

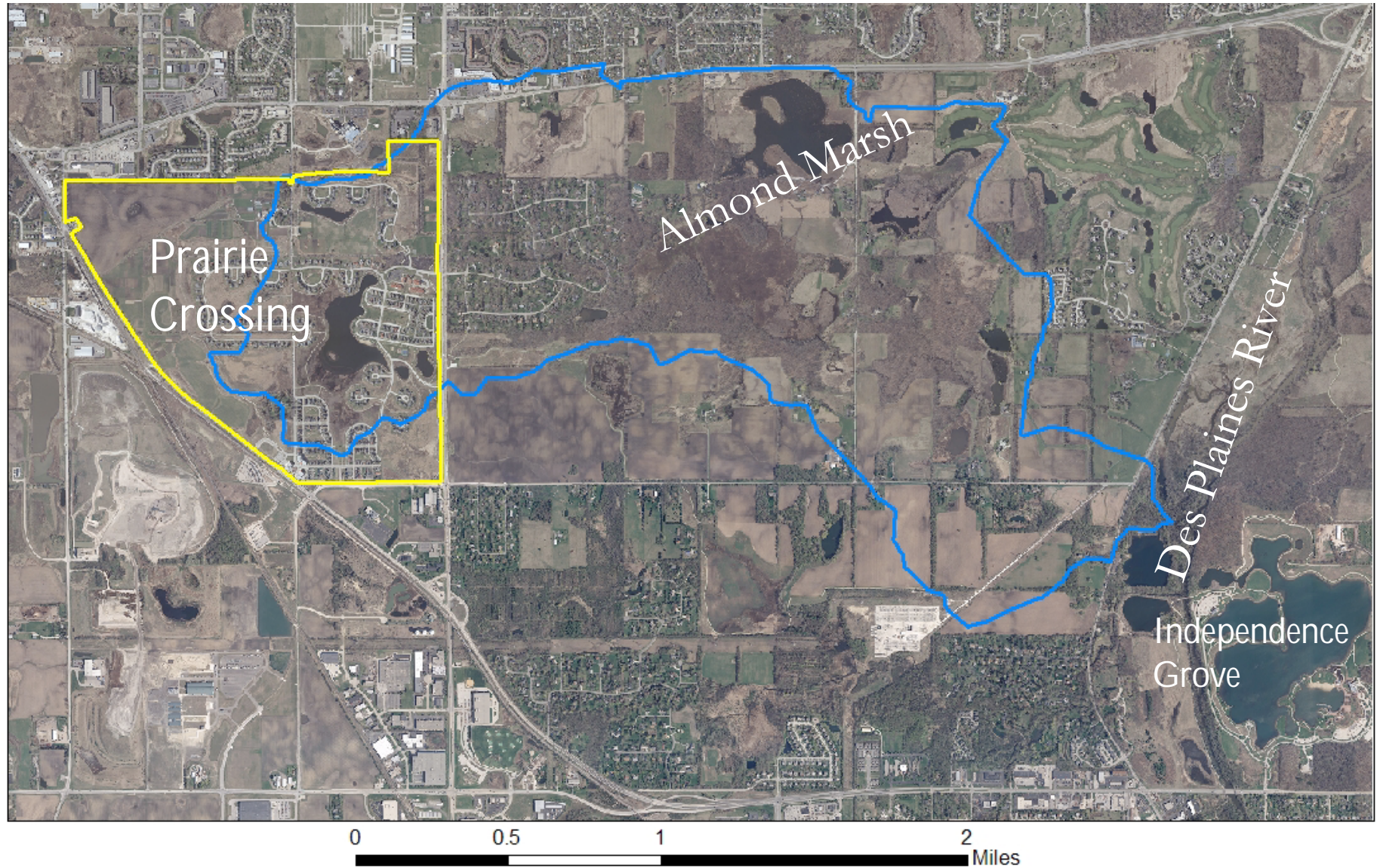
Stormwater Treatment Train Water Quality Impact



