

Florida Fish and Wildlife Conservation Commission



James L. "Jamie" Adams, Jr.
Bushnell

Barbara C. Barsh
Jacksonville

Quinton L. Hedgepeth, DDS
Miami

H.A. "Herky" Huffman
Deltona

David K. Meehan
St. Petersburg

Julie K. Morris
Sarasota

Tony Moss
Miami

Edwin P. Roberts, DC
Pensacola

John D. Rood
Jacksonville

ALLAN L. EGBERT, Ph.D., Executive Director
VICTOR J. HELLER, Assistant Executive Director

June 19, 2000

BUREAU OF MARINE FISHERIES MANAGEMENT
Robert Palmer, Chief

Mr. Clif Payne
United States Army Corps of Engineers
Pensacola Regulatory Office
41 North Jefferson Street
Suite 104
Pensacola, Florida 32501-5795
(Phone: 850-576-0790)

27

Dear Mr. Payne:

Enclosed is the Florida Fish and Wildlife Conservation Commission's request for a reauthorization of permit #199402365 (IP-CP) associated with two existing artificial reef areas, Escambia East and West, located in Federal waters off Escambia County Florida.

Following the instructions that you provided to my staff in a planning meeting earlier this year, we have responded to the additional information questions that you provided. The basic application used was that recommended by Mr. Don Hambrick for Northwest Florida projects ("Joint Application for Works in the Waters of Florida", Form # 62.312.900 (1)).

During the June 13, 2000 Gulf Breeze public workshop on the Large Area reauthorization proposal, there was some public interest in streamlining the deployment inspection process (Special Condition #1 currently has a five day waiting period). We are requesting that the general waiting period between time of agency inspection and time of deployment be shortened to 32 hours. The exception would be the required Coast Guard inspection of vessels to be sunk as artificial reefs. In the vessel cases, the five day waiting period would be retained. We have confidence in Escambia County's inspection program. Our artificial reef staff have had a good five year working relationship with County inspection staff.

Special Condition #5 currently requires deployment to occur only during daylight hours and during week days. We would like to request a modification as part of this reauthorization request that would allow deployments to begin as early as one hour before official sunrise and end no later than one hour after official sunset and to extend deployment days to seven days a week. The no weekend deployments have in some cases resulted in costly delays among commercial reef carriers particularly when good weather windows were associated with weekends.

Thank you for taking the time to review this reauthorization. Please do not hesitate to contact me if you need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell S. Nelson".

Russell S. Nelson, Director
Division of Marine Fisheries

SECTION A

FOR AGENCY USE ONLY	
ACOE Application #	DEP/WMD Application #
Date Application Received	Date Application Received
Proposed Project Lat.	Fee Received \$
Proposed Project Long.	Fee Receipt #

PART 1:

Are any of the activities described in this application proposed to occur in, on, or over wetlands or other surface waters?

yes no

Is this application being filed by or on behalf of a government entity or drainage district? yes no

A. Type of Environmental Resource Permit Requested (check at least one). See Attachment 2 for thresholds and descriptions.

- Noticed General - include information requested in Section B.
- Standard General (Single Family Dwelling) - include information requested in Sections C and D.
- Standard General (all other Standard General projects) - include information requested in Sections C and E.
- Individual (Single Family Dwelling) - include information requested in Sections C and D.
- Individual (all other Individual projects) - include information requested in Sections C and E.
- Conceptual - include information requested in Sections C and E.
- Mitigation Bank Permit (construction) - include information requested in Sections C and F. (If the proposed mitigation bank involves the construction of a surface water management system requiring another permit defined above, check the appropriate box and submit the information requested by the applicable section.)
- Mitigation Bank (conceptual) - include information requested in Sections C and F.

B. Type of activity for which you are applying (check at least one)

- Construction or operation of a new system, other than a solid waste facility, including dredging or filling in, on or over wetlands and other surface waters.
- Construction, expansion or modification of a solid waste facility.
- Alteration or operation of an existing system which was not previously permitted by a WMD or DEP.
- Modification of a system previously permitted by a WMD or DEP.
 Provide previous permit numbers:

<input type="checkbox"/> Alteration of a system	<input checked="" type="checkbox"/> Extension of permit duration
<input type="checkbox"/> Abandonment of a system	<input type="checkbox"/> Construction of additional phases of a system
<input type="checkbox"/> Removal of a system	

C. Are you requesting authorization to use Sovereign Submerged Lands?

yes no

(See Section G and Attachment 5 for more information before answering this question.)

D. For activities in, on, or over wetlands or other surface waters, check type of federal dredge and fill permit requested:

- | | | |
|--|---|----------------------------------|
| <input checked="" type="checkbox"/> Individual | <input type="checkbox"/> Programmatic General | <input type="checkbox"/> General |
| <input type="checkbox"/> Nationwide | <input type="checkbox"/> Not Applicable | |

E. Are you claiming to qualify for an exemption? yes no

If yes, provide rule number if known.

PART 3: A. OWNER(S) OF LAND	B. ENTITY TO RECEIVE PERMIT (IF OTHER THAN OWNER)
Name	Name Russell S. Nelson, Director, Division of Marine Fisheries
Title and Company	Title and Company Florida Fish and Wildlife Conservation Commission
Address	Address 620 South Meridian Street, Mailbox MF
City, State, Zip	City, State, Zip Tallahassee, Florida 32399-1600
Telephone and Fax	Telephone and Fax (850)-488-6058, Fax (850)-922-0463
C. AGENT AUTHORIZED TO SECURE PERMIT	D. CONSULTANT (IF DIFFERENT FROM AGENT)
Name	Name
Title and Company	Title and Company
Address	Address
City, State, Zip	City, State, Zip
Telephone and Fax	Telephone and Fax

PART 4: (Please provide metric equivalent for federally funded projects):

- A. Name of Project, including phase if applicable: Escambia County Large Area Artificial Reefs
- B. Is this application for part of a multi-phase project?
 yes no
- C. Total applicant-owned area contiguous to the project?
 _____ ac.; _____ ha.
- D. Total area served by the system: _____ ac.; _____ ha.
- E. Impervious area for which a permit is sought: _____ ac.; _____ ha.
- F. Volume of water that the system is capable of impounding:
 _____ ac. ft.; _____ m
- G. What is the total area of work in, on, or over wetlands or other surface waters?
 _____ ac.; _____ ha. _____ sq. ft.; 120.7 Nautical sq. m.
- H. Total volume of material to be dredged: _____ yd; _____ m
- I. Number of new boat slips proposed: _____ wet slips; _____ dry slips

PART 5:

Project location (use additional sheets if needed):

County(ies) Escambia

Section(s)	Township	Range
Section(s)	Township	Range
Section(s)	Township	Range

Land Grant name, if applicable:

Tax Parcel Identification Number:

Street Address Road or other location:

City, Zip Code, if applicable:

PART 6: Describe in general terms the proposed project, system, or activity.

Two large artificial reef areas located in federal waters about 17 to 19 miles offshore of Escambia County.

PART 7:

A. If there have been any pre-application meetings, including on-site meetings, with regulatory staff, please list the date(s), location(s), and names of key staff and project representatives.

2/11/00, Pensacola, Clif Payne (COE), J. Dodrill, B. Horn & T. Maher (FWCC)

6/14/00, Pensacola, Clif Payne (COE) & B. Palmer, B. Horn (FWCC)

B. Please identify by number any MSSW/Wetland Resource/ERP/ACOE Permits pending, issued or denied for projects at the location, and any related enforcement actions.

Agency	Date	No.\Type of Application	Action Taken
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C. Note: The following information is required for projects proposed to occur in, on or over wetlands that need a federal dredge and fill permit or an authorization to use state owned submerged lands. Please provide the names, addresses and zip codes of property owners whose property directly adjoins the project (excluding application) and/or (for proprietary authorizations) is located within a 500 ft. radius of the applicant's land. Please attach a plan view showing the owner's names and adjoining property lines. Attach additional sheets if necessary.

- | | |
|----|----|
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |
| 7. | 8. |

PART 8:

A. By signing this application form, I am applying, or I am applying on behalf of the applicant, for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto, does not relive me of any obligation for obtaining any other required federal, state, water management district or local permit prior to commencement of construction. I agree, or I agree on behalf of the applicant, to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a responsible operation entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Russell S. Nelson

Typed/Printed Name of Applicant (If no Agent is used) or Agent (If one is so authorized below)

Signature of Applicant/Agent

Date

Director, Division of Marine Fisheries, Florida Fish and Wildlife Conservatin Commission

(Corporate Title if applicable)

AN AGENT MAY SIGN ABOVE ONLY IF THE APPLICANT COMPLETES THE FOLLOWING:

B. I hereby designate and authorize the agent listed above to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above; and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Typed/Printed Name of Applicant	Signature of Applicant	Date
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(Corporate Title if applicable)

Please note: The applicant's original signature (not a copy) is required above.

PERSON AUTHORIZING ACCESS TO THE PROPERTY MUST COMPLETE THE FOLLOWING:

C. I either own the property described in this application or I have legal authority to allow access to the property, and I consent, after receiving prior notification, to any site visit on the property by agents or personnel from the Department of Environmental Protection, the Water Management District and the U.S. Army Corps of Engineers necessary for the review and inspection of the proposed project specified in this application. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review and inspection. Further, I agree to provide entry to the project site for such agents or personnel to monitor permitted work if a permit is granted.

Typed/Printed Name of Applicant	Signature of Applicant	Date
---------------------------------	------------------------	------

(Corporate Title if applicable)



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
PENSACOLA REGULATORY OFFICE
41 North Jefferson Street, Suite 104
PENSACOLA, FLORIDA 32501-5794

-2 2000

Regulatory Division
North Permits Branch
199402365 IP-CP

October 25, 2000

Fish and Wildlife Conservation Commission
c/o Jon Dodrill
620 South Meridian Street Mail box #MF-MFM
Tallahassee, Florida 32399-1600

RECEIVED

OCT 30 2000

BUREAU OF
MARINE FISHERIES SERVICES

Dear Mr. Dodrill:

Reference is made to your agency's request to modify Department of the Army (DA) permit 199402365 issued on 22 September 1994 and to gain a 10 year extension of the permit. The permit allowed deployment of artificial reef materials within two Large Area Artificial Reef Sites (LAARS) located south of Pensacola in Escambia County, Florida.

In evaluating an artificial reef permit application, the Corps must ensure the project is consistent with the Corps regulations published in 33 CFR Parts 320-330. The Corps is also tasked with ensuring an artificial reef, if permitted, is in accordance with the appropriate provisions of the National Fishing Enhancement Act of 1984.

On 17 August 2000, a public notice was published that advertised the FWCC request to reauthorize and modify the above referenced DA permit. The FWCC request has generated responses from the Atlantic States Marine Fishery Commission (ASMFC), Gulf States Marine Fishery Commission (GSMFC), National Marine Fisheries Service (NMFS), Sierra Club (SC), and the Public Employees for Environmental Responsibility (PEER). The comments of each agency or organization are outlined below.

By letter dated May 15, 2000, the ASMFC expressed concern with the FWCC request to deploy unballasted automobile tires as a component of the concrete reef tetrahedrons and the potential for dis-association and instability of the tires. The ASMFC also questions the usefulness of the 18 month assessment of the reef tetrahedrons. The ASMFC letter is enclosed for your review and evaluation. Please provide a written response to the comments or questions raised by the ASMFC.

By letters dated June 5, 2000 and June 10, 2000 the Gulf States Marine Fisheries Commission (GSMFC) also expressed concern for the deployment of the unballasted tires based on a lack of stability and potential lack of habitat quality. The GSMFC references a commission position statement addressing deployment of automobile tires and a commission resolution on the use of selected materials of opportunity. Copies of each of the GSMFC letters is enclosed for your review and evaluation. Please provide a written response to the comments or questions raised by the GSMFC.

