

Department of Public Health

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August 20, 2013

Honorable Mayor and Members of the Common Council
City of Racine
Racine City Hall
730 Washington Avenue
Racine, WI 53403

Dear Mayor and Council Members:

I hereby request permission to apply and accept funds for *Multijurisdictional Implementation of Beach Redesigns to Improve Water Quality and Restore Habitat* in the amount of \$354,869.00 from the Fund for Lake Michigan. This project seeks to improve water quality and restore coastal habitats at four (4) Lake Michigan beaches in Racine, Kenosha, and Milwaukee Counties through the implementation of conceptual redesign plans.

Design elements are based on the results of a 3-year Great Lakes Restoration Initiative study that examined sources of pollution at these locations. Plans are approved, or in the process of being approved, by the affected municipalities.

There is no City match required. (Grant Control #2013-023)

Respectfully submitted,

A handwritten signature in black ink, appearing to read "D. Bowersox", is written over the typed name and title.

Dottie-Kay Bowersox
Public Health Administrator

1. Name of Organization	2. Project Title:
City of Racine – Health Department	Multijurisdictional implementation of beach redesigns to improve water quality and restore habitat
3. Brief Summary of the Project: <i>Please include: 1) the problem the project intends to address, 2) the activities your organization will conduct for this project, and 3) the outcomes you hope to achieve and the expected impact on Lake Michigan water quality. The summary should fit in this box.</i>	
<p>Recreational water quality at Lake Michigan bathing beaches in Southeastern Wisconsin is under duress. All five Lake Michigan beaches in the City of Kenosha and two beaches in Milwaukee County are currently listed on the State of Wisconsin's 303(d) list of impaired waters due to excess risk of pathogen exposure. Further, some shoreline areas in Racine County are no longer designated for swimming due to lack of public access and persistent poor water quality. Water quality impairment threatens public health, lowers quality of life, reduces available recreation days, decreases tourism potential and mars the reputation of this region. Although there are many examples of poor water quality at bathing beaches in Southeastern Wisconsin, projects implemented at Bradford Beach in the City of Milwaukee and at North Beach in the City of Racine have demonstrated that water quality improvements can be achieved through science-based outcomes, e.g. identifying sources of pollution and instituting site specific restoration and best management practices designed to decrease their impact.</p> <p>Beginning in 2010, a 3-year study (GLRI 2010) was conducted by the Racine Health Department laboratory at 19 unmonitored or impaired beaches in Southeastern Wisconsin to determine sources of fecal contamination. Sources of pollution varied by beach; however, some were overarching at all beaches including localized stormwater runoff, nuisance wildlife, contaminated sediments and in some instances excessive <i>Cladophora</i> (algal) blooms. For example, at Simmons Island Park in the City of Kenosha, water quality standards were exceeded twice as often on the south end of the beach when gulls were present compared to when absent. Additional sources contributing to poor Great Lakes water quality include tributaries, stormwater outfalls and areas of eroded shoreline. Once pollution sources have been identified, site specific restoration and best management practices can be instituted for the targeted reduction of fecal indicator bacteria.</p> <p>Project activities are centered on the implementation of engineered improvements and the development of best management practices (BMPs) based on the accumulated sanitary survey data. Site specific beach redesign plans have been crafted based upon these study results. Eichelman and Simmons Island Parks in the City of Kenosha and Samuel Meyers Park in the City of Racine were selected based on the likelihood of a successful outcome, the level of interest displayed by the municipality, and the benefit of the restoration to the community. These beaches are currently 303(d) listed. All design elements are site specific, science-driven and crafted to meet individual community need (i.e. the Simmons Island plan integrates itself into the parks master plan for that location). However, common modifications include naturalizing the shoreline, providing beach nourishment, reducing nuisance wildlife through habitat modifications and managing local storm water runoff with the goals of improving Lake Michigan water quality and restoring coastal habitat. For instance, beach dunes (a natural coastal feature) have the capability of aiding in the infiltration of runoff as well as deterring gulls and other shorebirds from loafing on the beach. While these plans cannot address all sources of bacterial contamination, such as tributary contributions, research indicates significant water quality benefits can be realized by removing localized sources at the beach. Final approvals of beach redesign and construction plans have been secured in Racine and are in the process of being approved in Kenosha (also funded through a Great Lakes Restoration Initiative (GLRI) grant; 2011). These plans have been developed in phases such that portions of the work can be done as funding becomes available, allowing communities to proceed at their own pace while ensuring that the project is completed in its entirety.</p> <p>Partial implementation funding for this project has been secured as a result of a 2012 GLRI grant award. Initial cost estimates to fully implement the restoration plans at each site ranges from \$416,000 - \$680,000 for materials and permits and upwards of \$560,000 to \$1.07 million if an external labor force is required. Therefore, to fully execute redesign plans at all beaches, additional funds are being sought. This project features multiple partners including the Cities of Kenosha and Racine (fiscal agent) and UW-Parkside. This project represents a multi-partner collaboration between local governments and allows for the sharing of expertise and has broad-based support from local communities and academic institutions as well as volunteer organizations such as the Root Pike Watershed Initiative Network, who will actively participate in the recruitment of volunteers to offset labor costs.</p> <p>Outcomes and expected impacts. Beach redesign plans, when paired with BMPs, should improve water quality/reduce swim bans, restore coastal habitat, increase utility and enhance aesthetics. This project represents a large investment however the return on this "blue investment" are even greater: improved near shore Lake Michigan water quality, enhanced public access and recreational opportunities (inclusive of those who are mobility challenged), protection of public health, and shoreline habitat restoration. These actions will lead to improved quality of life in this region and aid in sustainable socio-economic development.</p>	