Quality Assurance Program Plan

for

Environmentally Concerned Citizens of South Central Michigan
(ECCSCM)
Water Monitoring Project
Hazen Creek/South Branch, River Raisin Watershed

2014

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I. Project Description

The ECCSCM Water Monitoring Project in Hazen Cr., S. Branch River Raisin Watershed conducts surface water monitoring for *E. coli* bacteria, Dissolved Oxygen, Nitrate, Nitrite, Phosphate, and Ammonia at sites near Confined Animal Feed Operations north and west of Adrian in Lenawee County, Michigan. All sampling sites are in the River Raisin Watershed.

The purpose of the Project is to identify surface water quality problems and high risk areas, and to educate the public in water quality and watershed issues. Sampling takes place quarterly, with the option for additional rain-event testing.

II. Project Organization and Responsibilities

ECCSCM Water Monitoring Project Coordinators are ECCSCM members Pam Taylor and Janet Kauffman. Dissolved Oxygen/water temperature results are taken in the field with a YSI DO meter. *E. coli* samples, in sterile bottles supplied by the DEQ Laboratory, are delivered on ice within 6 hours to the DEQ Lab in Lansing, MI when possible, or mailed overnight. Nitrate, Nitrite, Phosphate and Ammonia are tested using standard Hach test strips. Nitrate and Phosphate are also tested using an Exact Micro 7+ (TR 7) photometer.

Project Coordinators:
Pam Taylor, ECCSCM Treasurer
Janet Kauffman, ECCSCM Vice-President

Project Coordinator Responsibilities:
Pam Taylor and Janet Kauffman, as Project Coordinators, are responsible for the overall quality of the monitoring, including adherence to schedules, budgets, data preparation, reports, summaries. They are also responsible for overseeing all field-related activities, including scheduling, sampling, and transporting *E. coli* samples for analysis.

Field Responsibilities/Techniques/Quality Assurance:
YSI DO meter will be used for Dissolved Oxygen/water temperature; meter will be calibrated as per YSI instructions. *E. coli* samples will be collected as grab samples following clean technique and appropriate QA/QC procedures.

Field volunteers are encouraged to assist with sampling, recording observations, and providing general assistance. Volunteer work will allow citizens to gain knowledge of correct sampling techniques and will familiarize them with the watershed and water quality issues.

Laboratory Responsibilites/Quality Assurance Quality Control:
All bacteria analysis and data reporting will be conducted by the DEQ Laboratory, 3350 N. Martin Luther King Blvd, Lansing, MI. Analysis will be performed in accordance with standard

methods, under an appropriate quality assurance/quality control plan.

III. Data Management, Analysis, and Reporting Procedures

All data gathered in the field and test strip results will be recorded on log sheets—dates and times of sampling, weather and water conditions, DO/water temp readings. Both Project Coordinators will maintain copies of original log sheets. *E. coli* data generated in the DEQ Laboratory will be added to log sheets and also entered into a total data spreadsheet. All reports on findings, quarterly data reports, charts, summaries, will be released by Project Coordinators.

Water test results are sent to the Michigan Department of Environmental Quality, Region 5 EPA, appropriate local government entities, and the Lenawee County Health Department. Reports are also published in the ECCSCM newsletter, on the ECCSCM website, and total monitoring data is available to the public.