Proj #	Bay PRP 2014-011
Project Name	City of Panama City Beach and Bay County Continuous Outfall Sediment Reduction Projects
Project Proposer, affiliation, web site	Kelly Jenkins, P.E. City of Panama City Beach and Bay County
Project Description	The project goal includes Phase I which will improve water quality discharge at each of the 15 continuous outfalls including construction of upstream BMP. Phase II includes the survey and design for the offshore outfall that will eliminate the outfalls at Calypso and Lullwater Lake when funding is available for construction. Both Phases are requested for funding and will surveyed and designed simultaneously. There is $200,000 in funds for sediment reduction device construction in the budget.
Proj. Size (acres)	570
Economic	Economic benefits will include job creation and stimulus to the local economy. It will enhance revenue from tourism, trade, and commerce associated with the improvements to the beach and Gulf. Economics will be enhanced by visitor experiences, higher occupancies at rental units and appraisal values.
Environmental	The environmental benefit includes a reduction of sediment discharge of 900,000 lbs annually into the Gulf of Mexico. The nutrient removal system is a filtration mechanism that will reduce the nutrients and bacteria that are currently discharging into the Gulf of Mexico from each of the outfalls.
Social	The social benefits of the sediment reduction project will include improved snorkeling, fishing, and swimming due to reduced turbidity and bacteria discharge into the near shore beach areas. In addition, the improved outfall systems will allow for additional public gathering areas on the beach.
Other	This project also proposes to extend the existing beach outfalls where applicable. In these cases, beach erosion will drastically be reduced. The turtle nesting area will be improved as the sweep area for the outfalls are reduced significantly.
Project Location	The project includes 10 continuous outfalls in the City of Panama City Beach and 5 outfalls in Bay County. The locations are between Riviera Drive and R. Jackson Blvd. and are outfalls numbered B-132, B-130, B-123, B-122, B-119, B-116, B-112, B-106, B-97, B-88, B-78, B-71, B-55, B-52, and B-51.
Est total project cost	$12,550,000
Amount requested	$1,000,000
Describe what funds will be used for	The requested funds will be used for Phase I to survey, design, and permit the outfall improvements at each of the 15 locations through the DEP and ACOE with $200,000 allocated for construction improvements. Phase II will be for survey and design of the offshore discharge system.
Long term funding needed? Source? Availability?	The long term funding will be required to complete the project construction. The estimated construction schedule is 3 years from the date of completion of all permitting and construction plans preparation. The $200,000 construction funding is allocated to upstream BMP's for Phase I in year 2.
Est yrs completion	3-6
Matching $ available?	Yes

Match source? Secured?	The City of Panama City Beach is providing a $100,000 match for the project from their stormwater budget.
Amount match secured	$100,000
% proj cost from match	10
Partners anticipated?	Yes
Partner names	Bay County and the City of Panama City Beach
Funds request other source?	
If yes, name source, decision date	
Proj fully funded by other source?	
FULL PROPOSAL FORM	
Project number (proposal)	Bay PRP 2014-011
Submittal date proposal	2/7/2015
Project name (proposal)	City of Panama City Beach and Bay County Continuous Outfall Sediment Reduction
Applicant name	KELLY JENKINS, P.E.
Project description (proposal) 1	The City of Panama City Beach and Bay County are home to a thriving tourist destination for visitors from all over the United States and depend on this market for the local economies. The growth that has been experienced over the past 20 years has been significant and development has resulted in numerous stormwater outfalls that line the beaches with discharge structures, exposed pipes, and open box culverts. The City and County stormwater management systems that have been developed over the years has resulted in fifteen (15) continuous flow outfall structures that currently discharge onto the beach. The ponds and ditches that form on the beaches as a result of these discharges are often filled with trash, debris, and typically very high fecal coliform levels. The recent BEST study that was conducted by CDM for county wide watersheds found the Lower Coastal region where these fifteen (15) continuous outfalls are located to be impaired. There were four locations identified along the beaches that were found to be severely impaired including the outfalls at Lullwater Lake and Calypso Towers. The beach outfalls are unsightly, cause erosion of the natural beach, and transport approximately 1,934 lbs/ac/yr of pollutant load, including sediment, debris, oil, and nutrients, directly to the Gulf of Mexico. In addition, the stormwater transmits bacteria and viruses to the beach during and immediately after a rainfall event, exposing residents and tourists alike enjoying the near-shore area to harmful pathogens. The final issue that has required tremendous maintenance effort and funding by the City and County is reshaping the alignment of these outfall sweep areas to prevent shoreline impoundments.

