

April 20, 2015

Terri Jordan-Sellers, Regional Technical Specialist  
U.S. Army Corps of Engineers  
Jacksonville District  
701 San Marco Boulevard  
Jacksonville, FL 32207

Via Email: Terri.Jordan-Sellers@usace.army.mil

**Re: Port Everglades Feasibility Project, Final Feasibility Report and Environmental Impact Statement**

Dear Mrs. Jordan-Sellers:

I am writing on behalf of the Diving Equipment and Marketing Association (DEMA) and the many divers and dive-related businesses in South Florida, regarding the above referenced project.

The Diving Equipment and Marketing Association (DEMA) is a non-profit trade association based in San Diego California, representing the business and consumer interests of the recreational scuba and snorkel diving industries all over the world. DEMA's mission is to promote sustainable growth in safe recreational scuba diving and snorkeling while protecting the underwater environment.

DEMA is highly concerned with the Port Everglades Dredging project and its potential impact on the local Diving Industry in South Florida. In order to provide a greater understanding of the Diving Industry's concerns as well as how diving contributes to the South Florida economy, herein I describe the diving consumer, and the Diving Industry's economic impact due to the presence in South Florida of both natural and artificial reefs.

**How Important is the Diving Industry in South Florida?**

Florida is second only to California in the number of new diver certifications in the US each year (See EXHIBIT E-Open Water Certifications 2005 to 2014) and South Florida is one of the most important diving regions in the world. The Diving Industry in South Florida depends on sustainable interaction with the marine environment for its very existence, and is aware of the need for long term sustainability of these resources for all citizens of the U.S. The Industry is keenly aware of this dependence for diving and for all citizens, and as a result is dedicated to a healthy marine environment and protection of submerged cultural resources. For these reasons DEMA's mission statement includes an express acknowledgment of the need for environmental protection.

Scuba divers and snorkelers are stewards of an environment that is unique, and upon which they depend for recreation and study, and all scuba divers today are educated to maintain proper buoyancy and positioning configuration while diving that helps to prevent accidental damage to natural marine and other aquatic resources. Many divers have sought additional training above their initial diving “certification,” in order to better understand how they can protect the aquatic environment, and many have sought and received training to better understand the complex nature of coral reef communities, fishery resources and how to contribute to the knowledge base needed to monitor and protect these environments. With their first-hand observation of these protected areas, divers can encourage others to protect these resources.

### **South Florida: The Economic Impact of the Diving Industry**

Recreational scuba diving and snorkeling contribute about \$11 billion to the US gross domestic product. In Florida, largely centered in South Florida, snorkeling accounts for about 4.24 million visitor-days per year while scuba diving accounts for about 4.56 million visitor-days annually. The combination of snorkeling and scuba diving creates about 26,000 full-time equivalent tourism-related jobs in Florida each year.

Visitors participating in recreational scuba diving and snorkeling contribute about \$904.4 million to the Florida economy each year. Florida residents learning to dive in the state annually contribute an additional \$20 million in sales of equipment, education and travel to the local economies in the state.

The most active divers in the U.S. today participate in diving activities in many areas of the country, and Florida is the number one US-based diving destination for divers living in the United States (See EXHIBIT C– Percentage of Active Divers from the US Diving in Florida). Today’s most active divers fit the following profile:

- Participant’s Age: Mean: 33, Median: 30
- Head of Household: Mean Age: 53
- Participant’s Gender: Males: 65%, Females 35%
- Annual Household Income: 64.4% make between \$100,000 & \$150,000
- Occupation: 53.6% are Managerial/Technical/Professional
- Education: 59.2% completed college or grad school
- Home Ownership: 91.9% own their home
- Marital Status: 75.9% are married
- Presence and age of children in Household: 23.7% have children between 11 and 17 years of age

(See EXHIBIT D-Demographic Profile of Recreational Diver):

Recreational scuba divers and snorkelers contribute to tourism revenue by purchasing day-long and more extended dive trips originating in South Florida, diving equipment and other diving-related items, and by spending on hotels, food, air and ground transportation, as well as other secondary items while in South Florida to dive. Divers contribute to sales tax revenues for local counties, municipalities and the state, and to federal and state tax revenues through the creation of diving tourism-related jobs.

