# Appendix A-2:

# Newsletters

# Basin Quarterly Activity Reports (BQAR) by Basin

# Upper Monongahela Basin

ALCOSAN. Allegheny County Sanitary Authority.

# Basin Quarterly Activity Report

Upper Monongahela Planning Basin

## Quarterly Key Points

***Background and Purpose***

This Activity Report provides municipal representatives and other interested parties with a synopsis[1] of the status of activities associated with Allegheny County Sanitary Authority's (ALCOSAN) Upper Monongahela Basin Facilities Planning Study. This report is provided for the benefit of municipal representatives and to assist in building a body of knowledge that will form the basis for decision-making on capital improvements of a scale which is unprecedented in Allegheny County. This planning process requires close coordination and interaction with ALCOSAN customer municipalities and their own wet weather and sewage facilities studies and improvements, which are prescribed under separate municipal regulatory mandates. The Upper Monongahela Planning Basin (UMPB), one of seven basins which comprise ALCOSAN's regional planning area, consists of 20 municipalities.

This report was prepared by the Upper Monongahela Facilities Planning (UMFP) Team, which is presented in Table 1. To date, communication on the progress of these activities in your planning basin has been coordinated through municipal representatives who have attended the first three quarterly Basin Planning Committee (BPC) meetings. Municipal managers, engineers, and public works superintendents were encouraged to attend the BPC meetings. ALCOSAN has scheduled Upper Monongahela BPC No. 4 for June 9, 2009 and will be scheduling future BPC meetings along with Regional Stakeholder Group (RSG) meetings. These meetings will address regional and basin-wide wet weather planning and implementation issues.

1. This "synopsis" reflects a very brief summary of pertinent information regarding the ongoing wet weather planning program, which is one of the nation's largest and most complex regional wet weather planning programs. This Activity Report provides information which is related directly to ALCOSAN's facilities planning work. Municipal representatives are encouraged to participate in other forums, such as the 3 Rivers Wet Weather basin meetings, which include the discussion of inter- and intra-municipal sewage facilities planning issues. Additional related information may be found on ALCOSAN's website (http://www.alcosan.org) and at ALCOSAN's secure municipal intranet website (http://municipalities.alcosan.org/portal/site/Municipalities).

***Regulatory Compliance***

ALCOSAN entered into a Consent Decree with the United States Department of Justice (DOJ), United States Environmental Protection Agency (EPA), Pennsylvania Department of Environmental Protection (DEP), and the Allegheny County Health Department (ACHD) on January 23, 2008, for ALCOSAN to achieve compliance with the Clean Water Act. Municipal Orders executed in 2004 require that municipalities cooperate with ALCOSAN in the development and implementation of the Wet Weather Plan required under ALCOSAN's Consent Decree.

To comply with the Consent Decree, ALCOSAN must meet a series of requirements for planning, design and construction, operation, and permitting associated with its Conveyance and Treatment System. To assist with meeting the obligations of the Consent Decree, ALCOSAN has solicited engineering consultants by assigning a team of consultants to perform certain tasks for each of seven distinct planning basins. The Hazen and Sawyer/Lennon, Smith, Souleret Engineering Team was selected for the UMPB.

Beginning in March 2008, the UMFP Team has been working with ALCOSAN and municipal managers, public works officials, and engineers, on the initial facilities planning tasks. This report provides an overview of the facilities planning activities performed for the UMPB over the last several months with respect to: Municipal Coordination and Information Exchange; ALCOSAN's Public Participation Plan; Flow Monitoring; Hydrologic and Hydraulic Modeling; and, in general, the Regional Wet Weather Planning Process.

## On The Horizon … Your Participation

Municipal participation is needed in selecting a final wet weather plan, which will incorporate ALCOSAN as well as inter- and intra-municipal improvements. ALCOSAN's basin facilities planning process is now at the stage where an increased level of coordination and information exchange with municipal

managers and engineers is required. In order to meet deadlines of ALCOSAN's Consent Decree, basin planners will need information from the municipalities, which is necessary to identify alternatives to achieve the best practicable, cost effective plan for the entire region. This will require an iterative process involving the exchange of information between ALCOSAN, its basin planners, and various municipal representatives.

