

# BOONE – DUTCH CREEK WATERSHED PLANNING ♦ MEETING #7

Thursday, October 15, 2015 ♦ 1:00 – 3:00 PM

Loyola University Retreat and Ecology Campus (LUREC) – 2710 S. Country Club Road –  
South Wing Room 353, Woodstock, IL

## **DRAFT Meeting Notes**

### **1.0 Welcome & Attendee Introductions**

Holly Hudson, Chicago Metropolitan Agency for Planning (CMAP), welcomed and thanked everyone for coming. She explained the cancelling of the September Boone-Dutch meeting due to her longer than expected absence following knee surgery. Holly introduced Patricia Carty, Manager of Retreat Operations at LUREC, and thanked her and LUREC for hosting. Patricia thanked everyone for coming and gave a few interesting facts about LUREC's campus. For example, LUREC houses two biology laboratories, Loyola students can take hand-on ecology short courses at LUREC in January and early summer, and the retreat facilities and team-building course are available for groups.

### **2.0 Agenda Changes**

Holly announced that the update on ecological restoration activities by Dr. Bobbi Lammers and Randy Stowe was moved to later in the agenda.

### **3.0 June Meeting: brief recap, questions, etc.**

Holly briefly recapped the June 15, 2015, Boone-Dutch meeting. Key topics included a discussion of “prior converted” wetlands farmed prior to 2005, an overview of site-specific BMPs submitted by stakeholders, potential detention basin retrofit opportunities as identified as part of CMAP's detention basin inventory field work, a discussion of suggested watershed-wide BMPs/scenarios, and an overview of potential information and education activities to be included in the watershed plan. Holly asked meeting attendees to send her any additional information and education proposal or ideas.

### **4.0 Local Watershed Activities, News**

Dennis Dreher stated that a public meeting would likely be held early next year as part of the Illinois Route 31 Study. The project's study area extends 6.8 miles along Route 31 between Illinois Route 176 and Illinois Route 120.

Randy Schietzelt said that The Land Conservancy of McHenry County's project to restore a wetland on the south side of Thunderbird Lake would begin as soon as funding from the Illinois Department of Transportation (IDOT) becomes available. This project was identified as a short term project recommendation in the Silver Creek and Sleepy Hollow Creek Watershed Action Plan.

Nancy Schietzelt of the Environmental Defenders invited meeting attendees to participate in a restoration workday aimed at protecting Wingate Prairie in Veteran Acres Park in Crystal Lake, IL. The event will be held on November 14, 2015, at 9:00 a.m.

## 5.0 Draft Plan / Watershed Resource Inventory Update

### a) Update

Holly gave an overview of the stream assessment conducted as part of the watershed resource inventory. Completed in July, field work included inventorying Boone-Dutch Creek by way of observing streambank conditions at road crossings. The qualitative stream assessment sought to assess streambank erosion and riparian conditions. Because the streams were not walked, most of the stream segments will be coded as “low erosion” based on the observations at the stream crossings. Moderate and high erosion areas were noted if observed. For example, Holly came across a site with high streambank erosion along a Dutch Creek tributary that was threatening the Prairie Path north of McCullom Lake. Holly said she’d send Brad Woodson the GPS coordinates.

A detention basin assessment was also conducted as part of the Boone-Dutch Creek watershed resource inventory. In total, 155 “engineered” detention basins were identified, categorized by type (e.g., wet, dry, wet-extended dry, constructed wetland), and assessed for their relative water quality benefit (good, fair, or poor). Retrofit opportunities in and around the basins also were recorded. Holly noted that additional type categories may be added to indicate detention basins that were wet-naturalized and dry-naturalized. The draft plan will include maps and tables presenting this data. She asked meeting attendees to review that information and provide any missing data, including detention basins she may have missed on private property.

Dennis Dreher asked if the watershed plan would include brush management recommendations, either site specific or watershed wide. Holly confirmed that targeted recommendations would be included in the plan to address this issue. She also asked meeting attendees to forward specific site locations for potential brush management opportunities to her attention within one week. Ders Anderson identified a site near Johnsburg Junior High School as a potential site. He also wondered if cores could be drilled through the concrete lined channel and planted to create habitat. Ed Ellinghausen identified a site near the headwaters of a McHenry County Conservation District (MCCD) property as a potential site.

