## PROJECT NAME: Assessment of Health Risk, Post-Restoration Water Quality and Habitat Improvements (Milwaukee, Racine, Kenosha & Lake Counties)

**Supervisor/Mentor:** Dr. Julie Kinzelman  
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Racine, WI 53403  
**Phone #:** 262-636-9501  
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**PROJECT WORK SITE**  
**Facility:** Racine Health Department - Laboratory  
**Complete address:** 730 Washington Avenue, #8  
Racine, WI 53403  
**Phone #:** 262-636-9571  
**Fax #:** 262-636-9576

### Project Description and Internship Requirements

#### 1. PROJECT GOAL

The overarching goal of these projects are to conduct regulatory and investigative surface water quality monitoring in SE WI and northern IL, assemble a comprehensive database of site characteristics and water quality data, post regulatory compliance sampling results for the protection of public health and compare 2016 data to the historical data set driving current restoration initiatives at multiple Lake Michigan beaches. This is a multi-agency/multi-jurisdictional effort extending from South Milwaukee to Waukegan.

#### 2. OUTCOME

This project will allow us to protect bather health, identify pollution sources and determine if there are any observable improvements in water quality or other key attributes such as environmental conditions, habitat, avian population numbers and fecal indicator bacteria concentrations at sites where restoration has begun.

#### 3. TYPES OF ACTIVITIES

Conduct sanitary surveys at regulated bathing beaches along the shores of Lake Michigan to identify contributions of microbial pollution under a variety of environmental conditions using all available GIS, MET and GPS information. Instances of microbial pollution will be identified via bacterial testing. Other measurements such as ambient weather conditions, conductivity, turbidity, and temperature will also be collected. Expected outcomes of this project include: 1) assessment of pathogen indicators and other water quality parameters that are comprehensive and site specific, 2) application of a statistical approach to estimate the impact exerted by various pollution sources on the adjacent waters of Lake Michigan, and 3) provide data to support research initiatives looking at resiliency of restoration measures.

#### 4. SPECIFIC SKILLS OR ATTRIBUTES

**Required:**

- Good organizational and time management skills, attention to detail, ability/desire to work outdoors, proficiency in basic laboratory techniques, and computer data entry/database management skills.
- Possession of a valid driver’s license, access to a reliable vehicle, and evidence of the minimum required car insurance.
- Ability to walk/wade, carrying up to 35 pounds, and work under inclement weather conditions.
- The applicant must be able to swim and be comfortable doing so in an open water environment under a variety of conditions.
- Proficient in use of a digital camera.

**Preferred:**

- Familiarity with field sampling, basic laboratory skills, prior use of GPS and GIS, Adobe Acrobat.

#### 5. CO-MENTORS

**Name:** Stephan Kurdas, Coordinator of Laboratory Services  
**Name:** Adrian Koski, Grant Program Coordinator  
**Phone #:** 262-636-9571

#### 6. PROJECT DURATION

General timeframe is May 23rd – September 2nd, 2016. Work assignments last 10 - 15 weeks. Approximately 20 – 24 hours/week. Days of week and hours vary by project but are typically M - F. Offices closed May 30th and July 4th.

#### 7. COMPENSATION

This is a paid internship. The hourly rate is $13.94. Mileage reimbursement will be paid at $0.54/mile. May be eligible for academic credit - see your advisor.

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### STUDENT ASSIGNED

**Name:**  
**Advisor:**  
**Contact phone #:**  
**Email:**