



Chairman Doug Boyd Gulf of Mexico Fishery Management Council 2203 North Lois Avenue, Suite 1100 Tampa, Florida 33607 Phone: 813-348-1630

Fax: (813) 348-1711

### Dear Chairman Boyd:

Please accept the following comments from the Recreational Fishing Alliance Forgotten Coast Chapter (RFA Forgotten Coast Chapter) regarding the release of SEDAR 31 and necessary action items for the June 2013 Gulf of Mexico Fishery Management Council (Council) meeting. Though not accepted or rejected in the Review Panel Report, the SEDAR 31 report continues to support strong and continued growth of the Gulf of Mexico Red Snapper resource. A consistent trend of rebuilding as reflected through both total biomass and spawning stock biomass increases can be indisputably observed since the 1980's. Corresponding declines in fishing mortality can also be observed throughout this time series.

While the continued rebuilding of the Gulf of Mexico red snapper can be described as a conservation success, the increased availability of red snapper, particularly to the recreational sector, is proving to be a significant management challenge. Moreover, density dependant factors are becoming increasing important factor in achieving rebuilding objectives of the Reef Fish fishery management plan. The RFA Forgotten Coast Chapter hopes the Gulf Council takes swift and decisive action to confront theses challenges and offers the following recommendations.

### Move Toward Regional Management for Gulf of Mexico Red Snapper

The findings of SEDAR 31 continue to support a two-stock model for the Gulf of Mexico red snapper. Observations in genetic testing, otolith micro-constituent analysis and life history characteristics clearly indicate distinctions between red snapper found in the eastern and western regions of the Gulf. Based on these findings and varying needs of the fishing communities throughout the Gulf, the RFA Forgotten Chapter encourages of the Gulf Council to finish voting on regional management at the June meeting in Pensacola, FL. It is important that implementation begin immediately for regional management; this would also include the rescinding of Amendment 30B.

#### **Revisit Commercial/Recreational Allocation**

Successful rebuilding of the Gulf of Mexico red snapper fishery has afforded a 9.3-million pound quota for both the commercial and recreational sectors under the original 51%-49% allocation scheme. The RFA Forgotten Coast Chapter supports revisiting this allocation scheme; as the red snapper stock(s) continue to rebuild, there have been numerous statements made on-record by commercial representatives about the drop in market price for red snapper when the commercial quota exceeds 5 million pounds.

Considering the 51/49 allocation and the market loss experienced by the commercial fishing industry when more than 5 million pounds of red snapper floods the consumer market, the RFA Forgotten Coast Chapter would ask that the commercial sector be capped at the 5-million pound mark, and that all harvest above that threshold be allocated based on an allocation scheme that sets 90% of the quota to the recreational sector and 10% to the commercial sector.

The two tiered allocation approach will allow the commercial/recreational allocation to gradually shift toward the recreational sector as the stock rebuilds. Such an approach would protect the commercial sector from potential overages in the recreational sector while providing a mechanism that will address the growing concern about increased availability causing ever decreasing recreational red snapper seasons.

### **Setting Recreational Regulations**

RFA Forgotten Coast Chapter encourages the Gulf Council to set the recreational seasons at least 1 year in advance. This would provide some stability in the recreational red snapper fishery. SEDAR 31 projects that stock levels will go down over the next few years as the strong 2004, 2005, and 2006 year classes move out of the fishery. Long-term projections generated in SEDAR 31 however show continued long-term growth and rebuilding even without the influence of those strong year classes and with only average recruitment.

That is why we believe the Council should avoid managing the recreational sector in an impulsive, yo-yo manner that is tied to the year-to-year stock level. As the stock continues to rebuild, growth will not be in a straight line but the overall trend will be in an upward direction. The overall health of the recreational red snapper fishery is dependent upon stable and predictable regulations.

The RFA Forgotten Coast Chapter also encourages the Gulf Council to schedule an assessment update for red snapper in 2014 – obviously, a full stock assessment in 2014 would be preferable. The amount of new artificial reefs going out yearly and especially with BP restore money should help increase essential fish habitat for red snapper and will increase populations immensely. This mitigation could dampen stock level declines.

### Oil Rig Removal

SEDAR 31 indicates that density dependant factors are impacting the speed at which red snapper in the Gulf of Mexico rebuild. Predation and habitat are the two most important density dependant factors limiting red snapper rebuilding. Active reef building efforts throughout the Gulf continue to supply more available habitat for red snapper thereby increasing growth and overall stock productivity by reducing competition for habitat. Yet, removal of decommissioned oil rigs with explosives destroys red snapper habitat and kills fish.

RFA Forgotten Coast Chapter encourages the Council to request a status report from NOAA Fisheries on their evaluation of establishing oil rigs as essential fish habitat as defined under Magnuson. There is no question that oil rig removal with the use of explosives is having a negative impact on red snapper rebuilding. Even if the impact is minor, the Gulf Council should

pursue all options to stop this action because it is an avoidable and unnecessary source of mortality on red snapper and red snapper habitat.

