**SCOPE OF WORK**

**Project Title: *Bay View Wetland/Grand Trunk Wetland Restoration***

**WDNR Project Manager:** Stacy Hron, Milwaukee Estuary Area of Concern Coordinator

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**DUNS #:** 0719147120000 (RACM)

**Project Location:** Southeast Bank of Kinnickinnic River, Adjacent to the Turning Basin, Milwaukee, WI

**Project Landowner:** City of Milwaukee

**Background and Project Rationale**

The Bay View wetland is one of the only remaining wetlands in the Milwaukee Estuary, and area that was historically an expansive freshwater marsh. Restoration of this remnant wetland has been identified as an important habitat restoration project within the Milwaukee Estuary AOC as well as an important step in the revitalization of the harbor area.

The Bay View wetland is located adjacent to the former Grand Trunk Car Ferry site in the Milwaukee Harbor. The area was used as a rail yard and is surrounded by industrial sites that are located in this working harbor. Even though the land in this area and the wetland itself has been altered and influenced by its industrial past, this remnant wetland persists and has retained important ecological features. At 6.5 acres, it is by far the largest, if not only wetland remaining in the estuary, thereby providing an important opportunity for restoration of fish spawning and other wetland and riparian habitat in the estuary. It is the only wetland left in the Kinnickinnic watershed with the natural hydrology necessary to restore a functional seiche wetland, which is a critical habitat important for northern pike spawning. The site also contains an isolated population of Butler's Gartersnake, a Species of Local Conservation Interest (SLCI) now mostly absent from the estuary and opportunity for restoring populations of several other SLCI which have significantly declined. These include organisms that are dependent upon an ephemeral pond as a critical habitat feature (e.g., primary burrowing crayfish and amphibians) and riparian shoreline habitat (e.g., several breeding and migratory birds and bats). A restored wetland could contribute to enhancing habitat and populations of several of SCLI in the AOC.

Currently the site consists of a degraded wetland that is connected to the Kinnickinnic River via a shallow channel and culvert that is not appropriate for fish passage. The banks of the channel, while vegetated are also in a degraded condition. The connection to the river, estuary and lake directly influence the water level in the wetland. Due to historical land disturbance and filling the wetland does not have an adequate area or depth for spawning habitat. Invasive plant species such as Phragmites australis are present in the wetland. Various wetland and habitat types are present on site including emergent marsh, wet prairie, warm water stream, floodplain forest, and grassland. The site also has an upland portion that was filled with soil from a road construction project. As with almost all previous industrial sites in the harbor, there are some brownfield issues with this site. The City has already retained a consultant to investigate any contamination present. It is understood by all parties that any remediation related regulatory obligations of the City are separate from this project. However, it is hoped that a mutually beneficial solution can be found to dealing with any contamination present on site and the construction of the wetland restoration.

The City of Milwaukee has also begun the process of restoration planning for the Bay View Wetland. In the interest of preserving the wetland in this area, the Milwaukee Board of Harbor Commissioners approved the restoration of the 6.5 acre wetland for natural uses with educational and recreational uses at the forefront of this decision. Management of the restoration is being managed by the Redevelopment Authority of the City of Milwaukee (RACM). RACM identified the Fund for Lake Michigan (FFLM) as a resource for the restoration of the wetland with potential for a coastal or seiche wetland for fish habitat. RACM applied for and received private grant funding to have a master plan for the site prepared as well as a feasibility study to develop more refined design scenarios for the wetland restoration. The first result of the grant funding was the Bay View Wetland Master Plan Final Report, released in April of 2014 and the forthcoming feasibility study. The feasibility study refines the possible design scenarios and the process will produce a selected alternative for the habitat restoration project. This selected alternative will be the basis for this final design phase of the project.

**Project Scope**

The City has proposed restoring this site which includes a large wetland complex that is hydrologically connected to the Kinnickinnic River and Estuary. The goal is to restore the wetland to be a benefit for fish and wildlife as well as an asset for the community. RACM has been working with AECOM to determine a baseline engineering scenario and preliminary cost estimates to manage soil and sediments and develop a remedial action plan. This preliminary work was completed using FFLM resources. The proposed scope of work for this next phase of the project will include hiring a consulting firm to develop a final ecological restoration plan, obtaining regulatory approvals, developing construction documents and specifications, obtaining permits, hiring owner’s rep services and conducting public outreach.

The Bay View wetland restoration has been identified as a management action for the Loss of Fish and Wildlife Habitat beneficial use impairment in the Milwaukee Estuary AOC Remedial Action Plan Update for 2016. This project will contribute to the completion of one management action. The management action projects were selected in consultation with the Fish and Wildlife Technical Advisory Committee (Tech Team). The Tech Team identified the following necessary project elements, fish and wildlife goals addressed by the project and metrics for evaluating the project. These elements, goals and metrics will be included in the final design and implementation of the Bay View Wetland Restoration project (see appendix C, 2015 Milwaukee Estuary AOC Remedial Action Plan Update). The City is already incorporating these elements into the feasibility planning phase of the project.

