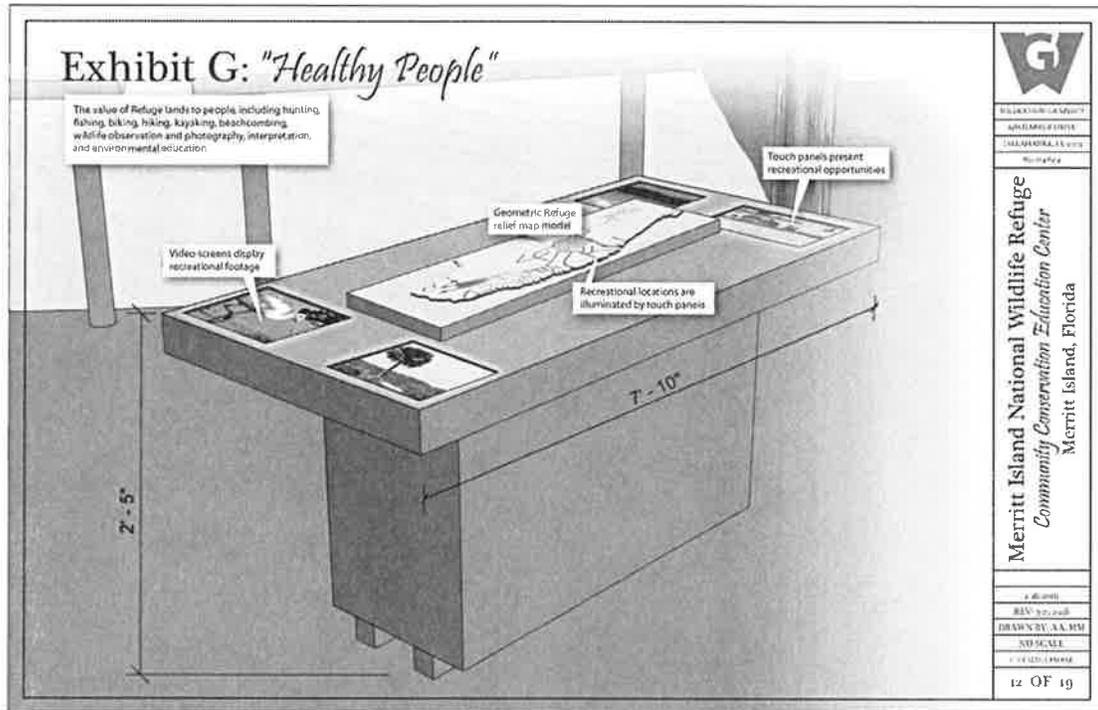
Merritt Island National Wildlife Refuge
Community Conservation Education Center
Merritt Island, Florida

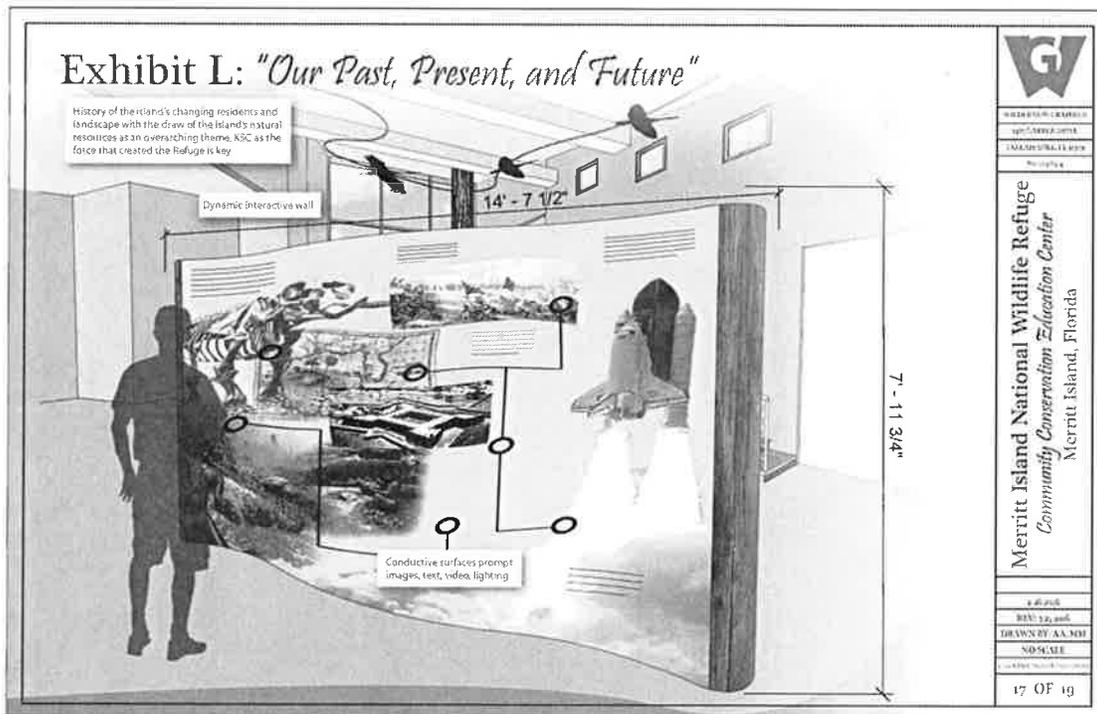
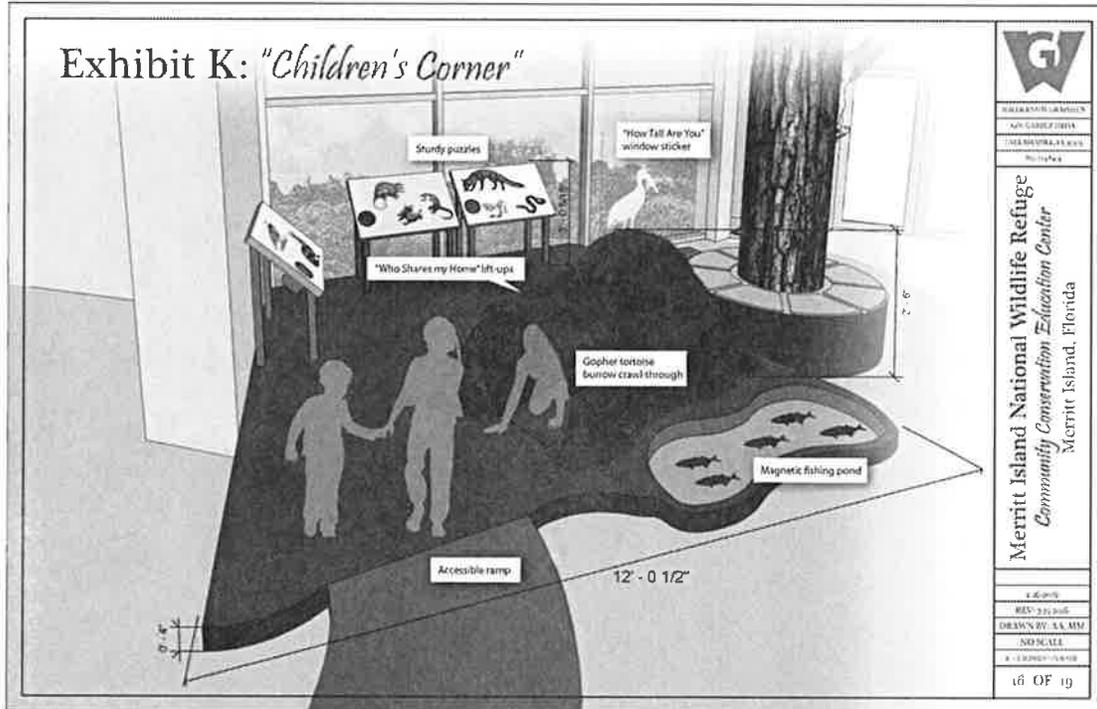
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DRAWN BY: A.A. REM
NO SCALE
DATE: 10/1/16

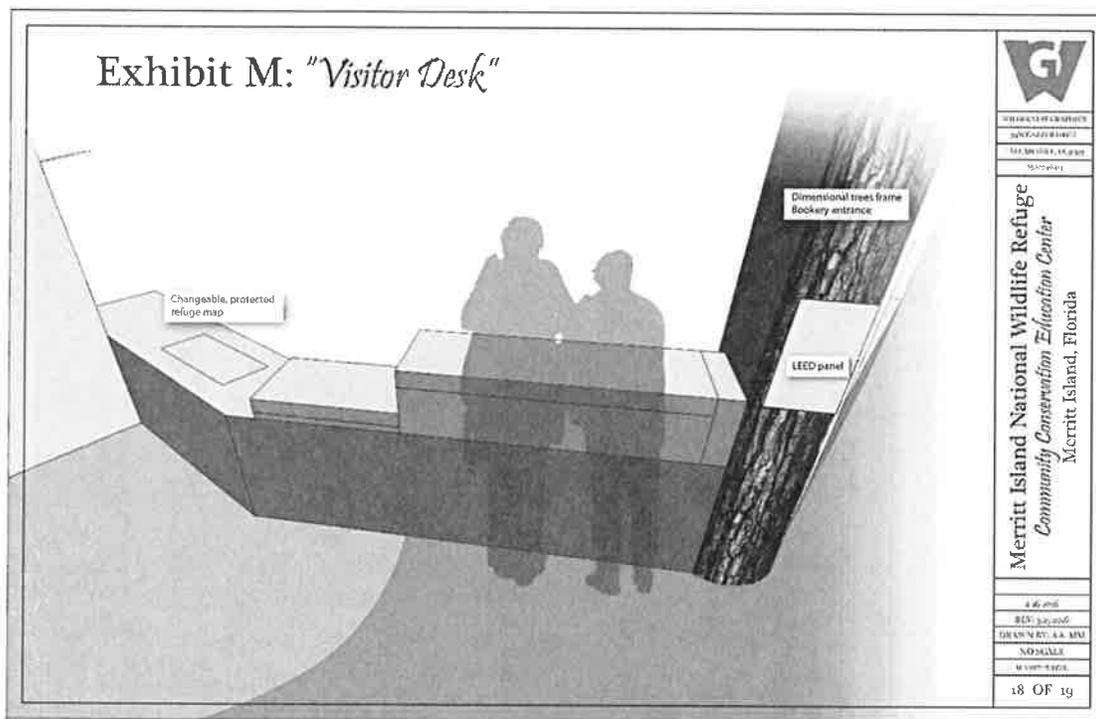
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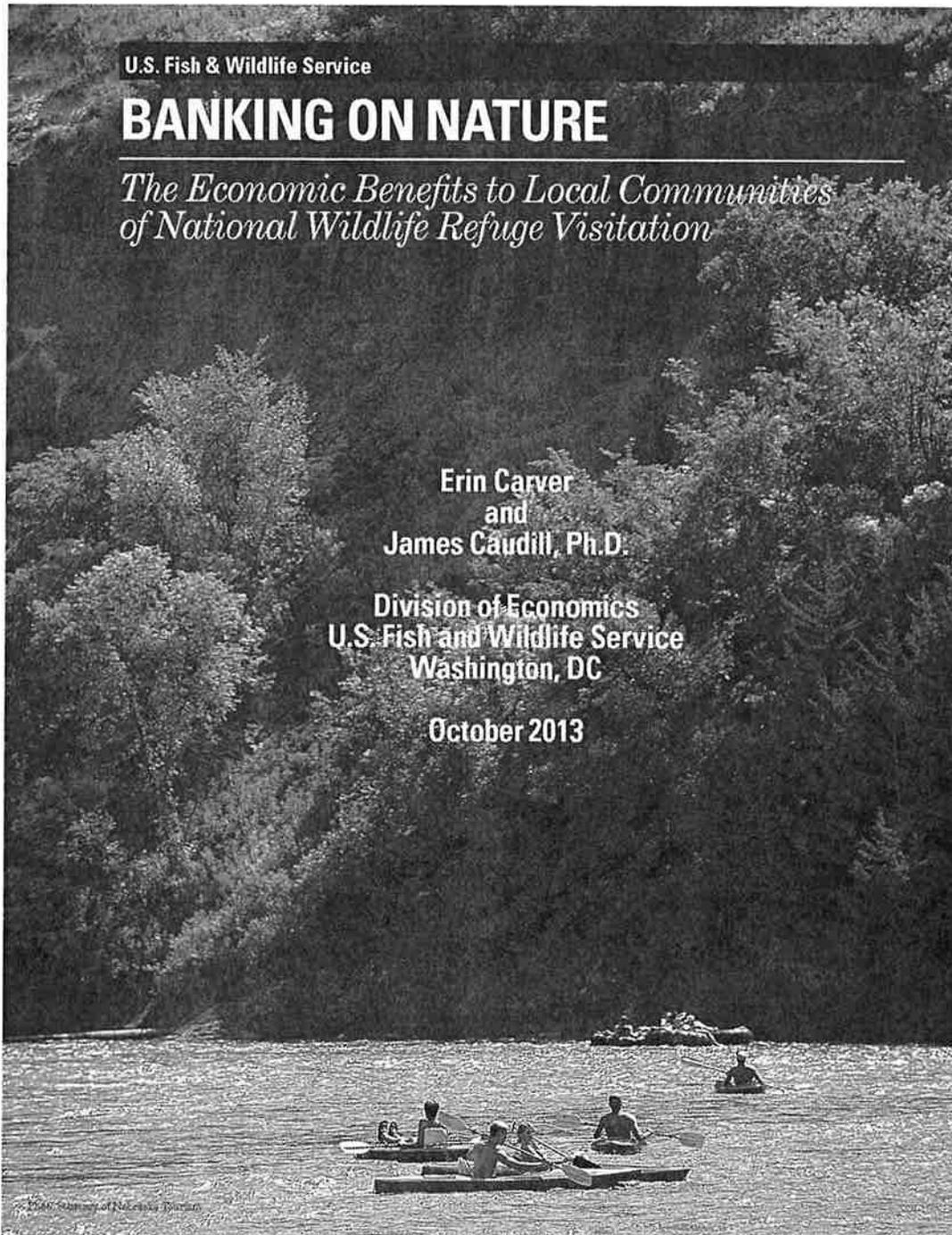


*Community Conservation
Education Center
Merritt Island National Wildlife Refuge
Concept Exhibit Schedule and Budget*

This budget is provided as a guideline only, with estimated percentages of the budget total provided for each exhibit. As this is the concept phase of the project, exhibit elements and components may change as designs are finalized. The budget allows for funds to be moved between exhibits as the project progresses.

A. Partnering to Protect	7%
B. Our Conservation Community	5%
C. Uniquely Florida, Wetlands & Wildlife	7%
D. Keep Looking Up!	4%
E. Lagoon Experience	12%
F. Healthy Habitats	5%
G. Healthy People	8%
H. What We Do For Wildlife Wall	7%
I. Nature Strikes	7%
J. High and Mighty	7%
K. Children's Corner	7%
L. Our Past, Present, and Future	6%
M. Visitor Desk	3%
N. Outdoor Amenities	15%

Budget Total \$700,367





Executive Summary

Banking on Nature 2011: The Economic Benefits of National Wildlife Refuge Visitation to Local Communities

An enormous molten ball shoulders its way up over the edge of the sea, illuminating a golden pathway from the horizon to a lonely beach. The only witnesses are a young couple with an infant who have come to gaze in awe at a piece of the world that still looks much as it did 10,000 years ago. In a small pond behind the sand dunes, a great blue heron patiently stalks a small green frog. A mile inland, two waterfowlers tense in their thatched blind as a small band of surf scoters appear in the distance. And at the opposite end of the sprawling salt marsh, a group of students and teachers gather for a class on wetlands ecology.

National wildlife refuges enrich people in a great variety of ways. Some benefits are relatively easy to quantify—to attach a value to—and some are not. How much does that young couple value their beachfront sunrise? Or the duck hunters their excitement? Can a dollar figure—a price tag, if you will—be attached to people's dawning understanding of the marvelous workings of the natural world? What's it worth to maintain and preserve the habitat vital to the survival of the endangered jaguarundi, or any of the other endangered or threatened creatures nurtured by refuges? In today's increasingly complex society, it is important to be able to discover and clearly express the economic values of things, even such things as human experiences and "existence values" that benefit society as a whole.

This report focuses on final demand, employment, income and tax revenue effects recreational visitors to refuges have on the economies of local regions. In addition to the economic effects of refuge hunting and fishing programs in local communities, it measures the economic impact of "ecotourism," the relatively recent phenomenon of large numbers of people traveling substantial distances to take part in non-consumptive uses of the natural environment.

Ecotourism is one method to derive economic benefits from the conservation of wildlife and habitat. Many refuges were established to protect waterfowl-hunting opportunities, but as public interests have expanded beyond consuming wildlife to emphasize watching and photographing wildlife, the role of refuges has also evolved. The economic effects of ecotourism are determined to assist refuge planning and to facilitate the interaction of refuges and local communities.

This report has four main sections. An Introduction details the study's overall rationale, outlines its economic concepts, and describes the methods and data sources used. The second section presents 80 sample refuge descriptions, highlighting the recreational activities enjoyed at each refuge, analyzing the regional economic factors involved, and putting the results of this analysis into perspective. A National View section discusses the overall results for the sample refuges and extrapolates them to a nationwide estimate. Finally, Appendices provide background detail on the economic models used for the refuge estimates and the nationwide aggregation.

One way to understand the economics of national wildlife refuges is to ask the questions: "If a given refuge did not exist, what would the region's economy be like? What would *life* there be like?" The answers involve how people come to acquire things they need or want. For the purposes of this study, those needs/wants are recreational opportunities. There are two elements in the value of any commodity: what you pay for it and the additional benefit you derive from it over and above what you pay for it. Surveys show people are almost always willing to pay more for recreation than they actually spend. Economists call this additional value *consumer surplus* or *net economic value*.



Refuge visitors pay for recreation through entrance fees, lodging near the refuge, and purchases from local businesses for items to pursue their recreational experience. This spending generates economic activity throughout the local economy. Some of that money “leaks” out of the local area (thus called “leakage”), and some is recycled through the local economy (the “multiplier effect”). Spending by non-residents must be separated from spending by local refuge visitors. In this study, total visitor spending is evaluated to show its significance to the local economy.

There are two major sources for the information presented in this report: the Fish and Wildlife Service’s National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (NSFHWRA) (2012), and the Division of Refuge’s Refuge Annual Performance Plan (RAPP) (2011 data). Combining data from these sources creates a profile of refuge visitors’ spending in local communities.

Daily visitor expenditures for both residents and non-residents were developed in four categories (food, lodging, transportation, and other expenses) for six activities (freshwater fishing, saltwater fishing, migratory bird hunting, small game hunting, big game hunting, and non-consumptive activities). Visitor days were factored in, and the total expenditures by category of spending for each activity were determined. These expenditures were allocated to industries, and IMPLAN calculated the final effects of these expenditures on the local economies.

This report spotlights each of the sample refuges, giving a brief overview of each refuge’s main mission, wildlife, uses, and activity levels. The economy of the local surrounding area is characterized by population growth, employment, and per-capita income. The Regional Economic Analysis section presents findings of 1) Visitor Recreation-Related Expenditures, 2) Economic Effects Associated with Refuge Visitation, and 3) Summary of Economic Effects of Refuge Visitation.

One goal of this research is to generate estimates of the national impact of refuges on their regional economies. The National View section concludes by examining how the findings for the 92 sample refuges apply to the eight U.S. Fish and Wildlife Service geographical regions. The economic analysis of sample refuges facilitates a look at the big picture: an estimate of the national impact of wildlife refuges on their regional economies. Many variables affect a refuge’s impact on its local economy. Some relate to the refuge and its public-use program, others to the size of the region’s economy. This report’s National View section reviews the detailed refuge case studies to highlight the differences among the sample refuges.

So, in the final analysis, how important is wildlife refuge-based recreation in the mix of federal outdoor opportunities? The following are some of this study’s findings:

- Recreational visits to national wildlife refuges generate substantial economic activity. In FY 2011, 46.5 million people visited refuges. Their spending generated \$2.4 billion of sales in regional economies. As this spending flowed through the economy, over 35,000 people were employed and \$792.7 million in employment income was generated.
- About 72 percent of total expenditures are generated by non-consumptive activities on refuges. Fishing accounted for 21 percent and hunting 7 percent. Local residents accounted for 23 percent of expenditures while visitors coming from outside the local area accounted for 77 percent.
- Refuge recreational spending generated about \$342.9 million in tax revenue at the local, county, state and Federal level.

Spending and employment by the refuges themselves, payments in lieu of taxes, commercial activities on refuges, and many other economic effects of refuges on local economies were not considered in this analysis.



Merritt Island National Wildlife Refuge

Description

Merritt Island National Wildlife Refuge, located along Florida's east central coast about 40 miles east of the city of Orlando, was established by agreement as an overlay of the National Aeronautics and Space Administration's John F. Kennedy Space Center in 1963. The refuge covers more than 140,000 acres and lies within one of the most productive estuaries in the country, the Indian River Lagoon, which has more species of plants and animals than any other estuary in North America. The National Park Service and the U.S. Fish and Wildlife Service co-manage 34,000 acres of the refuge. The refuge is located on one of the last extensive undeveloped barrier islands on the eastern coast of Florida. A wide array of habitats exist on the refuge, including the beach and dune system, estuarine waters, forested and nonforested wetlands, impounded wetlands and coastal scrub and forests. These diverse habitats support more than 1,000 species of plants and more than 500 species of fish and wildlife, including a variety of waterfowl, shorebirds, and neotropical migratory birds, as well as 9 federally-listed species that are common to the Refuge and 6 species that occur infrequently. More than 300 species of birds (resident and migratory) have been identified using the refuge. Popular with anglers, kayakers, birders, wildlife enthusiasts, and photographers, Merritt Island National Wildlife Refuge has the distinction of being one of the most visited refuges in the National Wildlife Refuge System with more than 1.1 million visitors per year. The partnership between space technology and abundant natural resources define the uniqueness of the Merritt Island National Wildlife Refuge.

Area Economy

Table 4-46 shows the area economy for Merritt Island NWR. The area population increased by 18 percent from 2001 to 2011, compared with a 17 percent increase for Florida and a 9 percent increase for the U.S. as a whole. Area employment increased by 13 percent from 2001 to 2011, with Florida showing a 12 percent increase and the U.S. a 6 percent increase. Per capita income in the area increased by 4 percent over the 2001-2011 period, while Florida and the U.S. both increased by 5 percent. (Note: in late 2011, more than 8,000 NASA workers in Brevard County were laid off due to the retirement of the space shuttle. A 2002 – 2012 timeframe would be a more accurate reflection of the impact of the layoffs but 2012 data is not currently available for all the categories in Table 4-46).



Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation

Table 4-46. Merritt Island NWR: Summary of Area Economy, 2011
(Population & Employment in 000's; Per Capita Income in 2011 dollars)

County	Population		Employment		Per Capita Income	
	2011	Percent change 2001-2011	2011	Percent change 2001-2011	2011	Percent change 2001-2011
Brevard FL	543.6	12%	261.6	6%	\$38,028	6%
Orange FL	1,169.1	25%	836.1	16%	\$35,990	2%
Volusia FL	494.8	10%	198.9	9%	\$33,436	5%
Area Total	2,207.5	18%	1,296.6	13%	\$35,919	4%
Florida	19,057.5	17%	10,008.7	12%	\$39,636	5%
United States	311,591.9	9%	175,834.7	6%	\$41,560	5%

Source: U.S. Department of Commerce November 2012.

Activity Levels

Table 4-47 shows the recreation visits for Merritt Island NWR. The Refuge had nearly 1.2 million visits in 2011. Non-consumptive recreation accounted for 1.0 million visits with residents comprising 42 percent of Refuge visitation.

Table 4-47. Merritt Island NWR: 2011 Recreation Visits

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	110,517	165,776	276,293
Auto Tour	79,242	118,863	198,105
Boat Trail/Launch	7,000	7,000	14,000
Bicycle	1,120	480	1,600
Interpretation	7,200	4,800	12,000
Photography	21,149	31,724	52,873
Other Recreation	180,673	271,010	451,683
Hunting:			
Big Game	0	0	0
Small Game	0	0	0
Migratory Birds	1,525	269	1,794
Fishing:			
Freshwater	11,670	5,002	16,672
Saltwater	83,361	83,361	166,721
Total Visitation	503,457	688,284	1,191,741



Regional Economic Analysis

The economic area for the Refuge is Brevard, Orange, and Volusia Counties in Florida. It is assumed that visitor expenditures occur primarily within these counties. Visitor recreation expenditures for 2011 are shown in Table 4-48. Total expenditures were \$39.1 million with non-residents accounting for \$32.1 million or 82 percent of total expenditures. Expenditures on non-consumptive activities accounted for 79 percent of all expenditures.

Table 4-49 summarizes the local economic effects associated with recreation visits. Final demand totaled \$60.4 million with associated employment of 466 jobs, \$18.1 in employment income and \$7.5 million in total tax revenue.



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Table 4-48. Merritt Island NWR: Visitor Recreation Expenditures (2011 \$,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$2,997.8	\$28,027.8	\$31,025.6
Hunting	\$44.0	\$19.1	\$63.1
Fishing	\$4,026.0	\$4,021.7	\$8,047.8
Total Expenditures	\$7,067.8	\$32,068.7	\$39,136.5

Table 4-49. Merritt Island NWR: Local Economic Effects Associated with Recreation Visits (2011 \$,000)

	Residents	Non-Residents	Total
Final Demand	\$10,949.2	\$49,492.6	\$60,441.8
Jobs	91	375	466
Job Income	\$3,298.5	\$14,778.8	\$18,077.3
Total Tax Revenue	\$1,415.5	\$6,055.7	\$7,471.2

Table 4-50 shows total economic effects (total recreation expenditures plus net economic value) compared with the Refuge budget for 2011. For an individual, net economic value is that person's total willingness to pay for a particular recreation activity minus his or her actual expenditures for that activity. The figure for economic value is derived by multiplying net economic values for hunting, fishing, and non-consumptive recreation use (on a per-day basis) by estimated Refuge visitor days for that activity. This figure is combined with the estimate of total expenditures and divided by the Refuge budget for 2011. The \$17.61 means that for every \$1 of budget expenditures, \$17.61 of total economic effects are associated with these budget expenditures. This ratio is provided only for the purpose of broadly comparing the magnitude of economic effects resulting from refuge visitation to budget expenditures and should not be interpreted as a benefit-cost ratio.

Table 4-50. Merritt Island NWR: Summary of Local Economic Effects of Recreation Visits (2011 \$,000)

	FY 2011 Budget	Expenditures	Economic Value	Total economic effects per \$1 budget expenditure
Merritt Island NWR	\$3,614.5	\$39,136.5	\$24,522.9	\$17.61



Note on the Appendices

The following appendices are intended to provide technical background information on the data, methods, and assumptions used to produce "Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Recreation." The appendices should be read in conjunction with the report, especially the Introduction. There is very little expository material in the appendices.

Appendix 1 - Estimating Economic Impacts: General Methodology and Assumptions

This appendix explains the methodology and assumptions used to generate estimates of the sample refuges' impacts and the national aggregation of local impacts. It is intended for economists and others knowledgeable in impact analysis.

Appendix 2 - Regional Recreation Expenditures

This appendix shows the expenditure function by Fish and Wildlife Service region, activity, and residence .

Appendix 3 – Summary of Sample Refuges' Economic Effects

This appendix summarizes the data presented for the refuges in the sample.



Appendix 1: Estimating Economic Impacts

General Methodology and Assumptions

1. Model.

Economic impacts for the 92 sample refuges were estimated using IMPLAN, a regional input-output modeling system. For more information on IMPLAN and regional input-output economic analysis, see Taylor et. al. *Micro IMPLAN User's Guide*. U.S. Department of Agriculture - Forest Service. Fort Collins, CO, May 1993, and Olson and Lindall, *IMPLAN Professional Software, Analysis and Data Guide*., Stillwater, MN, 1996.

2. Data Set.

The 2008 IMPLAN data set was used for the analysis. All monetary impacts were adjusted to 2011 dollars.

3. Expenditure Data

Per-person per-day expenditure information is based on the 2011 National Survey of Fishing, Hunting and Wildlife Associated Recreation (NSFHWR). This survey is conducted every 5 years by the U.S. Fish and Wildlife Service. Expenditure categories include: (1) food, including food, drink, and refreshments; (2) lodging, which includes lodging at motels, cabins, lodges, or campgrounds; (3) transportation, which includes both public transportation and the round-trip cost of transportation by private vehicle; and (4) other, which encompasses guide fees, pack trip or package fees, public land use or access fees, private land use or access fees (not including leases), equipment rental, and miscellaneous retail expenditures.

NSFHWR respondents were classified as non-residents if their state of residence differed from the state where the activity took place. Mean expenditures were calculated for each Fish and Wildlife Service region. Smaller geographic breakdowns left too few respondents in some categories for reliable averages.

Appendix 2 shows the per-day per-person expenditures for U.S. Fish and Wildlife Regions 1 through 8. These expenditures were allocated to IMPLAN sectors and activities as follows (Table 1a).



