Regional Water Management Task Force
<u>Report on Survey of Authorities and Municipalities</u>

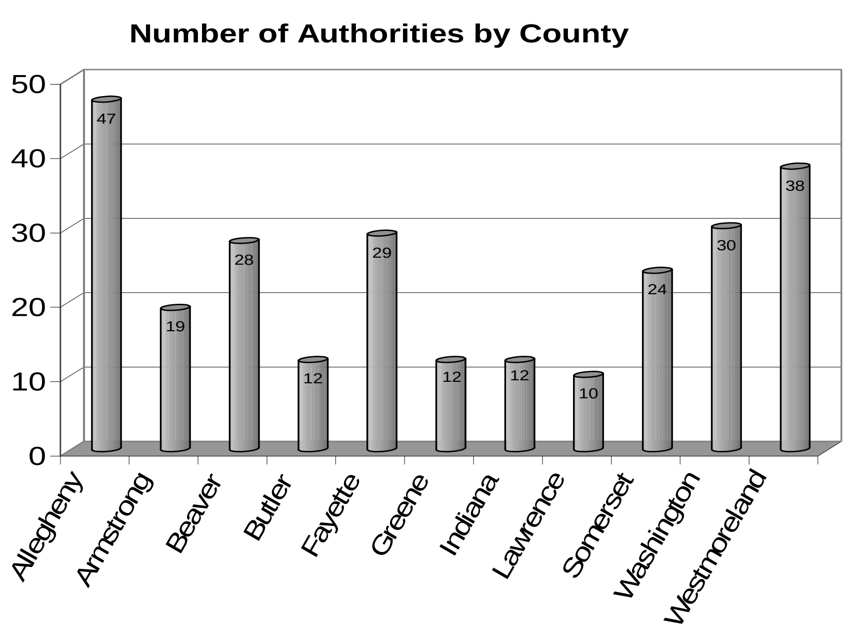
In July 2006, the Regional Water Management Task Force project team sent a survey on sewer and water management issues to 268 authorities (as identified from a list provided by the Pennsylvania Department of Community and Economic Development) in 11 counties of southwestern Pennsylvania. It also sent a slightly different survey to 601 municipalities in the same 11 counties. Recipients were offered the option of returning the survey by postage-paid mail or electronically. To encourage a strong response rate among authorities, follow-up calls were made in August to those authorities that had not already returned their surveys.

The Task Force received replies from 120 of the 268 authorities on its list (44.8 percent) and verified that several of the authorities no longer exist. In addition, 228 municipalities, or 37.9 percent of the total, replied.

Following are some highlights of the survey results. Individual surveys are confidential.

Authorities

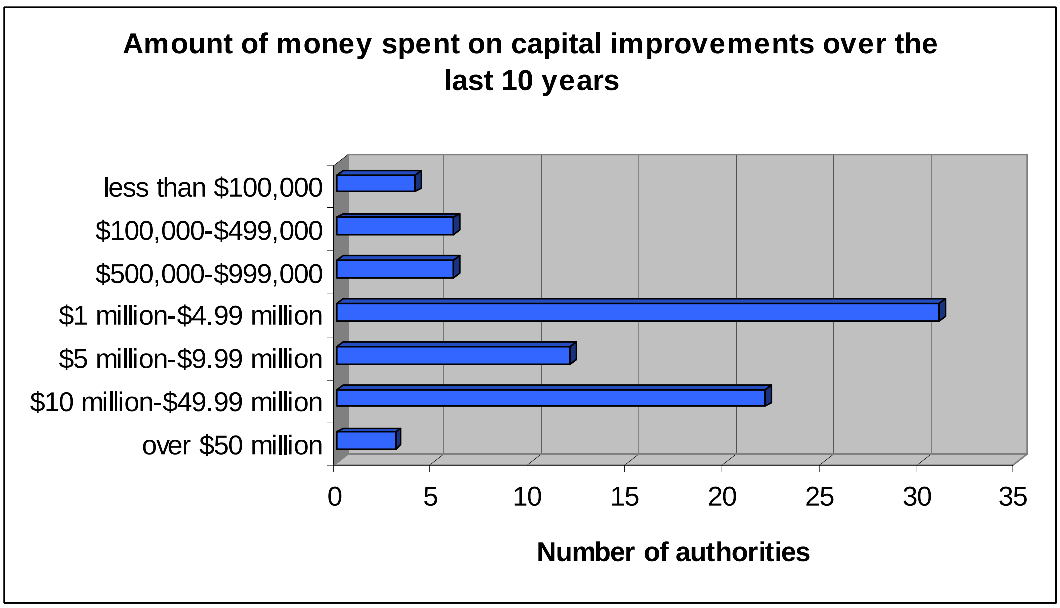
Number of authorities: The total number of separate authorities is striking. Greene and Somerset Counties have an authority for every 3,300 people, even though portions of these counties still rely on well water and on-lot sewage. In Allegheny County, the ratio is approximately one for every 25,000 people. When the number of authorities is analyzed per square mile, Allegheny and Beaver Counties have the lowest ratio (15.5 square miles per authority); Butler has one authority for every 65.8 square miles (when two authorities reported as no longer functioning are deleted) and Indiana one for every 69.1 square miles.