Experiences from Prairie Crossing
Michael Sands & Joseph Marencik

Headwaters of Bull's Brook

Context



Prairie Crossing History

- **Land purchased 1989**
- **PUD approvals 1993**
- **First house sold 1994**
- **HOA transferred 2003**
- **Last SFR house closes in 2005**
- **Condos presales 2004**



Guiding Principles

- Environmental Protection and Enhancement
- Healthy Lifestyle
- Sense of Place
- Sense of Community
- Economic and Racial Diversity
- Convenient and Efficient Transportation
- Energy Conservation
- Lifelong Learning
- Aesthetic Design and High-Quality Construction
- Economic Viability



Prairie Crossing

Prairie Crossing Plan 2000

January 2000



Skidmore, Owings & Merrill LLP
Calthorpe & Associates

Conservation Community

- **668 acres in Grayslake, Illinois**
- **formerly tiled conventional ag fields**
- **>69% protected open space (conservation easements)**
- **359 single family homes**
- **Mixed use area with 36 condos, retail and commercial**
- **2 train stations**

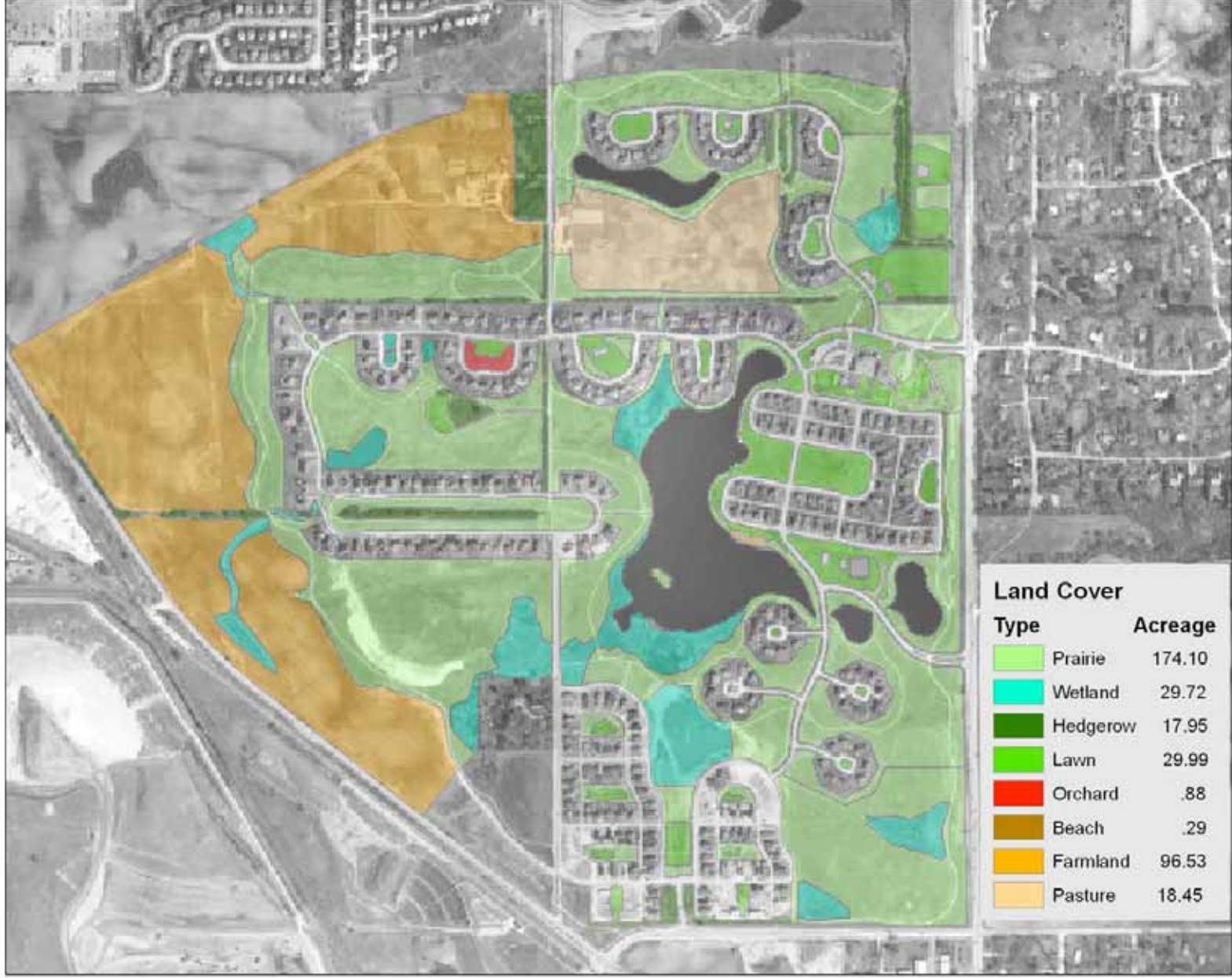
Prairie Crossing

Secret of 69% Open Space?

Small lot sizes

5,000 – 23,000 sq ft!





Prairie Crossing
 A CONSERVATION COMMUNITY
 32400 North Harris Road
 Grayslake, IL. 60030