Table 1a. Allocation of Expenditures to IMPLAN Categories

Fish/Hunt Survey Category	IMPLAN Activity/Sector	Percentage allocated to IMPLAN sector ³
Lodging	hotels	100%
Food/drink	food for off-site consumption	Residents: 35% Non-residents: 65%
	purchased meals	Residents: 65% Non-residents: 35%
Air Transportation	airline	100%
Other Transportation	gas/oil	90%
	car repairs	10%
Other	nondurable sport supplies	100%

4. Recreation Visits and Expenditures

- (a) Visits to the refuge are assumed to be for the primary purpose of engaging in wildlife-dependent recreation activities.
- (b) Visitor use data is based on information obtained from the U.S. Fish and Wildlife Service Division of Refuges' Refuge Annual Performance Plan (RAPP). Fiscal year 2011 data are used in this report.
- (c) For the economic impact IMPLAN analysis, residents are defined as living within a 50-mile radius of the refuge; non-residents live outside of this area.
- (d) Non-consumptive use is calculated by summing visitor use for nature trails, beach and water uses, wildlife observation, birding, observation towers/platforms/photo blinds, and other non-consumptive recreation specific to each refuge. Visitor use data for the 92 sample refuges were further refined by discussions with refuge personnel to minimize the possibility of double-counting visitors who engage in more than one activity during a given visit.
- (e) It is assumed that all expenditures related to refuge visits occur primarily in the economic base area defined for the refuge.

³Percentage of spending in NSFHWR category allocated to specified IMPLAN activity or sector.



- (f) Information on refuge visitors concerning trip destinations or the primary purpose of the trip is not currently available. To address the question of how much of total per-person per-day trip expenditures can be attributed to refuge visitation, the following assumptions were used for this study:
 - (i) On average, the more hours people spend on the refuge per trip, the higher the proportion of total daily trip expenditures are attributed to the refuge visit.
 - (ii) For hunting activities, visits are converted to recreation visitor days based upon the average number of hours that visitors engaged in hunting activities at the sample refuges. Thus, each refuge visitor day is then assumed to result in between one-half and three-fourths of the NSFHWR per-person per-day trip expenditures, depending on the type of hunting activity.
 - (iii) For fishing activities, visits are converted to recreation visitor days based upon the average number of hours that visitors engaged in non-consumptive activities at the sample refuges. Thus, each refuge visitor day is then assumed to result in about one-half of the NSFHWR per-person per-day trip expenditures for fishing activities.
 - (iv) For non-consumptive activities, visits are converted to recreation visitor days based upon the average number of hours that visitors engaged in non-consumptive activities at the sample refuges. Thus, each refuge visitor day is then assumed to result in just less than one-third of the NSFHWR per-person per-day trip expenditures for non-consumptive recreation.

5. Economic Study Area for the 92 Sample Refuges

In lieu of specific regional and local trade-flow information, IMPLAN economic study areas are defined as those counties adjacent or within the refuge which had a significant proportion of total refuge recreation expenditures. Significance was determined in consultation with refuge personnel and is based on estimates of where refuge visitors spent money and the location of major travel corridors. Generally, a conservative approach was taken in identifying counties to be included in the study area. Only spatial expenditure patterns and major travel corridors were used as criteria for determining counties to be included in the study area for each refuge. Backward linkages were not explicitly considered. It was decided that, given the lack of site-specific information on spending and trade flows, it would be better to underestimate economic impacts by keeping the study area small than to overestimate impacts by including counties marginally affected by refuge spending.

6. National Aggregation

One goal of this research is to generate estimates of the national impact of refuges on their regional economies. Ideally, an IMPLAN model and the necessary visitation information would be developed for each refuge and the results summed for a national estimate. Such a process would be prohibitively expensive. As an alternative, the results from 92 case studies can be treated as data points. National estimates were derived using a combination of average ratios from the sample refuges in 2011 and from the sample refuges in 2006. Ratios were derived for (1) final demand per recreation visit, (2) employment income per recreation visit, and (3) jobs per recreation visit. These ratios were averaged over 2006 and 2011 respectively (adjusting for inflation). Averaging over 2006 and 2011 provided more observations (data points) to improve the accuracy of the national estimates. These ratios were then



Appendix I. Estimating Economic Impacts

applied to estimate the economic impact of national wildlife refuges nationwide. This methodology is not the same as that used in reports prior to 2006 .

Adjustments were made to the data to ensure consistency. The sample refuges' recreational visitors ranged from 3,260 to 4.4 million. Refuges in the U.S. Territories were deleted from the calculations. These areas were considered to have very different local economies which this overall model did not capture well. The model applied the average length of stay for the sample refuges to all refuges.

This technique produces estimates of final demand, employment income and jobs created by all visitor spending at each refuge. From comparison of these predictions with the case study results, it was clear that the estimates could be wide of the mark. However, the predicted values were both too high and too low so it appeared that the deviations would balance each other when applied to aggregates of refuges. For this reason, the results for refuges outside of the study sample are not reported. Only regional and national aggregates are reported.

The national estimates and refuge case studies provide a rough scale of the economic significance of refuge recreation in local communities. These results are broadly descriptive. They are not intended to provide policy direction or performance measures. Refuge management balances multiple goals. This report highlights only one component.



Appendix 2: Regional Recreation Expenditures

Table 2a. Recreation Expenditures: Per Person Per Day, by Recreation Activity (2011 \$)

Region	Non-Consumptive		Big Game Hunting		Small Game Hunting		Migratory Waterfowl Hunting		Freshwater Fishing		Saltwater Fishing	
	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident	Resident	Non-Resident
Region 1	\$24.55	\$155.11	\$39.82	\$201.01*	\$17.29*	\$93.49**	\$48.56*	\$109.26**	\$32.03	\$79.40	\$65.69	\$153.11**
Region 2	\$24.67	\$71.71	\$40.05	\$169.15*	\$22.23	\$93.49**	\$32.28	\$109.26**	\$27.34	\$89.71	\$68.15	\$94.87**
Region 3	\$25.62	\$64.16	\$24.18	\$55.90	\$16.40	\$49.94	\$34.96	\$109.26	\$24.43	\$61.30	\$0.00	\$0.00
Region 4	\$21.92	\$140.25	\$26.34	\$85.07	\$21.30	\$67.53*	\$38.46	\$94.86*	\$20.01	\$45.54	\$61.59	\$61.59
Region 5	\$17.20	\$100.82	\$21.56	\$53.45	\$29.60	\$92.32*	\$29.81	\$45.73*	\$22.08	\$74.87	\$53.61	\$103.08
Region 6	\$38.06	\$163.62	\$37.96	\$207.14	\$30.59	\$150.59	\$29.36	\$135.39*	\$32.14	\$108.48	\$0.00	\$0.00
Region 7	\$58.58	\$457.14	\$58.58	\$457.14	\$58.58	\$457.14	\$58.58	\$457.14	\$58.58	\$457.14	\$58.58	\$457.14
Region 8	\$55.37	\$131.96	\$134.83	\$133.40**	\$52.70	\$93.49**	\$40.09	\$109.26**	\$53.77	\$117.98	\$86.38	\$207.31**

Note: Expenditures denoted by * have small sample sizes (n=10 to 30). Expenditures denoted by ** are national averages because sample sizes were too small to report data reliably (n<10).



Appendix 3: Sample Refuges' Economic Impacts

Table 3a. Sample Refuges' Visitation and Economic Significance

Refuge Name	Region	Total Recreational Visitation	Total Final Demand \$(,000)	Total Employment Income \$(,000)	Total Jobs
Agassiz NWR	3	8,500	\$202	\$58	2
Alamosa NWR	6	3,260	\$45	\$14	2
Alaska Peninsula NWR	7	8,196	\$1,614	\$487	12
Alligator River NWR	4	51,793	\$1,823	\$567	17
Anahuac NWR	2	91,593	\$3,164	\$966	23
Arthur R. Marshall Loxahatchee NWR	4	306,866	\$15,252	\$4,549	107
Assabet River NWR	5	119,130	\$2,078	\$689	12
Back Bay NWR	5	123,660	\$3,073	\$914	27
Big Oaks NWR	3	8,075	\$332	\$99	3
Blackwater NWR	5	82,163	\$2,480	\$766	23
Buenos Aires NWR	2	21,908	\$1,488	\$425	11
Cache River NWR	4	381,510	\$11,796	\$3,572	100
Camas NWR	1	13,513	\$250	\$68	2
Canaan Valley NWR	5	44,795	\$952	\$284	9
Chickasaw NWR	4	73,175	\$3,176	\$968	25
Columbia NWR	1	51,873	\$2,037	\$585	16
Conboy Lake NWR	1	5,605	\$466	\$58	4
Crab Orchard NWR	3	728,952	\$22,600	\$6,800	209
Crystal River NWR	4	429,500	\$38,136	\$11,449	278
Cypress Creek NWR	3	25,300	\$710	\$215	7
Deep Fork NWR	2	45,645	\$1,310	\$403	9
Dungeness NWR	1	111,628	\$2,802	\$861	25
Eastern Neck NWR	5	92,150	\$930	\$287	9
Eastern Shore Of Virginia NWR	5	36,625	\$1,596	\$523	14
Edwin B. Forsythe NWR	5	223,924	\$6,006	\$1,858	45
Egmont Key NWR	4	441,600	\$15,141	\$4,576	114
Felsenthal NWR	4	424,550	\$19,631	\$5,774	197
Flint Hills NWR	6	4,410	\$164	\$49	2
Great Dismal Swamp NWR	5	65,320	\$2,430	\$709	22
Great Swamp NWR	5	183,441	\$3,159	\$1,005	19
Hagerman NWR	2	152,550	\$4,037	\$1,153	34
Hanford Reach	1	33,925	\$2,015	\$593	17
Hart Mountain National Antelope Refuge	1	14,962	\$942	\$325	10



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Refuge Name	Region	Total Recreational Visitation	Total Final Demand \$(,000)	Total Employment Income \$(,000)	Total Jobs
Hobe Sound NWR	4	107,400	\$2,464	\$738	17
Horicon NWR	3	392,199	\$8,970	\$2,620	88
Illinois River	3	18,388	\$392	\$119	3
Iowa WMD	3	76,839	\$794	\$220	8
J. Clark Salyer NWR	6	80,340	\$4,345	\$1,317	40
John Heinz NWR at Tinicum	5	177,435	\$2,528	\$811	18
Kenai NWR	7	572,584	\$12,755	\$32,407	907
Kodiak NWR	7	50,855	\$9,696	\$2,934	65
Kootenai NWR	1	94,952	\$1,326	\$386	15
Koyukuk NWR	7	11,623	\$1,078	\$331	8
Laguna Atascosa NWR	2	440,042	\$23,413	\$6,549	205
Las Vegas NWR	2	16,837	\$161	\$48	1
Little Pend Oreille NWR	1	64,130	\$3,883	\$1,162	30
Little River NWR	2	15,150	\$431	\$135	4
Lower Hatchie NWR	4	65,050	\$3,333	\$1,124	29
Maine Coastal Islands	5	155,245	\$7,874	\$2,203	71
Malheur NWR	1	119,075	\$13,399	\$1,162	140
Marais des Cygnes NWR	6	3,295	\$237	\$72	2
McFaddin NWR	2	26,801	\$1,742	\$529	16
McNary NWR	1	42,095	\$1,561	\$442	14
Merritt Island NWR	4	1,191,741	\$60,442	\$18,077	467
Mooschoon NWR	5	22,396	\$415	\$120	4
Morris WMD	3	72,870	\$4,499	\$1,287	40
Muleshoe NWR	2	25,360	\$1,885	\$544	14
National Bison Range	6	224,300	\$20,121	\$5,726	169
Nisqually NWR	1	203,815	\$5,550	\$588	41
Ocoquan Bay NWR	5	25,438	\$241	\$76	2
Okelenoee NWR	4	458,312	\$20,789	\$6,254	211
Pea Island NWR	4	603,150	\$20,317	\$6,219	201
Pocosin Lakes NWR	4	70,150	\$2,181	\$664	25
Ridgefield NWR	1	164,525	\$5,630	\$1,682	39
Sacramento NWR	8	71,514	\$3,846	\$1,133	28
Salt Plains NWR	2	103,130	\$1,926	\$610	15
San Luis NWR	8	92,225	\$8,772	\$2,683	52
Sand Lake NWR	6	9,193	\$801	\$235	7
Santee NWR	4	174,178	\$5,595	\$1,586	56
Seedskadee NWR	6	13,410	\$614	\$178	5
Selawik NWR	7	21,203	\$1,409	\$419	9
Sheldon NWR	1	35,929	\$1,290	\$396	10



Appendix 3

Refuge Name	Region	Total Recreational Visitation	Total Final Demand \$,(000)	Total Employment Income \$,(000)	Total Jobs
Sonny Bono Salton Sea NWR	8	26,065	\$1,474	\$492	12
Squaw Creek NWR	3	294,003	\$3,465	\$1,006	32
St. Marks NWR	4	753,881	\$17,238	\$5,108	157
Steigerwald Lake NWR	1	44,531	\$1,361	\$407	10
Stewart B. McKinney NWR	5	14,935	\$389	\$130	2
Stillwater NWR	8	8,882	\$480	\$145	3
Tetlin NWR	7	90,624	\$9,974	\$3,000	66
Tewaukon NWR	6	2,824	\$159	\$45	2
Togiak NWR	7	32,827	\$14,255	\$4,295	95
Trinity River NWR	2	18,340	\$475	\$144	4
Tualatin River NWR	1	103,780	\$1,627	\$703	17
Turnbull NWR	1	54,196	\$1,075	\$321	8
Two Rivers NWR	3	11,070	\$160	\$47	1
Union Slough NWR	3	6,130	\$51	\$15	0
Upper Mississippi River NWR	3	4,437,390	\$161,400	\$47,000	1,394
Valentine NWR	6	23,375	\$2,710	\$781	28
Waccamaw NWR	4	7,691	\$226	\$82	4
Waubay WMD	6	62,625	\$3,218	\$945	32
Wichita Mountains Wildlife Refuge	2	3,187,148	\$113,200	\$34,700	1,053
Willapa NWR	1	103,780	\$2,563	\$720	21



National Wildlife Refuge Visitor Survey 2010/2011: Individual Refuge Results for Merritt Island National Wildlife Refuge

By Natalie R. Sexton, Alia M. Dietsch, Andrew W. Don Carlos, Lynne Koontz, Adam N. Solomon and Holly M. Miller

We will return to explore Merritt Island more thoroughly and at different seasons. It is a wonderful place to experience birds. Thanks to all who make its preservation and operation possible - we like spending our tax dollars this way.—Survey comment from visitor to Merritt Island National Wildlife Refuge.



Merritt Island National Wildlife Refuge. Photo credit: U.S. Fish and Wildlife Service.



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Introduction

The National Wildlife Refuge System (Refuge System), established in 1903 and managed by the U.S. Fish and Wildlife Service (Service), is the leading network of protected lands and waters in the world dedicated to the conservation of fish, wildlife and their habitats. There are 556 national wildlife refuges (NWRs) and 38 wetland management districts nationwide, including possessions and territories in the Pacific and Caribbean, encompassing more than 150 million acres. The mission of the Refuge System is to “administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” Part of achieving this mission is the goal “to foster understanding and instill appreciation of fish, wildlife, and plants, and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use” (Clark, 2001). The Refuge System attracts more than 45 million visitors annually, including 25 million people per year to observe and photograph wildlife, over 9 million to hunt and fish, and more than 10 million to participate in educational and interpretation programs (Uniack, 1999; U.S. Fish and Wildlife Service, 2007). Understanding visitors and characterizing their experiences on national wildlife refuges are critical elements of managing these lands and meeting the goals of the Refuge System.

The Service contracted with the U.S. Geological Survey (USGS) to conduct a national survey of visitors regarding their experiences on national wildlife refuges. The survey was conducted to better understand visitor needs and experiences and to design programs and facilities that respond to those needs. The survey results will inform Service performance planning, budget, and communications goals. Results will also inform Comprehensive Conservation Plan (CCPs), Visitor Services, and Transportation Planning processes.

Organization of Results

These results are for Merritt Island NWR (this refuge) and are part of USGS Data Series 643 (Sexton and others, 2011). All refuges participating in the 2010/2011 surveying effort will receive individual refuge results specific to the visitors to that refuge. Each set of results is organized by the following categories:

- **Introduction:** An overview of the Refuge System and the goals of the national surveying effort.
- **Methods:** The procedures for the national surveying effort, including selecting refuges, developing the survey instrument, contacting visitors, and guidance for interpreting the results.
- **Refuge Description:** A brief description of the refuge location, acreage, purpose, recreational activities, and visitation statistics, including a map (where available) and refuge website link.
- **Sampling at This Refuge:** The sampling periods, locations, and response rate for this refuge.
- **Selected Survey Results:** Key findings for this refuge, including:
 - Visitor and Trip Characteristics
 - Visitor Spending in the Local Communities
 - Visitors Opinions about This Refuge
 - Visitor Opinions about National Wildlife Refuge System Topics
- **Conclusion**
- **References**
- **Survey Frequencies (Appendix A):** The survey instrument with the frequency results for this refuge.
- **Visitor Comments (Appendix B):** The verbatim responses to the open-ended survey questions for this refuge.



Methods

Selecting Participating Refuges

The national visitor survey was conducted from July 2010 – November 2011 on 53 refuges across the Refuge System (table 1). Based on the Refuge System's 2008 Refuge Annual Performance Plan (RAPP; U.S. Fish and Wildlife Service, 2011, written comm.), 192 refuges with a minimum visitation of 25,000 were considered. This criterion was the median visitation across the Refuge System and the minimum visitation necessary to ensure that the surveying would be logistically feasible onsite. Visitors were sampled on 35 randomly selected refuges and 18 other refuges that were selected by Service Regional Offices to respond to priority refuge planning processes.

Developing the Survey Instrument

USGS researchers developed the survey in consultation with the Service Headquarters Office, managers, planners, and visitor services professionals. The survey was peer-reviewed by academic and government researchers and was further pre-tested with eight Refuge System Friends Group representatives from each region to ensure readability and overall clarity. The survey and associated methodology were approved by the Office of Management and Budget (OMB control #: 1018-0145; expiration date: 6/30/2013).

Contacting Visitors

Refuge staff identified two separate 15-day sampling periods and one or more locations that best reflected the diversity of use and specific visitation patterns of each participating refuge. Sampling periods and locations were identified by refuge staff and submitted to USGS via an internal website that included a customized mapping tool. A standardized sampling schedule was created for all refuges that included eight randomly selected sampling shifts during each of the two sampling periods. Sampling shifts were three- to five-hour randomly selected time bands that were stratified across AM and PM, as well as weekend and weekdays. Any necessary customizations were made, in coordination with refuge staff, to the standardized schedule to accommodate the identified sampling locations and to address specific spatial and temporal patterns of visitation.

Twenty visitors (18 years or older) per sampling shift were systematically selected, for a total of 320 willing participants per refuge—160 per sampling period—to ensure an adequate sample of completed surveys. When necessary, shifts were moved, added, or extended to alleviate logistical limitations (for example, weather or low visitation at a particular site) in an effort to reach target numbers.



Table 1. Participating refuges in the 2010/2011 national wildlife refuge visitor survey.

Pacific Region (R1)	
Kilauea Point National Wildlife Refuge (HI)	William L. Finley National Wildlife Refuge (OR)
Deer Flat National Wildlife Refuge (ID)	McNary National Wildlife Refuge (WA)
Cape Meares National Wildlife Refuge (OR)	Turnbull National Wildlife Refuge (WA)
Malheur National Wildlife Refuge (OR)	
Southwest Region (R2)	
Bitter Lake National Wildlife Refuge (NM)	Aransas National Wildlife Refuge (TX)
Bosque del Apache National Wildlife Refuge (NM)	San Bernard/ Brazoria National Wildlife Refuge (TX)
Wichita Mountains Wildlife Refuge (OK)	
Great Lakes-Big Rivers Region (R3)	
DeSoto National Wildlife Refuge (IA)	McGregor District, Upper Mississippi River National Wildlife and Fish Refuge - (IA/WI)
Neal Smith National Wildlife Refuge (IA)	
Muscatatuck National Wildlife Refuge (IN)	Big Muddy National Fish and Wildlife Refuge (MO)
Rice Lake National Wildlife Refuge (MN)	Horicon National Wildlife Refuge (WI)
Tamarac National Wildlife Refuge (MN)	Necedah National Wildlife Refuge (WI)
Southeast Region (R4)	
Wheeler National Wildlife Refuge (AL)	Banks Lake National Wildlife Refuge (GA)
Big Lake National Wildlife Refuge (AR)	Noxubee National Wildlife Refuge (MS)
Pond Creek National Wildlife Refuge (AR)	Cabo Rojo National Wildlife Refuge (Puerto Rico)
Merritt Island National Wildlife Refuge (FL)	Pea Island National Wildlife Refuge (NC)
St. Marks National Wildlife Refuge (FL)	Cape Romain National Wildlife Refuge (SC)
Ten Thousand Islands National Wildlife Refuge (FL)	Reelfoot National Wildlife Refuge (TN)
Northeast Region (R5)	
Stewart B. McKinney National Wildlife Refuge (CT)	Moosehorn National Wildlife Refuge (ME)
Bombay Hook National Wildlife Refuge (DE)	Great Swamp National Wildlife Refuge (NJ)
Monomoy National Wildlife Refuge (MA)	Montezuma National Wildlife Refuge (NY)
Parker River National Wildlife Refuge (MA)	Wertheim National Wildlife Refuge (NY)
Patuxent Research Refuge (MD)	Occoquan Bay/ Elizabeth Hartwell Mason Neck National Wildlife Refuge (VA)
Mountain-Prairie Region (R6)	
Monte Vista National Wildlife Refuge (CO)	Sand Lake National Wildlife Refuge (SD)
Quivira National Wildlife Refuge (KS)	National Elk Refuge (WY)
Charles M. Russell National Wildlife Refuge (MT)	
Alaska Region (R7)	
Alaska Maritime National Wildlife Refuge (AK)	Kenai National Wildlife Refuge (AK)
California and Nevada Region (R8)	
Lower Klamath/Tule Lake National Wildlife Refuge (CA)	Ruby Lake National Wildlife Refuge (NV)
Sonny Bono Salton Sea National Wildlife Refuge (CA)	



Refuge staff and/or volunteers (survey recruiters) contacted visitors on-site following a protocol provided by USGS to ensure a diverse sample. Instructions included contacting visitors across the entire sampling shift (for example, every n^{th} visitor for dense visitation, as often as possible for sparse visitation), and only one person per group. Visitors were informed of the survey effort, given a token incentive (for example, a small magnet, temporary tattoo), and asked to participate. Willing participants provided their name, mailing address, and preference for language (English or Spanish) and survey mode (mail or online). Survey recruiters also were instructed to record any refusals and then proceed with the sampling protocol.

Visitors were mailed a postcard within 10 days of the initial on-site contact thanking them for agreeing to participate in the survey and inviting them to complete the survey online. Those visitors choosing not to complete the survey online were sent a paper copy a week later. Two additional contacts were made by mail during the next seven weeks following a modified Tailored Design Method (Dillman, 2007): 1) a reminder postcard one week after the first survey, and 2) a second paper survey two weeks after the reminder postcard. Each mailing included instructions for completing the survey online and a postage paid envelope for returning the paper version of the survey. Those visitors indicating a preference for Spanish were sent Spanish versions of all correspondence (including the survey). Finally, a short survey of six questions was sent to nonrespondents four weeks after the second survey mailing to determine any differences between respondents and nonrespondents at the national level. Online survey data were exported and paper survey data were entered using a standardized survey codebook and data entry procedure. All survey data were analyzed by using SPSS v.18 statistical analysis software.

Interpreting the Results

The extent to which these results accurately represent the total population of visitors to this refuge is dependent on 1) an adequate sample size of those visitors and 2) the representativeness of that sample. The adequacy of the sample size for this refuge is quantified as the margin of error. The composition of the sample is dependent on the ability of the standardized sampling protocol for this study to account for the spatial and temporal patterns of visitor use specific to each refuge. Spatially, the geographical layout and public use infrastructure varies widely across refuges. Some refuges only can be accessed through a single entrance, while others have multiple unmonitored access points across large expanses of land and water. As a result, the degree to which sampling locations effectively captured spatial patterns of visitor use will likely vary from refuge to refuge. Temporally, the two 15-day sampling periods may not have effectively captured all of the predominant visitor uses/activities on some refuges during the course of a year. Therefore, certain survey measures such as visitors' self-reported "primary activity during their visit" may reflect a seasonality bias.

Herein, the sample of visitors who responded to the survey are referred to simply as "visitors." However, when interpreting the results for Merritt Island NWR, any potential spatial and temporal sampling limitations specific to this refuge need to be considered when generalizing the results to the total population of visitors. For example, a refuge that sampled during a special event (for example, birding festival) held during the spring may have contacted a higher percentage of visitors who traveled greater than 50 miles to get to the refuge than the actual number of these people who would have visited throughout the calendar year (that is, oversampling of nonlocals). In contrast, another refuge may not have enough nonlocal visitors in the sample to adequately represent the beliefs and opinions of that group type. If the sample for a specific group type (for example, nonlocals, hunters, those visitors who paid a fee) is too low ($n < 30$), a warning is included. Additionally, the term "*this visit*" is used to reference the visit on which people were contacted to participate in the survey, which may or may not have been their most recent refuge visit.



Refuge Description for Merritt Island National Wildlife Refuge

Merritt Island NWR is one of the more unique refuges in the system, due to the possibility of viewing space shuttle take off and landings. Located on the eastern shore of Florida, about 45 miles east of Orlando, Merritt Island NWR was established in 1963 as an overlay of NASA's John F. Kennedy Space Center. The refuge consists of 140,000 acres and provides a wide variety of habitats for over 1,500 species of animals or plants: coastal dunes, saltwater estuaries and marshes, freshwater impoundments, scrub, pine flatwoods, and hardwood hammocks. Of the 500 species of wildlife, 15 are federally listed threatened or endangered species.

In 1962, NASA acquired 140,000 acres of land, water and marshes adjacent to Cape Canaveral to establish the JFK Space Center. As development of the entire area was not necessary, the U.S. Fish and Wildlife Service agreed to establish the refuge and manage most of the land. The northern 20 miles of the 35-mile long refuge is open to the public for various wildlife oriented activities.

Merritt Island attracts over 780,000 visitors annually (based on 2008 RAPP database; U.S. Fish and Wildlife Service, 2011, written comm.) for various activities. Visitors travel to Merritt Island NWR primarily for environmental education and interpretative programs, fishing, hunting, wildlife observation and photography. Hunting opportunities include duck, exotic species, upland bird and small game. Figure 1 displays a map of the refuge. For more information, please visit <http://www.fws.gov/merrittisland/Index.html#>.

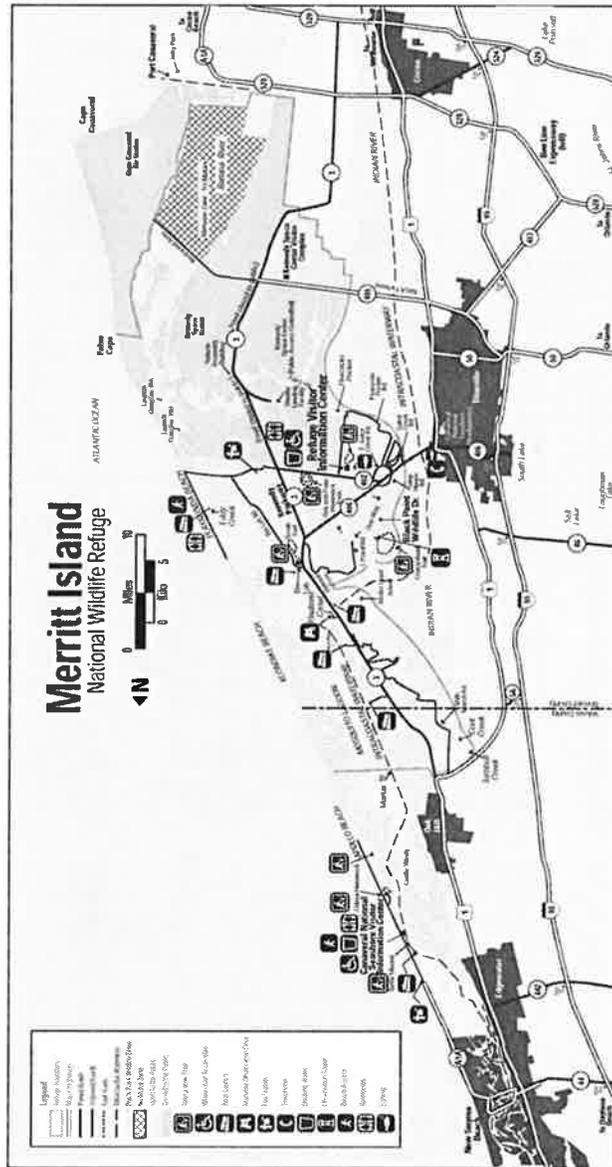


Figure 1. Map of Merritt Island NWR, courtesy of U.S. Fish and Wildlife Service.