Project description (proposal) 2	There are two items that are addressed in the proposal to improve the water quality and alignment of the outfalls that are outlined below: 1. Bay County and the City of Panama City Beach are seeking funds to survey, design, and permit a plan to restore, replace and enhance the fifteen (15) continuous outfalls that currently discharge onto the beach. There are ten (10) continuous outfalls within the City limits and five (5) outfalls in the county that would be addressed within the plan. Each of the outfalls would be surveyed and evaluated for performance improvements including installation of upstream trash collectors, nutrient and oil reduction devices such as baffle boxes, pipe skimmers, inlet baskets, and inlet skimmers that would significantly enhance the downstream water quality that is discharging onto the beaches. In addition, the discharge structures would be designed and permitted to extend the seaward limits to a distance that would significantly reduce scour, erosion, and maintenance requirements. 2. The second phase of the plan includes the surveying and design for an off-shore stormwater outfall that would significantly reduce sediment, debris, oil and nutrients discharging directly into the near-shore surf zone. Within this plan, existing stormwater drainage basin that spans from Lullwater Lake to Calypso Towers will be retrofitted with underground junction boxes that would connect the two systems into one offshore discharge system. The installation of baffle boxes at the discharge location would allow for high levels of treatment and water quality improvements prior to release into the Gulf of Mexico. The discharge structure would include approximately 1300 linear feet of 72" reinforced concrete pipe that will discharge offshore. The system would potentially eliminate four (4) intermittent outfalls and the two continuous outfalls at Calypso Towers and Lullwater Lake. As a result of this project, unsightly beach outfalls responsible for shoreline erosion will be removed, regional flooding problems will be alleviated, oil, grease, trash, and sediment will be prevented from discharging directly onto the beach and surf zone. In addition, the risk of adverse bacteria and viruses in the swim zone will be greatly reduc
Project location description	The proposed project includes fifteen (15) continuous outfalls in the Bay County and City of Panama City Beach that stretch along nine (9) miles of beach front to the Gulf of Mexico. The locations are between Riviera Drive and R. Jackson Blvd. and are outfalls numbered B-132, B-130, B-123, B-122, B-119, B-116, B-112, B-106, B-97, B-88, B-78, B-71, B-55, B-52, and B-51. In addition to this, phase 2 of the project the off-shore stormwater outfall will not be visible on the shore or in the water and will be located approximately 1,300 feet into the Gulf adjacent to the existing City Pier.

1. Restore nat res	Stormwater runoff often includes trash, pet waste, fertilizers, sediment, herbicides and other dangerous pollutants, metals, and toxins washed into storm drains during rainfall events. Used motor oil, grease, automotive fluids like leaking antifreeze, and car-wash soap all enter the stormdrain system as well. Unlike natural systems in which this toxic soup is percolated through the ground, getting filtered and cleaned along the way, urban areas such as the City of Panama City Beach and Bay County Beaches are covered with impervious surfaces, such as asphalt or concrete, that prevent such treatment. For these areas and most urban settings, stormwater discharges along the streets, picking up trash and additional roadside pollutants, and enters stormdrains that discharge unfiltered runoff directly into the Gulf of Mexico. The upstream nutrient and debris reduction devices will directly impact water quality for Gulf ecosystems and fisheries. The extension of existing continuous outfall structures will improve and enhance the wildlife habitat for marine turtle nesting and shorebird nesting. The extension of the outfalls will also reduce erosion on the beaches and reduce the size of impoundments that stay full of harmful toxins and algae. Untreated stormwater runoff can harm aquatic life in my ways due to changes in water chemistry and habitat loss. Added benefits from the proposed project include increased near-shore habitat resulting from the deepwater outfall and in phase 2 the removal of unsightly beach outfalls that directly contribute to shoreline erosion.
2. Mitigate	As a result of the proposed project, unsightly beach outfalls responsible for shoreline erosion may be removed, oil, grease, trash, and sediment will be prevented from discharging directly onto the beach and surf zone, and the risk of adverse bacteria and viruses in the swim zone will be greatly reduced. In addition, the shoreline marine turtle and shorebird nesting habitat will be restored by eliminating the outfall sweep areas that currently exist.
3. Implement plan	
4. Workforce/Jobs	In addition to the environmental benefits associated with the proposed project, workforce development and job creation are anticipated effects. Local engineering efforts will be required for the survey, design, and permitting portion of the proposed project and local construction companies will be solicited for the enhancements to the existing stormwater and outfall structures and installation of off-shore stormwater treatment system.