Response rates by county ranged from 75 percent (9/12) in Greene County and just over 50 percent in each of Allegheny, Washington, and Westmoreland Counties to 34 percent (10/29) in Fayette County, 25 percent (6/24) in Somerset County, and 20 percent (2/10) in Lawrence County. Generally, response rates were lower in the outlying counties, with the exception of Greene.

Response rates by type of authority also showed interesting differences, with 52 percent of sewer authorities, 47 percent of combined water-sewer authorities, and 31 percent of water authorities responding. These figures suggest that sewage authorities may perceive their management issues as more challenging than water authorities do.

Date when infrastructure was first built: Of 109 responses, 7 indicated that the infrastructure was first built prior to 1900, and another 21 gave a date between 1900 and 1949. At the other extreme, 7 authorities gave a date in the 1990s, 4 in the 2000s, and three said they have not yet built infrastructure. As confirmed by phone conversations, several authorities in the region exist to plan and seek funding for infrastructure development that has not begun.



Capital expenditures: The survey asked respondents to indicate the total amount of funds expended on capital improvements over the last 10 years. Aggregate amounts ranged from $25-35,000 (in three cases) to over $100 million. Of the 83 authorities answering this question, 66 indicated having spent $1 million or more; the sum of these 66 authorities' expenditures exceeded $745 million.

A comparison to the PENNVEST web site found that PENNVEST lists approximately $820 million of financing for projects in the 11-county region since 1997.

Capital expenditures per customer varied widely. For water-only authorities, capital expenditures ranged from $830 to about $3,800 per customer. Among sewage authorities, one urban entity reported spending less than $300 per customer over the previous 10 years, while several had spent more than $10,000 per customer. Follow-up inquiries determined that the largest per-customer costs tended to occur in outlying areas that have recently installed or are installing infrastructure.

Board structure: Most authorities have five-member boards, though a few are larger. Slightly over half of all board members come from the private sector. In the "other" category under the question about where board members work, 65 respondents indicated that they have retired persons on the board. Board members are municipally appointed in every case and nearly always have five-year terms.

Employment: Authorities have an average of 8.5 full-time and 1.5 part-time employees. Twenty of the authorities report having no full-time employees, while one of the largest responding entities has 265 employees. Fifty-three percent of those responding indicate that their employees' average age is 45-54 and 14 percent have an average age of at least 55, suggesting a possible need to replace an aging workforce in upcoming years.

Consultants: The great majority of authorities have two consultants: an engineer and a solicitor. Twenty authorities also indicated using auditing or accounting services on a consulting basis. Among a variety of less common responses, one hired a lobbying consultant. Most consultants have been employed for over 10 years. Most are on per-year contracts, but 10 respondents said the average length of a consulting contract is more than 5 years.