Sampling at Merritt Island National Wildlife Refuge

A total of 356 visitors agreed to participate in the survey during the two sampling periods at the identified locations at Merritt Island NWR (table 2). In all, 270 visitors completed the survey for a 79% response rate and ±5% margin of error at the 95% confidence level.¹

Table 2. Sampling and response rate summary for Merritt Island NWR.

Sampling period	Dates	Locations	Total contacts	Undeliverable addresses	Completed surveys	Response rate
1	1/15/2011 to 1/29/2011	Visitor Center	187	7	146	81%
		Black Point Wildlife Drive				
		Manatee Observation Deck				
		Bairs Cove Boat Ramp				
		Biolab Road				
2	4/9/2011 to 4/23/2011	Visitor Center	169	9	124	78%
		Black Point Wildlife Drive				
		Manatee Observation Deck				
		Bairs Cove Boat Ramp				
Total			356	16	270	79%

Selected Survey Results

Visitor and Trip Characteristics

A solid understanding of refuge visitors and details about their trips to refuges can inform communication outreach efforts, inform visitor services and transportation planning, forecast use, and gauge demand for services and facilities.

Familiarity with the Refuge System

While we did not ask visitors to identify the mission of the National Wildlife Refuge System or the U.S. Fish and Wildlife Service, visitors to Merritt Island NWR reported that before participating in the survey, they were aware of the role of the U.S. Fish and Wildlife Service in managing national wildlife refuges (85%) and that the Refuge System has the mission of conserving, managing, and restoring fish,

¹ The margin of error (or confidence interval) is the error associated with the results related to the sample and population size. A margin of error of ± 5%, for example, means if 55% of the sample answered a survey question in a certain way, then 50–60% of the entire population would have answered that way. The margin of error is calculated with an 80/20 response distribution, assuming that for any given dichotomous choice question, approximately 80% of respondents selected one choice and 20% selected the other (Salant and Dillman, 1994).



wildlife, plants and their habitat (90%). Positive responses to these questions concerning the management and mission of the Refuge System do not indicate the degree to which these visitors understand the day-to-day management practices of individual refuges, only that visitors feel they have a basic knowledge of who manages refuges and why. Compared to other public lands, many visitors feel that refuges provide a unique recreation experience (92%; see Appendix B for visitor comments on “What Makes National Wildlife Refuges Unique?”); however, reasons for why visitors find refuges unique are varied and may not directly correspond to their understanding of the mission of the Refuge System. Most visitors to Merritt Island NWR had been to at least one other National Wildlife Refuge in the past year (71%), with an average of 5 visits to other refuges during the past 12 months.

Visiting This Refuge

Some surveyed visitors (43%) had only been to Merritt Island NWR once in the past 12 months, while most had been multiple times (57%). These repeat visitors went to the refuge an average of 12 times during that same 12-month period. Visitors used the refuge during only one season (61%), during multiple seasons (23%), and year-round (16%).

Most visitors first learned about the refuge from friends/relatives (50%), refuge printed information (23%), or signs on the highway (19%; fig. 2). Key information sources used by visitors to find their way to this refuge include previous knowledge (50%), signs on highways (48%), or a GPS navigation system (25%; fig. 3).

Some visitors (37%) lived in the local area (within 50 miles of the refuge), whereas 63% were nonlocal visitors. For most local visitors, Merritt Island NWR was the primary purpose or sole destination of their trip (81%; table 3). For most nonlocal visitors, the refuge was one of many equally important reasons or destinations for their trip (55%). Local visitors reported that they traveled an average of 28 miles to get to the refuge, while nonlocal visitors traveled an average of 473 miles. Figure 4 shows the residence of visitors travelling to the refuge. About 50% of visitors travelling to Merritt Island were from Florida.

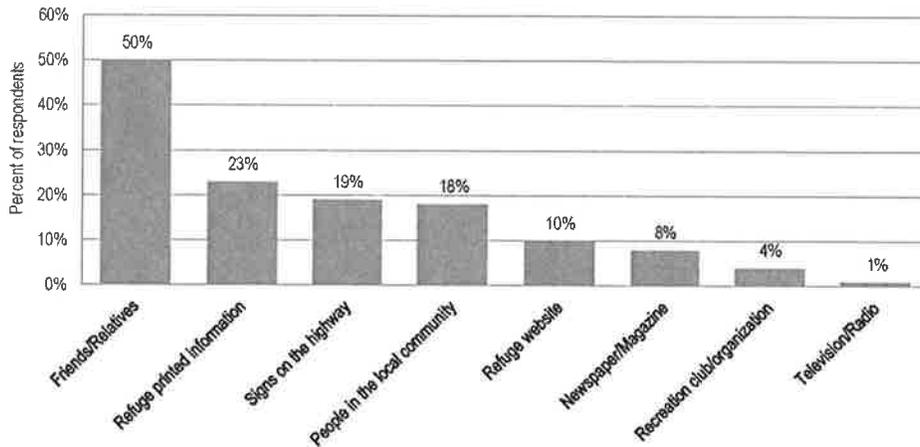


Figure 2. How visitors first learned or heard about Merritt Island NWR (n = 262).

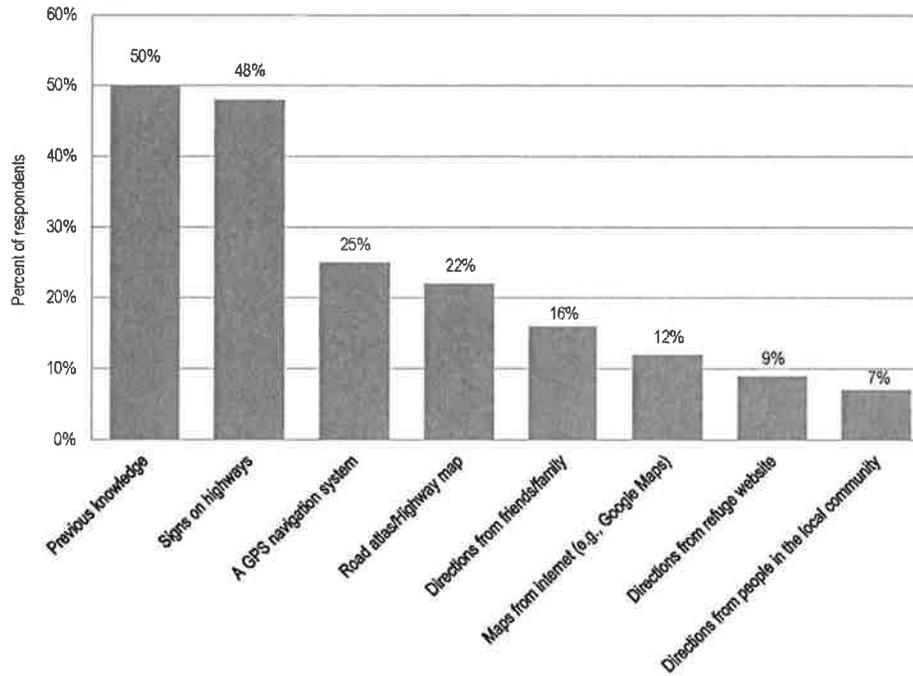


Figure 3. Resources used by visitors to find their way to Merritt Island NWR during *this* visit (n = 268).

Table 3. Influence of Merritt Island NWR on visitors' decision to take *this* trip.

Visitors	Visiting this refuge was...		
	the primary reason for trip	one of many equally important reasons for trip	an incidental stop
Nonlocal	25%	55%	20%
Local	81%	14%	5%
Total	45%	40%	15%

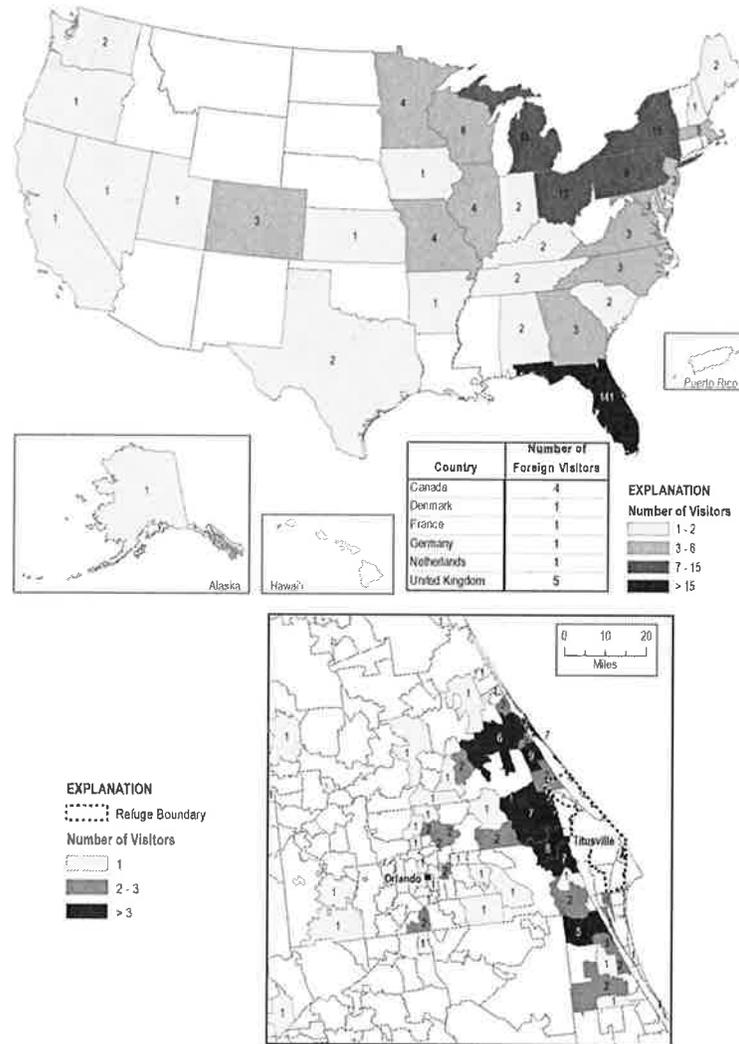


Figure 4. Number of visitors travelling to Merritt Island NWR by residence. Top map shows residence by state and bottom map shows residence by zip codes near the refuge (n = 270).



Surveyed visitors reported that they spent an average of 5 hours at Merritt Island NWR during one day there (a day visit is assumed to be 8 hours). However, the most frequently reported length of visit during one day was actually 8 hours (28%). The key modes of transportation used by visitors to travel around the refuge were private vehicle (94%), and walking/hiking (20%; fig. 5). Most visitors indicated they were part of a group on their visit to this refuge (67%), travelling primarily with family and friends (table 4).

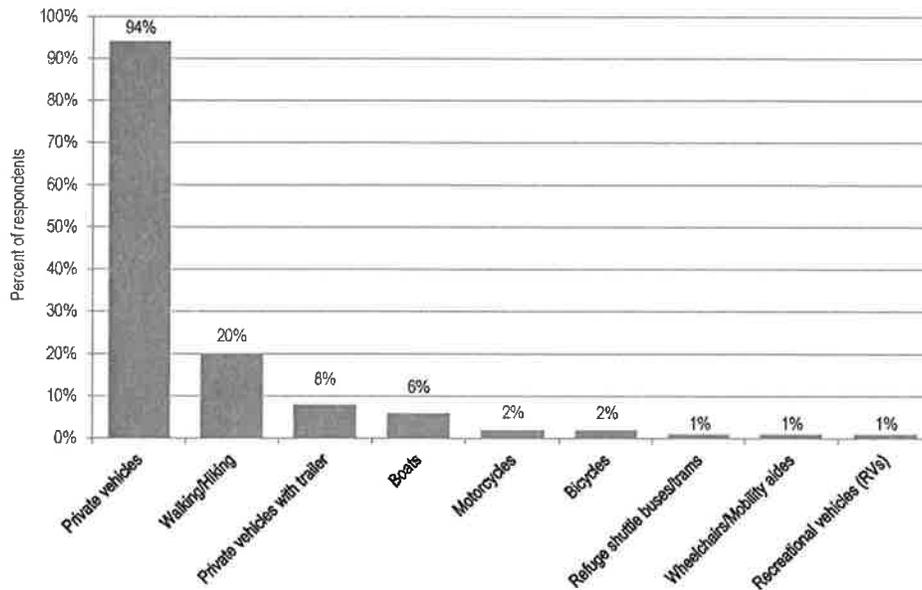


Figure 5. Modes of transportation used by visitors to Merritt Island NWR during this visit (n = 267).

Table 4. Type and size of groups visiting Merritt Island NWR (for those who indicated they were part of a group, n = 177).

Group type	Percent (of those traveling in a group)	Average group size		
		Number of adults	Number of children	Total group size
Family/Friends	91%	3	0	3
Commercial tour group	0%	0	0	0
Organized club/School group	4%	13	7	20
Other group type	5%	13	5	18



Surveyed visitors participated in a variety of refuge activities during the past 12 months (fig. 6); the top three activities reported were wildlife observation (78%), bird watching (66%), and auto tour route/driving (60%). The primary reasons for their most recent visit included wildlife observation (32%), bird watching (29%), and fishing (14%; fig. 7). The visitor center was used by 68% of visitors, mostly to view the exhibits (83%), stop to use the facilities (for example, get water, use restroom; 80%), ask information of staff/volunteers (80%), and visit the gift shop/bookstore (75%; fig. 8).

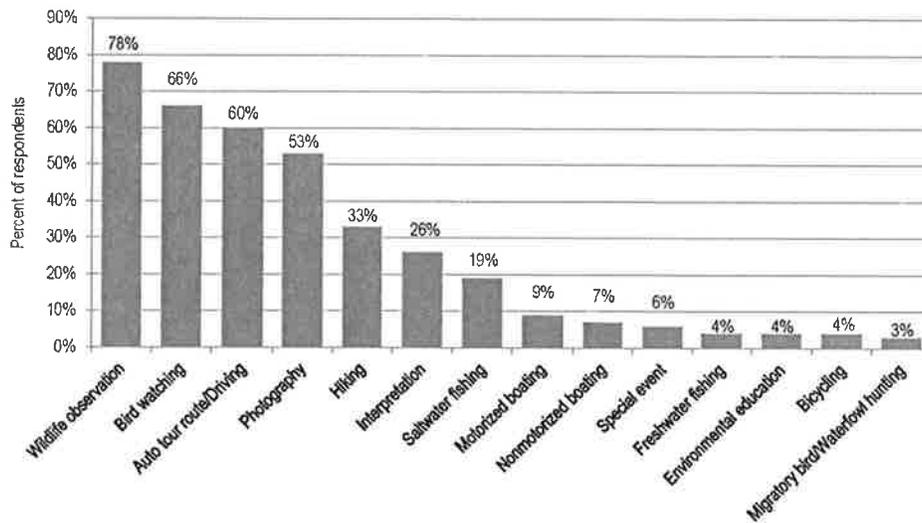


Figure 6. Activities in which visitors participated during the past 12 months at Merritt Island NWR (n = 268). See Appendix B for a listing of "other" activities.

Visitor Characteristics

Nearly all (95%) surveyed visitors to Merritt Island NWR indicated that they were citizens or permanent residents of the United States. Only those visitors 18 years or older were sampled. Visitors were a mix of 53% male with an average age of 60 years and 47% female with an average age of 59 years. Visitors, on average, reported they had 15 years of formal education (college or technical school). The median level of income was \$50,000–\$74,999. See Appendix A for more demographic information. In comparison, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation found that participants in wildlife watching and hunting on public land were 55% male and 45% female with an average age of 46 years, an average level of education of 14 years (associate degree or two years of college), and a median income of \$50,000–\$74,999 (Harris, 2011, personal communication). Compared to the U.S. population, these 2006 survey participants are more likely to be male, older, and have higher education and income levels (U.S. Department of the Interior and U.S. Department of Commerce, 2007).

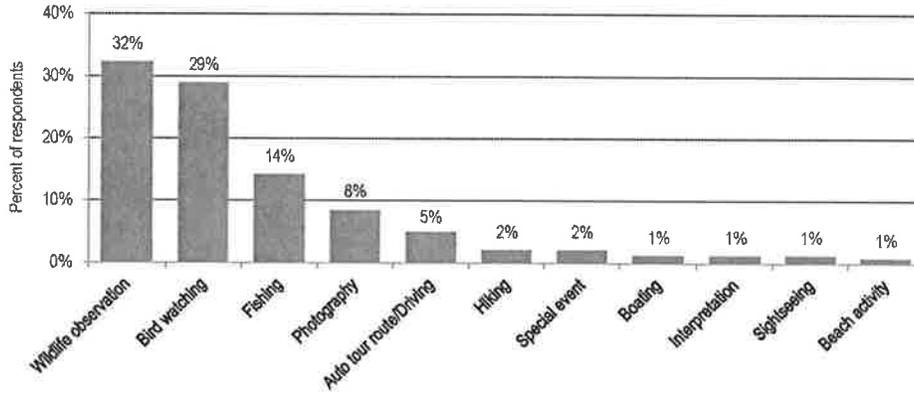


Figure 7. The primary activity in which visitors participated during this visit to Merritt Island NWR (n = 238). See Appendix B for a listing of "other" activities.

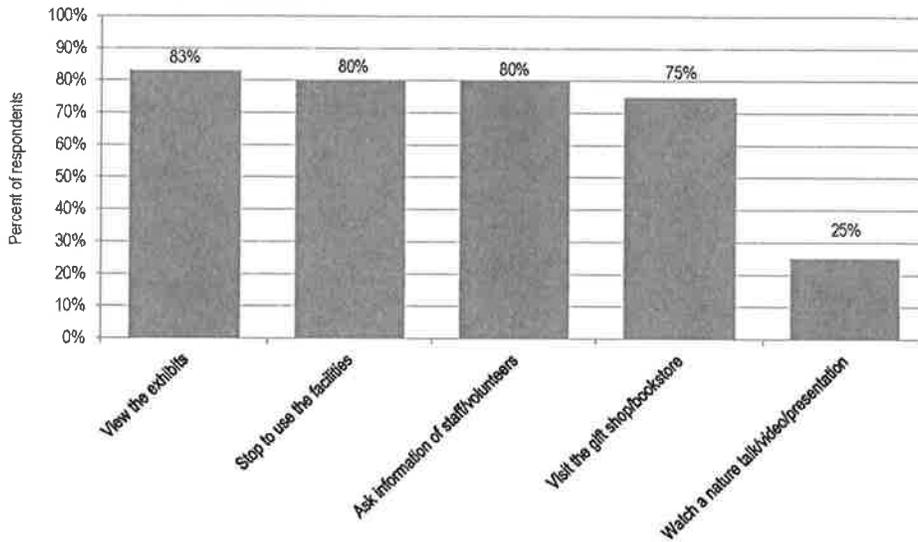


Figure 8. Use of the visitor center at Merritt Island NWR (for those visitors who indicated they used the visitor center, n = 182).



Visitor Spending in Local Communities

Tourists usually buy a wide range of goods and services while visiting an area. Major expenditure categories include lodging, food, supplies, and gasoline. Spending associated with refuge visitation can generate considerable economic benefits for the local communities near a refuge. For example, more than 34.8 million visits were made to national wildlife refuges in fiscal year 2006; these visits generated \$1.7 billion in sales, almost 27,000 jobs, and \$542.8 million in employment income in regional economies (Carver and Caudill, 2007). Information on the amount and types of visitor expenditures can illustrate the economic importance of refuge visitor activities to local communities. Visitor expenditure information also can be used to analyze the economic impact of proposed refuge management alternatives.

A region (and its economy) is typically defined as all counties within 50 miles of a travel destination (Stynes, 2008). Visitors that live within the local 50-mile area of a refuge typically have different spending patterns than those that travel from longer distances. During the two sampling periods, 37% of visitors to Merritt Island NWR indicated that they live within the local area. Nonlocal visitors (63%) stayed in the local area, on average, for 6 days. Table 5 shows summary statistics for local and nonlocal visitor expenditures in the local communities and at the refuge, with expenditures reported on a per person per day basis. During the two sampling periods, nonlocal visitors spent an average of \$91 per person per day and local visitors spent an average of \$52 per person per day in the local area. Several factors should be considered when estimating the economic importance of refuge visitor spending in the local communities. These include the amount of time spent at the refuge, influence of refuge on decision to take this trip, and the representativeness of primary activities of the sample of surveyed visitors compared to the general population. Controlling for these factors is beyond the scope of the summary statistics presented in this report. Detailed refuge-level visitor spending profiles which do consider these factors will be developed during the next phase of analysis.

Table 5. Total visitor expenditures in local communities and at Merritt Island NWR expressed in dollars per person per day.

Visitors	n ¹	Median	Mean	Standard deviation	Minimum	Maximum
Nonlocal	147	\$65	\$91	\$93	\$0	\$513
Local	74	\$25	\$52	\$74	\$0	\$375

¹n = number of visitors who answered both locality and expenditure questions.

Note: For each respondent, reported expenditures were divided by the number of persons in their group that shared expenses in order to determine the spending per person per trip. This was then divided by the number of days spent in the local area to determine the spending per person per day for each respondent. For respondents who reported spending less than one full day, trip length was set equal to one day. These visitor spending estimates are appropriate for the sampling periods selected by refuge staff (see table 2 for sampling period dates and figure 7 for the primary visitor activities). They may not be representative of the total population of visitors to this refuge.



Visitor Opinions about This Refuge

National wildlife refuges provide visitors with a variety of services, facilities, and wildlife-dependent recreational opportunities. Understanding visitors' perceptions of their refuge experience is a key component of the Refuge System mission as it pertains to providing high-quality wildlife-dependent recreational opportunities. Having a baseline understanding of visitor experience can inform management decisions to better balance visitors' expectations with the Refuge System mission. Recent studies in outdoor recreation have included an emphasis on declining participation in traditional activities such as hunting and an increasing need to connect the next generation to nature and wildlife. These factors highlight the importance of current refuge visitors as a key constituency in wildlife conservation. A better understanding is increasingly needed to better manage the visitor experience and to address the challenges of the future.

Surveyed visitors' overall satisfaction with the services, facilities, and recreational opportunities provided at Merritt Island NWR were as follows (fig. 9):

- 96% were satisfied with the recreational activities and opportunities,
- 95% were satisfied with the information and education about the refuge and its resources,
- 97% were satisfied with the services provided by employees or volunteers, and
- 97% were satisfied with the refuge's job of conserving fish, wildlife and their habitats.

Although 26% (n = 67) of visitors indicated they paid a fee to enter Merritt Island NWR, the refuge does not have an entrance fee. Based on open-ended comments, it may be that visitors to the refuge also visited Canaveral National Seashore, which does charge a fee.

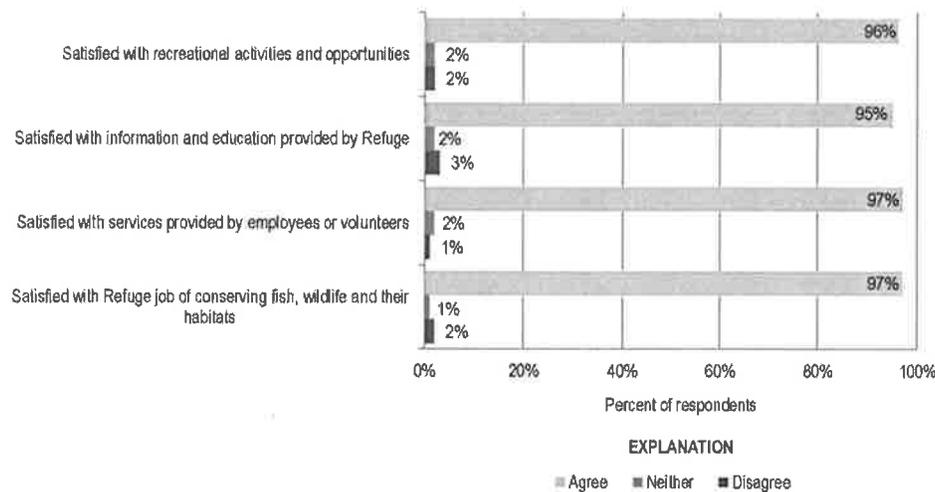


Figure 9. Overall satisfaction with Merritt Island NWR during this visit (n ≥ 253).



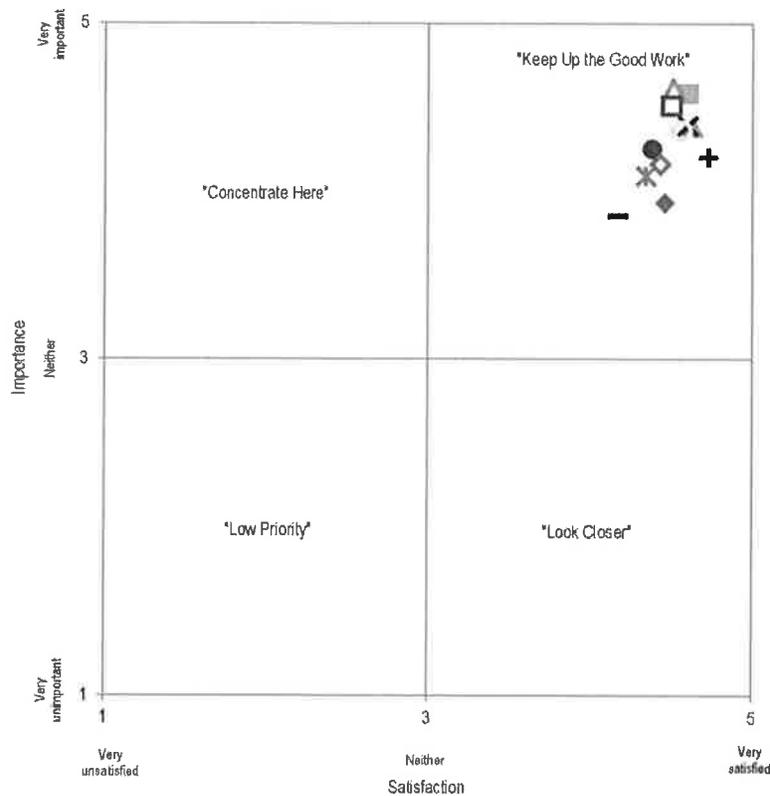
Importance/Satisfaction Ratings

Comparing the importance and satisfaction ratings for visitor services provided by refuges can help to identify how well the services are meeting visitor expectations. The importance-performance framework presented in this section is a tool that includes the importance of an attribute to visitors in relation to their satisfaction with that attribute. Drawn from marketing research, this tool has been applied to outdoor recreation and visitation settings (Martilla and James, 1977; Tarrant and Smith, 2002). Results for the attributes of interest are segmented into one of four quadrants (modified for this national study):

- Keep Up the Good Work = high importance/high satisfaction;
- Concentrate Here = high importance/low satisfaction;
- Low Priority = low importance/low satisfaction; and
- Look Closer = low importance/high satisfaction.

Graphically plotting visitors' importance and satisfaction ratings for different services, facilities, and recreational opportunities provides a simple and intuitive visualization of these survey measures. However, this tool is not without its drawbacks. One is the potential for variation among visitors regarding their expectations and levels of importance (Vaske et al., 1996; Bruyere et al., 2002; Wade and Eagles, 2003), and certain services or recreational opportunities may be more or less important for different segments of the visitor population. For example, hunters may place more importance on hunting opportunities and amenities such as blinds, while school group leaders may place more importance on educational/informational displays than would other visitors. This potential for highly varied importance ratings needs to be considered when viewing the average results of this analysis of visitors to Merritt Island NWR. This consideration is especially important when reviewing the attributes that fall into the "Look Closer" quadrant. In some cases, these attributes may represent specialized recreational activities in which a small subset of visitors participate (for example, hunting, kayaking) or facilities and services that only some visitors experience (for example, exhibits about the refuge). For these visitors, the average importance of (and potentially the satisfaction with) the attribute may be much higher than it would be for the overall population of visitors.

Figures 10-12 depict surveyed visitors' importance-satisfaction results for refuge services and facilities, recreational opportunities, and transportation-related features at Merritt Island NWR, respectively. All refuge services and facilities fell in the "Keep Up the Good Work" quadrant (fig. 10). Nearly all refuge recreational opportunities fell in the "Keep Up the Good Work" quadrant except hunting and fishing opportunities, which fell into the "Look Closer" quadrant (fig. 11). The average importance for fishing opportunities in the "Look Closer" quadrant was much higher among visitors who indicated they participated in this activity (n = 45; mean importance score = 4.5), as compared to visitors who did not participate in fishing at all (mean importance score = 2.3). The average importance of hunting activities may be higher among visitors who have participated in this activity during the past 12 months; however, there were not enough individuals in the sample to evaluate the responses of such participants. All transportation-related features fell in the "Keep Up the Good Work" quadrant (fig. 12).



EXPLANATION

- ◆ Availability of employees/volunteers
- ▲ Knowledgeable employees/volunteers
- ✕ Informational kiosks/displays about this Refuge
- ◀ Exhibits about this Refuge
- Visitor Center
- Ⓜ Well-maintained restrooms
- ✦ Courteous/welcoming employees/volunteers
- ✕ Printed information about this Refuge
- Signs with rules/regulations
- Environmental education programs/activities
- Convenient hours/days of operation
- ▣ Wildlife observation structures

Figure 10. Importance-satisfaction ratings of services and facilities provided at Merritt Island NWR.

