

1. Requested Motion:

Meeting Date: August 5, 2013

Motion to approve the Bivalve Data Collection Grant from Charlotte Harbor National Estuary Program in the amount of \$200.

Why the action is necessary:

Charlotte Harbor National Estuary Program has awarded the Town a \$200 grant upon the town's acceptance of the grant.

What the action accomplishes:

2. Agenda:

- Consent
- Administrative

3. Requirement/Purpose:

- Resolution
- Ordinance
- Other

4. Submitter of Information:

- Council
- Town Staff
- Town Attorney

5. Background:

The goal of the Mound House Bivalve Data Collection Program is to provide a representative sampling analysis of the seasonal availability and abundance of local populations for some of the various types of shellfish, conchs and whelks that are found in the archaeological record at Mound House.

Attachments:

- Memo detailing the grant request

6. Alternative Action:

None

7. Management Recommendations:

Approve grant as requested

8. Recommended Approval:

Town Manager	Town Attorney	Finance Director	Public Works Director	Community Development Director	Parks & Recreation Director	Town Clerk
					RN	

9. Council Action:

- Approved Denied Deferred Other

MEMORANDUM

TO: Terry Stewart, Town Manager
THROUGH: Randy Norton, Acting Parks & Recreation Director
FROM: Regan Doherty, Cultural Resources Manager
DATE: July 19, 2013
RE: Acceptance of \$200 grant from Charlotte Harbor National Estuary Program

Charlotte Harbor National Estuary Program has conditionally approved a request up to \$200 to cover the purchase of supplies for a marine gastropod and bivalve collection program at Mound House. The project will be completed by Environmental Educator, Parke Lewis with assistance from volunteers and unpaid interns. The project will be 100% funded through the CHNEP micro grant. The grant is for a bivalve data collection program which will allow staff to analyze local populations of various types of bivalves including shellfish, conchs, and whelks which are all found in the archaeological record at the mound house.

The terms of the grant are as follows:

1. Agree to explain CHNEP to participants and acknowledge the sponsorship as appropriate. In particular, please initiate the following where possible:

- Acknowledge CHNEP support in any materials developed including a brief explanation of the CHNEP, contact information and the CHNEP logo as appropriate.
- Consider capturing the names and addresses of people who participate in your activity for the free quarterly CHNEP newsletter *Harbor Happenings*.
- Consider distributing CHNEP materials, such as the program newsletter, to participants.
- Add a link from your website to www.CHNEP.org.
- Consider submitting a short article about your findings for the CHNEP newsletter *Harbor Happenings*.
- Promote and acknowledge CHNEP in other ways that may be available to you.

2. Complete the request for reimbursement and final report so that it arrives in the CHNEP office no later than August 31, 2013.

- A completed reimbursement request/final report. Please be sure the form is signed and the entire cost of the project is listed in both the reimbursement request form (item #6) and the final report.
- The final report should be comprehensive so that anyone reading it will understand the request, how the funds were used, the total cost of the project, description of how the CHNEP was acknowledged, the accomplishments of the project as well as any other information you deem relevant. (You may wish to use the copy of your initial request for a micro-grant as the start of your final report.)
- Please also provide as many photographs (as digital files if they are available) as possible that document the work of the project

The data collection program is detailed in the "Marine Gastropod and Bivalva Data Collection Program Summary" included here.

MARINE GASTROPOD AND BIVALVE DATA COLLECTION PROGRAM SUMMARY

INTRODUCTION

The goal of the Mound House marine gastropod and bivalve data collection program is to provide a representative sampling analysis of the seasonal availability and abundance of local populations for some of the various types of shellfish, conchs and whelks that are found in the archaeological record at Mound House.

The "Mound" that comprises the Mound House property is a shell mound created by Calusa Indians who started construction of the mound over 2,000 years ago and is made up of millions of shells collected over a span of more than a thousand years. Used as food, tools and ultimately mound building material, a basic understanding of the local habits and availability of these creatures helps inform the story of why, and to what extent, they are found here at Mound House today.

