**III. NEW AND ONGOING PROJECT INFORMATION**

*All EPA project ideas are vetted through three tiers at BTNEP: the BTNEP Action Plan teams, BTNEP staff, and the BTNEP Management Conference. Projects originate at the Action Plan level and are evaluated based on a variety of parameters including but not limited to: water quality, feasibility of project concept, affordability, partner input, community demands, value to habitat and species of concern, and educational and outreach value.*

**2019 NEW PROJECTS**

**Name: LUMCON Indirect (10%)**

**FY2019 New Project**

**Objective/Description:** Required funding to administer grant

**Partners:** Louisiana Universities Marine Consortium (LUMCON)

**Sec. 320 Funding Request: $54,545**

**Name: BTNEP Personnel Salary and Fringe**

**FY2019 New Project**

**Objective/Description:** Provides support to BTNEP personnel category. Personnel funds are also taken from Louisiana State General Fund. These combined funds are used to assist with salaries and fringe.

**Partners:** State of Louisiana; General Fund, Louisiana Universities Marine Consortium (LUMCON) as fiscal agent

**Sec. 320 Funding Request: $379,009**

**Name: Administrative Operating Services**

**FY2019 New Project**

**Objective/Description:** Funds items to include but not limited to: building rental ($28,795), automobile maintenance, boat maintenance, trailers, electricity, copiers, educational materials, dues, promotional equipment (including logo hats, towels, mugs, shirts, pencils, etc.), communications, and subscriptions.

**Partners:** Louisiana Universities Marine Consortium (LUMCON) as fiscal agent

**Sec. 320 Funding Request: $78,795.00**

**Name: Administrative Funds for Supplies**

**FY2019 New Project**

**Objective/Description:** Funds will be used to supplement administrative supplies in the budget for the BTNEP program. Funds items to include but not limited to: general office supplies, computers, computer supplies, educational supplies, vhf radios, auto supplies, and gasoline. Native plant production supplies, fertilizer, cone-tainers and cells, potting container, potting soils, herbicides, pesticides, etc

**Partners:** State of Louisiana - General Fund, Louisiana Universities Marine Consortium (LUMCON) as fiscal agent

**Sec. 320 Funding Request: $25,026**

**Name: Administrative Travel Funds**

**FY2019 New Project**

**Objective/Description:** EPA considers personal, face-to-face contact with peers and colleagues essential for information sharing and technology transfer. Especially important is the need to communicate lessons learned to other NEPs, thereby avoiding pitfalls that NEPs may have encountered. The Agency also considers technology transfer from NEPs to other communities essential for the success of coastal watershed protection.

**Sec. 320 Funding Request: $5,000**

**Name: LAYOUT OF THE 2020 TIDAL GRAPH CALENDAR**

**FY19 New Project**

**Objective:** To design a calendar for outdoorsmen that feature the tidal ranges for each day of each month that communicates relevant estuary issues in 12 monthly articles.

**Description:** A calendar will be designed for the Barataria-Terrebonne region that provides information relative to tidal movement with appropriate monthly articles about the BTNEP system for the 2020 calendar year. The numeric portion of the calendar will provide predicted tidal ranges for each day for each of the 12 months. In addition, the textual portion of the calendar will provide summary information on a variety of issues for each month in the form of monthly articles. Text for each of the articles will be accompanied by appropriate photographs and illustrations. In the past, this product has been one of the most popular items that is produced by the program and is in high demand.

This project provides for the layout and content, both text and pictures as a print-ready digital file. Partnering agencies are requested for collaboration in the development of textual information and the use of photographs. Sponsoring organizations are also request to help offset costs associated with printing and distribution.

**Partners:** deGravelles and Associates

**Outputs/Deliverables:** Layout and content of the 2020 Tidal Graph Calendar

**Estimated Milestones:**

* Initiation of contract
* Completion of textual content
* Completion of layout
* Printing of the calendar

**Estimated Budget:**

*Sec. 320 Funding Request: $9,000*

*Other Probable Contributions: Unknown at this time*

*Performing Organization: BTNEP*

*BTNEP Project Coordinator: Seth Moncrief, Public Involvement Coordinator*

*Action Plans: SR3*

*Time Line: October 1, 2019 – December 31, 2020*

**Long term Outcomes:** Increase in the awareness of the citizenry about estuary issues related to water quality, habitat, migratory birds, invasive species, BTNEP Projects and culture.