By letter dated September 15, 2000, the NMFS stated concerns for the stability of the deployment materials as advertised in the public notice. The deployment of unballasted automobile tires is referenced as not complying with the guidelines for artificial reef material published by the GSMFC in 1997. The NMFS collaborated in the development of the guidelines and requests the guidelines be followed. The NMFS is also concerned over the potential instability of the reef tetrahedrons themselves. The lack of design and stability information pertaining to the 1/8" or thicker metal objects is a third area of concern for the NMFS. A copy of the NMFS letter is enclosed for your review and evaluation. Please provide a written response to the comments or questions raised by the NMFS.

By letter dated September 25, 2000, the Northwest Florida Group Sierra Club (SC) submitted objections to the project as advertised. The group feels that tires and the reef tetrahedrons are not appropriate reef material, would not produce quality habitat, would set an unfavorable precedent, and would conflict with proposed "no take zones". The potential lack of stability and longevity of the deployment material within the category involving 1/8" or thicker metal objects is another source of concern for the group. A copy of the SC letter is enclosed for

your review and evaluation. Please provide a written response to the comments or questions raised by the SC.

Public Employees for Environmental Responsibility submitted numerous objections by correspondence dated September 11, 2000. PEER has requested the permit modification be denied. PEER suggests the permit be denied because the project would potentially violate Florida Statutes by allowing transport of artificial reef material over waters of the State of Florida, because the design, location, type of deployment materials and quantity of materials to be deployed are not specified, deployment may jeopardize threatened or endangered species, and that the project is not consistent with Corps of Engineers regulations, the mandates of the National Fishing Enhancement Act of 1984 (NFEA), National Artificial Reef Plan (NARP), Coastal Artificial Reef Planning Guide (CARPG), Guidelines for Marine Artificial Reef Material (GMARM), and the Florida Artificial Reef Development Plan (FARDP). A copy of the PEER correspondence is enclosed for your review and evaluation. Please provide a written response to items 1, 2, 4, 5, 6, 8, 9, 11, 12, 13, 15, 16, 18, 19, 20, 22, 24-27, 29, 30, and 34 as represented in the PEER correspondence.

In addition to responding to the comments referenced above, please accomplish the following:

- a. Provide written correspondence from the U.S. Coast Guard Eighth District regarding the need or lack thereof to mark the Escambia East and Escambia West reef sites.
- b. Describe what procedures or mechanism will be utilized by the FWCC to ensure deployments will not detrimentally impact natural habitat such as live bottom, existing reefs, etc.
- c. Clarify the minimum vertical clearance above deployed reef materials. The original permit stated a minimum clearance of 50 feet was required, however a minimum of 55 feet is specified in the FWCC June 19, 2000 correspondence in combination with a working clearance of 60 feet. What is the minimum vertical water column clearance being requested?
- d. Clarify the goals and objectives of the three proposed categories of reefs (public reefs, private reefs, sanctuary reefs) referenced the FWCC June 19, 2000 correspondence.

e. Clarify how materials to be deployed as referenced in the Corps August 17, 2000 public notice are consistent with the goals and objectives referenced in letter "d" above.

f. Clarify how the materials to be deployed are consistent with the guidelines of the NARP, GMARM and CARPG.

g. Clarify how the monitoring and management of the LAARS will be accomplished specifically in light of the goals and objectives referenced in letter "d" above.

h. The FWCC correspondence dated June 19, 2000 references biyearly monitoring of the LAARS. Will all three categories of reefs be available for inspection? Approximately how many reefs would be inspected during each monitoring event?

i. The FWCC correspondence dated June 19, 2000 appears to suggest that basic performance monitoring would be accomplished on the LAARS. Please clarify if monitoring (compliance, performance, biological, fisheries, and socio-economic) as discussed in the NFEA, NARP and CARPG will be accomplished for the LAARS? If so, provide a description of how it will be accomplished.

j. Clarify how the management of the LAARS will be consistent with the NFEA, NARP and CARPG. Will performance standards be incorporated into the management plan?.

k. Clarify if maintenance as referenced in the NFEA, NARP, and the CARPG will be accomplished for the LAARS.

l. Clarify how the LAARS will be monitored and managed in accordance with GSMFC fisheries management guidelines?

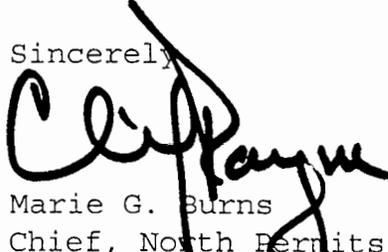
m. Clarify how or if the siting of the public and sanctuary reefs will incorporate GSMFC fisheries management guidelines?

The information requested above is required to determine compliance with the above referenced acts and for the Corps to complete a public interest review. Any other information you believe may be helpful in order to fully justify the project should also be submitted at this time. Further evaluation of your application will be held in abeyance for 45 days pending receipt of your response. If no response is received within this time

frame, we will assume you have no further interest in obtaining a Department of the Army permit and will place your request in an inactive status. If we have not heard from you within the specified time, this letter will constitute final action by the Department of the Army.

Questions concerning this letter should be directed to Clif Payne at the letterhead address or by telephone at (904) 433-8732.

Sincerely,


Marie G. Burns
Chief, North Permits Branch

for

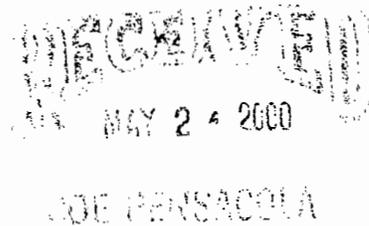
Enclosures

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
Bureau of Marine Resources
5 North Belle Mead Road, Suite 1, East Setauket, New York 11733
Phone: (631) 444-0430 • **FAX:** (631) 444-0434
Website: www.dec.state.ny.us



May 15, 2000

Mr. Clif Payne
U.S. Army Corps of Engineers
Pensacola Regulatory Office
41 North Jefferson Street
Suite 104
Pensacola, Florida 32501-5974



Dear Mr. Payne:

I am the Chairman of the Atlantic States Marine Fisheries Commission's Artificial Reef Technical Committee. This Committee consists of representatives from Atlantic East Coast States engaged in artificial reef activities and advisors from federal agencies with an interest in artificial reefs. The Committee has been meeting regularly since 1984 to discuss and analyze artificial reef issues of regional and nationwide interest and concern. We also coordinate and meet with like committees of the Gulf and Pacific States Marine Fisheries Commissions. Members of these bodies have reef construction, management and monitoring experience ranging from seven to more than 28 years.

At a recent meeting, an issue came up that generated unanimous concern among our members and is the reason for this letter. This concerns the use of unballasted automobile tires as part of reef structures proposed for placement in federal waters off the State of Florida. We cannot dictate the actions of state and federal agencies, and do not presume to do so in this case. We feel, however, that providing technical comments derived from our members' more than 130 years of cumulative experience with artificial reefs may be useful to agencies charged with oversight of these activities.

Tires were once considered to be "ideal" artificial reef material because they were so durable, freely available in large quantities and could provide good habitat for fish and other reef organisms. Millions of tires were deployed as reefs by programs throughout the United States from the 1960s into the 1980s. These tire reef projects initially received strong support and were considered successful overall based on the results of short-term studies. Over the long term, however, there have been many documented failures of tire reefs, some resulting in environmental damage and/or economic losses.



As an example, North Carolina's artificial reef program has been crippled financially and from a public relations standpoint as a result of the onshore movement of artificial reef tires that were placed offshore more than 25 years ago. In the last two months alone, 600-800 tires have washed ashore onto the beaches of a popular North Carolina barrier island coastal community. In the last five years, that state's reef program has spent \$100,000 on beach and near-shore artificial reef tire recovery at a cost of \$10-13 per tire. More than 100,000 tires have been retrieved from North Carolina beaches since 1989. Recently, the North Carolina state reef program has been getting an average of 25 complaint calls a month regarding tires washing ashore.

The primary issue surrounding the use of tires is stability in an open marine environment. Since tires are of relatively low density and only slightly negatively buoyant, the use of unballasted automobile tires should not be allowed for artificial reef construction, especially in dynamic ocean waters. State programs have documented loose tire movements of at least 30 miles. Loose tires end up in trawling gear, damage natural reefs and habitats, and produce adverse economic, aesthetic, safety, and public relations impacts by washing up on public and private beaches.

An often suggested solution to loose tire movement in dynamic environments is to secure the tires together, often into configurations such as the tetrahedron unit now proposed for placement off Florida. Unfortunately, the unballasted tires slipped loosely over the tetrahedron pilings will outlast the frames on which they are placed. When the concrete pilings or joints ultimately deteriorate and fail, the tires will eventually be freed and capable of moving off-site. It is not a matter of if such structures will fail, but when they will fail. Even if the units stay together for thirty years, for the limited benefits derived this is not an acceptable environmental trade off. We do not feel that it is in the best public interest to unnecessarily place an environmental burden upon the next generation or the generation after that.

The concerns generated by the use of automobile tires are addressed in the National Artificial Reef Plan, which stresses long-term artificial reef stability. It is critical for reef stability that all components of a reef structure are independently stable due to the inevitability of deterioration of this structure over time. This is why synthetic low-density materials of long duration such as plastics, fiberglass, and rubber are inappropriate as reef materials or components of reef material structures in an ocean or gulf environment.

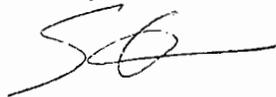
Recognizing this, most states will currently not allow the use of tires in their programs or severely limit their use, including Massachusetts, New York, New Jersey, Virginia, Maryland, North Carolina, South Carolina, Georgia, Florida's Department of Environmental Protection, Mississippi, Texas, Louisiana, California, Oregon, Puerto Rico, and the U.S. Virgin Islands. Further, all Gulf and Atlantic state programs are familiar with the tetrahedron tire frame design. A recent poll taken indicated no reef program managers would support modification of their policies or rules to integrate this design or any other automobile tire unit into their current reef programs where they are not currently in use. The only Atlantic coastal state currently engaged in placing tire reefs is Delaware, the state with the youngest artificial reef program (five years). They use concrete-ballasted truck tires, not automobile tires. Regardless, they would not use the subject tetrahedron frame unit containing individual unballasted tires due to the anticipated ultimate structural failure.

Finally, the Committee would caution that the results of a short-term experiment using the subject tetrahedron/tire units may not be sufficient to make an accurate assessment of the long-term viability of the units. Florida once spent \$50,000 on a different short-term study evaluating the stability and durability of automobile bodies as artificial reefs. The car bodies attracted fish as anticipated, yet were displaced and destroyed by a hurricane two years after the experiment's conclusion that automobiles were stable and made good reef material. The subject tetrahedron/tire units have already been under experimental evaluation and are currently used in adjacent Alabama where five of nine units in 70 feet of water disappeared during Hurricane Georges (1998).

In summary, the ASMFC Artificial Reef Technical Committee strongly advises against the use of reef units incorporating unballasted vehicle tires as part of their design. We believe that, in the long-term, our "do-no-harm" conservation vision would be sacrificed for short-term biological and socio-economic gains. Overall, the use of tires by artificial reef development programs in the marine environment is risky strategy that may not fully appreciate the eventual consequences and impacts for future generations. Other stable, durable designed reef units and materials without the adverse long-term implications are available for use in dynamic marine environments. Further, research efforts and funds should be focused on these more suitable materials and other aspects of artificial reef function rather than on structures and units that incorporate problematic materials such as tires.