## Public Information & Outreach

As required by the Consent Decree, ALCOSAN has formed a Customer Municipal Advisory Committee (CMAC) consisting of 14 public officials selected from throughout the seven planning basins. Two CMAC meetings have been held (February 18, 2009 and May 12, 2009). Four members of the CMAC are from the UMFP area: Ms. Denise Edwards (Council Member, Wilkinsburg Borough); Mr. John Fetterman (Mayor, Braddock Borough); Mr. Michael Kenney (Executive Director, PWSA); and, Ms. Deneen Swartzwelder (Mayor, Swissvale Borough).

ALCOSAN has also organized a Regional Stakeholder Group (RSG). The RSG is responsible for ensuring that representatives from the entire region will have the opportunity to provide input during the development of the Wet Weather Plan. The RSG includes academic representatives, County representatives, environmental groups, and representatives from each of the seven planning basins. Mr. James Hannan, P.E. (Manager, West Mifflin Sanitary Sewer Municipal Authority), Ms. Patricia Schaeffer (President of Council, Edgewood Borough), and Mr. Michael Terrick (Manager, Munhall Sanitary Sewer Municipal Authority) have volunteered to represent the Upper Monongahela Basin on the RSG. Two RSG meetings have been held (March 11, 2009 and May 14, 2009).

Schedules for the CMAC and RSG groups' future meeting dates are available on ALCOSAN's website (http://www.alcosan.org).

# Program Updates

The UMFP Team has begun analyses needed to develop the Upper Monongahela Facilities Plan. The intent of ALCOSAN's Facilities Plan is to recommend specific solutions to eliminate sanitary sewer overflows and control combined sewer overflows within the ALCOSAN Conveyance and Treatment System. Whatever alternatives are pursued by ALCOSAN, these must result in development of a viable regional wet weather plan, in combination with alternatives pursued by each municipality. Each municipality is required to perform its own feasibility study for the purpose of determining how much flow will be conveyed to ALCOSAN's Conveyance and Treatment System. Therefore, the need for total cooperation and sharing of data cannot be overstated. There are several key facilities planning elements and interim reports that will be developed prior to preparing the Upper Monongahela Facilities Plan.

***Work in Progress***

The UMFP Team submitted the *Upper Monongahela Existing Conditions Report* to ALCOSAN in March 2009, and is currently preparing the *Hydrologic and Hydraulic (H&H) Model and Calibration Report* and the *Screening of Controls and Sites Report*, which are due in September 2009 and October 2009, respectively. Pertinent sections in the *Existing Conditions Report* were provided for review by municipal representatives prior to completion. More detailed information exchange relevant to the *H&H Model and Calibration Report* and the *Screening of Controls and Sites Report* is planned as part of the scheduled BPC meeting in June.

The UMFP Team will continue facilitating the information exchange between ALCOSAN and the municipalities, and the Team will continue to hold quarterly BPC meetings.

A Regional Flow Monitoring Program consisting of approximately 556 monitoring sites within the regional collection system commenced on February 1, 2008 and the majority of the program was complete in February 2009. The program focused on collecting rainfall and wastewater flow data on critical portions of the

regional sewer system. Portions of the municipal systems that are greater than 10 inches in diameter (sanitary sewered municipalities) or 24 inches in diameter (combined sewered municipalities) are considered to be "critical components" of the system. The flow and rainfall monitoring data were provided to the participating communities by ALCOSAN and 3 Rivers Wet Weather, Inc., and the data are also being used by the seven Facilities Planning Teams to calibrate hydrologic and hydraulic predictive models of certain portions of the regional collection system. These predictive models will include all outfalls and the portions of the collection system downstream of the outfalls.

***Future Work***

Other key facilities planning elements and interim reports that will be developed prior to preparing the Upper Monongahela Facilities Plan are a Present Worth Analysis to be prepared by the UMFP Team, and Feasibility Reports to be prepared by the municipalities. Although the municipal ACOs and COAs indicate that municipalities' Feasibility Reports are due in July 2013, ALCOSAN has requested by March 2010 that each municipality identify its wet weather control strategy along with preliminary estimates of flow to be conveyed to ALCOSAN. At the BPC meeting on November 7, 2008, ALCOSAN requested that each municipality share its proposed schedule for completion of required feasibility studies. Since then, ALCOSAN has been participating in the municipal "Feasibility Study Work Group" (FSWG) meetings, which are being administered by 3 Rivers Wet Weather Inc. The FSWG is developing a municipal feasibility study process outline that is intended to provide guidance for municipal engineers and a coordinated schedule, which identifies critical information exchange, decision-making, and planning milestones between ALCOSAN's basin planning and municipal feasibility study activities. Representatives of the PA DEP and the ACHD are also participating in this process.