It is important for the Council to include investigation into the magnitude of mortality associated with rig removal using explosives in the statement of work for the 2014 assessment update.

Until we can get the Magnuson-Stevens Act sensibly and responsibly amended on behalf of both the fish and our fishermen, our only hope is for better stock assessments (more frequent assessments as planned now for 2014), improved recreational data collection, regional management implemented at this meeting (including rescinding 30b), and to get the allocation right where the recreational charter for-hire and headboat sectors are once again fishing and supporting our coastal economies. RFA Forgotten Chapter believes these items must be the priority for the Council at their June 2013 meeting. These items must be discussed and voted on. All other items such as headboats exempted special permits, sector separation, for-hire days at sea, intersector trading and the likes can be postponed to future meetings if necessary.

It's time to prioritize, and it's imperative that members of the Gulf Council get these things finished –accomplish something, stop working on the same things over and over and adding more tasks to the agenda without finishing one damn thing. Please finish voting on these four critically important items at this next meeting in Pensacola.

Respectfully submitted,

Tom Adams

Date: Wednesday, April 24, 2013 9:13 AM From: Walter J Stone <wjstone@gandolfokuhn.com> **To:** Charlene Ponce <charlene.ponce@gulfcouncil.org> Cc: Roy Crabtree < roy.crabtree@noaa.gov> Conversation: rig removal Charlene, I know I'm supposed to go to the Council Web site and click on the link that gets me to the response area to one of the dozen or so listed items to choose a response to click on that link to add a response to the referenced link that you should clickity click on and on and on..... Well I'm tired of all that so I'm sending this reply to you in the hopes that you will get it to whom ever. Dear Council, In the latest news from the Council newsletter: **Petroleum Platform Removal** The Council also directed staff to develop a letter to the Secretary of the Interior objecting to the removal of petroleum platforms with the use of explosives. Before sending the letter to the Secretary, a draft will be presented to the Council for review and approval during its June meeting.

These guys don't get it. It's not the explosives that they should be objecting to! Although that does needlessly kill thousands of fish.

My response:

Subject: rig removal

### But ultimately it's the RIG REMOVAL itself that they should be objecting to.

The explosives wouldn't kill the fish if the fish weren't there.
The fish are only there because the RIG IS THERE!!!!!!
The rig IS the environment that these fish NEED!!!!!
NO RIG = NO ENVIRONMENT = NO FISH
DUHHHHHHH

*Walter* 504-231-8124 Cell

**Subject:** Rig extraction in the Gulf of Mexico **Date:** Tuesday, February 19, 2013 5:50 PM **From:** Jerry Watkins <jdwatkins@satx.rr.com>

To: Info <Info@gulfcouncil.org>

**Conversation:** Rig extraction in the Gulf of Mexico

To whom it may concern,

How can the federal government allow oil rigs in the Gulf of Mexico to be exploded and kill thousands of fish. The removal process destroys valuable habitat that could be left in place, and at the same time the

### **Gulf of Mexico**

**Fishery Management Council** decrease the number of days recreational fisherman are allowed to fish( shortest red snapper season ever) in order to manage the depleting stock . This action is ludicrous and totally unacceptable. I have seen rigs removed the last few years on the Texas coast with large fish kills. I just saw another one last week that was filmed and posted on facebook. Can't the Gulf Council ask Washington to place a moratorium on this action until it can be reviewed. Does anyone really care or they that out of touch? Please reply to this email.

Jerry Watkins 13517 King Phillip Ct. Corpus Christi, Texas 78418 361-331-7273 jdwatkins@satx.rr.com Subject: NO!

**Date:** Friday, February 15, 2013 2:08 AM **From:** Sharon Watkins padrequeen@me.com>

**To:** Info <Info@gulfcouncil.org>

Conversation: NO!

Sharon Watkins Corpus Christi, TX Subject: Our Right to fish Red snapper is slowly being taken away by the very people that are destroying it.

**Date:** Saturday, February 16, 2013 11:50 AM **From:** Kenny Soulant <a href="mailto:ksoulant@gmail.com">ksoulant@gmail.com</a>

To: Info <Info@gulfcouncil.org>

Conversation: Our Right to fish Red snapper is slowly being taken away by the very people that are destroying

it.

It is Hypocrites such as yourself that are destroying this great country. You are telling us the Red Snapper are endangered on one hand and then blowing them up on the other, what the hell is that. I commend the person for getting this video out to the public to expose the blatant hypocrisy that is taking place.

Not only are you allowing the killing of thousands of pounds of Red Snapper; not to mention countless other species but your killing the habitat in which they flourish.

