

SEMINOLE TRIBE OF FLORIDA

6300 STIRLING ROAD
HOLLYWOOD, FLORIDA 33024
PHONE (954) 966-6300

WEBSITE:
<http://www.semtribe.com>



Tribal Officers:

JAMES E. BILLIE
Chairman

TONY SANCHEZ, JR.
Vice Chairman

LAVONNE KIPPENBERGER
Secretary

PETER HAHN
Treasurer

September 29, 2014

Mr. Leonard Rawlings, P.E.
Eastern Regional Hydrologist
Bureau of Indian Affairs
545 Marriott Drive, Suite 700
Nashville, TN 37214

Re: Funding Proposal to the Gulf Coast Ecosystem Restoration Council entitled "Major Surface Water Flows Monitoring Project - Brighton Seminole Indian Reservation"

Dear Mr. Rawlings:

Attached you will find a copy of our application to the United States Department of the Interior, Bureau of Indian Affairs (BIA), for the Secretary's recommendation to the Gulf Coast Ecosystem Restoration Council of the RESTORE Act. As a stakeholder in a congressionally designated critical project in the restoration of the Everglades, we thank you for the opportunity to submit a proposal that supports those goals on a Tribal level.

The Tribe is requesting \$1,844,000.00 for the anticipated project lifespan of ten (10) years.

Your timely assistance approving this budget will assist the Tribe in completing tasks to protect Tribal resources on Seminole Indian lands. If you should have any questions concerning this request, please do not hesitate to call Ms. Cherise Maples at 954-965-4380 extension 10632.

Sho Na Bish,


James E. Billie, Chairman of the Tribal Council

Cc: Cherise Maples, Director
Adam Nelson, Executive Director
Jim Shore, General Counsel
Suresh Geer, Executive Director of Finance
Kirk G. Meyer, BIA Awarding Official
File

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DIRECTOR

"BUT I HAVE PROMISES TO KEEP & MILES TO GO BEFORE I SLEEP"

Appendix A: Council Member Applicant and Proposal Information Summary Sheet

Council Member: Secretary, Department of Interior	Point of Contact: Libby Washburn Phone: 202-219-7499 Email: elizabeth_washburn@ios.doi.gov
Project Identification	
Project Title: Seminole Tribe of Florida Brighton Reservation Major Surface Water Flows Monitoring	Project
State(s): Florida	County/City/Region: Glades County
General Location: <i>Projects <u>must</u> be located within the Gulf Coast Region as defined in RESTORE Act. (attach map or photos, if applicable)</i>	
Project Description	
RESTORE Goals: <i>Identify all RESTORE Act goals this project supports. Place a P for Primary Goal, and S for secondary goals.</i>	
<input checked="" type="checkbox"/> Restore and Conserve Habitat <input checked="" type="checkbox"/> Restore Water Quality <input type="checkbox"/> Restore and Revitalize the Gulf Economy	<input type="checkbox"/> Replenish and Protect Living Coastal and Marine Resources <input checked="" type="checkbox"/> Enhance Community Resilience
RESTORE Objectives: <i>Identify all RESTORE Act objectives this project supports. Place a P for Primary Objective, and S for secondary objectives.</i>	
<input checked="" type="checkbox"/> Restore, Enhance, and Protect Habitats <input checked="" type="checkbox"/> Restore, Improve, and Protect Water Resources <input type="checkbox"/> Protect and Restore Living Coastal and Marine Resources <input type="checkbox"/> Restore and Enhance Natural Processes and Shorelines	<input checked="" type="checkbox"/> Promote Community Resilience <input type="checkbox"/> Promote Natural Resource Stewardship and Environmental Education <input checked="" type="checkbox"/> Improve Science-Based Decision-Making Processes
RESTORE Priorities: <i>Identify all RESTORE Act priorities that this project supports.</i>	
<input type="checkbox"/> Priority 1: Projects that are projected to make the greatest contribution <input type="checkbox"/> Priority 2: Large-scale projects and programs that are projected to substantially contribute to restoring <input type="checkbox"/> Priority 3: Projects contained in existing Gulf Coast State comprehensive plans for the restoration <input checked="" type="checkbox"/> Priority 4: Projects that restore long-term resiliency of the natural resources, ecosystems, fisheries ...	
RESTORE Commitments: <i>Identify all RESTORE Comprehensive Plan commitments that this project supports.</i>	
<input checked="" type="checkbox"/> Commitment to Science-based Decision Making <input checked="" type="checkbox"/> Commitment to Regional Ecosystem-based Approach to Restoration <input checked="" type="checkbox"/> Commitment to Engagement, Inclusion, and Transparency <input checked="" type="checkbox"/> Commitment to Leverage Resources and Partnerships <input checked="" type="checkbox"/> Commitment to Delivering Results and Measuring Impacts	
RESTORE Proposal Type and Phases: <i>Please identify which type and phase best suits this proposal.</i>	
<input type="checkbox"/> Project <input type="checkbox"/> Planning <input type="checkbox"/> Technical Assistance <input checked="" type="checkbox"/> Implementation <input checked="" type="checkbox"/> Program	
Project Cost and Duration	
Project Cost Estimate: Total :	Project Timing Estimate: Date Anticipated to Start: <u>10</u> / <u>2015</u> Time to Completion: <u>10</u> months / years Anticipated Project Lifespan: <u>10</u> years
\$ <u>1,844,000.00</u>	

