

**Item #5D:**  
**Village President Rodriguez**  
Buffalo Creek Clean Water Partnership - Update

## David Lothspeich

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**From:** Marcy Knysz [marcyknysz@gmail.com]  
**Sent:** Wednesday, January 09, 2013 11:47 AM  
**To:** Marcy Knysz  
**Subject:** \*\*BCCWP STAKEHOLDER MEETING #4 REMINDER\*\*

Buffalo Creek Clean Water Partnership  
Stakeholder Meeting #4

\*\*\*\*Presentation on Pollutant Load Reductions by Dean Maraldo, Chief  
Water Enforcement & Compliance Assurance Branch, U.S. EPA - Region 5\*\*\*\*

Wednesday January 16, 2013  
7:00 PM – 9:00 PM

Location: Long Grove Village Hall  
3110 Old McHenry Road  
Long Grove, IL 60047  
847-634-9440

The purpose of this meeting is to bring stakeholders in the Buffalo Creek Watershed together to review the draft vision statement and to begin development of the goals and objectives for the watershed plan.

**RSVP: Marcy Knysz ([marcyknysz@gmail.com](mailto:marcyknysz@gmail.com))**

Feel free to contact Jeff Weiss (Founder) at 847-224-0965 ([marjeff@aol.com](mailto:marjeff@aol.com)) or Marcy Knysz (Watershed Coordinator) at 847-732-5172 ([marcyknysz@gmail.com](mailto:marcyknysz@gmail.com)) for further information.

Thank you,  
Marcy and Jeff

**Buffalo Creek Clean Water Partnership  
Coordinated Pollutant Monitoring Program  
MS4 Community Participation Agreement**

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The Buffalo Creek Clean Water Partnership (BCCWP) has developed a Coordinated Pollutant Monitoring Program that consists of on-going data collection as follows:

1. **Sediment Sampling at the three largest lakes in the watershed** (funded with Watershed Management Assistance Grant): Lake Albert, Buffalo Grove Reservoir – Upper Basin, and Buffalo Grove Reservoir – Lower Basin
2. **Upstream Reservoir Monitoring** - Water quality testing at two locations located immediately upstream of the reservoir (funded by Watershed Management Assistance Grant)
3. **Downstream Reservoir Monitoring** - MWRD - Water quality testing at one downstream location (to be conducted by the Metropolitan Water Reclamation District of Greater Chicago (MWRD)). This portion of the program is not included for funding by the Watershed Management Assistance Grant.
4. **MS4 Water Quality Monitoring** - Water quality testing conducted by MS4 communities twice per year (first Monday in May and October) for selected parameters. This portion of the program is not included for funding by the Watershed Management Assistance Grant.

The proposed Coordinated Pollutant Monitoring Program will enable experts to pinpoint sources of pollutants and support cleanup initiatives and Best Management Practices. The outcome of this project will be a coordinated, efficient monitoring program that makes the most of community and agency investment in assessing water quality trends over time, sufficient to be used to optimize Best Management Practice locations and address water quality impairments across the Buffalo Creek watershed. This program will enable water quality issues to be addressed across community and county borders, and build the spirit of cooperation needed to address other watershed issues, such as flooding, erosion and habitat quality. This is one of the first steps to be taken to develop a Watershed-Based Plan.

By being part of the Coordinated Pollutant Monitoring Program, your community will not only benefit as noted above, but you will also be able to utilize all the watershed data to support grant applications and for inclusion in your MS4 program. In addition, by being part of the Coordinated Pollutant Monitoring Program, you can reduce your annual water quality sampling costs by teaming up with other communities in the watershed.

If you would like your community to support and be a part of the Coordinated Pollutant Monitoring Program, please indicate your support by signing and returning this document to Marcy Knysz (Watershed Coordinator) or Jeff Weiss (Founder).