And to top it off we have a Governor that is taking the money from the Louisiana Rigs to Reef program to use as he pleases. It all makes me sick. What a bunch of asses. God help the generations to come if this is the government that they will be facing.

This is a letter that I sent to our governor Bobby Jindel.

To; Governor Jindel

This video made me sick to my stomach; I can't believe what I just saw. This was reported and aired on channel 15 out of Mobile Ala. You can go to their website at www.local15tv.com or see it at the 2 links below.

http://www.youtube.com/watch?

client=mvgoogle&gl=US&hl=en&feature=player\_embedded&v=kYFKLkC7tpE&nomobile=1

And

 $http://www.local15tv.com/news/local/story/Explosive-Fed-Mandate-Killing-Thousands-of-Red/xj8T4zPamkOGc8fuT40W\_Q.cspx$ 

What is wrong with this picture the Feds want the recreational fisherman to have a 27 day season 2 per person limit on Red Snapper but they are destroying the red snapper habitat and thousands of pounds in the process. And Governor you are using the funds from the oil companies for the Rigs to Reef Program to do as you wish. This is ludicrous such hypocrisy, what a surprise. As a local New Orleanian and a very avid offshore fisherman for the last fifty years I am

watching my rights to fish being slowly taken away by the very people that are destroying it, what a shame.

I would normally go offshore fishing 2 to 3 times per month and spend a few hundred dollars each trip (gas, bait, Ice, launch, Tackle etc.) this is money out of the economy's pocket. With the Federal Government continuing to reduce the limits and the length of the season, I've cut my fishing offshore 2 to 4 times per year. I would see boats from other states coming to spend their money and fish our waters all the time, not any more. It use to be you couldn't find a rig to pull up too because of so many boats and people fishing, now you will not be able to find a rig or the fish. If you want to keep this trend going keep doing what you're doing.

I have 2 young kids who love to fish but by the time they are my age there will be no more habitat for the Red Snapper to reproduce and flourish not to mention all the other species. Louisiana has such great fishing resources that attract fisherman from all over the country we could be utilizing it with great success but instead we are destroying it. When most of the habitat is gone and the Government has the limits to zero with no open season, our kids will be asking why we can't fish for snapper. We will then be asking our public officials for the answer and they will be lying to us telling us that we had been over fishing them. What a joke.

I am asking for your help. To stop robbing the Louisiana Rigs to Reef funds, to stop the way in which the Feds are killing thousands of pounds of red snapper and destroying their habitat. You are in a position where you can make a difference. You have to do something to stop the bureaucrats that think they are protecting the recourses for me and my children when they themselves are destroying it. HELP! This must stop!

Kenny Soulant Very pissed off. Subject: Idle Iron

**Date:** Tuesday, February 12, 2013 12:06 PM **From:** Craig Knable < Cknable@wrscompass.com> **To:** Charlene Ponce < charlene.ponce@gulfcouncil.org>

**Conversation:** Idle Iron

Im sure you saw the same video I did. This is insanity. I can only fish for these fish in a VERY SMALL window during the year. And then I can only keep 1 or 2. This video shows THOUSANDS of dead red snapper, DEAD in a second. Please stop Idle Iron. These rigs are important habitats for fish and valuable fishing structure for many people like myself.

Just a thought. Instead of blowing them up because they are any eyesore, couldn't we just cut the tops off at the surface and mark the structure with buoys so that no one would run into them? That's my \$.02

Thanks

Craig Knable Team 5 O&M inspector 850 251 4702 **From:** leon [mailto:leonwiesener75@gmail.com]

**Sent:** Saturday, February 09, 2013 06:56

**To:** Steve Bortone

Subject: red snapper kill

Just saw a video of federal policy of blowing up unused oil rigs in the gulfand killing 1000's of red snapper and other fish in the process. What is wrong with the federal government? Is this the best solution they can muster? It's no wonder fishermen up and down the gulf coast have no confidence in organizations like the gulf council. Use your power and stop this practice or open red snapper season year around and help us get our share of the bounty. My taking 2 fish over a 2-3 week season does not compare to this kind of waste. Damn, I'm mad.

Leon Wiesener

Carrabelle, Fla

**Subject:** Stop the Madness

**Date:** Monday, February 11, 2013 10:12 AM **From:** Brice Falkner <a href="mailto:spring">brice Falkner <a href="mailto:spring">spring</a> To: John Milner <a href="mailto:spring">GulfCouncil@gulfcouncil.org</a>

**Conversation:** Stop the Madness

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Brice C Falkner Financial Service Center of Alabama 6647 Green Drive Suite 109 Trussville, AL 35173 phone: 205-655-4944

fax: 205-655-3835

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Subject: Essential Fish Habitat

**Date:** Thursday, January 24, 2013 1:32 PM **From:** Steve hartley <tementos@gmail.com> **To:** John Milner <GulfCouncil@gulfcouncil.org>