Should you require additional information regarding more suitable artificial reef materials or otherwise, please do not hesitate to contact me and the Committee. Thank you for your attention to and consideration of this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'S Heins', with a long horizontal stroke extending to the right.

Steve Heins, Chairman
ASMFC Artificial Reef Technical Committee

cc: Don Hambrick
Marie Burns
John Hall



GULF STATES MARINE FISHERIES COMMISSION

P.O. Box 726, Ocean Springs, MS 39566-0726

(228) 875-5912 • (228) 875-6604 FAX

www.gsmfc.org

Larry B. Simpson
Executive Director

June 5, 2000

Mr. Clif Payne
U.S. Army Corps of Engineers
Pensacola Regulatory Office
41 North Jefferson Street
Suite 104
Pensacola, Florida 32501-5974

Dear Mr. Payne:

The Gulf States Marine Fisheries Commission (GSMFC) is a compact of the States of Texas, Louisiana, Mississippi, Alabama, and Florida, established in 1949 through state legislation and Federal Public Law 81-66. The mission of the GSMFC is “. . . to promote the better utilization of the fisheries, marine, shell and anadromous, of the seaboard of the Gulf of Mexico, by the development of a joint program for the promotion and protection of such fisheries and the prevention of the physical waste of the fisheries from any cause.” One of the most significant program areas of the GSMFC over the past twelve years is Gulf-wide coordination of state artificial reef program activities. We have recently become aware of a letter from the Florida Fish and Wildlife Conservation Commission to the U.S. Army Corps of Engineers, dated May 18, 2000, requesting a variance from their permit to allow the deployment of concrete tetrahedron units that have unballasted automobile tires threaded over the beams that form the tetrahedron. While we understand that the variance is for a comparison test between the units with tires and the units without tires, we would like to take this opportunity to raise our concern regarding the variance based on two policies (attached) established by the GSMFC.

The first is entitled “Position Statement on the Use of Automobile Tires as Artificial Reef Material.” The statement specifies that tires are not considered to be an optimum material, primarily because they are not stable in the marine environment, unless they are ballasted according to guidelines established by the State of New Jersey, Department of Environmental Protection and Energy. The second is a resolution entitled “Resolution on the Use of Selected Materials of Opportunity as Artificial Reef Material.” Note that the first resolved clause recommends against the use of materials

-Alabama-

-Florida-

-Louisiana-

-Mississippi-

-Texas-

*Commemorating Fifty Years of Service to the Marine Resources of the Gulf of Mexico
Preserving the Past • Planning the Future • A Cooperative Effort*

that may disassociate, making the resultant pieces free to the environment. The artificial reef unit in question is constructed by connecting concrete beams by tying together reinforcement rods and pouring a concrete cap over the apexes. It is virtually guaranteed that, given time and exposure to salt water, the tetrahedrons will come apart, thus rendering the unballasted tires free to the environment. The manufacturers own product information indicates a life expectance of about forty years. Automobile tires will last much, much longer than forty years.

While tire use as artificial reef material has not been extensive in the Gulf of Mexico, tires were used extensively along the Atlantic coast. In recent years, tires deployed as artificial reefs have washed ashore in North Carolina, causing significant economic and social impact, costing the management agency in excess of \$100,000.00 to remove them. In addition, tires that were deployed offshore Mississippi in the early 1980s have proven to be ineffective in promoting epiphytic growth, leading to the conclusion that tires are not effective habitat for establishing marine communities.

During the period between the 1960s and the 1980s, tires were thought to be ideal reef material, because they were durable, inexpensive, and readily available. Many states and the federal government promoted their use as artificial reefs, thinking they were a success story, based on short-term evaluations. However, longer term exposure of tires in the marine environment has proven that tires are not the success story once thought. In fact their habitat value is highly questionable, they are unstable, have washed ashore, and have been picked up in the nets of shrimp fishermen. When polled recently, most states along the Atlantic and Gulf coasts indicated that they will not use the units in question because the tires used are unballasted and will likely cause negative environmental, social, and economic impacts in the not-to-distant future.

In addition to the policy decisions referenced above, the GSMFC has contributed to the development of two documents (enclosed) that call into question the wisdom of using automobile tires as artificial reefs. The first document is entitled "Guidelines for Marine Artificial Reef Materials." That document provides a brief history of the use of various secondary use materials, including tires, listing the drawbacks and benefits for the use of each material. Note that in the tire chapter (beginning page 29) that the primary benefits are associated with availability and costs. We do note that tires can be effective in holding fish and invertebrate organisms if properly designed, but proper design includes the employment of concrete ballast, which may be more responsible for the associated organisms than the tires. Further note that the drawbacks are more substantive, and the recommendations include actions that are not taken when constructing the unit in question, specifically ballasting. The second document is entitled "Coastal Artificial Reef Planning Guide." That document provides the following guidance on page 26:

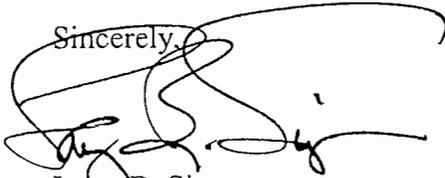
Vehicle tires are also problematic. However, there have been limited cases where they have been used without documented negative impact. In particular, tires have been imbedded in concrete that both encases the tires and provides enough ballast to ensure stability. The plan recommends that tires should be used as artificial reef materials only with great caution.

Mr. Clif Payne
June 5, 2000
Page -3-

In closing, the GSMFC recognizes that the variance request is for a comparison project only; however, we are concerned that short term results could result in the widespread use of unballasted tires in the marine environment, and the GSMFC opposes the use of unballasted automobile tires as artificial reef material based on their inherent instability in salt water and their questionable habitat value in the Gulf of Mexico. There are certainly other materials available for artificial reef development that are far more acceptable and have documented habitat value. Since this variance request is viewed as a significant departure from the current allowable materials attached to the permit, we recommend that the U.S. Army Corps of Engineers issue a public notice of the request and gather comments from the public regarding this use of automobile tires in the marine environment.

Thank you for your consideration of our comments regarding this issue. If you have questions or require additional information, please feel free to contact Ron Lukens at the GSMFC office.

Sincerely,

A handwritten signature in black ink, appearing to read 'Larry B. Simpson', written over the word 'Sincerely,'.

Larry B. Simpson
Executive Director

cc: Commissioners and Proxies
Technical Coordinating Committee
TCC Artificial Reef Subcommittee
ASMFC Artificial Reef Advisory Committee
Dr. Russell Nelson
Dr. Bob Palmer

LBS/RRL/nm

P. O. Box 726
Ocean Springs, MS 39564
(601) 875-5912
(FAX) 875-6604

Gulf States Marine Fisheries Commission

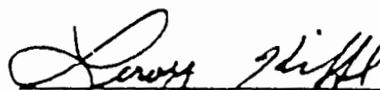
Larry B. Simpson
Executive Director

POSITION STATEMENT ON THE USE OF AUTOMOBILE TIRES AS ARTIFICIAL REEF MATERIAL

Historically, construction of artificial reefs in the marine and estuarine environment in the United States has been accomplished using materials of opportunity, ranging from refrigerators to scuttled ships. A material that has been used rather consistently over time is automobile tires. Use of tires as artificial reef material has been variously motivated by the need for low cost, readily available materials to a mechanism to dispose of a significant source of landside solid waste. Methods of using tires have varied, ranging from the use of single, unballasted tires to the construction of sophisticated units with tires embedded in concrete.

Since most artificial reef programs in the United States still rely upon the use of materials of opportunity for continued construction of artificial reefs, the issue of tire use recurs periodically. Some programs are pressured by local and state governments to use tires toward fulfilling waste disposal goals. Regardless of the underlying motivations for use of tires in artificial reef construction, the practice continues.

Recognizing that automobile tires as artificial reef material in the Gulf of Mexico region are not generally accepted as an optimum material, either physically, environmentally, or biologically, the Gulf States Marine Fisheries Commission establishes that if automobile tires must be used as artificial reef material in the Gulf of Mexico region, including both state territorial and federal jurisdictions, they should be chipped and incorporated as aggregate in concrete units or properly ballasted in units of multiple tires following the concept established by the State of New Jersey, Department of Environmental Protection and Energy, Division of Fish, Game, and Wildlife. Specific standards for design and ballast may vary depending primarily on bottom sediments, bottom slope, and current velocities; however, artificial reef program should adhere to the basic concept of using established engineering principles to determine appropriate design and ballast weight to assure stability under predictable storm and other events.


Leroy Kiffe, Chairman



Larry B. Simpson
Executive Director

GULF STATES MARINE FISHERIES COMMISSION

P.O. Box 726, Ocean Springs, MS 39566-0726

(601) 875-5912 (FAX) 875-6604

RESOLUTION

ON THE USE OF SELECTED MATERIALS OF OPPORTUNITY

AS ARTIFICIAL REEF MATERIAL

WHEREAS the National Fishing Enhancement Act of 1984 (P.L. 98-623) established the need for and mandated the development of a National Artificial Reef Plan (National Plan), and

WHEREAS the National Marine Fisheries Service was required to draft the National Plan, and

WHEREAS the National Plan was completed and adopted in 1985 as NOAA Technical Memorandum NMFS OF-6, and

WHEREAS the National Plan set forth criteria for application to the use of materials in development of artificial reefs, and

WHEREAS these criteria require that artificial reef materials be functional as long-term habitat for invertebrate and vertebrate living aquatic resources, compatible with the environment into which they are placed, durable enough to withstand the rigors of the natural environment and still retain their functional capability, stable enough to remain in place through natural storm events and man-made perturbations, and available for use by artificial reef programs, and

WHEREAS materials of opportunity, or man-made substances that are no longer useful for their primary purpose, have been used for decades in the United States as artificial reef material, and

WHEREAS materials of opportunity include, but are not limited to, concrete rubble, automobile and other vehicle bodies, vehicle tires, white goods (washing machines, clothes driers, refrigerators, etc.), aircraft, railroad cars, steel-hulled vessels and barges, oil and gas structures, military battle hardware, among a host of others, and

WHEREAS many materials of opportunity meet the criteria set forth in the National Plan for artificial reef development, while others do not, and

WHEREAS the Gulf States Marine Fisheries Commission developed and published "Guidelines for Marine Artificial Reef Materials" (1997), and

-Alabama-

-Florida-

-Louisiana-

-Mississippi-

-Texas-

WHEREAS that document provides a recitation of experiences with the use of selected materials of opportunity as artificial reef material, along with a listing of benefits, drawbacks, and recommendations regarding such use, and

WHEREAS some of the materials exhibit more drawbacks than benefits when used as artificial reef materials; therefore, they do not meet the criteria, set forth in the National Plan, for artificial reef development,

THEREFORE BE IT RESOLVED that the Gulf States Marine Fisheries Commission recommends against the use of materials for artificial reef development that may disassociate in the marine environment, thus making the resulting disassociated pieces free to the environment, and

BE IT FURTHER RESOLVED that the Gulf States Marine Fisheries Commission recommends against the use of the following materials of opportunity for artificial reef development:

- passenger automobile bodies
- non-fighter aircraft
- fiberglass boat hulls and molds
- white goods, including washing machines, clothes driers, refrigerators, and other appliances
- wooden vessels and other wooden materials

BE IT FURTHER RESOLVED that this resolution be provided to the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service for application to consideration of permit requests for development or enhancement of artificial reefs in the Gulf of Mexico region.

Given this the 21st day of March in the year of Our Lord, One Thousand, Nine Hundred, Ninety-seven.