Community/Agency Name: \_\_\_\_\_

Authorized Representative: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# *DRAFT* Coordinated Pollutant Monitoring Program

Prepared by: Marcy R. Knysz, Watershed Coordinator & Jeff Weiss, Founder  
Buffalo Creek Clean Water Partnership  
November 11, 2012 (rev. December 16, 2012)

## **Purpose**

The proposed project will develop Buffalo Creek Clean Water Partnership's (BCCWP) capacity through engagement of local communities, partner agencies and volunteers in an efficient and Coordinated Pollutant Monitoring Program for the Buffalo Creek sub-watershed. At present, infrequent and uncoordinated water quality monitoring efforts result in limited usefulness of the water quality data to identify sources or assess trends in watershed water quality. For example, there is currently no monitoring at key points in the watershed. There is also a lack of frequent monitoring to identify seasonal trends and pollutants at different flow rates. There is no analysis available for lake sediments, which contribute to problems of eutrophication, suspended solids and low dissolved oxygen. Finally, current monitoring is conducted using inconsistent testing regimes, at different times by MS4 communities, making it impossible to compare these data across the watershed.

The proposed Coordinated Pollutant Monitoring Program will enable experts to pinpoint sources of pollutants and support cleanup initiatives and Best Management Practices. The outcome of this project will be a coordinated, efficient monitoring program that makes the most of community and agency investment in assessing water quality trends over time, sufficient to be used to optimize Best Management Practice locations and address water quality impairments across the Buffalo Creek watershed. This program will enable water quality issues to be addressed across community and county borders, and build the spirit of cooperation needed to address other watershed issues, such as flooding, erosion and habitat quality.

## **Protocol**

### **I. Sediment Sampling (funded with Watershed Management Assistance Grant)**

Sediment sampling is proposed at three locations:

1. Lake Albert
2. Buffalo Grove Reservoir – Upper Basin
3. Buffalo Grove Reservoir – Lower Basin

One sediment analysis will be run for each basin. Each test sample will be comprised of multiple soil samples collected throughout each basin (inflow, outflow, deeper spots, etc.). Sediment will be tested for the following parameters:

- Volatile Organic Compounds
- Semi-Volatile Organic Compounds (includes PNAs)
- Organochlorine Pesticides
- Polychlorinated Biphenyls (PCBs)
- Metals- Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Silver, Zinc
- Total Kjeldahl Nitrogen
- Total Phosphorus
- Cyanide
- Herbicides (2,4, D, 2,4,5 TP)

### **II. Water Quality Monitoring**

There are three components to the Water Quality Monitoring portion of the Coordinated Pollutant Monitoring Program as follows:

1. **Upstream Reservoir Monitoring** - Water quality testing at two locations located immediately upstream of the reservoir (funded by Watershed Management Assistance Grant)
2. **Downstream Reservoir Monitoring - MWRD** - Water quality testing at one downstream location (to be conducted by the Metropolitan Water Reclamation District of Greater Chicago (MWRD)). This portion of the program is not included for funding by the Watershed Management Assistance Grant.
3. **MS4 Water Quality Monitoring** - Water quality testing conducted by MS4 communities. This portion of the program is not included for funding by the Watershed Management Assistance Grant.

### **1. Upstream Reservoir Monitoring**

Upstream reservoir monitoring will consist of both dry weather and wet weather water quality sampling at two locations. BCCWP will collect and analyze the samples for the parameters outlined below. The dry weather sampling will be conducted using grab samples while the wet weather sampling will be conducted using two continuous samplers (6700 series). The two samplers will be on loan to the BCCWP by the Lake County Health Department – Lakes Management Division for the duration of the project. Both upstream reservoir monitoring locations will be upstream of the Buffalo Creek Reservoir. One will be located near Checker Road (“Upstream North”) and the second will be located near Lake Cook Road (“Upstream South”). The exact locations will be determined in the field in coordination with the Lake County Health Department. A watershed map showing the locations of existing MS4 test sites and these two additional proposed test sites is attached. Sampling at these two locations will give us the best information as to the types of pollutants that are entering the reservoir via storm water from the two main tributaries that make up Buffalo Creek.

