

**LOUISIANA DEPARTMENT OF WILDLIFE
AND FISHERIES**



LOUISIANA ARTIFICIAL REEF PROGRAM

Strategic Plan 2018-19 through 2022-2023

June 2018

INTRODUCTION

The Louisiana Artificial Reef Program (Program) is responsible for promoting, developing, maintaining, monitoring, and enhancing the artificial reef potential in the navigable waters of Louisiana and waters of the federal exclusive economic zone adjacent to Louisiana waters. It was created and assigned these responsibilities by the Louisiana Fishing Enhancement Act, R.S. 56:639, (LFEA), which placed the Program into the Louisiana Department of Wildlife and Fisheries (Department), Office of Fisheries (Fisheries).

The Department is the state agency responsible for management of the state's renewable natural resources, including all wildlife and all aquatic life. The purpose of Fisheries is to manage living aquatic resources and their habitat, to support the fishing industry, and to provide access, opportunity and understanding of the Louisiana aquatic resources to the State's citizens and other beneficiaries of these sustainable resources.

PHILOSOPHY

The Program supports the Department's mission by creating and enhancing habitat through the deployment of material and by preserving existing habitat through the reefing of oil & gas platforms. The Program's guiding principles have been inscribed in the LFEA:

- (1) Enhance and conserve fishery resources to the maximum extent practicable.
- (2) Facilitate access and utilization by Louisiana recreational and commercial user groups.
- (3) Minimize conflicts among competing uses of waters covered under this Subpart and the resources in such waters.
- (4) Minimize environmental risks and risks to personal and public health and property.
- (5) Be consistent with generally accepted principles of international law and national fishing law, and not create any unreasonable obstructions to navigation.

The Program performs these activities in accordance with the National Artificial Reef Plan, the Louisiana Artificial Reef Plan, and the Louisiana Inshore Nearshore Artificial Reef Plan.

Operations

The Louisiana Artificial Reef Program

The Program has a Planning & Permitting component and a Monitoring component. The Planning & Permitting group is responsible for the reef “building” aspect of operations: evaluating proposals, creating permit requests from proposals, developing contracts or agreements to execute the projects, and ensuring the projects meet the standards of the permits and the contracts or agreements. The Artificial Reef Coordinator and the Inshore Reef Biologist comprise the Planning & Permitting Section.

The Monitoring group evaluates the success of the reefs permitted and built through the Program. This includes assessing angler preference, effort and success at the reefs, and evaluating the species assemblages that make use of the reefs. The Monitoring group does these evaluations through angler surveys and biological monitoring of the reefs. The Monitoring group is comprised of a Biologist Program Manager and several Biologists.

The Fisheries Research Laboratory on Grand Isle

The Fisheries Research Laboratory (located on Grand Isle, LA) acts as a base of operations for much of the monitoring activities of both inshore and offshore artificial reef sites. Monitoring efforts of inshore reefs began in 2017 with a pilot study monitoring the artificial reef site at Independence Island. Biologists are evaluating the utility of two different material types (small versus large limestone) commonly used by the Program to create inshore artificial reefs. The goal is to assess potential differences in fish and invertebrate assemblages between material types. Sampling is conducted using small, modified-chevron fish traps in triplicate. Control sites include nearby natural shoal and mud bottom habitats. To date, Lab biologists have conducted nine sampling trips in total between March 2017 and May 2018.

A program to monitor offshore artificial reef sites has been developed and will commence in the summer of 2018. Historically, 3% or less of all artificial reef sites off the coast of Louisiana have been sampled annually through the NOAA Southeast Area Monitoring and Assessment Program (SEAMAP). LDWF will increase monitoring of offshore artificial reef structures by adding an additional 42 sites per year coast wide to achieve 10% monitoring coverage of this habitat type annually. LDWF biologists will utilize protocols similar to those of the SEAMAP vertical line survey in order to characterize the fish assemblages associated with artificial reefs in Louisiana offshore waters.

The Gulf of Mexico Fishery Management Council

The Gulf of Mexico Fishery Management Council (Gulf Council) is one of eight US Regional Fishery Management Councils established by the Fishery Conservation and Management Act of 1976. The Gulf Council manages fishery resources in the federal waters of the Gulf of Mexico, including reef-dependent fish. The Department is a voting member of the Gulf Council and spends a great deal of time and resources participating in Gulf Council meetings and decisions, the vast majority of which pertain to red snapper (a reef-dependent fish)

management. Current red snapper regulation, in concert with the LA Creel Program, will collect data on recreational angling effort and success that can help guide offshore reef development.

Expenditures

The LFEA created the Artificial Reef Development Fund (Fund), set guidelines on how it could be spent, and authorized the Secretary to accept and receive donations (R.S. 56:639.8). These donations and the associated interest income form the balance of the Fund. The Program’s primary source of funding are the monetary donations the Program receives when oil and gas companies reef their platforms (“Rigs-to-Reefs” projects); the Program receives 50% of what the companies save by reefing instead of traditional removal. The Fund also earns interest from investments made by the state treasurer. The Legislature determines the Fund’s budget authority for a fiscal year, but the Program does not necessarily plan to spend that amount.