RESTORE Act Project Proposal
Seminole Tribe of Florida Brighton Reservation Major Surface Water Flows Monitoring

Seminole Tribe of Florida
Environmental Resource Management Department
6300 Stirling Road
Hollywood, FL 33024
954-965-4380

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EXECUTIVE SUMMARY

The Seminole Tribe of Florida (Tribe) proposes to partner with the US Geologic Survey, (USGS) to establish four streamflow and water level monitoring stations in the Seminole Tribe of Florida Brighton Reservation (Brighton) in Glades County, Florida (Figures 1&2). The new sites would provide an independent and objective determination of major surface water inflows into and out of Brighton Reservation. Surface water flows from Brighton Reservation are a significant contributor of flow volumes and nutrient loading to Lake Okeechobee. Lake Okeechobee is at the center of Florida Everglades restoration, as well as a vital resource for Florida's fresh water supply, wildlife and the environment.

This project would quantify surface water flows available to Brighton Reservation. Knowledge of major surface water flow amounts would enhance community resilience to distribute water resources in an informed capacity for the natural environment. Lack of knowledge of water availability information prevents the Seminole Tribe of Florida from determining how much water is available, and how much was utilized. The wetland habitats of Brighton Reservation have been changed via channelization. Surface water from the canals could be utilized for wetland rehydration and current existing restoration projects; however water availability and consumption is currently unknown. Finally, water quality restoration would be enhanced with the ability to determine nutrient and pollutant loading entering Brighton Reservation.

The objective of this proposal is to install four (4) water level and streamflow data collection stations on the major inflow sites of the Brighton Reservation: Harney Pond Canal and Indian Prairie Canal (Figure 4). The USGS will operate and maintain equipment to collect water level, stream index velocity, and acoustic doppler velocity meter (ADVM) discharge measurements in order to calculate continuous flow at each site. The USGS will provide both daily mean and continuous (15-minute) stage and discharge data at each station for the purposes of water-quality loading calculations. Automatic sampling equipment will also be installed at each of the four stations and samples will be collected on a consistent basis for Total Phosphorus. Water quality will be assessed and analyzed utilizing the flow information from the USGS gages. Reporting will be submitted by the Tribe to the US Environmental Protection Agency (EPA) annually for the duration of this project.

The installation of the surface water monitoring stations could be completed with one calendar year of project funding. This project requests long term monitoring for the period of ten years. There are no anticipated risks or uncertainties associated with this project as the Seminole Tribe of Florida has worked with USGS since 1996 with similar equipment at the Tribe's Big Cypress Reservation. The Tribe has also collected water quality samples since the early 1990s in Brighton Reservation. The Tribe has EPA approved Standard Operation Procedures (SOPs) for the collection of surface water samples, as well as an EPA approved Quality Assurance Project Plan (QAPP) and EPA approved Quality Assurance Management Plan (QMP).

PROPOSAL NARRATIVE

INTRODUCTION/BACKGROUND

The Seminole Tribe of Florida Brighton Reservation is located in Glades County, Florida (see Figures 1-4). Brighton Reservation is located in between Lake Istokpoga and Lake Okeechobee. The South Florida Water Management District operates the regional water management system which includes the two major canals transecting Brighton Reservation, the Harney Pond Canal and the Indian Prairie Canal. Prior to the channelization of Florida, the Brighton Reservation received surface water via overland flow of seasonal rainfall from upstream watersheds, which included Lake Istokpoga (SFWMD, 2000). Surface water flows entering Brighton Reservation are agricultural and run-off discharges into the Harney Pond and Indian Prairie Canals (SFWMD 2000). Surface water exiting Brighton Reservation via the canals are major inflows into Lake Okeechobee.

“Okeechobee” is a Seminole language word which means “big water”. Lake Okeechobee is a key component of Florida fresh water supply and flood control systems. Lake Okeechobee and its wetlands are also the center of the Greater Everglades, from the Kissimmee River, through the Florida Everglades, into Florida Bay. Lake Okeechobee is referred to as “Florida’s Liquid Heart” and is considered a vital resource for people, native wildlife and the environment. The health of Lake Okeechobee has been threatened for decades by excessive nutrients by agricultural and urban activities in the upstream watersheds and by harmful high and low water levels (www.sfwmd.gov/okeechobee).

In 1999, the Seminole Tribe requested the South Florida Water Management District (SFWMD) study the hydrologic and water quality conditions in the Harney Pond and Indian Prairie Canals in order to address water quality concerns. The SFWMD responded with a study in 2000 which concluded that major data gaps prevented such analysis. The data gaps included water quality data upstream of Brighton Reservation, flow data at the upstream boundaries of Brighton Reservation, and the definition and evaluation of inflows to the Harney Pond and Indian Prairie Canals upstream of Brighton Reservation (SFWMD, 2000).