### **2. Downstream Reservoir Monitoring – MWRD**

The BCCWP plans to utilize the MWRD’s existing test site (WW-12) as the downstream sampling point for this project. The use of the data collected by MWRD at this downstream test site is imperative to the success of the water quality monitoring program. MWRD staff will collect and analyze the samples for the parameters outlined below. The combined results of this monitoring will be used to develop a more intensive monitoring and surveillance program to identify and target specific sources of pollutants entering Buffalo Creek. If the monitoring program can be established for the long term, it can be used to determine the post-construction effectiveness of green infrastructure projects and restoration efforts in the watershed.

### **3. MS4 Water Quality Monitoring**

The BCCWP is trying to engage each MS4 in the watershed to coordinate the timing of their annual water quality testing with the BCCWP Coordinated Pollutant Monitoring Program. We are proposing that each MS4 test their sites twice per year, once in May and once in October (on the first Monday of those months – to coincide with the MWRD and BCCWP testing dates). The BCCWP can assist communities in determining which locations they can share with their neighbors to minimize the cost of the water quality sampling. The attached map shows all the locations that have been submitted to the BCCWP for inclusion in the analysis. If MS4’s can share some of their sites that are on the edge of their communities, it may allow for the second test to be completed each year with minimal additional cost.

### Water Quality Monitoring Schedule

The Coordinated Pollutant Monitoring Program proposes multiple water quality samples to be collected during dry and wet weather events from April through October over a two year period (see table below).

<b>Water Quality Testing Schedule 2013-2014</b>				
<b>1st Monday of Each Month April-October</b>	<b>BCCWP Upstream North</b>	<b>BCCWP Upstream North</b>	<b>MWRD Downstream (WW-12)</b>	<b>MS4 Communities (various sites)</b>
April 1, 2013	1	1	1	
May 6, 2013	1	1	1	x
June 3, 2013	1	1	1	
July 1, 2013	1	1	1	
August 5, 2013	1	1	1	
September 2, 2013	1	1	1	
October 7, 2013	1	1	1	x
April 7, 2014	1	1	1	
May 5, 2014	1	1	1	x
June 2, 2014	1	1	1	
July 7, 2014	1	1	1	
August 4, 2014	1	1	1	
September 1, 2014	1	1	1	
October 6, 2014	1	1	1	x
Unscheduled Wet Weather Events	6	6	N/A	N/A
<b>Total Number of Samples</b>	<b>20</b>	<b>20</b>	<b>14</b>	
	<b>40 samples total for BCCWP</b>		<b>14 Samples total for MWRD</b>	<b>Sampling twice per year</b>

### Water Quality Monitoring Parameters

All water quality monitoring samples will be tested for the following parameters:

<b>Parameter</b>	<b>Estimated Lab Fee</b>
Fecal Coliform	\$16.00
Chloride	\$11.00
Dissolved Oxygen	\$15.00
Total Dissolved Solids	\$15.00
Total Kjeldahl Nitrogen	\$23.00
Calcium	\$12.00
Conductivity	\$12.00
Biochemical Oxygen Demand	\$21.00
Total Phosphorus	\$16.00
Total Suspended Solids	\$15.00
Temperature (will be taken on-site)	N/A
pH (will be taken on-site)	N/A
<b>Estimated Total Per Sample Cost (Lab fee only)</b>	<b>\$156.00</b>

# Buffalo Creek Clean Water Partnership

Jeff Weiss, Founder  
Marcy Knysz, Watershed Coordinator  
Buffalo Creek Clean Water Partnership