While much of Florida has natural reefs, artificial reefs also contribute to the local economy. For example, estimates from research submitted by The University of West Florida indicate there are more than 4,200 chartered dive trips taken to the artificial reef/aircraft carrier Oriskany off of Pensacola Florida annually, carrying divers from all over the world. Annual revenue generated from visitors traveling from Escambia county Florida and Baldwin county Alabama alone is estimated at \$2.2 million, and dive-related expenditures drive an economic impact of \$3.6 million in local output and additional jobs while generating \$1.4 million in local income. The Fort Lauderdale area immediately adjacent to Port Everglades boasts more than [65 artificial reef structures](#).

Diving is actively conducted under a variety of conditions and in a variety of locations around the state of Florida. In South Florida, including the area near Port Everglades, divers have access to both natural and artificial reefs.

### **South Florida Tourism: Natural Reefs**

Natural coral reefs contribute some \$375 billion in goods and services to the world and according to a 2000 report from the World Resources Institute, coral reefs in the Caribbean (including South Florida) alone contribute \$2.1 billion for dive tourism. Recreational divers, snorkelers, fishers, and others are attracted by the presence and accessibility of coral reefs. In Florida, coral reefs provide more than 18.4 million visitor days of recreational use (Source: *Coral Reef Ecosystems Value: Enhancing Resilient Communities* presented during Capitol Hill Ocean Week, June 4, 2008, Billy D. Causey, Ph.D., Regional Director, Southeast Region, National Marine Sanctuaries - See EXHIBIT A - Florida Coral Reefs Recreational Use).

According to the *Socioeconomic Study of Reefs in Southeast Florida* (October 2001, Florida Fish and Wildlife Conservation Commission, National Oceanic and Atmospheric Administration, in association with Florida State University), reef-related expenditures generated over \$4.395 billion in sales in Palm Beach, Broward, Miami-Dade and Monroe Counties combined, during the 12-month period from June 2000 to May 2001. These sales resulted in generating \$2.047 billion in income to Palm Beach, Broward, Miami-Dade, and Monroe County residents during the same time period. According to the same study, during the same period, reef-related expenditures provided 71,300 jobs in these four southeast Florida counties. Two-thirds of the economic contribution was associated with natural reef-related expenditures in Miami-Dade and Palm Beach Counties, seventy five percent of the economic contribution was associated with natural reefs in Monroe County, and about fifty percent was associated with natural reefs in Broward County (See EXHIBIT B – Economic Contribution of Reef-Related Expenditures in Four Florida Counties).

In the presentation, *Taking the Heat in Tropical Seas* (Rodney V. Salm, PhD for Capitol Hill Ocean Week, June 4, 2008) the average value of coral reefs was estimated to be about \$813,000/sq. mile for recreational use, food, jobs and other services combined.

### **South Florida Tourism: Artificial Reefs**

Artificial Reefs, including those close to the dredging project at Port Everglades, have been shown to contribute significantly to local economies. For example, economic contribution estimates from the sinking of the ex-USS Vandenberg off of Key West

Florida range from \$5.6 to \$16.1 million per year. The expenditures of divers visiting artificial reefs in Florida are estimated at more than \$131 for every \$1 dollar of local and state investment (Source: Jon Dodrill, Florida Fish and Wildlife Conservation Commission). Diving and marine tourism are so influential to the economy that in 2008 the State of Florida legislation which established a matching grant program titled Ships to Reefs (S. 379.249, Fla. Stat.; Ch. 2008-100; SB 432). [The program authorizes](#) the sinking of decommissioned U.S. Military vessels specially cleaned and prepared to increase marine habitat and for use by recreational scuba divers and fishers.