Conversation: Essential Fish Habitat

#### To the members of the Gulf Council.

The opportunity that currently lies in your hands is of truly epic proportions. The immediate halt to the destruction of Oil and Gas platforms in the Gulf of Mexico must happen. We the people, the residents of the Gulf Coast, the fisherman, sightseers, and researchers, are relying on you, Gulf Council members, to save countless acres of unique Essential Fish Habitat. We Gulf Coast residents are so fortunate to have had oil and gas companies come to our waters and involuntarily establish thousands of artificial reefs, that produce and shelter marine life like no other artificial reef can. By offering structure from the surface to the seabed, an opportunity is made for so many different species of fishes and invertebrates, as opposed to laying a structure over and loosing that crucial top 100 ft of the water column.

While other portions of the Gulf of Mexico are said to be experiencing fish stocks at non sustainable levels and drastic restrictions are being imposed to ensure the survival of these fish and corals. We here in the oil and gas producing states of Texas, Louisiana, Mississippi, and Alabama have waters teaming with life in the waters found under these structures. Imagine how truly absurd it is that our own government is mandating the destruction of these irreplaceable reefs. So many times in my life I see my government with a few choices before them and almost predictably the worst possible choice is the one selected. Here we are again. However as of right now you Gulf Council members have the opportunity to make the right decision, right now. Simplify this decision in your own mind and ask yourself this question. Do I think it would be a good idea to remove a living thriving reef?

I ask of you to think of why you took your position. Do you want to protect the marine environment? The fate of these reefs is in your hands. I beg of you to fight for them.

Sincerely Steve Hartley



August 20, 2012

Gulf of Mexico Fishery Management Council 2203 N. Lois Avenue -- Suite 1100 Tampa, Florida 33607

Dear Council Member:

This week in New Orleans, the Gulf of Mexico Fishery Management Council (Council) and the Joint Artificial Reef/Habitat Committee will be meeting to consider a proposal of designating specific oil and gas platforms as crucial fish habitats. For your consideration, due to the different ongoing energy operations on offshore platforms that will potentially be affected in the Gulf, we would like to work with the Council to determine suitable fishery options that would address mutual interests.

The offshore oil and gas industry is a central supplier to the fisheries environment in the Gulf of Mexico. The industry is also a strong supporter of the existing "Rigs-to-Reefs" program under which, as of last month, the industry has reefed more than 430 platforms in the Gulf of Mexico to provide long-term habitats that significantly help sustain Gulf fisheries resources.

The Rigs-to-Reefs program does two positive things: First, it presents a positive environment that offers an expansion of the natural biological marine life. By leaving these obsolete rigs in the water, a new artificial atmosphere is created for the natural surrounding habitat. This not only is an advantage for the sportsmen, but it helps with the advancement of the natural food chain and the general health of the ecological system. Secondly, the Rigs-to-Reef program enhances the fishing community's daily catch count and can increase the variety of what is available to them. Positive economic development stems from this process. The fishermen come back into the communities, sell their catch to the local groceries and ultimately the catch can end up on your plate at the nearest seafood restaurant.

Thank you for your consideration of this request. We welcome the opportunity to work with the Council on this serious issue, and look forward to addressing related concerns with you.

Very truly yours,

**Don Briggs** President Louisiana Oil & Gas Association

### THE DIVING EQUIPMENT AND MARKETING ASSOCIATION

3750 Convoy Street, Suite 310, San Diego, CA 92111-3741 P: 800.862.3483 | 858.616.6408 | F: 858.616.6495 | E-MAIL: info@dema.org

January 2, 2013

The Honorable Ken Salazar Secretary United States Department of the Interior 1849 C Street NW Washington, D.C. 20240

Dear Secretary Salazar:

I am writing to you on behalf of the 1,400 business members of the Diving Equipment and Marketing Association (DEMA), the trade association for the Recreational Diving Industry, in support of using certain offshore oil and gas platforms in the Gulf of Mexico for artificial reefs, and for other purposes. During the 212th Congress HR 3429 and S. 1555 were considered, and both of these bills would authorize such use.

Although we at DEMA are aware that the original intent of oil platforms was not to create an "artificial reef" environment, such artificial reefs have been created as a result of placing these structures in the Gulf of Mexico, California and other coastal areas around the United States. The diving industry strongly believes that these artificial reefs have substantial value, and serve a purpose for environmental, social and medical reasons, as a means of increasing fisheries and by providing direct economic value and impact to the local communities. We believe these platforms should not be removed or modified until an appropriate study has been made of each to gain an understanding of their environmental, social and economic impacts on the immediate vicinity.

