

Appendix A

IAFSM Grant Proposal by Dr. Joseph Fitzpatrick of Northwestern University

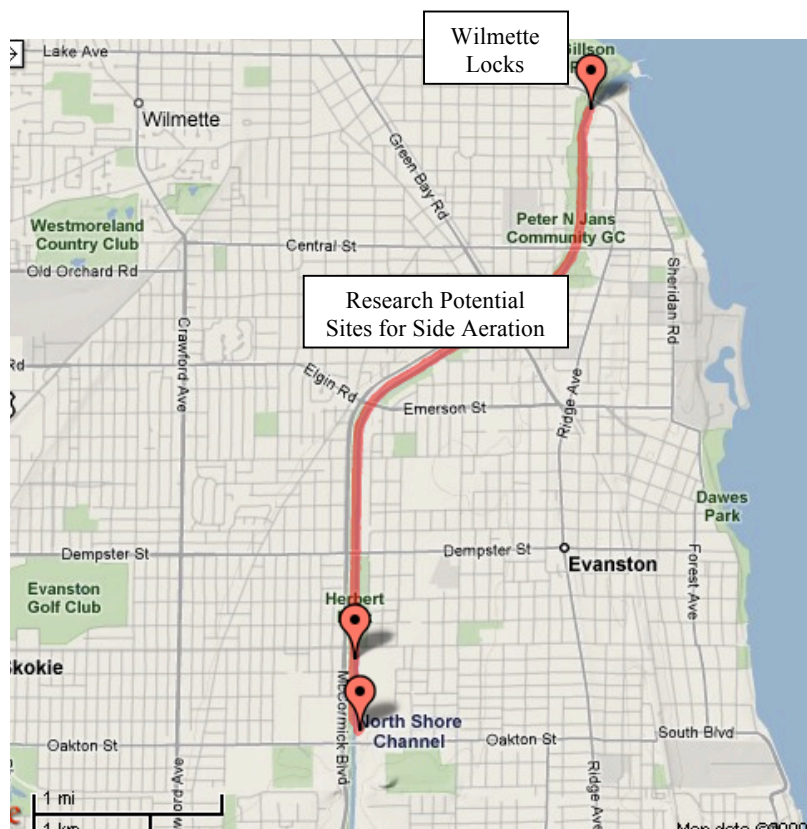
Aeration channel along the North Shore Channel

Dr. Fitzpatrick spoke with colleagues and there is interest in supporting a capstone design study for next year aimed at improving quality in the MWRDGC North Shore Canal along McCormick Boulevard to the Wilmette Locks.

The idea is to use perhaps side stream aeration or other technologies and develop a design. The design will be presented at both the 2010 and 2011 IAFSM conferences. A progress presentation could be made at the 2010 annual IAFSM conference.

There may need to be preliminary survey work on the canal on seasonal quality to supplement MWRDGC data and then also to verify quality changes for the alternative approaches. The field work may be done in fall and winter and design would be done in the spring. Teams would estimate quality improvement as a function of the design (technology) choices.

Channel Background The North Shore Channel is a drainage canal built between 1907 and 1910 to flush the sewage-filled North Branch of the Chicago River down the Chicago Sanitary and Ship Canal. The canal drains out of Lake Michigan in Wilmette, near the Bahá'í House of Worship, and connects to the North Branch at the junction of several North Side community areas. Today, the canal is often used by small boats, and is the basis for much local wildlife. Chicago's only waterfall in the city limits is where the North Branch drops four feet through a dam into the canal.



Dr. Joseph Fitzgerald will use the IAFSM grant money for laboratory and field data gathering over this and parts of next year that would then be used by the spring 2010 design teams who would design a variety of methods and appurtenance systems to examine degree of control of storm and runoff quality over part or all of the seasonal cycles of the MWRGC channel or another test basin or receiving area.

We have a little back log from some botec projects on the canal, but we would like to use junior level to senior undergraduate engineers. The final product should be much better and could be presented at IAFSM annual conference.

Tentative Schedule for North Shore Channel Improvement Project

Phase I	Gather the Existing Water Quality information for North Shore Channel
Spring 2010	Report to IAFSM at March Conference
Funding Level	\$3000
Presentation to IAFSM at the 2010 conference	

Phase II	Design an approach to benefit the channel
Fall 2010	Written Update Summary Report to IAFSM
Funding level	\$2000

Phase III	Measure the Success of the Design
Spring 2011	Present to IAFSM at March Conference
Funding Level	\$3000
Presentation to IAFSM at the 2011 Conference	