

Sustainability and the Chicago River

From Urbanization to Pollution to Restoration



Ron Taylor, Ken Schmidt, & Mike Bryson
Sustainability Studies Program at RU
Chicago River Student Congress | Workshop Session
23 February 2013



Sustainability & the River: Workshop Highlights

Context (Mike)

Sustainability and Water in Chicago

The Ron and Ken Show

Alterations of the Chicago River

Wastewater & its impacts

Lake Michigan & climate change

Green infrastructure

Water Education and Research (Mike)

Sustainability Studies at Roosevelt





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Water and Sustainability





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Water and Sustainability



Jardine Water Filtration Plant on Chicago's Downtown Lakefront

In a Sustainable Future:



Debris floating in Bubbly Creek, a tributary of the South Branch of the Chicago River

Environmental resources are conserved for both future human generations as well as non-human biota.

Economic development occurs not at the expense of the natural environment, but in a way to mitigate ecological costs and impacts.

Equity – social, economic, and environmental justice – governs the process of sustainable development.

Our Favorite River

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This is the river today . . .



North Branch of the Chicago River (Spring 2010)



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And so is this . . .



WMRD's Racine Avenue Pumping Station, Bubbly Creek, Chicago (May 2009)

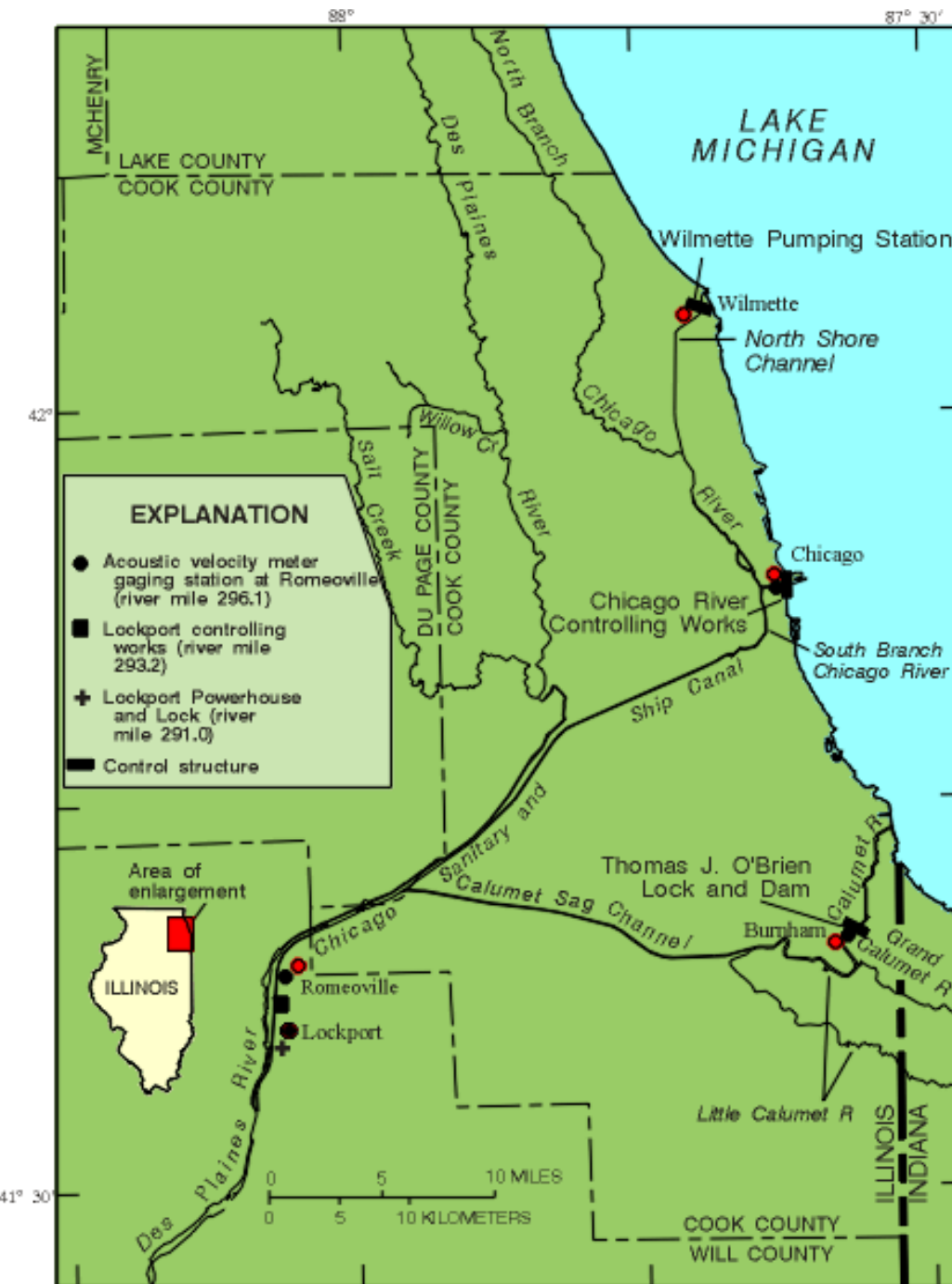
And this, too – sort of . . .