### **Environmental Impact Potential of Removing Oil Platforms**

According to the Bureau of Ocean Energy Management Regulation and Enforcement website (BOEMRE; now Bureau of Ocean Energy Management BOEM) "the size of a typical 4-pile platform jacket (the underwater support structure of an offshore platform) provides 2-3 acres of living and feeding habitat for thousands of underwater species." Under any other circumstances the removal, alteration or destruction of a 2-3 acre living reef or bottom substrate with thousands of underwater species would only be allowed after extensive study and long consideration by environmental organizations, government agencies and the public.

Although the offshore platforms may never have been intended as thriving artificial reefs, BOEM clearly recognizes that they are living reefs now, with many different species and a considerable environmental benefit. From an environmental standpoint, we believe that a complete environmental study of each of these thriving reef communities is needed prior to removal of an oil platform.



### Social Impact Including the Need for New Products and Medical Research

Adding to the benefits of leaving these oil platforms in place, a January 2008 study\* from the U.S. Department of the Interior, Minerals Management Service, Pacific OCS Region, entitled Advancing Marine Biotechnology: Use of OCS Oil Platforms as Sustainable Sources of Marine Natural Products, indicated that marine organisms inhabiting the sub-tidal structures of offshore oil production platforms are a source of potentially revolutionary compounds for pharmaceutical use.

The presence of these organisms on oil platforms provides an unparalleled opportunity to study natural product chemistry from populations of organisms living in ecologically unique habitats. Research has shown that growth rates of certain invertebrate species living in the platform community can be quite high. The platform encrusting invertebrate community also supports many encrusting and soft-bodied organisms, which rely on rapid growth rates, allelopathic effects, and chemical warfare to compete for space in the habitat and avoid predation. Such habitat characteristics (as in the example of coral reefs) have been shown to sustain many organisms that produce compounds with potential pharmaceutical application, including products from sea anemones, marine alga, and bryozoa living on the intertidal and sub-tidal portions of offshore oil production OCS (outer continental shelf) platforms. The study focused on platforms in the Santa Barbara California Channel.

The study concluded that, "...invertebrates, such as sponges, tunicates, and bryozoans, which may contain potentially useful marine natural products can be abundant on offshore oil platforms. However, the significant variation found in the distribution, recruitment and growth of these invertebrates among platforms in the SBC suggests that factors such as location and temperature could affect the potential harvest of these organisms for use in the development of marine natural products." The study also concluded that compounds from organisms found on oil platforms may be promising in the development of new drugs for cancer treatment.

\*Schmitt, R.J., R.S. Jacobs, H.M. Page, J.E. Dugan, L. Wilson, S.D. Gaines and S.A. Hodges. Advancing Marine Biotechnology: Use of OCS oil platforms as sustainable sources of marine natural products. MMS OCS Study 2006-054. Coastal Research Center, Marine Science Institute, University of California, Santa Barbara, California. MMS Cooperative Agreement Number 14-35-0001-31063. 45 pages.

#### **Fisheries Impact**

There has been some historical question in the past as to whether artificial reefs (such as oil platforms) actually increase fish populations or whether they tend to simply cause an accumulation of fish, which move in from surrounding areas. However, in at least one 2008 study\*\* it was demonstrated that increases in fish populations over time in the presence of artificial reefs did not match corresponding decreases of fish assemblages from close-by natural

reef structures. While artificial reefs are well-known as "fish accumulators," limited studies have been conducted on their ability to increase the actual number of fish (biomass). The 2008 study referenced above concluded that such artificial reef structures as oil platforms may actually increase the actual fish biomass.

The fact that such evidence of biomass increase exists should by itself be enough for the scientific and governmental community to pause and study the impact of the presence of these retired oil rigs on local fisheries prior to their removal.

\*\*Brickhill, M.J. Enhancement of Fish Stock by Habitat Manipulation in Artificial Waterways. Griffith School of Environment, Science, Engineering and Technology, Griffith University, Queensland, Australia. 206 pages.

### **Direct Economic Impact**

From a direct economic point of view, BOEM has estimated that these structures account for about \$324 million annually in revenue by providing locations for recreational fishing and scuba diving. BOEM has also estimated that these structures create about 5,560 full-time equivalent jobs in the fishing and diving industries, including charter dive businesses, dive retail stores and ancillary jobs connected to the tourism and recreation industry. Job creation and other direct economic advantages are well-studied and documented benefits of the presence of these structures, and are similar to those derived from the presence of retired ships placed as artificial reefs, with the key difference being that these oil platforms are already in place, requiring no additional effort to reap such economic and job-creation benefits.

For environmental, social/medical, and economic reasons, DEMA strongly supports studying each of the retired oil drilling platforms or "rigs" prior to their removal. Where it is shown that these platforms are serving as marine habitat, DEMA strongly supports retaining and using these offshore oil and gas platforms in the Gulf of Mexico for artificial reefs, and for other purposes.

Thank you for your consideration in this matter.