Individual Facilities Plans for each of the seven ALCOSAN planning basins will be prepared by June 2011. ALCOSAN will then prepare the Regional Wet Weather Plan, which will require a consolidation of the Facilities Plans for all seven ALCOSAN planning basins, together with integration of municipal feasibility study recommendations for 83 customer municipalities. The Regional Wet Weather Plan is due in January 2013.

## Basin Planning Committee Updates

As part of the Municipal Coordination initiatives, ALCOSAN and the UMFP Team have implemented several activities as described below.

To assist with coordination and cooperation between ALCOSAN and the municipalities, the UMFP Team has conducted quarterly Basin Planning Committee (BPC) meetings with representatives of all the municipalities in the planning basin. To date, three BPC meetings have been held (July 30, 2008, November 7, 2008, and February 27, 2009). Copies of the meeting minutes and handouts have been provided to all invitees and are available upon request.

In addition to the BPC meetings, the UMFP Team reviewed available data with respect to wastewater conveyance systems and related information within the UMPB. The UMFP Team held one-on-one meetings with each of the municipalities in the Upper Monongahela Basin in August and September 2008 to explain data needs, facilitate coordination, and to initiate information exchange between the municipalities and the UMFP Team. The attached Table 2 lists the meetings that have been conducted to date. Following the initial round of meetings and information exchange, additional data needs have been identified. In most cases, follow-up phone calls and emails have occurred to obtain additional data from the municipalities.

## Future Actions

In addition to the municipalities identifying the flows for conveyance to ALCOSAN, municipalities are encouraged to initiate evaluation of existing financial and institutional processes and determine what, if any, revisions to existing administration, operations and maintenance programs, inter-municipal agreements, or new agreements may be required to facilitate future wet weather control strategies.

The need for more intensive coordination and cooperation between ALCOSAN and the municipalities will increase as the regional planning process continues and progress is made towards the identification of alternatives and associated construction, operating costs, and ultimate user fees. Because the timeframe for development of the Wet Weather Plan is likely to eclipse the term of many public officials, all current office holders and appointed officials are encouraged to read these Activity Reports. In addition, municipalities are encouraged to incorporate an agenda item in their official public meetings, under the manager, engineer, or public works agenda, to present this Activity Report and for regular reporting on inter- and intra-municipal and regional/basin-wide planning efforts. Municipalities can anticipate regular quarterly updates in the form of this Activity Report from the UMFP Team for this purpose.

## Contact Information

***Any questions or requests for additional information may be directed to:***

ALCOSAN's Project Manager, Mr. Tim Prevost, P.E., Manager of Wet Weather Programs, 412-734-8731; tprevost@alcosan.org.

Additional information may be found at ALCOSAN's secure municipal intranet website (http://municipalities.alcosan.org/portal/site/Municipalities).

ALCOSAN. Allegheny County Sanitary Authority.

# Basin Quarterly Activity Report

Upper Monongahela Planning Basin

## Quarterly Key Points

This *Quarterly Activity Report* provides a synopsis[1] of the status of activities associated with Allegheny County Sanitary Authority's (ALCOSAN's) Upper Monongahela (UM) Basin Facilities Planning Study. This report is provided for the benefit of municipal representatives and to assist in building a body of knowledge that will form the basis for decision-making on capital improvements of a scale that is unprecedented in Allegheny County. Close coordination and interaction of ALCOSAN and customer municipalities and their respective wet weather and sewage facilities studies are vital during this planning process.

This report was prepared by the Upper Monongahela Facilities Planning (UMFP) Team. Additional communication addressing facilities planning has continued through municipal representatives who have attended the quarterly Basin Planning Committee (BPC) meetings. The next **Upper Monongahela BPC Meeting is scheduled for October 2, 2009 at 9:00 a.m.** at the Brentwood Library Community Room at 3624 Brownsville Road in Brentwood Borough.