Most important criteria to organizational effectiveness: Respondents were asked to rank seven options in order of importance, with 1 being the highest. The leading responses were efficiency and cost (average score 2.26), environmental protection (2.63), and accountability (3.24), with leadership (3.81), security (4.64), equity (5.11), and economic competitiveness (5.32) trailing. Since most respondents were authority managers and plant operators, these priorities represent their view and not necessarily a cross-section of the general public.

Roles: Among water and combined authorities, 35 of 45 responding to the question indicated that they are involved in treatment; all but one in distribution, and all in billing and administration. With regard to sewage-only authorities, the roles varied more; 50 of 74 (68 percent) handle treatment, 58 of 74 (78 percent) handle collection, and 61 of 74 (82 percent) handle billing and administration.

Number of customers for authorities handling drinking water ranges from 200 at a rural authority to 120,000 at the Municipal Authority of Westmoreland County, the state's largest. The average number of customers is under 4,000 if MAWC is excluded. With regard to sewage, the number of customers ranges from 98 to 19,000, with an average of about 4,000. Eight combined, 5 water, and 15 sewage authorities report having fewer than 1,000 customers.

Rates: The survey asked the base fee for residential customers and how many gallons are included. It then asked the cost per gallon over the base fee and whether there was a tiered billing structure. Reported answers varied significantly. Follow-up questioning determined that the data could not always be compared fairly; for example, some responses did not take into account the fact that sewage customers may have to pay two separate entities, one for collection and one for treatment. On average, the survey found, customers of larger authorities tend to pay slightly lower rates. However, larger authorities usually serve more concentrated populations.

Sewage-providing authorities

Number of customers	Average cost
Fewer then 1,000	$94.17
1,000 to 2,000	79.91
2,000 to 5,000	73.16
Over 5,000	67.50

Type of sewers and overflows: Among sewage authorities, 69 said they have sanitary sewers, 11 have combined sewers, and 8 reported having both. Of the 19 with combined sewers, 17 reported a total of 193 combined sewer overflows (CSOs), including Greater Greensburg's 37, McKeesport's 28, Blairsville's 20, and Mon Valley Sewage Authority's 17. (CSO data are publicly available through the DEP web site.)

Challenges: Authorities completing the page on drinking water were invited to answer the open-ended question, "What are the greatest challenges your organization/authority faces?" All but three of the 45 authorities completing this page had something to say. Infrastructure, financial issues, and regulatory demands were mentioned with approximately equal frequency; the number of comments in each category is hard to count because they so often overlap. Examples of such overlapping comments include:

- Maintaining an aging infrastructure in an area of low economic means with little growth
- Replacing an aging infrastructure, lack of outside funds to do so
- Keeping rates down while complying with regulations
- EPA/DEP regulation (cost of compliance, cost of reporting)

One candid respondent from a combined water-sewer authority admitted that his biggest current challenge was "defending the Authority against the ridiculous notion that multi-national corporations can deliver better drinking water more efficiently or at better rates."

<u>Municipalities</u>

Response rates: Indiana County had the best response rate (51 percent), perhaps because regional management under the Indiana County Municipal Services Authority made it easy for municipalities to respond that they did not have a direct role in water or sewer management. Allegheny, Beaver, and Butler Counties had response rates over 40 percent, with Fayette and Lawrence with rates just under 30 percent.

Management role: Only 10 municipalities (5 percent) said they were responsible for all aspects of water and sewage management; 23 (11 percent) are responsible for all aspects of sewage specifically. Of the 51 municipalities stating that they had some management role, 6 said it was in drinking water, 34 in sewage, and 11 in both.

Private wells: 44 respondents (22 percent) identified private wells as their municipality's source of drinking water. These included 14 municipalities in Butler County, 7 each in Indiana and Somerset Counties, and just one each in Fayette and Greene Counties.

Other water providers: 27 respondents cited Pennsylvania-American as their water provider, 17 named MAWC, and 15 are associated with the West View Water Authority.