Sincerely,

Tom Ingram

**Executive Director** 

cc: The Honorable Congressman Steven Palazzo

The Honorable Congressman Steve Scalise

The Honorable Congressman Gregg Harper

The Honorable Congressman Larry Kissell

The Honorable Congressman Alan Nennelee

The Honorable Congressman Blake Farenthold

The Honorable Congressman Bill Cassidy

The Honorable Congressman Steve Southerland

The Honorable Congressman John Carter

The Honorable Congressman Richard Nugent

The Honorable Allen B. West

The Honorable Senator David Vitter

The Honorable Senator Roger Wicker

The Honorable Senator Thad Cochran

Terry Migaud



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL OCEAN SERVICE Special Projects Office Silver Spring, Maryland 20910

October 2, 2007

## Memorandum

Tos

Joe Weatherby and Jeff Dey

ARK

From: Bob Leeworthy

Chief Economist

NOAA's National Marine Sanctuary Program

RE

Projected Economic Impacts of U.S.S. Vandenberg

Attached is an Excel Workbook with five spreadsheets/tables. Sheet 1 (table 1) presents estimates of the Baseline Year, 2000-2001 total reef use in the Key West Region of the Florida Keys and associated spending and economic contribution (sales, income, employment and State sales tax revenue). Separate estimates are provided for visitors and residents. The baseline estimates were derived from our recent study "Socioeconomic Study of Reefs in Southeast Florida: Final Report (October 19, 2001), Chapter 6, Monroe County" and from our 1995-96 study "Linking the Economy and Environment of the Florida Keys/Florida Bay". The most recent study did not estimate use by region of the Florida Keys. I used the 1995-96 study percentages of uses in the Key West Region to derive the proportion of total reef use in Key West (see second attached Excel spreadsheet with these numbers).

Sheet 1, also provides hypothetical projections of percentage increases in artificial reef use for the Key West Region. We only have the recent work on the Spiegel Grove that documents the amount of use that has occurred due to introduction of a new artificial reef. This study was published in the Bulletin of Marine Sciences and is posted on our web site. The increase in total reef use for the Spiegel Grove was a little over 9 percent (decline in natural reef use and increase in artificial reef use with a net increase in total use). Because we haven't done a complete study of the U.S.S. Vandenberg (before and after monitoring of use), I have presented a range of potential increases and the potential economic contributions to the Monroe County economy.

Sheet 3 simply calculates the net present value of the flow of income to Monroe County businesses. The spreadsheet is set-up to calculate net present value for 10 and 20 year time periods under different real interest rates (interest rates net of inflation). You can change the interest rate column to calculate net present value for different interest rates.

Sheet 2 summarizes the results of the net present value calculations for different projected increases in total reef use, years of income and alternative real interest rates.

P.03

Sheet 5 simply calculates the net present value of the flow of State sales tax revenue to the State of Florida (net of sales tax revenue to local government and local lodging taxes). The spreadsheet is set-up to calculate net present value for 10 and 20 year time periods under different real interest rates (interest rates net of inflation). You can change the interest rate column to calculate net present value for different interest rates.

There are a lot of numbers here which doesn't lend to a simple take home message so below I give a simple summary choosing the most likely scenario, time period for the life of the Vandenberg, and the real interest rate for converting future dollars to present dollars.

Scenario: 10% increase in annual total reef use in Key West region of the Florida Keys due to U.S.S. Vandenberg (this is close to what was observed for the U.S.S. Spiegel Grove off Key Largo, Florida).

Use life of U.S.S. Vandenberg of 20 years and a real interest rate of 5% (net of inflation).

- The U.S.S. Vandenberg sunk as an artificial reef would generate almost 90 thousand additional person days of reef use in the Key West region of the Florida Keys per year.
- This increase in use would result in an annual increase of about \$7.5 million in expenditures by both resident and visitor reef users in the Monroe County economy.
- This increase in expenditures would increase total sales, including multiplier impacts, of about \$8.0 million in the Monroe County economy and this would in turn generate about \$2.7 million in income and 195 full and part-time jobs in Monroe County.
- In addition, sales tax revenue to the State of Florida would increase by almost \$450 thousand per year. This amount excludes local sales taxes and lodging taxes and only includes the portion of sales tax received by the State of Florida.
- The net present value of 20 years of the additional annual income would be about \$34 million.
- The net present value of 20 years of the additional annual State sales tax revenue would be about \$5.6 million.
- So just based on sales tax revenue generated to the State of Florida, the State of Florida could
  justify investing \$5.6 million in the sinking of the U.S.S. Vandenberg.

If you have any questions, call me at (301) 713-3000 ext. 138 or e-mail at Bob.Leeworthy@ngaa.gov.