5. Improve state park	Bordering the beaches of Panama City Beach is St. Andrew's State Park, a former military reservation with over 1.5 miles of beaches on the Gulf of Mexico and Grand Lagoon. Improvements to water quality and a reduced risk of shoreline erosion will dually benefit this State park's beaches and marine inhabitants. The reductions in nitrogen, oils, sediment, toxins, and PCB's that will result from the project will significantly enhance water quality at the discharge locations with the installation of the baffle boxes and other sediment reduction devices. In addition, the offshore discharge structure will reduce pollutant loading from the nearshore areas that support critical habitat.
6. Infrastructure	The proposed projects will immensely benefit the City's and County's expanding resources by alleviating the risk of coastal flooding and preventing the direct discharge of stormwater to the nearshore area. Additionally, as a source of job creation and stimulus to the local economy, the proposed project will improve revenue generated from tourism, trade, and commerce as economics will be enhanced from positive visitor experiences and higher occupancies at rental units as well as appraisal values.
7. Flood protect	The City and County are developing like most other beach communities cross the United States with government funding concentrated on water supply, sewage collection, and roadway improvements without significant consideration for stormwater management and little or no consideration for water quality. Situated between the Gulf of Mexico and St. Andrew Bay, the City and County have relied on fifteen (15) continuous outfall pipes, extended to the beach, to drain hotels, roads, parking lots and commercial establishments as development has occurred over the past forty (40) years. A recent stormwater assessment for St. Andrew Bay conducted by CDM Smith, Inc. described Panama City Beach and Bay County as a "highly urbanized subbasin with numerous outfalls with direct discharge to the Gulf of Mexico" and with "limited stormwater treatment for developed areas." The recent flooding from July 4, 2013 and April 30, 2014 have provided a new awareness of the critical importance of outfall performance. The proposed improvements to the outfalls will result in minimizing damage to residential and commercial structures, roadways, sewer systems, and other facilities that are critical to the function of the City and County.