This report focuses on the facilities planning activities performed since the last *Quarterly Activity Report* (QAR No. 1) for the Upper Monongahela Planning Basin (UMPB) over the last three months: Municipal Coordination and Information Exchange; ALCOSAN's Public Information and Outreach; Hydrologic and Hydraulic Modeling; Screening of Controls and Sites; and the Regional Wet Weather Planning Process.

1. This "synopsis" reflects a very brief summary of pertinent information regarding the ongoing Wet Weather Planning Program, which is one of the nation's largest and most complex regional wet weather planning programs. This *Quarterly Activity Report* provides information that is related directly to ALCOSAN's facilities planning work. Municipal representatives are encouraged to participate in other forums that include the discussion of inter- and intra-municipal sewage and wet weather facilities planning issues.

***Regional Integration through Technical Standards***

An important aspect of ALCOSAN's wet weather planning is development of technical standards and protocols to ensure a seamlessly integrated wet weather plan that considers the local priorities identified in each of the seven basins. These documents define the "rules of the road" with which the wet weather planning team must comply to ensure consistency, resulting in a cohesive regional Wet Weather Plan (WWP). ALCOSAN's Program Management Team is responsible for such coordination.

The effectiveness of this approach was demonstrated during the implementation of the flow monitoring program and expected again when the models from each of the seven basins are integrated into a unified system-wide model. The flow monitoring carried out by four separate firms produced consistent, quality information that can be used by the Basin Planning teams or customer municipalities. Basin Planning teams are extending the hydrologic and hydraulic models to include critical portions of the municipal collection systems utilizing data provided by the flow monitoring program. These models will be used to review existing baseline conditions and to assess a range of alternatives to control wet weather flow and improve water quality. Through documents, workshops, and periodic status meetings, the standardization established for the models will once again maximize the value of the investment made by the ratepayers.

Over the coming months, guidance will be provided to the Basin Planning teams and customer municipalities for the collaborative development of an integrated WWP that addresses local and regional challenges.

## On The Horizon … Your Participation

Municipal participation is needed in developing the WWP, which will incorporate ALCOSAN improvements as well as identified municipal improvements. Basin planning activities require a high level of coordination and information exchange

among municipal managers, public works staff, municipal engineers, ALCOSAN, and Basin Planners. These efforts are necessary to identify alternatives to achieve the best practicable, cost-effective wet weather plan for the entire region. Coordination and cooperation efforts between ALCOSAN and the municipalities, especially direct communication with municipal managers, will continue to increase and intensify as the regional planning process continues. Input and feedback from municipal representatives and the general public will especially be needed when alternatives and their associated construction and operating costs, and impact on user fees, are identified. A series of meetings with the general public is planned to be initiated in November 2009.

## Public Information & Outreach

The Customer Municipality Advisory Committee (CMAC), consisting of 14 public officials from throughout the seven planning basins, provides a forum to discuss the development of the WWP and is responsible for providing feedback to ALCOSAN. The CMAC held its third meeting on June 23, and the next meeting is tentatively scheduled for Wednesday, October 14, 2009.

As advocates for ALCOSAN's customer municipalities, the CMAC members have addressed several key topics which include: municipal feasibility studies, multi-municipal funding and collaboration, coordination of ALCOSAN's planning process and its impacts on its customer municipalities, effective methods to educate elected officials, and early action projects. The CMAC remains a forum to collaboratively examine municipal concerns, questions, and experiences. For more information, contact the CMAC members from the UMPB: Ms. Denise Edwards (Council Member, Wilkinsburg Borough); Mr. Michael Kenney (Executive Director, PWSA); and, Ms. Deneen Swartzwelder (Mayor, Swissvale Borough).

The Regional Stakeholder Group (RSG) held its third meeting on July 9, and the next meeting is tentatively scheduled for October 15, 2009. The RSG, composed of representatives from the entire region, will provide input during the development of the WWP. The RSG members continue to examine and

prioritize important topics that the public needs to know regarding the wet weather pollution control program facing our region. Understanding that collaborative efforts will be the driving force in development of a comprehensive wet weather plan, the RSG is actively engaged in defining effective avenues of communication and identifying critical topics and issues. Additional information can be obtained from the three representatives for the UMPB on the RSG: Mr. James Hannan (Manager, West Mifflin Sanitary Sewer Municipal Authority); Ms. Patricia Schaeffer (President of Council, Edgewood Borough); and, Mr. Michael Terrick (Manager, Munhall Sanitary Sewer Municipal Authority).