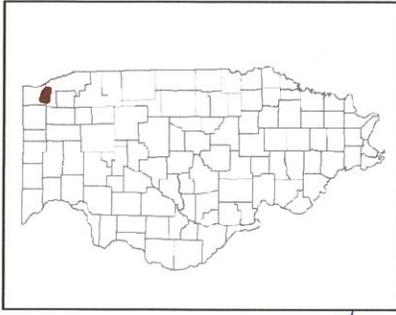
# Presentation Outline

1. Who are we?
2. Buffalo Creek Watershed
3. What are we doing?
4. Upcoming events

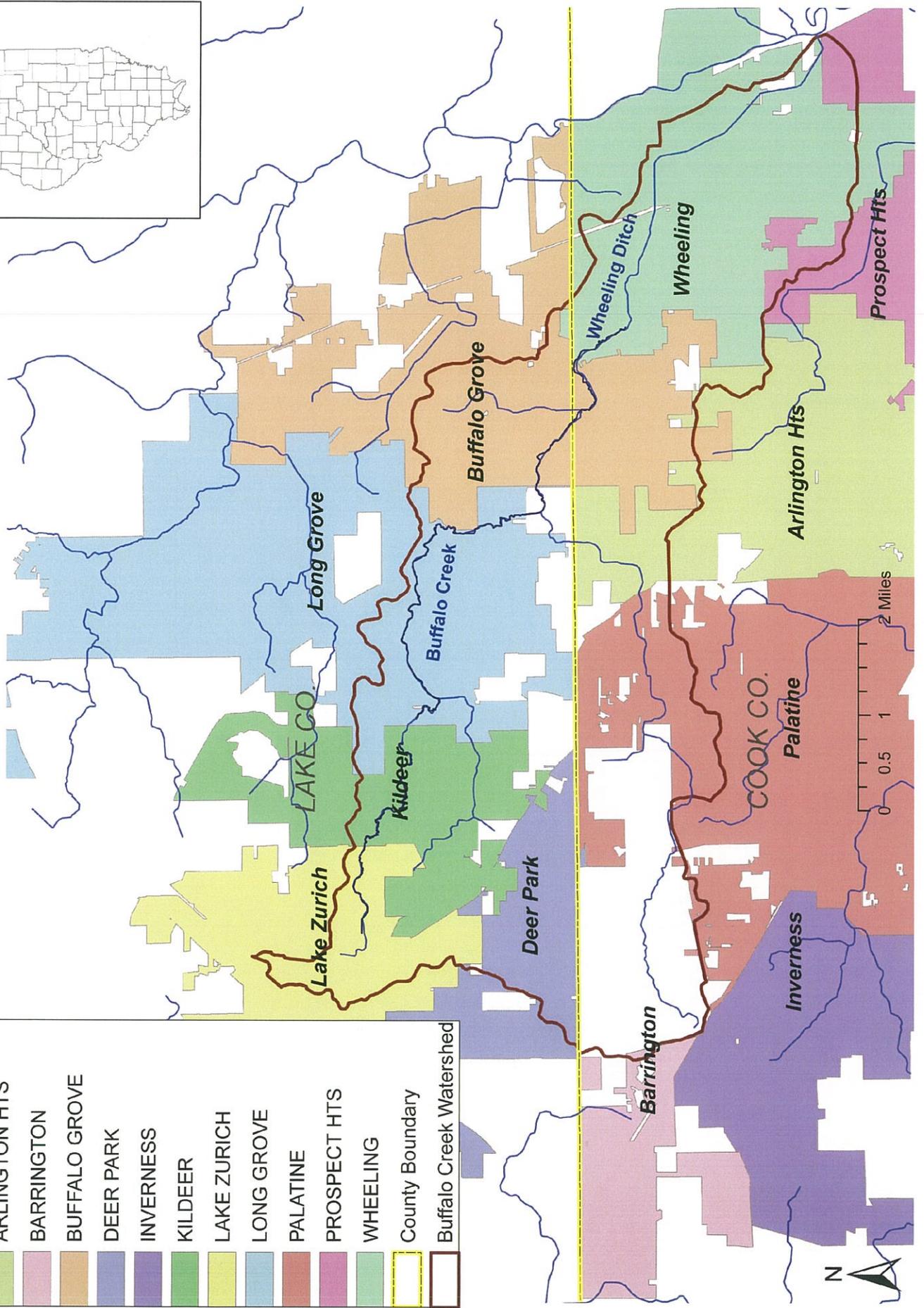
# Who Are We?

