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## Background on Subwatershed Plans Being Developed by CMAP in the Kishwaukee River Basin and their Relationship to the FPA Process

May 29, 2007

### Introduction

CMAP and collaborating members (i.e., Boone County Soil and Water Conservation District, Openlands Project, and The Land Conservancy of McHenry County) of the Kishwaukee River Ecosystem Partnership have begun work on watershed plans for Beaver Creek, the Upper Kishwaukee River, and Lawrence Creek, all subwatersheds of the Kishwaukee River basin. Funding is being provided by IEPA through the Clean Water Act Section 319(h) grant program; the plans are due to IEPA by July 2008. IEPA conditioned the award on CMAP's agreement to make the plans consistent with USEPA watershed plan guidance, the IEPA's "Guidance for Developing Watershed Implementation Plans in Illinois," any total maximum daily load implementation plan requirements, and finally the IEPA's *Framework for a Basinwide Planning and Protection Pilot*<sup>1</sup>(*Framework*), a document that expresses the recommendations of the Basinwide Management Advisory Group (B-MAG) on the fate of the Facility Planning Area (FPA) review process. In brief, the B-MAG called for the FPA process to continue while IEPA tests a basinwide management approach through a pilot program to:

- (*Recommendation 1*)      Develop a subwatershed plan through a stakeholder process led by local units of government or an authorized agent and to present the plan to local government units for adoption and implementation, subject to a 5–7 year review and update;
- (*Recommendation 5*)      Address certain elements beyond the "Nine Minimum Elements"<sup>2</sup> required of Section 319-funded watershed plans as discussed below and in the appendix;
- (*Recommendation 14*)    "Test a more effective mechanism for local governments to settle disputes over issues of growth and development;" and
- (*Recommendation 17*)    "Test the redundancy (or lack thereof) in the FPA program."

The subwatershed plans CMAP and KREP are developing are the first in this pilot program. It is our understanding that IEPA may incorporate the subwatershed plans into the Illinois Water Quality Management Plan, after which IEPA actions — NPDES permit issuance, facility plans, State Revolving Fund loans, etc. — must be consistent with the subwatershed plans. According to the *Framework*, the IEPA "will make a final determination of what constitutes consistency with an approved Watershed Plan for the purposes of that consistency being considered in a regulatory or loan review" (p. 40). As an example of the potential effect of the watershed plan, however, were the locally-adopted and IEPA-approved plan to identify an area as prime farmland to be protected, we would expect IEPA to be bound

<sup>1</sup> <http://www.epa.state.il.us/water/watershed/facility-planning/basinwide-framework.pdf>

<sup>2</sup> *Nonpoint Source Program and Grants Guidelines for States and Territories* (Federal Register V. 68, No. 205, October 23, 2003)

to deny a request to include it in an FPA extension. Similarly, if the plan indicated that certain municipalities' stream protection ordinances were inadequate or nonexistent and recommended performance standards or model language for them to incorporate, it is expected that IEPA would condition a FPA amendment on passage of ordinances that included the recommended language or met the recommended performance standards. If a municipality requested an application to increase capacity at its wastewater treatment plant (WWTP) to meet expected growth, and the plan indicated that expected growth would contribute additional pollutant loading from nonpoint sources, then we would expect IEPA would take that forecasted load into account when setting effluent limits through the NPDES permit.

### **Changes to Watershed Work Plan Necessary for Consistency with the *Framework***

While the ordinary Nine Elements of the Section 319 program are still in force, the *Framework* includes a number of novel prescriptive elements that broaden the realm of watershed planning as conceived by USEPA (cf. "Elements of a Locally Developed Watershed Plan," p. 29, reproduced in Appendix). The Nine Elements are written like performance standards that govern the outputs of the plan while leaving the content and methods to those undertaking the plans; the *Framework* on the other hand calls explicitly for, e.g., developing a "vision for land use." Where the Nine Elements are meant to correct existing impairments, the *Framework* calls for consideration of future water quality degradation. By calling for a "vision for wastewater treatment" and the identification of groundwater protection measures, it implies that municipal point sources and groundwater should be taken into account, whereas the Section 319 program is oriented toward nonpoint source pollution of surface water bodies. The *Framework* also calls for more extensive quantification of existing water quality protection measures such as ordinances and NPDES Phase II plans. Much of the *Framework* is sensible, and like the Nine Elements, simply reflects criteria of good planning. Despite the prescriptions, however, the *Framework* also leaves much to be determined by the watershed stakeholder groups.