## Program Update

The intent of ALCOSAN's wet weather planning is to recommend specific solutions to eliminate sanitary sewer overflows (SSOs) and control combined sewer overflows (CSOs) within the ALCOSAN Conveyance and Treatment System. Any alternatives pursued by ALCOSAN must result in development of a viable regional Wet Weather Plan, in combination with alternatives pursued by each municipality. Each municipality is required to perform its own Feasibility Study for the purpose of determining wet weather control strategies and how much flow will be conveyed to ALCOSAN's Conveyance and Treatment System. Therefore, the need for total cooperation and sharing of data cannot be overstated. Updates about progress on key UMFP elements under development are provided below.

***Work in Progress***

The UMFP Team is currently preparing the *Hydrologic and Hydraulic Model and Calibration Report*, which is due in late September. The Team used GIS, field investigations, flow monitoring data collected during the Regional Collection System Flow Monitoring Program, and rainfall data to extend, calibrate, and validate the hydrologic and hydraulic predictive model of critical portions of the Regional Collection System, including all CSO and SSO outfalls. The UMFP Team will apply this model to simulate a variety of wet weather scenarios within

those portions of the collection system, which will result in estimates of overflow volumes and frequencies at every CSO and SSO outfall. ALCOSAN will make the UMPB model available to interested municipalities for use later this year. In addition, the UMFP Team is preparing the *Screening of Controls and Sites Report*, which is due to ALCOSAN later this year. The work underway involves researching and comparing the technologies that may be effective in reducing, treating, and conveying wet weather flows within the UMPB, as well as consideration of potential sites for wet weather facilities and/or routes for additional conveyance. This report will focus on areas at or near points of connection to ALCOSAN's interceptors, and will provide the basis for more extensive evaluation for the UMPB *Alternatives Analysis Report*.

As additional data or coordination needs arise with respect to municipal wastewater conveyance systems and related information, the UMFP Team will coordinate with each municipality as has been customary thus far via phone calls, emails, and meetings to exchange data.

ALCOSAN has continued participating in the Feasibility Study Work Group (FSWG) meetings, which are being administered by 3 Rivers Wet Weather Inc. (3RWW). The FSWG is developing a municipal process outline that is intended to provide guidance for preparing municipal Feasibility Studies as well as a schedule that identifies critical milestones between ALCOSAN's Basin planning and the municipalities' Feasibility Study activities.

***Future Work***

Although the municipalities' *Feasibility Reports* are not due until six months after ALCOSAN submits the *Wet Weather Plan*, information is needed much sooner. ALCOSAN has requested by **March 2010** that each municipality identify its preliminary flow estimates to be conveyed to ALCOSAN, and if available, the municipality's wet weather control strategy. Criteria for evaluating a variety of wet weather conditions are design storm frequencies of 1 year, 2 years, 5 years, and 10 years, and a specified typical year of wet weather patterns (year 2003).

Overall, Facilities Plans for each of the seven ALCOSAN planning basins will be completed by June 2011. ALCOSAN will then produce the *Regional Wet*

*Weather Plan*, which will require a consolidation of the seven Facilities Plans, together with integration of municipal Feasibility Study recommendations for 83 customer municipalities. The *Regional Wet Weather Plan* is due in January 2013.

## Basin Planning Committee Update

The UMFP Team has conducted quarterly Basin Planning Committee (BPC) Meetings with representatives of all the municipalities and authorities located within the planning basin. At the most recent BPC Meeting held on June 9, 2009, relevant information was shared about the *Hydrologic and Hydraulic Model and Calibration Report* and the *Screening of Controls and Sites Report*. Copies of the meeting minutes have been provided to all invitees. Additional copies of the minutes are available upon request, or can be found on ALCOSAN's municipal intranet website at: http://municipalities.alcosan.org/portal/site/Municipalities.