Walter Penry, Chairman



Larry B. Simpson
Executive Director

GULF STATES MARINE FISHERIES COMMISSION

P.O. Box 726, Ocean Springs, MS 39566-0726

(228) 875-5912 • (228) 875-6604 FAX

www.gsmfc.org

June 10, 2000

Mr. Clif Payne
U.S. Army Corps of Engineers
Pensacola Regulatory Office
41 North Jefferson Street
Suite 104
Pensacola, Florida 32501-5974

Dear Mr. Payne:

Pursuant to our recent phone conversation, you asked if there might additional information regarding the use of tires as artificial reef material that may not have been covered in our letter to you dated June 5, 2000. I would like to take this opportunity to provide additional comments regarding the artificial reef permit variance requested by the Florida Fish and Wildlife Conservation Commission. As noted in our letter, we realize that the variance is being requested to allow the use of a specific artificial reef unit, which includes unballasted tires, in a study to determine their performance. You should be aware that just such a study is currently being conducted off Alabama by Dr. Bob Shipp. Dr. Shipp and his staff are evaluating several artificial reef units in an effort to determine whether or not they should be used in Alabama's offshore waters.

Dr. Shipp's study is not complete; however, it is important to note that following Hurricane Georges in September 1998, several of the Walters artificial reef units, with tires attached, disappeared. To my knowledge, they have not yet been recovered. At the same time, other manufactured units went through the storm and did not move. This is a particularly important point, since it is likely that the addition of the tires to the concrete tetrahedron adds significant surface area without adding any weight to provide stability. While to my

-Alabama-

-Florida-

-Louisiana-

-Mississippi-

-Texas-

knowledge this point has not been proven through specific stability tests, the real world results should be seriously considered.

I mentioned that tires do add significant surface area to the concrete tetrahedrons. One of the issues Mr. Walters points to is that the increased surface area adds complexity and, therefore, will be more effective as fish habitat. While it is generally accepted that habitat complexity is a benefit, most observations, as mentioned in our first letter, have revealed that tires in the northern Gulf of Mexico do not promote epiphytic growth and, therefore, the complexity the unit provides is not satisfactory habitat. As I understand it, one reason for the request for the variance is to test the tetrahedrons with tires and without tires to determine the difference in fish biomass associated with the units. It is reasonable to assume that the increased complexity resulting from the addition of the tires could result in more fish being associated with the units with tires as opposed to the units without tires; however, that does not address the real issue, i.e. stability of the tires when the unit fails and the tires are free in the environment. You notice I say "when" rather than "if." No long term durability studies have been done to determine the longevity of the units, but Mr. Walters states in his own product information that the life expectancy is about 30 to 40 years. Ignoring this fact simply puts off dealing with the loose tires for another generation of folks to address.

On an international note, I recently participated in the 23rd meeting of the Scientific Group of the London Convention, which is an international agreement to prevent pollution of the world's oceans from dumping of wastes at sea. I quickly became aware of a perception held by several of the member countries that artificial reef development is simply a way to circumvent ocean dumping regulations and agreements, such as the London Convention. This perception is held particularly with regards to activities in the United States. The continued use of questionable materials such as automobile tires as artificial reefs simply provides such criticisms with ammunition and could result in conflicts among countries that promote the use of artificial reef habitats and those that oppose such actions. The participants at the meeting which I attended held discussions regarding the possibility of regulating artificial reef development just like ocean dumping. Such a result would be problematic for U.S. programs.

Finally, I have enclosed an article from the New Jersey artificial reef newsletter that provides information regarding the importance of epiphytic or encrusting growth on artificial reefs. This article is enclosed because it illustrates the significance of the "habitat value" issue. The fact that tires in the northern Gulf of Mexico do not promote epiphytic growth is significant regarding the overall performance as habitat for marine organisms. Note that there is a tire anchoring the unit. It is filled with concrete to serve as a stabilizing foot, so it is completely ballasted. It is not considered to be a habitat component of the unit. It should also be noted

Mr. Clif Payne
June 10, 2000
Page -3-

that, even though our Position Statement references the New Jersey protocol for ballasting tires used as artificial reefs, New Jersey discontinued the use of tires many years ago.

In closing, I want to reiterate the message in our first letter to you regarding the requested variance. We do not oppose the proposed research project; however, it should be noted that the research project, as I understand it, will not address our primary concerns. Those are 1) instability of unballasted tires used, and 2) relatively low habitat value of tires. The amount of biomass around the units, with or without tires, says very little about the wisdom of using the tires, so it is unclear how the results of the study will affect the decision of whether to go forward with using tires or continuing to disallow their use.

Thank you for the opportunity to comment. I will be glad to answer any questions you might have regarding our thoughts on this matter.

Sincerely,



Ronald R. Lukens
Assistant Director

Enclosure
RRL/nm

NJ REEF NEWS

Y2K Annual Edition

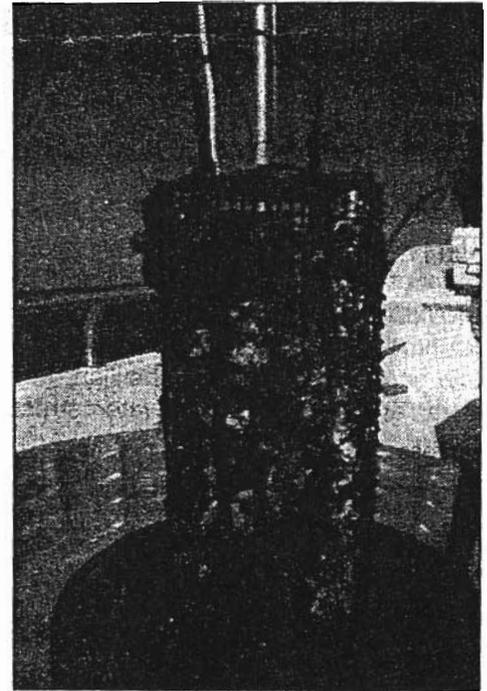
FREE

Study Reveals Reefs Enhance New Jersey's Marine Environment

Preliminary results from a recent artificial reef colonization study conducted by the Division of Fish and Wildlife indicate that New Jersey's reefs have hundreds of times more marine life than areas of sea floor with no reefs. The study was conducted to determine the types and amounts of marine life that colonize ocean reefs and to compare those levels with what is normally found on the sandy sea floor. It was an attempt to answer the question do reefs produce marine life or simply attract it?

The study began in 1996 when 30 experimental reef habitats were placed on the Barnegat Light Reef Site. Each habitat consisted of a 3' x 1' square plastic coated wire box embedded in a concrete base. The boxes were filled with a variety of materials to imitate the hiding places found on reefs and to duplicate common reef building materials. Each box contained 10 corrugated fiberglass panels, 50 whelk (large snails) shells and 6-inch diameter plates of four common, reef-building materials—steel, concrete, rock and tire rubber.

The first experimental reef habitat was raised from the sea floor in October of 1998. After spending two years on the sea floor, it was retrieved by scuba divers from the U.S. Environmental Protection Agency. Division biologists then spent the next three months in a lab removing, sorting, counting, identifying and weighing the marine life living within the experimental habitat. The results were impressive. In



An experimental reef habitat brought to the surface after 3 years on the reef.

just two years, the habitat was colonized by 39,938 marine animals, including 25,000 blue mussels, 8,500 barnacles, 2,000 snails, 1,300 worms, 350 crabs, 12 fish, 2 lobsters and much more. In addition, the habitat was also colonized by colonial encrusting organisms, such as bryozoans, hydroids and sponges, that could not be enumerated, but collectively accounted for tens of thousands of organisms. The total biomass of all these organisms amounted to 9.5 pounds. Biomass is a biologist's measure of the

(continued on page 4)



New Jersey Department of Environmental Protection

Division of Fish and Wildlife

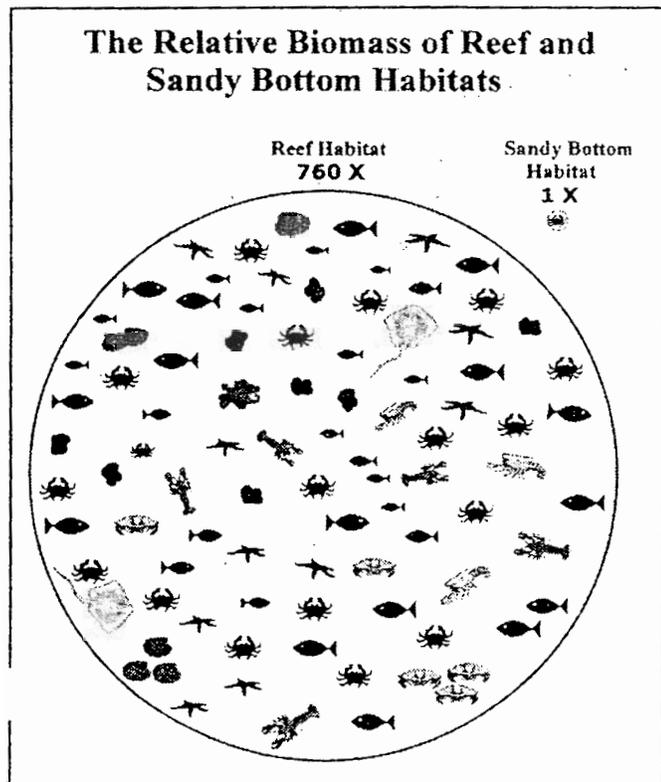
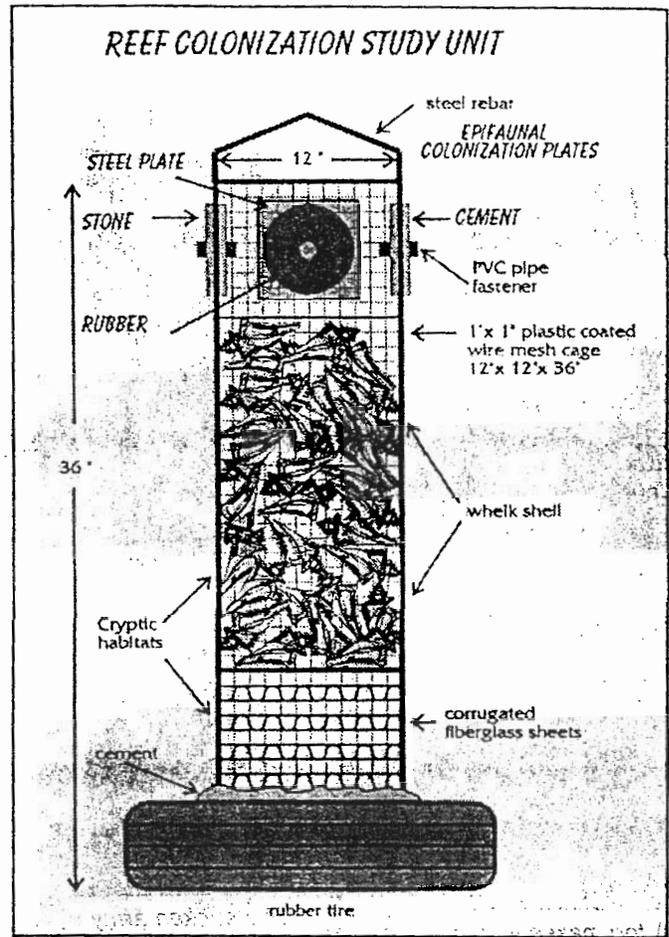


Reefs Enhance Environment

(continued from page 1)

weight of all the organisms living in a particular habitat. In this study, biomass referred to the weight of all marine life inhabiting a square foot of sea floor.