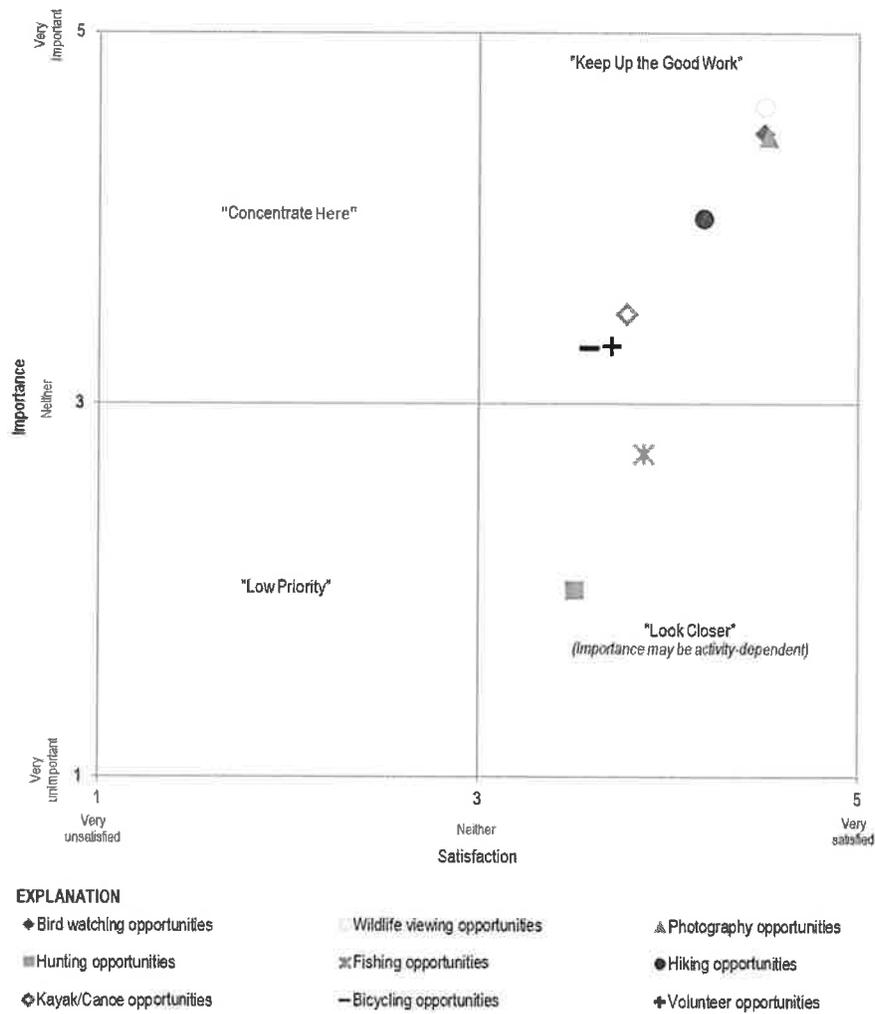


Figure 11. Importance-satisfaction ratings of recreational opportunities provided at Merritt Island NWR.



Visitor Opinions about National Wildlife Refuge System Topics

One goal of this national visitor survey was to identify visitor trends across the Refuge System to more effectively manage refuges and provide visitor services. Two important issues to the Refuge System are transportation on refuges and communicating with visitors about climate change. The results to these questions will be most meaningful when they are evaluated in aggregate (data from all participating refuges together). However, basic results for Merritt Island NWR are reported here.

Alternative Transportation and the National Wildlife Refuge System

Visitors use a variety of transportation means to access and enjoy national wildlife refuges. While many visitors arrive at the refuge in a private vehicle, alternatives such as buses, trams, watercraft, and bicycles are increasingly becoming a part of the visitor experience. Previous research has identified a growing need for transportation alternatives within the Refuge System (Krechmer et al., 2001); however, less is known about how visitors perceive and use these new transportation options. An understanding of visitors' likelihood of using certain alternative transportation options can help in future planning efforts. Visitors were asked their likelihood of using alternative transportation options at national wildlife refuges in the future.

Of the six Refuge System-wide alternative transportation options listed on the survey, the majority of Merritt Island NWR visitors who were surveyed were likely to use the following options at national wildlife refuges in the future (fig. 13):

- a boat that goes to different points on Refuge waterways;
- an offsite parking lot that provides trail access; and
- a bus/tram that provides a guided tour.

The majority of visitors were *not* likely to use a bike share program or a bus/tram that takes passengers to different points on national wildlife refuges in the future (fig. 13).

When asked about using alternative transportation at Merritt Island NWR specifically, 36% of visitors indicated they were unsure whether it would enhance their experience; however, some visitors thought alternative transportation would enhance their experience (25%) and others thought it would not (40%).

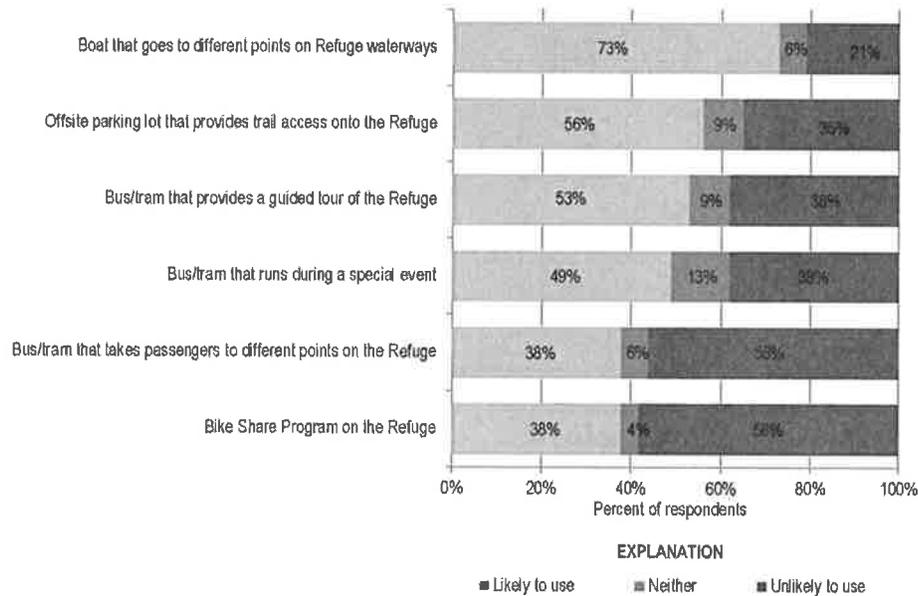


Figure 13. Visitors' likelihood of using alternative transportation options at national wildlife refuges in the future (n ≥ 255).

Climate Change and the National Wildlife Refuge System

Climate change represents a growing concern for the management of national wildlife refuges. The Service's climate change strategy, titled "Rising to the Urgent Challenge," establishes a basic framework for the agency to work within a larger conservation community to help ensure wildlife, plant, and habitat sustainability (U.S. Fish and Wildlife Service, 2010). To support the guiding principles of the strategy, refuges will be exploring options for more effective engagement with visitors on this topic. The national visitor survey collected information about visitors' level of personal involvement in climate change related to fish, wildlife and their habitats and visitors' beliefs regarding this topic. Items draw from the "Six Americas" framework for understanding public sentiment toward climate change (Leiserowitz, Maibach, and Roser-Renouf, 2008) and from literature on climate change message frames (for example, Nisbet, 2009). Such information provides a baseline for understanding visitor perceptions of climate change in the context of fish and wildlife conservation that can further inform related communication and outreach strategies.

Factors that influence how individuals think about climate change include their basic beliefs, levels of involvement, policy preferences, and behaviors related to this topic. Results presented below provide baseline information on visitors' levels of involvement with the topic of climate change related to fish,



wildlife and their habitats. The majority of surveyed visitors to Merritt Island NWR agreed with the following statements (fig. 14):

- “I am personally concerned about the effects of climate change on fish, wildlife and habitats;”
- “I stay well-informed about the effects of climate change;”
- “I take actions to alleviate the effects of climate change;” and
- “My experience would be enhanced if the Refuge provides information about how I can help address climate change effects.”

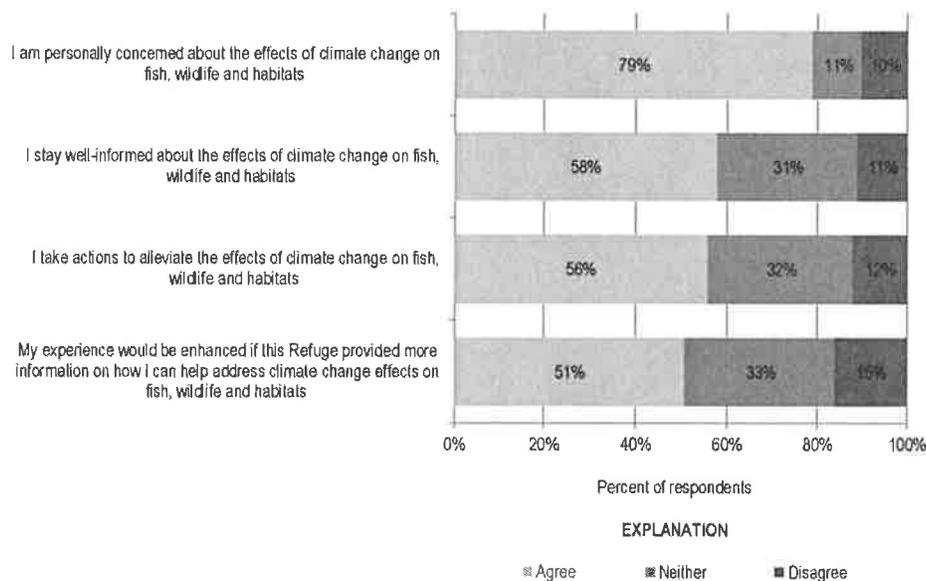


Figure 14. Visitors' personal involvement with climate change related to fish, wildlife and their habitats (n ≥ 254).

These results are most useful when coupled with responses to belief statements about the effects of climate change on fish, wildlife and their habitats, because such beliefs may be used to develop message frames (or ways to communicate) about climate change with a broad coalition of visitors. Framing science-based findings will not alter the overall message, but rather place the issue in a context in which different audience groupings can relate. The need to mitigate impacts of climate change on Refuges could be framed as a quality-of-life issue (for example, preserving the ability to enjoy fish, wildlife, plants, and their habitat) or an economic issue (for example, maintaining tourist revenues, supporting economic growth through new jobs/technology).



For Merritt Island NWR, the majority of visitors believed the following regarding climate change related to fish, wildlife and their habitats (fig. 15):

- “Future generations will benefit if we address climate change effects;”
- “We can improve our quality of life if we address the effects of climate change;” and
- “It is important to consider the economic costs and benefits to local communities when addressing climate change effects.”

The majority of visitors did *not* believe:

- “There has been too much emphasis on the catastrophic effects of climate change.”

Such information suggests that certain beliefs resonate with a greater number of visitors than other beliefs do. This information is important to note because just over half of visitors (51%) indicated that their experience would be enhanced if Merritt Island NWR provided information about how they could help address the effects of climate change on fish, wildlife, and their habitats (fig. 14), and framing the information in a way that resonates most with visitors may result in a more engaged public who support strategies aimed at alleviating climate change pressures. Data will be analyzed further at the aggregate, or national level, to inform the development of a comprehensive communication strategy about climate change.

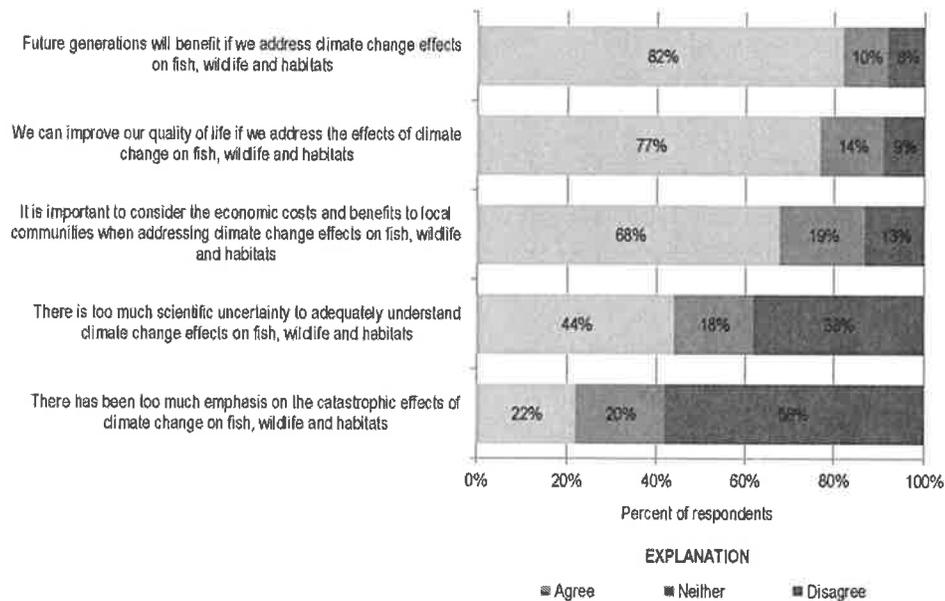


Figure 15. Visitors' beliefs about the effects of climate change on fish, wildlife and their habitats (n ≥ 252).



Conclusion

These individual refuge results provide a summary of trip characteristics and experiences of a sample of visitors to Merritt Island NWR during 2010–2011. These data can be used to inform decision-making efforts related to the refuge, such as Comprehensive Conservation Plan implementation, visitor services management, and transportation planning and management. For example, when modifying (either minimizing or enhancing) visitor facilities, services, or recreational opportunities, a solid understanding of visitors' trip and activity characteristics, their satisfaction with existing offerings, and opinions regarding refuge fees is helpful. This information can help to gauge demand for refuge opportunities and inform both implementation and communication strategies. Similarly, an awareness of visitors' satisfaction ratings with refuge offerings can help determine if any potential areas of concern need to be investigated further. As another example of the utility of these results, community relations may be improved or bolstered through an understanding of the value of the refuge to visitors, whether that value is attributed to an appreciation of the refuge's uniqueness, enjoyment of its recreational opportunities, or spending contributions of nonlocal visitors to the local economy. Such data about visitors and their experiences, in conjunction with an understanding of biophysical data on the refuge, can ensure that management decisions are consistent with the Refuge System mission while fostering a continued public interest in these special places.

Individual refuge results are available for downloading at <http://pubs.usgs.gov/ds/643/> as part of USGS Data Series 643 (Sexton and others, 2011). For additional information about this project, contact the USGS researchers at national_visitor_survey@usgs.gov or 970.226.9205.

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Appendix A: Survey Frequencies for Merritt Island National Wildlife Refuge

National Wildlife Refuge Visitor Survey

**A PLACE TO
CALL HOME**



A-1



PLEASE READ THIS FIRST:

Thank you for visiting a National Wildlife Refuge and for agreeing to participate in this study! We hope that you had an enjoyable experience. The U.S. Fish and Wildlife Service and the U.S. Geological Survey would like to learn more about National Wildlife Refuge visitors in order to improve the management of the area and enhance visitor opportunities.

If you have recently visited more than one National Wildlife Refuge or made more than one visit to the same Refuge, please respond regarding only the Refuge and the visit when you were asked to participate in this survey. Any question that uses the phrase "this Refuge" refers to the Refuge and visit when you were contacted.

SECTION 1. Your visit to this Refuge

1. Including your most recent visit, which activities have you participated in during the past 12 months at this Refuge? (Please mark all that apply.)

- | | | |
|--|---|--|
| <input type="checkbox"/> 0% Big game hunting | <input type="checkbox"/> 33% Hiking | <input type="checkbox"/> 4% Environmental education (for example, classrooms or labs, tours) |
| <input type="checkbox"/> 0% Upland/Small-game hunting | <input type="checkbox"/> 4% Bicycling | <input type="checkbox"/> 6% Special event (please specify)
See Appendix B |
| <input type="checkbox"/> 3% Migratory bird/Waterfowl hunting | <input type="checkbox"/> 60% Auto tour route/Driving | <input type="checkbox"/> 4% Other (please specify)
See Appendix B |
| <input type="checkbox"/> 78% Wildlife observation | <input type="checkbox"/> 9% Motorized boating | <input type="checkbox"/> 0% Other (please specify)
See Appendix B |
| <input type="checkbox"/> 66% Bird watching | <input type="checkbox"/> 7% Nonmotorized boating (including canoes/kayaks) | |
| <input type="checkbox"/> 4% Freshwater fishing | <input type="checkbox"/> 26% Interpretation (for example, exhibits, kiosks, videos) | |
| <input type="checkbox"/> 19% Saltwater fishing | | |
| <input type="checkbox"/> 53% Photography | | |

2. Which of the activities above was the primary purpose of your visit to this Refuge? (Please write only one activity on the line.) See report for categorized results; see Appendix B for miscellaneous responses

3. Did you go to a Visitor Center at this Refuge?

- 32% No
- 68% Yes → If yes, what did you do there? (Please mark all that apply.)
- | | |
|--|---|
| <input type="checkbox"/> 75% Visit the gift shop or bookstore | <input type="checkbox"/> 25% Watch a nature talk/video/presentation |
| <input type="checkbox"/> 83% View the exhibits | <input type="checkbox"/> 80% Stopped to use the facilities (for example, get water, use restroom) |
| <input type="checkbox"/> 80% Ask information of staff/volunteers | <input type="checkbox"/> 12% Other (please specify) See Appendix B |



4. Which of the following best describes your visit to this Refuge? (Please mark **only one**.)

Nonlocal	Local	Total	
25%	81%	46%	It was the primary purpose or sole destination of my trip.
55%	14%	39%	It was one of many equally important reasons or destinations for my trip.
20%	5%	15%	It was just an incidental or spur-of-the-moment stop on a trip taken for other purposes or to other destinations.

5. Approximately how many miles did you travel to get to this Refuge?

Nonlocal 473 number of miles
 Local 28 number of miles

6. How much time did you spend at this Refuge on your visit?

See Report for Results

7. Were you part of a group on your visit to this Refuge?

33% No (skip to question #9)

67% Yes → What type of group were you with on your visit? (Please mark **only one**.)

- 91% Family and/or friends
- 4% Organized club or school group
- 0% Commercial tour group
- 5% Other (please specify) See Appendix B

8. How many people were in your group, including yourself? (Please answer each category.)

3 number 18 years and over 1 number 17 years and under

9. How did you first learn or hear about this Refuge? (Please mark **all that apply**.)

- 50% Friends or relatives
- 10% Refuge website
- 19% Signs on highway
- 3% Other website (please specify) See Appendix B
- 4% Recreation club or organization
- 1% Television or radio
- 18% People in the local community
- 8% Newspaper or magazine
- 23% Refuge printed information (brochure, map)
- 13% Other (please specify) See Appendix B

10. During which seasons have you visited this Refuge in the last 12 months? (Please mark **all that apply**.)

- 65% Spring (March-May)
- 22% Summer (June-August)
- 28% Fall (September-November)
- 66% Winter (December-February)

11. How many times have you visited...

...this Refuge (including this visit) in the last 12 months? 7 number of visits
 ...other National Wildlife Refuges in the last 12 months? 4 number of visits



SECTION 2. Transportation and access at this Refuge

1. What forms of transportation did you use on your visit to this Refuge? (Please mark **all that apply**.)

- | | | | | | |
|------------------------------|---|-----------------------------|----------------------------------|------------------------------|------------------------------|
| <input type="checkbox"/> 94% | Private vehicle without a trailer | <input type="checkbox"/> 1% | Refuge shuttle bus or tram | <input type="checkbox"/> 2% | Bicycle |
| <input type="checkbox"/> 8% | Private vehicle with a trailer
(for boat, camper or other) | <input type="checkbox"/> 2% | Motorcycle | <input type="checkbox"/> 20% | Walk/Hike |
| <input type="checkbox"/> 0% | Commercial tour bus | <input type="checkbox"/> 0% | ATV or off-road vehicle | <input type="checkbox"/> 1% | Other (please specify below) |
| <input type="checkbox"/> 0% | Recreational vehicle (RV) | <input type="checkbox"/> 6% | Boat | See Appendix B | |
| | | <input type="checkbox"/> 1% | Wheelchair or other mobility aid | | |

2. Which of the following did you use to find your way to this Refuge? (Please mark **all that apply**.)

- | | | | |
|------------------------------|--|------------------------------|--|
| <input type="checkbox"/> 48% | Signs on highways | <input type="checkbox"/> 9% | Directions from Refuge website |
| <input type="checkbox"/> 25% | A GPS navigation system | <input type="checkbox"/> 7% | Directions from people in community near this Refuge |
| <input type="checkbox"/> 22% | A road atlas or highway map | <input type="checkbox"/> 16% | Directions from friends or family |
| <input type="checkbox"/> 12% | Maps from the Internet (for example,
MapQuest or Google Maps) | <input type="checkbox"/> 50% | Previous knowledge I have been to this Refuge before |
| | | <input type="checkbox"/> 4% | Other (please specify) See Appendix B |

3. Below are different alternative transportation options that could be offered at some National Wildlife Refuges in the future. Considering the different Refuges you may have visited, please tell us how likely you would be to use each transportation option. (Please circle one number for each statement.)

How likely would you be to use...	Very Unlikely	Somewhat Unlikely	Neither	Somewhat Likely	Very Likely
...a bus or tram that takes passengers to different points on the Refuge (such as the Visitor Center)?	<input type="checkbox"/> 35%	<input type="checkbox"/> 21%	<input type="checkbox"/> 6%	<input type="checkbox"/> 23%	<input type="checkbox"/> 15%
...a bike that was offered through a Bike Share Program for use while on the Refuge?	<input type="checkbox"/> 41%	<input type="checkbox"/> 17%	<input type="checkbox"/> 4%	<input type="checkbox"/> 24%	<input type="checkbox"/> 14%
...a bus or tram that provides a guided tour of the Refuge with information about the Refuge and its resources?	<input type="checkbox"/> 22%	<input type="checkbox"/> 16%	<input type="checkbox"/> 9%	<input type="checkbox"/> 34%	<input type="checkbox"/> 19%
...a boat that goes to different points on Refuge waterways?	<input type="checkbox"/> 13%	<input type="checkbox"/> 8%	<input type="checkbox"/> 6%	<input type="checkbox"/> 37%	<input type="checkbox"/> 36%
...a bus or tram that runs during a special event (such as an evening tour of wildlife or weekend festival)?	<input type="checkbox"/> 24%	<input type="checkbox"/> 14%	<input type="checkbox"/> 13%	<input type="checkbox"/> 31%	<input type="checkbox"/> 18%
...an offsite parking lot that provides trail access for walking/hiking onto the Refuge?	<input type="checkbox"/> 20%	<input type="checkbox"/> 15%	<input type="checkbox"/> 9%	<input type="checkbox"/> 31%	<input type="checkbox"/> 25%
...some other alternative transportation option? (please specify) See Appendix B	<input type="checkbox"/> 6%	<input type="checkbox"/> 6%	<input type="checkbox"/> 13%	<input type="checkbox"/> 31%	<input type="checkbox"/> 44%

4. If alternative transportation were offered at this Refuge, would it enhance your experience?

- 25% Yes 40% No 36% Not Sure



Market & Feasibility Advisors

5. For each of the following transportation-related features, first, rate how important each feature is to you when visiting this Refuge; then rate how satisfied you are with the way this Refuge is managing each feature. If this Refuge does not offer a specific transportation-related feature, please rate how important it is to you and then circle NA "Not Applicable" under the Satisfaction column.

Importance					Satisfaction						
Circle one for each item.					Circle one for each item.						
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
5%	13%	9%	49%	24%	Surface conditions of roads	5%	9%	6%	27%	52%	NA
6%	15%	16%	47%	16%	Surface conditions of parking areas	4%	3%	5%	25%	63%	NA
6%	6%	11%	35%	42%	Condition of bridges	3%	1%	8%	19%	70%	NA
6%	5%	5%	46%	38%	Condition of trails and boardwalks	2%	1%	7%	20%	70%	NA
3%	6%	9%	45%	37%	Number of places for parking	1%	8%	6%	28%	57%	NA
4%	5%	6%	43%	42%	Number of places to pull over along Refuge roads	1%	14%	8%	40%	37%	NA
5%	2%	5%	35%	52%	Safety of driving conditions on Refuge roads	2%	4%	5%	27%	62%	NA
3%	4%	4%	37%	52%	Safety of Refuge road entrances/exits	2%	3%	4%	20%	70%	NA
4%	5%	8%	35%	49%	Signs on highways directing you to the Refuge	1%	3%	10%	28%	58%	NA
2%	5%	7%	44%	43%	Signs directing you around the Refuge roads	2%	6%	9%	31%	51%	NA
4%	3%	11%	36%	46%	Signs directing you on trails	1%	1%	19%	37%	42%	NA
6%	5%	28%	27%	35%	Access for people with physical disabilities or who have difficulty walking	3%	5%	30%	25%	36%	NA

6. If you have any comments about transportation-related items at this Refuge, please write them on the lines below.

See Appendix B



SECTION 3. Your expenses related to your Refuge visit

1. Do you live in the local area (within approximately 50 miles of this Refuge)?

Yes

No → How much time did you spend in local communities on this trip?

3 number of hours OR 8 number of days

2. Please record the amount that you and other members of your group with whom you shared expenses (for example, other family members, traveling companions) spent in the local 50-mile area during your most recent visit to this Refuge. (Please enter the amount spent to the nearest dollar in each category below. Enter 0 (zero) if you did not spend any money in a particular category.)

Categories	Amount Spent in Local Communities & at this Refuge <i>(within 50 miles of this Refuge)</i>
Motel, bed & breakfast, cabin, etc.	
Camping	
Restaurants & bars	
Groceries	
Gasoline and oil	
Local transportation (bus, shuttle, rental car, etc.)	
Refuge entrance fee	
Recreation guide fees (hunting, fishing, wildlife viewing, etc.)	
Equipment rental (canoe, bicycle, kayak, etc.)	
Sporting good purchases	
Souvenirs/clothing and other retail	
Other (please specify) _____	

See Report for Results

3. Including yourself, how many people in your group shared these trip expenses?

2 number of people sharing expenses



4. As you know, some of the costs of travel such as gasoline, hotels, and airline tickets often increase. If your total trip costs were to increase, what is the maximum extra amount you would pay and still visit this Refuge? (Please circle the highest dollar amount.)

\$0	\$10	\$20	\$35	\$50	\$75	\$100	\$125	\$150	\$200	\$250
8%	16%	17%	8%	15%	2%	12%	1%	4%	6%	12%

5. If you or a member of your group paid a fee or used a pass to enter this Refuge, how appropriate was the fee? (Please mark **only one**.)

3%	Far too low	10%	Too low	85%	About right	1%	Too high	0%	Far too high	74%	Did not pay a fee (skip to Section 4)
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6. Please indicate whether you disagree or agree with the following statement. (Please mark **only one**.)

The value of the recreation opportunities and services I experienced at this Refuge was at least equal to the fee I paid.

8%	Strongly disagree	5%	Disagree	8%	Neither agree or disagree	35%	Agree	45%	Strongly agree
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SECTION 4. Your experience at this Refuge

1. Considering your visit to this Refuge, please indicate the extent to which you disagree or agree with each statement. (Please circle one number for each statement.)

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Not Applicable
Overall, I am satisfied with the recreational activities and opportunities provided by this Refuge.	1%	2%	1%	32%	65%	NA
Overall, I am satisfied with the information and education provided by this Refuge about its resources.	1%	2%	2%	35%	60%	NA
Overall, I am satisfied with the services provided by employees or volunteers at this Refuge.	1%	0%	2%	29%	67%	NA
This Refuge does a good job of conserving fish, wildlife and their habitats.	1%	1%	1%	23%	74%	NA



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2. For each of the following services, facilities, and activities, first, rate how important each item is to you when visiting this Refuge; then, rate how satisfied you are with the way this Refuge is managing each item. If this Refuge does not offer a specific service, facility, or activity, please rate how important it is to you and then circle NA "Not Applicable" under the Satisfaction column.