Time of year, water temperature, salinity, predation and disease can all affect the abundance of bivalves and gastropods. Storm events under the right circumstances can leave thousands upon thousands of fighting conchs, pen shells or surf clams high and dry, stranded on the beaches of Estero Island. Seasonal migrations and the cold waters of winter frequently leave our beaches and back bay shallows nearly devoid of species such as the lightning whelks and horse conchs that were so important to the Calusa.

Quantitative sampling of the beach at nearby Newton Park or the sea grass flats of Estero Bay provides information on the current abundance and availability of these creatures. Recent changes in environmental conditions, such as salinity or, the historic presence of sea grasses, may be found to have altered the populations of these creatures from their historic levels.

Archaeological evidence shows that the Calusa may have practiced aquaculture. Can some of these species be successfully raised and harvested here in the waters of Estero bay? Interns will be able to collect, measure and monitor the progress of numerous species of shellfish in the swift nutrient rich currents of the waters surrounding Mound House.

METHODOLOGY

BEACH SAMPLING- Sampling will be conducted waterward of Newton Park and will consist of two 50 meter by 2 meter sample transects established at the waterline on high tide events and on the sandbar during low tide events. Targeted gastropods and bivalves will be collected and measured for overall length and total number of specimens present before being released. Stakes will be installed at either end of a 50 meter cord with a 2 meter pvc pipe being used to determine the 2 meter width of the sampling along the 50 meter cord.

SEA GRASS BED SAMPLING- Sampling will be conducted in the grass flats on the southeastern side of New Pass adjacent to the foot of the bridge. Sampling will consist of two 50 meter by 2 meter sampling transects established perpendicular to the shoreline on either high tide or low tide events. Targeted gastropods and bivalves will be collected and measured for overall length and total number of specimens present before being released. Stakes will be installed at either end of a 50 meter cord with a 2 meter

pvc pipe being used to determine the width of the sampling area along the 50 meter cord.

INFORMAL PEDESTRIAN SAMPLING

This methodology is used to collect data on the presence of targeted species on designated portions of tidal flats, sand bars and beaches on Estero Island as a number of species observed /time. This sampling methodology provides data and insight into what harvesting targeted species for food might entail under varying conditions such as tide, seasonality and turbidity in a given period of time. Data collection after specific events, such as storms with heavy surf, or prolonged low temperatures, will also provide information on traditional harvest of targeted species and how they might have been affected.

MAINTAINING GASTROPODS AND BIVALVES IN CAPTIVITY

In order to meet the requirements of State and local law regarding the harvest of marine organisms for education purposes, all collection of marine for use at Mound House and Newton Park educational programs is conducted under the supervision of Certified Aquatic Science Educator pursuant to 68B-8.003(9) F.A.C.

Wire mesh holding pens installed along the shoreline of the Mound House property will be stocked with representative samples of targeted gastropods and bivalves. These specimens will be monitored on a weekly basis to determine growth rates and survivability. Specimens will be measured for overall length and weight. Duration of survival for each species of targeted gastropods and bivalves will also be recorded.

TARGETED SAMPLING SPECIES LIST

Florida fighting conch	Lettered olive	giant cockle
Horse conch	Moon snail	ark shell
Lighting whelk	Venus sunray clam	bay scallop
Banded tulip	surf clam	calico scallop
Tulip shell	spiny cockle	dosinia clam
Rough pen shell	stiff pen shell	quahog clam
Pear whelk	paper whelk	crown conch

In addition to targeted gastropods and bivalves as sample specimens, separate holding pens will also be stocked on a regular interval in order to provide additional various marine creatures for Mound House and Newton Park educational programs. These specimens will include the targeted species listed above as well as other suitable marine organisms including crabs, marine sponges, tunicates, oysters, starfish, sand dollars and sea urchins, etc. which are held in temporary captivity as needed.