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Wisconsin Water Science Center

Capabilities Summaries

Non-Point Evaluation Studies

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Non-Point Evaluation Studies

The Non-Point Evaluation Monitoring Team (NPE) in the USGS Wisconsin Water Science Center (WI WSC) office in Middleton, Wisconsin provides expertise in instrumentation, data collection, and data analyses for both rural and urban non-point source research projects. These research efforts are adding to the comprehensive database needed by the non-point research community to help resolve the most pressing non-point issues on both a local and national scale. Data is being collected at plot, field, and whole watersheds scales.

Urban Monitoring

The team is evaluating single practices and end-of-the-pipe treatment devices. These devices are being used in urban areas by municipalities to improve urban storm-water quality and to meet permit requirements mandated by State and Federal legislation. The team is a leader in evaluating street sweeping as one of these practices to improve water quality in urban areas.

Rural Monitoring

The NPE team is evaluating best management practices and their effect on water quality in rural watersheds. Rural watersheds are being monitored for streamflow and water quality during the pre- and post- implementation periods. The data is being used to determine if water quality has improved and if these changes can be attributed to the implementation of BMP's.

Instrumentation

The NPE is a leader in the utilization of equipment for monitoring water quality of urban and rural watersheds. The NPE has used innovative techniques to monitor snowmelt runoff at remote field sites. The NPE is also monitoring storm-water flows in closed storm sewers and collecting water-quality samples at the inlets and outlets of single-treatment devices.

Modeling

The NPE continues to collect data that are used in calibration and verification of the SLAMM model. The SLAMM model is used extensively by consultants for urban non-point evaluation efforts in Wisconsin. The model is continually being enhanced using actual field data collected by the team.