According to the contract between CMAP and IEPA, the subwatershed plans should be consistent with the B-MAG *Framework* (in addition to other watershed guidance as described above) and CMAP must submit to IEPA a final report "that evaluates the strengths and/or weaknesses of 'Framework for a Basinwide Planning and Protection Pilot' in regard to how valuable this document was to the process of developing these watershed plans." We will make every effort to address the items described in the appendix. As they are untested, some of the *Framework* may prove unworkable, and CMAP staff will inform IEPA of their findings.

### **Watershed Background and Planning Approach**

The steps needed to meet the recommendations of the B-MAG are not yet clear in all cases. The CMAP Land Use Committee and the Environment and Natural Resources Committee will consider draft strategies to meet the recommendations at their meetings in September and October 2007. With committee input, the strategies will be finalized and applied in the CMAP/KREP planning processes. Local stakeholders will have the responsibility of developing and vetting recommendations for the specific subwatersheds that follow the strategies prepared by CMAP staff with committee input.

The subwatersheds chosen for the pilot program span a range of conditions and therefore represent a diverse test bed for the pilot program. Because the Upper Kishwaukee has been included on the IEPA 303(d) list as impaired, and its causes and sources of impairments have been identified, we expect to focus on load reductions from nonpoint sources and potentially from the WWTPs in the watershed. As the subwatershed is projected to grow to some extent, we must also focus on future degradation.

<b>Subwatershed</b>	<b>Impairment</b>	<b>Causes and Sources of Impairment</b>
Upper Kishwaukee River	Impaired	Identified
Lawrence Creek	Impaired	Not identified
Beaver Creek	Not Impaired	—

Lawrence Creek is considered impaired, but no causes and sources of impairment have been identified because essentially no ambient water quality data are available. As important as public and agency involvement is anyway, it is crucial in this case to help identify causes of impairment based on local knowledge and secondary sources and to target BMPs to problem areas. Development and resource extraction in Lawrence Creek is expected to be considerable. Finally, Beaver Creek is not considered impaired, so the focus must be on preventing it from becoming so, i.e., on local land use decision-making and on policies to protect water quality.

<b>Subwatershed</b>	<b>Counties</b>	<b>Municipalities</b>
Lawrence Creek	McHenry	Harvard
Upper Kishwaukee	McHenry	Crystal Lake, Lakewood, Woodstock
Beaver Creek	Boone, Winnebago	Caledonia, Capron, Loves Park, Poplar Grove, Rockford, Timberland

**APPENDIX**

Elements of a Locally-Developed Watershed Plan (B-MAG Framework, p. 29)	Part of “Nine Elements”?
<b>1. Inventorying and Assessment</b>	
a. Describe sources of water quality degradation;	Y
b. Identify current land uses;	
c. Assess existing local regulations; and,	
d. Describe and/or quantify existing protections such as NPDES permits, Phase II plans, existing ordinances, CRP and CREP acreage, etc.	
<b>2. Estimation of Future Needs and Concerns</b>	
a. Estimate twenty-year (or different time period, as appropriate to the planning area) growth patterns and land uses;	
b. Estimate expected changes in sources of degradation in water quality; and,	
c. Identify funding, site-specific projects, policy changes and other resources needed to continue and expand (if necessary) protection programs.	
<b>3. A Vision For The Watershed</b>	
a. Outline issues and opportunities, incorporating local communities’ comprehensive and other plans	
b. A vision for wastewater treatment and water supply and possibly other infrastructure;	
c. A vision for land use; and,	
d. A vision for protection and/or restoration of water quality.	
<b>4. Plan for Implementing the Vision</b>	
a. Identify a plan for protection and/or restoration of water quality;	
b. Identify steps needed to achieve surface water quality protections;	
c. Identify steps needed to protect groundwater quality;	
d. Estimate pollutant reductions that will be achieved through implementing protections;	Y
e. Identify tools that could be used to achieve these goals;	
f. Identify monitoring and enforcement tools for use by state and local officials;	
g. Identify the amount of funding and technical assistance needed to implement the watershed plan, possible funding and technical assistance sources, site-specific projects, policy changes, and steps to secure the needed resources;	Y
h. Identify ways to ensure consistency with local communities plans; and,	
i. Set a schedule for implementing the actions identified in steps a. through h.	Y
<b>5. Metrics for Evaluation</b>	
a. Identify interim, measurable milestones for determining whether the action steps above are being implemented;	Y
b. Criteria to determine whether pollutant reductions are occurring and progress is being made toward water quality goals; and,	Y
c. A monitoring and evaluation plan to evaluate the effectiveness of the Watershed Plan and its implementation.	Y