8. Planning	The proposed project seeks to address issues identified in the St. Andrew Bay Stormwater Management Plan as well as targeted objectives of the Gulf Coast Ecosystem Restoration Council. The St. Andrew Bay watershed Surface Water Improvement and Management (SWIM) Plan takes a basin perspective to address priority issues. A number of the issues, programs and projects incorporated within the plan were identified by the St. Andrew Bay Environmental Study Team (BEST) (now Friends of St. Andrew Bay) and incorporated in a management plan for the St. Andrew Bay ecosystem. The priority issues identified were growth management, nonpoint source pollution, point source pollution, chemical contamination, biodiversity, public outreach, and management of the Deer Point Lake Reservoir basin. The SWIM plan addresses these issues through several programs: watershed planning and coordination, stormwater retrofit and treatment, public outreach and education, biodiversity and natural systems, chemical contaminants, cumulative assessment, and Deer Point Lake Reservoir watershed management.
9. Promote tourism	Beyond improving the quality of water for residents, the perception of water quality by the millions of tourists that visit the City and County each year, can have a dramatic impact on the economy of this top-rated family beach destination. Presently, floatables and trash that are discharged directly along the beach have a direct impact on the aesthetic beauty of the coast line and beaches as well as posing a risk to public health and aquatic life. Additionally, the beach outfalls and subsequent stormwater sweep paths are eye-sores for residents and visitors alike, hindering visitors overall experience. A similar off-shore stormwater treatment design was and is currently being implemented in Myrtle Beach, South Carolina, and has documented drastic improvements in sediment and trash removal as well as a high percentage of pathogen-laden sediments which had previously been deposited on the beach. As a result of the project, Myrtle Beach, which had been previously labeled a “Beach Bum” is now referred to as a “Beach Buddy,” validating the stormwater improvements and call for action from the tourism industry and local Chamber of Commerce. The aesthetic and water quality improvements associated with the proposed project are sure to increase revenue from tourism, trade, and commerce, and greatly increase the likelihood of repeat visitors and recreational users of the City and Gulf’s resources, including recreational fishing. Additionally, the deepwater outfall and surrounding structures will dually serve as benthic habitat for marine organisms and therefore structure for recreational fishermen.

10. Promote seafood	As a result of the proposed project, the risk of exposure to harmful toxins, metals, and bacteria will be greatly reduced for participants in marine food webs, thereby decreasing the risk of exposure from human consumption. In turn, local suppliers of seafood and residents and visitors purchasing local seafood or recreationally harvested seafood may do so with peace of mind, unafraid of harmful exposure. The fishing and seafood industry are a key industry for the region as well as the City of Panama City Beach and Bay County and would be further protected by implementation of the proposed improvements that are outlined in the proposal. Reduction of sediment, pathogens, toxins, and PCB's into the Gulf of Mexico as a result of the proposed improvements will ensure long term resilience for the seafood and fishing industry that was devastated during the BP disaster.
1.1 Diversify	
1.2 Infrastruc	By implementing this proposed project, the City and County will demonstrate to future business capitalists and key industry personnel a commitment and prioritization to the management and maintenance of infrastructure including a reduced risk of coastal flooding. Additionally, as this project itself is considered new and innovative, it demonstrates their willingness and open-mindedness to pioneering projects and an open-door policy to revolutionary businesses. As City growth rates are steadily rising 5.5% annually, inevitable development pressures will be placed on the insufficient stormwater treatment and conveyance system. Thus, it is pivotal this system is retrofitted to accommodate increased development and lessen the risk of flooding from storms like the April 30, 2014 and July 4, 2013 events.
1.3 Airport	
1.4 Job train	
1.5 Workforce dev	
1.6 Facil tourism/econ dev	
1.7 Rec, transport, wage	As a result of this proposed project, unattractive and problematic beach outfalls along with their eroding outfall sweep paths will be reduced, thereby improving and increasing the County and City's beaches. Additionally, improved water quality, void of trash, pollutants, and dangerous pathogens, along the nearshore beach will entice beach goers and increase recreational opportunities for City and Bay County residents and its numerous visitors. Increased tourism and recreational commerce allow for the opportunity to create new markets and job opportunities as well as benefit existing businesses (local restaurants, motels, gas stations, etc.), leading to increased personal income for residents and more tax revenue for local governments.
1.8 Protect nat res	By implementing the proposed project, stormwater runoff that is presently contributing to water quality impairments observed along the City and County beaches will be treated with the removal of trash, oils, and sediment, and allowed to slowly infiltrate into the marine environment along a 1,300 foot outfall pipe. In doing so, appropriate conservation and protection measures are achieved for the natural resources that form the basis of the City's tourism industry, and marine habitats in the form of the deepwater outfall and surrounding structure are formed, enticing species colonization and interaction.

