Overview and Requirements

Background: Since the rapid expansion of the lionfish population in 2009, the FWC has recognized this issue as a high priority and made significant strides in educating the public about the potential negative impacts of lionfish on human health and safety, the economy of Florida, and native natural resources. Effective control of the lionfish invasion is highly dependent on cooperative efforts by government agencies, partners, and stakeholders. This collaboration requires the public to understand potential threats than can result from invasive species, and their role in helping prevent or minimize these impacts.

Goal: To increase awareness and ensure consistent, accurate messaging about the lionfish invasion in Florida waters by supporting the creation of lionfish educational exhibits in public facilities around the State.

How to Qualify:

- All participants must be facilities open to the public and committed to encouraging public awareness of coastal issues in Florida. Funding awards will be given to facilities with existing lionfish educational exhibits or an interest in creating one. Participants are required to apply for the program (see attached Application Form).
- Exhibits must display FWC-approved information on lionfish and their invasion of Florida waters. Exhibits may contain additional information, but the messaging must not conflict with the agency’s nonnative and invasive species initiatives.
- Exhibits must include the following: “Provided with funding from FWC” and include the FWC logo.
- Applicants are encouraged to visit FWC’s lionfish information page (MyFWC.com/Lionfish). FWC will not provide lionfish for exhibits.

Support Funds:

Approved participants may be awarded up to $2,499 to offset costs associated with the creation of lionfish educational exhibits. Approved vendors are only eligible to receive one award per fiscal year. Monetary awards are contingent upon valid submission of required reports and invoice(s) (see “Required Reporting and Invoicing” below).
Required lionfish facts that must be included in exhibit display
(Exhibits should include this information but can be arranged to fit your facility’s themes)

- Invasive species are animals or plants that are introduced into an area they are not native to and that negatively impact native fish and wildlife, cause damage that is costly to repair, or pose a threat to human health and safety.
- The population size of invasive species follows a general pattern depicted in the graphic below. Growth over time occurs rapidly after introduction followed by a slight decline and a stable population level is reached as the ecosystem’s resources are fully used, called the carrying capacity. However, an invasive species will use a disproportionate amount of an ecosystem’s resources, displacing many other species in the ecosystem. Management of invasive species is critically important in maintaining ecosystem diversity.

![Population Growth Graphic](image)

- Native to the Indo-Pacific, lionfish are an invasive species first spotted off Florida in 1985 that has become established in the Atlantic Ocean, Gulf of Mexico and throughout the Caribbean Sea.
- Lionfish are a hardy, generalist predator with no known consistent natural predators in the invaded range. They have the capacity to significantly reduce juvenile populations and overall diversity, preying on over 90 species of reef fishes and invertebrates.
- Lionfish possess 18 venomous spines that can cause pain and swelling. There have been no reported deaths from a lionfish sting.
- Lionfish are demersal (bottom-dwelling) and prefer habitat with ledges. The greatest densities of lionfish are generally found below 75 feet of depth.
- Releasing invasive species is prohibited in Florida and can permanently alter native ecosystems. Don’t release your pets!
Florida Fish and Wildlife Conservation Commission
Lionfish Education Exhibit Program
Requirements & Application

Application Form

A. Payment Information: To be paid by the FWC, the organization must be a registered vendor in the state of Florida purchasing system with a valid W-9 on file. If you have already done so, proceed to Applicant Information, otherwise follow steps below:
   1. Register as a vendor with the state of Florida at https://vendor.myfloridamarketplace.com/.
   2. Complete a separate registration (from step #1) and upload an active W-9 at https://flvendor.myfloridacfo.com/. Note: It usually takes 3-5 days for system processing.

B. Applicant Information: Please submit the information and materials requested in Sections B and C to Lionfish@MyFWC.com no later than April 3, 2020. Information must match My Florida Marketplace Vendor Profile.

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<td>Vendor Address</td>
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☐ Organization is registered with https://vendor.myfloridamarketplace.com/.

☐ Valid W-9 is on file with https://flvendor.myfloridacfo.com/.