Part of the study focused on comparing the biomass on reefs with that found on the sandy sea floor. For this phase of the study, 60 square-foot samples were taken with a scientific sampling dredge on the sandy sea floor around the Cape May Reef. Marine organisms were separated from the sand using sieves. The biological samples were then analyzed by the Center for Coastal and Marine Studies at Rutgers University. These samples yielded an average of 58 marine organisms with a biomass of 0.2 ounces per square foot of sea floor. More than 99 percent of New Jersey's sea floor consists of sand. Since sand is constantly shifting and does not provide a foothold for marine life, the biomass of sand bottom is low. Sand bottom life includes burrowing animals, such as surf clams, snails, crabs and sand worms. In comparison, the reef habitat had 689 times the number of organisms and 760 times more biomass than the same area of sandy sea floor. The increased biomass of the reef habitat is significant because it represents a far greater food source for marine life and a greater number of food and game species (fish, lobster, crabs,



mussels) available to anglers and divers.

New Jersey reefs are colonized entirely by marine animals. The depths (generally over 60 feet) on reef sites are too great for the penetration of sufficient light to sustain plant growth. Instead of plants, the basic level of the reef food web consists of many species of filter feeding animals that live attached to reef structures and feed by straining the plankton that is carried past them by ocean currents. The filter feeders (i.e., mussels, barnacles, tubeworms and others) are in turn eaten by fish, crabs and lobsters. The stationary filter feeders also serve another function on the reef by providing a carpet of cover or hiding place for small mobile invertebrates, such as shrimp, snails and worms. These animals, too, may end up as food for larger predators.

The goal of building reefs, which provide firm, stable substrate for the attachment of marine organisms, is to enhance the biological productivity of the sea floor. Based on the preliminary results of this study, building reefs does enhance New Jersey's marine environment.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

September 15, 2000

Colonel James G. May
District Engineer, Jacksonville District
Department of the Army, Corps of Engineers
Pensacola Regulatory Office
41 North Jefferson Street, Suite 104
Pensacola, Florida 32501-5794

RECEIVED
SEP 19 2000
COE PENSACOLA

Dear Colonel Miller:

The National Marine Fisheries Service (NMFS) has reviewed the public notice dated August 17, 2000, regarding permit application number 199402365(IP-CP). The applicant, Florida Fish and Wildlife Conservation Commission, is requesting a 5 year extension and additional modifications to an existing permit that authorized two artificial reef sites in the Gulf of Mexico, in Escambia County, Florida.

The original permit authorized the deployment of natural limestone, clean concrete rubble, pre-fabricated materials and reef structures, and cleaned heavy gauge steel materials including surplus military equipment. The proposed modifications include the deployment of clean concrete rubble, quarried limestone, steel hulled vessels prepared/cleaned to U.S. Coast Guard and Environmental Protection Agency specifications, 1/8th inch or thicker metal welded or securely fastened together with a weight of at least 150 pounds, and prefabricated reef structures constructed of the four materials previously listed in this paragraph. The applicant is also requesting a one-time exemption from the existing permit conditions which do not allow the use of vehicle tires. The applicant is proposing an 18-month physical and biological study which would compare pre-fabricated reef tetrahedrons using unballasted vehicles tires to pre-fabricated tetrahedrons lacking vehicle tires. In accordance with the study, approximately 600 unballasted tires would be incorporated into ten reef tetrahedrons and placed in close proximity to ten reef tetrahedrons lacking tires. The physical and biological characteristics of the tetrahedrons would be documented during assessment dives conducted by the applicant and Escambia County six times per year. The tetrahedrons would not be removed upon completion of the study.

The depth within the two sites varies from approximately 73 feet to approximately 238 feet at mean lower low water (MLLW). The proposed reefs would vary in height from 27-178 feet and would maintain a minimum water depth or clearance of 55 feet at MLLW. The bottom consists of light brown sand with some silt present and natural hard bottom does not generally exist with the two referenced sites.



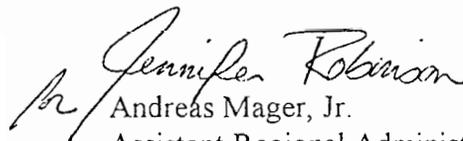
The Gulf States Marine Fisheries Commission, Artificial Reef Subcommittee, has prepared guidelines for artificial reef materials. These guidelines, finalized in January 1997, are based on in-depth investigations and program management experiences. The NMFS participated in developing these guidelines, supports their findings, and recommends that the materials proposed comply with the guidelines.

The guidelines recommend that tires should be ballasted according to engineering principles and that each tire should be ballasted in concrete. The applicant is proposing to use unballasted tires on pre-fabricated reef tetrahedrons. The NMFS is concerned about the corrosion of the welded rebar by the eventual intrusion of saltwater through the concrete cap. Studies have been done on the use of tire cutting, compressing, and baling to bundle unballasted tires together (Minter 1974; Prince and Brouha 1974). These methods were not successful because the material used to bale the tires together eventually corroded or rotted, thus resulting in loose, unballasted tires on the sea bottom (Kasprzak et al. unpublished). A study using 15 tetrahedrons with unballasted tires and 5 tetrahedrons without tires was done in the Hugh Swingle general permit area south of Mobile Bay. When Hurricane Georges came through Alabama in September 1998, nine tetrahedron artificial reef sites were destroyed or buried in mud and only 1 other tetrahedron was located, thereby leaving 10 other tetrahedrons unaccounted for (Strelcheck 2000). The NMFS believes that, from the data available, these tetrahedrons are easily moved or destroyed during large storms resulting in the release of tires in the marine environment. Therefore, the NMFS recommends that only ballasted tires be used for this artificial reef.

The NMFS also questions the use of 1/8th inch or thicker metal welded or securely fastened together with a weight of at least 150 pounds. The NMFS is concerned about the stability of this material since no information has been provided regarding the design and size of this structure and, because of its relatively light weight, how it will be anchored to the bottom. The applicant should provide more detailed information to the NMFS so that we can better assess the stability of this material in regard to the compliance with the guidelines.

If you have questions concerning our comments, please contact Jennifer Robinson of our Panama City Office at 850/234-5061.

Sincerely,


Andreas Mager, Jr.
Assistant Regional Administrator
Habitat Conservation Division

cc:
EPA,ATL
FWS,PC
DEP,PEN
FFWCC,TALL
F/SER4

Work Cited

- Minter, T.F. 1974. Discarded tires as artificial reef material. In: Proceedings: Artificial Reef Conference. TAMU-SG-74-103. Laura Colunga and Richard Stone, editors. p.134-136.
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- Strelcheck, A., J.H. Cowan, R.L. Shipp, J. McCawley. August 2000. Summary Report, Univ. of South Alabama's Artificial Reef Project.



Northwest Florida Group

P.O. Box 4907
Seaside, Florida 32459-4907

September 25, 2000

SEP 28 2000

Cliff Payne
U.S. Army Corps of Engineers
Pensacola Regulatory Office
41 N. Jefferson St., Suite 104
Pensacola, FL 32501-5794

Subject: Permit Application no. 199402365, Artificial Reef Permit, FWCC

Dear Mr. Payne;

The Northwest Florida Group Sierra Club asks that you consider these comments when deliberating the merits of the above-mentioned permit variance request. We also ask that the advised comment date be waived in that we became aware of this proposal just recently.

We object to this permit for the following reasons:

1. The use of tires in the structure. Tires are considered inappropriate and potentially damaging and are disallowed as artificial reef materials by nearly every state, including Florida. They are not considered durable, and are too easily broken loose from their structure. There have been many examples of harmful impacts due to the release of tires. That alone should disallow this variance. According to the National Artificial Reef Plan, "Experience has demonstrated that the use of tires in high-energy (strong currents or surge effects) environments or over hard bottom is not advisable." (NOAA 1985). We already know that tires are unsuitable materials for artificial reefs. There is no need or justification to conduct another "experiment" to verify this.
2. The potential instability of the structure. At a minimum weight of only 150 lbs., these structures will be too light and the metal used too narrow (1/8") to create a durable structure, capable of withstanding hurricane force currents. This is especially true of the structure to be placed in shallow waters, which will be subject to heavy wave force. While we are not engineers, it appears from the shape and weight distribution that these structures could easily move or even "roll" during a hurricane surge. Unless a structure is stable it can never achieve the goal of creating more habitat, since it takes a long time for attached fauna to become established and for larval fish to settle. Without durability, the reef will eventually come loose and become problematic marine debris.
3. The tetrahedron structure does not present a variety of habitat structure. A good artificial reef will have variable crevices to provide suitable habitat for many species of fishes and invertebrates. The structure of the proposed reef is simplistic, and seems to be designed to attract just a few targeted fishery species, while disposing of tires at the same time.
4. The improbability that these structures will "enhance" fisheries. There is little doubt that fish population enhancement will not be achieved by this type of reef (Bohnsack et al. 1997); rather, the short-term enhancement of fishing is the apparent goal. These reefs will merely aggregate fishes from nearby hardbottom habitat, and make it easier for fishermen to catch

them. Then once the reef is fished out, they will have to go elsewhere. Rather than increasing the stock of catchable fishes, it will work to diminish these stocks.

5. Overload of artificial reefs in the area. It is of note that there are already hundreds of private and public artificial reefs off of the Pensacola area. It is doubtful that more will enhance production. According to Grossman et al. 1997, "User groups likely exert tremendous pressure to continue the production and deployment of artificial reefs, despite the lack of rigorous scientific data regarding whether reefs have a positive or detrimental effect on marine ecosystems.
6. The setting of a bad precedent. If this variance is allowed, others will surely be proposed, and there will be great pressure to allow them. More and more inappropriate reefs will be placed, with the resulting damage to fishery stocks and creation of marine debris.
7. Conflict with plans for marine sanctuaries. Most fishery scientists and conservationists now agree that the better way to enhance fisheries is by the establishment of marine sanctuaries and "no take" zones (Murray et al. 1999). These areas of protected habitat provide better means for fishes to reach full size, and achieve higher rates of reproduction. Then the areas outside of these zones become enhanced for fishery purposes, as the recruits move out of these areas. Several such zones are proposed for an area not far from this project area off of Pensacola (Koenig et al. 2000). Rather than allowing a variance counter to the purpose of fishery enhancement, the Corps and FWCC should now discourage such ventures, and instead encourage the establishment of marine reserves.

We ask that you deny this permit. Should you decide to move it forward, we request a public hearing. Thank you.

Sincerely,



Sharon Maxwell
Chairperson

References cited:

- Bohnsack, J.A., et al. 1997. Artificial reef research: is there more than the attraction-production issue? *Fisheries* 22(4):14-16.
- Grossman, G.D. 1997. Do artificial reefs increase regional fish production? A review of existing data. *Fisheries* 22(4):17-23.
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- National Oceanic and Atmospheric Administration (NOAA). 1985. National Artificial Reef Plan. U.S. Dep. Commer., NOAA, Washington, 39 p.

Cc: FWCC: Dr. Allan Egbert; Julie Morris
U.S. FWS, Panama City
Steven Medina, PEER



Jeb Bush
Governor

Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

June 4, 2001

Mr. Clif Payne
Department of the Army
Jacksonville District Corps of Engineers
Pensacola Regulatory Office
41 North Jefferson Street, Suite 104
Pensacola, FL 32501-5794

Re: FWCC Request to Modify and Reauthorize Artificial
Reef Permits, Gulf of Mexico, Offshore Escambia County
SAI#: FL200008300623C

Dear Mr. Payne:

By letter dated November 29, 2000, the Department of Environmental Protection provided comments and recommendations on the modification and renewal of the Fish and Wildlife Conservation Commission's (FWCC) permit for the Escambia County Large Area Artificial Reefs (Corps of Engineers Permit Number 199402635 IP-CP). The Department did not object to renewal of the permit, but did oppose the proposed addition of thin-gauge metal materials (<1/4" thickness) to the list of approved materials for placement in the reef sites. The proposed permit action was determined to be consistent with the Florida Coastal Management Program (see DCA letter dated November 30, 2000).