It should be clear that recreational diving and snorkeling contribute significantly to tourism-related businesses, in addition to the revenue contribution from diving activities derived directly by diving-related businesses. The Recreational Diving Industry is dependent on the availability of quality diving and snorkeling sites, and this dependency extends to hotels, restaurants, marinas and other businesses associated with diving activities.

### **The Potential Impact of the Port Everglades Project on the Diving Industry**

DEMA is highly concerned about the Port Everglades Dredging Project, its effect on the local underwater environment and the resultant impact on the South Florida Diving Industry.

While we understand that while some detrimental impacts from this dredging project are inevitable and will be permitted due to the physical nature of dredging, we strongly believe that a well-designed and well-managed effort may not significantly impact a large area. However, “well-designed” and “well-managed” must be mandatory.

Our concern stems from the fact that the Final Environmental Impact Statement indicates that the “turbidity and sedimentation effects associated with the Port Everglades Navigation Project Recommended Plan (will be)...similar to those seen at the ongoing Miami Harbor expansion project.” Further, the Environmental Impact Statement indicates that, “the material disposed in the Port of Miami project is the same type of material being dredged at Port Everglades...and should result in similar conditions regarding associated sedimentation and turbidity generated by the material.”

According to Dr. Richard Dodge, Executive Director of the National Coral Reef Institute and Dean of the Nova Southeastern University Oceanographic Center (See EXHIBIT F – Correspondence, Dr. Richard Dodge), it appears that the Port of Miami project has caused negative effects on the environment (with potential negative impacts on the local diving industry) and DEMA is deeply concerned that the Port Everglades project may encounter or create similar issues. Should damage to the natural and artificial reef structures in the Port Everglades area be similar to the damage already found as a result of the Port of Miami project, significant environmental and economic consequences would occur. The loss of revenue to hotels, restaurants, marinas, tourist-related small businesses, as well as to diving businesses could result in the loss of thousands of jobs, and millions in tax revenues to the state of Florida.

### **Suggestions for the Port Everglades Dredging Project**

Prior to beginning the Port Everglades Dredging project DEMA strongly urges the Army Corps of Engineers to incorporate the lessons learned from the Port of Miami project and ensure that the Port Everglades project meets with the requirements to avoid direct and indirect damage to the underwater environment. The information from the Port of Miami project should be incorporated into the Port Everglades Final Environmental Impact Statement to help ensure the best design and management of this issue. In addition, incremental monitoring activities should be mandatory, if the project is implemented, to ascertain if the same impacts discovered during the Port of Miami project are occurring. Diving related professionals are available to assist the Army Corp in making these assessments.

Thank you for your consideration,

A handwritten signature in black ink, appearing to read "Tom Ingram", with a stylized flourish at the end.

Tom Ingram  
Executive Director

## EXHIBITS

### EXHIBIT A – Florida Coral Reefs Recreational Use

Recreational Use of Coral Reefs in Florida	
Snorkeling	4.24 million visitor days
Scuba Diving	4.56 million visitor days
Fishing	9.72 million visitor days
Glass-bottom Boats	0.12 million visitor days
<b>TOTAL</b>	<b>18.64 million visitor days</b>
Ref: Dr. Vernon R. Leeworthy, Chief Economist, Office of National Marine Sanctuaries	

