

# Solving the Wet Weather



## Overflow Problem in

## 3 Rivers Wet Weather Milestones

Since its founding in 1998, 3 Rivers Wet Weather has worked diligently to serve the 83 customer municipalities in the ALCOSAN service area in addressing the sewage and storm water overflow problem that has plagued the region for decades. The non-profit organization has used its funding wisely to benefit the region as a whole and to move toward a sustainable sewage system and improved water quality for generations to come. Known for its regional approach to problems, 3RWW has saved millions of dollars for the ratepayers of southwestern Pennsylvania, while providing invaluable tools to support a long-term viable solution to the problem.

## Southwestern Pennsylvania

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### Some milestones include:

#### ▼ *1998-2000: Municipal Demonstration Grants*

3RWW granted municipalities funding to complete projects in their municipalities that demonstrated and benchmarked new and cost-effective sewer technologies such as trenchless techniques for sewer rehabilitation. In total, 3RWW supported 33 demonstration projects.

#### ▼ *2001: The Development of Basin Groups*

The Eastern, Northern and Southern Basin Groups were formed to help educate municipal officials, encourage communities to share resources and explore regionalization options. The formation of these groups resulted in an open dialogue with the regulatory agencies regarding an administrative consent order to comply with the Clean Water Act.

#### ▼ *2002-2003: Consensus-Building Process for Municipal Consent Orders*

Over an 18-month period, 3RWW held 150 meetings of solicitors, engineers and elected officials, as well as smaller core representative stakeholder groups regarding a consensus-based version of the municipal consent orders. The consent order, ultimately negotiated between municipalities and three regulatory agencies, included no penalties for past violations, its requirements and deadlines were consistent and feasible across all communities, and it set the foundation for regional approaches to managing the municipal sewage collection system throughout Allegheny County.

#### ▼ *2004: Regional Compliance with Municipal Consent Orders*

In early 2004, all 83 communities signed municipal consent orders requiring assessment and repair of their sewer systems. While the order requirements and deadlines were consistent for all communities, no protocols were defined for approach or method of compliance. 3 Rivers developed Basin Engineers' and Managers' Groups to define engineering protocols and to continue exploring and implementing inter-municipal strategies to the wet weather problem. 3RWW led the way with regional compliance approaches

for the municipalities beginning with the coordination of the mapping of more than 80,000 manholes and more than 4,000 miles of sewers throughout the 83 municipalities. A highly detailed computerized map using Geographic Information System (GIS) technology, was made accessible online to communities for integrating data collected during assessment and evaluation activities required in the order and for information sharing among neighboring municipalities.

#### ▼ **2005-2006: Regional Flow Monitoring Plan and Municipal Data Support Site Development**

In 2005-2006, 3RWW, using federal support, managed the development of a flow monitoring plan on behalf of the municipalities that reduced the number of flow monitors from 900 to 520 by using a regional placement approach. 3RWW also developed the Municipal Data Support (MDS) site, an easily accessible online database of information to assist communities in compliance with their municipal consent orders.

#### ▼ **2007-2008: Flow Monitoring Implementation and MDS Site Enhancement**

In 2007, 3 Rivers Wet Weather created a Flow Monitoring Implementation Team to coordinate with ALCOSAN on quality assurance and control measures to assure the flow monitoring program met the requirements of the municipal consent orders. *(Through ALCOSAN's consent decree in 2008, the Authority committed to conducting the flow monitoring program on behalf of the communities.)* The system-wide flow monitoring data collected, which will be critical to the development and implementation of the long-term wet weather control plan, is housed on the MDS site, along with the GIS mapping data and additional tools and resources added in the last several years to support regionalization and long-term sustainable solutions. (See below.)

#### ▼ **2009-2010: Feasibility Studies and Laying the Foundation for Long-term Sustainable Solutions**

The 3RWW Feasibility Study Working Group (FSWG) was formed in 2009 to assist municipalities in the complex task of evaluating alternatives for treating, storing or conveying sewage from their communities to the ALCOSAN System. The FSWG has worked with municipalities and their engineers to standardize engineering approaches and 3 Rivers will continue to assist municipalities in sewersheds that are multi-municipal and technically complex to develop alternatives to be included in their municipal feasibility studies. These feasibility studies will be provided to ALCOSAN for inclusion in the region's long-term wet weather control plan.

To help the municipalities as they work with ALCOSAN on the long-term control plan, 3RWW recently developed an essential planning tool called the 3RWW WebMap, an interactive view of the region's sewer maps on a Google Earth platform. The WebMap is accessible through the Municipal Data Support site, which has become a regional database of information to support not only short-term compliance goals, but also long-term governance issues (i.e. consolidation of the sewer system). In 2010, 3RWW populated the MDS site with additional resources, such as a library of existing municipal agreements and a municipal asset information system.

Another important online planning tool is also underway through a \$250,000 Colcom Foundation Grant. 3RWW has begun work on a Green Infrastructure Database project that will allow planners and engineers to define priority locations in their municipality where green infrastructure, such as green roofs, rain gardens and permeable pavement, has the highest potential to reduce combined sewer overflows in the ALCOSAN system. The goal of the project is to integrate green infrastructure into the region's long-term wet weather control plan to the greatest extent possible where appropriate, cost-effective, and sustainable.

Finally, in support of the movement toward consolidation, 3 Rivers awarded grants (using state funding) to six projects representing 43 communities and authorities, who are collaborating to explore options for consolidating their sewer collection systems.

### **The Future Challenge**

Municipalities will be receiving consent orders for implementation of the long-term control plan within the next few years, which is estimated to cost several billion dollars. Over the last 12 years, 3RWW has demonstrated the benefits of regional approaches by saving the ratepayers an estimated \$60 million or more. As we move into this next phase of addressing the wet weather problem, the current fragmented management of the sewer system will not be sustainable. 3RWW is uniquely positioned and ready to take on the challenge of moving the region toward a more cost-effective, sustainable solution through consolidation of the municipal sewer system.