Nancy Schietzelt asked if the watershed plan would include recommendations addressing coal tar sealants. Holly confirmed that general recommendations addressing this topic could be included in the planning and policy section of the plan. Holly noted she planned to send the planning and policy section, drafted by CMAP’s Brian Daly, to Boone-Dutch Creek stakeholders before the draft plan is finalized.

### b) Boone & Dutch Creek fish inventories update

Ders Anderson of Openlands reported on the fish monitoring of ten sites within Boone, Dutch, and Sunnyside Creeks and tributaries. The monitoring was conducted with assistance from Randy Schietzelt, Phil Wilink, Roger Klocek, and Cindi Jablonski (MCCD). The fish survey was conducted to find species as identified in the Illinois Wildlife Action Plan with the greatest need for conservation. It is hoped that applicants applying for a National Pollution Discharge Elimination System (NPDES) permit within these areas would be required to conduct an Illinois Department of Natural Resources study.

As part of the presentation, Ders provided a map identifying of all of the monitored sites and a list of fish species found at each site. Species included Blacknose Dace\*, Southern Redbelly Dace\*, Orangethroat Darter, Johnny Darter, Rainbow Darter, Fantail Darter, Green Sunfish, Pumpkinseed Sunfish, Largemouth Bass\*, Central Mudminnow\*, Brook Stickleback\*, Mottled Sculpin\*, Yellow Bullhead, Black Bullhead, White Sucker, Common Carp, Creek Chub, Fathead Minnow, Spotfin Shiner, and American Brook Lamprey\* (\* indicates Species of Greatest Conservation Need).

Monitoring results revealed that the Fish Index of Biotic Integrity (fIBI) for a stream may be uniquely different depending on whether sampling is taken upstream or downstream. As an example, monitoring result revealed that Bluegill and Central Mudminnow predominantly occupy portions of Dutch Creek with 89 sightings of Bluegill and 76 sightings of Central Mudminnow. However, there was a lack of fish diversity in heavily tiled areas near Dutch Creek near the main stem south side of Johnsburg Road with the predominate fish being Bluegill. On the other hand, approximately nine fish species were found along the main stem north side of Johnsburg Road. Ders concluded that while IDNR conducts a triennial fish assessment on local streams, IBI results may be vastly different for portions of the same stream and may be inaccurate if both upstream and downstream samples are not taken as part of the assessment.

## **6.0 Watershed-wide BMPs & Implementation Scenarios**

Andrea Cline gave an overview of Geosyntec's preliminary analysis of suggested watershed-wide BMPs and implementation scenarios for the Boone-Dutch Creek planning area. The overview also included an analysis of BMP pollutant load reductions and implementation costs, divided among the nine subunits.

Andrea began with showing suggested watershed-wide BMP scenarios for urban stormwater infrastructure retrofits: rain gardens and bioretention, vegetated swales, detention basins, green roofs, permeable pavement. Estimated pollutant load reductions for each BMP scenario type was assigned to either "high density development" or "moderate to low density development" categories. Andrea continued by displaying estimated pollutant load reductions for nitrogen, phosphorus, sediment, and BOD by subwatershed unit. Total estimated costs to implement proposed BMP scenarios for the Boone-Dutch Creek Watershed totaled more than \$330,000,000. Dennis Dreher suggested that Andrea modify the "Pollutant Load Reductions and Implementations Costs" list to be based on land uses within the watershed.

Ed Weskerna thought that the high estimated implementation costs column included as part of the "Pollutant Load Reductions and Implementations Costs" list may cause some to quickly dismiss the plan. While Andrea acknowledged Ed's concerns, she explained that including estimated implementation costs was one of U.S. EPA's Nine Required Elements of a Watershed Plan. She added that these costs were necessary for the Illinois EPA to track projected implementation costs for Clean Water Act Section 319 Grant Funding. Holly noted that the dollar amounts used by Geosyntec for each BMP were based on national costs derived from literature reviews and their own project experience. In an effort to address Ed Weskerna's concerns, Dennis Dreher suggested that the estimated costs column be broken

down into cost per acre/unit instead of total estimated costs. Andrea noticed that some of the costs may have been incorrectly applied and said she would have all calculations double-checked.