**CWA (Clean Water Act) Core Programs the Project Supports:** CWA core programs are (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program.

**Name: 2019 FROM H-2-O: A WATER QUALITY WORKSHOP FOR TEACHERS**

**FY 2019New Project**

**Objective:** To conduct a teacher workshop on water quality that provides teacher with water quality sampling kits, context and information about how to sample, and information about how and where to download and upload data for classroom use.

**Description:** *From H-2-O* is a teacher workshop developed to train participants the methods for using water sampling and educational strategies to educate students about water quality and related issues within the BTES using LUMCON’s Bayouside Classroom (BC) program. Bayouside Classroom is LUMCON’s ongoing student-based water monitoring program. All data collected by students is entered onto the BC database (http://www.lumcon.edu/bayousideclassroom/), which can be viewed and used by anyone with an Internet connection.

*From H-2-O* is designed to allow teachers, informal educators, and scientists to work together to build a community that will foster scientific thinking and environmental stewardship within Louisiana. There are approximately 20 spaces available for the workshop.

The workshop focuses on the following major themes: (1) Why water quality is important, (2) Bayouside Classroom sampling techniques and use of equipment, (3) Collecting accurate data, (4) Entering data into and how to use the BC website, (5) Retrieving data and data use in the classroom, and (6) Using student data to teach others about water quality.

By the end of the workshop teachers should have the quality of understanding about Bayouside Classroom and water quality that they need to comfortably teach their students about water quality using the BC program.

**Partners:** *LUMCON, BTEF*

**Outputs/Deliverables:** Final report including participant evaluations, pre and post-tests, workshop participant binder, CD of photographs, CD of all presentations including the those made by the teachers on Day 3, and, if applicable, a presentation to the BTNEP Management Conference

**Estimated Milestones:**

1. Initiation of MOU agreement between BTNEP and LUMCON by April 2019
2. Completion of the workshop in Summer of 2019
3. Final report of the workshop to BTNEP by October 2019

**Estimated Budget:**

*Sec. 320 Funding Request: $6,000*

*Other Probable Contributions: Unknown at this time*

*Performing Organization: Louisiana Universities Marine Consortium (LUMCON)*

*BTNEP Project Coordinator: Andrew Barron, Water Quality Program Coordinator*

*Action Plans: SR-11, SR-14, SR-15, SR-16*

*Time Line: January 1, 2019 – December 31, 2019*

**Long term Outcomes:**

Increase awareness among educators and students about water quality issues, improve educator access to LUMCON Bayouside classroom database and information, increase educators’ and student’s knowledge about water quality issues, provide educators with tools for measuring water quality

**CWA Core Programs the Project Supports:**

(4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, and (7) protecting Large Aquatic Ecosystems

**Name: PASSIVE ARRAY OF VHF RADIO TELEMETRY TOWERS IN THE BTNEP REGION: YEAR THREE**

**FY 2019New Project**

**Objective:** To maintain and manage the extensive array of VHF telemetry towers along the coastal reaches of the BTNEP Region.

**Description:** Currently the BTNEP Program has purchased and is in the process of establishing an array of VHF telemetry towers along with receivers across the immediate coast. This project furthers the work of the BTNEP Program aiding in the life history work currently being done by the program. Additionally, the array serves the larger ornithological community as a whole by providing data to various researchers across the Americas. Nanotags attached to migratory birds emit signals that the array captures and logs. This data is then shared with ornithologists who are part of the North American MOTUS system.

This project represents a true partnership with the Louisiana Department of Wildlife and Fisheries. Once completed, the array will span the entire coastal area of the state. Any bird fitted with a nanotag that migrates through south Louisiana will be captured by the system.

**Partners:** BTNEP, Louisiana Department of Wildlife and Fisheries, U. S. Fish and Wildlife Service

**Outputs, Deliverables:** Data that support the life history work conducted by the BTNEP Program and the Louisiana Department of Wildlife and Fisheries. Data will be shared with the ornithological community who conduct similar work.

**Estimated Milestones:** By the summer of 2016 this array will be up and running. Funding here provides for the management of that system as we move forward into 2019.