Following that correspondence, FWCC and Escambia County representatives met with Secretary Struhs and Department staff to discuss the proposed use of thin-gauge materials and how management of the reef sites could address the Department's concerns. FWCC considers the permit modification and re-authorization as an opportunity to conduct a five-year evaluation of the effectiveness of using thin-gauge metal materials for artificial reefs off the Northwest coast of Florida. The FWCC or its designee will inspect all materials before they are placed on the site, and an inspector will accompany 25% of the deployments to the reef sites. Experimental sites will be established for *in situ* monitoring of stability.

In light of the evaluative approach and quality control measures proposed by the FWCC, the Department has reconsidered its initial position and elected to withdraw its objection to the modification and issuance of renewal permits for the two large-area artificial reef sites. The Department does recommend, however, that the performance evaluation of thin-gauge metal

"More Protection, Less Process"

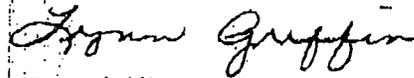
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Mr. Payne
June 4, 2001
Page Two

materials respond to the specific concerns for durability, stability and habitat value raised in our original comments. Further, in conducting this study and evaluation, we recommend that FWCC draw from all current, available research on artificial reef design and function. The Department would appreciate an opportunity to review and comment on any reports and conclusions resulting from the project.

Please call me at 850-487-2231 if you have any questions or wish to discuss these issues.

Cordially,



Lynn Griffin
Intergovernmental Programs

cc: Mollie Palmer
Jasmin Raffington
Jon Dodrill



Public Employees for Environmental Responsibility

4244 West Tennessee Street • Box 337 • Tallahassee, FL 32304-6515
tel: (850) 574-6515

District Engineer
Department of the Army, Jacksonville District Corps of Engineers
Pensacola Regulatory Office
41 North Jefferson Street, Suite 104
Pensacola, Florida 32501-5794
Attn.: Clif Payne

September 11, 2000
RECEIVED
SEP 13 2000

COE PENSACOLA

Re: The Florida Fish and Wildlife Conservation Commission, Department of the Army, Corps of Engineers Permit No. 199402365(IP-CP)/**Written Comments and Request for Public Hearing**

Dear Mr. Payne:

On September 6, 2000, on behalf of Public Employees for Environmental Responsibility (PEER), I visited the offices of the Florida Fish and Wildlife Conservation Commission (FFWC) to review its public records pertaining to the Public Notice for Department of the Army, Corps of Engineers Permit Number 199402365 (IP-CP). PEER opposes the permit and requests a public hearing.

PEER is increasingly involved on a public basis on coastal issues, including recently through filings with the Federal Communications Commission, U.S. Army Corps of Engineers, and Florida Board of Trustees of the Internal Improvement Trust Fund concerning fiber optic cable installation in coastal waters. While not directly related to the subject permits, PEER's work on fiber optic cable issues demonstrates PEER strong interest in activities that could impact Florida coastal waters.

Further, last month, PEER submitted comments to the Jacksonville District Corps of Engineers pertaining to the Okaloosa County Board of County Commissioners' requests for re-issuance and modifications pertaining to Department of the Army Permit Nos. 199402365(IP-DH) and 199603565 (IP-DH). If anything, PEER's concerns with respect to the instant proposal are even more serious and pronounced than those strong concerns already expressed with respect to the Okaloosa County proposal.

PEER, representing its members, respectfully opposes the re-issuance of this permit with the proposed modifications. Concurrently, we oppose federal approval and/or permitting of these modifications to the existing artificial reef construction permits. PEER has substantial numbers of members in the State of Florida, including members from Escambia County and other Gulf of Mexico counties, and public users of these Gulf of Mexico waters, and the public natural resources dependent on clean Gulf of Mexico waters and healthy, functioning ecosystems.

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September 11, 2000
District Engineer
Department of the Army
Attn.: Clif Payne

Re: The Florida Fish and Wildlife Conservation Commission, Department of the Army,
Corps of Engineers Permit No. 199402365(IP-CP)/**Written Comments and Request for
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Apparently, this permit would authorize the construction of artificial reefs at two sites located in the Gulf of Mexico south of Pensacola, Florida by the FFWCC and/or any private or corporate entity, under a sub-permitting system managed by the FFWCC. PEER would like to request a complete copy of the application, all attachments, correspondence, E-mails, and telephone conversation records pertaining to this FFWCC application, as possessed by the Department of the Army, Corps of Engineers (Corps) in order to conduct a more substantive review of their proposal and your permitting decision.

Based on a review of the referenced public notice and the FFWCC records, PEER requests denial of the permit re-authorization as requested by the FFWCC. We request the following items be considered by the Corps during its review of the proposed modifications to currently authorized materials, which include a request for a one-time exemption from the existing permit conditions in order to conduct an 18-month physical and biological study which would compare pre-fabricated reef tetrahedrons utilizing un-ballasted vehicle tires to pre-fabricated tetrahedrons lacking vehicle tires.

1. Apparently, the FFWCC's application, inspection and approval program allows sub-permitting to private or corporate entities to place materials in these permitted sites without any direct oversight by the FFWCC at the time the reef materials are physically placed on the ocean bottom. PEER requests the legal references that allow the Corps to establish a sub-permit system for activities not directly controlled by the primary applicant. Without requiring oversight, the FFWCC cannot possibly ensure that all general and special conditions of the permit are met. Specifically, the FFWCC will not be able to verify that only approved materials are actually placed within the permitted sites and that these deployments actually occur within the boundaries of the permitted sites without the presence of a FFWCC employee physically onboard for every deployment.

2. PEER objects to the proposed activities in the referenced public notice. Section 2104(b)(1) of Title 33, Chapter 35 of the United States Code specifically states, "Each permit issued by the Secretary (of the Army) subject to this section shall specify the design and location for construction of the artificial reef and the types and quantities of materials that may be used in constructing such artificial reef." Since the proposed activity is designed to allow an unknown and unspecified amount of reef construction activity through an unsupervised sub-permitting process, the FFWCC will not be able to provide required data on the total quantity of materials.

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Without this required information, PEER and other reviewers cannot complete the public review process in a timely and sagacious manner. This permit re-authorization application and the materials variance modification should be dismissed as incomplete on these grounds and the public notice withdrawn by the Corps.

3. The National Artificial Reef Plan (NARP) is under review by the U.S. Department of Commerce, National Marine Fisheries Service. The December 1998 revision is available as the Coastal Artificial Reef Planning Guide, which was prepared by the Joint Artificial Reef Technical Committee of the Atlantic and Gulf States Marine Fisheries Commissions. In this document, it is stated, "Improperly located reefs, built out of inappropriate materials or built inadequately can pose long-term problems." (page 2). The Coastal Artificial Reef Planning Guide (page 2) also states: "Although artificial reefs can enhance recreational and commercial fishing opportunities, creating a successful reef entails more than placing miscellaneous materials in ocean, estuarine or other aqueous environments. Planning, long-term monitoring, and evaluation measured against project goals and objectives must be incorporated into each project to ensure that the maximum anticipated benefits are derived from artificial reefs. Improperly planned, constructed or managed reefs can be ineffective, can cause conflict among competing user groups and activities at the reef site, increase the potential to over harvest targeted species, or may damage natural habitats."

Since the proposed activity does not contain any specific and measurable goals and objectives or provide for the incorporation of a long-term monitoring plan, the proposed activity clearly does not follow the guidelines established in the NARP, and the permit should be denied by the Corps.

4. PEER opposes the proposed permitting modifications in the referenced public notice in light of Section 2104(a)(4) of Title 33, Chapter 35 of the United States Code. It specifically requires that the Secretary of the Army "consider the plan developed under section 2103 of this title and notify the Secretary of Commerce of any need to deviate from that plan." Section 2103 describes the requirements of the Secretary of Commerce for developing and publishing the National Artificial Reef Plan.

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5. The Coastal Artificial Reef Planning Guide, in the discussion of the criteria for artificial reef materials (page 21), refers to Guidelines for Artificial Reef Materials a document published by the Gulf States Marine Fisheries Commission. It states that “[t]his document should be used as the main source of information relative to specific materials proposed for the construction of marine artificial reefs.” Under the stability section (page 22), the Coastal Artificial Reef Planning Guide states, “All materials used in reef construction should be of proven stable design.” PEER questions whether it has been proven that the materials proposed in the public notice will meet the stability requirements as stated in the NARP and as required by the Corps artificial reef permit guidelines established in the Code of Federal Regulations (33CFR, Parts 320 through 330). PEER is not aware of such proof, and therefore challenges the proposed intent on these grounds.

6. Under the Durability section (page 22), the Coastal Artificial Reef Planning Guide states, “Artificial reef materials, therefore, must be resistant to deterioration and breakup. Durable materials will retain the desired structure and configuration, have low maintenance costs, and have long life expectancy in the marine environment.” Again, PEER challenges the Corps and the FFWCC to clearly demonstrate that the proposed materials in the referenced public notice will meet these requirements and that they can verify that sub-permittees will adhere to them. If not, the permit should be denied.

7. Section 205(a)(2) of the National Fishing Enhancement Act of 1984, Title II. Artificial Reefs (Public Law 98-623) requires that the Secretary of the Army “ensure that the provisions for siting, constructing, monitoring, and managing the artificial reef are consistent with the criteria and standards established under this title.” If the FFWCC has not submitted a monitoring plan for the proposed activity to ensure compliance with all permit conditions, the permit as proposed should be denied.

8. Under the Types of Materials section (page 23), the Coastal Artificial Reef Planning Guide states, “The decision to allow or disallow the use of particular materials should be based on state and federal regulations and other guidelines. . . . The ‘Guidelines for Marine Artificial Reefs’ provides detailed information based on the experiences, benefits, and drawbacks of past uses of a variety of materials by state resource management agencies.” Therefore, the proposed revision of the NARP refers to the Guidelines for Artificial Reef Materials in numerous locations as the substantive document that should be used to determine the acceptability of artificial reef materials. The proposed permit changes ignore these guidelines.

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9. The introduction to the Guidelines for Artificial Reef Materials states, "Most people think of artificial reefs as mechanisms to facilitate catching fish, but in reality, artificial reefs constitute habitat for fish and other aquatic organisms." However, the proposed listing of allowable materials in the referenced public notice describes materials that are reasonably expected not to provide durable and stable habitat, and in fact may be or may function as fish aggregating devices (FADs). This is further substantiated by the request to use 1/8th inch or thicker welded or securely fastened structures with a weight of at least 150 pounds (Work and Purpose section). PEER contends that this type of material does not meet the criteria as described in both the NARP and the Guidelines for Artificial Reef Materials. Therefore, it is our position that this material should not be authorized for use in the creation of artificial reefs. The permit as proposed should be denied.

10. Within the referenced public notice, the proposed list of materials contains four types of material and also requests the use of any type of prefabricated reef structures constructed of the four materials previously listed. Does this indicate that the FFWCC is not requesting to use common artificial reef materials such as structures composed of surplus concrete materials (culverts and other stormwater structures) or prefabricated modules constructed from new or end-of-the day waste concrete, or obsolete oil and natural gas production structures? All of these materials were previously permitted, but are not requested to be used in the five-year reauthorization period.

