STANDARD OPERATING PROCEDURE
Vessel Preparation and Deployment Process
Okaloosa County, Florida

The objective of this Standard Operating Procedure (SOP) is to provide the individual or entity considering a reef construction project using a vessel with a clear understanding of what will be required by the County to obtain a permit. The County's objective for a vessel reef deployment is to reduce the risk of detrimental impacts to the environment and assure the safety of the operation. This SOP is intended to comply with Federal and State guidelines for the preparation, transportation and sinking of a vessel for use as an artificial reef.

Permit applications for deployment of a vessel in the Large Area Artificial reef Sites (LAARS) A, B or C through the Okaloosa County Artificial Reef Program (OCARP) will require additional documentation requirements. The regulatory framework for State and Federal artificial reef construction utilizing vessels is currently being developed. The nature of work performed by vessels in their operational life distinguishes them from other potential reef materials on many levels. Two primary distinguishing characteristics are that vessels have the potential to introduce hazardous substances into the marine environment and they are typically constructed as a whole reef unit.

It is highly recommended that the individual or entity desiring to permit a vessel deployment in LAARS A, B or C should open a dialog with OCARP as early in the project as possible. A meeting should be arranged to discuss the objectives of the permit applicant and the general nature of the vessel. Less complex vessels like barges that have had no self-propulsion capabilities are far less complex than tugboats, commercial fishing vessels or most military vessels. A pre-planning meeting is a timely opportunity for the permit applicant to request a reduction of requirements. However, the decision to drop particular requirements is not a guarantee since the County will be liable for many of the actions taken by the applicant during the implementation of the project and for years after the vessel is deployed. As an alternative, the individual or entity can permit the vessel deployment directly through the US Corps of Engineers for deployment locations outside of LAARS A, B or C.

1. **USCG Inspection**

   The USCG must be solicited by the applicant to provide and inspection to determine the whether the vessel is seaworthy and to determine towing requirements/configuration. The applicant should provide a narrative that documents the physical USCG inspection. The narrative should include a list of the persons present at the time of inspection and their contact information. The applicant should solicit the results of the inspection from the USCG with the determinations and recommendations of the USCG. The narrative should also address whether additional inspections have been requested. The USCG may or may not provide additional comments relative to the deployment but not necessarily related to sea-worthiness. These comments should also be documented. Any photographs or video obtained during the inspection should also be included in the inspection report.

2. **OCARP Inspections – Permit and Process Compliance**

It is recommended that the applicant request an inspection by OCARP prior to vessel preparation. This inspection will provide the County with a baseline to assist in evaluation of the applicant's progress throughout the project. Recommendations from OCARP may be provided at this inspection that will expedite the project and/or identify potential issues that need to be addressed early in the project. The inspector can generally determine additional inspection requirements at this time. The final OCARP inspection will be performed as part of the project permitting phase. The final inspection is the point in time where the County assumes liability of the project. It is expected that the applicant comply with the recommendations of the inspector.

3. **Application for Approval to Use the Okaloosa County Artificial Reef Sites A, B, & C**

The *Application for Approval to Use the Okaloosa County Artificial Reef Sites A, B, & C* is the permitting instrument used for documenting the transfer of liability of the vessel from the vessel owner to OCARP. Before this instrument is executed (generally at the Final Inspection) the permit applicant should be ready for vessel deployment and all vessel preparation activities should be complete.

4. **Indemnification Instrument**

Liability issues must be recognized and addressed by permit applicants because the LAARS permit holder (Okaloosa County) is required to provide long-term responsibility for materials on LAARS A, B and C, including vessels. Demonstration of this responsibility by the permit applicant could include liability insurance, posting a bond or other indemnifying instrument to ensure resolution of liability issues associated with the towing, cleaning and sinking of vessels on State or Federal submerged lands. This liability includes damages caused by movement of the materials during storm events well after deployment activities have concluded.

- **Liability Insurance**

  Based on the complexity of the project and other considerations, the County may require the applicant to carry liability insurance.

- **Bonds**

  Based on the complexity of the project and other considerations, the County may require the applicant to be bonded.