*Sec 320 Funding Request: $10,000*

*Other Probable Contributions: unknown*

*Estimated Budget: $20,000*

*BTNEP Project Coordinator: Richard DeMay, Senior Scientist*

*CCMP Action Plans: EM-15, SR-3*

*Time Line: Oct. 2018 – July 2019*

**Long term Outcomes:** Increase our knowledge of the life history requirements of migratory birds.

**Name: INTEGRATING EMERGING MONITORING TOOLS TO EVALUATE**

**WILSON’S PLOVER DEMOGRAPHY**

**FY 2019New Project**

**Objective:** Use the Motus tower network to quantify 1st year and adult annual survivorship and stress physiology of Wilson’s Plover.

**Description:** Audubon Louisiana and Tulane University will assess in detail multiple demographic parameters that drive population change in the Wilson's Plover, and reveal mechanisms that drive variation in these parameters. By utilizing the automated telemetry Motus network, long-lived nanotags (9+ months of battery life) will be attached to 1st year and adult Wilson’s Plovers in order to inform recruitment, dispersal, and annual survival. Combined with field surveys that include nest searching and tracking chicks to fledging, the intrinsic rate of population change (lambda) will be quantified. This will allow us to test whether current published estimates of minimum breeding productivity rates to sustain Wilson’s Plover populations are suitable, a critical metric for managers of breeding sites.

The proposed project will also measure two indices of physiological condition of adult birds and chicks through the analysis of plasma oxidative stress, and the analysis of feather corticosterone levels. Previous studies that used *a posteriori* assessment of oxidative stress have demonstrated that it is sensitive to a variety of environmental disruptions, including human disturbance, pollution, and habitat degradation (Beaulieu and Costantini 2014, *Conservation Physiology*). Corticosterone, the main stress hormone of birds, will be measured from the inner-most primary flight feather collected from captured adults and juveniles (Bortolotti et al. 2008, *Functional Ecology*). By understanding these mechanisms that drive variation in demographic parameters, land managers can better focus strategies on improving breeding habitat for nesting Wilson’s Plovers.

This project would provide funding for the continuation of a trial 2018 effort in which 20 nanotags will be deployed (10 adult and 10 fledgling Wilson’s Plovers) within the BTNEP area. Funding requested for the 2019 nesting season (March – July) will: a) support analysis of blood and feather samples to measure cortisol levels in both adults and chicks; b) purchase nanotags for 2019.

**Partners:** BTNEP, Audubon Louisiana, Tulane University, Wisner Foundation

**Outputs, Deliverables:** Data that support and leverage life history work previously conducted by BTNEP and Audubon Louisiana. Raw and summarized data will be shared through a final annual report, which will contribute to at least one Ph.D. dissertation and peer-reviewed scientific manuscript*.*

**Estimated Milestones:** Purchase and deployment of 60 nanotags on both adult and fledgling Wilson’s Plovers within the BTNEP area. Collection and analysis of blood and feather samples.

*Sec 320 Funding Request: $5,000*

*Other Probable Contributions:* Funding secured by Audubon Louisiana will support two field technicians, field housing, and basic field supplies. Tulane fellowship secured for Ph.D student lead on the project.

*Estimated Budget: $37,000*

*BTNEP Project Coordinator: Delaina LeBlanc, Migratory Birds Coordinator*

*CCMP Action Plans: EM-15*

*Time Line: Nov. 2018 – Oct. 2019*

**Long term Outcomes:** Development of post-restoration guidelines at project sites for land managers, as well as more broadly for dune renourishment projects, to improve beach-nesting bird populations across the Gulf of Mexico.

**Name: 2019 WETSHOP - LOUISIANA WETLAND EDUCATION TEACHER WORKSHOP**

**FY2019 New Project**

**Objective:** To provide teachers with an intense look at wetland issues related to wetland habitats, botany, ecosystems, birding, history, coastal land loss and restoration, water quality, oil and gas exploration, fishing, seining, trawling, and fisheries management

**Description:** This project will provide teachers with one week of training on the above-mentioned topics. Teachers will be required to participate in a variety of activities that will improve their content information on wetland related issues. Content knowledge will be assessed by pre/post testing.

**Partners:** The Louisiana Department of Wildlife and Fisheries, LA Sea Grant, BTNEP, CWPPRA, Keep Louisiana Beautiful

**Outputs/Deliverables:** The deliverable will be a project summary document to include: workshops summary report, workshop agenda, images, list of participants, evaluations, pre and post test results with report

**Estimated Milestones**: By May of 2019, the Louisiana Department of Wildlife & Fisheries (LDWF) will provide an agenda and list of locations that teachers will visit during WETSHOP 2019. In June/July 2018, the Louisiana Wildlife & Fisheries Foundation in partnership with LDWF will host a 6-day wetland workshop for teachers. In the AY 2018/19, WETSHOP veteran teachers will provide in-service teacher trainings and/or wetland community service learning projects for their students or community on the values, issues and history of the Louisiana coastal ecosystem and the values of wetlands in general. LDWF will show this by workshop sign-in sheets, evaluation forms and pictures of events and teacher portfolios.