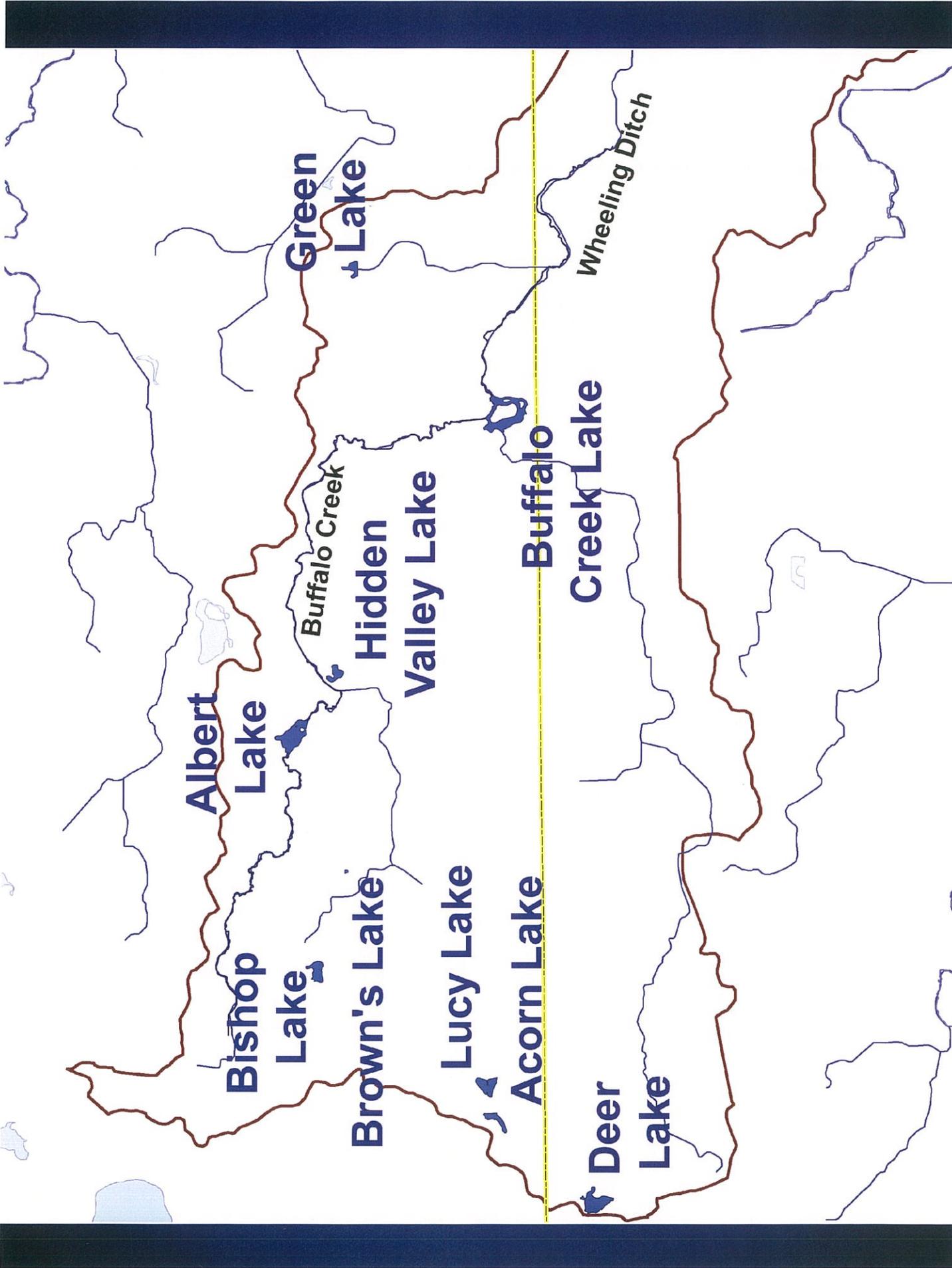
The Buffalo Creek Clean Water Partnership (BCCWP) is a consortium of municipalities, resource agency professionals, environmental advocates, conservation groups, and private landowners that established itself in 2012 to guide the development of strategies to protect and restore Buffalo Creek and its tributaries.

