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## Woods & Wetlands News

Serving Lake and Northeastern Cook Counties

### Beat the Blues

By Barbara Bell

By the time you read this it will be mid-January, the holidays are a distant memory, warm weather seems a long way off and there's nothing to look forward to.

Well, Woods & Wetlands has a solution to beat the winter doldrums. It's our third annual Beat the Blues Party at a club member's house in Lake Forest. Members can gather to talk, eat and imbibe spirits.

The party is on Sunday, January 21, 2007, and goes from 3 to 7 p.m. We suggest that you bring a dish from a food group based on the first letter of your last name:

- A-E: fruits and vegetables;
- F-J: protein;
- K-P: carbohydrates ;
- Q-T: deserts; and
- U-Z: refreshments.

For directions to the party, email [ww-blues@illinois.sierraclub.org](mailto:ww-blues@illinois.sierraclub.org) or call (847) 367-4253 or (847) 680-6437. ↗

### Lake Michigan

By Larry Marvet

As the source of our weather, water and history, Lake Michigan is the essence of where we live—but what do we really know about it? Each of us lives within 20 miles of this lake, fifth largest in the world with 1,180 cubic miles of water, and by far largest in the United States. But every summer we read of contaminated beaches, and almost every month that we've reached a pumping limit for the Lake.

At our first meeting of the new year, on Wednesday, February 28, we've invited Great Lakes Expert Judy Beck to speak with us. Ms. Beck leads the US Environmental Protection Agency's Lake Michigan Initiative and will update us on the most important lake in Lake County. ↗

## Woods and Wetlands Calendar

### GENERAL MEMBERSHIP MEETINGS

**Sunday, January 21st, 2007, W&W Winter Party**

#### **Beat the Blues**

Private residence in Lake Forest

For directions to the party, email [ww-blues@illinois.sierraclub.org](mailto:ww-blues@illinois.sierraclub.org) or call (847) 367-4253 or (847) 680-6437.

**Wednesday, February 28th, Program at Vernon Area Library.**

#### **Lake Michigan**

Presented by Judy Beck, US Environmental Protection Agency

See description on this page.

**Wednesday, March 22nd, Program at Prairie Crossing's Byron Colby Barn.**

#### **Save the Date**

### CONSERVATION COMMITTEE MEETINGS

Conservation Committee Meetings are held at 6:00 p.m. in advance of the General Membership Meetings.

For maps and details, please visit <http://illinois.sierraclub.org/w&w/meet>

#### Directions

General meetings are held at Vernon Area Library, 300 Olde Half Day Road in Lincolnshire. Olde Half Day Road is between Half Day and Rt. 22. Take it west from Milwaukee Ave (Rt 21) and turn right into the Library parking lot.

The Byron Colby Barn is on Jones Point Road in Grayslake. Turn W onto Jones Point from Rt. 45 at the light a between Casey and Rt. 120 / Belvidere. The Barn and its parking area are on the left.

### Is W&W on Your Gift List?

By Evan Craig

The key to being a heavenly secret angel is to learn a little about your secret mortal. With a little observation you can discover a simple gift that will warm their hearts.

We hope you've grown fond of having the W&W News arrive in one form or another more frequently than it has in the past, and have begun to think of it as a friend. Per-

haps you've noticed the beautiful color ink we occasionally lavish on it, the recycled paper, and the postage that gets it to you. Imagine how a check for \$10 from every member would light up it's front page!