1.9 Promote fishing	The proposed project will enhance recreational fishing by improving water quality discharge and creation of habitat from the offshore discharge structure. The rip rap reinforcement at the terminal end of the outfall structure will provide a significant ecosystem for attracting gulf fish. The rip rap area at the end of the project will consist of a 100' by 100' granite stone that will rise above the bottom of the gulf approximately 2'.
1.10 Commun resil	
2.1 Protect SAB	As outlined in the St. Andrew Bay SWIM plan, the following are key priorities: • Provide comprehensive, coordinated management of the watershed to preserve and protect resources and functions • Provide for effective treatment and management of urban stormwater runoff • Promote sustainable resources of the St. Andrew Bay watershed through public education and outreach • Protect and restore the natural ecological diversity, productivity and ecological functions of the watershed • Identify extent of chemical contamination; initiate restoration actions • Identify environmental quality and trends within the watershed • Protect the quality and quantity of water, as well as habitat quality, in the Deer Point Lake Reservoir basin. The proposed project addresses many of these priorities and solidifies the City and County as a proponents for tackling head-on many of the issues outlined in the St. Andrew Bay Stormwater Management Plan (2009) and the SWIM plan.
2.2 Improv wtr qual	For the County and City, many of the observed water quality impairments originate as stormwater from developed upland areas bordering the bay and near-shore waters. By treating and removing trash and other debris from stormwater prior to its infusion with the Gulf, water quality is greatly improved along the beach and bay system.
2.3 Protect seagrass	Many of the pollutants, including sediment, transported in stormwater are extremely damaging to seagrasses and other forms of marine vegetation and algae. With the implementation of the proposed project, the City will initiate its commitment to improving water quality for the Gulf and St. Andrew Bay as well as open the door to partnering with resource protection organizations to increase public awareness and encourage outreach opportunities to inform residents and visitors of the value and potential threats to seagrass beds and other marine flora and fauna.
2.4 Wildl hab	
2.5 Acq lands	
2.6 Preserve dunes, shore	

2.7 Protected spp	Numerous state and federally listed species such as sea turtles, Gulf sturgeon (Acipenser oxyrinchus desotoi), and Piping plover (Charadrius melodus), along with their critical habitat, will greatly benefit from the proposed project and its improvements to beach habitat and water quality. These along with other associated benefits discussed earlier will aid in the recovery effort of all listed species utilizing the City and surrounding areas beach and near-shore habitat. Additionally, as the City and County are seeking to address stormwater concerns, it relieves a potential conflict of responsibility from local developers or business operations who may take matters into their own hands, often times utilizing a less green alternative for stormwater treatment and attenuation.
2.8 Water data	
3.1 Deer Pt Lk wtr qual	
3.2 Stabil roads	
3.3 Sewer AWT	
3.4 Septic to central	
3.5 Stormwtr	As outlined in the St. Andrew Bay SWIM plan, the following are key priorities: • Provide comprehensive, coordinated management of the watershed to preserve and protect resources and functions • Provide for effective treatment and management of urban stormwater runoff • Promote sustainable resources of the St. Andrew Bay watershed through public education and outreach • Protect and restore the natural ecological diversity, productivity and ecological functions of the watershed • Identify extent of chemical contamination; initiate restoration actions • Identify environmental quality and trends within the watershed • Protect the quality and quantity of water, as well as habitat quality, in the Deer Point Lake Reservoir basin. The proposed project addresses many of these priorities and solidifies the City and County as a proponents for tackling head-on many of the issues outlined in the St. Andrew Bay Stormwater Management Plan (2009) and the SWIM plan.
3.6 LID	
3.7 Coast resil	With the implementation of the proposed project, the City will address those “problem areas” identified in CDM’s assessment of the St. Andrew Bay watershed, thereby increasing coastal resilience and risk of flooding. In doing so, the City will be at the forefront of protecting key public and private assets.
3.8 Support port	