In 2002, the SFWMD began monitoring water quality at the Brighton Reservation upstream boundaries at two sites; C-40VMB and C-41VMB. In addition, stage and velocity equipment was installed at the Brighton upstream boundaries (C-40VMB and C-41VMB) (SFWMD 2006 and 2007). The SFWMD began gathering data at the Brighton upstream boundaries in 2002. In 2010, the SFWMD produced a report which concluded that the Brighton Reservation upstream monitoring did not contribute significantly to other information in the area. The SFWMD was “unable” to develop flow ratings with the stage/velocity equipment at the Brighton Reservation upstream boundaries, autosamplers could not be triggered, and nutrient loading could not be calculated because the corresponding flow data was not available (SFWMD, 2010 revised 2011). In 2011, the SFWMD ceased monitoring at the Brighton upstream boundaries based on the conclusions of the 2010 Revised 2011 Report. Seminole Tribe of Florida staff subsequently requested the continuance of the monitoring, which was denied by the SFWMD in 2011.

In 2009, Seminole Tribal Environmental Resource Management Department (ERMD) staff requested Seminole Tribal Council approval for US Department of Interior Bureau of Indian Affairs (BIA) funding for a Brighton Water Use Study. BIA awarded the funding, and a study began in 2010 to investigate surface water inflows and outflows from Brighton Reservation, also to determine if all water flowing through the Reservation was measured, and to perform a historical evaluation of surface water available to Brighton. The Brighton Water Use Study was completed in 2011 (TCE, 2011). The 2011 Brighton Water Use Study concluded a detailed hydrologic monitoring program was needed to determine water “deliveries” to Brighton Reservation. The 2011 Brighton Water Use Study also suggested that, although the Seminole Tribe of Florida and the State of Florida entered a Compact in 1987 which provided a framework for the delivery of surface waters and recognized the Tribe’s entitlement to surface waters, that Brighton Reservation Workplan surface water quantities always exceeded computed water budget deliveries, and that the volume of surface water transferred into Brighton Reservation was not accessed. It was noted that the delivery of preferential waters to Brighton Reservation requires action both by the Tribe and the SFWMD. The Tribe is required to know that entitlement water is available, and to request the water from the SFWMD. Delivery of water requires the SFWMD to operate gates and pumps to bring water into the Brighton Canals, and to transfer the water into Brighton’s internal irrigation network. The 2011 Brighton Water Use Study found that volumes of water accessed by Brighton Reservation during the 10 year study period were less than approved work plan volumes and entitlements. The study also found that the current means by which the SFWMD arranges to deliver or store entitlement volumes for Brighton Reservation is not fully documented (TCE, 2011).

Surface water flows entering Brighton Reservation have been estimated by the SFWMD for the entire period of record using structures S-70 and S-75 (Figure 3). Structures S-70 and S-75 are located between 2-4 miles upstream of the Brighton Reservation northern boundaries; in channels which are connected to upstream non-Tribal agricultural users. The Seminole Tribe of Florida and SFWMD utilize flow and stage data from S-70 and S-75 to estimate hydrologic conditions in Brighton Reservation, to identify flows for pollutant loading calculations. S-70 and S-75 are also compared with structures S-71 and S-72 (Figure 3) to postulate Brighton surface water loss.

The 4 SFWMD structures provide a rough estimate of water flows surrounding Brighton Reservation, when the data is available. The SFWMD provides public access to structure flows and stages through its database, DBHYDRO. DBHYDRO flow data for S-70 (used as reference for water entering Brighton Reservation from the Harney Pond Canal) has been missing for the period of February 2014 to date. DBHYDRO flow data for S-75 (used as reference for water entering Brighton Reservation from the Indian Prairie Canal) has been missing for the period of June 2014 to date. Structure S-72 (used to reference water exiting Brighton Reservation from the Indian Prairie Canal) has been missing for the period of July 2013 to date. Headwater levels at S-72 have been also been missing since July 2013 to date.

Lack of knowledge of water availability information prevents the Seminole Tribe of Florida from determining how much water is available, and how much was utilized. The wetland habitats of Brighton Reservation have been changed via channelization. Surface water from the canals could be utilized for wetland rehydration and current existing restoration projects; however water

availability and consumption is currently unknown. Finally, water quality restoration would be enhanced with the ability to determine nutrient and pollutant loading entering Brighton Reservation. The Seminole Tribe of Florida has an EPA approved Numeric Nutrient Criteria Development Plan, which requires the Tribe to set numeric nutrient water quality standards for Brighton Reservation which are protective of the designated uses within Brighton, as well as protective of downstream users (State of Florida, Lake Okeechobee). The current status data collection highlights a lack of consistent, reliable, representative data for surface waters entering and exiting Brighton Reservation relating to both volume and timing.

PROPOSAL EVALUATION CRITERIA

1. Comprehensive Program Goals

The Primary Initial Comprehensive Plan of the RESTORE Council and RESTORE Act **Goal** for this project is to *Restore Water Quality, with the secondary goals of Restoring and Conserving Habitat, and Enhancing Community Resilience.*

2. Comprehensive Plan Objectives:

The Primary Initial Comprehensive Plan of the RESTORE Council and RESTORE Act **Objective** for this project is to *Restore, Improve and Protect Water Resources. The secondary objectives are to Restore, Enhance and Protect Habitats, Promote Community Resilience and Improve Science Based Decision Making Processes.*

3. Comprehensive Plan Priority Criteria

This proposal addresses the priority criteria as a project that is expected to make a contribution to protecting and restoring the natural resources, ecosystems, wildlife habitats and wetlands of the Gulf Coast region, without regard to geographic location within the Gulf Coast Region. This project will provide objective, independent surface water flow data and water quality data for a significant contributor to Lake Okeechobee in Florida; heart of the Greater Florida Everglades, and vital to Florida's fresh water resources, wildlife and environment. Additionally, this project will provide the Seminole Tribe of Florida the data to better understand and manage its use of surface water within the Reservation boundaries, to protect the established surface water designated uses and to protect downstream users. The Seminole Tribe of Florida has existing wetland restoration projects; which require surface water and water management operations based on objective scientific information.