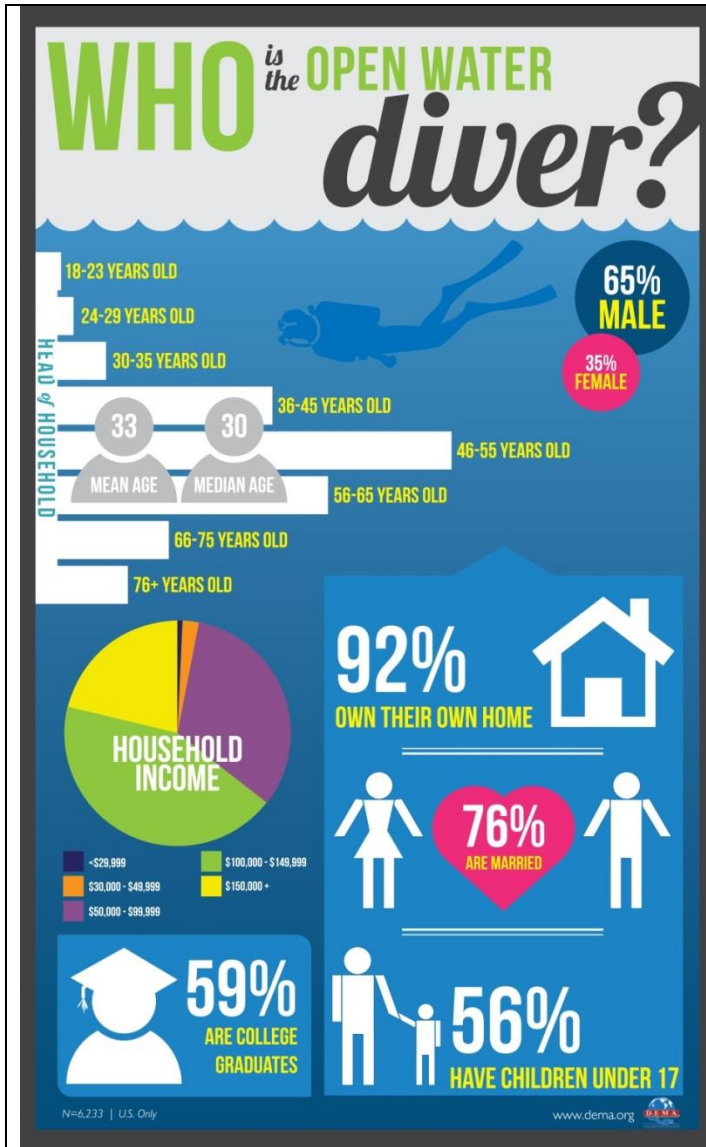
### EXHIBIT B – Economic Contribution of Reef-Related Expenditures in Four Southeast Florida Counties

Table ES-4 Economic Contribution of Reef-Related Expenditures to Each County <sup>1</sup> June 2000 to May 2001 – Residents and Visitors				
Type of Economic Contribution	Palm Beach County	Broward County	Miami-Dade County	Monroe County
Sales – All Reefs (in millions of 2000 dollars)	\$505	\$2,069	\$1,297	\$490
Artificial Reefs	\$148	\$961	\$419	\$127
Natural Reefs	\$357	\$1,108	\$878	\$363
Income – All Reefs (in millions of 2000 dollars)	\$194	\$1,049	\$614	\$139
Artificial Reefs	\$52	\$502	\$195	\$33
Natural Reefs	\$142	\$547	\$419	\$106
Employment – All Reefs (number of full- and part-time jobs)	6,300	36,000	19,000	10,000
Artificial Reefs	1,800	17,000	6,000	2,000
Natural Reefs	4,500	19,000	13,000	8,000
Source: <i>Socioeconomic Study of Reefs in Southeast Florida</i> , Johns, Leeworthy, Bell, Bonn				

### EXHIBIT C – Percentage of Active Divers from the US Diving in Florida

In the LAST 12 months WHERE did you go on a day dive trip (WITHOUT AN OVERNIGHT STAY) in the US/US Territories (whether on a dive boat, land-based dive location or other)?	
N=6,134	
Answer Options	Response Percent
Florida	23.3%
California	14.5%
Hawaii	7.0%
Texas	5.8%
Pennsylvania	5.0%
Source: <i>Diver Study 2014</i> , Diving Equipment and Marketing Association	

## EXHIBIT D-Demographic Profile of Recreational Diver



### Profile of **Open Water-level\*** Divers in the US

- Participant's Age: Mean: 33, Median: 30
- Head of Household: Mean Age: 53
- Participant's Gender: Males: 65%, Females 35%
- Annual Household Income: 64.4% make between \$100,000 & \$150,000
- Occupation: 53.6% are Managerial/Technical/Professional
- Education: 59.2% completed college or grad school
- Home Ownership: 91.9% own their home
- Marital Status: 75.9% are married
- Presence and age of children: 23.7% have kids between 11 and 17