The truth is, a little holiday gift from each of you will make the difference between hardly getting by, and spreading the spirit of environmental stewardship to more people. Please share a little, and send a check to the address at the bottom of this page. ↗

## Coming to a Lake and River Near You

By Jim Bland

The phrase "Total Maximum Daily Load" has achieved a new cachet. It's not really a new phrase since the process is over 40 years old and was used to determine acceptable pollutant loading to the Great Lakes. About 15 years ago the phrase took on a new meaning: a law suit filed by the Natural Resources Defense Council forced state and federal agencies to employ this type of analysis for all rivers and lakes that were listed as impaired and designated on states' 303(d) list. For Illinois as well as many other states this represented a bit of a quandary since the level of resources required to prepare a single TMDL is very substantial. As with many governmental programs there exists a Catch-22 ... states must list their 303d waters, they must schedule and prepare a TMDL analysis for those waters and they must have technically defensible plans to restore waterways. However, while all states have continued to spend money to grant water pollution permits, *few states have found the funds to support such analyses to justify them.*

As it was originally interpreted and enforced, the Clean Water Act was intended to address chemical pollution loads coming from point sources (i.e. a sewage treatment plant pipe or an industrial outfall), and non-point sources (i.e. an agricultural field delivering nutrients across a diffuse perimeter). TMDLs are written plans and analyses established to ensure that water bodies maintain water quality standards. Generally they address a range of pollutants. According to USEPA guidance documents a TMDL must, at a minimum, include:

- Geographic identification of the impaired water body
- Identification of chemical pollutants responsible for impairment and a quantification of their annual and daily loads
- Load influence analyses (to what degree does it contribute to use impairment)
- Source categories
- Load allocations and targeted reductions for point sources
- Load allocations and targeted reductions for non point sources

- Margin of safety
- Consideration of seasonal influences
- Allowance for future growth
- An implementation plan for restoration
- In Illinois a watershed analysis is also a requirement of the TMDL process.

On the face of it all of these items would appear to be good things. Several types of problems have prevented TMDL analyses from realizing their potential as a restoration tool. The first is the assumption that chemical loading is the sole cause of use impairment. Both streams

### Section 303(d) of the Clean Water Act

Section 303d of the Clean Water Act calls for the development of a list of impaired waters. States are required to review this list biannually and submit it to the USEPA. Generally impairment is graded against chemical water quality standards but it also means that water bodies must support their highest "beneficial use." If a water body does not support a balanced indigenous fish population for example it may be graded as "impaired." To address the impairment, states have to create technical analyses (TMDL) indicating how they will restore the water to its full intended use.

and lakes are driven by a constellation of factors which includes chemical water quality, but which also includes habitat, biological interactions, energy dynamics, and flow variability. If use attainment is judged by means of biological integrity then these other factors have to be incorporated into the TMDL process. A second assumption is that restoration (as judged by achievement of water quality standards and use designations) is technically possible. Recent scientific analyses of the impacts of urbanization raise significant questions about our ability to redress impaired urban stream and lake communities. Still another concern is the quality of analysis that is possible given the fact that adequate resources have not been allocated to state coffers.

Despite their shortcomings TMDLs represent a unique opportunity to do focused technical analysis for a broad array of aquatic resources. The TMDL process is particularly useful for lakes where nutrient balances, especially for phosphorus, drive the expressed ecology of lakes. In northeastern Illinois phosphorus is almost always the limiting, or critical nutrient, which determines whether a lake will be overgrown with algae or will have a desirable balance of rooted aquatic vegeta-

tion, algae, fish and invertebrates.

Not all forms of phosphorus are created equal. Some forms of phosphorus (orthophosphorus) are highly soluble and will be immediately available for uptake by algae. It is notable that sewage treatment plant effluents are almost always made up of the most "bioavailable" or soluble forms of phosphorus. By contrast other forms of phosphorus (generally measured as total phosphorus) can be adsorbed to the surface of soil particles and will not be as readily available for biological uptake. Once a budget for nutrient loading is created the lake can be modeled and algal growth predicted. Computer assisted modeling is an integral part of almost all TMDLs.

On a local level, issues of TMDL analysis and nutrient budgets are highly relevant to all of our inland lakes. The Sierra Club Woods and Wetlands Group has approached the Village of Antioch concerning these issues as they pertain to Lake Marie. The Antioch Sewage Treatment Plant is due for expansion. **Notably however, the Illinois EPA schedule would allow for the expansion of the sewage treatment plant before the creation of a TMDL/nutrient budget for Lake Marie.** We believe that

this is definitely the cart before the horse. If the plant is expanded before doing the analysis then phosphorus reduction options are likely to be much more limited.