Determining Expenditures for a Fiscal Year

The LFEA does not direct the Program how to plan expenditures for a given fiscal year. Fisheries, however, has decided it would be prudent to set a maximum annual budget not to exceed the total amount in donations and interest earnings from the most recently completed fiscal year. For example, at the time of the creation of this document, it is fiscal year 2017-18 (FY-17-18). In FY-17-18, the Program has accepted 7 platforms and \$1,490,477 (Table 1), but the fiscal year is not complete. Additional platforms and donations could be accepted before June 30, 2018 (the end of FY-17-18). In FY-16-17, the Program accepted \$5,770,983 in donations and interest earnings (Table 1); so in FY-18-19, we will plan to spend no more than \$5,770,983.

Year	Beginning Balance	Revenue	Interest Earned	Actual/ Projected Operating Expenditures	Other Expenditures/ Withdrawals	Ending Balance
12-13	\$17,734,407.76	\$11,077,629.00	\$486,131.34	\$8,135,129.00	\$109,447.00	\$21,056,510.34
13-14	\$21,056,510.34	\$9,572,046.16	\$506,093.06	\$10,255,901.00	\$87,000.00	\$20,840,628.50
14-15	\$20,840,628.50	\$7,338,764.00	\$197,997.94	\$8,113,143.34	\$3,285,909.34	\$17,322,004.26
15-16	\$17,322,004.26	\$6,546,366.00	\$232,909.53	\$5,576,332.68	\$1,415,511.00	\$17,116,638.11
16-17	\$17,116,638.11	\$5,600,373.78	\$170,609.84	\$2,818,411.66	\$412,149.00	\$19,989,334.17
17-18	\$19,989,334.17	\$1,490,477.00	\$272,735.00	\$3,100,000.00		\$18,652,546.00

Table 1. The Artificial Reef Development Fund’s beginning balance, revenue, interest earned, operating expenditures, other expenditures, and ending balance for each fiscal year between FY-12-13 and FY-17-18.

Constitutional Dedications and Savings

The LFEA dictates that the Fund be used “for the operation of the program . . . including evaluation of the program and administrative and field support for the permitting, establishing, monitoring, and maintenance of artificial reefs” (R.S. 56:639.8).

The LFEA also envisions a future in which “annual interest earnings from the fund are sufficient to run the program”. While the Program is unable to project a Fund balance that would provide that level of interest earnings, we have set a goal of having a minimum Fund balance of \$40 million (roughly twice the Fund balance at the end of FY-16-17). Until the Fund reaches that level, the Program has decided to “carve out” another 10% of each fiscal year’s expenditures to save towards that goal.

It also set aside up to 10% of the donations and interest earnings to inshore reefs and an additional 10% to the wild seafood certification program. (The establishment of the Fund and these dedications were added to Louisiana’s Constitution in 2014—La. Const. Art. VII §10.11.)

Thus, the Program applies a 10/10/10 rule to the total planned expenditures for the fiscal year, before arriving at the amount the Program will spend on its activities. (Inshore reefs are clearly artificial reef activities; because the Constitution addresses their funding, we are merely carving out that amount first). Table 2 calculates those numbers for FY-18-19. In FY-18-19, the Program will budget \$577,098 for inshore reef projects and \$4,039,688 for all other activities, for a total of \$4,616,786.

	Total Fund expenditures + dedications	10% inshore	10% SC	10%save	AR (non-inshore) expenditures
FY-18-19 expenditures	\$5,770,983	\$577,098	\$577,098	\$577,098	\$4,039,688

Table 2. The Program determines the expenditures for a fiscal year’s activities by first setting aside 10% for inshore reefs, then subtracting 10% for wild seafood certification, then subtracting 10% to save until the Program has reached a \$40 million balance.

Surpluses

If we extend the practice of planning a fiscal year’s expenditures based on the most recently completed fiscal year, the Program has been surplus spending for the past two years. FY-16-17’s planned expenditures would have been \$7,536,761—the actual expenditures were \$3,230,560.66, for a surplus of \$4,306,201.28. FY-17-18’s planned expenditures would have been \$6,779,275—the Program is projected to spend \$3.1M, for a surplus of \$3.679M. We have decided to “carry forward” these surpluses for years where the planned expenditures might not be large enough to cover the Program’s basic activities. For example, the FY-19-20 expenditures are currently projected to be \$1,763,212. Carrying forward the surpluses will help us if we continue to spend \$2.8-3.1M. (If donations continue to be lower than that, we will have to plan expenditures to lower amounts without surpluses).

Forecasting

It is difficult to predict how many Rigs-to-Reefs projects will be completed in a year. The Artificial Reef Coordinator is responsible for acquiring the permits for each project and

executing an Act of Donation with the company donating the platform. The permit authorizes the project, and the Act of Donation forms the agreement to accept the platform between the company and the State—these are two major steps that must occur before a platform can be reefed. The Act of Donation also specifies the monetary donation the State will accept in exchange in order to take ownership and liability for the platform.