# Buffalo Creek Watershed

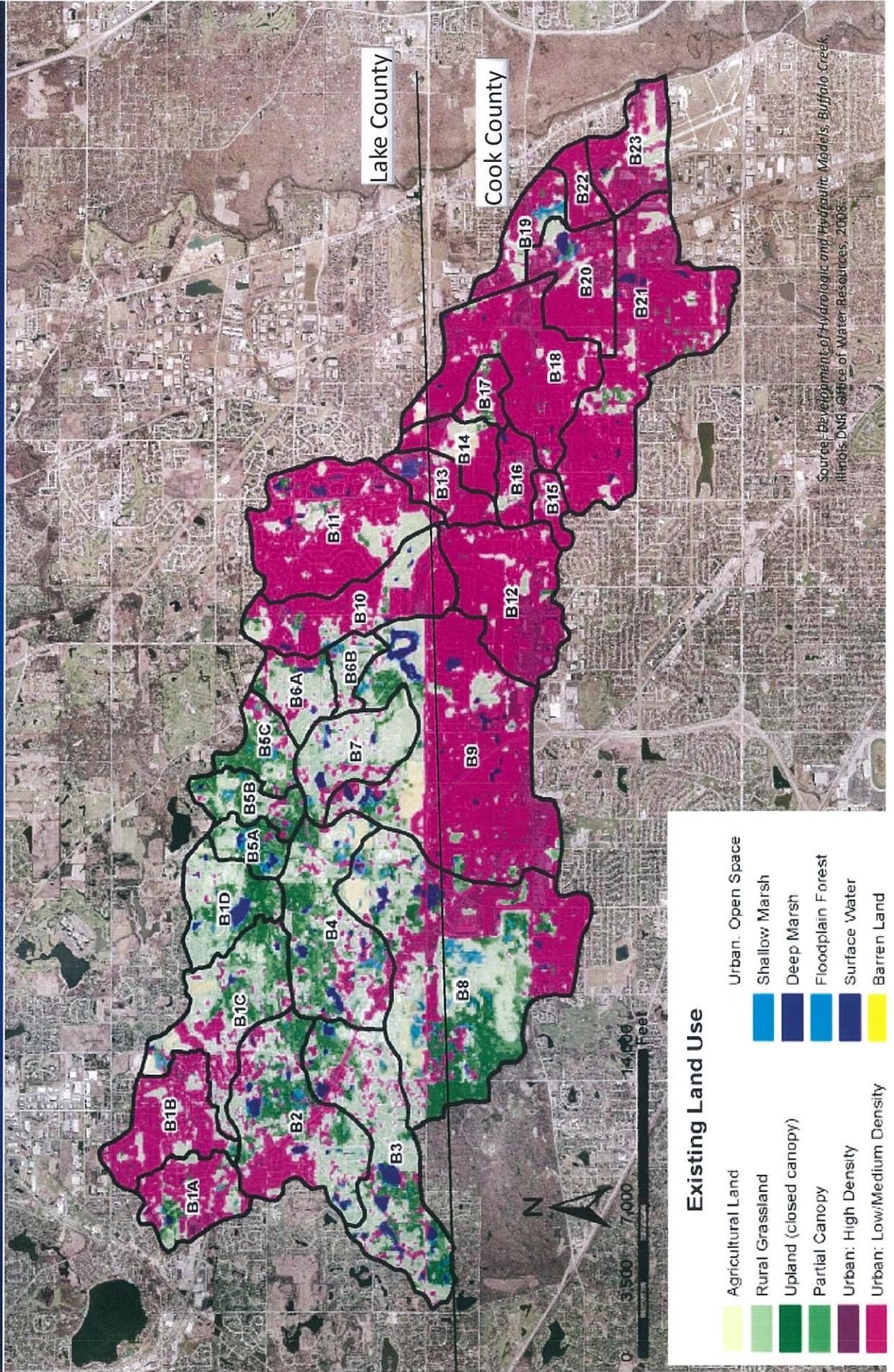


Municipalities	
	ARLINGTON HTS
	BARRINGTON
	BUFFALO GROVE
	DEER PARK
	INVERNESS
	KILDEER
	LAKE ZURICH
	LONG GROVE
	PALATINE
	PROSPECT HTS
	WHEELING
	County Boundary
	Buffalo Creek Watershed