UM BPC Meeting No. 5 will be held at the Brentwood Library on **October 2, 2009 at 9:00 a.m.**

## Future Actions

In addition to the need for municipalities to identify strategies for addressing local wet weather issues and to quantify the flows to be conveyed to ALCOSAN, municipalities are encouraged to begin now to evaluate existing financial and institutional processes and determine any revisions to existing administration, operations and maintenance programs, inter-municipal agreements, or new agreements that may be required to facilitate future wet weather control strategies. Development of a coordinated wet weather plan for the UMPB will require significant deliberation on many technical and legal issues relating to conveyance of flows via jointly owned municipal sewers, upstream of the point of connection to ALCOSAN's system. ALCOSAN does not plan to initiate or participate directly in these deliberations. However, it does intend to provide

municipal representatives with pertinent technical and related information on its conveyance and treatment system that will assist municipalities in making key decisions regarding conveyance of wet weather flows to the ALCOSAN system. Certain information may be accessed via the ALCOSAN and the 3RWW websites. Additional information may be obtained directly from ALCOSAN, the Basin Planner, or at the planned public meeting forums.

Municipalities are encouraged to incorporate an agenda item in their official public meetings, under the manager, engineer, or public works agenda, to present this *QAR* and for regular reporting on municipal and regional/basin-wide planning efforts. The UMFP Team will continue to produce quarterly updates in the form of this *QAR* for this purpose, and may be made available to attend municipal work sessions or public meetings to address planning issues.

## Contact Information

***Any questions or requests for additional information may be directed to:***

ALCOSAN's Project Manager, Mr. Timothy D. Prevost, P.E., Manager of Wet Weather Programs, 412-734-8731, timothy.prevost@alcosan.org.

Additional information may be found at ALCOSAN's secure municipal intranet website (http://municipalities.alcosan.org/portal/site/Municipalities).

*In consideration of the environment, we would be glad to provide future Quarterly Activity Reports electronically via e-mail. Please send an e-mail message to tammi@collectiveefforts.com, with a message asking to receive future QARs electronically.*

ALCOSAN. Allegheny County Sanitary Authority.

# Basin Quarterly Activity Report

Upper Monongahela Planning Basin

## Quarterly Key Points

This third edition of the ***Quarterly Activity Report*** summarizes the status of activities associated with Allegheny County Sanitary Authority's (ALCOSAN's) Upper Monongahela (UM) Basin Facilities Planning Study. This report is provided for the benefit of municipal representatives and to assist in building a body of knowledge that will form the basis for decision-making on capital improvements of a scale that is unprecedented in Allegheny County.

This report was prepared by the Upper Monongahela Facilities Planning (UMFP) Team and focuses on Wet Weather Program update information and public outreach efforts since the last *Quarterly Activity Report* (*QAR No. 2*, Fall 2009).

## On The Horizon … Your Participation

Ongoing municipal participation is needed in developing the Wet Weather Plan (WWP), which will incorporate ALCOSAN improvements as well as identified municipal improvements. Basin planning requires a high level of coordination among municipal managers, public works staff, municipal engineers, planning commissions, ALCOSAN, and Basin Planners (BPs). These efforts are necessary to identify alternatives to achieve the best practicable, cost-effective wet weather plan for the entire region.

Municipalities are encouraged to incorporate an agenda item in their official public meetings to present this *QAR* and for reporting on municipal, basin, and regional planning efforts. The UMFP Team is willing to attend municipal or public meetings to address planning issues.

## Public Information & Stakeholder Outreach

Extensive communication about regional facilities planning has continued through several forums, and highlights are presented as follows.

ALCOSAN hosted 13 Public Meetings throughout its service area in November 2009, and would like to thank the municipalities that allowed us to utilize their

facilities for the meetings. The focus of the meetings was to educate the public about the Wet Weather Program, including the demands on the wastewater conveyance and treatment infrastructure, and the program's purpose, goals, and schedule. The UMPB Public Meeting was held on November 19, 2009 in West Homestead. Thirty residents from eight different municipalities attended this meeting. In addition to an educational slide presentation, there was ample time for the public to examine informational display boards and to pose inquiries during a question-and-answer session.

ALCOSAN greatly appreciates the continued support, participation, and dedication of time and resources by RSG and CMAC members relative to the development of the long-term regional Wet Weather Plan.

The next CMAC meeting (#5) will be held on March 2, 2010. Informative discussions with CMAC members have provided ALCOSAN with valuable insight when coordinating with its customer municipalities. Select goals for the CMAC in 2010 include integrating feedback on site alternative screening and evaluation criteria into the alternative site review process, as well as actively engaging elected officials and managers to participate in this critically important planning process.