Randy Schietzelt suggested that the watershed plan include an analysis of water quality and landuse impacts if no action was taken to address pollutants of concern in the watershed. In support of this suggestion, Dawn Thompson proposed that we check whether CMAP's new tool, the "Green Infrastructure Vision 2.3 Ecosystem Service Valuation" could be used to make this assessment. The tool classifies and estimates ecosystem values within the watershed and estimates the costs if these services were removed. Results derived from this tool might be used to support proposed BMP scenarios outlined in the plan despite their cost.

Andrea's presentation also included an overview of other BMP scenarios that may be applied within the watershed to protect water quality, including stream channel and riparian corridor restoration; chloride reduction, including use of alternative deicing products and practices; restoring natural areas by removing invasive species and establishing native vegetation; stream maintenance, including trash and debris removal; and, farmed wetland restoration. Andrea suggested updating the "Pollutant Load Reductions and Implementations Costs" list to include a column titled "chlorine reduction" and to populate the field with appropriate estimates for the watershed.

Andrea elaborated on the BMP scenario regarding farmed wetland restoration. She noted that restoring farmed wetlands not only helps to improve water quality, it also reduces erosion and downstream flooding and helps break down pollutants. As such, farmed wetlands within the watershed should be identified and restored, to the extent possible. Ed Weskerna said that he forwarded an email to Holly that listed all farmed wetland locations within the watershed and asked that the plan include a recommendation to protect these areas.

Brad Woodson asked if the watershed plan would include recommendations targeted towards golf courses to eliminate or reduce phosphate use on their lawns or turf. Holly stated that the plan will include targeted recommendations as appropriate. She noted she had met with the superintendents at both the Boone Creek Golf Club and McHenry County Club and stated that they are already using best practices as much as possible. Recommendations may include using field borders around the perimeter of the golf course and establishing or improving buffers along streams to reduce soil erosion and protect water quality.

## **7.0 LUREC update**

Dr. Bobbi Lammers described the various efforts undertaken by LUREC to restore natural areas on the campus. They were able to use a Geo-boy brush cutter tractor to clean out excess brush at a wetland on site. A number of students recently herbicided key areas on site. These areas are now resprouting native vegetation. Additionally, LUREC installed geothermal wells that tap into natural geothermal energy found beneath the Earth's surface to maintain more stable indoor temperatures on the north side of campus. Randy Stowe, Biotechnical Erosion Control, described a plan to decommission the lake and route more

water to the existing fen. Dr. Lammers requested that the watershed plan include a recommendation that the decommissioned pond would be a good demonstration site to highlight the use of green infrastructure for urban stormwater management. Randy noted that a 319 grant was applied for in this last cycle to convert the turf swale on the NW side of the parking lot to a naturalized vegetated swale.

**8.0 Next Meeting**

The next meeting is planned for Thursday, November 12, 2015, at 1:00 p.m., at the McHenry Township offices, 3703 N Richmond Rd (Rt. 31), Johnsburg, IL.

**9.0 Announcements**

There were no additional announcements.

**10.0 Adjournment**

The meeting ended at approximately 3:15 p.m.

## ATTACHMENT

### **ATTENDEES**

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Hosted by: Loyola University Retreat and Ecology Campus

<u>NAME</u>		<u>ORGANIZATION</u>
Ders	Anderson	Openlands
Patricia	Carty	Loyola University - LUREC
Andrea	Cline	Geosyntec Consultants
Dennis	Dreher	Boone Creek Watershed Alliance
Carol	Ellinghausen	Boone Creek Watershed Alliance
Ed	Ellinghausen	Boone Creek Watershed Alliance; Village of Bull Valley Board
Holly	Hudson	Chicago Metropolitan Agency for Planning
Bobbi	Lammers-Campbell	Loyola University - LUREC
Mary	McCann	McHenry County Board
Nancy	Schietzelt	Environmental Defenders of McHenry Co.
Randy	Schietzelt	The Land Conservancy of McHenry Co.
Ralph	Stark	HR Green; representing Village of Johnsburg
Randy	Stowe	BioTechnical Erosion Control Ltd
Dawn	Thompson	Chicago Metropolitan Agency for Planning
Ed	Weskerna	McHenry-Lake SWCD
Brad	Woodson	McHenry Co. Conservation District

-- DRAFT -- prepared by D. Thompson & H. Hudson, CMAP, rev. 11/4/2015