Importance <i>Circle one for each item.</i>					Refuge Services, Facilities, and Activities	Satisfaction <i>Circle one for each item.</i>					
Very Unimportant	Somewhat Unimportant	Neither	Somewhat Important	Very Important		Very Unsatisfied	Somewhat Unsatisfied	Neither	Somewhat Satisfied	Very Satisfied	Not Applicable
3%	8%	11%	48%	29%	Availability of employees or volunteers	3%	2%	8%	22%	66%	NA
3%	5%	7%	38%	46%	Courteous and welcoming employees or volunteers	1%	1%	5%	11%	82%	NA
3%	2%	5%	33%	56%	Knowledgeable employees or volunteers	2%	1%	6%	14%	77%	NA
1%	3%	4%	38%	53%	Printed information about this Refuge and its resources (for example, maps and brochures)	2%	2%	4%	19%	73%	NA
2%	3%	10%	53%	31%	Informational kiosks/displays about this Refuge and its resources	2%	4%	11%	24%	59%	NA
2%	2%	13%	38%	46%	Signs with rules/regulations for this Refuge	1%	1%	12%	31%	55%	NA
2%	2%	9%	52%	35%	Exhibits about this Refuge and its resources	1%	3%	9%	25%	62%	NA
3%	5%	22%	42%	27%	Environmental education programs or activities	2%	2%	24%	22%	51%	NA
2%	2%	9%	34%	54%	Visitor Center	1%	1%	12%	12%	74%	NA
1%	0%	4%	29%	66%	Convenient hours and days of operation	1%	2%	4%	20%	73%	NA
1%	2%	4%	22%	72%	Well-maintained restrooms	1%	5%	4%	21%	69%	NA
1%	1%	5%	33%	60%	Wildlife observation structures (decks, blinds)	1%	3%	5%	26%	64%	NA
2%	1%	11%	23%	64%	Bird-watching opportunities	1%	2%	11%	20%	67%	NA
0%	1%	2%	31%	65%	Opportunities to observe wildlife other than birds	2%	1%	7%	26%	65%	NA
1%	2%	10%	25%	61%	Opportunities to photograph wildlife and scenery	1%	1%	8%	25%	65%	NA
56%	5%	27%	5%	7%	Hunting opportunities	4%	2%	60%	8%	26%	NA
33%	12%	24%	10%	21%	Fishing opportunities	3%	2%	38%	19%	38%	NA
4%	4%	14%	43%	35%	Trail hiking opportunities	2%	1%	16%	40%	41%	NA
11%	7%	30%	27%	25%	Water trail opportunities for canoeing or kayaking	3%	2%	42%	21%	32%	NA
14%	10%	27%	28%	20%	Bicycling opportunities	4%	2%	47%	26%	21%	NA
12%	8%	40%	21%	20%	Volunteer opportunities	3%	2%	47%	19%	29%	NA



3. If you have any comments about the services, facilities, and activities at this Refuge, please write them on the lines below.

See Appendix B

SECTION 5. Your opinions regarding National Wildlife Refuges and the resources they conserve

1. Before you were contacted to participate in this survey, were you aware that National Wildlife Refuges...

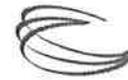
- ...are managed by the U. S. Fish and Wildlife Service? 85% Yes 15% No
- ...have the primary mission of conserving, managing, and restoring fish, wildlife, plants and their habitat? 90% Yes 10% No

2. Compared to other public lands you have visited, do you think Refuges provide a unique recreation experience?

- 92% Yes 8% No

3. If you answered "Yes" to Question 2, please briefly describe what makes Refuges unique. _____

See Appendix B



4. There has been a lot of talk about climate change recently. We would like to know what you think about climate change as it relates to fish, wildlife and their habitats. To what extent do you disagree or agree with each statement below? (Please circle one number for each statement.)

Statements about climate change	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
I am personally concerned about the effects of climate change on fish, wildlife and their habitats.	6%	3%	11%	36%	43%
We can improve our quality of life if we address the effects of climate change on fish, wildlife and their habitats.	6%	2%	15%	37%	40%
There is too much scientific uncertainty to adequately understand how climate change will impact fish, wildlife and their habitats.	15%	23%	18%	31%	13%
I stay well-informed about the effects of climate change on fish, wildlife and their habitats.	3%	8%	31%	41%	17%
It is important to consider the economic costs and benefits to local communities when addressing the effects of climate change on fish, wildlife and their habitats.	5%	7%	19%	50%	19%
I take actions to alleviate the effects of climate change on fish, wildlife and their habitats.	6%	6%	32%	37%	19%
There has been too much emphasis on the catastrophic effects of climate change on fish, wildlife and their habitats.	28%	30%	21%	14%	8%
Future generations will benefit if we address the effects of climate change on fish, wildlife and their habitats.	5%	3%	10%	40%	42%
My experience at this Refuge would be enhanced if this Refuge provided more information about how I can help address the effects of climate change on fish, wildlife and their habitats.	7%	9%	33%	38%	13%

SECTION 6. A Little about You

**** Please tell us a little bit about yourself. Your answers to these questions will help further characterize visitors to National Wildlife Refuges. Answers are not linked to any individual taking this survey. ****

1. Are you a citizen or permanent resident of the United States?

95% Yes 5% No → If not, what is your home country? See Figure 4 in Report

2. Are you? 53% Male 47% Female

3. In what year were you born? 1952 (YYYY)



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4. What is your highest year of formal schooling? (Please circle one number.)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20+
(elementary)					(junior high or middle school)			(high school)				(college or technical school)				(graduate or professional school)			
					<input type="checkbox"/> 0%			<input type="checkbox"/> 19%				<input type="checkbox"/> 46%				<input type="checkbox"/> 35%			

5. What ethnicity do you consider yourself? 2% Hispanic or Latino 98% Not Hispanic or Latino

6. From what racial origin(s) do you consider yourself? (Please mark all that apply.)

1% American Indian or Alaska Native 0% Black or African American 99% White

0% Asian 0% Native Hawaiian or Pacific Islander

7. How many members of your household contribute to paying the household expenses? 2 persons

8. Including these members, what was your approximate household income from all sources (before taxes) last year?

<input type="checkbox"/> 1% Less than \$10,000	<input type="checkbox"/> 12% \$35,000 - \$49,999	<input type="checkbox"/> 12% \$100,000 - \$149,999
<input type="checkbox"/> 7% \$10,000 - \$24,999	<input type="checkbox"/> 27% \$50,000 - \$74,999	<input type="checkbox"/> 8% \$150,000 - \$199,999
<input type="checkbox"/> 7% \$25,000 - \$34,999	<input type="checkbox"/> 21% \$75,000 - \$99,999	<input type="checkbox"/> 4% \$200,000 or more

9. How many outdoor recreation trips did you take in the last 12 months (for activities such as hunting, fishing, wildlife viewing, etc.)?

 22 number of trips

Thank you for completing the survey.

There is space on the next page for any additional comments you may have regarding your visit to this Refuge.

See Appendix B for Comments



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Appendix B: Visitor Comments to Open-Ended Survey Questions for Merritt Island National Wildlife Refuge

Survey Section 1

Question 1: "Including your most recent visit, which activities have you participated in during the past 12 months at this Refuge?"

Special Event	Frequency
14th Annual Space Coast Birding and Wildlife Festival	1
Adopt-an-Area clean up	1
Beach Clean-up (Keep Brevard Beautiful)	1
Bird Field Trip Leader	1
Bird Watching Tour	1
Birding Event	1
Birding Festival in Titusville	1
Clean-up	1
Eagle Project	1
Eagle Project, Boy Scouts, Playalinda Beach Clean-up, Haul over canal, Dummit Cave cleanup	1
Space Coast Birding Festival	4
Space Coast Birding Festival Field Trips	1
Total	15

Other Activity	Frequency
Beach	4
Beach walking	1
Eagle Scout project	1

B-1



One of 12 fly fishers, clearing the side of the road	1
Rubbish clean-up	1
School field trip	1
Trail clean-up	1
Visit to the beach - National Seashore	1
Total	12

Question 2: "Which of the activities above was the primary purpose of your visit to this Refuge?"
Primary activities are categorized in the main report; the table below lists the "other" miscellaneous primary activities listed by survey respondents.

Other Miscellaneous Primary Activities	Frequency
Beach	2
Discovery	1
Show to out-of-state visitors	2
Sightseeing	1
Swam	1
Total	7

Question 3: "Did you go to a Visitor Center at this Refuge?"; If Yes, "What did you do there?"

Other Visitor Center Activity	Frequency
Art show	1
Asked for help identifying birds	1
Ate our lunch on the grounds	1
Birded the boardwalk	1



Bought Audubon birds, insects	1
Get info on sightings	1
Get refreshment	1
Looked at the pair of painted buntings on the feeder	1
Nature walk	1
Photo club meeting	1
Photographed birds	1
Photographed painted bunting at the Visitors Center's feeders	1
Pick up materials for cleanup project	1
Picnic	1
Purchased gift shop items	1
Saw a 2010 watercolor painting exhibit	1
Strolled on the nature walkway	1
Walked on the trail at the Visitor Center	1
Walked the boardwalk	1
Watch birds at feeders there and walk the little trail	1
Watch the bird feeder	1
Watched painted buntings at feeders	1
Total	22



Question 7: "Were you part of a group on your visit to this Refuge?; If Yes, "What type of group were you with on your visit?"

Other Group Type	Frequency
Bird watching groups	1
BSA troop	1
Clean-up	1
CNPA member	1
Space Coast Birding & Wildlife Festival lecture/walk	1
Space Coast Birding Festival	3
The Annual Birding Festival visits the refuge for instruction purposes	1
Total	9

Question 9: "How did you first learn or hear about this Refuge?"

Other Website	Frequency
Birding forum	1
Cardina Nature Photographers Association (www.cnpa.org)	1
dayawaykayaktours.com	1
Duckhuntingchat.com	1
Google - Birding the Space Coast	1
Mark Drown fishing website	1
Space Coast Birding Festival website	1
Surf fishing	1
Trip research on the Internet	1
Total	9



Other Ways Heard about This Refuge	Frequency
AAA	1
AAA road map	1
Audubon	1
Books on things to do in Florida	1
Brochures, Florida books	1
Buy a French travel book of Florida	1
Centennial book on NWRs	1
Condo management told us of this refuge	1
Employed by the Florida Dept. of Environmental Regulation	1
Festival info	1
Florida birding guidebook	3
Florida Birding trail, NWR map of all states	1
Fodor's guidebook	1
Great Florida Birding Trail Guides	1
Kennedy Space Center Visitor Center	2
Las Olas Beach Club, Cocoa Beach, FL	1
Lonely Planet Guide: Orlando & Central Florida	1
Map included in a festival activities booklet	1
Map of wildlife refuges across the nation	1
Oscar Scherer - State Park volunteer	1
Someone at an Elder Hostel told us.	1
Space Coast Birding Festival	1
State highway map	1



Tampa Audubon field trip 2009	1
Travel guidebook	4
Ulysses guide	1
Total	32

Survey Section 2

Question 1: "What forms of transportation did you use on your visit to this Refuge?"

Other Forms of Transportation	Frequency
Kayak	1
School bus	1
Total	2

Question 2: "Which of the following did you use to find your way to this Refuge?"

Other Ways Found This Refuge	Frequency
Birder's guide to Florida	1
Brochures	1
Called refuge for directions	1
Came with locals	1
Directions from the Visitors Center by phone	1
Driver	1
Initially tried to access from road to the space center. Learned there is no access via 405 and 3.	1
KSC Worker	1
Map in festival booklet	1
Refuge pamphlets with map	2
Total	11



Question 5: "Below are different alternative transportation options that could be offered at some National Wildlife Refuges in the future...please tell us how likely you would be to use each transportation option."

Other Transportation Option Likely to Use	Frequency
Canoe	1
Golf cart	1
Guided horseback trails	1
Hybrid car	1
Kayak or canoe rental	1
More refuges with driving capabilities	1
Motorcycle	1
Personal vehicle	7
Segway	2
Slow plane	1
Total	17

Question 6: "If you have any comments about transportation-related items at this Refuge, please write them on the lines below."

Comments on Transportation-related Items at This Refuge (n = 39)

A beach wheelchair was available for my use, enabling me to get down on the beach. It was wonderful!

A few more pull offs might be nice for the rude people that don't pull close to the edge of the road when looking at something.

As a birder, being forced to use busses or other transportation would take the pleasure of the refuge away. I need to be independent and would not return.

Because of the insect population, it is not practical to do much hiking, therefore, spending money on wheelchair access/etc. may be wasteful at this refuge.

Better road or steel markings, and better maps.

Conditions were adequate for our short visit.



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I attempted to access L. Pond Road from the refuge only to find it was closed, forcing me to turn around. This dead-end should be clearly marked.

I feel that it's important in bad weather such as storms of the nature of tornadoes & hurricanes. I saw no signs for leaving the area in case of a storm. There were signs on the mainland.

I have difficulty walking and I did not find easy access to where I went.

I have difficulty walking any distance and feel that benches on which to rest would get me further along the trails and enhance my trail experience.

I know that some NWRs are thinking of busses to transport visitors around. This would be very bad for photographers. First, we have lots of gear we need access to. Also, it is good to use the vehicle as a photo blind and take pictures right out the window. Other times, we like to get away from the crowds and stand or sit quietly for long periods of time watching and photographing. If you pile us all on a bus and only let the whole lot of us at certain stops the bird photography, in my mind, will be ruined.

I like it natural and undisturbed by man.

I wasn't doing the driving and we had a guide, so some of your questions above were hard to answer.

I wish more areas were open for photography.

I'm a photographer and I need to stop often and for various time intervals.

It would be nice to have the option to have a guided tour bus or something like that.

Maps not to scale and signs directing to sites are poor.

Maybe a bus or something from Cocoa Beach or New Sunshine, or somewhere else would be helpful.

Merritt Island NWR is a great place to visit!

One road that showed on the map as going through the refuge, in fact, was a dead end. It went about half way, was pretty rough, and had a very minimum space on which to turn around. It should have had a sign indicating that it was a dead end. Apparently, it had been closed as a through route for about two years.

Really like the new boardwalk overlooking the manatee habitat at the boat ramp! Nice job!

Road from US-1 to the bridge needs repaired, with the bumps and waves taken out.

Road grade some boat ramps about twice a year (WSEG, Beccoan 42; BioLab).

Roads are well maintained. This area is most appreciated by people doing specific activities like fishing and bird watching. Encouraging more traffic of casual visitors will detract from its value.

Some of the signs around the refuge were confusing.

The gravel roads with potholes were somewhat of a pain to drive on.

The new manatee art is really awesome!



The only concern is that the roads are so narrow and passing other cars is a daunting experience.

The road needs to be wider so that two cars can get past each other safely; there is not enough room to pull off to the side to stop and look at wildlife.

The trails should be kept as natural as possible; after all, it is a wildlife refuge. To improve the driving conditions would attract more cars and ruin the ambiance of the refuge.

The unpaved secondary roads in the bird viewing and alligator sunning areas were in poor shape; there was a large hole with water.

There isn't enough parking where the eco-toilet is and maneuvering was difficult.

Trails are what we come for!

Very well kept and clean.

We appreciate the hard work the staff does to provide this experience to all of the nature lovers that visit.

We didn't use walking trails.

We think there would be more public support, if the wildlife refuge maintained as much freedom of access as possible.

When traveling by motorcycle, it is very hard to maneuver on sand.

When we pulled over to look at the alligators, we ran into a road block. Roads should be widened at prime viewing spots.

Survey Section 4

Question 6: "If you have any comments about services, facilities, and activities at this Refuge, please write them on the lines below."

Comments on Services, Facilities, and Activities at This Refuge (n = 70)

A better sign from the main road and information about the nearest gas station, food, and bait supplies would be helpful.

A boat ride would be nice.

As birding visitors from the UK, we arranged our itinerary specifically to allow us to visit this site and this is the 3rd time we have done so. The wildlife drive provides superlative opportunities for lagoon and salt marsh birding, wildlife watching and photography, and the Visitor Center and nearby boardwalks offer access to excellent information and different habitats. It is a wonderful to be able to experience such an important preserve "close-up."

Bank fishing should be available 24 hours a day.

Beach access, biking, and fishing are most important.

Best refuge on the east coast for birding.



Bike paths beside the road would make it much more pleasant for visitors who wish to come by bike.

Bird watching is the most important.

Could use some porta-potties at the primitive boat launches.

Excellent.

For the size of this refuge, the Visitors Center is undersized and needs more materials/boards about the refuge. For a good example, look at Ding Darling Center on Sanibel Island, FL.

Good as it is - more trails if anything.

I am there to bird and observe, so those are the things that are important to me. I am sure the hunting and fishing are important to others.

I am very satisfied with the new observation area for manatees and the improvement on the road surface at Black Point Loop Road.

I do not want any hunting by anybody.

I don't like that they allow hunting. If they want to charge more and the money stays in the refuge, I would support that. I would prefer a lifetime or yearly pass. Why can't it be tied in with a National Park Pass?

I enjoyed everything there is to offer. The people are very nice.

I had a great time and did not know the park existed. I plan to return and bring my family and visit the park again. Hopefully, I will have more time and do more things that the park had to offer. I really loved it - it was beautiful.

I really love this refuge!

I will continue to do my part to clean up and preserve nature. I think a campaign addressing personal responsibility would be very beneficial.

I would absolutely make a point of visiting this refuge on my next visit to Florida! The land is beautiful; it is obvious that the people who maintain it care about it.

I would recommend Merritt Island to family, friends, and online guests considering it.

It would be hard to add buildings and roads to an area that needs to be kept pristine; however, seeing all the animals, birds, and land makes us want to preserve it all the more for our kids and future generations.

It would be nice to have a larger parking lot at the entrance for people hiking and bicycling the drive. Also, a patch for bikers and hikers back to the entrance so they don't have to walk along the side of the road.

It would be nice to have kid-friendly events, more walking trails, more swimming access, and more areas we can park our car and go fishing or swimming.

It's great how it is. The only interest would be a few more publicly accessible bathrooms.

Just three roads need to be smoother: WSEG, Beacoan 42, and Bio Lab.

Merritt Island is great!



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Merritt Island National Wildlife Refuge is very well maintained. I had reason to travel Birdlab Road recently and the road is in serious need of attention. (There are a lot of birds and alligators though!)

My visit was too brief to assess everything the refuge has to offer, but I certainly was rewarded with some great birding moments (my primary interest).

Nice beach.

No porta-potties.

Not many parking spaces in the paved lot. We had to park in the heavy sand area (not a real parking area).

On site at the Rio Lab Refuge, two volunteers were very helpful with information about the Refuge and gave me a booklet about the Refuge and other trails.

On the Black Point Wildlife Drive, the information leaflets were far from helpful. Most of the "markers" had a description in the leaflet that bore no relation to the wildlife that one could expect to see at that marker. One marker even referred us to a nest finder that actually appeared about 10 markers later along the drive. The drive itself is excellent, offering a wide range of bird and other wildlife viewing opportunities in a range of habitats, but the written information sadly lets the whole experience down somewhat.

Please keep it as wild as possible. Refuges were built for the animals, not people, keep them that way. The few roads give people plenty of access.

Restrooms in the Visitor Center could have been cleaner.

The docks on dock need to be replaced or repaired and there needs to be two boat launching ramps.

The employees and volunteers were all really friendly and helpful. We had a great time.

The feral cats on Merritt Island were very unpleasant. Feral cats are an alien/invasive species with no place in a wildlife refuge with endangered scrub jays.

The individuals at the Visitors Center were very helpful in providing information about where best to hike and see alligators - our two main goals of our visit. The man who helped us even allowed us to use his insect repellent, which was a life saver! I've never seen so many mosquitoes!

The roads are well kept for slow moving traffic, which is needed and used. There are very few walkers and some trails with parking areas. The restrooms are well maintained.

The signs to recycle the tour brochure should be placed before you get to the brochure return box. The refuge drive could stay open until sunset and the Visitors Center could stay open until 5 pm.

The staff at the Visitor Center were wonderful! They went way over the top to help me. Hats off to them!

The trash left behind by others is a serious problem.

The volunteer that greeted us was very nice and very knowledgeable.

There is no need for the closing of several access roads at Black Point Drive and east side of the Indian River. You also need trash bins at the boat ramps.

This is one of the best wildlife refuges in the country for bird watching. Merritt Island Wildlife Sanctuary.



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This is the finest refuge in the state for bird watching. I just love it and its services. Porta-potties should be added on the Gator and Peacock's Pocket Roads.

This refuge does not need a lot of services beyond the continued protection of the environment. Access is sufficient. It should remain a quiet, low volume resource.

This refuge was well maintained and clean.

Through your services and facilities you have drawn too many people in. You have clear cut, burned, and stripped the plants and habitat. Since the 60's, the more you do the less this refuge likes it. You used to play the role of law enforcement against poachers and let God manage the rest. If you stop now there's a chance this land will heal.

Very helpful in answering our questions.

Visitor's Booth was very helpful.

We are lucky to have this lovely refuge so close to our home.

We didn't have the opportunity to take advantage of many of the things available at this facility, so it is hard to rate it.

We enjoyed our visits to the wildlife reserve and look forward to our next visit.

We have visited Merritt Island National Wildlife Refuge 4 or 5 times over the past 15 years. Every visit has been very enjoyable and highly memorable. Great staff & volunteers, and a wonderful destination - we love it!

We just did a drive through. We didn't use any facilities or participate in any activities.

We received a wonderful reception by volunteers and staff and some good advice on where to go to see specific birds. Everyone seemed genuinely happy to help and were able to provide valuable information.

We were extremely impressed by the Visitor Center, the volunteers who greeted us, and the entire national park that has been kept pretty natural and uncommercialized.

We were looking to photograph birds... there were few good locations to set up tripods. Perhaps in the future, more observation decks or platforms might help. We were also late in the season, so there was little bird life to observe or photograph.

Well informed employees and volunteers. Clean facilities, and the boardwalk is lengthy and well-maintained. Thanks.

Well informed volunteers. We had a very helpful and knowledgeable volunteer guide for bird watching; truly a wonderful experience!

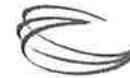
Well maintained Visitors Center and friendly employees and volunteers.

When you enter the trail off of Biolab Road/boat ramp, there are huge holes. Some are wider than my car.

While you cannot control mammals and reptiles in the refuge, it would be great if more remote viewing was car accessible without the need for hiking (I enjoy hiking, but the insects are murderous). Bird watching is already fantastic.

Wish the Visitor Center was open on Sundays during the spring and summer.

Would be nice to have informational kiosks/displays about this refuge and its resources in other languages, like French, for example.



You need a bathroom facility or a porta-potty at the canal where the manatees swarm.

Survey Section 5

Question 3: "If you answered "Yes" to Question 2, please briefly describe what makes Refuges unique."

Comments on What Makes Refuges Unique? (n = 208)

A combination of education and recreation opportunities, and access to unique habitats in a way that minimizes man's impact.

A great place to see wintering birds.

Ability to be up close to wild animals in their natural habitat.

Access to watching and photograph birds and other local wildlife in their natural habitat, as well as seeing launch pads at the Kennedy Center and visiting pristine beach. I visited on a day when there was no \$3 fee. I would have gladly paid the \$3 fee.

Accessibility to visitors. Unique wildlife. Amount of space to view wildlife without encroaching on other people.

All of the wildlife.

All the trails are well marked and in good condition.

Animal wildlife was unlike anything we have in my home state of Indiana.

Animals are viewed in their own habitats rather than in a zoo.

Animals first, people second.

As a photographer, it gives me the opportunity to photograph the wildlife in its natural setting. Even though there are other visitors, they all seem to respect the wildlife and others viewing it.

Attention to habitats, eco-culture and respect for all life is evident.

Back to nature; natural habitat.

Because the refuge is designed to nurture wildlife habitat instead of just creating scenery.

Being able to boat away from everyone and enjoy.

Bird sighting opportunities with low-key roads/gravel/dirt.

Bird watching and good opportunities for photography.

Bird watching opportunities.



Birding in the area is extraordinary. We can't wait until our next visit.

Birds are from all over and the animals are in their own habitat. The spoonbills and alligators are here. Everything is worth seeing again and again.

Concentration of wildlife. Knowledgeable staff.

Conservation and preservation of wildlife.

Conservation as the primary goal, with visitors as a lesser priority.

Conservation is the priority.

Conserves our wildlife, provides an opportunity to view it in its natural habitat, and gives us a unique opportunity to learn more of its importance to our nation.

Conserving the natural habitat for local wildlife. Protected from commercialization and construction expense.

Controlled access, management practices are species specific, and access is restricted in some areas to protect certain species.

Convenient to pull off the beaten path.

Different refuges provide diverse opportunities to view and photograph their local wildlife (no spoonbills in Yellowstone and no grizzly bears at Merritt Island).

Driving/hiking opportunities, NASA viewing, large selection of wildlife, and land.

Educating the visitors about the importance of sustaining our ecosystem and to give them an opportunity to observe how interconnected the system is.

Everything they offer.

Fairly unspoiled natural lands and wildlife.

Fishing and wildlife.

For me, it is unique in its ability to attract birds and other wildlife, giving me the opportunity to observe birds and other wildlife in their natural habitat. Also, it provides birds a resting point in their migration, giving these birds a better chance at survival. The way natural areas are disappearing it's a wonder that there are any bird or wildlife left. Perhaps this refuge could provide more educational opportunities to schools so that children will learn of their importance and hopefully grow up with some sense of the need to save these spaces, not only for the wildlife, but for future generations to enjoy.

For us, it was unique because in France we don't have national wildlife refuges without some barriers. We were very surprised and happy to discover all this nature in Florida.

Generally the size and scope is larger and more varied than state or county conservation lands.

Geographically, it is a different habitat for both water and land creatures.

Gives the public the opportunity to see wildlife and nature up close.



Goal of protection over tourism convenience.

Great displays, great walking, and great scenery.

I am pleased the animals and birds in the refuge are allowed to maintain their natural living style. I am glad that they do not have to perform tricks for audiences.

I appreciate the refuges because I can go with my camera and appreciate the different wildlife, food, and birds. I have seen a lot migrate over the years here in Ohio that normally wouldn't be in my area if not for the wildlife refuges.

I enjoy fishing and just relaxing at the refuge!

I enjoy the wild areas rather than constantly being in civilization. To be able to identify creatures that are really wild is great.

I hadn't been to a refuge before. This specific one was very interesting in the way it managed water levels to improve habitat (and reduce mosquitoes!).

I like it because it is peaceful and relaxing. It is whole different environment.

I like knowing the land is primarily for the wildlife that inhabits it and that humans are secondary.

I like that they are government run. This makes it seem of higher quality. Maybe because of more funding?

I like the ability to be able to drive through the trails. I do this several times a week so my children and grandchildren's can see the alligators. This is an inexpensive form of entertainment that my family enjoys.

I like the size of the area. It is natural and uninterrupted.

I live in Ohio, so I was excited to see the shorebirds.

I love driving and being surprised by seeing wildlife and not expecting to.

I see different birds and animals than I would see in Michigan.

I was able to see a variety of wildlife in one trip.

Important attempts to conserve the natural environment.

In this case, the manatees come to this site frequently.

It being a drive allows those with limited mobility to enjoy the refuge. At the same time, it allows others to hike or bike the drive.

It feels like you are out with nature and it is great to be in the outdoors and very relaxing.

It gives people the opportunity to view wildlife and to hopefully have a greater appreciation of our resources. Keep things in their natural state, and hopefully stop over developing the land.

It gives the wildlife a better place to live and survive.

It has enough variety of natural activities to appeal to everyone in a group (i.e. photography, wildlife observation, fishing, trail walking).



It has good swimming, fishing, beautiful scenery, clean facilities, and knowledgeable and friendly staff.

It is a more controlled setting in which you can view things in their natural state.

It is a quiet place to observe wildlife and to see a number of species of animals and birds.

It is able to preserve the "unique" environment of the area in which it has been set up. Each refuge across the country has its own features, and it is important to preserve these features.

It is important to have large tracts of land preserved to see wildlife in its natural habitat.

It is left natural... people and nature can get along.

It offers information, tours, exhibits, and is environmentally conscious.

It's a place where animals are safe from hunting, pollution, etc. Also it's a great place to see animals in their natural habitat.

It's because of their primary mission. Conservation of important habitat is absolutely critical, but so is allowing people to see that conservation in action and how important the habitat is to the resident and migratory wildlife.

It's really a nice driving experience.

Its location, the wildlife and plants, and the methods used to keep it a refuge i.e. water control.

Just the location, habitat, employees, and volunteers who are familiar with the uniqueness.

Location, location, location - this NWR provides a reasonably managed environment without overdeveloping it into a theme park.

Location, location, location.

Low cost to participate, opportunities for birding; wildlife conservation.

Manatee observation, PLUS knowledgeable volunteer at the observation point.

Manatee observation.

Many times, NWRs provide unique opportunities for wildlife viewing on a regular basis.

More birds, natural habitat, less people!

More hands-on care and maintenance.

More opportunities to see wildlife and birds in their natural habitat.

Most people never get out of their cars and do not get to experience the habitat Merritt Island NWR brings within their reach. Fishing is as easy as pulling over and fishing, manatees are right there, etc.

Most refuges are preserved to show the public the natural state of the area -like this feature!



Most refuges I'm familiar with are near oceans.

Natural preservation.

Natural unspoiled environment. Volunteers who devote their time to educating people.

Nature, not man, is priority in a world increasingly devoted to people only.

Not as overly populated with humans most of time and easier to see wildlife with little interruptions.

Not commercialized.

Number and species of birds.

NWRs provide educational and other facilities, and have staff and volunteers that are professional and top notch. Roads and trails are well maintained. I feel safe.

Opportunities to observe high concentrations of birds and other wildlife. Knowledgeable staff who provide information regarding wildlife.

Opportunity to enjoy natural areas and wildlife.

Opportunity to observe birds and other wildlife in their own environment and to walk through unspoiled areas.

Opportunity to see animals.

Our refuges give us an opportunity to see how flora and fauna benefit from preservation.