Budget justification	The City is seeking $1,000,000 of funding from the Gulf Coast Restoration Trust Fund Direct Component dollars allocated to Bay County by the 2012 RESTORE Act. The City of Panama City Beach Stormwater Budget has adequate funds to provide a $100,000 match for the project. In addition, the County will provide an in-kind match. The combined $1,100,000 budget will be utilized for the design, permitting, and planning to restore, replace or enhance 15 continuous outfalls on Panama City Beach and Bay County and to survey and complete the off-shore stormwater discharge design, thereby reducing sediment, debris, oil and nutrients discharging directly into the near-shore surf zone. If awarded, the City intends to apply for additional funds from the National Fish and Wildlife Foundation's Gulf Environmental Benefit Fund for project implementation.
Ongoing costs	Operation and maintenance (O & M) is a critical component of Bay County's Stormwater Management Program, and following the implementation of the proposed project, the City will strive to ensure that the structures and facilities function at optimal efficiency for the operable life of the off-shore stormwater treatment system. Ongoing maintenance costs of the proposed project are inevitable and will be assumed by the City and County respectively for the outfalls that are in their jurisdiction.
Objective and measures	1) Develop a Beach Outfall Master Plan and Estimate of Probable Cost 2) Develop a PER (preliminary engineering report) of priority drainage basins 3) Geotechnical Work –The City will hire a local Geotechnical consultant to obtain sub-surface soil information on-shore and off-shore for the design of pipelines. 4) Plume Study – Perform a Sediment Transport and Pollutant Dilution Modeling. 5) Dynamic Analysis – Due to the complex forces which will be brought to base on the outfall, it will be necessary to determine the effect of those forces to ensure that the depth, bedding, and other construction elements are properly designed. The first step in this process, after receipt of the topographic and geotechnical data is the determination of the design wave and the hydrodynamic forces on the proposed outfall culverts and the discharge nozzles. In order to accomplish this, the following work must be completed. 6) Stability Analysis – Provide stability analysis to verify the depth of offshore system to handle hurricane forces. 7.) Design and permit sediment reduction devices for upstream systems to improve water quality 8.) Construct $200,000 improvements on upstream structures to improve water quality.
Nat Res Proj	Yes

Best Avail Science	The proposed project is based on the best available science and passes all three of the Treasury tests. The system is modeled after a similar pilot project initiated in 2004 in Myrtle Beach, South Carolina. The South Carolina sediment reduction project has been deemed a huge success for Myrtle Beach and South Carolina by the scientific community and due to the initial project success, four (4) sediment reduction projects of similar nature have been commissioned by the City of Myrtle Beach over the past ten (10) years, with the final project anticipating completion summer of 2015. The offshore discharge structure has been proven to significantly reduce nearshore bacteria concentrations and improve water quality by up to 75% as outlined in the post construction test data from the South Carolina Sediment Reduction projects that have been completed and monitored for four (4) years. The use of baffle boxes and nutrient separators in the upstream system has been a scientifically proven effective method to achieve water quality improvements with numerous publications that are readily available. We anticipate that the agencies that will review the project including DEP, ACOE, and U.S. Fish and Wildlife will strongly support the project since the available data from the South Carolina project has been widely accepted by all the agencies. The success of the proposed project is based on scientific data that is readily available and uses a methodology that has been proven.
Env issues	Please review the checklist for responses.
Econ Dev proj?	Yes
Econ Dev description	The project is an economic development project in the sense that the City of Panama City Beach and Bay County rely on the tourist industry for growth and primary industry. The improvements will indirectly result in a source of job creation and stimulus to the local economy. The proposed project will improve revenue generated from tourism, trade, and commerce as economics will be enhanced from positive visitor experiences and higher occupancies at rental units. In addition, the construction of the offshore discharge system will eliminate the toxic ponds on the beaches and improve the value of commercial and residential rental units along the beaches.
Job Creation?	
Describe how jobs created	
No. jobs created	
No. jobs created Yr 1	
No. jobs created Yr 2	
No. jobs created Yr 3	
Avg wage	
Total proj cost	