4. Comprehensive Plan Commitments

This proposal would achieve all of the commitments in the Comprehensive Plan. The installation of surface water monitoring equipment by USGS at the borders of the Seminole Tribe of Florida Brighton Reservation would provide objective professional data collection of surface water levels and flows. Consistent, objective long term surface water flow monitoring in this project will fill known existing data gaps with real time current and historic data available on USGS NWIS. Consistent water quality data collection and reporting for Total Phosphorus in this project will enhance science-based decision making as the data will be provided directly to EPA and will be available on STORET. Data collected for this project will be reported by the Seminole Tribe relating to water quality and water management/Brighton wetland restoration. The availability of the data will also enhance the regional dataset to be used for regional eco-system based approaches to restoration which

include Brighton Reservation and the up and downstream watersheds. The project addresses the commitment to Inclusion and Transparency as the project deliverables will be available to the public and on-line through USGS and EPA. This project address the commitment to Leveraging Resources and Partnerships as the Seminole Tribe will work in collaboration with USGS for the surface water discharge and elevation information. The Seminole Tribe will provide the in-kind resource of collecting and analyzing the water quality data; and reporting will be provided to EPA as part of the Tribe's Water Pollution Control Annual Report. This project will also achieve the commitment of Delivering Results. As noted previously, all deliverables of this project will be available to the public, on-line, and managed and stored by USGS and EPA.

5. Science – included in following narrative with progress measurement and tracking.
6. Environmental Compliance – included in following narrative and in Appendix B.

IMPLEMENTATION METHODOLOGY

The methodology to implement this project incorporates best available science by following USGS standards and procedures for the installation of surface water measurement monitoring stations (Sauer 2010). A general listing of equipment to be installed at each site by the USGS includes a digital collection platform (DCP) to store and transmit field data; a Stream Velocity Sensor to measure an index velocity; an Electronic Shaft Encoder to measure the water level; a Float/wheel/steel tape to connect the water surface to the Encoder; an Outside Staff Gage to reference the gauge independent of the structure; an Antenna/cable to transmit the data; a solar panel/voltage regulator/battery to supply power; and lumber/aluminum/miscellaneous for the equipment shelter.

Each station would be equipped with a Data Collection Platform (DCP), a water level sensing unit, and a 12V system recharged by a 20 Watt solar panel to power the instrumentation. The DCP would be programmed to initiate, record, and log all sensor readings and transmit the data through the GOES system to the USGS database. The water level, or stage, sensing unit would consist of an electronic incremental shaft encoder with a graduated tape connected to a float and a counter. The water level sensing unit would measure the water level in a stilling well which would be a 16 inch diameter corrugated aluminum pipe with several holes to allow communication with the water (Sauer and Turnipseed, 2010).

An outside staff gage at each station would be installed to ensure that the water level inside and outside of the stilling well are the same. The standard vertical staff gage used by the U.S. Geological Survey consists of porcelain-enameled iron sections, each 4 in wide, 3.4 ft long, and graduated every 0.02 ft.

At the Brighton stations, discharge would be computed by the index-velocity method because no relationship exists between stage and discharge at these sites. To compute discharge using the index-velocity method, an acoustic Doppler velocity meter (ADVM) would be mounted to the dock and at a depth sufficient to adequately measure a section of the channel water velocity, called the index velocity. For the ADVM to consistently measure the same volume of water, the ADVM would be mounted at a fixed elevation referenced to NGVD 29, and the ADVM

transducers would be oriented perpendicular to the flow. The ADVN measures a volume of water starting at the manufacturer determined minimum distance (blanking distance) from the transducer face and ending at a certain distance from the opposite bottom bank or obstacles blocking the measuring section. The total measurement length is determined by signal quality.

At the Brighton sites, the walkway would also support an ISCO Auto-sampler which would be purchased, maintained and operated by the Seminole Tribe of Florida. The USGS DCP would be programmed to trigger the Tribe's Auto-sampler.

At each Brighton site, the USGS would operate and maintain equipment to collect water level, stream index velocity, and discharge measurements in order to calculate continuous record of flow at the site. The USGS would install data logging equipment that can be programmed to trigger autonomous water-quality samplers at predetermined cumulative flows; the Tribe would operate and maintain the auto-sampler. The USGS would provide both daily mean and continuous (15-minute) stage and discharge data for the purposes of water-quality loading calculations at this location. Before installation begins, USGS would perform a site evaluation to select the best location for the new gauging station. One new continuously recording data collection station would be provided and operated for the Tribe by the USGS. All services described would be performed by and/or under the direct supervision of a hydrographer designated by the USGS.

Work Breakdown Structure

Once the location of the monitoring station has been determined, the Tribe would obtain any necessary construction permits from the Seminole Water Commission and would notify the South Florida Water Management District through the Workplan process. After the Workplan Amendment and Seminole Water Commission Permit are approved, the Tribe will notify the USGS of approval for installation of the streamflow and water level monitoring station. The USGS would construct the dock on the stream bank before instrumentation installation to ensure that reliable data is collected. Outside staff gages will be installed at each site.