*Sec. 320 Funding Request: $ 5,000.00*

*Other Probable Contributions: ≈ $26,000.00 (In kind and fees)*

*Estimated Budget: Total budget is estimated at $31,000*

*BTNEP Project Coordinator: Alma Robichaux, Outreach and Education Coordinator*

*CCMP Action Plans: SR-15, SR-16,*

*Time Line: January 2019-December 2019*

**Long term Outcomes:** Increase awareness among educators about wetland issues, improve educator access to information, increase educators’ knowledge about wetlands, provide educators with tools for improved wetlands education. The most valuable long term outcome is that students will be educated by trained teachers who have had field experience.

**CWA Core Programs Addressed:** (2) identifying polluted waters and developing plans to restore them, (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program, and (7) protecting large aquatic ecosystems.

**Name: TEACH WILD*:* A LESSON ON MARINE DEBRIS**

**FY2019 New Project**

**Objective:** To develop customized marine debris school and public programming that will address the causes of land-based marine debris, its impacts on the environment, and what individuals can do to reduce its effect on local habitats. NOAA defines marine debris as any persistent, manufactured, or processed solid material that is directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment.

**Description:** The Barataria-Terrebonne National Estuary Program’s Education Opportunity Program will support Audubon Nature Institute’s *Teach Wild: A Lesson on Marine Debris* program that will target regional educators, students, and two million paid visitors including students visiting Audubon Aquarium of the Americas and Audubon Zoo on field trips. This grant will provide funding for land-based marine debris education programing including:

* + - * Marine debris education materials/supplies for guest engagement opportunities at Audubon
* Aquarium of the Americas and Audubon Zoo;
* Marine debris outreach materials and supplies for the AquaVan, Audubon’s outreach vehicle that
* provides complimentary visits to Title 1 Schools in the Greater New Orleans area;
* 40 bus transportation vouchers for regional schools to visit Audubon Aquarium of the Americas
* to experience Audubon’s marine debris programming;
* Micro-plastic apparatus and supplies to provide an active learning experience during school
* programming/field trips to Audubon Aquarium of the Americas; and
* Supplies for dissection demonstrations to show the effects of micro-plastic ingestion by sea birds.

**Partners:** Audubon’s education team will use the *Washed Ashore* curriculum developed in partnership with the NOAA Marine Debris Prevention

**Outputs/Deliverables:** BTNEP’s support of *Teach Wild: A Lesson on Marine Debris* will enhance Audubon’s marine debris education efforts while focusing on educating regional youth on plastic use in our society, the effects of marine debris along the Gulf Coast, and how to act both individually and as a community to prevent the creation of marine debris. This program will encourage behavior change among the educators, students, and two million visitors to Audubon Aquarium of the Americas and Zoo, while empowering visitors to create outreach opportunities for the broader community.

*Project Outcomes:*

* Create customized marine debris programming that is relevant to the Gulf Coast community;
* Develop interactive, engaging marine debris programming materials;
* Provide marine debris programming and resources to further engage students;
* Engage two million visitors through interactive marine debris programming at Audubon Aquarium of the Americas and Audubon Zoo each year;
* Encourage students, teachers, and visitors to participate in a clean-up event in their community;
* and
* Raise awareness, change behaviors, and ultimately reduce land-based marine debris within the
* Greater New Orleans area.

**BTNEP Education Opportunity Program Budget**

*Sec. 320 Funding Request: $ 9,625.00*

*Other Probable Contributions: ≈ $?? (In kind and fees)*

*Estimated Budget: Total budget is estimated at $??*

*BTNEP Project Coordinator: Alma Robichaux, Outreach and Education Coordinator*

*CCMP Action Plans: SR-15, SR-16,*

*Time Line: January 2019-December 2019*

**Long term Outcomes:** Long-term Outcomes for *Teach Wild: A Lesson on Marine Debris* include:

* Encourage empathy, respect, awareness, and appreciation of the natural world;
* Raise awareness of marine debris through public-facing products to reach wider audiences;
* Encourage behavior change;
* Prevent the introduction of marine debris through raising awareness and changing behavior; and
* Reduce single-use plastic usage and encourage replacing them with reusable items.