The Stickney Wastewater Treatment Plant, SW of Chicago (courtesy MWRD)

The Transformation of Water in Chicago

The Chicago Area Waterway System:
rivers, canals, locks, and controlling structures





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Dealing with Wastewater



MWRDGC's Stickney Wastewater Treatment Plant, Stickney, IL



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Dealing with Wastewater



Combined Sewage Overflow outlet, Bubbly Creek, Chicago



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The River and the Lake



Chicago in 1857

Climate Change & the Great Lakes

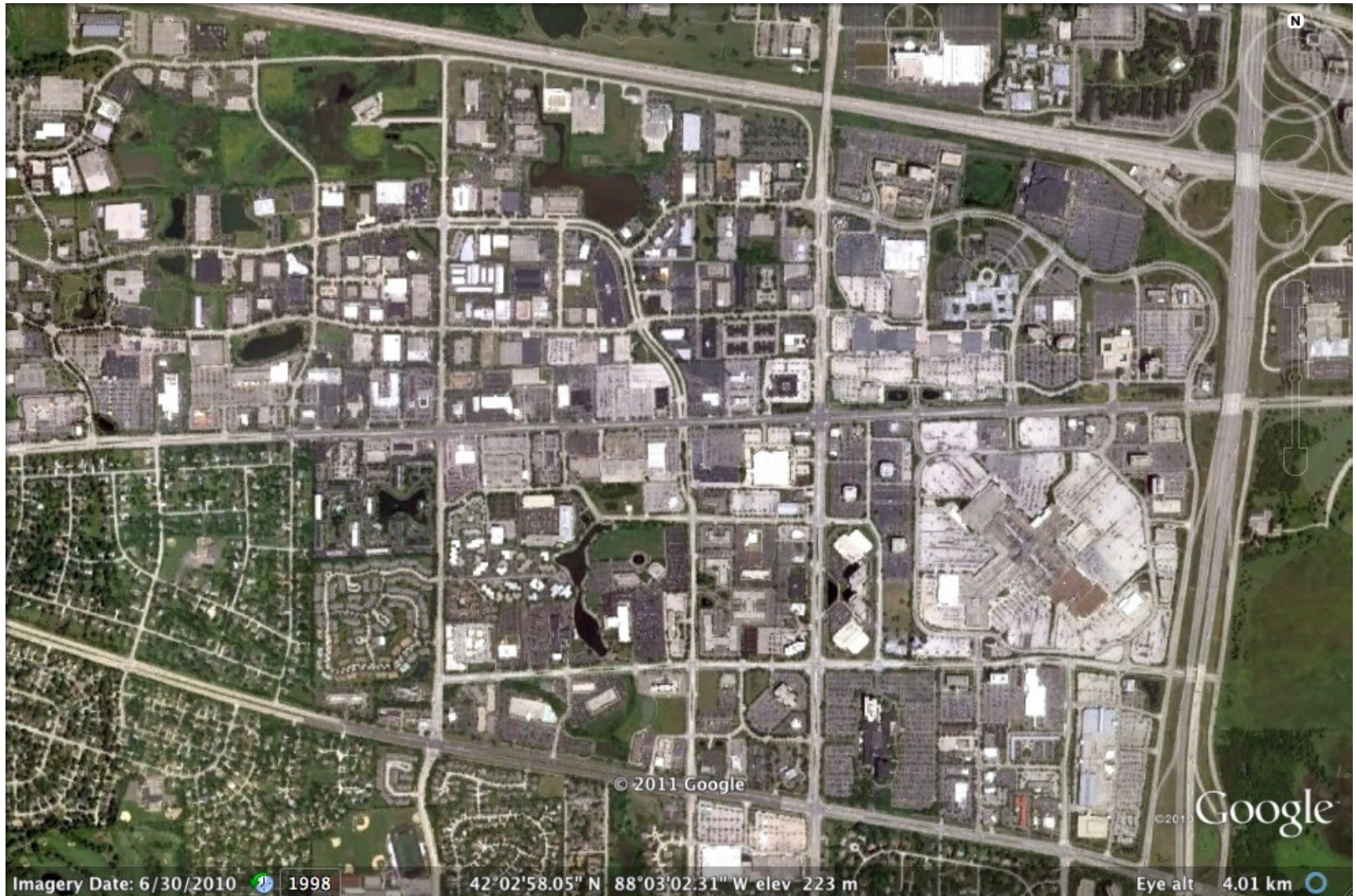


Lake Michigan, near Milwaukee, WI (Mike De Sisti)