Complement. proj descr.	The project will complement the SR-79 CRA Improvement Project from Front Beach Road to Back Beach Road that was designed in August 2014 in a number of ways. The current proposal from Atkins is to install a larger culvert at Lullwater Lake Box Culvert that will discharge onto the beach. The DEP has expressed concern over the increased volume of discharge and velocities that would be anticipated from the structure. The offshore discharge project would eliminate these concerns and reduce the cost of the CRA project drastically by eliminating the new storm structures. The existing box culvert at Lullwater Lake discharge could be removed entirely and a new cross drain would be installed at the West side of the Panama City Beach Pier property that would provide a direct connection to the offshore system. The offshore system would eliminate approximately $980,000 in costs associated with the proposed drainage improvements that have been proposed as part of the project.
Proj readiness descr	The project will begin immediately following funding approval. The Phase I upstream survey and design for the fifteen (15) continuous outfalls would start simultaneously with the survey and basin analysis for the Phase II offshore discharge system. The major work such as final recommendations and design would be completed within one year of the approved funding on the project. The permitting for the improvements to the fifteen (15) continuous outfalls would take approximately 6 additional months to complete.
Permits required?	Yes
Permits status	The project will require approvals from the Department of Environmental Protection and The Army Corps of Engineers. The agencies that would review the project under the ACOE submittal would include the National Marine Fisheries, U.S. Fish and Wildlife, and the Coast Guard. The Florida Fish and Wildlife would review the proposal as part of the DEP submittal. There have not been any permits submitted to date on the project.
Land acq?	
Acquire fee simple?	
Acquire easement?	
Fee and easement descri	
Terms of easement	
Entity to hold title	
Easement acres	
Fee simple acres	
Appraisal avail?	
Appraised value	
Title opinon avail?	

Material risks	Regulatory Risks - The regulatory risks associated with Phase I which includes the improvements to the fifteen (15) continuous outfalls is minimal at best. The proposed methodology for Phase I improvements have been vetted by the agencies and accepted as Best Management Practices for reduction of sediment and nutrients. The offshore outfall will require concurrence with National Marine Fisheries which has approved these systems on the East Coast of the US for many years. This project will be the first in the region to provide offshore discharge and will be mitigated with the installation of baffle boxes and nutrient reduction devices upstream. While the risk is minimal the duration for permitting could be up to a year for the system to be thoroughly reviewed and approved by the agencies. There are no operational, legal, budgetary, or ecological risks associated with the project.
Likelihood of success	The likelihood of accomplishing the reduction of sediment and nutrient loading into the Gulf of Mexico is very high. The sediment and nutrient reduction systems that will be utilized in Phase I are time tested and scientifically proven to work in the environment that currently exists at each of the fifteen (15) continuous outfalls. The Phase II offshore discharge will also accomplish its main purpose by eliminating the nearshore discharge of sediment and nutrients that each of the outfalls currently causes.
Contract out work?	Yes
Contracting strategy	The City of Panama City Beach and Bay County will contract out the work required on the projects in accordance with their adopted purchasing procedures. The schedule for design and permitting will be finalized at the project kickoff however the full completion of proposed work is anticipated to be one year from approval of funding. The City and County will monitor and manage the contractor performance with weekly update meetings and monthly updates to the City and County Boards.
Applic manage proj?	Yes
L 1. Proposed mgr	The project manager for the City of Panama City Beach will be Kelly Jenkins, P.E. City Engineer.
L 2. Mgr agreed?	Yes
L 3.Mgr experience	The City of Panama City Beach will work in coordination with the assistance of Bay County and has managed much larger projects and has the staff and experience required to track, record, and provide oversight on the Phase I and Phase II design and construction as funding proceeds.
L 4. Post proj maint	The City of Panama City Beach and Bay County have maintained the outfalls for many years and the Phase I improvements to the fifteen (15) continuous outfalls will reduce the maintenance required on the discharge side of the system since many of the discharge locations will be extended further toward the MHWL. The reduced sweep area will minimize the frequency of the necessary grading on the beach by City and County. The upstream improvements will require more maintenance by both City and County since the skimmers, screens, and oil booms within the sediment reduction devices will need to be cleaned out by maintenance crews as the trash is collected in the boxes.

L 5. Mgmt approach	The project approach will consist of developing final scope and schedule to complete all design elements within a one year time frame. The schedule for milestones will include specific dates for delivery of surveys, designs, and permits for each of the phases in the project.
Outreach descr	