At the new station, water level and acoustic Doppler velocity sensing equipment would be installed by USGS to measure water level and stream index velocity at 15-minute intervals. The Data Collection Platform (DCP) and antenna installed at each site will transmit water level and stream index velocity data to NWISWeb every hour to assist USGS stream gauging staff in monitoring site conditions during extreme periods. The USGS can observe the data and make station repairs or measurements to provide the most complete record possible. The USGS will use USGS-owned equipment for all data collection.

Surveying Control

The USGS will recover or establish a minimum of five elevation marks at the water leveling gage site. The site will have a minimum of three landward reference marks and two gauging measuring points, one each for the instrument shelf and outside staff gage reference. The USGS will attempt to recover base datum references if appropriate monuments exist within reasonable

proximity of the proposed gage. Existing structure elevation references will also be obtained. The vertical reference for water level data shall be NGVD 1929 and/or NAVD 1988 (North American Vertical Datum of 1988) if available.

Reporting

The USGS will prepare a standard station description to describe the location, elevation datum, and the equipment. Each report will include the coordinates of the gage site in NAD 1983. The locations of all reference marks will be clearly delineated via electronic site sketches and will include other site specific information.

Water levels shall be reported in units of feet, tenths, and hundredths, and discharge will be reported in cubic feet per second (cfs). Water level and stream index-velocity data will be recorded on the data logger every 15 minutes and uploaded via Geostationary Operational Environmental Satellite (GOES) telemetry system to the NWIS (National Water Information System) once every hour. The GOES system will be the primary link by which “real-time” data will be transmitted from the station. At the time of each site visit, data will be downloaded from the data logger and stored in NWIS to fill in any data gaps that may have occurred in transmissions. The water level and velocity data will be analyzed daily by qualified USGS staff; if any data is questionable or if there is an indication of malfunction, the USGS shall repair and place back into service all malfunctioning equipment as soon as possible.

To compute continuous (15 minute) discharge at the new site, an index-velocity rating will be developed from discharge measurements and stream gage data collected during the measurements. The discharge measurements will be made over a range of water levels, stream index velocities, and flow conditions. Since all sites will be on DCP, extreme conditions can be observed as they occur and measurements can be made during or near those times.

One-hundred and twenty days of the latest provisional continuous water level and stream velocity will be available on NWISWeb. Once the discharge rating is established, provisional discharge computations will be available on NWISWeb.

All data collected by this process shall be quality assured by the USGS. At the end of the fiscal year, water level and discharge values will be finalized and published in the Annual Data Report. If any of the discharge ratings are incomplete at the end of the first year of operation, the discharge from the stations will not be published in the Annual Water Data Report but will be published in the Annual Water Data Report for the next year.

Provisional continuous (15-minute) water level and discharge data will be available for review by Tribe staff on NWISWeb and through access procedures already in place through the existing cooperative agreement. Upon completion of annual quality assurance procedures, the USGS will provide finalized continuous data from the USGS online database, NWIS, and will publish the summary data in USGS Annual Water Data Report which is accessible on the web at <http://wdr.water.usgs.gov/>. Data will consist of date, time, and water level in feet relative to NGVD 1929 and/or NAVD 1988 and discharge in cubic feet per second (cfs).

Water Quality Monitoring Workplan

Automatic composite samplers with the ability to automatically collect time based discreet surface water samples will be purchased. The Seminole Tribe of Florida Environmental Resource Management Department (ERMD) will maintain and collect samples at each of the 4 autosamplers. The autosamplers will be programmed to collect one sample daily at a pre-determined time. USGS will provide power supply and assist with pulse signal settings. The ERMD Water Quality Program performs surface water sample collection activities under US Environmental Protection Agency (EPA) approved Quality Management Plan (QMP), Quality Assurance Project Plan (QAPP) and Standard Operating Procedures (SOPs). Samples at each autosampler will be collected following the ERMD Water Quality Program EPA approved SOPs and submitted to the Tribe's contracted NELAC certified environmental laboratory for Total Phosphorus analysis. The Tribe will assess the water quality data and report to EPA annually within the Tribe's annual Water Quality Program Section 106 Reporting Narrative. Data results from the autosamplers will also be submitted to EPA through the Water Quality Data Exchange (WQX) for inclusion in STORET Data Warehouse.

MONITORING AND ADAPTIVE MANAGEMENT

Adaptive management is not expected throughout the duration of this project; as water quality sampling data collection is an established monitoring activity which the Seminole Tribe of Florida has performed for decades prior to this grant request. Monitoring of water quality data and surface water data shall be performed by the Seminole Tribe of Florida with data assessment and analysis included with the annual report submission to EPA. In addition, surface water flow data shall be publically available on the USGS NWIS and water quality data shall be made available through STORET.

MEASURES OF SUCCESS

The objective metric of project success shall be measured by the consistent delivery of narrative discussion in annual water quality monitoring reports to EPA, as well as the submission of water quality monitoring data via WQX and the availability of surface water stage and discharge data at all sites on the USGS NWIS. Additionally, future development of numeric nutrient standards for Brighton Reservation which is based on surface water flows and consistent water quality data sets shall be protective of Lake Okeechobee downstream of Brighton Reservation, as well as protective of Brighton Reservation water resources which are impacted by water quality entering the Tribe's lands.