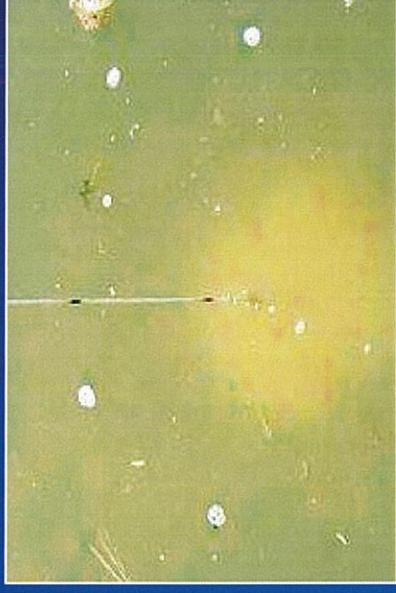
# Land Use



# Lakes

## Albert Lake

- 18 acres
- Max depth = ~2 ft



## Buffalo Creek Reservoir

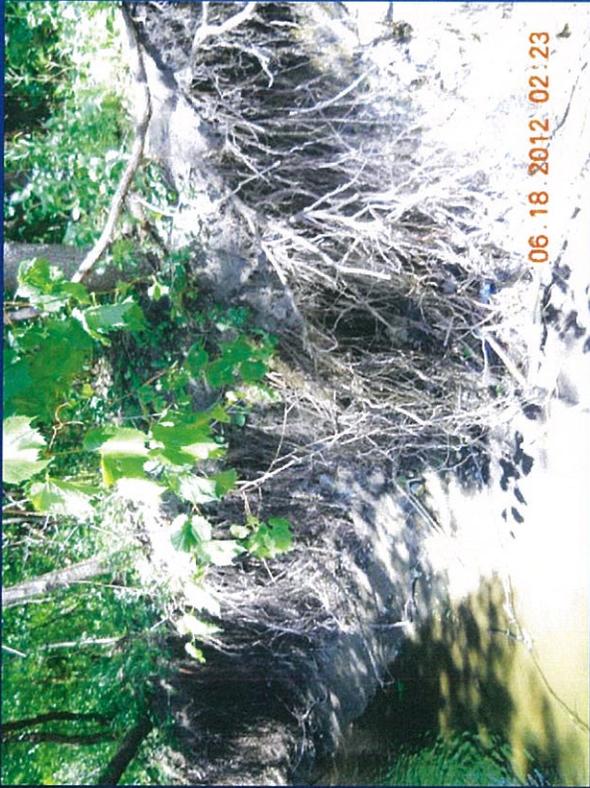
- 35 acres
- Max depth = 6 ft



# Water Quality Impairments

- Albert Lake
  - Total Phosphorus, Total Suspended Solids, Dissolved Oxygen
- Buffalo Creek Reservoir
  - Total Phosphorus, Total Suspended Solids, Dissolved Oxygen
- Buffalo Creek
  - Fecal Coliform, Chloride, Dissolved Oxygen