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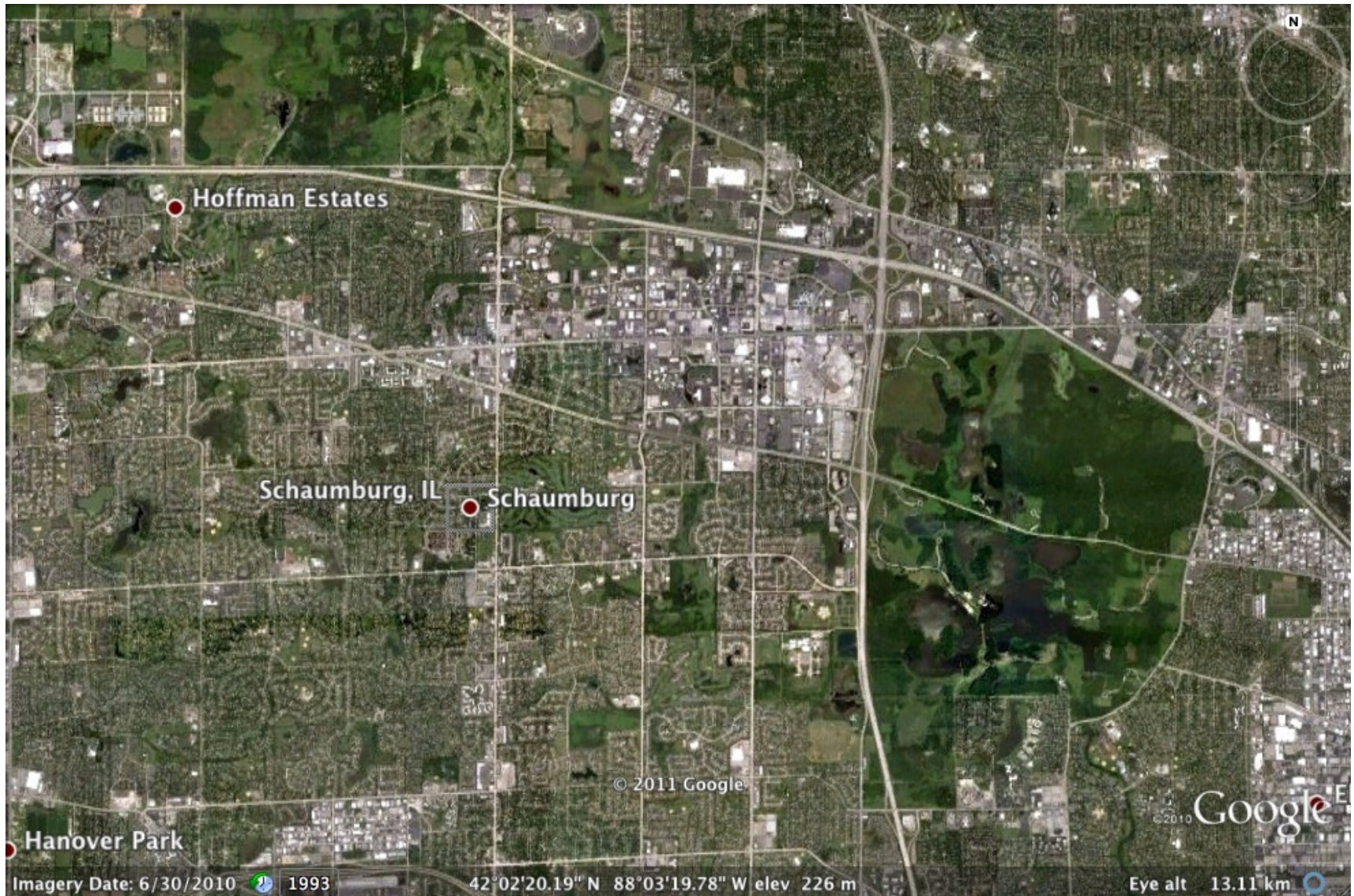
Suburban Hardscape





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Green Infrastructure





Wastewater Treatment



MWRDGC's **John Egan Wastewater Treatment Plant**, Schaumburg IL / Busse Woods

The Farm & the River



Growing Power's Iron Street Farm, on the west bank of Bubbly Creek (2012)

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Sustainability Studies at RU



- **Fosters environmental literacy** through interdisciplinary work in the natural sciences, social sciences, and humanities;
- **Engages public policy** concerns surrounding consumption, energy usage, and viable economic growth;
- **Explores social justice** issues on a range of fronts, including environmental justice, resource allocation, urban development, and social equity;
- **Educates students to be leaders** on issues of sustainability, one of the critical issues of the 21st century.



Core Courses

SUST 210 Sustainable Future
SUST 220 Water
SUST 230 Food
SUST 240 Waste

Advanced Courses

SUST 310 Energy and Climate Change
SUST 320 Sprawl, Transportation, and
Planning
SUST 330 Biodiversity
SUST 340 Policy, Law, and Ethics

Special Options

SUST 350 Service Learning
SUST 390 Special Topics



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Canoeing the North Branch



Heading south into the Loop where the branches meet;
Wolf Point in the background (October 2011)



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Canoeing the North Branch



Paddling the West Fork of the Upper North Branch: here we portage around a fallen tree, within the greenway of the Cook County Forest Preserve (October 2012)



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Canoeing the South Branch



Canoe trip down Bubbly Creek, an industrialized tributary of the South Branch of the Chicago River (May 2009)

I Get Credit for Doing This? Cool!



Sustainability Studies [Blog](#) and [Website](#) (and, oh yes, [Facebook page](#))
[Schaumburg's Sustainable Future](#) (student research project)
Prof. Mike Bryson's [website/blog](#)