RISKS AND UNCERTAINTIES OF THE PROPOSED ACTIVITIES

Risks and uncertainties of the proposed activities are not expected as the Seminole Tribe of Florida has collected water quality data and worked with USGS for decades in Big Cypress Reservation.

OUTREACH AND EDUCATION

This project is not expected to have an outreach/education element as it is a scientific data gathering effort.

PARTNERSHIPS/COLLABORATIONS

The Seminole Tribe of Florida will collaborate with USGS for the surface water flow monitoring information for this project.

PROJECT BENEFITS

There are several benefits of this program; both to the Seminole Tribe of Florida and other agencies. Benefits to the Seminole Tribe of Florida relate to water quality and water quantity. Consistent objective data on surface water quality and water quantity entering Brighton Reservation via the Harney Pond and Indian Prairie Canals will assist the Tribe in the development of numeric nutrient criteria to protect surface water quality within Brighton Reservation as well as protecting the downstream user (State of Florida-Lake Okeechobee). This project would assist the Seminole Tribe with understanding and documenting the changing quality deliveries of surface water to its borders, as well as understanding the amount of water utilized by the Tribe during the dry seasons, and the impact of surface water runoff during the wet seasons.. The Seminole Tribe of Florida has negotiated water rights with the State of Florida for Brighton Reservation; the lack of flow data prevents the Tribe from utilizing water to which it may be entitled. Additional surface water could be directed to the Brighton Reservation wetland restoration area south of the Harney Pond Canal. Finally, knowledge of surface water flows could assist the Tribe in enhancing Brighton water management activities. Other agencies could benefit from this project due to the data availability in STORET and NWIS and would include any party interested in nutrient loading to Lake Okeechobee, and incrementally increasing nutrient loads from Lake Istokpoga to Lake Okeechobee.

LOCATION INFORMATION

Figure 1 provides the general area of Brighton Reservation within the State of Florida. Figure 2 provides a close-up section of the South Florida Water Management District SFWMD canal system with the area of Brighton Reservation identified as a red square. This figure is provided to show the relationship of Brighton Reservation to Lake Istokpoga and Lake Okeechobee. Figure 3 provides the SFWMD water structure identifications, the Brighton Reservation boundaries and the canal names for reference. Figure 4 provides the locations of the proposed surface water flow and water quality monitoring sites for this project.

BUDGET

The table below summarizes the major categories of project features and associated costs. Seminole Tribe of Florida in kind costs are identified as well as on-going operations and maintenance costs. Should funding for this request be limited, adjustments could be made with the duration of the project and future Restore grant requests can be submitted. In addition, water quality monitoring could be eliminated to meet any potential funding concerns. The Seminole Tribe of Florida currently samples at the Brighton Reservation boundaries on a monthly basis. Water quality data would be collected and reported to EPA, however not at the level of consistency or frequency suggested in this proposal.

Proposal Budget	
<i>Item Detail</i>	<i>Cost</i>
USGS Surface water measurement site installation (\$37,600 per site for 4 sites)	\$ 150,400.00
USGS Annual Operation and Maintenance Cost (\$34,440 per year times 4 sites times 10 years-long term monitoring)	\$ 1,377,600.00
Automatic Water Quality Sampler ISCO 6700 series or equivalent (\$6,000 per site/4 sites)	\$ 24,000.00
NELAC certified Environmental Lab Total Phosphorus Analysis (\$20 per analysis, 365 days per year, 4 sites, 10 years)	\$ 292,000.00
Seminole Tribe of Florida In-Kind Service: water quality sample collection, autosampler maintenance, data validation and verification, data assessment/analysis, water quality data reporting to EPA and WQX submission	in-kind
Project Budget Total:	\$ 1,844,000.00

ENVIRONMENTAL COMPLIANCE CHECKLIST (APPENDIX B)

The Environmental Compliance Checklist is attached. There are no state or federal permits anticipated for this project. The Seminole Tribe of Florida has a Compact with the State of Florida which set forth a process for submitting projects in an annual workplan. This project would be submitted to the SFWMD in the workplan process, after Seminole Water Commission presentation and approval.

DATA/INFORMATION SHARING PLAN

The data collected for this program would be shared with the public via USGS NWIS (surface water elevation and discharge) and EPA STORET (water quality monitoring data). Narrative discussion relating to data assessment and analysis would be provided annually to EPA via the Tribe's annual Section 106 (Water Pollution Control) reporting process. The data collected for this project would be stored, shared, made secure and preserved following the protocols of EPA and USGS.