Illinois EPA has published a tentative schedule (i.e. within the next two years) for TMDLs for our local area lakes. It is duplicated on page W4. All of the lakes identified have been listed on the 303(d) list of impaired water bodies. We encourage all citizen stewards to become familiar with these analyses since they are critical management tools for the future.

In 2003 we helped pass the Illinois Clean water Fund into law. It placed a fee on water polluters to fund TMDLs. To deal with the severe budget deficit, Governor Blagojevich raided the fund for other uses during his first year. Action needs to be taken to ensure that our newly re-elected governor restores these funds for their intended use, and provides adequate funds in the Illinois EPA budget to get this work done in an expeditious fashion. 🐾

## Conservation Column: 120 Bypass Aiming to Spoil Our Chances?

By Larry Marvet, Conservation Chair

Our usual Illinois natural history saga starts with our prehistoric state covered in glaciers, followed by settlers/farmers and, finally, “modern” development of the Chicago area. The Chicago area certainly has followed that path and seems unlikely to un-pave or un-build the roads or skyscrapers that reside there today.

Much of Lake County and some of the North Shore is not paved. In fact, one of the reasons many of us came here was to find some nature, some undeveloped land, places we could explore, view nature, relax and get away from the city. So what priority do you give to protecting the natural lands and wildlife where we live?

The proposed 120 Bypass is a classic example of the tension between those that want to extend Cook County development north versus those that want to retain some small level of nature where they live. Viewed by itself, the proposed expressway is out of place, unconnected to any other super highways and surrounded by simple roads with stop lights. However, when you sketch in the other, whispered, road proposals, most notably the northern extension of Route 53, it becomes clear that the true plan is to crisscross Lake County with high speed roads, the precursor to high density development. With 53 extended to the Wisconsin border and 120 covering the county from east to west, including a connection to I-94, all open land—including both natural and restorable—becomes viable for large swatches of asphalt and closely packed homes.

I recently took a look at some of the territory in the path of the 120 Bypass expressway, and was struck by the relation of this area to the land before settlers arrived. Thousands of acres of existing farmland in this “120 Bypass Corridor” once was wetland prairie, the landscape seen by the first settlers riding through the area. But what’s most exciting is that this land is under repair as wetland scientists sow native seed, remove invasive plants, and work to restore the water so that the land can revert back to the days just after the glaciers receded to the north.

In this place, just north of Campbell Airport, the 120 Bypass proposal is a cynical attack on our hopes for restoration—the expressway is aimed directly through the Big Sag Wetland Bank which is working

hard to restore and preserve over 200 acres of wetlands. (The bank is adjacent to 135 acres of existing, high quality wetlands, which combined will provide over 300 acres of continuous wet prairie that our great great grandparents might have seen.)

Running a super highway through the middle of fragile wet prairie probably draws a few snickers from those fighting to improve “congestion” on 120, though all involved swear “...to avoid sensitive resources as a first priority...” On the other hand, they will, “...determine the best alternatives for avoidance and minimization of impacts ...”

Hmmm... Who gets to decide what “avoidance” and “minimization” mean? Let’s hope it’s not those pushing to make Lake County a clone of Cook County. 🐾

## Subscribe to the W&W E-News

By Evan Craig, Chair

If you’ve seen the new W&W E-News, you know it’s more enjoyable than this printed black and white version. We hope that you will make the switch and read your W&W News on-line. Here’s why:

- **Environmental Impact.** Printing 2300 copies of our newsletter consumes trees and energy. Delivering them uses more. Disposing of them uses still more. That information distribution system made sense before the telegraph. Now we have better options that place less stress on our environment.
- **Quality.** The e-mail version offers a format and features that the paper version cannot. These include: more color, active links to more information, easy links to e-mail leaders, and a more logical layout.
- **Speed.** Printing takes at least a week. Snail mail (bulk mail by the US Post Office) takes two to five weeks more. We should rename the paper version the “W&W Old” because by the time you get it it’s not really news anymore. You can receive this by e-mail almost immediately.
- **Cost.** We spend most of the money we get from you, our members, printing and mailing the W&W News. Printing and postage (even at non-profit bulk mail rates) is expensive. That money would be better spent getting the environmental message to the public, and on fun events with

members. Paper and postage, or preservation and picnics, it’s up to you.

