

Storm Sewer System Mapping and NYRWA



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New York Rural Water Association (NYRWA) is currently assisting a community in the Syracuse area with mapping its storm sewer system. A representative from this community approached NYRWA once he heard of our mapping services.

As part of this project, NYRWA utilized various engineering drawings completed at different times. These drawings show the location of stormwater catch basins, storm sewers, outfalls, and other structures. These drawings were given to NYRWA in both paper and digital versions. NYRWA then used GIS (Geographic Information System) software to georeference the drawings. This is a process where the engineering drawings are aligned to base maps. Once completed, georeferencing allowed us to create GIS datasets of storm sewer catch basins, other stormwater inlets, stormwater ponds, culverts, swales, channels, stormwater mains, and stormwater outfalls.

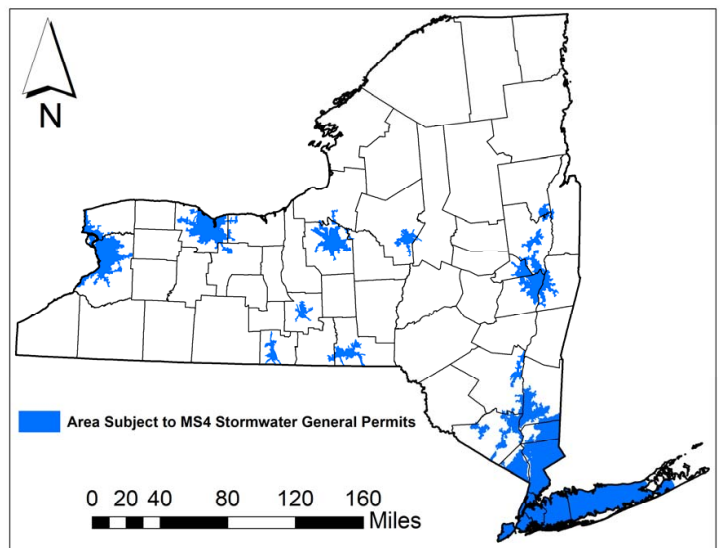
Not only did GIS allow us to create nice-looking maps of the storm sewer system, but it will enable the community to manage its storm sewer system. An interactive inventory of each system feature is created. This is accessed by simply clicking on the feature in the GIS. Parcel boundaries and ownership information can also be determined with the click of the mouse. Digital orthoimagery (aerial photography) will also be used with the GIS. Personnel can create customized maps for their use. Even new features can be plotted so that they can be added to the GIS at a later time by NYRWA.

The final step that NYRWA and the community are completing is verifying some of the outfall locations and mapping the storm sewersheds. These are the land areas that drain into the community's storm sewer system based upon the surface topography.

Storm sewer system mapping not only makes sense, it is now required for those Municipal Separate Storm Sewer Systems (MS4s) that are located in urbanized areas and additionally designated areas. These areas, shown in Figure 1, are where MS4s must obtain a SPDES General Permit for Stormwater Discharges from the NYSDEC. Under Permit No. GP-0-08-002, all permittees must develop and maintain a map showing all outfalls. In addition, by March 9, 2010, the permittee's storm sewersheds must be mapped. Finally, storm sewer lines must be mapped during the trackdown of an illicit discharge (discharges not entirely composed of stormwater). Remaining storm sewers should be mapped as funds allow. The status of such mapping must be reported to NYSDEC.

There are several communities within the urbanized areas shown on Figure 1 that are smaller and have more limited resources. These are the types of communities that we serve. If you work for one of these towns or villages and are curious about our storm sewer system mapping services, give me a call at 1-888-NYRURAL ext. 17 or email me: winkley@nyruralwater.org.

Figure 1.



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