FIGURE 3: CURRENT SFWMD STRUCTURES

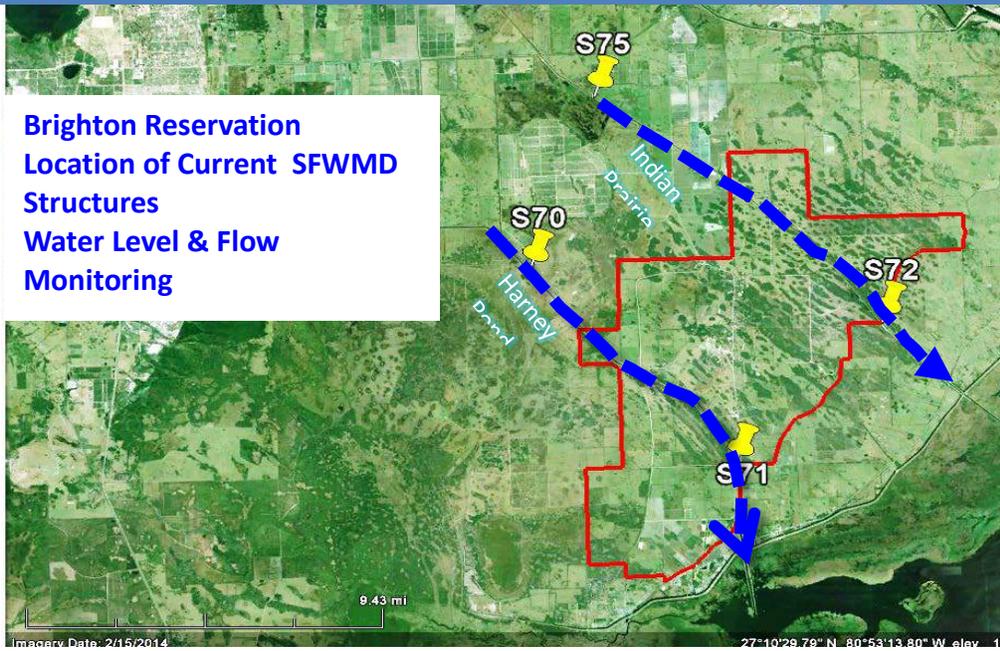
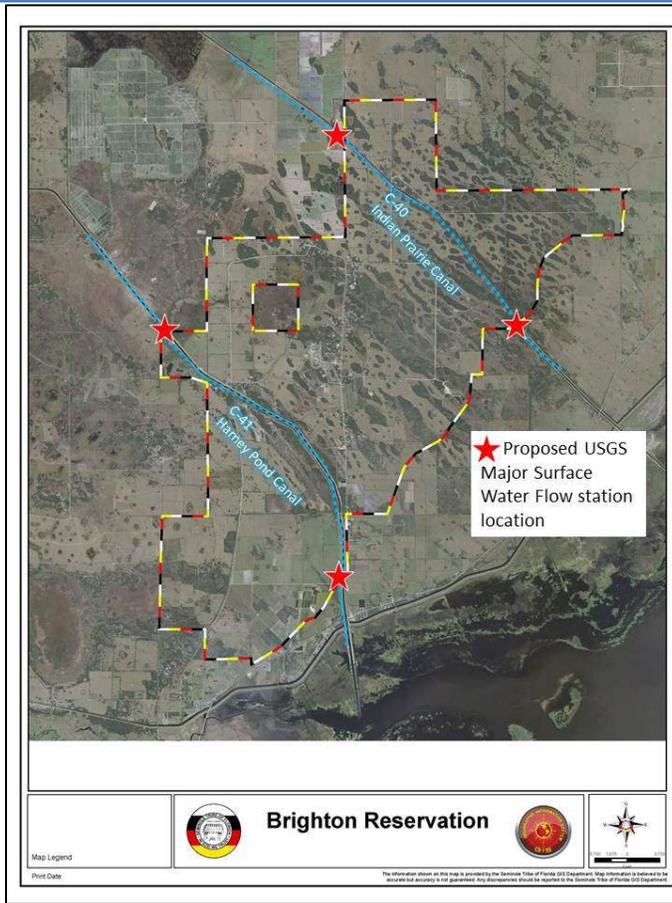


FIGURE 4: PROPOSAL MONITORING SITE LOCATION DIAGRAM



REFERENCE LIST

Lake Okeechobee information: www.sfwmd.gov

<http://my.sfwmd.gov/portal/page/portal/xweb%20protecting%20and%20restoring/lake%20okeechobee>

Sauer, V.B., and Turnipseed, D.P., 2010, Stage measurement at gaging stations: U.S. Geological Survey Techniques and Methods book 3, chap. A7, 45 p. (Also available at <http://pubs.usgs.gov/tm/tm3-a7/>.)

SFWMD, June 2000, Rev. July 31, 2000, "Brighton Seminole Indian Reservation Hydrology and Water Quality Synopsis".

SFWMD, February 2006, "Brighton Reservation Monitoring".

SFWMD, July 30, 2007, "Monitoring Plan for Brighton Reservation Monitoring Program (Project BRM), Ver1.0.

SFWMD, January 8, 2010-(Revised on May 4, 2011) "Evaluation of Project BRM Monitoring Program Water Quality Data at C40VMB and C41VMB".

TCE/Tomasello Consulting Engineers, September 2011, "Brighton Seminole Indian Reservation Final Report Water Use and Availability Water Years 2000-2009".