1. How many annual visitors at your facility? _________________________________

2. Describe how the proposed exhibit will increase awareness of the lionfish invasion (Use additional paper, if necessary):

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________


C. **Materials Required for Submission with Application Form:** In addition to the application form above, applicants must submit by email the following documentation for proposed exhibit displays:

1. Blueprint/sketch of proposed exhibit or photos of existing exhibit(s) (if any)
2. Copy of text and photos to be displayed in the exhibit
3. A proposed itemized budget for assistance fund spending (i.e. materials and/or services).

After the application is processed and approved, you will receive an approval email notification with a purchase order number. **Do not begin construction before receiving purchase order approval.**

No payments for reimbursement will be approved without prior application approval and receipt of purchase order number.

D. **Required Reporting and Invoicing**

1. **Construction Report:** All construction must be completed and a construction report submitted by **June 5, 2020.** The construction report must include an itemized list of materials and labor hours for the completed exhibit display, copies of any receipts for materials purchased, description of construction completed including information on displays, and photos of completed exhibit. Please submit construction reports to Lionfish@MyFWC.com.

2. **Final Invoice(s):**
   - Invoice(s) MUST use FWC template and include:
     - Dates of service
     - Invoice number and date
     - Vendor name and address
     - FWC name and address (FWC Lionfish, 1875 Orange Ave E, Tallahassee, FL 32311)
     - Purchase order number (included in notification email of approved purchase order)
     - The sum total of expenditures

Final Invoice(s) must be received **no later than June 5, 2020,** to be eligible for payment.

FWC reserves the right to deny payment if the participant fails to fulfill the requirements for payment processing or provide all required reporting and invoicing.

I acknowledge that I have read and agree to the requirements for this program.

Printed Name: _________________________________________ Date: ________________

Signature: ____________________________________________

Send application and required materials to Lionfish@MyFWC.com. Please direct all questions regarding the program to Jessica Valek (Jessica.Valek@MyFWC.com)
Additional Lionfish Facts

May be included in exhibit

**Reproduction:**

- Spawn frequently, about 2-4 days between spawns during warmer months in the summer. Eggs are encased in a floating, gelatinous egg mass.
- Can release up to 30,000 eggs per spawn though most do not reach adulthood.

**Biology/Life History:**

- 18 venomous spines total, 13 on dorsal (top), 1 on each pelvic fin (bottom front), 3 on anal fin (bottom back). Spines are not hollow like snake fangs. Instead, venomous glandular tissue is housed in grooves along the spine.
- Are not aggressive and use their venomous spines only for defense.
- Neuromuscular toxin can cause pain, swelling, redness, tingling, numbness. Treat stings by immersing the wound in hot (not scalding) water for 30 to 90 minutes and seek medical attention if necessary.
- Can live as deep as 1,000 feet, tolerate salinity as low as 4 ppt (average ocean is 35 ppt), and temperatures as low as 50° Fahrenheit.

**Invasion:**

- The lionfish invasion refers to 2 species: Red Lionfish (*Pterois volitans*) and Devil Firefish (*P. miles*).
- The source of the invasion is unknown, but it was likely from an aquarium release of some kind. Though sometimes blamed, it is unlikely that a release from ballast water was the culprit, as very little shipping from the lionfish’s native range to our waters occurs without the exchange of ballast water beforehand.
- Harvest by recreational and commercial divers is currently the best means of controlling lionfish and minimizing unwanted ecological impacts.
- Lionfish predation on grazers could lead to increase of algal cover on coral reefs. Lionfish could be competing with native predators for food and space

**Harvesting Lionfish:**

- There are no minimum size limits, closed seasons or bag limits for recreational or commercial harvest, and a recreational fishing license is not required to harvest lionfish when using dip nets, pole spears, Hawaiian slings or any spearing device designed and marketed exclusively for lionfish. Care should be taken to not damage reefs when spear fishing. Please safely remove lionfish whenever possible and consider participating in lionfish derbies and tournaments.
- The practice of feeding lionfish to other predatory species while diving should be avoided because it is dangerous and prohibited in state waters.