

June 17, 2003 Meeting Summary

St. Joseph River Watershed Planning Project Road-Stream Crossing Technical Subcommittee

Attendees

Chris Bauer, MDEQ

Allen Butchbaker, Cass County Drain Commission

Mark Kieser, Kieser & Associates

Joe Margol, Berrien County Road Commission

Sandra Nordmark, FOTSJR

Nicole Ott, Kieser & Associates

Gordon Porter, Branch Conservation District

Robin Ryan, Hog Creek Watershed

Sarah VanDelfzijl, Rocky River Watershed

Bill Word, Hillsdale County Drain Commission

Mark Kieser provided an introduction to the project and explained the objectives. The purpose of this component of the watershed planning project is to institutionalize a standardized methodology for quantifying erosion losses and prioritizing sites of erosion in the watershed associated with streambanks and road/stream crossings. The form that watershed coordinators are required to use for their 319 projects was developed by the MDEQ. The U.S. EPA also requires the MDEQ's Nonpoint Source Program to survey 80% of the road-stream crossings in the state. Therefore, the MDEQ shifts a portion of that responsibility to recipients of 319 planning grants. It is the aim of this project for the quantification approach to become a standard element of these surveys, as the current MDEQ procedure does not lead to prioritization of sites, quantification of loading or sharing of data.

The road-stream surveys for the two ongoing subwatershed projects in the basin (Hog Creek and Rocky River) have been completed or are mostly completed. However, it was considered valuable to revisit priority sites to collect additional parameters that would lead to quantification of sediment loading. Collecting these extra parameters will help watershed managers meet the new U.S. EPA requirements for watershed management plans. Copies of the data collected for the Rocky River Watershed and a selection of ten sites to revisit were distributed to the Committee. The packet was meant to illustrate the large amount of data that must be collected with the MDEQ forms, and that the data do not lead to prioritization. Largely, the data are cataloged in a spreadsheet and not used for decision making. A hypothetical graph was distributed with the data illustrating the attempt to correlate the subjective characterization of the sites from the forms with annual sediment loading values. Ten sites in the Rocky River Watershed will be revisited so that extra parameters which will lead to a quantification of sediment loading can be collected.

It was noted that not all of the sites rated as poor or fair were impaired due to erosion or sediment deposition. This highlighted another shortcoming of the current MDEQ data collection method in that the information regarding habitat quality and sediment loading is compiled together into one subjective rating. Three draft forms developed by Kieser & Associates, based on the MDEQ form and other forms, were distributed to the Committee. One form was meant to be used in a river at a site of erosion. The other two are meant to be used at road-stream crossings, with one leading to quantification of erosion and the other leading to scoring of habitat quality.

It was asked how important areas to survey would be identified. For example, Berrien County has several 12"-culverts beneath roadways. Large culverts (48" or larger) are surveyed annually, and smaller culverts are observed by foremen frequently. They are analyzed for integrity (e.g., rusty, failing, etc.). Berrien County is divided into six districts. Therefore, each foreman is very knowledgeable about his district. They utilize a county-wide methodology for inspecting bridges and culverts. Problem areas are documented and photographed. Work completed on those areas is filed in paper files organized by road name.

It was noted that the cause and effects of erosion and water quality problems can be explained to citizens and decision makers. However, the important factor is getting buy-in from those groups. Many of the Berrien County staff are part-time farmers, who have embraced the watershed concept and understand the importance of the erosion surveys. Many of the erosion problems were noted to be caused by old infrastructure which was constructed narrower than today's roads and ditches.

It was noted that decision makers prefer to be presented with definitive numbers. Therefore, the scoring and quantification of sites of erosion can be used as a tool to identify and present priority sites to decision makers. As funding and time resources are limited, it is important to identify the most severely impacted sites. Staff in Berrien County are so familiar with their districts that they know which areas to take gravel to following a rain event. However, those areas could be fixed so that gravel does not need to be replaced after each rain event. That would constitute a higher initial expense, but a cost savings over the long term.

Bill Word of Hillsdale County noted that many county drains are tributaries to the St. Joseph River. Hillsdale County is the location of the headwaters for five different major rivers. Therefore, he is concerned with the quality of water that his county is exporting. Many drain outlets are impacted by silt. Further, many erosion problems have been caused by log jams. It is sometimes difficult to get log jams removed, as many groups want them left in place because they provide habitat. However, the river cuts around the logs, causing erosion. It was noted that the erosion surveys should be conducted through the rivers, not just at road-stream crossings. Observing the rivers only from road crossings will cause a large segment to be undocumented. Allen Butchbaker noted that many streams in Cass County have wide riparian buffers. Sediments are entering the river from muck areas and wind erosion.

It was noted that field personnel would work well with a standardized checklist and that the forms need to be standardized across the watershed and user-friendly. Using a numerical scoring system as opposed to a category (i.e., poor, fair, good), will allow subwatersheds to be compared to one another. An area ranked poor in one subwatershed may actually be average within the larger basin. A numerical system allows for comparisons within and among the subwatersheds.

The current MDEQ database is accessible only to the database managers. Chris Bauer noted that she can extract limited data. But because she is not familiar with all of the potential queries (and the query language), she cannot obtain all watershed information. Therefore, the data are not accessible to the public or watershed coordinators. Watershed coordinators also cannot enter their data directly into the MDEQ database. This problem has been identified with past 319 project data and plans, as well. The data will have to be in an electronic form accessible to many or all potential users. Watershed data in the past have been cataloged by paper or not recorded at all. Gordon Porter remarked that his county's engineer was extremely knowledgeable regarding the county's water resources and sites of erosion. However, that engineer is retiring and it will be difficult or impossible to transfer his knowledge to his successor.

The MDEQ form was meant to be used at road crossings. Personnel can record observations from the bridges without entering the water. Therefore, forms that ask for exact measurements may not be used by those conducting surveys from bridges. It was also noted that if exact measurements are necessary, field personnel will find a creative way to collect those parameters. The draft forms that were distributed allowed users to estimate dimensions by choosing a category or to enter the exact measurement. The scoring system will also be necessary to eliminate the observers' bias, as different observers can record subjective elements in different ways.

Draft forms were distributed to the Committee for comment. Kieser & Associates will draft templates for data collection, data entry and load calculations. Joe Margol will fax the forms utilized by his department to Kieser &

Associates for use in the creation of new standardized, watershed-wide forms. These forms will be adapted for various users, including watershed coordinators and road commissioners.

The next meeting will be on August 19, 2003 from 1:00 p.m. to 3:00 p.m. at the St. Joseph Conservation District in Centreville, Michigan.