RSG meeting #5 will be held in early March 2010. With a full agenda for 2010, the RSG will begin exploring implementation factors that will affect the public, and discussing relevant combined and sanitary sewer overflow (CSO and SSO) control technologies. Throughout the year, RSG members will also use their organization's network to help build public consensus for the development of a regional solution.

## Program Update

The intent of ALCOSAN's wet weather planning is to develop solutions to eliminate SSOs and control CSOs within the ALCOSAN Conveyance and Treatment System. ALCOSAN must produce a viable regional Wet Weather Plan, in concert with municipal plans. Each municipality must generate its own Feasibility Study for the purpose of determining wet weather control strategies within their own systems and shared inter-municipal systems, and quantifying flow to be conveyed to the ALCOSAN system. Updates about progress on key program elements are provided as follows.

# Basin Quarterly Activity Report

Upper Monongahela Planning Basin

Major phases of ALCOSAN's Wet Weather Planning Program include: 1) review and analysis of existing data and information (*Current Information and Conditions Report*); 2) flow monitoring; 3) hydrologic and hydraulic (H&H) modeling (*H&H Model and Calibration Report*); 4) alternatives development and analyses (*Feasibility Report and Present Worth Analysis*); and, 5) development of Basin Facilities Plans. The first three phases of the effort are now nearing completion, and the alternatives development and evaluation work has begun.

Each BP has submitted a *Current Information and Conditions Report* detailing the sewer systems and related characteristics within their Basin. The BPs also submitted draft *Screening of Controls and Sites Reports* (*SCSR*) in which wet weather overflow control technologies and potential sites and routes were identified for areas at or near points of connection to ALCOSAN's interceptors. The *SCSR*s are expected to be finalized in early 2010. As reports are completed, they will be posted on the municipal secure website for use by ALCOSAN's customer municipalities. In addition to these reports, the BPs developed an H&H model for the purpose of simulating conditions within the sewer system during both dry and wet weather periods. The BPs drafted a report, the *H&H Model and Calibration Report*, which details the modeling methodology and results. These models will be "rolled out" through the Feasibility Study Work Group meetings facilitated by 3 Rivers Wet Weather, Inc.

The UMFP Team is conducting meetings with municipal planning representatives in early 2010 to coordinate and exchange data about potential sites and routes identified in the draft UM *SCSR*. An update of this process will be discussed at the next BPC meeting.

Throughout most of 2010, ALCOSAN's Basin Planning Teams will be developing and evaluating alternatives to control wet weather flows and pollution. The goal is to develop Basin-specific Facilities Plans by the third quarter 2011. In order to meet this goal, it is critical that the municipalities provide flow estimates to the Basin Planning Teams. ALCOSAN has requested by **March 31, 2010** that each municipality identify its preliminary flow estimates to be conveyed to ALCOSAN, and if available, the municipality's wet weather control strategy.

ALCOSAN. Allegheny County Sanitary Authority.

# Basin Quarterly Activity Report

Upper Monongahela Planning Basin

## Basin Planning Committee Update

At the most recent BPC Meeting (No. 5) held on October 2, 2009, key elements of the H&H modeling and the screening of controls and sites were communicated by the UMFP Team. **UM BPC Meeting No. 6 will be held on February 26, 2010 at 9:00 a.m.** in the Brentwood Library Community Room located at 3501 Brownsville Road in Brentwood. This meeting will include a program update and highlight some of the findings from the screening of controls and sites.

## Future Actions

Municipalities are encouraged to evaluate financial and institutional processes, operations and maintenance programs, and inter-municipal agreements, relevant to future wet weather control strategies. Technical and legal issues need to be addressed relating to jointly owned municipal sewers upstream of the point of connection to ALCOSAN's system. ALCOSAN does not plan to participate in these evaluations, although it will provide municipalities with pertinent technical information on its conveyance and treatment system that will assist them in making key decisions regarding conveyance of flows to the ALCOSAN system.

## Contact Information

Any questions or requests for additional information may be directed to ALCOSAN's Project Manager, Mr. Timothy D. Prevost, P.E., Manager of Wet Weather Programs, 412-734-8731, timothy.prevost@alcosan.org.