* A seiche wetland with a passively controlled hydrologic connection to the river and in turn estuary. The connection should be passable by aquatic organisms, with northern pike the target species to use for design purposes.
* An adequate buffer between aquatic habitats and development (as defined in goal 3 of the Draft Milwaukee Estuary AOC Fish and Wildlife Plan).
* Any passive recreational activities on site should not interfere or be in conflict with the habitat or wildlife value of the site.
* Incorporate ephemeral wetlands on the site that remain fish-free and preserve, enhance and/or creating snake denning sites. These are critical habitats for semi-aquatic SLCI are already present on site.
* Preserve and restore upland habitat on site that support sustainable SLCIs (i.e. first do no harm to existing species inhabiting the site).
* An invasive species and vegetation management plan (aquatic and terrestrial) with provisions made for long-term implementation.
* A stormwater management plan for the entire site is recommended.
* Some type of permanent conservation protection for the site (conservation easement or equivalent).
* Maximize benefits for multiple species (fish, waterfowl, invertebrates, etc.) with a focus on SLCI (see Species Checklists and match SLCI to proposed habitat goals).
* If possible, provide access to the wetland for canoes or kayaks, but limiting access to only non-motorized vessels is recommended.

Fish and Wildlife Plan Goals Addressed by Project

1. Enhance/improve aquatic habitat by…
	1. Identifying and enhancing fish spawning sites from Lake Michigan to the tributaries and headwaters where opportunities exist (e.g., inner and outer harbors, Milwaukee River downstream of the North Ave. Dam pedestrian bridge), and/or
	2. Improving lateral connectivity by connecting aquatic habitat to floodplain wetland with suitable hydroperiod from Lake Michigan to the tributaries and headwaters where opportunities exist.
2. Improve aquatic habitat connectivity by…
	1. Improving linear connectivity by restoring or enhancing fish and aquatic organism passage from Lake Michigan to the tributaries and headwaters, and/or
3. Enhance/improve terrestrial, semi-aquatic, and/or riparian habitat by…
	1. Expanding habitat buffer width to a minimum of 75 feet, and/or
	2. Where possible, expanding shoreline buffers up to 1,000 feet to meet core habitat area needs for semi-aquatic species, and/or
4. Improve terrestrial riparian habitat connectivity by expanding riparian buffer habitat quality and continuity.
5. Protecting high-quality areas or environmentally sensitive lands, especially those supporting rare and protected species.

The Bay View Wetland Restoration project will enhance and expand the wetland habitat in the estuary area of the AOC. Currently, there is a lack of suitable wetland habitat and aquatic habitat within the estuary. The objectives of this project are to; restore a diversity of wetland, shoreline and terrestrial upland buffer habitat on the site and improve aquatic habitat connectivity and provide enhanced fish spawning habitat. The success at meeting the goals and objectives of this project will be measured not only by the incorporation of necessary project elements but also by the following criteria.

Criteria/Metric for Evaluating Project Goals and Objectives

* Creation and protection of wetland habitat through the establishment of a functional seiche wetland with suitable Northern Pike spawning habitat on site.
* Spawning of Northern Pike demonstrated.
* Physical establishment of a functional, fish-free, ephemeral wetland habitat on site, occupied by ephemeral wetland dependent SLCI (e.g., amphibians, fairy shrimp).
* Area of enhanced wetland habitat, with a goal of at least 6.5 acres of wetland and habitat present on site.
* Number of impediments removed to establish functional aquatic organism passage.
* Volume of historic fill removed.
* Area of upland buffer habitat surrounding wetland habitats created or enhanced.
* An increase in the number of SLCI utilizing the site, as measured by appropriate occupancy documentation.

**Tasks and Deliverables**

The following is a list of tasks that must be completed for the project along with the deliverables associated with each task. All work products must be approved by DNR and will be retained as property of DNR. All work deliverables should be submitted to the DNR Project Manager.

Task 1: Engineering Services and Final Design Development

Develop detailed engineered plans and specifications for the wetland restoration, culvert design, channel restoration, and improvements to upland areas. The plans will also include development of a storm water management plan for the site to ensure that the wetlands are not negatively impacted by runoff. Complete any necessary sampling and investigation associated with the design, including an NR347 investigation to assess sediment and updated wetland delineation. The plans will be developed in accordance with the Project Scope detailed in the above section and AOC fish and wildlife habitat restoration goals.

Deliverables:

1. Request for proposals to solicit engineering firms
2. Preliminary and final engineering designs and specifications in paper (2 copies with full size drawings) and electronic formats (PDF, CADD, GIS).
3. Cost estimates
4. Investigation Reports

Task 2: Permitting, Regulatory Compliance and Approvals

Prepare all applicable federal, state and local permit applications and gain regulatory approval for the Bay View Wetland project as required. This includes preparing materials and ensuring compliance with, but may not be limited too, National Historic Preservation Act, National Environmental Policy Act, Endangered Species Act and Wisconsin Administrative Codes relating to contaminated sites , historic fill exemption, sediment investigation, aquatic plant management, and waterway and wetland activities.