By tracking the executed Acts of Donation and communicating with the companies about their reefing plans, the Artificial Reef Coordinator estimates the number of projects and the total donation amount the Program may receive each year.

The Future of Rigs to Reefs in the Gulf of Mexico

There are approximately 2000 platforms remaining in the Gulf of Mexico, and removals have been proceeding at a pace of about 200 a year. Rigs to Reefs projects are unlikely to end in exactly 10 years ($2000/200=10$), but the math does indicate that Rigs to Reefs projects will slow down and cease on a timeframe of that scale. The Program must start planning for a future in which projects that “build themselves” and the income generated from those projects cease.

Goals

As discussed in the budget section, the Program anticipates that Rigs-to-Reefs projects will be slowing down in the coming years, reducing the number of projects the Program can accomplish each year and reducing the funding for inshore and nearshore projects. This section is intended to make clear the Program’s goals for the next five years. This list reflects, largely, the activities the Program has been conducting; but the hierarchy of the goals listed reflects the Program’s priorities.

Reef building

The Louisiana Artificial Reef Program actively creates new reef sites and enhances existing reef sites as necessary.

GOAL 1: To create, maintain, and enhance habitat for fish and fishing opportunities for fishermen.

Objective 1.1 (Offshore): Facilitate as many “Rigs to Reefs” as practicable as long as there are “reefable” oil & gas structures in the offshore waters of Louisiana.

Objective 1.2 (Inshore): Facilitate the creation of new inshore reef sites and/or the enhancement of existing reef sites to the maximum extent possible within the allotted expenditures (10% of fiscal year expenditures).

Objective 1.3 (Inshore): Expend the full 10% constitutional dedication to inshore artificial reef projects.

Objective 1.4 (Nearshore): Facilitate the creation of new nearshore reef sites and/or the enhancement of existing reef sites to the maximum extent possible within the allotted expenditures.

PERFORMANCE MEASURES

Output (Offshore): Request a United States Army Corps of Engineers permit within 30 days of receiving a “Letter of Intent.”

Output (Offshore): Execute Acts of Donation for at least 95% of cost estimates received annually.

Output (Inshore): Develop and publish a Request for Industry Input and Quotes (RFIQ)

Output (Inshore): Expend the full 10% constitutional dedication to inshore artificial reef projects on proposed projects submitted through RFIQ

Output (Nearshore): Develop and publish a Request for Industry Input and Quotes (RFIQ)

Output (Nearshore): Expend the full amount allotted per year on proposed projects submitted through RFIQ

Outcome (Offshore, Inshore, & Nearshore): Number of reef sites created or enhanced.

Compliance Monitoring

The Louisiana Artificial Reef Program monitors existing artificial reefs to ensure compliance with permits and ensure that materials remain durable and stable.

GOAL 2: To identify any issues with materials, placement of materials, or movement of materials that may affect compliance with permits or long-term utility of artificial reefs (Offshore, Inshore, & Nearshore)

Objective 2.1 (Offshore): To perform a “physical” (sonar) survey of each offshore reef every five years.

Objective 2.2 (Inshore): To perform a “physical” (sonar) survey of each inshore reef every three years.

Objective 2.3 (Nearshore): To perform a “physical” (sonar) survey of each nearshore reef every three years.

PERFORMANCE MEASURES

Output (Offshore): Develop a Request for Quotes (RFQ) for surveying 15-16 reefs (those not surveyed in the last 5 years; those enhanced with a new structure since the last survey).

Output (Inshore): Develop an RFQ to survey one third of inshore reef sites.

Output (Nearshore): Survey “inshore-like” (lower profile reefs) with the inshore reefs; “offshore-like” (those created with platforms) with the offshore reefs.

Outcome (Offshore, Inshore, & Nearshore): Number of reef sites surveyed.

Biological Monitoring

The Louisiana Artificial Reef Program monitors existing artificial reefs to assess their utility to fishermen and fish/aquatic species.

GOAL 3: To determine the characteristics of artificial reefs that maximize their usefulness to fishermen and fish/aquatic species (Offshore, Inshore, & Nearshore)

Objective 3.1: To perform angler surveys that assess which reefs anglers are using and how often and their angling success at these sites.

Objective 3.2: To perform biological surveys of the areas and material used to create artificial reefs.

Research

The Program consistently has questions that it cannot answer with even a robust monitoring program. There also questions asked from outside the Program that can be pertinent to the Program's activities.

Can environmental DNA sampling techniques be used to characterize the assemblages associated with artificial reefs?

Can artificial structures be sampled in a way that enhances stock assessments?
Specifically, one informational gap is: how are fish distributed depthwise along the structures?

Are different profiles (the "height" of a structure into the water column) associated with different assemblages?

Spacing: are different distances between reefed structures associated with different assemblages?

Juvenile reef vs. adult reefs: can reefs that are designed to benefit different life histories increase recruitment of a species into a fishery?

The Program can address these questions both in partnerships with universities and by funding research. The Program has decided to commit funds each year to Master's-level research—we believe this can both address the Program's questions and contribute to our own workforce development.