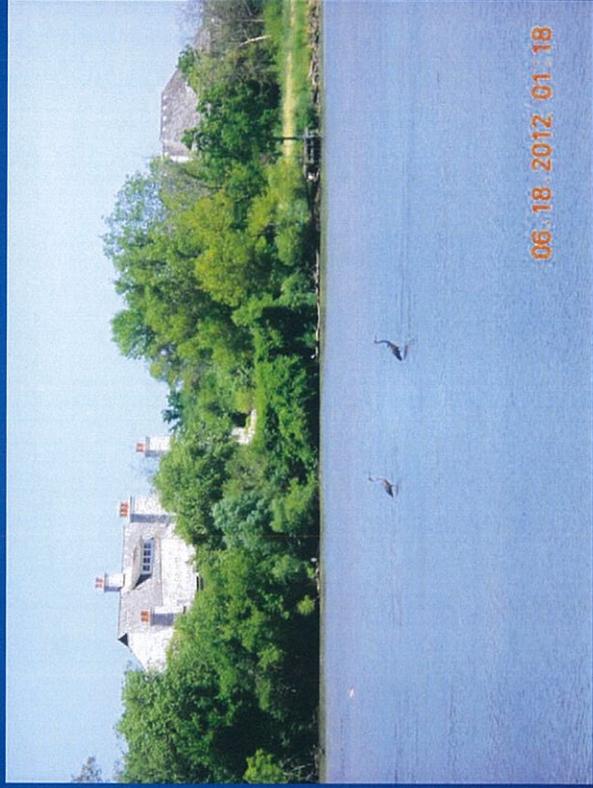
**Illinois EPA is finalizing a water quality study  
and implementation plan**



Buffalo Creek Reservoir



Buffalo Creek Reservoir



Albert Lake

# What are we doing?

## Building BCCWP Organization

- Held three meetings in 2012 (March/June/Oct)
- 200+ people on contact list
- Quarterly meetings for next 2 years
- Web site [www.buffalocreekcleanwater.org](http://www.buffalocreekcleanwater.org)

# What are we doing?

- Governance and sponsorship
  - Openlands agreed to be our fiscal agent to handle our grant funds
  - Organizing a technical committee
- BCCWP volunteer activities
  - Habitat work at Deer Grove FP and Rylko Park
  - Volunteer Lake Monitoring
  - Stream Assessments
  - RiverWatch Stream Monitoring
  - Photo record of Buffalo Creek and tributaries

# 319 Grant Application

- 319 Grant application complete
  - Two year project for Watershed-Based Plan
  - LCSMC recommendation
  - Estimated budget of \$90,000 requires 50% match
  - Commitments for in-kind services
  - Letters of support

# 319 Grant – Letters of Support

Village of Barrington

Village of Buffalo Grove

Village of Inverness

**Village of Long Grove**

Village of Palatine

Buffalo Grove Park District

Metropolitan Water Reclamation District

U.S. Fish and Wildlife Service

Lake County Division of Transportation

Cook County Forest Preserve District

Lake County Forest Preserve District

Buffalo Grove Environmental Action Team

Friends of Deer Grove East

Ela Township

Palatine Township

# Watershed Management Assistance Grant

**#1 priority voted by our members was water quality**

**Project:** Conduct sediment sampling and coordinate pollutant monitoring in the watershed.

**Goal:** To pinpoint sources of impairments.

**Status:** Pending final approval by Lake County Storm-water Management Commission Board.

# Coordinated Pollutant Monitoring Program

- Engage local communities, partner agencies and volunteers to conduct frequent, coordinated water quality monitoring
- Enable experts to pinpoint sources of pollutants and support cleanup initiatives and Best Management Practices
- Assess water quality trends across the watershed
- Current data collection: Wheeling, Buffalo Grove, Arlington Heights, Deer Park, Kildeer & Metropolitan Water Reclamation District of Greater Chicago

## Village Involvement

- Villages who do MS4 water quality monitoring
  - Coordinate test timing and locations
  - Add an additional test per year
- **For Villages who do not monitor**
  - Add a test site and conduct two WQ tests/year
  - Cost is approximately \$150 per test per location



# Upcoming Events

Stakeholder Meeting #4

Wednesday January 16, 2013

7:00 PM – 9:00 PM

Long Grove Village Hall

# Get Involved

To get involved, contact:

Jeff Weiss [marjeff1@aol.com](mailto:marjeff1@aol.com) (847)224-0965

Marcy Knysz (847)732-5172

[www.buffalocreekcleanwater.org](http://www.buffalocreekcleanwater.org)