Land Cover

**Prairie Crossing
 Homeowners' Association**
 32400 North Harris Road
 Grayslake, IL. 60030
 Email: Board@pchoa.com

Farm

**Commercial
organic producers**

Learning Farm

**Organic Farm
Incubator**

Co-op horse stable

**Outside
watershed**



Hedgerows

Prairies/Meadows

Wetlands

Lakes



Native Areas



Native Landscaping



Common areas
Home sites



Fire is principle management tool



Prairie Crossing

Native areas used for Stormwater Treatment Train

- Water quantity
- + Water quality



Rain Gardens



Native Swales



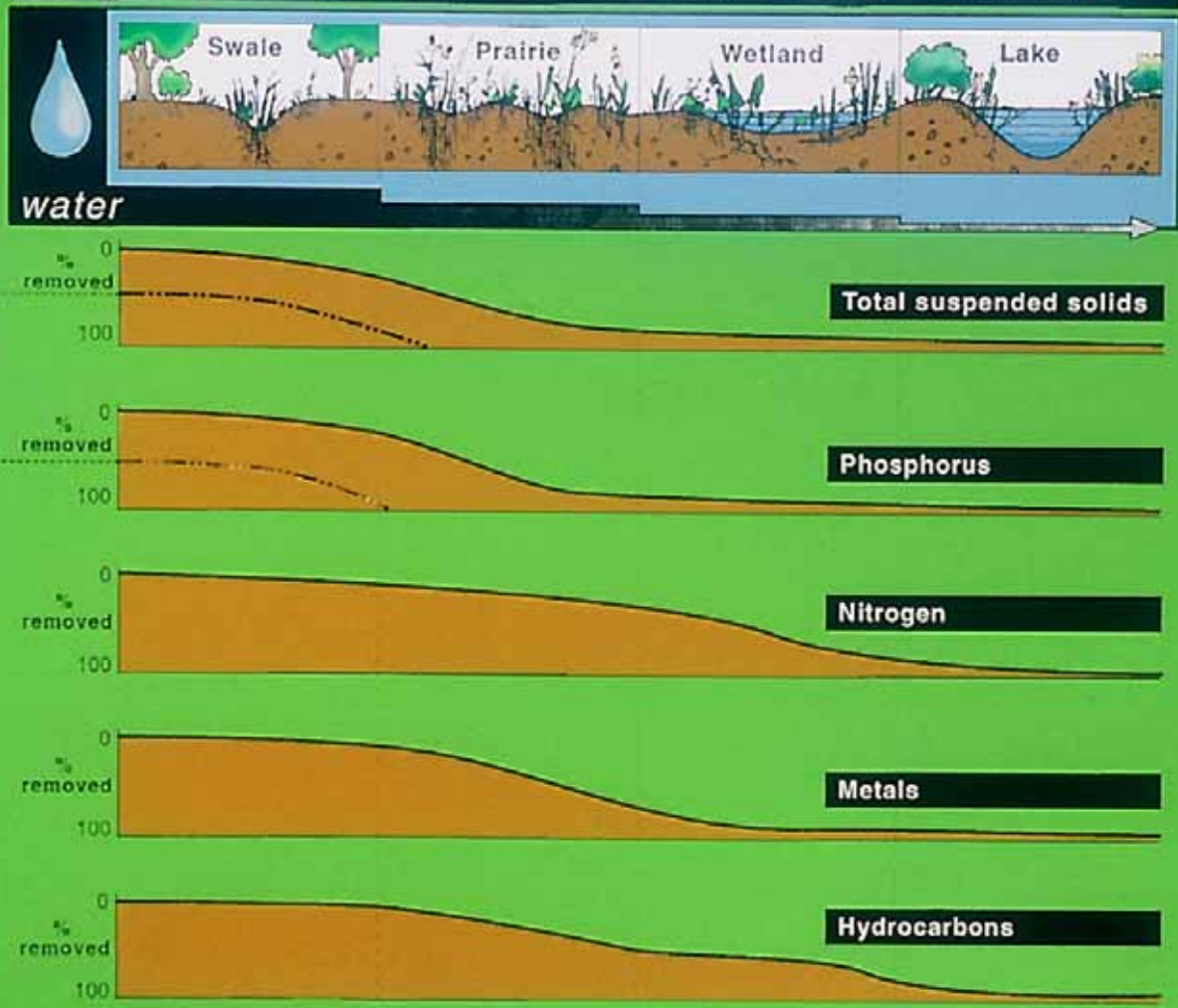
Prairies and Wetlands



Common Areas for Treatment

Prairie Crossing

Stormwater Treatment Train



Source management

Prairie Crossing



Prairie Crossing



Pavement Widths

- Jones Point 66/31
- Prairie Trail 60/24
- Village 40/20
- Station Village 50/18
- Alleys 20/16

Prairie Crossing



Prairie Crossing



Prairie Crossing



Prairie Crossing



Prairie Crossing





Planted late Fall 2001

Prairie Crossing



Prairie Crossing



**STORMWATER
MANAGEMENT COMMISSION**

Bull Creek and Indian Creek Watersheds



WORK IN PROGRESS

We are reducing
nonpoint source pollution
in the Indian Creek
and Bull Creek/Bull's
Brook watersheds by using
best management practices
The end result will be cleaner water,
less flood damage, and better
habitat for plants and animals.
Questions? Please contact:

Michael Sands
847-548-4062 X10

Funding provided, in part, by the EPA
through Section 319 of the Clean Water Act

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Prairie Crossing

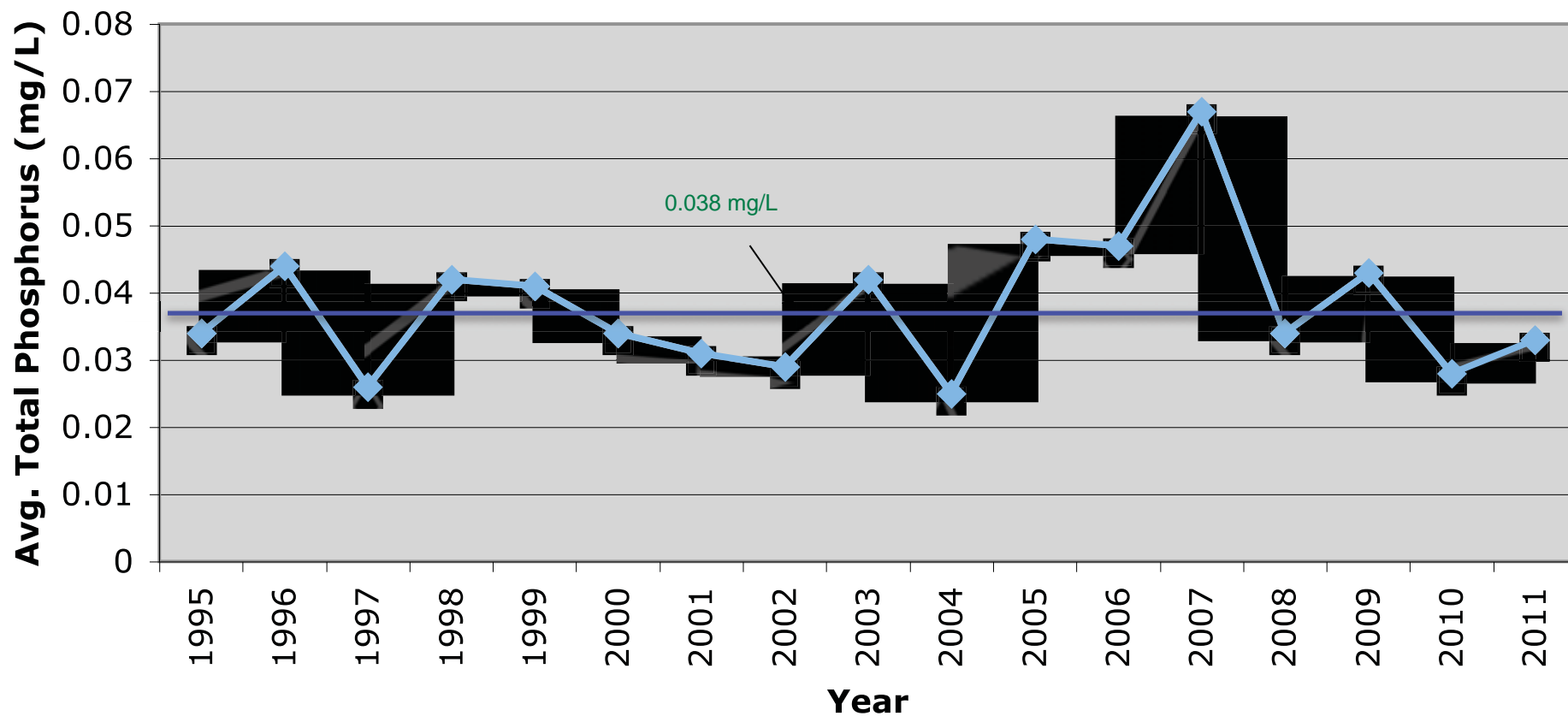


Prairie Crossing



P Levels in Lake Leopold

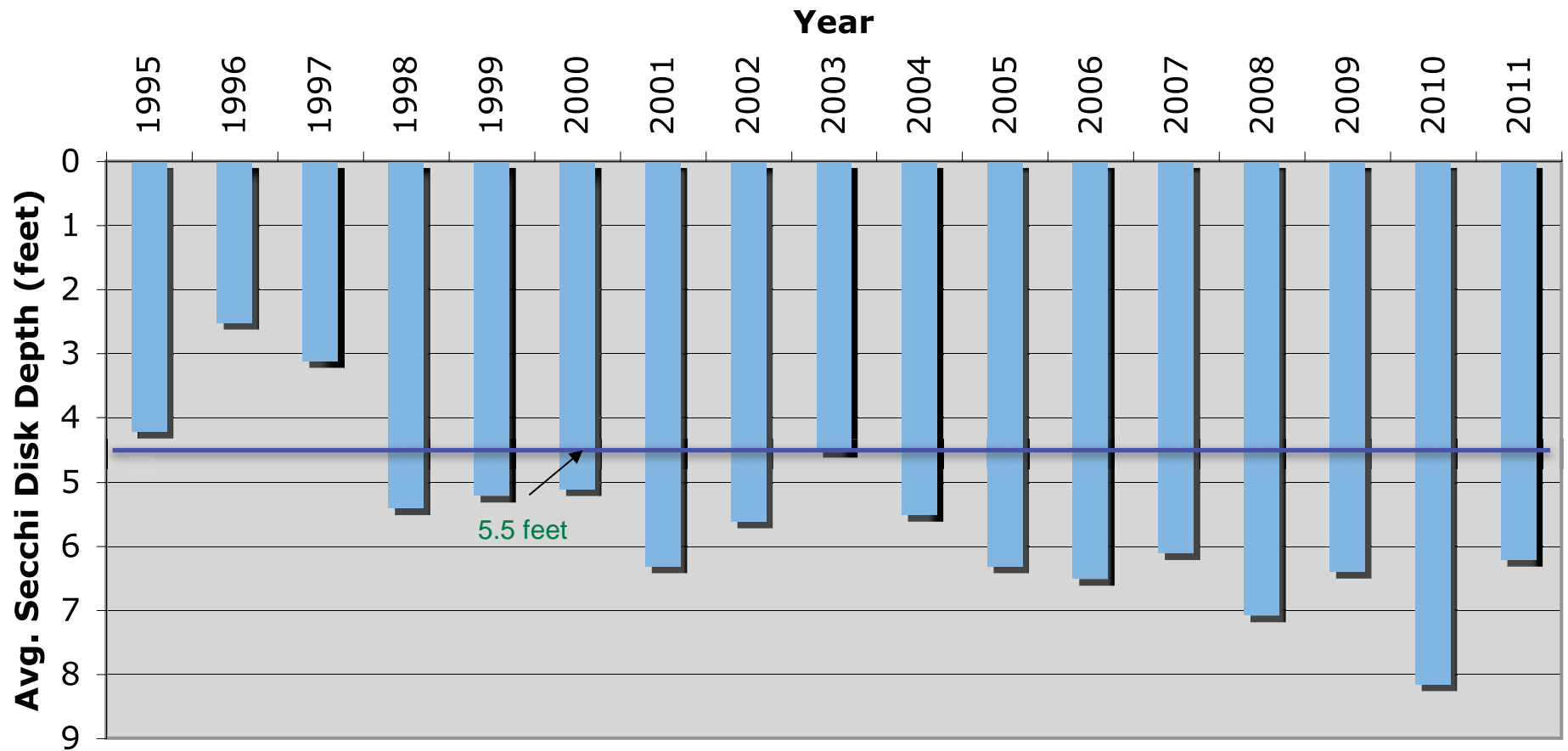
Lake Leopold Avg. Total Phosphorus Concentration (1995-2011)