**VISITORS** Baseline Projected Percentage Increases in Total Reef Use 10% 2000-2001 Measurement 1% 5% Person-days 321,498 3,215 16,075 32,150 \$2,465,407 **Total Expenditures** \$49,308,148 \$493,081 \$4,930,815 **Economic Contribution Total Sales** \$55,225,126 \$552,251 \$2,761,256 \$5,522,513 Total Income \$18,710,273 \$187,103 \$935,514 \$1,871,027 **Total Employment** 1,340 13 67 134 Tax Revenues<sup>1</sup> \$3,067,863 \$153,393 \$306,786 \$30,679 **RESIDENTS** Person-days 577,122 5,771 28,856 57,712 **Total Expenditures** \$25,191,375 \$251,914 \$1,259,569 \$2,519,138 **Economic Contribution Total Sales** \$25,191,375 \$251,914 \$1,259,569 \$2,519,138 Total Income \$8,534,838 \$85,348 \$426,742 \$853,484 **Total Employment** 611 6 31 61 Tax Revenues \$1,419,720 \$14,197 \$70,986 \$141,972 **VISITORS & RESIDENTS** Person-days 898,620 8,986 89,862 44,931 **Total Expenditures** \$74,499,524 \$7,449,952 \$744,995 \$3,724,976 **Economic Contribution Total Sales** \$80,416,501 \$804,165 \$4,020,825 \$8,041,650 \$272,451 **Total Income** \$27,245,111 \$1,362,256 \$2,724,511 **Total Employment** 1,951 20 195 98 Tax Revenues \$4,487,583 \$44,876 \$224,379 \$448,758

<sup>1.</sup> Tax revenues are State Sales tax only at six (6) percent. Local sales tax and lodging taxes are not included.

### Estimated Net Present Value of Income from Projected Increases in Total Reef Use Resulting from U.S. S. Vandenberg

Baseline Projected Increases in Total Reef Use

|                               | Daseille      | r tojected increases in Total Neel Ose |              |              |  |
|-------------------------------|---------------|--|--------------|--------------|--|
| Income                        | 2000-2001     | 1%                                     | 5%           | 10%          |  |
| 10 Years at 5% <sup>1,2</sup> | \$210,379,525 | \$2,103,794                            | \$10,518,980 | \$21,037,952 |  |
| 10 Years at 7%                | \$191,358,259 | \$1,913,582                            | \$9,567,916  | \$19,135,825 |  |
| 10 Years at 10%               | \$167,409,413 | \$1,674,093                            | \$8,370,473  | \$16,740,941 |  |
| 20 Years at 5%                | \$339,534,304 | \$3,395,342                            | \$16,976,721 | \$33,953,429 |  |
| 20 Years at 7%                | \$288,635,094 | \$2,886,350                            | \$14,431,759 | \$28,863,508 |  |
| 20 years at 10%               | \$231,952,989 | \$2,319,529                            | \$11,597,653 | \$23,195,298 |  |

<sup>1.</sup> Years of income provided by U.S.S. Vandenberg.

<sup>2.</sup> Real interest rate (net of inflation) used in calculating net present value of income over 10 and 20 year periods.

|          | Real     |    | Baseline      |             |              |              |
|----------|----------|----|---------------|-------------|--------------|--------------|
| Time     | Interest |    | 2000-2001     | 1%          | 5%           | 10%          |
|          | 1 0      | .1 | \$24,768,283  | \$247,683   | \$1,238,415  | \$2,476,828  |
|          | 2 0      | .1 | \$22,516,621  | \$225,166   | \$1,125,831  | \$2,251,662  |
|          | 3 0      | .1 | \$20,469,655  | \$204,696   | \$1,023,483  | \$2,046,965  |
|          | 4 0      | .1 | \$18,608,777  | \$186,088   | \$930,439    | \$1,860,878  |
|          | 5 0      | .1 | \$16,917,070  | \$169,171   | \$845,854    | \$1,691,707  |
|          | 6 0      | .1 | \$15,379,155  | \$153,791   | \$768,958    | \$1,537,915  |
|          | 7 0      | .1 | \$13,981,050  | \$139,810   | \$699,053    | \$1,398,105  |
|          | 8 0      | .1 | \$12,710,045  | \$127,100   | \$635,502    | \$1,271,004  |
|          | 9 0      | .1 | \$11,554,587  | \$115,546   | \$577,730    | \$1,155,459  |
| •        | 10 0     | .1 | \$10,504,170  | \$105,042   | \$525,209    | \$1,050,417  |
| •        | 11 0     | .1 | \$9,549,245   | \$95,492    | \$477,462    | \$954,924    |
| •        | 12 0     | .1 | \$8,681,132   | \$86,811    | \$434,057    | \$868,113    |
| •        | 13 0     | .1 | \$7,891,938   | \$78,919    | \$394,597    | \$789,194    |
| •        | 14 0     | .1 | \$7,174,489   | \$71,745    | \$358,725    | \$717,449    |
| •        | 15 0     | .1 | \$6,522,263   | \$65,223    | \$326,113    | \$652,226    |
| •        | 16 0     | .1 | \$5,929,330   | \$59,293    | \$296,467    | \$592,933    |
|          |          | .1 | \$5,390,300   | \$53,903    | \$269,515    | \$539,030    |
| •        | 18 0     | .1 | \$4,900,273   | \$49,003    | \$245,014    | \$490,027    |
| •        | 19 0     | .1 | \$4,454,793   | \$44,548    | \$222,740    | \$445,479    |
| 2        | 20 0     | .1 | \$4,049,812   | \$40,498    | \$202,491    | \$404,981    |
| 10 years | 3        |    | \$167,409,413 | \$1,674,093 | \$8,370,473  | \$16,740,941 |
| 20 years |          |    | \$231,952,989 | \$2,319,529 | \$11,597,653 | \$23,195,298 |