\*Open Water Divers are entry-level divers

(Source: Diving Equipment and Marketing Association 2014 Diver Study)

## EXHIBIT E – Open Water (Entry level) Diver Certifications 2005 to 2014

### Open Water Certification Statistics: Top Diving States in the US 2005 to 2014

State by State 2005-2013	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2005-2014	% By State
CALIFORNIA	22,572	22,329	21,429	20,464	18,270	18,552	18,765	19,727	20,287	20,451	202,846	13.90%
FLORIDA	13,688	15,055	14,493	13,933	13,377	13,661	15,226	15,351	13,849	13,793	142,426	9.76%
TEXAS	10,307	11,058	11,125	11,429	10,741	10,966	11,930	11,545	11,449	11,565	112,115	7.68%
NEW YORK	7,480	7,481	7,678	7,691	7,105	7,793	7,314	6,838	7,010	6,926	73,316	5.02%
VIRGINIA/MARYLAND/D.C	7,783	7,597	7,613	7,367	7,081	7,895	7,789	7,499	7,284	6,871	74,779	5.01%

Source: Diving Equipment and Marketing Association Certification Census

**EXHIBIT F – Correspondence, Dr. Richard Dodge**

**From:** Richard Dodge [<mailto:dodge@nova.edu>]

**Sent:** Saturday, April 11, 2015 11:07 AM

**To:** Tom Ingram

**Cc:** David Gilliam; Brian Walker

**Subject:** RE: Port Everglades Dredging Project

Dear Tom,

Thanks for your email.

We too are also concerned, and as an academic institution, we are trying to do our best to be able to work with and advise the relevant agencies on how to keep the dredging impacts as minimal as possible and to offer to help them design and implement the best mitigation efforts to compensate for permitted impacts. NOAA has been a pleasure to work with for example.

Although some impacts from this dredging project are inevitable and will be permitted (e.g., dredging...) a well-designed and managed effort should not/ may not significantly negatively affect the all the SEFL region, and so the dive industry would not/might not suffer too heavily or at all. However, well- design and good management must be mandated and implemented. An example of not so well-design and management may be the Port of Miami dredging project where serious concerns about the dredging have been warranted.

We will continue to do our best to encourage that lessons learned from current and ongoing science as well from as during the POM project are utilized during the PE project to minimize impacts and optimize mitigation. At present there is no guarantee they will take our advice, but we will keep on trying.

Hope this is responsive in some ways to your email.

Best regards.

Dick

**From:** Tom Ingram [<mailto:tingram@dema.org>]

**Sent:** Monday, March 16, 2015 2:39 PM

**To:** Richard Dodge

**Subject:** Port Everglades Dredging Project

Dear Dr. Dodge:

I am the Executive Director of the Diving Equipment and Marketing Association, located in San Diego California. I have been contacted by more than a few diving operators in the Fort Lauderdale area expressing concerns about the potential negative impact on the quality of recreational diving due to the Port Everglades dredging project. Their major



concern is, of course, the silting issue and potential damage to the living coral and sea grass areas near the Port project.

I have read the final Army Corps of Engineers' Environmental Impact Statement, and we understand this project is moving forward regardless of any remaining concerns from the diving community. However, DEMA would like to provide feedback to divers and diving groups in the area regarding any concerns or comments you and the National Coral Reef Institute may have regarding this issue. While we understand that there are potential hazards for sensitive habitat areas associated with this project, any direction to research or any reassurance you can provide which indicates that the quality of the reefs and the recreational diving in the area will be minimally impacted by this dredging project would be helpful.

Thank you in advance for pointing us toward any resources that can mitigate these concerns.

**Tom Ingram, CAE**

*Executive Director*

Diving Equipment and Marketing Association

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