IL EPA Standard is 0.05mg/L

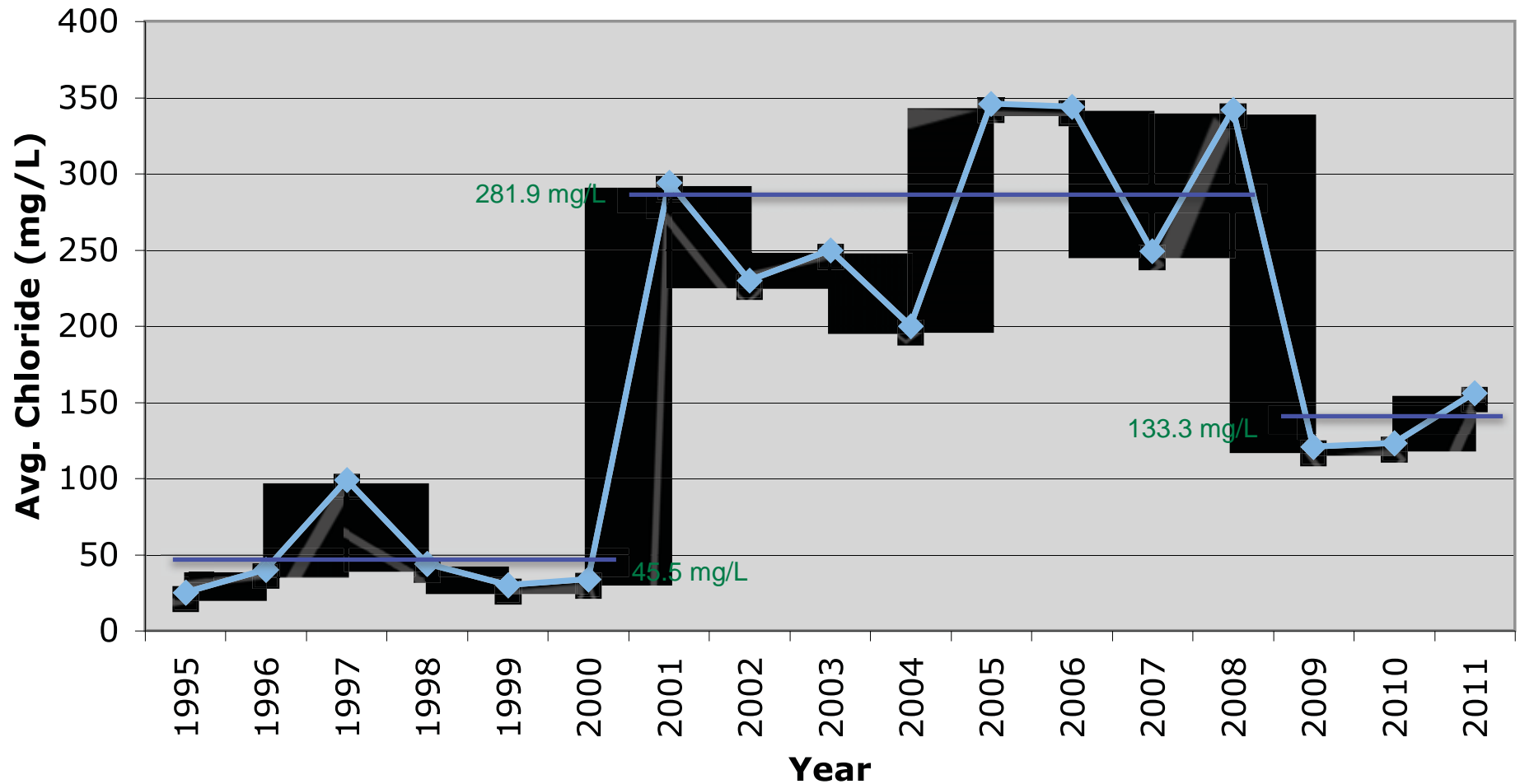
Water Clarity in Lake Leopold

Lake Leopold Avg. Secchi Depth (1995-2011)