# Estimated Net Present Value of State Sales Tax Revenue from Projected Increases in Total Reef Use Resulting from U.S. S. Vandenberg

Baseline Projected Increases in Total Reef Use State Sales Tax Revenue 2000-2001 1% 5% 10% 10 Years at 5%<sup>1,2</sup> \$34,651,926 \$346,521 \$1,732,595 \$3,465,190 10 Years at 7% \$31,518,905 \$315,190 \$1,575,944 \$3,151,888 10 Years at 10% \$27,574,255 \$275,744 \$1,378,712 \$2,757,424 20 Years at 5% \$55,925,203 \$559,254 \$2,796,258 \$5,592,517 20 Years at 7% \$47,541,518 \$475,417 \$2,377,074 \$4,754,149 20 years at 10% \$38,205,324 \$382,055 \$1,910,265 \$3,820,530

<sup>1.</sup> Years of State Sales Tax Revenue provided by U.S.S. Vandenberg.

<sup>2.</sup> Real interest rate (net of inflation) used in calculating net present value of State Sales Tax revenue over 10 and 20 year periods.

|          | Real     | Baseline           |           |             |                            |
|----------|----------|--------------------|-----------|-------------|----------------------------|
| Time     | Interest | 2000-2001          | 1%        | 5%          | 10%                        |
|          | 1 0.07   | \$4,194,003        | \$41,940  | \$209,700   | \$419,400                  |
|          | 2 0.07   | 7 \$3,919,629      | \$39,196  | \$195,981   | \$391,963                  |
|          | 3 0.07   | 7 \$3,663,204      | \$36,632  | \$183,160   | \$366,320                  |
|          | 4 0.07   | 7 \$3,423,556      | \$34,236  | \$171,178   | \$342,355                  |
|          | 5 0.07   | 7 \$3,199,585      | \$31,996  | \$159,979   | \$319,958                  |
|          | 6 0.07   | 7 \$2,990,266      | \$29,903  | \$149,513   | \$299,026                  |
|          | 7 0.07   | 7 \$2,794,641      | \$27,947  | \$139,732   | \$279,464                  |
|          | 8 0.07   | 7 \$2,611,814      | \$26,118  | \$130,591   | \$261,181                  |
|          | 9 0.07   | 7 \$2,440,948      | \$24,410  | \$122,047   | \$244,095                  |
| •        | 10 0.07  | 7 \$2,281,260      | \$22,813  | \$114,063   | \$228,126                  |
| •        | 11 0.07  | 7 \$2,132,018      | \$21,320  | \$106,601   | \$213,202                  |
| •        | 12 0.07  | 7 \$1,992,541      | \$19,925  | \$99,627    | \$199,254                  |
| •        | 13 0.07  | . , ,              | \$18,622  | \$93,109    | \$186,219                  |
| •        | 14 0.07  | ¥ .,,              | \$17,404  | \$87,018    | \$174,036                  |
| •        | 15 0.07  | 7 \$1,626,507      | \$16,265  | \$81,325    | \$162,651                  |
| •        | 16 0.07  | 7 \$1,520,100      | \$15,201  | \$76,005    | \$152,010                  |
| •        | 17 0.07  | ¥ ·, ·= -, · ·     | \$14,207  | \$71,033    | \$142,065                  |
| •        | 18 0.07  | . , ,              | \$13,277  | \$66,386    | \$132,771                  |
|          | 19 0.07  | ¥ · ,— · · , · · · | \$12,409  | \$62,043    | \$124,085                  |
| 2        | 20 0.07  | 7 \$1,159,677      | \$11,597  | \$57,984    | \$115,968                  |
| 10 4005  |          | ¢21 E10 00E        | ¢215 100  | ¢1 575 044  | ¢2 151 000                 |
| 10 years |          | \$31,518,905       | \$315,190 | \$1,575,944 | \$3,151,888<br>\$4,754,140 |
| 20 years | 5        | \$47,541,518       | \$475,417 | \$2,377,074 | \$4,754,149                |