

Client: **Fox Metro Water Reclamation District (FMWRD)**

Deuchler’s Environmental team has been performing an extensive monitoring of the urban and rural parts of the City of Aurora/Fox Metro Water Reclamation District (FMWRD) watershed area for point source and non-point source pollution continuously since 2006. A portion of this work has included biological sampling including fish, mussels, macroinvertebrates, and habitat.

Deuchler has prepared a Quality Assurance Project Plan (QAPP) defining sampling strategies and procedures for this work, which is updated annually and when changes necessitate. The purpose of this biological sampling is to establish a baseline for the biological components of the Fox River for both the future expansion of the FMWRD wastewater treatment plant and as a comparison to post-construction monitoring upon implementation of the FMWRD’s combined sewer overflow long term control plan. Data analysis via various scoring metrics (IBI, MBI, MCI, QHEI) and report writing is a significant portion of this project.

Noteworthy Findings:

- Fish IBI scores in the “Good” category, both upstream and downstream of the FMWRD discharge.
- Several live and healthy individuals of the state-listed endangered species Greater Redhorse, *Moxostoma valenciennesi*, throughout the study area.
- No significant difference in Macroinvertebrate MBI scores upstream and downstream of the FMWRD effluent discharge point or inside and outside of the FMWRD effluent plume.
- A mussel bed located approximately 1800’ downstream of the FMWRD effluent discharge point, inside the effluent plume.
- Dams had a larger influence on the biota than any point sources.

Customer Reference Info:

Client:	Fox Metro Water Reclamation District (FMWRD)
Project Period:	2006 to present
Project Managers:	Philippe Moreau, President & Karen Clementi, Senior Biologist
Staff:	Deuchler Engineering’s environmental/biological team

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Flathead catfish (*Pylodictis Olivaris*) captured by electrofishing downstream of FMWRD's effluent



Using a minnow seine to capture minnows and young of the year



Electric seining on a tributary



Hester-Dendy macroinvertebrate sampler and anchor stone used on the Fox River



Mussel sampling with FMWRD staff in 2012



Northern Pike (*Esox lucius*) captured while electrofishing



Black Crappie (*Pomoxis nigromaculatus*) collected in 2012



Largemouth Bass (*Micropterus salmoides*) collected in 2012



Endangered Greater Redhorse (*Moxostoma valenciennesi*), found on the Fox River main stem.



Juvenile White Heel Splitter (*Lasmigona complanata*) found in the effluent plume of FMWRD



Catching a soft-shell turtle i