11. The authors of the document Guidelines for Artificial Reef Materials apparently did not believe that the proposed structures constructed primarily from extremely lightweight metal met the requirements to be considered as a potential artificial reef material. Since the Guidelines for Artificial Reef Materials is referenced by the NARP as the reference document to be used for determining the types of materials that should be used for artificial reef construction, PEER again contends that this material type, which is not referenced in the Guidelines for Artificial Reef Materials, should not be authorized for use in the creation of artificial reefs. As written, this permit should be denied. If the application is allowed to be modified to conform to these and other requirements, the public review and comment period should start over after re-advertisement of the new public notice, and we would also a public hearing, before the Corps makes its permit decision.

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12. The Florida Artificial Reef Development Plan (FARDP) (September 1992) contains an entire chapter (Chapter 9) devoted to acceptable artificial reef materials. Within this chapter, it is stated that "Materials used for marine and estuarine habitat in Florida waters should meet the following criteria":

Possess physical characteristics that best assure maximum longevity in the ocean environment and optimal habitat for marine species. To this extent, materials should be proven to:

- Have sufficient density (mass to volume ratio) to remain stable in the ocean environment at depths and currents in which the material will be placed;
- Be extremely durable in sea water
- Have suitable substrate characteristics and ample surface area for fouling animals;
- Be structurally complex to support species diversity;

The FARDP (Section 9.1.3) describes materials that are not recommended for reefs. This section states, "Light-gauge metal materials are excluded because of low density and also because they corrode rapidly in seawater, making them extremely short-lived." PEER again contends that the proposed materials described in the referenced public notice should not be authorized by the Corps for use in the creation of artificial reefs, since they are specifically excluded in the FARDP, which is the guiding document for artificial reef creation in Florida. PEER is bewildered as to how the FFWCC could request such modifications to the existing permit, given that these materials are specifically excluded from the document the state artificial reef program developed and operates under.

13. According to Section 370.25, Florida Statutes, it is unlawful to store or transport on state waters any materials that could be reasonably used to construct an artificial reef. If the proposed permit is approved, the FFWCC will not be able to ensure that this statute is not being violated by a sub-permittee unless a staff member is on the sub-permittee's vessel at the time the materials are being transported through state waters to the sites located in federal waters. If approved by the Corps, the FFWCC's sub-permitting system may allow or foster violations of Florida Statutes.

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14. If the Corps issues the permit as proposed, the sub-permittees of FFWCC will possess federal permits that conflict with state law and guidelines. This creates certain legal and administrative challenges--state versus federal authority--and makes enforcement unlikely, if not impossible. The Corps should deny the permit as proposed and not issue permits that conflict with state laws, regulations, guidelines, and legislative intent.

15. Section 320.4(a)(1) of Title 33, Chapter II, Code of Federal Regulations states, "The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest."

The proposed activity described in the referenced public notice requests a permit that is apparently designed to allow a small select group of charter boat captains and recreational fishermen the opportunity to deploy lightweight and ephemeral materials on the ocean bottom under the guise of constructing durable and stable artificial reef habitat, rather than conducting an activity that is compatible with the public interest. This may or may not also, from time to time, have the actual or intended effect of providing a façade for the disposal of construction-related solid waste in an environmentally unsound fashion, instead of using permitted, well-engineered disposal in a licensed and inspected solid waste landfill. The evaluation of probable and cumulative impacts on the public interest cannot occur unless some limit is placed on the number of reefs that could be created during the life of the permits. The short-lived nature of many of the proposed materials and their long-term consequences on the marine environment following the disintegration of these materials are at best unknown. PEER is also concerned about the potential cumulative impacts on the marine environment throughout the Jacksonville Regulatory District if this activity is permitted for the FFWCC and becomes a regulatory precedent. The sheer number of potential artificial reef permits that could similarly be requested by any of the 35 coastal counties throughout the District is staggering.

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16. Section 320.4(h) of Title 33, Chapter II, Code of Federal Regulations states that “No permit will be issued to a non-federal applicant until certification has been provided that the proposed activity complies with the coastal zone management program and the appropriate state agency has concurred with the certification or has waived its right to do so.” There is no indication in the public notice that the proposed activity is consistent with Florida’s Coastal Zone Management Plan. Without the Florida Department of Community Affairs and other state regulatory agencies’ concurrences to the Corps, and since the FFWCC has not provided required data which indicates that its proposed activity is consistent with the U.S. Code, Title 16, Chapter 33, Coastal Zone Management, the permit should be denied.

17. The proposed modifications to the materials list are not consistent with existing permit conditions for similarly permitted sites in Bay and Escambia Counties. This is disconcerting since these permits are issued under the same criteria as specified in the NARP, FARDP, and the Code of Federal Regulations and by the same Corps North Permits Branch of the Corps. Issuing sub-permits for one county that conflict with adjacent counties reasonably could lead to challenges to state and federal permits and make enforcement in these three counties very difficult, unlikely, or impossible.

18. Has the FFWCC contacted the U.S. Coast Guard or the FFWCC Bureau of Marine Enforcement to determine how the proposed sub-permitting program will be enforced in reference to the restriction on transporting un-approved materials in state waters as per Section 370.25, Florida Statutes? Without this coordination and concurrence, the permits should be denied.

19. The proposed materials list requests the use of clean concrete rubble with no minimum size or weight requirement. How would an FFWCC-appointed inspector or other regulatory party determine if a material meets applicable criteria? The ambiguity in this language would allow a sub-permit applicant to deploy a 10-pound pile of gravel-sized concrete construction rubble in order to create an artificial reef even though the material would not be classified as an artificial reef under the guidelines in the Coastal Artificial Reef Planning Guide or in the Guidelines for Artificial Reef Materials. Again the permit does not appear to be enforceable and should be denied.

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20. PEER believes that these proposed activities pose future potential conflicts with fishery management plans (FMPs) established by the Gulf of Mexico Fishery Management Council (GMFMC) and approved by the National Marine Fisheries Service (NMFS). If hundreds of ephemeral locations where fish can be rapidly removed from both pelagic and benthic fisheries are created, it may require early closures of both recreational and commercial seasons for species which are currently managed through the total allowable catch quotas. This is especially true as the proposed artificial reefs would be available to any member of the public who locates these reefs, and not just to the sub-permittee that created them. Has the GMFMC and NMFS been informed of the proposed activity or received a copy of the referenced public notice? If these conflicts are not currently resolved, the permit should be denied.

21. The referenced public notice (Works and Purpose section) does not state the intended purpose of the permit. The objective of obtaining the permit is not clear from the public notice. As written, these permit modifications should be denied. If re-written, we request re-initiating the full public notice and comment period with the addition of a public meeting.

22. The scattering of a substantial number of navigational obstructions throughout these large permitted sites may have a direct future impact on commercial fishing and other potential uses, especially if any of the materials are moved off-site during storm events. Has the U.S. Department of the Interior, Minerals Management Service been contacted by either the FFWCC or the Corps in reference to this proposed activity and its potential impact in order to determine if the activity is consistent with the Outer Continental Shelf Lands Act? What about the Department of Defense and the Federal Communications Commission?

23. The referenced public notice states, "Preliminary review of this application indicates that an Environmental Impact Statement will not be required." Due to the vast areas of publicly owned resource that are proposed to be affected by this activity and the unknown total number of reefs which may be created under this permit, how has the Corps made this determination? PEER recommends that an Environmental Impact Statement as mandated by NEPA be conducted prior to issuance of a permit for the proposed activity. **Additionally, PEER requests that a public hearing be held in order that the Corps can more fully evaluate the overall public interest of the proposed activity.**

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24. Reefs constructed from the proposed 1/8-inch thick metal structures may function as fish traps rather than artificial reefs. How will the FFWCC ensure that fish traps regulations are being met if some of the requested materials could be considered to be fish traps? The Corps should not issue a permit that promotes violations of Florida's fish trap regulations and may not be enforceable.

25. Another troubling feature of the FFWCC proposal involves the use of tires. Tires being used as artificial reef materials have proved to be problematic at best. Every coastal state in the country with the exception of Delaware and Alabama has discontinued the use of tires as artificial reef materials due to concerns over stability. Although the referenced public notice states that the placement of the pre-fabricated reef tetrahedrons would only be a one-time exemption from the existing permit conditions, it also states that the tetrahedrons would not be removed upon completion of the study. This indicates that these modules constructed with un-ballasted automobile tires will remain in the marine environment indefinitely. Among other things, since the use of un-ballasted tires has not proved to be an appropriate reliable artificial reef material, these permit modifications should be denied.

26. The Corps has previously received letters (including Resolutions and Position Statements) from the Artificial Reef Technical Committees of both the Atlantic States Marine Fisheries Commission (ASMFC) and the Gulf States Marine Fisheries Commission (GSMFC) strongly advising that the Corps not allow the use of un-ballasted tire reef modules as proposed in the FFWCC permit variance request. Based on these statements from the combined voices of state artificial reef managers on both the Gulf and Atlantic Coasts, PEER also strongly recommends that the permit re-authorization and variance be denied.

27. The primary concern of the ASMFC and GSMFC apparently was the inherent structural weakness associated with the construction of the tire reef tetrahedron modules. Due to the use of "cold joints" (newly poured concrete placed around hardened, cured concrete) in the manufacturing process of these modules, both the ASMFC and the GSMFC have expressed concerns that the modules may disassociate due to one of several mechanisms. The "cold joints" are reasonably expected to eventually weaken structurally due to the penetration of chloride ions, causing the embedded steel reinforcing bar to corrode, expand and physically crack the "cold joint," which would allow the un-ballasted automobile tires to drift freely in the marine environment.

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Another mechanism by which the tire reef tetrahedron modules apparently may allow un-ballasted tires to become disassociated from the module is through the actual breakage of the "cold joint" due to hydrodynamic forces during severe weather events. If either of these events occurs, these un-ballasted tires may eventually wash ashore and have to be removed for appropriate disposal.

As a recent Hollywood movie aptly illustrates, judicious decision-making should not discount the potential occurrence of even "The Perfect Storm," much less other known long-term potential adverse risk. A stability analysis of the tire reef tetrahedron modules conducted by a professional coastal engineer, as requested by the FFWCC, apparently indicated that the tire reef tetrahedron modules would only be stable during a 20-year storm event if placed at water depths greater than 75 feet, and would have to be placed at water depths greater than 100 feet in order to remain stable under a 50-year storm event in northwest Florida. Although the existing permitted sites are located so as to have these water depths available, PEER is concerned that this analysis further indicates potential instability of these modules and therefore, for this additional reason, requests that the permit variance be denied. Further, particularly when coupled with the reasonably anticipated joint weakening associated with chloride ion penetration, the storm may not have to be "perfect" to effect tire loss prior to the eventual reasonably anticipated loss that would otherwise occur based on chloride ion penetration alone.

28. Un-ballasted tires continue to haunt artificial reef programs for decades after their placement. For example, the North Carolina artificial reef program has spent hundreds of thousands of dollars retrieving tires placed as artificial reefs during the 1970s and 1980s. It has been estimated that over 100,000 tires have been removed from North Carolina beaches since 1989. Some of these tires have been in the marine environment for over 20 years, and show no evidence of substantial encrustation by sessile marine organisms, thereby confirming the lack of ability of tires to provide habitat for marine fish and invertebrate species.

Given the large economic benefits that northwest Florida receives from beach-related tourism, PEER questions as to how the Corps could approve the requested variance in the best public interest given the potential for the eventual arrival of tires on the beaches of northwest Florida.

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29. Moreover, how could FFWCC, much less the Corps, conscientiously consider using Florida's coastal environment for needless "experimentation" with both known and unknown adverse environmental risk? What, after all, is the upside for Florida assuming this risk? Does the FFWCC seriously contend that un-ballasted ocean deposition is a prudent method of waste tire "recycling or disposal" consistent with the public interest. If so, PEER respectfully disagrees. Surveys of Floridians show time and time again that Floridians want the best protection for their invaluable coastal environment.