**Name: MARINE DEBRIS EDUCATION AND PREVENTION PROGRAM (MDEPP)**

**FY2019 New Project**

**Objective:** To improve water quality by significantly reducing the amount of trash entering estuary water bodies and the ocean through education and awareness activities targeted at students (K-12), parish governments, business communities, and individual citizens

**Description:** BTNEP has educated High School Juniors and Seniors and citizen groups on Marine Debris for 3 years through the Marine Debris Education and Prevention Program. Hands-on data citizen science is performed once a month on Elmer’s Island to track the amount and types of marine debris accumulating on Elmer’s Island. BTNEP uses the NOAA protocol for collecting the data and enters the data into NOAA Marine Debris Program online database.

Despite the highest fine for littering in the country, Louisiana waterways are still full of trash and debris. Marine debris results in animal fatality through ingestion and entanglement, boat motor problems, loss of tourism revenue and decrease in water quality. With the breakdown of plastics marine debris, this waste becomes more toxic and dangerous to sea life. Research on the effects of this plastic ingested by sea life as food is ongoing.

Funds will be used to provide transportation to students and citizen groups.

**Partners:** BTEF, LAWLF, and others TBD.

**Outputs/Deliverables:** The deliverable will be a project summary document to include images.

**Estimated Milestones**: Monthly Citizen Science trips to Elmer’s Island.

*Sec. 320 Funding Request: $ 3,500 (Operating Services)*

*Other Probable Contributions: Unknown at this time*

*Estimated Budget: Total budget is estimated at $15,000*

*BTNEP Project Coordinator: Alma Robichaux, Outreach and Education Coordinator*

*CCMP Action Plans: SR-15, SR-16, EM-10, SR-3, SR-4*

*Time Line: January 2019-December 2019*

**Long term Outcomes:** The students and citizen groups gain knowledge about how litter becomes a part of marine debris. Public has an opportunity to volunteer to improve coastal habitats, people can learn how to influence individuals and government officials to take action against marine debris and to encourage litter abatement.

**CWA Core Programs Addressed:** (4) addressing diffuse, nonpoint sources of pollution, (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program

**Name: PILOT TESTING AND PROTOCOL DEVELOPMENT OF APPLE SNAIL EGG MASS SUPPRESSION AT MANDALAY NATIONAL WILDLIFE REFUGE:**

**YEAR TWO**

**FY 2019 New Project**

**Objective:** The goal of this project is continue ongoing research to develop and test protocols for apple snail egg mass suppression at Mandalay National Wildlife Reserve where apple snails are already established. The project will assess whether the development of protocols to suppress the egg life stage of apple snails, combined with attrition by natural predation of the adult stage, will have an impact to reduce the active breeding population.

**Description:** The maculata apple snail (*Pomacea maculata*) has invaded many coastal and some inland areas in south Louisiana. There have been reports that they significantly reduce SAV available for waterfowl and other wildlife. At the same time, we have evidence that native predators such as alligators and raccoons are eating them. Because they lay their eggs on objects sticking out of the water and are easily seen because of their bright pink color, they are a logical point of attack. Each egg mass contains between 800 and 2000 eggs. Each female can lay an egg mass approximately every 4-7 days during the summer months. Thus, a single female could produce more than 52,000 eggs from the beginning of April to the end of September when they most actively lay eggs. A hundred females could produce over 5 million eggs. And, while egg masses often incompletely hatch out or are lost due to flooding, even if you reduced that estimate by 50% you would still have over 2.5 million hatchling snails. Fortunately, many species eat snails at all stages of their life. The problem is that this reproductive effort overwhelms the predator community’s ability to have an impact on them. A recent USGS study in Mobile, Alabama demonstrated that spraying apple snail egg masses with coconut oil or PAM cooking spray reduced hatch success by as much as 80%. We would like to test the proposition that a concerted egg mass reduction effort will allow the predator community to ‘catch up’ to the apple snails and reduce their overall population and impact. To do this we need to develop a practical and sustainable implementation strategy.

At Mandalay NWR we will conduct egg mass suppression in three interior ponds and have three no-suppression ponds as controls. We will use interior ponds to minimize the potential for rapid re-invasion in response to our control efforts. These ponds are also valuable duck habitat and the reduction in submerged aquatic vegetation that has been attributed to apple snails has negatively impacted duck visitation.