Sewage provision: Over 28 percent of municipalities said they rely primarily on private septic systems. The distribution is almost identical to that for private wells; the largest deviation is in Beaver County, with 4 municipalities citing private wells and 7 citing septic systems.

Multi-municipal relationships: Of 45 respondents, 19 (42 percent) said they served other municipalities beside their own, while 35 of 46 respondents (76 percent) said they are connected to other municipal systems.

Capital improvements: The thirty-three municipalities responding with estimated figures reported a total of over $130 million of expenditure over the last 10 years, or an average of $4 million. One economically distressed borough reported spending just $50,000, even though it says it is responsible for all aspects of sewage collection and treatment. At the other extreme, four municipalities reported spending from $10 to $40 million.

Number of employees: Respondents reported having 0 to 94 full-time employees, with an average of 11.3, and 0 to 23 part-time employees, with an average of 3.1. However, it appears that some respondents misinterpreted the intent of this question and indicated their total municipal staff size, not the staff specifically devoted to water and sewage issues.

Age of employees: Over 70 percent of those responding indicated an average employee age of 45 years or older, and 16 percent have an average employee age of at least 55.

Consultants: Virtually all respondents listed having engineers on a consulting basis; most list solicitors. Twenty-five of 43 respondents said the average length of time working for them is over 10 years.

Priorities: Of 36 municipalities responding, efficiency and cost was the highest priority, with an average score of 1.94. Environmental protection averaged 2.33, with accountability a distant third at 3.44. Bringing up the rear were leadership (4.09), equity (4.68), competitiveness (4.69), and security (4.76).

Challenges: Thirty-three answers were given to the question, “What are the greatest challenges your municipality faces (in terms of water treatment)?” Maintenance and financial issues were directly mentioned most often (9 and 10 times, respectively); compliance issues, keeping rates low, extending the system, combined sewer separation, inflow and infiltration, and adequate capacity all received multiple mentions.

Billing: Fourteen municipalities provided billing information on drinking water and 33 on sewer service. As with authorities, rates were lower in municipalities with a larger customer base.

Combined vs. sanitary sewers and overflows: Of 43 respondents, 30 reported having sanitary sewers only, 5 have combined sewers only, and 8 have both. Eleven indicated that they have from 1 to 6 permitted combined sewer overflows.

Tap-in restrictions

In addition to the municipality and authority surveys, the Task Force obtained data from DEP regarding tap-in restrictions in the region. Tap-in restrictions are imposed because of overloads at local sewage treatment plants, which can result from insufficient system upgrades or from inflow and infiltration problems related to aging infrastructure and illegal sewer connections. Tap-in restrictions limit the number of new taps that can be connected to local sewer lines, thereby constraining growth in the area. These restrictions vary in severity, ranging from slight constraints that will have a small effect on growth to complete bans on all new development.

Allegheny County faces the most tap-in restrictions, with 57 restrictions reported in 12 municipalities. At the other end of the spectrum, Armstrong County has no overloads or restrictions. Percentage-wise, Westmoreland County faces the most limitations, with almost 19 percent of its municipalities facing tap-in restrictions. In Butler County, the only county in our region that has experienced significant growth during the last two decades, close to 9 percent of municipalities are currently facing restrictions. Altogether, 47 municipalities in 11 counties must deal with 125 tap-in restrictions. Put in another perspective, that means that almost 8 percent of the region’s municipalities are limited in their growth and development due to sewage overloads.

Municipalities Facing Tap-in Restrictions in Southwestern Pennsylvania

County	*Number of Municipalities*	*Percent*
Allegheny	12	9.2%
Armstrong	0	0.0%
Beaver	3	5.6%
Butler	5	8.8%
Fayette	4	9.3%
Greene	3	11.5%
Indiana	1	2.6%
Lawrence	3	11.1%
Somerset	3	6.0%
Washington	1	1.5%
Westmoreland	12	18.8%
TOTAL	**47**	**7.8%**