Appendix B

Gulf Coast Ecosystem Restoration Council Environmental Compliance Checklist

Please check all federal and state environmental compliance and permit requirements as appropriate to the proposed project/program

<u>Environmental Compliance Type</u>	Yes	No	Applied For	N/A
Federal				X
National Marine Sanctuaries Act (NMSA)				X
Coastal Zone Management Act (CZMA)				X
Fish and Wildlife Coordination Act				X
Farmland Protection Policy Act (FPPA)				X
NEPA – Categorical Exclusion				X
NEPA – Environmental Assessment				X
NEPA – Environmental Impact Statement				X
Clean Water Act – 404 – Individual Permit (USACOE)				X
Clean Water Act – 404 – General Permit(USACOE)				X
Clean Water Act – 404 – Letters of Permission(USACOE)				X
Clean Water Act – 401 – WQ certification				X
Clean Water Act – 402 – NPDES				X
Rivers and Harbors Act – Section 10 (USACOE)				X
Endangered Species Act – Section 7 – Informal and Formal Consultation (NMFS, USFWS)				X
Endangered Species Act – Section 7 - Biological Assessment (BOEM,USACOE)				X
Endangered Species Act – Section 7 – Biological Opinion (NMFS, USFWS)				X
Endangered Species Act – Section 7 – Permit for Take (NMFS, USFWS)				X
Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH) – Consultation (NMFS)				X
Marine Mammal Protection Act – Incidental Take Permit (106) (NMFS, USFWS)				X
Migratory Bird Treaty Act (USFWS)				X
Bald and Golden Eagle Protection Act – Consultation and Planning (USFWS)				X
Marine Protection, Research and Sanctuaries Act – Section 103 permit (NMFS)				X
BOEM Outer Continental Shelf Lands Act – Section 8 OCS Lands Sand permit				X
NHPA Section 106 – Consultation and Planning ACHP, SHPO(s), and/or THPO(s)				X
NHPA Section 106 – Memorandum of Agreement/Programmatic Agreement				X
Tribal Consultation (Government to Government)				X
Coastal Barriers Resource Act – CBRS (Consultation)				X
State				
As Applicable per State				X



United States Department of the Interior

U.S. GEOLOGICAL SURVEY
Caribbean-Florida Water Science Center
4446 Pet Lane, Suite 108
Lutz, Florida 33559
Tel. (813)498-5000
Fax (813) 498-5002

September 15, 2014

Seminole Tribe of Florida
Environmental Resource Management Department
6300 Stirling Road
Hollywood, FL 33024
954-965-4380

Dear Ms. Lisa Meday:

This letter is to express USGS CFWSC interest in providing continuous water level and flow monitoring at four stations at the Brighton Reservation. This program includes one-time installation of all stations and monitoring equipment at each site and operation and maintenance for 10 years. Funding for this program will be provided by a grant to the Seminole Tribe of Florida from RESTORE.

The monitoring stations, located on Harney Pond Canal and Indian Prairie Canal, will be sited to determine major surface water flows into and out of the Reservation boundaries. The Tribe will install and operate Autosamplers at each site to determine phosphorus concentrations, and the flow results will be used to determine phosphorus loads entering and exiting the Reservation.

The USGS CFWSC has many decades of experience in operating hydrologic monitoring equipment and computing a continuous record of discharge in streams and canals for a variety of flow controls. All water level and discharge data will be available on NWISWeb to give water resource managers a better understanding of long-term hydrologic conditions in the Brighton Reservation.

Sincerely,

Mark R. Dickman
Hydrologist



ELIGIBILITY REVIEW

Bucket 2 – Council Selected Restoration Component

PROPOSAL TITLE

Seminole Tribe of Florida Brighton Reservation Major Surface Water Flows Monitoring

PROPOSAL NUMBER

DOI-T-I

LOCATION

Glades County, Florida

SPONSOR(S)

Department of the Interior

TYPE OF FUNDING REQUESTED (Planning, Technical Assistance, Implementation)

Implementation

REVIEWED BY:

Bethany Carl Kraft/ Ben Scaggs

DATE:

November 18, 2014

1. Does the project aim to restore and/or protect natural resources, ecosystems, fisheries, marine and wildlife habitat, beaches, coastal wetlands and economy of the Gulf Coast Region?

YES NO

Notes:

The Seminole Tribe of FL proposes to partner with USGS to establish 4 streamflow and water level monitoring stations on the Seminole Tribe of Florida Brighton Reservation.

2. Is the proposal a project?

YES NO

If yes, is the proposed activity a discrete project or group of projects where the full scope of the restoration or protection activity has been defined?

YES NO

Notes:

3. Is the proposal a program?

YES NO

If yes, does the proposed activity establish a program where the program manager will solicit, evaluate, select, and carry out discrete projects that best meet the program's restoration objectives and evaluation criteria?

YES NO

Notes:

4. Is the project within the Gulf Coast Region of the respective Gulf States?

YES NO

If no, do project benefits accrue in the Gulf Coast Region?

YES NO

Notes:



Eligibility Determination

ELIGIBLE

Additional Information

[Empty box for additional information]

Proposal Submission Requirements

1. Is the project submission overall layout complete? *Check if included and formatted correctly.*

- | | | | |
|--------------------------------|-------------------------------------|---------------------------------------|-------------------------------------|
| A. Summary sheet | <input checked="" type="checkbox"/> | F. Environmental compliance checklist | <input checked="" type="checkbox"/> |
| B. Executive summary | <input checked="" type="checkbox"/> | G. Data/Information sharing plan | <input checked="" type="checkbox"/> |
| C. Proposal narrative | <input checked="" type="checkbox"/> | H. Reference list | <input checked="" type="checkbox"/> |
| D. Location information | <input checked="" type="checkbox"/> | I. Other | <input checked="" type="checkbox"/> |
| E. High level budget narrative | <input checked="" type="checkbox"/> | | |

If any items are NOT included - please list and provide details

[Empty box for listing missing items and details]

2. Are all proposal components presented within the specified page limits (if applicable)?

YES NO

Notes: