**SCOPE OF WORK**

**Wisconsin DNR Office of Great Waters**

**Project Title:** Little Menomonee River Habitat Corridor Restoration

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

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**Partner Project Manager:** Brian Russart, Natural Areas Coordinator, Milwaukee County Department of Parks, Recreation and Culture

**Partner Project Manager Contact Information:** 9480 Watertown Plank Road, Wauwatosa, WI 53226; 414-257-6521

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**DUNS #: 172896383**

**Project Location:** Little Menomonee River Corridor from Brown Deer Road to confluence with the Menomonee River

**Background and Project Rationale**

Habitat restoration within the Little Menomonee River Corridor (LMRC) has been identified as a necessary fish and wildlife habitat restoration project in the Milwaukee Estuary AOC. Milwaukee County Department of Parks, Recreation and Culture (DPRC) along with the Department of Natural Resources (WDNR), proposes to prepare restoration plans for the LMRC with input from other stakeholders. This 631.5 acre, 6 mile corridor, stretching from Brown Deer Road to the confluence with the Menomonee River, is owned almost entirely by Milwaukee County (Figure 1.).

The LMRC is also the location of the former Moss-American/Kerr-McGee Superfund site. While all remedial actions have taken place to protect human health in the short term, the impact of these actions and other land use impacts have left the habitat in the corridor degraded. Since the LMRC is almost exclusively in public ownership, it provides the opportunity to improve a sizable greenspace for fish and wildlife while providing improved connectivity to the upper portions of the watershed.

**Proposed Work**

The proposed scope for the project is to conceptualize and plan logistically feasible habitat improvement projects for the entire LMRC. Due to the need to include some due diligence and high level planning within the first portions of this planning phase, the level of detail that will be achieved for the final project deliverable is not yet completely defined. It will depend on the restoration actions chosen for inclusion within the project as well as the level of effort and need for detailed construction plans. At minimum, the final product will be a concept plan and cost estimate for the proposed improvements throughout the LMRC. It will also include a comprehensive ecological restoration and management plan for the LMRC developed based on existing DPRC Ecological Restoration and Management Plan models. The outcome of this planning will be a product that could move the project to an implementation stage (i.e. a concept plan that could be used to produce final construction plans, if needed, with subsequent construction and/or a finalized management plan that directs restoration activities). To accomplish the proposed work, the Milwaukee County DPRC would hire a qualified consultant and temporary staff as needed to assist in the planning effort. The Milwaukee County DPRC would also undertake a sizable portion of the planning directly, in coordination with the WDNR. The concept plan(s) will be submitted for vetting to the United States Environmental Protection Agency’s (US EPA) Superfund program to ensure that any proposed practices and/or proposed management actions would be consistent with the approved remedial actions on site.

In order to develop the proposed plan(s) for the LMRC a thorough baseline assessment of both native and non-native vegetative communities will need to be conducted. This assessment, for both native and non-native vegetation, will be conducted through the use of mapping programs hosted on Arc GIS Online via the Arc Collector application. The objective is to accurately locate sensitive native and invasive species populations within the defined project area, determine relative population levels, and prescribe recommended control/treatment where appropriate. Milwaukee County DPRC staff will also conduct control of rapid response invasive species as they are detected pursuant to control methods described in the Milwaukee County DPRC’s Invasive Species Quick Reference Guide. As they relate to habitat restoration, the recommendations made in the plan(s) for the LMRC should be developed based on existing and historical vegetative and wildlife data, so that any species considered uncommon or rare or listed as local conservation interest, special concern, threatened, or endangered may be preserved and managed for at their respective sites pursuant to the Focal Species Concept.

Little Menomonee River Corridor Habitat 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 2015 Update. This project is the first phase for this management action. The projects were selected in consultation with the Fish and Wildlife Technical Advisory Committee (Tech Team). The Fish and Wildlife Tech Team has not yet identified all of necessary project elements that will be included in the final design and implementation of the LMRC project (see 2015 Milwaukee Estuary AOC Remedial Action Plan Update). Some items that have been discussed include forest stand improvement to mitigate canopy loss due to Emerald Ash Borer (EAB), riparian buffer management and fish and wildlife habitat improvements and management. Once more of the initial planning is complete, the Tech Team will provide input on these elements. Input will be gathered by the Milwaukee County DPRC (with the help of a hired consultant) and WDNR during formal presentations to the Tech Team. However, for projects of this nature, the Tech Team identifies the following necessary project elements:

* Invasive species management plan completed.
* Permanent protection for areas of restoration.

The the Milwaukee Estuary Area of Concern (AOC) Fish & Wildlife Technical Team had previously identified goals for this impairment in the Draft Milwaukee Estuary Fish and Wildlife Plan (2013). The following is a proposed list of goals will be used to guide habitat planning for this project:

Physical/Biological Primary Goals

1. Enhance/improve aquatic habitat by…

A. 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

B. Improving lateral connectivity by connecting aquatic habitat to floodplain wetland with suitable hydro-period from Lake Michigan to the tributaries and headwaters where opportunities exist.

1. 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
   2. Reconnecting high quality habitat downstream of the Bridge Street Dam and Lepper Dam to the main stem rivers of the AOC in cases where that habitat is directly connected to the estuary (i.e., there are no downstream barriers from the proposed project site).
2. 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
3. Improve terrestrial riparian habitat connectivity by expanding riparian buffer habitat quality and continuity.
4. Protecting high-quality areas or environmentally sensitive lands, especially those supporting rare and protected species.

Physical/Biological Habitat Secondary Goals:

1. Moderate flow regimes to decrease flashiness.

2. Provide and preserve sufficient base flow.

The following criteria and metrics will be used to evaluate project goals and objectives are met:

* Improve lateral and linear connectivity within the more than 630 acre, 6 mile corridor.
* Improve fish and aquatic life passage.
* Improve continuity of riparian buffers, including improvements to decrease resistance to animal movements. Minimum 75 feet in width, optimum 1000 feet.
* Increase in suitable habitat patch size resulting from new connectivity.

Milwaukee County DPRC will continue to work with project stakeholders through planning process. Partners include the Wisconsin Department of Natural Resources (WDNR), the Milwaukee Estuary Area of Concern (AOC) Fish & Wildlife Technical Team, US EPA Superfund and community stakeholders. The WDNR and the Milwaukee AOC Fisheries Technical Team have this project as a priority for removing beneficial use impairments in the AOC, and have expressed an interest in participating in restoration planning.

**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: Milwaukee County DPRC staff shall perform thorough vegetative (non-native and native) inventories of the LMRC. Survey data will be directly incorporated into the planning effort. Survey data will be submitted in electronic format, which includes location information (i.e. lat/long, decimal degrees, etc.) for non-native invasive species populations and sensitive native species (as defined by the Milwaukee County DPRC, WDNR and/or SEWRPC). Acceptable formats include Microsoft Excel and/or ArcGIS geo-database.

Deliverables:

1. Survey documentation including completed data sheets, photographs, and other documentation will be submitted in the appropriate format, with electronic format preferred. Species identification verification through voucher photographs. Photographs should be of the highest available resolution and provide needed information for species identification purposes. For all field work, accurate location information for survey sites, boundaries, species occurrence, etc. must be collected using GPS with 95% accuracy, so data can be used in geographic information systems, including ArcGIS 10.3. The referencing system and datum (i.e. WGS84, WTM 83/91) must be documented for all data collected.
2. Provide reporting to Natural Heritage Inventory of the occurrence of rare, threatened or endangered species observed.
3. Maps of existing plant communities with survey points/transects and survey areas shown.

Task 2: Review and compile existing data, identify gaps or outdated information, and assess as necessary. Existing data may include data from the Milwaukee Estuary AOC Baseline Wildlife Population Assessment, AOC Wadeable Fisheries assessment, other fish, wildlife and habitat data of WDNR origin, county GIS mapping resources.

1. Copies of data or information that is not of WDNR origin.

Task 2: Prepare a comprehensive restoration and management plan for the LMRC. Develop detailed engineered plans and specifications. The plans will be developed in accordance with the Project Scope detailed in the above section and AOC program goals. Hire a consultant(s) to assist with management plan activities and engineering plan development.

Deliverables:

1. Request for proposals to solicit consulting firm
2. Preliminary and final engineering designs and specifications, with cost estimates, in paper (2 copies with full size drawings) and electronic (PDF and CADD) formats
3. A comprehensive restoration and management plan for the LMRC based on the existing Milwaukee County DPRC model for habitat management plans (Appendix A.). The plan will also identify any constraints limiting restoration opportunities; develop a decision support chart to determine feasible restoration and incorporate data collected in Task 2, list fish and wildlife critical habitat requirements (biological constraints) for guiding proposed habitat restorations, and identify any projects/actions needing further design, development or engineering.

Task 3: Prepare all applicable federal, state and local permit applications and gain regulatory approvals as required. Prepare materials and ensure compliance with National Historic Preservation Act, National Environmental Policy Act and Endangered Species Act.

Deliverables:

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

Task 4: Prepare and gain approval for a Quality Assurance Project Plan (QAPP) for both design and construction from DNR and the US Environmental Protection Agency.

Deliverables:

1. Completed QAPP in electronic format

Task 6: 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 quarter and how they were addressed.

Deliverables:

1. Quarterly Project Reports for each quarter from receipt of funding through project close out.

Task 7: Collaboration with project partners and stakeholders. The County will collaborate with the DNR via the DNR project manager and other appropriate staff throughout the project. The County will include in all phases of the project appropriate public input processes and notices in addition to soliciting input from the Tech Team 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**

Vegetative inventory survey start times are weather dependent. The general timetable listed below is subject to change depending on weather and other environmental conditions. Any changes to timing below will be through written notification from the Milwaukee County DPRC Project Manager or Assistant Project Manager to the WDNR Project manager (email acceptable).

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| **Task** | **Timeframe** | **Responsible Party** |
| Quality Assurance Documentation (development and approval) | March 2017 | Milwaukee County DPRC  Wisconsin DNR  US EPA |
| Vegetative Sampling, Invasive Species Control, & Data Analysis | March 2017 – March 2018 | Milwaukee County DPRC |
| Preparation of Draft Restoration Plan(s) | March 2017 – December 2017 | Milwaukee County DPRC |
| Updates to Tech Team (project status, noteworthy findings, and proposed restoration plan(s) or actions) | October 2017 | Milwaukee County DPRC  Hired Consultant  Wisconsin DNR |
| Reporting | Quarterly | Milwaukee County DPRC |
| Finalization of Restoration Plan(s) | January 2018 – March 2018 | Milwaukee County DPRC |
| Updates to Tech Team (project status, noteworthy findings, and proposed restoration plans or actions) | February 2018, March 2018 | Milwaukee County DPRC  Hired Consultant  Wisconsin DNR |
| Grant close-out | June 30, 2018 | Milwaukee County DPRC  Wisconsin DNR |
| Reporting | Quarterly | Milwaukee County DPRC |

**Project Budget & Invoicing**

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| --- | --- |
|  | **Total Cost** |
| Personnel: DPRC Staff (3/2017-3/2018)  Seasonal Field Technicians (6): ($17.60 hourly rate + .06% fringe) x 1640 hours each  Field Crew Leader: ($18.14 hourly rate + .06% fringe) x 1640 hours x 1 position  Natural Areas Coordinator ($28 hourly rate + .63% fringe) x 200 hours  Ass. Natural Areas Coordinator ($22 hourly rate + .63% fringe) x 200 hours | $183,575  $31,535  $9,128  $7,172 |
| Contractual:  Consultant(s) for botanical consultation, Tech Team and stakeholder outreach support, preparation and distribution of necessary reports, restoration plan development, amendment(s) to QAPP, engineering services, regulatory coordination, and implementation assistance as budget allows following restoration plan development. | $268,090 |
| Equipment | $0 |
| Supplies: reference guides | $500 |
| Other | $0 |
| **Total Direct Cost** | **$500,000** |
| Indirect cost (%): | **0** |
| **Total Cost** | **$500,000** |

The method of payment is reimbursement for expenses incurred upon invoice. Invoices will be submitted to DNR on a quarterly basis, but can be submitted on a monthly basis if desired. Funding is being provided by other grantors for work at South Shore Park as previously mentioned. Documentation of allocation of project costs to this and any other funding sources must be included on each invoice. Invoices must also include details/description of work invoiced and copies of contractor invoices.

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

The County and DNR are entering into this project with a shared vision of water quality improvement and an approach of collaboration. It is the intent of all to complete a project that benefits the AOC and in turn the community, while fitting into the site and regulatory constraints. It is recognized that the project 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 County 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. The County will develop a draft RFP for the project team to review and comment. The team shall function within the framework of funding regulations, state statutes, 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.

Milwaukee Countyshall:

* Provide a project manager.
* 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 June 30, 2018
* As riparian landowner, will secure necessary permitting.
* Obtain necessary approval from local entities, including the Milwaukee County Board.
* Work with the DNR to ensure the project meets the Area of Concern program goals to the DNR’s satisfaction.
* Review all contractor and subcontractor invoices to assure that all work included is complete before submitting an invoice to DNR for reimbursement.

Department of Natural Resources shall:

* Provide a project manager.
* 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 related projects.
* Review and approve drafts, work products, invoices and deliverables in a timely manner.

Figure 1: Project Area