Peace & quiet, a real feeling of "getting away from it all," and being able to observe wildlife in its natural environment.

Peaceful and easy way to connect with nature.

Places for animals to live and reproduce that are safe from harm by humans and encourage native wildlife to remain in the area undisturbed.

Plentiful manatees.

Preservation and rebuilding of natural habitats for the wildlife allow you to see animals the way they were intended and not behind a cage/fence.

Preserving habitat and experiencing 'old' Florida.

Preserving the park and the natural habitat for the animals. It was beautiful and I was thrilled to have found out about it. I cannot wait until I come back with my family.

Pristine environment and low volume of visitors. The area is accessible to those who appreciate it the most without a big draw for tourists who mostly miss the subtle beauty and value of such a place. Broad tourism would destroy what makes this place valuable.

Provided they're managed correctly. This refuge is over managed and declining as a result of it (in every area, habitat, plants, wildlife, and fish). Just enforce the laws and leave the plants and animals alone.

Provides areas for wildlife.



Public access to habitat that is often privately held and unavailable to the public.

Quiet, undisturbed, natural. God's beauty!

Rare opportunity to see wildlife in their natural habitat. Protecting valuable, unique environments from development for future generations to enjoy as our forefathers have.

Refuges are managed primarily for wildlife, including habitat preservation; other recreational properties are managed mainly for human use, such as picnics, hiking, etc.

Refuges place an emphasis on providing habitat for wildlife, not people. Hence, no campgrounds, hotels, cabins, etc. This is the beauty of a refuge.

Refuges provide great bird watching places.

Refuges provide the wilderness that is lacking in our world today. Fewer and fewer wild spaces are available for the birds and wildlife. Private lands are managed differently and often do not have educational displays for families with children and schools or homeschoolers. The educational aspect is so important, more so than just going for a walk with the family.

Refuges try to incorporate the visitors into nature. They make it convenient for visitors while still conserving the environment.

Reliability. You can basically count on having a rewarding experience when birding and photographing in a NWR. This is not always the case in other refuges.

Road access to ponds and the variety of wildlife in season.

Roads on impoundment dikes offer unique opportunity to see birds, wildlife, and plants and flowers up close.

Saw the manatees close up and personal. Very moving experience. Not the same as watching it on TV.

Scenic drives through the refuge, seeing wildlife i.e. birds, alligators, flowers, etc.

Some public lands are "managed" and don't offer education or facilities for visitors. Refuges offer both.

Spending time in the wild.

Tax funded opportunities to participate in activities on public lands.

The "drive through" feature of Black Point Nature Trail allows me to cover a large area in less time.

The ability to take a car full of family, friends, and elderly, and take in the vast expanse with all the birds and water sunsets. I've been here many times and everyone has been impressed. It's the real Florida.

The abundance of birds and wildlife to see, photograph, and learn about. We can take our time to watch and learn.

The animals feel safe. And that gives you the chance to see them and or photograph them in their natural environment. It gives the animals a safe place to raise their young.

The appeal of the observation of wildlife in their natural habitat.

The area is remote.



The beach and refuge.

The beach and salt marshes. Thanks :)

The birds, unfortunately it was off season when we made our visit.

The convenient up-close observation of flora and fauna.

The diversity of wildlife available for viewing.

The fish, birds, and wildlife come first! THANK YOU!

The focus is on unique wildlife, keeping facilities on the basic side.

The land is at a natural state where the wildlife have the chance to feed, rest, be admired, be safe, and be enjoyed by people who appreciate them. There should be more of them.

The location and the number of dams and access to them by the dikes.

The main focus of the refuge should not be to provide recreation for people, but to preserve a natural habitat for the animals.

The many birds you see in different times of the year and the different variations you see each season. One trip is not enough, you need to visit many times to really feel the peace, see the beautiful views and the different growth, and see the birds of that season.

The most birds and the least people in the area. Love its solitude and lack of crowds.

The natural beauty it has to offer, inclusive of wildlife and the educational experience in what nature has to offer and how important it is to protect our land from over-fishing and hunting to keep an equal balance between land and sea.

The natural environment, wetlands, and a place for nature.

The natural habitat was maintained.

The ones I have visited in Florida and Texas provide as good an opportunity as you're likely to find birds and wildlife in (mostly) their natural habitat. They give you access to areas and wetlands that would otherwise be visited only with great difficulty or not at all.

The opportunity to "easily" view and photograph wildlife in a natural setting for the whole family.

The opportunity to experience nature unlike in its purest form.

The opportunity to fish, boat, hike, hunt, see and photograph wildlife.

The opportunity to observe birds and other wildlife. The drivers are excellent. It is very convenient for elders.

The opportunity to see natural life.

The opportunity to see the manatees and wildlife of the wetlands.

The opportunity to truly be totally immersed in nature and the natural environment.



The opportunity to view wildlife in their natural environment.

The opportunity to visit refuges like Merritt Island to see and photograph birds is very special to us. Please keep refuges open for all to enjoy God's unique creations.

The preservation of the environment.

The protection of the environment and ability to use the refuge for recreation.

The protection provided to the habitats and wildlife.

The proximity to the Kennedy Space Center was an added attraction.

The sights, fishing, and swimming.

The size of the area lends itself to many species that co-exist. It educated us by showing how nature balances the "circle of life" with prey and predator. It also seems very safe to me compared to some places.

The size of the refuges and the quality of how they are managed for the wildlife.

The term "refuge" says it all.

The variety and number of birds, the proximity to the beach and space center, and being able to travel through self-guided.

The variety of migratory and indigenous birds is great and the ability to access them in multiple views while easily transporting cameras, telescopes and equipment is also great. In addition, there appears to be minimal invasiveness involved in the traffic flow.

The viewing of the manatees makes this trip worthwhile.

The volunteers who care, do their homework, and enthusiastically give to share nature with others. I was amazed at the dedication!

The wide variety of all the flora & fauna during the year. Also, the many different habitats.

The wide variety of area wildlife and their natural habitats make this refuge unique.

The wildlife and scenery available.

The wildlife, birds, and fishing opportunities are unmatched. I have attended several "talks" from refuge personnel and have always been impressed by their professionalism and enthusiasm.

The wildness and wildlife.

There are more realistic habitats and the people who work or volunteer at refuges always seem to truly want to be there to make a difference!

There are usually more species of birds and animals available to observe.

They are not as developed as other places; you can feel part of the environment.

They are remote and mostly left as natural as possible! They are not commercialized and never should be.



They are set aside specifically as refuges for wildlife and birds. Places for animal habitat are fast disappearing all over the world. Keep up the good work.

They are very natural settings.

They are very well maintained. Conservation and change of water levels offer a diverse opportunity to view birds and other wildlife.

They are well-organized with a clear sense of mission.

They give us a chance to observe animals in their natural habitat.

They promote wildlife and habitat restoration and conservation. As an avid outdoorsman and hunter, I find those things important.

They protect the local habitat, and allow people to get close to nature without harming their habitat.

They provide a safe haven for wildlife and the opportunity for people to observe wildlife.

They provide habitat for wildlife and opportunities to watch and enjoy the wildlife, plants, etc.

They're more caring to preservation of wildlife and habitats.

Things are left in their natural state and not created by people to make the plants and animals fit.

This refuge has incredible birds everywhere in many different habitats.

This refuge looks almost as nature left it.

Up close observation of bald eagle nests, numerous aquatic birds, and large alligators.

Very natural. Lots of manatees to view. Small viewing walkway.

We are able to see wildlife without disturbing the area.

We are from Wisconsin so it was a unique experience to see different types of wildlife and vegetation, birds and other waterfowl. We were fascinated with the alligators!

We especially like watching the unique wildlife in their natural habitat.

We got to see alligators in their natural habitat. Also, the refuge allows visitors to experience Florida's native plants.

We have gone the last couple of years. We love to see the birds and alligators. Love it at sunset. Beautiful land! Thank you!

We may tour and photograph at our own pace. No one pressuring us to move on their schedule. We can tour what we want and when, and we can drive with our vehicle through the refuge.

Well maintained, a lot of trails, large area, nice Visitors Center and wildlife observation area and facilities, and well patrolled.

Where else can you see 9 manatees? Or baby blue herons learning to walk and fly? Alligators resting in the water? Just so nice to see so many birds and other animals. Great! They need a safe place and we need a way to share an observation of them.



Wildlife comes first.

You can drive around the refuge - great for people who can't walk too far.

You can drive right up to birds. No houses. Few people. Vehicle access. Refuge size.

You can see wildlife in its natural state.

You can see wildlife up close.

You have a chance to see wild birds and animals in their natural habitat.

You have a variety of birds and wildlife that you can observe in their environment.

You see all kinds of wildlife.

Additional Comments (n = 48)

A great place to view Florida landscape, wildlife, and fishing.

Always enjoy the Refuge. Nice and relaxing.

An easy way for a foreign tourist to appreciate, learn about, and observe the wildlife of Florida in their natural surroundings. Also had an informative Visitor Center. A great day out, and a brilliant location to observe manatees.

Awesome refuge! We had a great time.

Because of our first visit 20 years ago to this refuge, we come yearly to spend time bird watching in all seasons, and we began a hobby of bird watching that has added much enjoyment to our senior years.

Black Point Wildlife Drive is wonderful and I hope it can be enjoyed by many for a long time.

Excellent Refuge!!

For people who appreciate 'natural' Florida, this and other refuges are that little escape from the stressful lives we lead. Refuges should all strive to stay as natural as possible and let nature "keep its course."

Great birding spot.

Great natural resource, but not utilized to its full potential. Thanks for the volunteers! Encourage bicycle access and fishing.

Great refuge. I'm concerned about the emphasis in the questionnaire about climate change. I don't believe the scientists have a clue and public (tax payer supported and funded) policies should not be guided by these theories.

I am disappointed in your questions on climate change. They are pointed in one direction. I do not believe that climate change is a man-made situation. Most knowledgeable climatologists see it as cyclic and perhaps due to the effects of the sun. There is absolutely no proof that CO2 has any bearing on climate change, but the economics is the real driving issue.



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I am older than most people visiting this refuge and must say this is one of the most interesting places I visit. Every year I visit 2-4 times or more. I drive and the other people are always nice about sharing the roads and stops we make to look at birds and ducks. It is always neat and clean; I believe the visitors here are very concerned about other people.

I appreciate that you are conducting this kind of survey!

I booked the day away kayak. It was a great experience for all, my 14 year old son liked it much more than expected! The beach is beautiful and not too crowded. I like the bike idea, and more hiking areas and information points would be good.

I do not have a good level of English, so some questions are too difficult for me. Sorry, I hope that my answer can help you.

I have been to this refuge several times and it has always been a worthwhile and pleasurable experience, but I do find it a little strange that fishing and hunting is allowed in wildlife refuges.

I have enjoyed Merritt Island and will visit again next year.

I live in the country and enjoy watching native wildlife.

I love Merritt Island National Wildlife Refuge! I spend a lot of time there, especially during the winter months. I have participated in numerous clean-ups at the refuge as well as at the beach. I am a frequent, pass-carrying visitor to the Canaveral National Seashore. Please preserve our refuge!

I love this refuge and try to get here as often as I can. It changes with the seasons, but there is always something of interest to be found.

I would gladly pay higher taxes to help all wildlife refuges. I donate to many wildlife funds.

I would like to see bank fishing in Haulover Canal closed for an extended time period due to garbage, litter, and illegal harvesting of fish. The area has been disrespected for some time, even with threats of closures. The litter is an ongoing battle, but mainly the fish population has severely decreased and everyone in the Titusville and Mims area discusses this regularly. If you are boat fishing, you are regularly checked so you are less apt to illegally harvest, and this works. If you watch on any nice day, the bank fishermen are harvesting anything and everything at will! This is probably due to lack of officers on the ground, and bank fishermen know this well. No one likes to be hassled, but in the long term, the ultimate goal is conservation through education. Shut down bank fishing and the problem goes away, or keep it open and put more stationary officers on the ground. Fish populations will rebound, but it will take some time. The most beautiful place on earth is turning into a toilet and a dinner table (or a dump and a refrigerator).

In the past few years, a beautiful sign was installed at the entrance to the Scrub Jay Trail. Since I am in the sign business, I know that it is a sand blasted sign, which is expensive. I would suggest that it should be repainted every couple of years to preserve the wood. If you have any questions about that you can contact me (email address). Thank you for the book about the refuge. I think you folks are doing a wonderful job. (Signed)

In the twenty years that I've been coming here, I've noticed a decline in the number of trout and redfish being caught. I think the harvest limit numbers on both species should be reduced. Ideally, I would like to see a no harvest restriction on redfish for at least a few years.

It's a great refuge. We love it! From a national point of view, I think we should have more drive through opportunities.

Keep up the good work looking after the refuge.

My grandparent used to live on Merritt Island before the government took it away for the cape and I hunted and fished there a long time ago. It was better then.

Overall, the park was clean and the Visitors Center was enjoyable. I was disappointed in the litter along the waterways, although I find litter even in remote fishing trips to Canada. It's not the parks' fault, as the responsibility rests with the visitors.



Plan to come back to visit and will bring my family and stay longer.

Thank you for Merritt Island!

Thanks for a wonderful day!! The man was so helpful!!

Thanks.

The habitat and bird numbers have steadily been declining at Merritt Island NWR. I have been involved with the refuge and sometimes help with the bird counts - the habitat is in bad shape and bird counts should reflect lower bird numbers. This 2010/2011 winter is the worst I have seen it. The impoundments were bare, with very few birds - waders or waterfowl. It was a dismal time to spend on the refuge. Something needs to be done to recognize that bird numbers and diversity come from fresh water impoundments and not salt/brackish water. The biologists should know this and adjust their strategies that have continually eroded at the bird numbers and habitat over the past 12 years.

The volunteer and ranger at the Visitor Center at Merritt Island were very helpful to us. The water level was quite low at the time of our visit, so we didn't see as many water birds as we usually do. They informed us of another location close by to see the birds (esp. ducks) at the Viera Wetlands. We were provided a map and directions on how to get there. Wish I had gotten their names - we visited on 1/16/11.

There should be more areas accessible by vehicles into the water inlets.

This was my first trip to Merritt Island. I loved it. If I return to the area again, I will return to Merritt Island. I would love to come for the big week when the well known photographers come, so I can learn with and from them.

This was our third visit to Black Point. We love going there and observing the birds and alligators. Unfortunately, this last visit was disappointing due to the drought conditions. In spite of that, we still enjoyed our visit.

Very friendly and informative staff. Very nice shoreline. I really enjoyed the manatee viewing area. The bird viewing area was wonderful. What a large number of very unique birds.

We are willing to pay a minimum fee (\$15.00/year) to use the boat ramp at the Merritt Island National Wildlife Refuge; however, I do not see what charging \$5.00 to launch a boat will accomplish when it would be necessary to pay federal employees of the FWS to collect the fee(s). Fee payment should be collected by placing the fee in an envelope, along with truck and trailer identification, and placed in a secured collection box, where FWS can check on who paid and who did not pay fee(s). Those of us over 65 should not have to pay a fee for use of the facilities.

We live in Florida for a good part of the year and Merritt Island is one of our favorite places to do our birding and photography. Thank you for maintaining this valuable resource for all of us.

We love National Wildlife Refuges! We realize that they are primarily for the benefit of wildlife, but we believe it is also very important to maintain accessibility to the public to increase awareness of wildlife, wildlife needs, and expansion of the National Wildlife System. Thank you.

We loved our visit to Merritt Island. We would return in the future. The staff was excellent!

We need more parking places and an additional boat ramp at Bair's Cove at Merritt Island. Also, better lights on the boat ramp area so we can see how to back up the boat trailer in the dark. Also, more rangers to catch poachers who violate fishing rules.

We specifically rent a condo in Titusville, Florida for 3 months in the winter because of Merritt Island National Wildlife Refuge. It is what brings us to the area. It's a treasure to us.

We stayed a week in this area. We often take day trips to their wildlife viewing areas.

We will be back often.



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We will return to explore Merrill Island more thoroughly and at different seasons. It is a wonderful place to experience birds. Thanks to all who make its preservation and operation possible - we like spending our tax dollars this way.

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About Market & Feasibility Advisors

Market & Feasibility Advisors (MFA) provides timely in-depth data, comprehensive analysis, and sustainable strategies for public, private, and non-profit clients. Our consultant team members have worked on more than 400 projects in more than 30 states and provinces and in more than a dozen countries in Asia, Europe, the Middle East and Mexico. We pride ourselves on working in many small communities as well as large urban areas, regional and statewide plans as well.

We often work with firms that provide professional services in Architecture; City and Regional Planning; Real Estate Development, Entertainment, Leisure and Recreation, Exhibit Design; Fund Raising; Landscape Architecture; Legal Services; Survey Research; Civil Engineering; Theatre Design; Museum Planning; Transportation; Education and Branding.

Whether working directly for clients or as a part of multi-disciplinary team, MFA executes market, feasibility, master plan economics, and impact studies resulting in strategic planning based on realistic environments and the unique characteristics of each specific site, project, target market, and competition.

- MFA's cultural and non-profit sector clientele includes work on museums, nature centers, performing arts facilities, zoos, historic structures and districts, aquariums.
- MFA's public-sector work is for municipalities, counties, states and parks and recreation agencies and others. For these groups, we have worked on many unique assets owned by the public organizations (ranging from museums to equestrian centers), downtown, corridor, neighborhood, and many types of economic development and urban redevelopment plans, as well as real estate and retail studies, transit-oriented developments (TOD), historic districts, parks and recreational plans and facilities, and convention and meeting facilities.
- MFA's private-sector work includes: mixed-use developments, housing, retail, hotel and resort, medical, and commercial entertainment, including waterparks, theme parks, cinemas, attractions, and.

Market and Feasibility Advisors has offices in Chicago and Austin. For more information, please visit our website www.mfallc.com and follow us on Twitter: <http://twitter.com/MFALLC>

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General Limiting Conditions

Every reasonable effort has been made to ensure that the data contained in this study reflect the most accurate and timely information possible and they are believed to be reliable. This study is based on estimates, assumptions and other information developed by Market & Feasibility Advisors LLC from its independent research effort, general knowledge of the industry, and consultations with the Client and the Client's representatives. No responsibility is assumed for inaccuracies in reporting by the Client, the Client's agent, and representatives or any other data source used in preparing or presenting this study. No warranty or representation is made by Market & Feasibility Advisors LLC that any of the project values or results contained in this study will actually be achieved.

Possession of this study does not carry with it the right of publication thereof or to use the name of "Market & Feasibility Advisors LLC" in any manner. No abstracting, excerpting, or summarization of this study may be made. This study is not to be used in conjunction with any public or private offering of securities or other similar purpose where it may be relied upon to any degree by any person other than the client. This study may not be used for purposes other than that for which it is prepared. Exceptions to these restrictions may be permitted after obtaining prior written consent from Market & Feasibility Advisors LLC. This study is qualified in its entirety by, and should be considered in light of, these limitations, conditions and considerations.



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Draft Final Report
Grant Application Document
Indian River Lagoon Conservation Campus & Aquarium

Submitted to:
Brevard County Tourism Development Council

Submitted by:
Market & Feasibility Advisors

Tuesday, July 31, 2018

MFA Project Number: 618



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Application Questions

1. Please provide your contact information below. Name

Keith Winsten
Brevard Zoo/East Coast Zoological Society
8225 North Wickham Road
Melbourne, FL 32940-7924
kwinsten@brevardzoo.org
321 4 9453

**2. Who is your project sponsor? Please enter their name and title in the appropriate box below.
Note: you only need one project sponsor so only one name should be entered.**

County Commissioner: Commissioner Barfield

3. To determine if your project qualifies for the Tourist Tax Collection funding, please clarify the category for your project.

Conservation Campus & Aquarium

4. Has a name been chosen for this facility yet?

Yes

5. What is the name of the new facility?

Indian River Lagoon Conservation Campus & Aquarium

6. Briefly, tell us about the proposed facility.

We are proposing to build and operate a mid-sized aquarium as the attendance driver of a 26-acre campus on the Banana River dedicated to the conservation of the Indian River Lagoon (IRL). The site is currently used by its owner, Port Canaveral, as a storage site for construction materials.

Over the life of the project, the shorelines will be restored, docks will be added for kayaks and small craft, and a network of boardwalks will be constructed giving tourists unparalleled access to our defining natural resource as well as set a tone of respect and conservation during their visit.

Space is being put aside within the Conservation Campus where the Zoo's marine conservation program to be housed. The Campus will be free and open to the public and will have displays with the latest research and conservation efforts being done to help the Lagoon. We will offer space to Central Florida universities to work on research projects and offer meeting spaces to other groups. We plan to put space aside on the campus for potential future conservation needs such as sea turtle, marine mammal and sea bird rehabilitation.

When the citizens of Brevard have questions and concerns about the IRL, this is the place they will come for answers. The Aquarium will offer guests an experience estimated to be around two-hours long. The experience is designed to tell the unique story of water in Brevard County. The indoor and



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outdoor space will each be roughly 60,000 square feet and include elements of appeal to both visitors and local residents.

Rather than an iconic building, the main structure will feature a sand berm giving the illusion of walking through a dune when you start your experience. Different "scenes" in the aquarium will use innovative exhibit techniques and fascinating creatures to bring guests out to the splash down zone of space vehicles off our coast and onto the decks of shrimpers and sports fisherman. From there, travel through the locks in the Port, across the flats as Lemon Sharks and Bull Sharks cruise nearby and be sure to feed friendly rays. Adjacent to Shark Flats will be hands-on spaces where guests can participate in IRL restoration activities. Finally, visitors to the aquarium will experience the St. John's River through an interactive water play area – rich with freshwater life like gators, turtles and otters.

A changing exhibit space will keep the experience fresh, and uniquely themed merchandise and food point-of-sales will add to both the guest experience and bottom line.

Ten years of detailed attendance and income projections shows the aquarium firmly running in the black. Even after cash is adjusted for a moderate capital debt load of \$30 million at 6% as well as ongoing capital investments. Even when these projections are stressed by a 25% reduction in attendance and other negative factors, the project shows a net cash flow of \$8,335,096 over 10 years of operation with only one year running in the red.

While we estimate that the Aquarium visitor experience will be around two-hours long, the overall Indian River Lagoon Conservation Campus will allow for a longer visit. The Campus will include easily accessible boardwalks, free exhibits on lagoon conservation, kayaking excursions among other features. Other future expansion will create a space for the entire package of Aquarium and Campus to become a 1/2-day attraction.

Based on our experience with Brevard Zoo, it will become a signature experience for return visitors - who regularly tell the Zoo they visit every year. This leads to repeat visitation to the county, longer length of stay and increased room nights.

7. What other facilities in Florida are most like this?

- a. Mote Marine Laboratory and Aquarium, Sarasota FL Facility
- b. Sea Life Aquarium, Orlando FL
- c. Florida Aquarium, Tampa FL

8. Who in the immediate area do you see as your biggest competition?

None

9. Is this a new or a renovated facility?

New

10. What is the address of the facility?

George King Boulevard Cape Canaveral FL

11. How many acres is the site for the facility?



26

12. How many square feet of interior space?

60,000

13. How many parking spaces will be needed?

750

14. Is this or will this facility be publicly owned and/or operated?

No, a Non-Profit Organization

15. Who will own the facility?

East Coast Zoological Society (ECZA) dba Brevard Zoo

16. Who will operate the facility?

ECZS dba Brevard Zoo

17. Will the facility be open to the public?

Yes

18. Will there be an entrance/admission fee?

Campus will be free, there will be a fee for the aquarium

19. Amount?

Our current projections for the aquarium use an opening price of \$24.95 for adults, \$23.95 for seniors and \$19.95 for children 3 to 11. Children under three are free and we have used a 5% increase in admission prices annually starting in year three.

20. What are the estimated costs of the TOTAL project?

These category amounts should reflect the total costs of the project including the costs appropriated with the requested Tourist Development Tax (TDT) funding.

Please complete all applicable amounts, if a category does not apply for this project please leave blank.

- Building/Structure Addition Costs: \$
- Exterior Renovation Costs: \$ Interior Renovation Costs: \$
- Land Acquisition Costs: \$
- New Building/Structure Costs: \$47,642,000
- Parking Lot Costs: \$1,500,000

21. Please list 'Other' costs in appropriated categories.

- Other 1: Design 15% \$7,146,375
- Other 2: FFE 6% \$2,858,550
- Other 3: Contingency 20% \$9,528,500



22. In total, how much funding is being requested from the Tourist Development Tax (TDT)?

- \$10,000,000.00

23. Is Tourist Development Tax (TDT) funding necessary for this facility/project to be financially viable?

Yes

24. List the other sources of funding for this facility/project.

- Source 1: \$10,000,000.00
- Source 2: \$20,000,000.00
- Source 3: \$30,000,000.00

25. List the percentage of funds by type that are currently secured and/or unsecured for this facility/project.

- Agreement: 1.4%
- Cash-In-Hand: 1.4%
- Unsecured: 97.2%

26. What is the projected annual visitation of this facility?

575,000

27. Based on the projected annual visitation, please anticipate the percentage of each age group of visitors to the facility.

- Under 3 – FREE
- 4-11 – 8.3%
- 12 – 18 – 24.2%
- Adults – 58.5%
- Seniors (65+) – 9%

28. Which month(s) of the year are anticipated to be the MOST popular?

February, March, April, June, July

29. Which month(s) of the year are anticipated to be MODERATELY popular?

January, May, November, December

30. Which month(s) of the year are anticipated to be the LEAST popular?

August, September, October



31. What day(s) of the week are anticipated to be the MOST popular?

Sunday and Saturday

32. What day(s) of the week are anticipated to be MODERATELY popular?

Monday, Tuesday, Wednesday, Thursday, Friday

33. What day(s) of the week are anticipated to be the LEAST popular?

None of the above

34. What time(s) of the day are anticipated to be the MOST popular?

10am - 2pm

35. What time(s) of the day are anticipated to be MODERATELY popular?

6am - 10am; 2pm - 6pm

36. What time(s) of the day are anticipated to be the LEAST popular?

None of the above

37. How long, on average, do you expect visitors to stay at the facility?

2 to 4 Hours

38. What percentage of your visitors will be from:

In County: 27% Out of County: 37% Out of State: 32% International: 4%

39. What are the projected: number of room nights and lodging revenue from this project?

Room Nights: 50,688

Lodging Revenue: \$7,045,632.00

40. What are the expected annual operating costs?

\$5,000,000.00

41. How many full-time employees?

57

42. Will alcohol be served on the premises?

Yes

43. Will your facility need security?

Yes



44. Will there be any live animals in or on the premises?

Yes

45. What type and approximately how many animals will be on the premises?

There will be an extensive collection of fish and marine invertebrates. Species of special interest include: Tarpon, Goliath Grouper, Mahi Mahi, Cobia, Red Fish, trout, snook, Bull Sharks, Lemon Sharks, Cownose Rays, American River Otters, American Alligators, Florida Soft Shell Turtles, Red-bellied Turtles, Chicken Turtles. It is impossible for us to predict the number of individuals at this time.

46. When do you anticipate being able to provide final and complete project package, to include, if applicable, confirmation of matching funds; pro forma financial statements; and final master plan?

18 months

47. When is the expected date of the facility to be operational?

12/12/2022

48. Do you have any other businesses in Brevard County?

Yes

49. Please list the names and locations of your businesses.

Brevard Zoo



Economic & Fiscal Impacts

Brevard County, Economic & Fiscal Impacts

MFA was tasked to assess the economic and fiscal impact of three proposed developments in Brevard County.

The impact area is defined as Brevard County, Florida.

The model assumes that **all** spending is local given the economic sector in which the spending occurs is present in the defined impact area thus eliminating competition resulting in the maximum possible impact.

If an economic sector is not present in the impact area, the spending for this sector "leaks" out of the impact area and has no impact there.

Impact Model Inputs

The impact model inputs are based on data gathered from the four proposed developments and the spending characteristics of domestic visitors to Florida. The following two table summarize gathered input data.