Florida's waste tire disposal problem patently should not excuse the effective private taking of Florida coastline and marine ecosystems for use as a laboratory in waste tire "experimentation." That such an "experiment" would be effectively sponsored by the very agency that is supposed to be conserving Florida fish and wildlife is more than a little ironic. Indeed, FFWCC's motivation for pursuing this "experiment" is hardly unsolicited concern to assist a sister state agency, the Florida Department of Environmental Protection, in arranging for proper final resting places for Florida's waste tires. (Further ironically, PEER understands that the waste tires used in the modules may not even be Florida waste tires!)

PEER does not believe the ability, in the short run, to place waste tires out of sight beneath Florida marine waters should be the standard for evaluating proposed activities within these waters. Clearly, FFWCC should be setting a proven, reliable, top quality national standard for Florida's artificial reef program.

30. Moreover, the design of the "experiment" reflects that FFWCC is conveniently using the terminology of "experimentation" for marketing purposes. The study duration anticipates, or hopes for, hasty anticipated measurement of "success." Thereafter, FFWCC will presumably get on the bandwagon for covering much of Florida's marine environment with artificial reefs whose potential problems may not actualize for a long time.

The variance request to allow placement of the tire reef tetrahedron modules ostensibly is to conduct a short-term (18-month) study in order to document the physical and biological characteristics of the tetrahedron modules with and without tires. PEER questions why this study needs to be conducted in Florida coastal waters (or indeed anywhere) in light of a recent report by professionals affiliated with the University of South Alabama (August 2000). In this report, Dr. Robert Shipp and his colleagues describe a study to determine the effectiveness of various artificial reef designs, including the tire reef tetrahedron modules.

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Soon after numerous tire modules were put in place, Hurricane Georges made landfall west of the study area. According to the report, the academic investigators have only managed to re-locate a single tire module, although three separate attempts were made in late 1998 to locate the modules. This study would appear to have already provided information, albeit disconcerting, that the FFWCC purports to desire, without the necessity to replicate the study in Florida.

31. The Coastal Artificial Reef Planning Guide (page 26) states, "The plan [i.e., the National Artificial Reef Plan] recommends that tires should be used as artificial reef materials only with great caution." Since there currently exists a substantial amount of various other material types that are available for the construction of artificial reefs PEER requests that the permit variance be denied.

32. Most states along the Atlantic and Gulf Coasts have indicated that they would not use the tire reef tetrahedron modules within their own individual state programs because of concerns related to the durability of the modules and the likelihood of these modules causing negative environmental, social, and economic impacts.

33. In the conclusion of the Guidelines for Artificial Reef Materials, it is stated that "... the ultimate goal of this document is to encourage movement away from the use of questionable materials that have short-term application toward the use of long-lived materials that have a proven track record of success." PEER hopes that the Corps will seriously consider this statement during its review of the activities proposed in the referenced public notice and deny the permit modifications.

34. The proposed project modifications and lack of primary applicant oversight of sub-permittees may negatively affect listed state and federal threatened and endangered species--including West Indian manatees, other sea mammals, sea turtle species--protected under the Endangered Species Act and state statutes and regulations. Without consultation with the U.S. Department of Commerce NOAA, U.S. Fish and Wildlife Service and the FFWCC, these permits should be denied.

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In conclusion, the Coastal Artificial Reef Planning Guide states, "All legal artificial reef construction activities require the issuance of a Corps permit. Prior to approval of such a permit, other concerned agencies and departments within the Federal Government, as well as state agencies and other groups, are given the opportunity to review the proposed work to ensure compliance with existing regulations. This review also helps prevent the approval of projects that might negatively impact other existing or planned activities, or which actually may be an ocean dumping project." PEER contends that the proposed activity should be more appropriately permitted as an ocean dumping activity rather than as an artificial reef construction activity, as the proposed project and requested materials do not appear to meet the existing regulations for artificial reef permitting. We strongly recommend a denial of the permit as proposed.

Please copy PEER, c/o of Steven A. Medina, P.A., P.O. Box 247, Ft. Walton Beach, Florida 32549-0247, in future correspondence to the FFWCC and reviewing parties. I can be contacted directly at (850) 664-7856, if you have any questions or comments.

Thank you for providing this opportunity to provide comments to this public notice.

Sincerely,



Steven A. Medina

Florida PEER Counsel

P. O. Box 247

Fort Walton Beach, Florida 32549-0247

Phone (850) 664-7856

Facsimile (850) 664-0774

cc: Mr. Mark Thompson, USDOC, NOAA, National Marine Fisheries Service

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION



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DIVISION OF MARINE FISHERIES
Kenneth D. Haddad, Interim Director
Roy O. Williams, Asst. Director

January 12, 2001

Mr. Clif Payne
Jacksonville District Army Corps of Engineers
Pensacola Regulatory Office
41 North Jefferson Street, Suite 104
Pensacola, Florida 32501-5794
Phone: 850/433-8732

Reference: Completeness letter response submission for Permit # 199402635 (IP-CP).

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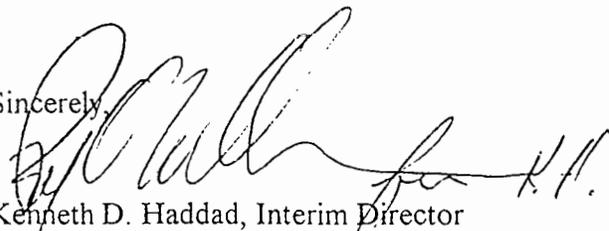
Dear Mr. Payne:

Enclosed is the FWC Bureau of Marine Fisheries Management response to your October 25, 2000 completeness letter to Jon Dodrill requesting additional information in reference to Escambia Large Area Artificial Reef (LAAR) Permit # 199402635 (IP-CP). Please let us know if there is any additional information or clarification that you require.

Also enclosed for your general information are comments from Florida Panhandle charter and recreational fishermen submitted to this office describing their personal experiences with certain materials types as well as general statements in support of the Large Area Reef Site concept.

If you have any questions don't hesitate to contact Bob Palmer or Jon Dodrill at 850/488-6058.

Sincerely,



Kenneth D. Haddad, Interim Director
Division of Marine Fisheries

**Florida Fish and Wildlife Conservation Commission
Division of Marine Fisheries
Bureau of Marine Fisheries Management
Response to October 25, 2000 Completeness Letter
Sent by Mr. Clif Payne,
Department of the Army Jacksonville District Corps of Engineers (ACOE)**

I. Responses to Materials Modifications Concerns

A. Tire and concrete tetrahedron reef unit materials variance request. There were concerns from multiple parties about a Florida Fish and Wildlife Conservation Commission (FWC) permit variance proposal to use in an 18 month experiment, 10 concrete tetrahedron frame units with 60 automobile tires incorporated into each unit. Individual unballasted tires were to be slipped over the frame piling arms before the individual pilings were joined by welding steel reinforcement rods followed by sealing with a cold joint concrete cap at each apex of the frame. These units were to be compared with concrete tetrahedron units of similar dimensions but lacking tires. This 05/17/00 variance request was included along with the Escambia large area artificial reef site (LAARS) reauthorization request (06/19/00) to the ACOE..

Entities expressing written concern to the ACOE about individually unballasted automobile tire use in the project included the National Marine Fisheries Service (NMFS) (09/15/00), Gulf States Marine Fisheries Commission (GSMFC) (06/05/00, 06/10/00), Atlantic States Marine Fisheries Commission Artificial Reef Technical Committee (ASMFC) (05/15/00), the Sierra Club (Northwest Florida Chapter) (SC) (09/25/00), Public Employees for Environmental Responsibility (PEER) (09/11/00), and the Minerals Management Service (MMS)(11/07/00). Additionally, the Florida Department of Environmental Protection (FDEP) expressed concerns to FWC staff related to inconsistency issues under the Coastal Zone Management Act. Tire use is currently not allowed in state waters under the FDEP general artificial reef permits.

B. Response: In a 11/20/00 letter from Kenneth Haddad, interim Director of the FWC Division of Marine Fisheries, to Clif Payne, Chief of the ACOE Pensacola Regulatory Office, the concrete and tire tetrahedron module unit experiment variance was withdrawn from consideration as part of the FWC Escambia LAARS re-authorization request. A copy of the withdrawal letter is included as Attachment 1.

C. Use of miscellaneous metal materials, 1/8 inch thick or thicker and reef materials as light as 150 pounds. Specific concerns received in writing by the ACOE relating to this item were: a) lack of design, stability, and longevity information pertaining to these objects (NMFS, PEER, SC, MMS); concern about entrapment of fishes using cage structures like chicken transport boxes (GSMFC); questions about anchoring of lighter materials (NMFS).

D. Background informational comments and rationale for materials modification. The proposed use of lighter weight materials (minimum 150 pounds) that included a reduction in

minimal metal thickness allowable from 1/4 inch to 1/8 inch has been made at the request of some Western Florida charter fleet captains and recreational fishermen (2/9/00 Okaloosa County workshop; 6/13/00 FWC workshop, Pensacola; 11/08/00 FWC Commission Meeting, Tallahassee). The specific objectives associated with their request were to: a) use objects light enough to enable fishermen to manhandle them on and off their own boats and do so safely; b) increase the diversity and thus potential availability of secondary use metal objects allowable for use; c) enable fishermen to cut costs by using readily available scrap material (scrap steel value at a 14 year low); d) have the option of transporting the material themselves rather than hire a commercial carrier, and e) seek some better consistency of materials standards among the seven large artificial areas located in federal waters of the Florida Panhandle off Escambia, Okaloosa, and Bay counties. For example, Bay County, the earliest large area permit holder, in 1992 secured a more liberal materials list and a looser interpretation of what was allowable reef material than the permits which subsequently followed in Escambia and Okaloosa Counties, with the Escambia sites and one Okaloosa site currently having the most stringent materials requirements.

Public hearing testimony indicates that the relatively low level of private reef building involvement in the Escambia LAARS program in terms of the number of participants is because the materials standards in the current permit are both ambiguous and restrictive. Relaxing the metal thickness requirement would result in increased recreational and charter fishing participation in the program.

During the four year period between June 1995 and June 1999 there were 30 private applications by nine applicants to use 120.7 square nautical miles of the Escambia LAARS. This effort resulted in 211 separate private artificial reef deployment locations. Most materials were concrete structures placed by commercial carriers representing clients. Of the nine applicants who used the Escambia LAARS, three applicants were identifiable as charter operators, two were private individuals, and four were commercial carriers deploying reefs for private clients. The four year private Escambia LAARS use is summarized in the permit application.

Three charter boat operators used the Escambia LAARS from 1994-1999 under the Escambia LAARS sub-permit program to personally transport and build their own private artificial reefs. This is despite a major hurricane (Opal) in 1995 which reportedly moved, buried or destroyed the majority of light weight reefs in less than 130 feet of water in the western panhandle. One hundred thirty-eight charter and head boat vessels operate between Okaloosa and Escambia counties. The reported number of active registered charter fishing boat owners in Escambia County is 42 (FWC Florida Marine Research Institute data) out of a total of 76 total vessels registered as commercial (1998-99 Department of Motor Vehicles and Vessel Registration data.). Based upon this level of charter fishing boat use (7%), the original objective to provide a private reef deployment area for the Pensacola Charter Fleet, was not fully realized during the first six years of the existence of this large area (October 1994-October 2000).

Private recreational reef building in terms of individual participation was similarly low in relation