5. **Vessel Preparation Plan** (ref. *USEPA - National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs*)

The intent of vessel preparation is threefold. First, the vessel should be prepared in a manner that enables the vessel to be transported to a pre-determined location and sunk in an efficient and safe manner. Secondly, preparation activities are performed to reduce the potential risk of detrimental environmental impacts as a result of the vessel components and configuration. Thirdly, proper

preparation of the vessel prior to deployment can affect the accessibility of the vessel after deployment and the potential to attract targeted marine life.

- **Vessel Description, Specifications and History**
  - Vessel Titled Name
  - Vessel Ownership Record and Proof of Current Ownership
    Note: The permit applicant should also provide documentation that certifies that the owner of the vessel supports the efforts of the permit applicant.
  - Vessel Captains Log
  - Vessel Dimensions and Displacement/Weight
  - Anecdotal Information
  - Vessel Maintenance Records
- **Vessel Location for Preparation**
  - GPS Coordinates and/or Street Address of Preparation Activities
  - Access Restrictions and Liability Waivers (Hold Harmless Agreement)
  - Property Damage Contingencies and Liabilities
  - Emergency Contact Information
- **Assessment of Applicable Laws, Regulations, Guidelines and Permits**
  - Provide the following Statement in all plans: *<Your name or entity name>* shall comply with all applicable Federal, State and local rules and regulations in the effort to sink this vessel. Including the general and special conditions specified in permits issued by the US Department of Army, Corps of Engineers or the Florida Department of Environmental Protection. *<Your name or entity name>* acknowledges that this requirement includes all Federal, State and Local health and safety rules and regulations. This provision will be included in al subcontracts issued as a result of this vessel deployment effort.
  - Discuss Turtle Entrapment Evaluation and Rectification
  - Discuss Diver Snag and/or Entrapment Evaluation and Rectification
- **Hazardous Material Management**
  - Discuss Potential Exposures during Preparation and Risk Mitigation
    Note: Applicant should be prepared to comply with all local, state and federal regulations concerning hazardous and non-hazardous substances throughout the preparation period as defined by the USEPA. Demonstration of compliance with applicable regulations should be available to OCARP upon request.
  - Hazardous/Non-Hazardous Material Handling Protocols
  - Insulation/Asbestos Assessment
    - Asbestos containing materials which may be disturbed by actions related to preparing the vessel for sinking or that are likely to be loosened from or fall off vessel components during the sinking or a result of environmental forces following the sinking must be removed prior to the sinking of the vessel.
    - Such materials must be disposed of at a landfill operating in compliance with asbestos disposal requirements.

- An asbestos inspection and demonstration of compliance with inspection results is required.
- For inspection assistance and guidance, contact the Department's Air Resources Management Section in the Pensacola Northwest District Regulatory Office (Ph. 850-695-8300).

- PCB Assessment
  - Vessels built prior to 1978 must have polychlorinated biphenyl (PCB) testing performed on sample wire insulation, paint, rubber gasketing and other suspect materials remaining in the vessel.
  - PCB levels above 50 parts per million (ppm) in any material evaluate may eliminates the vessel from being sunk as an artificial unless the material can be easily and safely removed..
- Radiological Assessment (Military Vessels)
- Refrigerant and Halon Removal Documentation
- MSDS Sheets
- Amount of Material Removed
- Disposition of Material
  - Dispose of oil, muck, and debris in approved areas ashore in compliance with acceptable local, state and Federal disposal requirements for these materials.
- Amount and Specification of Material Inaccessible
- Exterior Hull Paint Assessment – Type, Last Application, Leachate Potential Assessment

➢ **Schematics and Photographs of Vessel, Machinery, Compartments and Tank Layouts**

➢ **Tanks and Contained Areas**

- Tank Soundings – Volume of Tanks and Contents
- Open and vent all tanks.
- Clean tanks, fuel lines, pneumatic systems, hydraulic systems, machinery lubrication systems, voids, bilges, and any other materials containing oil, gas, debris, and muck.
- Remove fuel oil in tanks and machinery spaces by pumping to barge, tank truck or suitable container designated compatible with the material and acceptable for transport/disposal.
- Remove oil and greases from tanks, bilges, and machinery spaces by washing areas with approved chemicals and water.
- Remove fuel oil in tanks and machinery spaces by pumping to barge, tank truck or suitable container designated compatible with the material and acceptable for transport/disposal.