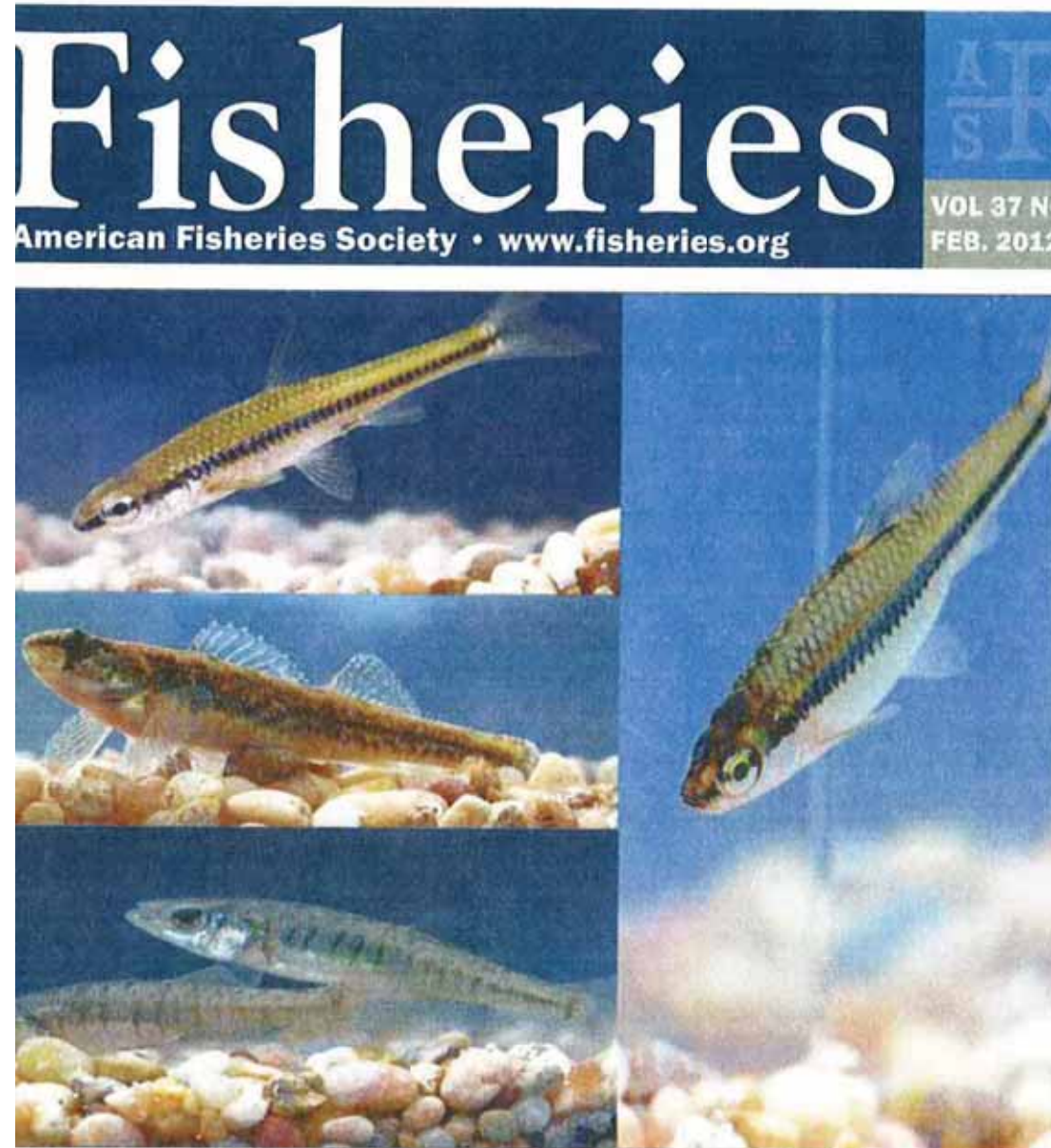


Chloride Levels in Lake Leopold

Lake Leopold Avg. Chloride Concentration (1995-2011)



IL EPA standard is 500 mg/L US EPA criteria is 230 mg/L



Examples of Resources Going Forward

Urban Land Institute (www.uli.org)

NAHB Research Center Toolbase (www.toolbase.org)


Low Impact Development Center (www.lowimpactdevelopment.org)

U.S. EPA (www.epa.gov/owow/nps/urban.html)

Environment and Development
Myth and Fact





National Association of Counties



Low Impact Development
A Guide for Local Elected Officials

"An important principle of Low Impact Development, or conservative development, is its inherent link with one of our most important resources, water."

Robert Wilmer, Chairman
New Castle County, Delaware


Builder's Guide to Low Impact Development

Would you be interested in saving upwards of \$70,000* per mile in street infrastructure costs by eliminating one lane of on-street parking on residential streets?

Did you know that communities designed to maximize open space and preserve mature vegetation are highly marketable and command higher lot prices?

Are you aware that most homeowners perceive Low Impact Development practices, such as bioretention, as favorable since such practices are viewed as additional builder landscaping?

Did you know that by reducing impervious surfaces, disconnecting runoff pathways, and using on-site infiltration techniques, you can reduce or eliminate the need for costly storm water ponds?



Municipal Guide to Low Impact Development

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A painting of a woman with dark hair, wrapped in a green, quilted blanket, looking out over a vast, green, hilly landscape. The landscape is composed of rolling hills and fields, with a small body of water visible in the distance under a blue sky. The woman's face is partially visible, showing her eyes closed and a peaceful expression. The overall mood is serene and contemplative.

Liberty Prairie Foundation
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Grayslake, IL 60030
Tel: 847/548-5989
www.prairiecrossing.org