Deliverables:

1. Copies of all reports
2. Copies of all permit applications, materials and regulatory correspondence

Task 3: Quality Assurance Documentation

Prepare and gain approval for a Quality Assurance Project Plan (QAPP) or other acceptable Quality Assurance documentation for all activities included within this scope from DNR and US Environmental Protection Agency.

Deliverables:

1. Completed QAPP in electronic format.

Task 4: Bidding Services

Carry out construction or implementation bidding.

Deliverables:

1. Copy of all bidding documents
2. Copy of bid tabulation

Task 5: Construct Oversight/Owner’s Representative

Hire construction oversight contractor to oversee construction and implementation activities. This task only includes the activities necessary to hire an oversight contractor. Execution of a contract for oversight or construction is not included in this scope.

Deliverables:

1. Request for proposal or other instrument to hire oversight contractor.

Task 6: Reporting

Prepare and submit quarterly grant reports, quarterly invoices and a final report. Reports will be submitted January 1, March 1, July 1, and September 1. Reports will identify amount expended per quarter, activities conducted, and planned activities for the following quarter, along with identification of any issues encountered (including delays or deviations from the original schedule or other setbacks) during the time and how they were addressed.

Deliverables:

1. Quarterly Project Reports for each quarter from receipt of funding or pre-award cost eligibility through project close out.

Task 7: Public Outreach & Collaboration

Collaboration with project partners and stakeholders. RACM will collaborate with the DNR via the DNR AOC Coordinator and other appropriate staff throughout the project. RACM will include in all phases of the project appropriate public input processes and notices in addition to soliciting input from the Tech Team, Harbor District, Inc. and other stakeholders during the design phase of the project. The DNR Project Manager will facilitate input via the Tech Team.

Deliverables:

1. Summary of findings and public meeting minutes in report format

**Project Schedule**

The following project schedule is subject to change based on receipt of funding, design, permitting and timing of construction. The project is planned to be completed in tandem with the other projects occurring at the park. Any changes to timing below will be through written notification from the RACM Project Manager to the WDNR Project manager.

May 2017 Prepare request for proposal

June 2017 Hire consultant

July 2017– July 2018 Complete investigations, prepare regulatory compliance, construction and bid documents

August 2017 Bid construction work

August 31, 2018 Final Design Grant Project close-out

**Project Funding & Invoicing**

Engineering, Design Permitting, Bidding Services $250,000

The method of payment is reimbursement for expenses incurred on invoice. Invoices will be submitted to DNR on a quarterly basis, but can be submitted on a monthly basis if desired. Additional funding for this project is being provided for the project by the FFLM and RACM. Documentation of allocation of project costs to both funding sources must be included in each invoice. Invoices must also include details/description of work invoiced and copies of contractor invoices.

**Responsibilities of Partners, Collaboration & Decision Making**

RACM and DNR are entering into this project with a shared vision of restoration and an approach of collaboration. It is the intent of all to complete a project that benefits the fish and wildlife of the river and in turn the community, while fitting into the site and regulatory constraints. It is recognized that the projects must meet the funding goals and criteria. It is DNR’s responsibility through the funding to ensure satisfaction of these goals and criteria for meeting the delisting of the BUIs.

A project team made up of representatives from the DNR and the RACM will ensure coordination and continuous interaction between parties. At a minimum the project team will include the respective project managers for both agencies. The project team will utilize collaborative decision making.

The project team will develop the RFPs to solicit contracting firms, participate in pre-bid contractor meetings, participate in progress meetings, discuss change orders, and provide updates. RACM will develop a draft RFP for the project team for review and comment. The team shall function within the framework of funding regulations, state statues, County ordinances, and County procurement procedures.

It is recognized that project outputs must meet Great Lakes Restoration Initiative and AOC goals and criteria. It is DNR’s responsibility to ensure satisfaction of these goals and criteria.

RACM shall:

* Provide access to its properties for this scope of work to be conducted.
* Administer the funding according to the aid agreement and this scope of work.
* Hire qualified contractors, and carry out this scope of work.
* Assure the scope of work defined has been completed by August 31, 2018
* As riparian landowner, will execute necessary permitting.
* Obtain necessary approval from local entities, including the RACM Board, Port of Milwaukee Board of Commissioners, and the City of Milwaukee Common Council.
* Work with the DNR to ensure the project meets the Area of Concern fish and wildlife habitat goals to the DNR’s satisfaction.
* Work with the Harbor District, Inc. and others to ensure there is input and participation from the stakeholders in the area.
* Review all contractor and subcontractor invoices and change orders to assure that all work included is complete before submitting an invoice to DNR for reimbursement.
* Hold regular meetings as agreed to by project team.

Department of Natural Resources shall:

* Provide funding for the execution of this scope of work in the amount specified in section Project Funding & Invoicing.
* Provide oversight of this funding agreement.
* Provide any available information collected as part of other AOC and fisheries related projects.
* Review and approve drafts, work products, invoices and deliverables in a timely manner.