➢ **Cleaning and Preparation - Miscellaneous**

- Remove all trash, cleaning compounds, floatable materials, and loose gear stored in holds and compartments and sweep spaces, and on deck.
- Secure propeller shaft or remove propeller and seal shaft log.
- Secure rudder amidships.
- All valves on major through-hull fillings must be left in place.
- No loose materials shall be left on deck.

- **List of Removable Items Available for Reuse or Recycling**
- **List and Specifications of Material Added to the Vessel for Ballast or Reef Enhancement**
- **Target Deployment Location**
  - Discussion of Alternate Sites Considered
  - Specify Relationship to Safety Fairways
  - Discussion of Potential User Group Conflicts
  - County GPS Reporting Requirements
    - Horizontal
      - System – State Plane
      - Horizontal Datum - NAD83 Florida North Zone 903
      - Units - US Survey Foot
    - Vertical
      - Datum - 1988 - NAVD88
      - Units - US Survey Foot
    - All Coordinates in Degree, Decimal-Minutes Format - xx° xx.xxx'N, -xx° xx.xxx'W
  - Navigational Clearance
    - State Applicable Navigational clearance
    - Discuss Requirements for Site Marking
    - Discuss Requirements for NOAA Charting
  - Proximity of Public reef Sites
- **Target Deployment Survey**
  - Copies of Diving Logs and Captains Log
  - Verification of Proposed Deployment Location Coordinates.
  - Date
  - Time of Departure, Arrival on-site, Dive Start, Dive End, Time of Departure from Site, Arrival at Port
  - Sea State
  - Sea Current On-Site
  - Climatic Condition
  - Visibility
  - Survey Participants with POC Information and Area of Responsibility
  - Narrative of Observations
  - Photographs and or Video
- **Flooding Aids**
  - Void space and Hull Breech (i.e., Flooding Patches)
    Any holes cut through the exterior hull prior to towing shall be firmly patched and sealed securely enough to remain in place without leaking during offshore vessel transport.
    - Identify Locations and Dimensions of Flooding Holes
    - Detail Patching Specifications (Size and Location)
    - Determine the Schedule for Cutting and Installation of Removable Patches

- Describe Patch Removal Process
- Document Equipment Used and Specifications
  - Describe Equipment Testing
  - Describe Equipment Failure Contingency

- **Ballast Evaluation and Addition**
- **Vessel Enhancements for Structural Complexity, Marine Life Attraction and Diver Safety**
- **Demolition Plan (Explosive Deployment Plan**
  - Explosives Qualifications
  - Charge Specifications – Type, Poundage, Placement, Method of Detonation, Back-up
  - Aerial Surveys
  - Explosives Mitigation
  - Explosives Transport, Site Security and Public Safety Plan
  - Demolition Detonation Verification

6. <u>Vessel Deployment Plan</u>

- **Statement of Project Objectives and Potential User Groups**

  Examples
  - Enhance and conserve targeted fishery resources to the maximum extent practicable;
  - Minimize conflicts among competing uses of water and water resources;
  - Minimize the potential for environmental risks related to site location;
  - Be consistent with international law and national fishing law and not create an obstruction to navigation;
  - Be based on scientific information; and
  - Conform to any federal, State, or local requirements or policies for artificial reefs.
  - Facilitating access and use by recreational and/or commercial fishermen; and
  - Facilitating access and use by recreational divers.
- **Definition of Authorities**

  Note: Provide a statement that defines the authority of a particular individual or entity in relation to specific deployment activities.
- **Statement of Liability**
  - Provide Liability Statement: It is the responsibility of *<your company or entity name>* sinking the vessel to assure that the vessel is sunk within the designated Large Area Artificial Reef Site and within 100' of the proposed vessel sink site. If these conditions are not met, the cost of relocating the vessel to the proposed site is the responsibility of *<your company or entity name>*. All liability, risk of loss and responsibility for the safe handling, storage, cleaning, transportation and deployment of the vessel shall be borne by *<your company or entity name>.*
- **Notifications**