- **Flexibility.** We include a link to a printable version, so if you decide you want one after making the switch, just print one – or part of one – for yourself. In addition, you can easily share it with your friends, take it with you on your PDA or phone, and save it for later without cluttering up the house. We also archive them on-line.

Your W&W ExCom encourages you to sign onto our ALERTS e-mail system to make it easy to send the E-News to you in the future. The ALERTS e-mail system will only be used to send this and other periodic e-mails from the Group leadership – and you can use the instructions at the bottom of any ALERTS e-mail to unsubscribe if you change your mind. Please accept this invitation by visiting [illinois.sierraclub.org/w&w/contact.html](http://illinois.sierraclub.org/w&w/contact.html) web page now. Follow the instructions for entering your firstname and lastname in an e-mail, and sending it in.

We also decided to begin allowing you to opt-out of this printed version if you are subscribed to the e-mail version, and will explain how to select that in a future issue.

We could use suggestions, and help doing all of this. E-mail me at [ww-chair@illinois.sierraclub.org](mailto:ww-chair@illinois.sierraclub.org) with ideas and offers. 🐾

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**Table: Selected List of Northeastern Illinois Lakes on the 303(d) List Scheduled for TMDL Analysis in the Next Two Years**

Lake	Designated Uses	Pollutants of Concern	Sources
Grays Lake	Aesthetic quality	Phosphorous	Unknown
Spring Lake	Aesthetic quality	Phosphorous and TSS (Total Suspended Solids)	Urban runoff, sewers
Sun Lake	Aesthetic quality	Phosphorous	Unknown
Lake Catherine	Aesthetic Quality Fish Consumption	Phosphorous PCBs	Multiple Unknown
Fox Lake	Aesthetic quality Aquatic life Fish consumption	Phosphorous, TSS Phosphorous, TSS PCBs	Urban runoff, septic, recreational pollution Multiple Unknown
Channel Lake	Aesthetic quality Fish consumption	Phosphorous PCBs	Urban runoff, septic, recreational pollution Unknown
Long Lake	Aesthetic quality	Phosphorous, TSS	Urban runoff
Grass Lake	Aesthetic quality Aquatic life	Phosphorous, TSS Phosphorous, Sediment, TSS	Urban runoff, septic, recreational pollution Multiple
Lake Marie	Aesthetic quality Fish Consumption	Phosphorous, TSS PCBs	Urban runoff, septic, recreational pollution Unknown
Antioch Lake	Aesthetic quality	Phosphorous, TSS	Unknown
Pistakee Lake	Aesthetic quality Aquatic life Fish consumption	Phosphorous, TSS Phos, Sediment, TSS, Ammonia PCBs	Multiple Unknown
Nippersink	Aesthetic Quality Aquatic life	Phosphorous, TSS Phosphorous, TSS	Multiple Multiple
Duck Lake	Aesthetic Quality Aquatic Life	Phosphorous, TSS Dis. Oxygen, Phos., TSS	Unknown Unknown
Deep Lake	Primary contact	Fecal coliform	Unknown
Petite Lake	Aesthetic Quality	Phosphorous, TSS	Urban runoff, septic systems

This table is drawn from the 2006 Section 305(b) report prepared by Illinois EPA. A clear pattern is that all of these lakes have phosphorus control problems. The total suspended solids problem can derive from inorganic sediment which is roiled by storms or boating and/or it can be due to algal growth brought about by excessive phosphorus. Illinois EPA has not chosen to identify sewage treatment plants as a source of nutrient problems but there are multiple lakes in the Chain of Lakes for which this is a root problem.