**Partners:** USGS Wetland and Aquatic Research Center (WARC)

**Outputs/Deliverables:** Deliverables will include protocols for suppression of apple snail reproduction to levels where it can have an impact for both areas that are already invaded and areas that are still at the early stages of infestation and a manuscript evaluating the feasibility of egg mass suppression as a mitigation tool for apple snails.

**Estimated Milestones**: Contractor has been identified. Scope of Services contract to be executed in Spring 2018. Experiment to be conducted through Fall 2018. Final report expected Winter 2019.

*Sec. 320 Funding Request: $ 7,500*

*Other Probable Contributions: $ 6,700 matching from USGS*

*Estimated Budget: $ 14,200*

*BTNEP Project Coordinator: Michael Massimi, Invasive Species Coordinator*

*CCMP Action Plans: EM-16*

*Time Line: October 2018 – September 2019*

**Long term Outcomes:** It is expected that suppression of reproduction of apple snails combined with predation of adults by native molluscivores will have a net effect of suppressing the total population of apple snails, allowing native plant communities to recover from snail herbivory. This will help restore native aquatic system sustainability and improve habitats for waterfowl and fisheries. Protocols can be shared with other stakeholders, adding a new weapon to the arsenal of apple snail control and management.

**CWA Core Programs Addressed:** (5) protecting wetlands, (6) protecting coastal waters through the National Estuary Program

**Name: CULTURAL HERITAGE PROJECT**

**FY 2019 New Project**

**Objective:** To fund a project or projects that develops a greater awareness of the unique lifestyles and historical traditions of the BTES that have contributed to the ecology and economy of the estuary. A project in contention must aim to preserve the lifestyles and unique historical traditions of the BTES while also conserving the estuary’s resources.

**Description:** Southern Louisiana has a strong multi-cultural heritage of history, food, music, language, folklore and lifestyles, all clearly related to the beauty, mystique and richness of the natural resources of the area. Because of the strong ties between the cultural heritage of the BTES and the area’s natural resources, the cultural traditions and unique lifestyles of the estuary are being threatened alongside the diminishing resources of the estuary. This funding source will help to highlight the cultural richness of the BTES while emphasizing the stewardship of resources for future generations.

*Sec 320 Funding Request: $2,000*

*Other Probable Contributions: Unknown at this time*

*Estimated Budget: $ Unkown*

*BTNEP Project Coordinator: Seth Moncrief, Public Involvement Coordinator*

*CCMP Action Plans: SR-5 Cultural Heritage*

*jTime Line: October 2018 – September 2019*

**Long term Outcomes:** Activities such as these will bring greater awareness to the interaction between people, lifestyles and the environment. The activities represent innovative ways to show the value of the estuary and how the estuary can continue to support the culture of this area. As community pride is built, citizens will become more engaged in the preservation of both the physical and cultural resources in the region.

## **FY 2018 PROJECT SUMMARY SHEET BY PROJECT NAME**

|  |  |  |
| --- | --- | --- |
| **Project Summary Sheet -Project Name** | **Cost** | **Subtotals** |
| LUMCON Indirect (10%) | $54,545 |  |
| Personnel Salary and Fringe | $379,009 |  |
| Administrative Operating Services – Rental Building | $28,795 |  |
| Administrative Operating Services - (Ex: postage, freight, auto main., dues, subscriptions, communications) | $50,000 |  |
| Administrative Funds - Supplies for BTNEP Office | $20,026 |  |
| Farm Supplies/Plant Materials | $5,000 |  |
| Administrative Travel Funds | $5,000 | $542,375 |
| Layout Of The 2019 Tidal Graph Calendar | $9,000 |  |
| H-2-O Teacher Workshops (Kits, teacher stipends) | $6,000 |  |
| Passive Array Of Vhf Radio Telemetry Towers In The BTNEP Region: year two | $10,000 |  |
| Wilson's Plover demography - Audubon and Tulane | $5,000 |  |
| 2018 WETSHOP | $5,000 |  |
| Teach Wild: A lesson on Marine Debris | $9,625 |  |
| MDEPP (Operating Services) | $3,500 |  |
| Pilot Testing And Protocol Development Of Apple Snail Suppression At Mandalay National Wildlife Refuge | $7,500 |  |
| Cultural Heritage Project | $2,000 | $57,625 |
| **TOTAL** | **$600,000.00** | **$600,000.00** |
|  |  |  |