- Post Inspection – Page 1 and 2 of *Application for Approval to Use the Okaloosa County Large Area Artificial Reef Sites A, B, & C* to USACE, USCG – Mobile, Destin and Panama City, Florida Marine Patrol – Pensacola – **COUNTY**
- 24 Hour Pre Deployment Notification – County, USCG and USACE -- **APPLICANT**
- Post Deployment Coordinates (within 10 days after deployment) – Page 4 or of Final Coordinates Supplemental Sheet from the *Application for Approval to Use the Okaloosa County Large Area Artificial Reef Sites A, B, & C* -- **APPLICANT**

➢ **Vessel Ownership Verification**
- Provide Copy of Title
- Provide Copy Maintenance Records
- Provide Owners Notice of Intent

➢ **Stability Analysis**
- Artificial Reef Stability Analysis Software (FWC/Paul Lin Associates)
    - Provide Inputs for STABLE Condition – Use 20 Year Storm Event
- Alternate/Enhanced Stability Plan and Specifications

➢ **List of Souls**
- Name, Address, Telephone, Function and Emergency POC Information
- Provide Roll Call and Substitutions or Additions the Day of Deployment

➢ **Safety Statement**
- Provide Regulatory Standard Compliance for Each Work Function

➢ **Reef Construction Site Safety Plan**
- Work Perimeter Marking
- Law Enforcement Notification and Participation

➢ **Vessel Tow Plan**

Note: The Contractor shall tow the vessel in accordance with all Federal, State and local laws, rules and regulations pertaining to such work. The County observer reserves the right to suspend operations if positioning and other deployment objectives are not being met or change in sea or weather conditions or other circumstances place persons or equipment in harms way.

- Identification of Tow Vessels and Captains
- A vessel licensed for offshore service and manned with an appropriately licensed crew shall be used for ocean towing.
- Distribution of Responsibilities
- Tow and Assist Vessel(s) Specifications
    - Towing Vessel, Assist Vessels and Observation Vessel shall be equipped with a working/accurate differential GPS unit, a working VHF radio and an accurate fathometer.
- Communications
    - Navigational Lighting aboard the Vessel to be Deployed
    - VHF Radio Monitoring
    - Abort Procedures

- Acceptable Sea State Conditions
    - Maximum Wave Height
    - Maximum Sustained Wind
    - Probability of Thunderstorms
    - Contingency - Forecast the Day after Scheduled Deployment
- Diagram of Lashings and Vessel Configuration while Underway
- Schedule of Events
- Towing Sequence Description
- Contingency Plans
    - Pump Out Description and Capabilities
    - Tow Vessel Malfunction
    - Sea State Anomaly
    - Rigging Failure

➢ **Vessel Sink Plan**

- Site Safety
    - No vessels other than the Contractors vessel or the County observation vessel, may approach within 300 feet of the vessel to be sunk
    - No diving or fishing activity shall be authorized within 600 feet of the vessel being sunk during sinking operations.
    - Law Enforcement Notification Procedures
    - Safety Area Identification
- Target Buoy Placement
    - Target Buoy/Anchor Description
        - One or more colored buoys no less than 12 inches in diameter.
        - Sufficiently anchored so that it will not drift.
        - Provide narrative of target buoy plan and explain any multiple buoy placement clearly
    - Anchoring Plan
        - Wind and Current Corrections
        - Describe Anchoring w/Specification Pre-Scuttle
        - An anchor of appropriate size to firmly anchor the vessel to be sunk, chain, and sufficient scope of anchor line must be onboard for towing and anchoring at the deployment site.
        - Describe Anchoring w/Specification Post-Scuttle
        - The Contractor shall insure adequate anchoring capability of the vessel under tow.
- Sequence of Events
    - Sequence Schematics
    - Description of Activities
- Deployment Verification

- Dive Log
  - Orientation of Vessel
  - Anchoring Condition
  - Vessel Listing Angle
  - Dive Stats – Depth on Bottom, Depth on Vessel Appurtenances
- Video and Photography
- GPS Coordinates and Fathometer Readings

7. **Post Deployment Report**
   - **Final Deployment Coordinates**
     - All Coordinates in Degree, Decimal-Minutes Format - xx° xx.xxx'N, -xx° xx.xxx'W
     - Photograph of Reef Profile on Bottom Machine w/Coordinates
   - **Compilation of Captains Logs**
   - **Compilation of Diver Logs**
   - **Comparison of Proposed Location of Deployment with Actual**
   - **Plan Variations**
   - **Status of Project Objectives**
   - **Lessons Learned**