Indian River Lagoon Conservation Campus

Construction (One-Time Impact)

Table 1.: Preliminary Construction Impacts			
Impact Type	Employment	Income	Economic Activity
Direct Effect	279	\$13,432,083	\$36,755,079
Indirect Effect	53	\$2,703,429	\$7,064,741
Induced Effect	90	\$3,354,393	\$10,635,857
Total Effect	422	\$19,489,904	\$54,455,677

Source: IMPLAN, MFA, BLS, Brevard Zoo

Construction Tax Revenues (One-Time Impact)

Table 2.: Preliminary Construction Impacts Estimated Tax Revenue	
Total State and Local Tax	\$1,495,265
Total Federal Tax	\$4,436,011

Source: IMPLAN, MFA, BLS, Brevard Zoo



Operations (Annual Recurring Impact)

Table 3.: Preliminary Operations Impacts			
Impact Type	Employment	Income	Economic Activity
Direct Effect	59	\$1,830,194	\$4,177,000
Indirect Effect	10	\$371,085	\$1,057,452
Induced Effect	12	\$459,695	\$1,457,895
Total Effect	81	\$2,660,975	\$6,692,347

Source: IMPLAN, MFA, BLS, Brevard Zoo

Operations Tax Revenues (Annual Recurring Impact)

Table 4.: Preliminary Operations Impacts Estimated Tax Revenue	
Total State and Local Tax	\$291,126
Total Federal Tax	\$601,652

Source: IMPLAN, MFA, BLS, Brevard Zoo

Visitation/Attendance (Annual Recurring Impact)

Table 5.: Preliminary Visitation/Attendance Impacts			
Impact Type	Employment	Income	Economic Activity
Direct Effect	624	\$14,156,610	\$41,284,607
Indirect Effect	85	\$3,107,232	\$9,931,725
Induced Effect	97	\$3,591,807	\$11,389,084
Total Effect	806	\$20,855,649	\$62,605,416

Source: IMPLAN, MFA, BLS, Brevard Zoo

Visitation/Attendance Tax Revenues (Annual Recurring Impact)

Table 6.: Preliminary Visitation/Attendance Impacts Estimated Tax Revenue	
Total State and Local Tax	\$4,497,628
Total Federal Tax	\$5,219,946

Source: IMPLAN, MFA, BLS, Brevard Zoo

Please Note:

- The assessment assumes that all goods and services will be purchased in the impact area given that the demanded economic sector/industry is present. Thus, the model does not account for competition in the marketplace. For example, it assumes that a service will be acquired within the impact area even though it might be less expensive to purchase it outside of it. This means that the assessment reflects the maximum impact based on the current local economy.
- Ongoing Impacts reflect a snapshot based on the data provided. Those impacts are subject to change in the future based on visitor/attendee numbers, vacation/recreation budgets, consumer behavior, changes in operational spending and inflation as well as changes in tax rates and legislation.



Economic and Fiscal Impact Assessments

An impact analysis begins by identifying the economic activity, such as capital improvement projects, operational expenditures, expenditures on programs, or increased sales from a new initiative. Such activity is then assigned to the appropriate industry/economic sector. In this case these are the four projects the applicants are developing

The underlying economic rationale is that new expenditures in a region drive the demand for goods and services and lead to economic growth. The logic of the model is that any additional demand in any economic sector or institution triggers economic responses from other sectors and institutions through the linkages in an input-output matrix. This is often called the ripple effect, since it is similar to the cascade of waves that form when a stone is thrown into a lake.

The economic and fiscal impact of any project and its surrounding community is measured by deviation in economic activity (output), and the associated changes in jobs (employment), income (wages), and related tax revenues.

As a dollar flows through an economy, it touches various industries, some local and some non-local. The portion of a dollar spent locally turns over again. At each iteration, a portion of the economic activity spurs additional economic activity in the area, while some of the economic activity "leaks" to another area. The multipliers capture this iterative process until the whole dollar is "leaked".

While the dollar "ripples" through the local economy, it has different effects in different economic sectors that are determined by a multiplier. A large impact area (such as a state) or an economically diverse area (such as an urban center) may have high multipliers because a greater portion of activity required to support the change in final demand would come from within the impact area's boundaries. For a small impact area, a rural impact area a less diverse economy such as a single county or zip code, multipliers could be lower.

The impact model includes information for 536 different industries/economic sectors, generally at the three- or four-digit Standard Industrial Classification (SIC) level – called the NAICS codes. The multipliers are then selected based on the impact area's geography and are applied to each industry sector present in the defined impact area to calculate impacts.

Regional input-output (I-O) multipliers systematically analyze economic impacts and account for inter-industry relationships within and between regions. These multipliers are unique to each industry sector and are geography based on the economic make-up of the locality. Thus, a construction project will have a greater local impact on an area that has a concentration of construction material suppliers, whereas a change to a banking policy will have a greater impact on an area with a concentration of financial institutions.

One-Time and Ongoing Impacts

There are two principal types of impacts: one-time impacts, such as those associated with a construction project, which end when the construction is completed, and ongoing impacts, which continue annually, such as those from the operation of a long-standing program, retailer, or other facility.



For example, the addition of new attractions, amenities, programs or facilities to Brevard County would have:

- a one-time effect during the construction phase, and
- on-going annual effects due to additional visitor spending, either onsite (concessions, souvenirs) or in adjacent restaurants, retail stores and/or hotels, as well as changes (increases) in the operational expenditures by the attractions to maintain and operate those new amenities or facilities

There are three types of impacts

Direct Impact

A direct impact is the change in sales, income, and jobs in those businesses or agencies that directly receive revenues from an operator/owner of an attraction. For example, the economic activity of the construction company building a new sports facility or parking deck would be a direct impact.

Indirect Impact

An indirect impact is the change in sales, income, and jobs in those businesses or agencies that supply the businesses or agencies receiving direct impacts. For example, if a steel fabrication plant in the impact area produces the steel that is sold to the construction company that builds sports facility or parking deck, the economic activity at the steel fabrication plant is an indirect impact.

Induced Impact

Induced impact measures ripple effects of wages in the local economy. As employees are paid by the businesses and agencies directly or indirectly impacted, there is an increase in household income, which is then spent, at least in part, in the impact area, which represents the induced impact.

The result of all of the three types of impacts above is the total economic impact -- the sum of direct, indirect, and induced impacts and are measured in changes to the economic activity (output), and the associated changes in jobs (employment), income (wages), and related federal, state and local tax revenues.

The model also allows to account for competition in the market place. If it is set to 100% local purchase, as it is in this case, it assumes that all expenditures are made within the impact area, given all economic sectors affected are present, thus eliminating competition and resulting in the highest possible impact. For example, instead of purchasing concrete from a business in outside of Brevard County for a lower price, the concrete will be purchased from a business within the impact area despite a higher price.

This is an economic model; thus, it does not measure social impacts of the new attractions and facilities such as the increase in quality of life through and becoming a more attractive county to live in. It also does not account for follow up investments that are likely to happen triggered by the increased visitation to the County.



Supporting Documentation

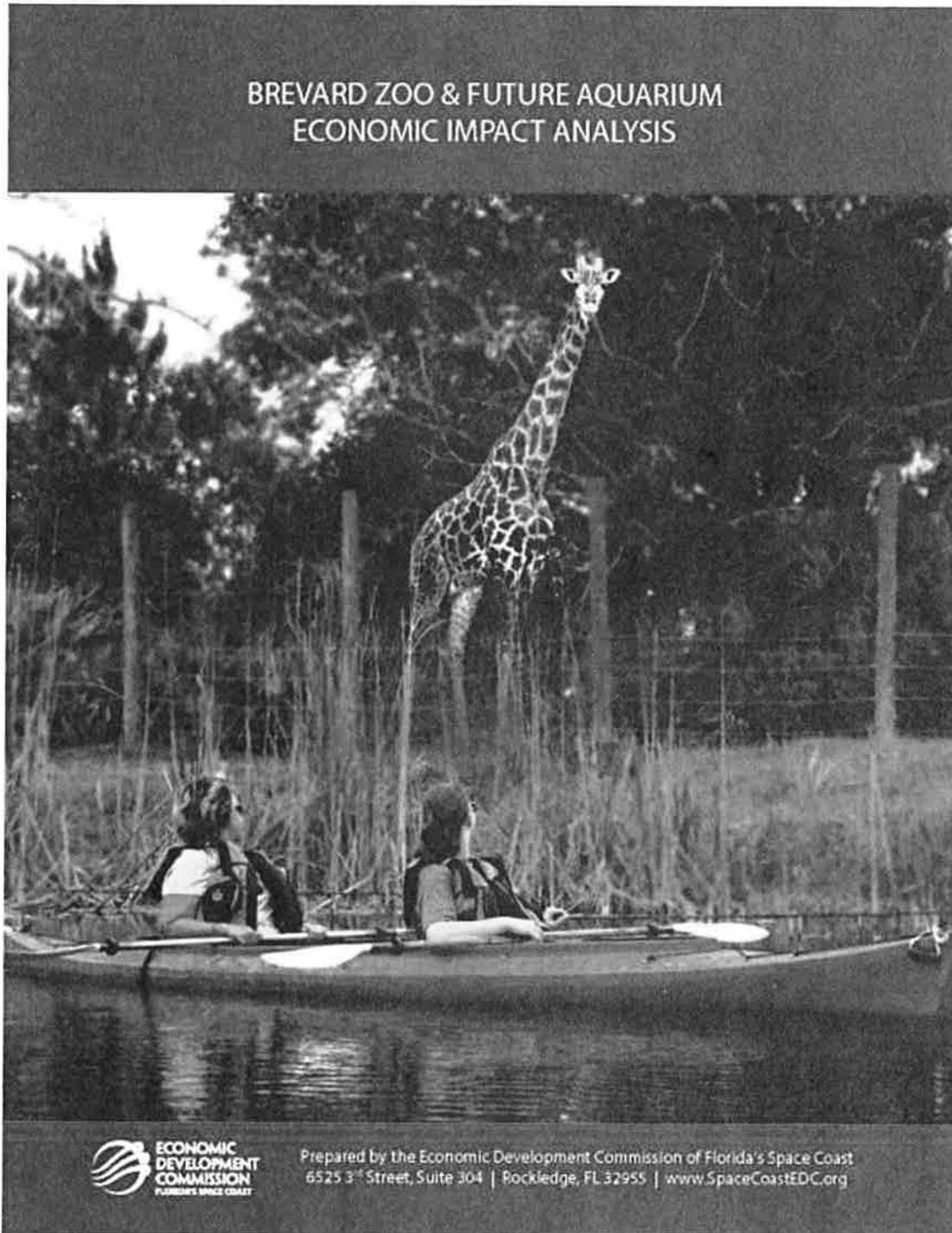




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EXECUTIVE SUMMARY

The Brevard Zoo and the future Brevard Aquarium, as major sources of economic activity already do and will have a substantial impact on the local economy. This impact is a result of operating expenditures in the community, through the compensation paid to employees and through visitor spending in local businesses. These entities are and will be at the core of a series of economic transactions triggering significant activity in the Brevard economy.

Among the key findings pertaining to the Brevard Zoo:

- In 2015, the Brevard Zoo had an estimated total economic impact of **\$59.5 million in area sales**, generating a **local income of \$21.0 million** and supporting **805 jobs**.
- Of the total annual estimated impact, Brevard Zoo had an estimated economic impact resulting from operating expenses of \$19.3 million in area sales, generating a local income of \$8.2 million and supporting 310 jobs.
- And \$40.2 million of the total annual estimated impact was attributable to spending by out-of-area visitors on lodging, dining, souvenirs and other purchases in connection with their visit to the Zoo, generating \$12.9 million in income and supporting 495 jobs.

Among the key findings pertaining to the future Brevard Aquarium:

- Annually, the Brevard Aquarium will have an estimated total economic impact of **\$85.5 million in area sales**, generating a **local income of \$26.0 million** and supporting **937 jobs**.
- Of the total annual impact, Brevard Aquarium will have an estimated economic impact resulting from operating expenses of \$19.4 million in area sales, generating a local income of \$4.8 million and supporting 123 jobs.
- And \$66.1 million of the total annual estimated impact will be attributable to spending by out-of-area visitors on lodging, dining, souvenirs and other purchases in connection with their visit to the Aquarium, generating \$21.2 million in income and supporting 814 jobs.
- Capital expenditures associated with the Aquarium's construction will have an estimated one-time, non-recurring economic impact of \$62.6 million in area sales, generating a local income of \$19.3 million and supporting 469 jobs.



METHODOLOGY

In assessing the overall impact of Brevard Zoo and future Brevard Aquarium, only economic activities that would not have occurred in the region had it not been for the existence of the Zoo or Aquarium were considered. It is assumed that the Zoo and Aquarium are/would be solely responsible for the following economic stimuli:

- I. Spending of operating expenses
- II. Spending of wages paid to the entities' employees
- III. Construction expenditures associated with the Aquarium
- IV. Spending by out-of-area visitors on lodging, dining, souvenirs and other purchases in connection with their visit

The analysis within delineates the direct, indirect and induced effects of each of these expenditures on the Brevard economy. In each case, the three effects sum to provide the total economic impact for that expenditure.

The **direct impact** refers to the initial event applied to a specific industry; in this instance, the operating expenditures associated with the Zoo/Aquarium activity.

The **indirect impact** refers to the effect upon the local supply chain resulting from the initial event.

The **induced impact** refers to the effect of the spending of labor income resulting from the initial jobs and indirect jobs.

The increase in output of all of the affected companies invariably leads to an increase in earnings for workers and owners. It is assumed this translates into greater household spending in the community.

Economic impact may be expressed in terms of output (sales generated), labor income (wages paid / proprietor income received), or employment (jobs supported). In most economic impact studies, it is the effect on output that is widely reported as the overall economic impact. Insofar as the change in output best represents the new economic activity generated for the region, this analysis does not deviate from that wisdom. It is stressed, however, that all three impact categories are related; readers should guard against summing together different measures of the same economic change.

Estimates of the impacts in this analysis were calculated using the Brevard County model of the IMPLAN modeling system, developed by the Minnesota IMPLAN Group. Using actual historical data to replicate trade flows within the Brevard County economy, the model allows analysts to estimate changes in output, income and employment in all industry sectors resulting from a change in spending in one sector. In this application, the model's underlying data was modified slightly to reflect more current numbers made available to us by Brevard Zoo.

Well regarded by academic and professional researchers, the EDC feels IMPLAN provides reasonable and conservative estimates of direct, indirect and induced impacts.



INTRODUCTION

The Brevard Zoo, in conducting its mission through innovative educational programs and extensive conservation efforts, is a major source of economic activity. The Brevard Zoo supports a large number of jobs, generating labor income and consumer spending to the benefit of the local, regional and state economies. Additionally, a similar significant economic impact is expected from the future Brevard Aquarium construction and operation.

The Economic Development Commission of Florida's Space Coast was asked to estimate the economic benefits accruing to Brevard County from the current Zoo and the future Aquarium activities. Our findings, based on the Zoo's operations in calendar year 2015 and the Aquarium's projected operations, are presented herein.

Readers should note the analysis captures only those benefits that can be easily quantified. Brevard Zoo/Aquarium's impact on the local community are and will be far-reaching, including many educational and cultural benefits that are impossible to measure in dollar terms, thus not mentioned in this report.

The Zoo/Aquarium's probable fiscal benefits are not referenced in this analysis. Although related, fiscal impacts are not the same as economic impacts. This analysis is purely economic.

This report aims to provide objective and conservative information on the Zoo and Aquarium performance and impact on the community. It is achieved by analyzing the impact of the operating expenses, and tourism expenses associated with the Brevard Zoo and the future Brevard Aquarium, as well as the impact of the construction of the Aquarium.



PART I: BREVARD ZOO ECONOMIC IMPACT

I. Annual Impact of Operating Expenses and Wages

Brevard Zoo is a large consumer of goods and services like any other business. While conducting its primary mission of "Wildlife Conservation through Education & Participation", the Zoo spending includes expenditures for utilities, repair and maintenance, animal care and feeding, security, customer services, and administration.

In 2015, direct expenditures associated with the Zoo's ongoing operations, including payroll for 234 employees, totaled \$10,486,297.

These expenditures supported a broad range of businesses locally as these dollars were re-spent for consumer goods and services, and supplies. These expenditures by the Brevard Zoo in 2015 supported additional payroll and jobs and generated additional spending across all sectors of the economy.

The multiplier effect for this spending by the Brevard Zoo is 1.84; that is, for each dollar (\$1) of annual spending by the Brevard Zoo, an additional \$0.84 was generated within the local economy for a total of \$19,264,544 in economic activity (output).

This spending supported 310 jobs directly and indirectly as these moneys were spent and re-spent and generated a total of \$8,170,933 in labor income, including the zoo jobs and income.

Table 1: Annual Brevard Zoo Operations Impact:

	Direct*	Indirect**	Induced***	Total
Output (Sales)	\$10,475,937.00	\$4,406,023.30	\$4,382,584.40	\$19,264,544.70
Income Generated	\$5,592,028.00	\$1,214,241.30	\$1,364,664.60	\$8,170,933.80
Jobs Supported	234	39	37	310

*Zoo operations and output, **Numbers generated by Zoo supply chain needs, ***Numbers generated by the spending of all wages associated with direct and indirect activity - Source: IMPLAN, MFG, Inc., Brevard County Dataset

Let us note that purchases made by the Zoo outside of the local area do not contribute money to the region, but rather 'leak' out of the local economy. This concept of leakage runs throughout the analysis. Just as the Zoo does not purchase all its goods and services from the Brevard area, neither do its suppliers source all of their inputs locally, nor households spend all of their income within county lines.

The same concept applies to wages spending, while a portion of Zoo employees' income undoubtedly flows out of the area - in the form of mortgage payments to out-of-area banks, for example - a significant percentage is retained locally. Provisions are made for this throughout the analysis model.



II. Annual Impact of Visitor Spending

Visitors attracted to the Brevard Zoo are a significant source of economic activity that occurs beyond the Zoo in the form of expenditures for retail products, food and beverage services, recreational activities, overnight lodgings, and transportation services.

However, not all visitors are relevant to this analysis; in assessing the economic benefits the Brevard Zoo brings to the area, only the inflow of 'new money' is considered. Thus, the spending of local visitors is excluded in the calculations, assuming their dollars would otherwise still have been spent locally.

Spending by out-of-area visitors on-site is also excluded due to the assumption that these revenues in part drive the Zoo's operating expenses and payroll captured elsewhere in this analysis.

While the Zoo is typically not considered sufficient cause for a trip to Brevard County on its own, research indicates the primary characteristic of a Zoo visitor is that he or she stays a day longer in Brevard County. Using daily average tourist expenditure data provided by the State's office of tourism (Visit Florida), i.e. what a visitor to Florida is typically expected to spend in one day; in this case, the spending off-site in connection with his or her visit to the Zoo.

The Zoo attracted 415,000 visitors in 2015, of which 166,000 were out-of-area visitors (40%). The typical out-of-area visitor spends an average of \$159.40 off-site in connection with their trip to the Zoo, delineated as follows:

Table 2: Typical Daily Florida Visitor Spending by Category

Daily Spending	Per Person	For 166,000 visitors
Lodging	\$51.70	\$8,582,200
Transportation	\$34.70	\$5,760,200
Food	\$35.50	\$5,893,000
Souvenirs	\$18.30	\$3,037,800
Attractions	\$19.20	\$3,187,200
Total	\$159.40	\$26,460,400

It is estimated that in 2015, this injection of \$26,460,400 of out-of-area visitor spending created \$40,211,898 in total area economic activity (output), supported 495 jobs and generated \$12,868,867 in labor income.

Table 3: Annual Brevard Zoo Out-of-Area Visitor Spending Impact:

	Direct*	Indirect**	Induced***	Total
Output (Sales)	\$26,460,400.42	\$6,850,082.23	\$6,901,416.21	\$40,211,898.86
Income Generated	\$8,617,961.19	\$2,101,829.56	\$2,149,076.70	\$12,868,867.45
Jobs Supported	376	61	58	495

*Tourist spending impact; **Numbers generated by tourism demand supply chain needs; ***Numbers generated by the spending of all wages associated with direct and indirect activity - Source: IMPLAN, MIG, Inc., Brevard County Dataset



III. Combined Brevard Zoo and Associated Tourism Impact

The overall combined estimated annual impact of the Brevard Zoo operating expenditures and related tourism expenditures represent \$59,476,443 in economic activity, supporting 805 jobs directly and indirectly as these moneys were spent and re-spent and generated a total of \$21,039,801 in labor income, including direct jobs and income.

Table 4: Annual Brevard Zoo Operations and Out-of-Area Visitor Spending Impact:

	Direct*	Indirect**	Induced***	Total
Output (Sales)	\$36,936,337.42	\$11,256,105.54	\$11,284,000.57	\$59,476,443.53
Income Generated	\$14,209,989.19	\$3,316,070.81	\$3,513,741.30	\$21,039,801.30
Jobs Supported	610	100	95	805

*Operations and Tourist spending impact; **Numbers generated by operation and tourism demand supply chain needs; ***Numbers generated by the spending of all wages associated with direct and indirect activity - Source: IMPLAN, AMG, Inc., Brevard County Dataset



PART II: FUTURE BREVARD AQUARIUM ECONOMIC IMPACT

I. Annual Impact of Operating Expenses and Wages

Brevard Aquarium is anticipated to be a large consumer of goods and services like any other business. While conducting its primary mission the Aquarium spending will include expenditures for utilities, repair and maintenance, animal care and feeding, security, customer services, and administration.

In the first five years of operation, average annual direct expenditures associated with the Aquarium's ongoing operations including payroll for 57 employees, is projected to total \$6,367,478.

These expenditures will support a broad range of businesses locally as these dollars are re-spent for consumer goods and services, and supplies. These expenditures by the Brevard Aquarium will support additional payroll and jobs and generate additional spending across all sectors of the economy.

The multiplier effect for this spending by the Brevard Aquarium will be 1.64; that is, for each dollar (\$1) of annual spending by the Brevard Aquarium, an additional \$0.64 will be generated within the local economy for a total of \$19,421,423 in economic activity (output).

This spending will support 123 jobs directly and indirectly as these moneys will be spent and re-spent and generate a total of \$4,820,003 in labor income, including the aquarium jobs and income.

Table 5: Annual Brevard Aquarium Operations Impact:

	Direct*	Indirect**	Induced***	Total
Output (Sales)	\$11,851,568	\$4,984,760	\$2,585,095	\$19,421,423
Income Generated	\$2,641,297	\$1,373,733	\$804,972	\$4,820,003
Jobs Supported	57	44	22	123

*Aquarium operations and output; **Numbers generated by Aquarium supply chain needs; ***Numbers generated by the spending of all wages associated with direct and indirect activity - Source: IMPLAN, ADG, Inc., Brevard County Dataset

Let us note that purchases which will be made by the Aquarium outside of the local area will not contribute money to the region, but will rather 'leak' out of the local economy. This concept of leakage runs throughout the analysis. Just as the Aquarium will not purchase all its goods and services from the Brevard area, neither will its suppliers source all of their inputs locally, nor households will spend all of their income within county lines.

The same concept applies to wages spending, while a portion of Aquarium employees' income will undoubtedly flow out of the area - in the form of mortgage payments to out-of-area banks, for example - a significant percentage will be retained locally. Provisions are made for this throughout the analysis model.



II. Annual Impact of Visitor Spending

Visitors attracted to the Brevard Aquarium will be a significant source of economic activity that will occur beyond the Aquarium in the form of expenditures for retail products, food and beverage services, recreational activities, overnight lodgings, and transportation services.

However, not all visitors are relevant to this analysis; in assessing the economic benefits Brevard Aquarium will bring to the area, only the inflow of 'new money' is considered. Thus, the spending of local visitors is excluded in the calculations, assuming their dollars would otherwise still be spent locally.

Spending by out-of-area visitors on-site is also excluded due to the assumption that these revenues in part drive the Aquarium's operating expenses and payroll, captured elsewhere in this analysis.

While the Aquarium might not typically be considered sufficient cause for a trip to Brevard County on its own, research indicates the primary characteristic of an Aquarium/Zoo visitor is that he or she stays a day longer in the area. Using daily average tourist expenditure data provided by the State's office of tourism (Visit Florida), i.e. what a visitor to Florida is typically expected to spend in one day; in this case, the spending off-site in connection with his or her visit to the Aquarium.

The Aquarium is projected to attract an annual average of 471,693 visitors over the first five years of operation, of which 272,967 would be out-of-area visitors (60%). The typical out-of-area visitor spends an average of \$159.40 off-site in connection with their trip, delineated as follows:

Table 6: Typical Daily Florida Visitor Spending by Category

Daily Spending	Per Person	For 272,967 visitors
Lodging	\$51.70	\$14,112,371
Transportation	\$34.70	\$9,471,940
Food	\$35.50	\$9,690,313
Souvenirs	\$18.30	\$4,995,288
Attractions	\$19.20	\$5,240,958
Total	\$159.40	\$43,510,870

It is estimated that this annual injection of \$43,510,870 of out-of-area visitor spending will create \$66,123,512 in total area economic activity (output), support 814 jobs and generate \$21,161,266 in labor income.

Table 7: Annual Brevard Aquarium Out-of-Area Visitor Spending Impact:

	Direct*	Indirect**	Induced***	Total
Output (Sales)	\$43,510,867.7	\$11,264,116.0	\$11,348,528.4	\$66,123,512.1
Income Generated	\$14,171,175.1	\$3,456,199.7	\$3,533,891.8	\$21,161,266.5
Jobs Supported	618	100	96	814

*Tourist spending impact; **Numbers generated by tourism demand supply chain needs; ***Numbers generated by the spending of all wages associated with direct and indirect activity - Source: IMPLAN, MIG, Inc., Brevard County Dataset



III. Combined Brevard Aquarium and Associated Tourism Impact

The overall combined estimated annual impact of the future Brevard Aquarium operating expenditures and related tourism expenditures will represent \$85,544,935 in economic activity, supporting 937 jobs directly and indirectly as these moneys will be spent and re-spent and will generate a total of \$25,981,269 in labor income, including direct jobs and income.

Table 8: Annual Brevard Aquarium Operations and Out-of-Area Visitor Spending Impact:

	Direct*	Indirect**	Induced***	Total
Output (Sales)	\$55,362,435.70	\$16,248,876.04	\$13,933,623.43	\$85,544,935.17
Income Generated	\$16,812,472.47	\$4,829,933.06	\$4,338,863.99	\$25,981,269.52
Jobs Supported	675	144	118	937

*Operations and Tourist spending impact; **Numbers generated by operation and tourism demand supply chain needs; ***Numbers generated by the spending of all wages associated with direct and indirect activity - Source: IMPLAN, ANS, Inc., Brevard County Dataset

IV. One Time Impact of Construction

The projected \$45,000,000 to be invested in the construction of the Brevard Aquarium will significantly affect the local economy, in the sense that local contractors will be hired, and purchases of large quantities of material from local businesses will be made, the indirect and induced effects of this construction spending will be considerable.

It is estimated that the Aquarium's construction activity will have a one-time, non-recurring impact, generating \$62,640,365 in total area economic activity (output), which will in turn support 469 jobs paying \$19,274,668 in labor income.

Table 9: Brevard Aquarium Construction Capital Investment Impact:

	Direct*	Indirect**	Induced***	Total
Output (Sales)	\$45,000,000	\$7,303,681	\$10,336,685	\$62,640,365
Income Generated	\$13,436,214	\$2,619,637	\$3,218,817	\$19,274,668
Jobs Supported	332	49	88	469

*Aquarium construction spending and output; **Numbers generated by Aquarium construction supply chain needs; ***Numbers generated by the spending of all wages associated with direct and indirect activity - Source: IMPLAN, ANS, Inc., Brevard County Dataset



CONCLUSION

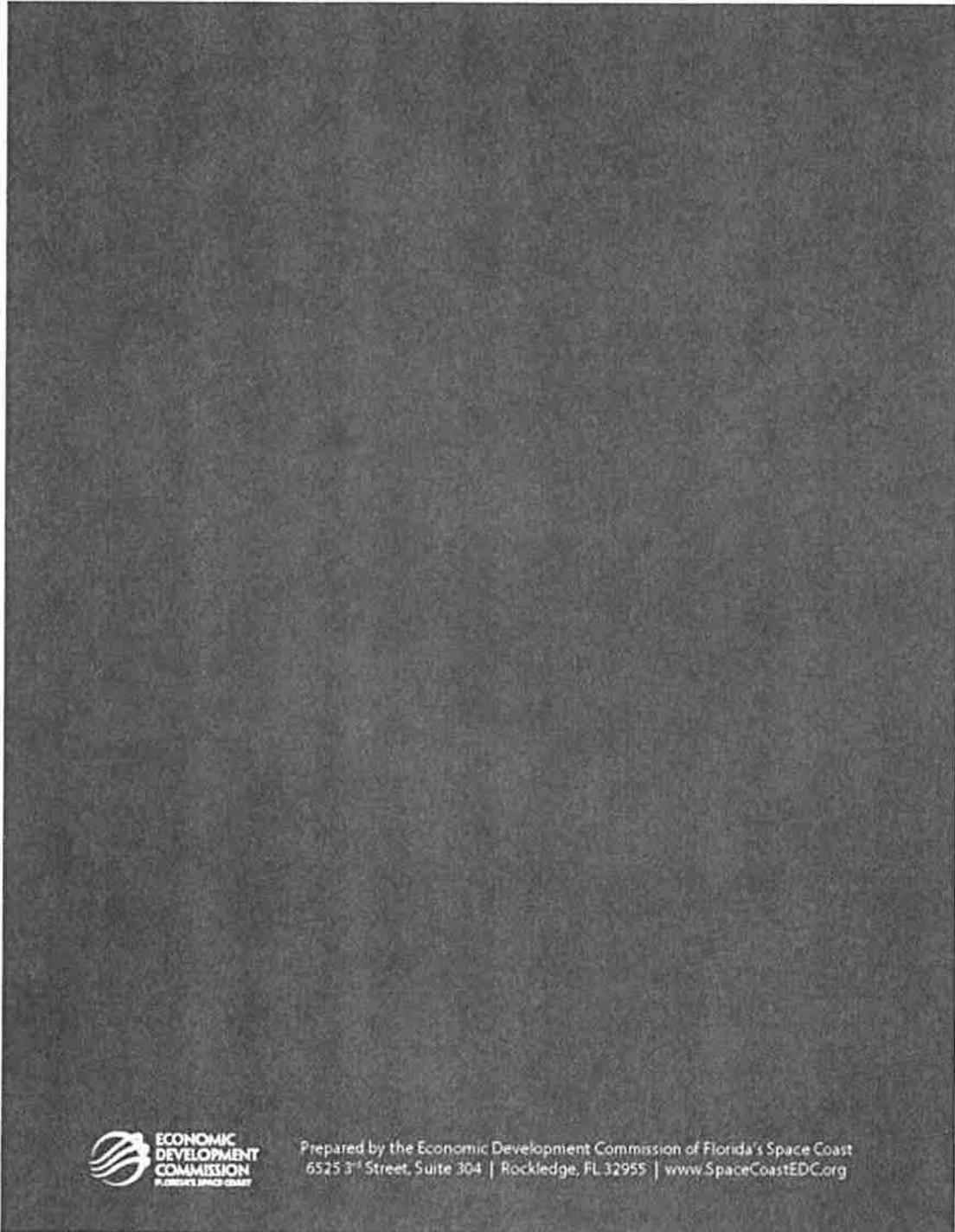
The Brevard Zoo's impact on the local economy is multi-faceted.

