

Solving drainage problems

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AFTER 18 YEARS OF INACTIVITY in stormwater management and more than 10,000 unresolved drainage complaints, Cincinnati took a big step toward solving its problems by forming a stormwater management utility in 1984. In its first two years, the utility has made major improvements in planning and maintenance.

Cincinnati has its share of problems, including:

The city's infrastructure is aging. Over 31% of the city is more than 100 years old and 92% is more than 50 years old.

Some neighborhoods do not have storm sewers. An overview of drainage complaints identified a capital need in excess of \$53 million.

The 1968 creation of a metropolitan sanitary sewer district left the Public Works Department without staff, equipment, or funds to manage its stormwater problem

Before the utility was formed, there was no single city agency responsible for drainage.

Our budget concerns are no different than those of many other municipalities, namely the lack of a dependable revenue source to resolve stormwater problems, Human services has long been given high priority for general fund revenues. Stormwater management's funding problem is shared with the rest of the city's infrastructure, including street rehabilitation, bridge replacement, retaining wall repair, and landslide correction. Another problem is that the doctrine of sovereign immunity has been removed as a defense against lawsuits, increasing the exposure of city staff to liability claims.

Faced with these facts, Cincinnati implemented a stormwater management utility funded by a user fee. In addition to capital improvements, the program includes operations and maintenance, regulation and enforcement, master planning, and financial management activities. The utility also operates and maintains the Mill Creek Barrier Dam.

APWA's Special Report No. 49, *Urban Stormwater Management*, was helpful in developing our concept for the utility. We assembled a city-wide management team to meet regularly and discuss the new program and its implementation. The main elements of our success, however, were planning and communication.

Our program is city-wide. We collect user fees from all parts of the city and spend them the same way. The user fee is based on contribution to runoff. When examining complaints, we found that drainage problems were present throughout the city from hilltops to valleys. Our stormwater system contains both major and minor elements, including the stormwater collection system composed of storm and combined sewers and the major watercourses. We are not responsible for some watercourses maintained by other agencies such as the U.S. Army Corps of Engineers, local conservancy districts, and combined sewers operated by the local metropolitan sanitary sewer district.

We planned for the utility to be small because people do not need another bureaucracy. We have less than 25 employees. To keep our staff size down, we use other city agencies and the private sector. Rather than create a new maintenance organization, we contract with our existing Division of Highway Maintenance and supplement its efforts with private sector contracts for remedial maintenance. We use private consultants for watershed master plans and for preparing plans, specifications, and estimates for our capital improvement program.

Collection of the user fee through preparation of a separate stormwater bill has also been privatized. We use a local bank's lock box, the accounts receivable and billing system of a local data processing organization, and the oversight of a local accounting firm. The city is responsible for the master account file, a database including both financial and engineering information.

The first year of the utility's operation was spent mostly in developing the billing system, including the master account file. We began collecting the storm drainage service charge in July 1985 and began a city-wide upgrade of routine and remedial maintenance operations.

Throughout the development process, the only commitment we made to the public was that an improved maintenance operation would begin immediately. We cleaned more than 7,000 inlets by mid-1986 and we will clean the balance by the end of the year. In addition, we cleaned manually 569 sewer intakes and more than 27,000 linear feet (8230 m) of drainage ditches. We have investigated more than 1,100 drainage complaints. Most have been resolved.

We have done a lot of planning. We have divided the city into six major watersheds and have begun preparing drainage master plans for each watershed. Cincinnati has 48 neighborhoods. We are identifying projects in each one. We have no system of priority, but we are developing one. This will enable us to compare drainage projects from all parts of the city and develop priorities which the communities can support in the City Council. Of course, we shall look for community input during this process.

A top priority was preparation of a maintenance master plan. One of the first staff additions was an engineer for operations and maintenance. His assignment was to develop such a plan and implement it through existing city organizations, providing staff support and work assignments. We are now revising the plan to reflect the experience gained from the first year of operation. It has proven to be a valuable document.

Another benefit of the utility has been the development of a drainage code. Before this, the city did not have one. The new code permits the City Manager to promulgate necessary rules and regulations to administer the program, including appropriate design criteria.

To improve public identification of all this work, stormwater personnel wear distinctive blue uniforms and caps. A Stormwater Management Utility logo is used on all vehicles, equipment, and office correspondence. This increases public perception of the new program.