As consumers of local goods and services, the Zoo and Aquarium do and will stimulate sales of area businesses; as employers of local residents, they do and will generate income staying in the community; and as notable attractions, they do and will play important roles in the experience and planning of visitors who spend money in local businesses.

The result of the total Brevard Zoo's impact in 2015, was an estimated economic stimulus for Brevard County of \$59.5 million in annual sales, 805 jobs and \$21.0 million in income.

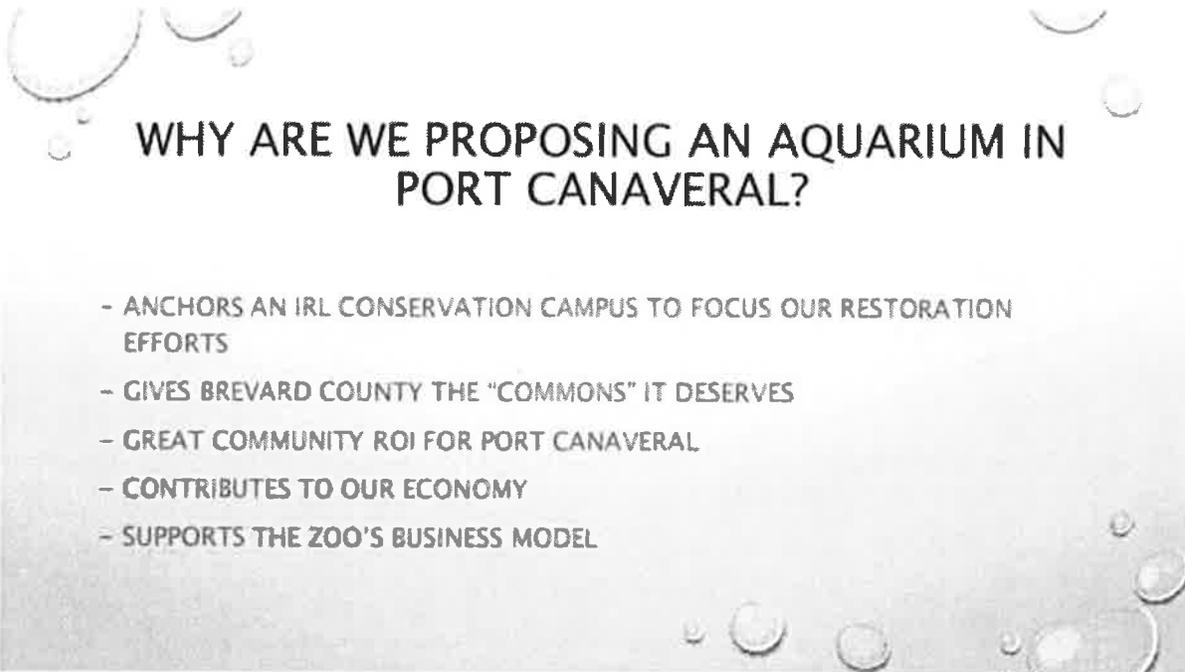
The expected result of the total Brevard Aquarium's estimated annual impact is an economic stimulus for Brevard County of \$85.5 million in annual sales, 937 jobs and \$26.0 million in income.

The true value of such amenities extends far beyond that which can be recorded in monetary terms. However, the magnitude of these entities overall impact on Brevard County can be gauged by quantifying the effect of expenditure flows they do and will stimulate.



Prepared by the Economic Development Commission of Florida's Space Coast
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WHY ARE WE PROPOSING AN AQUARIUM IN PORT CANAVERAL?

- ANCHORS AN IRL CONSERVATION CAMPUS TO FOCUS OUR RESTORATION EFFORTS
- GIVES BREVARD COUNTY THE "COMMONS" IT DESERVES
- GREAT COMMUNITY ROI FOR PORT CANAVERAL
- CONTRIBUTES TO OUR ECONOMY
- SUPPORTS THE ZOO'S BUSINESS MODEL



HOW WILL THIS HELP THE LAGOON

- OFFER UN-PARALLELED ACCESS TO THE LAGOON
- BECOMES THE PUBLIC SPACE FOR IRL CONSERVATION: CITIZENS CAN
 - GET THEIR QUESTIONS ANSWERED
 - LEARN ABOUT THE LATEST IRL RESTORATION EFFORTS AND RESEARCH
 - GET INVOLVED, VOLUNTEER
 - HOLD PUBLIC MEETINGS.
- INTRODUCES TOURISTS TO ENVIRONMENTAL NORMS AS THEY START THEIR VACATIONS
- CENTRAL HOME TO MULTIPLE IRL ORGANIZATIONS: UNIVERSITIES, TOURISM, WILDLIFE REHAB



BREVARD ZOO'S HISTORY OF SUCCESS

- ONE OF 11 INDEPENDENT AZA-ACCREDITED ZOOS IN THE COUNTRY
- 24 YEARS OF SUCCESS AS A 501(C)3 NOT-FOR-PROFIT
- IN 2017: 467,927 GUESTS, 4.1 HOUR AVG VISIT, 98% SATISFACTION RATE
- IN 2015: ECONOMIC IMPACT OF \$59.5 MILLION IN AREAS SALES, SUPPORTS 805 JOBS
- MULTIPLE AWARDS AND LISTINGS AS A TOP ZOO



HOW DOES AN AQUARIUM FIT OUR BUSINESS MODEL?

IT BUILDS OUR RESILIENCY

- REINFORCES OUR COMMUNITY POSITION AS THE PREMIER NATURE ATTRACTION
- COMPLEMENTS OUR PRODUCT - BEACHSIDE/MAINLAND, INSIDE/OUTSIDE, TOURIST/LOCAL DRIVEN
- IS CASH POSITIVE: AVERAGING 500,000 PLUS GUESTS ANNUALLY
- ADDS A NEW SOURCE OF FUNDING FOR MARINE CONSERVATION



WHY PORT CANAVERAL?

- NO AQUARIUM ALONG THE I-95 CORRIDOR SOUTH OF CHARLESTON
 - EAST/WEST AND NORTH/SOUTH CROSSING - CAPTURES ORLANDO TRAFFIC
 - OVER 30,000 CARS DAILY ON THAT SECTION FOR ROUTE 528
 - 2.25 MILLION INDIVIDUAL CRUISERS IN PORT IN 2017
 - ALL WITHOUT AN ANCHOR ATTRACTION
- 



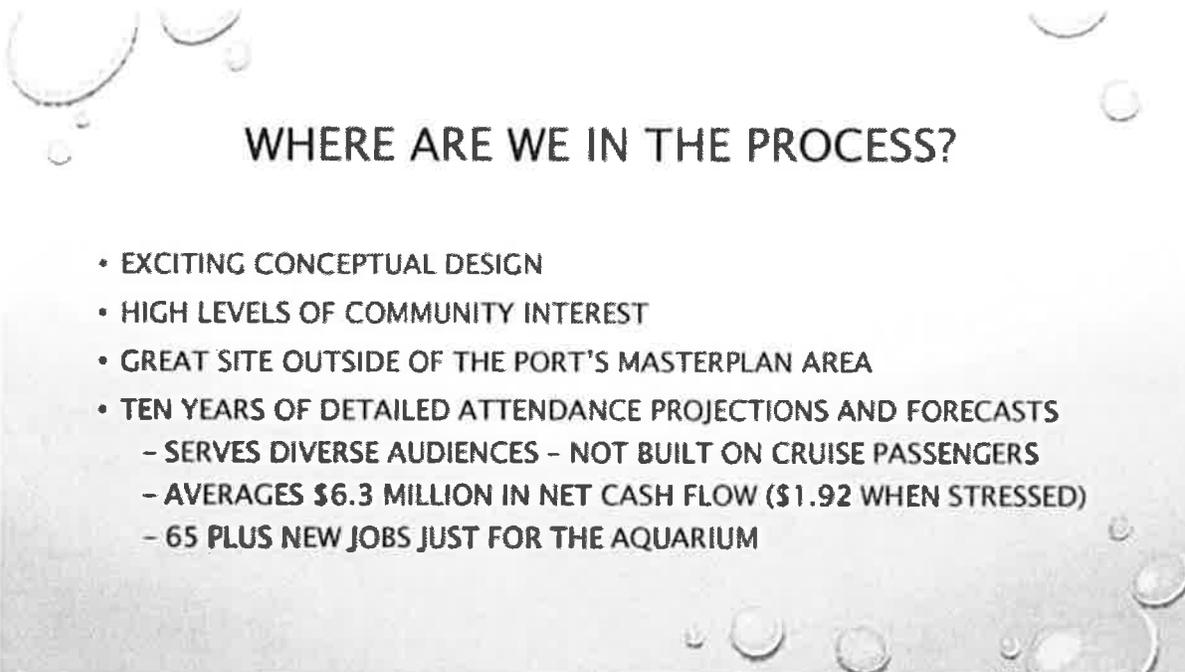
WHY ARE WE CONFIDENT IT WILL BE PROFITABLE?

AQUARIUMS OUTPERFORM ZOOS

- MARKET PENETRATION: ZOOS AVG 73.9% VS AQUARIUMS AVG 122.7%
- AVERAGE ADMISSION PRICE: ZOOS AVG \$16 VS AQUARIUMS AVG \$28
- EARNED REVENUE PER CAPITA: ZOOS AVG \$9.66 VS AQUARIUMS AVG \$18.08

SIGNIFICANT ECONOMIES OF SCALE

WE KNOW THE MARKETPLACE



WHERE ARE WE IN THE PROCESS?

- EXCITING CONCEPTUAL DESIGN
- HIGH LEVELS OF COMMUNITY INTEREST
- GREAT SITE OUTSIDE OF THE PORT'S MASTERPLAN AREA
- TEN YEARS OF DETAILED ATTENDANCE PROJECTIONS AND FORECASTS
 - SERVES DIVERSE AUDIENCES - NOT BUILT ON CRUISE PASSENGERS
 - AVERAGES \$6.3 MILLION IN NET CASH FLOW (\$1.92 WHEN STRESSED)
 - 65 PLUS NEW JOBS JUST FOR THE AQUARIUM



OUR VISION

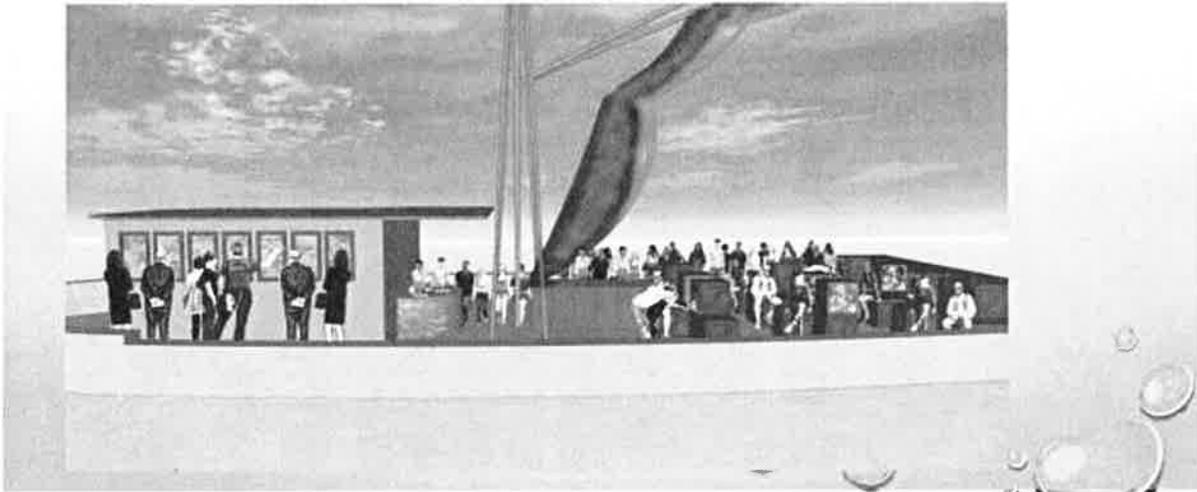
- MINIMUM 130,000 SQFT FACILITY: 60,000 SQFT UNDER AIR
 - 90 MINUTE AVERAGE EXPERIENCE
 - AFFORDABLE PRICE POINT: \$24.95 IN 2018 DOLLARS
 - 60% TOURIST/40% LOCAL MIX WITH LOW RELIANCE ON CRUISE TRAFFIC
 - TELLS OUR UNIQUE FLORIDA STORIES:
...SPACE, SPORTS FISHING, SHRIMPING, BEACHES, PORT, IRL, ST JOHNS RIVER
- 



Only
Off
Our
Shores



PROUD SHRIMPING TRADITION





Tarpon Time





In
The
Locks

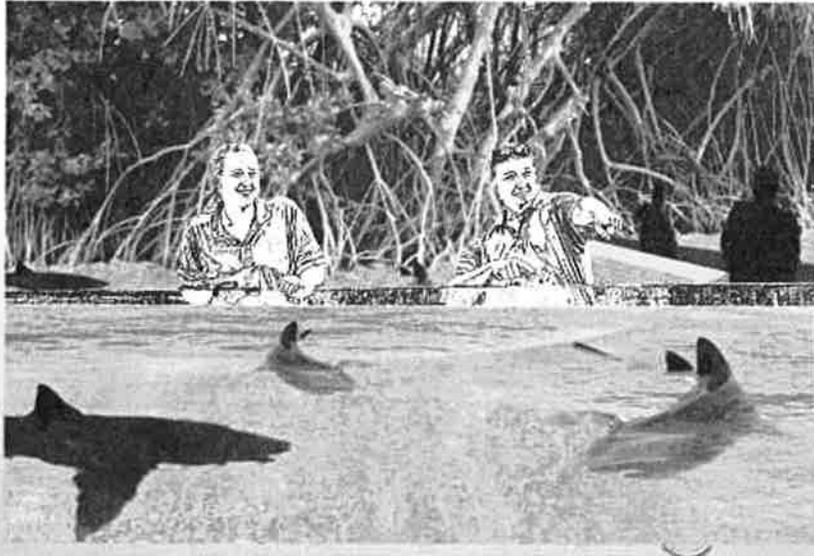


CHANGING EXHIBIT SPACE





WADING SHARK FLATS





RAY ENCOUNTERS



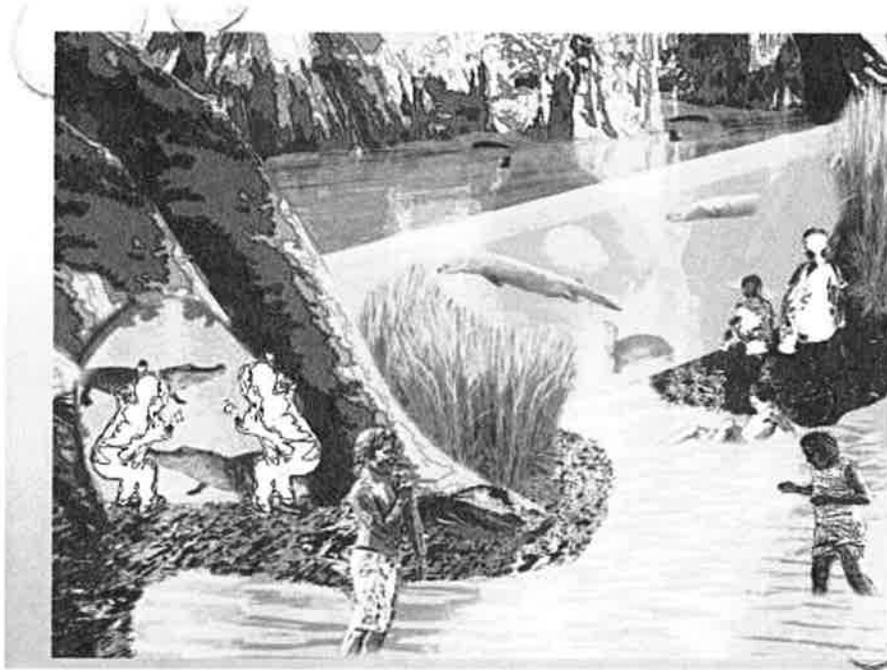


HANDS ON CONSERVATION





St. John's River Fish Camp



Exploring the River

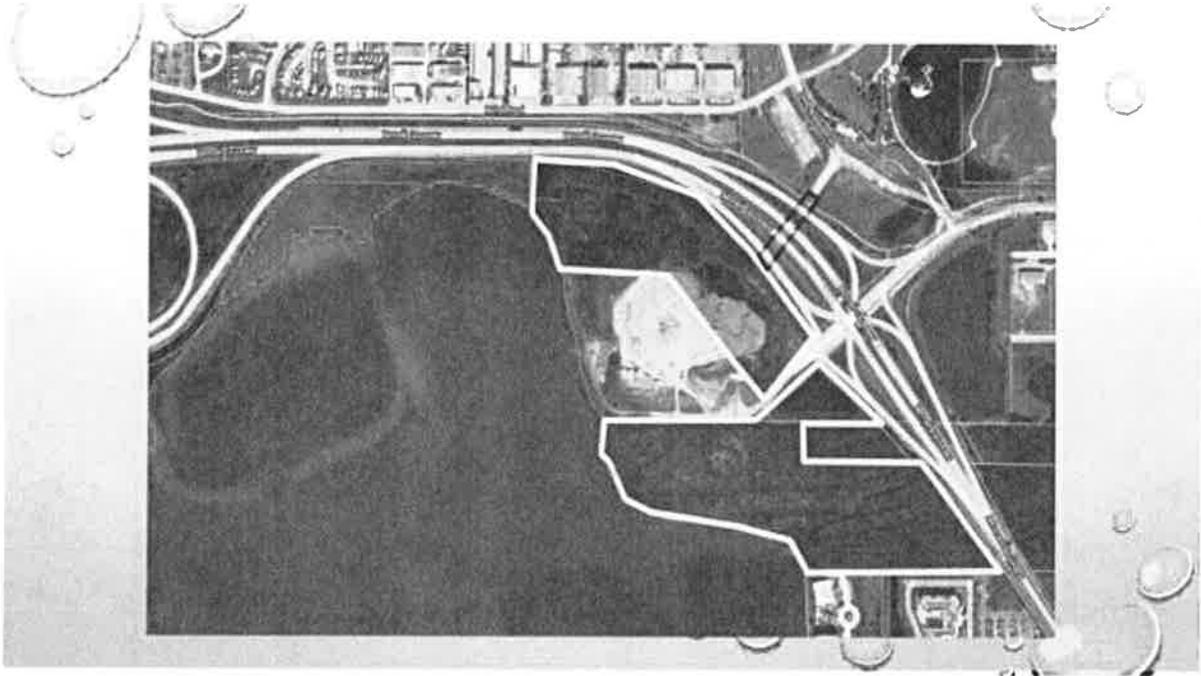




OTHER KEY COMPONENTS OF THE CAMPUS

- Restored shoreline offering kayaking and other outdoor recreational opportunities
- Collaborative Conservation "Hub:" supports public engagement and a presence from Institutions of higher learning. The Front Door for IRL Conservation in Brevard County
- Gathering space on the Banana River with easy on/easy off access and parking
- Potential sea turtle and manatee rehabilitation facilities







Market & Feasibility Advisors

Aquarium Forecast										
Forecast Variables										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Attendance										
Paid	540,219	395,309	477,479	477,479	477,479	477,479	477,479	477,479	477,479	477,479
Unpaid	52,235	63,363	88,115	107,937	127,759	127,759	127,759	127,759	127,759	127,759
% Increase *										
Paid Admission Per Cap	\$23.45	\$23.45	\$24.39	\$25.37	\$26.38	\$27.44	\$28.54	\$29.68	\$30.87	\$32.10
Memberships Sold	1,367	2,734	4,100	5,467	6,835	6,835	6,835	6,835	6,835	6,835
Membership Price	\$149.00	\$149.00	\$149.00	\$149.00	\$149.00	\$149.00	\$149.00	\$149.00	\$149.00	\$149.00
Income										
Gift Shop Per Cap	\$0.96	\$0.96	\$1.06	\$1.17	\$1.29	\$1.42	\$1.56	\$1.72	\$1.89	\$2.08
Food Service Per Cap	\$1.10	\$1.10	\$1.18	\$1.26	\$1.35	\$1.44	\$1.54	\$1.65	\$1.77	\$1.89
Additional Zoo Income Per Cap	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00
Additional Zoo Capture Rate	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Feedings Per Cap	\$5.00	\$5.00	\$5.25	\$5.51	\$5.79	\$6.08	\$6.38	\$6.70	\$7.04	\$7.39
Feeding Capture Rate	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
* - Percent increase per year will be applied after the 2nd year - Calculated amount										
Cost Adjustments										
Payroll Increase % Per Year										
Operation Increase % Per Year	3.00%									
Fringe Benefit Increase % Per Year	2.00%									
Debt										
Debt Amount	30,000,000									
Interest Rate	6.00%									
Years	10									
Assets to Depreciate	50,000,000									
Depreciation Years	20									



Market & Feasibility Advisors

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
INCOME										
Aquarium Admissions	12,668,136	9,269,896	11,645,713	12,113,642	12,555,896	13,102,024	13,627,251	14,171,577	14,739,777	15,327,076
Membership Sales	303,683	407,366	810,000	814,563	1,018,415	1,018,415	1,018,415	1,018,415	1,018,415	1,018,415
Gift Shop	568,756	440,325	599,150	684,937	780,757	859,438	944,171	1,041,009	1,143,900	1,258,895
Food Service	651,699	304,339	867,403	737,824	871,071	959,543	932,067	998,643	1,071,271	1,143,900
Additional Zoo Revenue	355,472	275,203	339,356	351,250	363,143	363,143	363,143	363,143	363,143	363,143
Secondary Income Sources										
Furcation Net (1/2 of zoo current)	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Farpon Feeding / Hay Feeding	296,227	229,316	296,917	322,554	350,432	387,985	386,142	405,509	426,088	447,271
Total Revenue	\$14,818,973	\$11,201,766	\$14,234,833	\$15,009,600	\$16,000,715	\$16,657,547	\$17,346,188	\$18,071,298	\$18,837,593	\$19,633,099
EXPENSES										
INSURANCE										
Property	137,000	119,740	142,335	143,386	148,294	151,260	154,283	157,371	160,518	163,728
Liability	10,000	10,200	10,404	10,612	10,824	11,040	11,261	11,486	11,716	11,950
UTILITIES (based on AgbyRay)	552,000	503,040	574,301	545,787	597,203	629,473	671,042	713,875	757,972	809,607
IT SERVICES (1/3 of zoo cost)	55,000	56,100	57,222	58,366	59,533	60,724	61,938	63,177	64,441	65,730
MARKETING										
Advertising	400,000	408,000	416,100	424,483	432,973	441,532	450,165	459,874	469,663	479,536
Misc.	100,000	102,000	104,040	106,121	108,243	110,408	112,616	114,868	117,165	119,508
Travelling Exhibit Cost	250,000	253,000	260,100	265,302	270,608	276,030	281,540	287,171	292,914	298,772
SUPPLIES										
Animal Care (Current zoo budget)	400,000	408,000	416,160	424,483	432,973	441,532	450,165	459,874	469,663	479,536
Office	10,000	10,200	10,404	10,612	10,824	11,040	11,261	11,486	11,716	11,950
Guest Services	50,000	51,000	52,020	53,060	54,121	55,203	56,307	57,433	58,582	59,754
Facilities	250,000	253,000	260,100	265,302	270,608	276,030	281,540	287,171	292,914	298,772
Interpretation	25,000	25,500	26,010	26,530	27,061	27,602	28,154	28,717	29,291	29,877
Accreditation	20,000	20,400	20,808	21,224	21,648	22,081	22,523	22,973	23,432	23,901
STAFFING										
Training/Trawl	25,000	25,500	26,010	26,530	27,061	27,602	28,154	28,717	29,291	29,877
Administration	275,000	283,250	291,748	300,301	309,016	317,892	326,930	336,141	345,526	355,086
Animal Care	570,000	585,000	591,000	598,110	605,266	612,468	619,716	627,011	634,354	641,746
Facilities	17	17	17	17	17	17	17	17	17	17
Administrations	17	17	17	17	17	17	17	17	17	17
Interpretation	4	4	4	4	4	4	4	4	4	4
Accreditation	13	13	13	13	13	13	13	13	13	13
Benefits	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
GIFT Shop - outsourced										
Food Service - outsourced										
Income before Depreciation and Interest	\$10,047,473	\$6,309,261	\$9,219,570	\$9,957,639	\$10,778,735	\$11,252,134	\$11,803,831	\$12,390,389	\$13,010,436	\$13,658,493
Depreciation	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Interest Expense	3,738,571	1,599,293	1,451,423	1,294,434	1,127,762	950,810	762,043	563,490	351,735	126,919
Operating Profit	\$2,808,902	\$2,210,968	\$5,268,147	\$6,163,205	\$7,100,973	\$7,801,324	\$8,540,888	\$9,126,899	\$10,158,701	\$11,033,574
Cash Flow Adjustments										
Less: Capital Expenditures (3%)	444,569	336,053	427,045	452,988	480,021	499,726	520,386	542,199	565,128	589,011
Less: Principal Payment	2,258,167	2,397,445	2,545,315	2,702,304	2,868,976	3,045,928	3,233,795	3,433,248	3,645,003	3,869,819
Add: Depreciation	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
Net Cash/Cash Flow	\$5,008,166	\$1,977,170	\$4,795,787	\$5,507,913	\$6,231,976	\$6,735,670	\$7,286,707	\$7,851,452	\$8,448,570	\$9,073,744



Market & Feasibility Advisors

About Market & Feasibility Advisors

Market & Feasibility Advisors (MFA) provides timely in-depth data, comprehensive analysis, and sustainable strategies for public, private, and non-profit clients. Our consultant team members have worked on more than 400 projects in more than 30 states and provinces and in more than a dozen countries in Asia, Europe, the Middle East and Mexico. We pride ourselves on working in many small communities as well as large urban areas, regional and statewide plans as well.

We often work with firms that provide professional services in Architecture; City and Regional Planning; Real Estate Development, Entertainment, Leisure and Recreation, Exhibit Design; Fund Raising; Landscape Architecture; Legal Services; Survey Research; Civil Engineering; Theatre Design; Museum Planning; Transportation; Education and Branding.

Whether working directly for clients or as a part of multi-disciplinary team, MFA executes market, feasibility, master plan economics, and impact studies resulting in strategic planning based on realistic environments and the unique characteristics of each specific site, project, target market, and competition.

- MFA's cultural and non-profit sector clientele includes work on museums, nature centers, performing arts facilities, zoos, historic structures and districts, aquariums.
- MFA's public-sector work is for municipalities, counties, states and parks and recreation agencies and others. For these groups, we have worked on many unique assets owned by the public organizations (ranging from museums to equestrian centers), downtown, corridor, neighborhood, and many types of economic development and urban redevelopment plans, as well as real estate and retail studies, transit-oriented developments (TOD), historic districts, parks and recreational plans and facilities, and convention and meeting facilities.
- MFA's private-sector work includes: mixed-use developments, housing, retail, hotel and resort, medical, and commercial entertainment, including waterparks, theme parks, cinemas, attractions, and.

Market and Feasibility Advisors has offices in Chicago and Austin. For more information, please visit our website www.mfallc.com and follow us on Twitter: <http://twitter.com/MFALLC>

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General Limiting Conditions

Every reasonable effort has been made to ensure that the data contained in this study reflect the most accurate and timely information possible and they are believed to be reliable. This study is based on estimates, assumptions and other information developed by Market & Feasibility Advisors LLC from its independent research effort, general knowledge of the industry, and consultations with the Client and the Client's representatives. No responsibility is assumed for inaccuracies in reporting by the Client, the Client's agent, and representatives or any other data source used in preparing or presenting this study. No warranty or representation is made by Market & Feasibility Advisors LLC that any of the project values or results contained in this study will actually be achieved.

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