Additional information may be found at ALCOSAN's secure municipal intranet website: http://municipalities.alcosan.org/portal/site/Municipalities.

To receive *Quarterly Activity Reports* via email, please send a request to tammi@collectiveefforts.com.

ALCOSAN. Allegheny County Sanitary Authority.

# Upper Monongahela Planning Basin

Basin Quarterly Activity Report

## Development of Wet Weather Control Alternatives

In February 2010, the Upper Monongahela Planning Basin (UMPB) Team submitted the Screening of Controls and Sites Report (SCSR), in which wet weather overflow control technologies and potential sites and routes were identified for areas at or near points of connection to ALCOSAN's interceptors. The UMPB SCSR report, along with the previously produced Existing Conditions Report, will be posted on ALCOSAN's municipal secure website in the near future for municipalities' access.

To coordinate data about the potential sites and routes identified in UMPB's SCSR, the UMBP Team conducted meetings with municipal and County planning representatives in early 2010. Meetings were held with representatives of Baldwin, Braddock, Homestead, Munhall, Rankin, Swissvale, and West Homestead Boroughs, the City of Pittsburgh, Allegheny County Economic Development, and Regional Industrial Development Corporation. Among the wet weather alternatives discussed were consolidation pipelines, drop shafts for deep tunnels, and storage and treatment facilities.

The UMPB Team has been working on developing and evaluating alternatives to control wet weather flows and related water quality impacts. Our analyses involve development of costs and anticipated effectiveness for each alternative for several wet weather scenarios. Analyses will continue through fall 2010.

A key analysis tool is the hydrologic and hydraulic (H&H) model, which is being used to simulate conditions in the sewer system during specific wet weather scenarios. The H&H model and the H&H Model and Calibration Report were completed in March 2010. ALCOSAN posted this report on the secure municipal website, and provided the model via a DVD to the municipal managers in each of the municipalities in March. With the H&H model to assist, ALCOSAN has requested that municipalities provide flow estimates as soon as possible.

The UMPB Team has developed a future conditions model to estimate wastewater flows in the year 2046 using population projections based upon the Southwestern Planning Commission. This model will be updated based upon municipal flow estimates and used to properly size planned ALCOSAN controls. Municipal data needs include plans for extraneous flow reduction, sewer improvements, and wet weather control strategies.

**Upper Monongahela Basin Planners investigating Homestead Run in Munhall – related article on Page 1**

**More inside…**

ALCOSAN. Allegheny County Sanitary Authority.

# Upper Monongahela Planning Basin

Basin Quarterly Activity Report

## In the Upper Monongahela Communities

**Basin Planning Committee Meetings.**
The most recent Upper Monongahela Basin Planning Committee (UM BPC) meeting was held on February 26, 2010 in Brentwood. A total of 16 municipalities and two authorities were represented by their elected officials, managers, public works staff, or consulting engineering firms. Meeting highlights included:

- Explanation of the site screening process, including the flow analyses, site evaluations, and field visits that occurred for each of the 30 points of connection in the UMPB;
- Attendees were invited to participate in developing the relative weights of factors that will be part of the alternatives feasibility evaluation: economic factors; public factors; water quality, public health, and environmental impacts; operational impacts; and, implementation impacts.
- Summaries of recent public outreach events, RSG meetings, and CMAC meetings.

The next Upper Monongahela BPC meeting will be held on **Friday, June 25, 2010** at 9:00 a.m. at the Brentwood Library Community Room located at 3501 Brownsville Road in Brentwood. At this meeting, updated information about the development and evaluation of Basin wet weather control alternatives will be shared.

## In the Region… ALCOSAN Updates

**Program Status.**
Now that existing conditions have been defined and the hydrologic and hydraulic model has been developed and calibrated, the Basin Planning effort has shifted to alternatives development and evaluation. Throughout most of 2010, ALCOSAN's basin planning teams will be developing and evaluating alternatives to control wet weather flows and pollution. The goal is to develop a basin specific facilities plan. Coordination during this process will allow ALCOSAN to begin its Regional Alternatives Evaluation process as the basin planning process is being completed. Regional alternatives evaluation will take the best components of each basin-wide plan and integrate them into a series of regional alternatives. Regional alternatives will then be evaluated and costed to select a system-wide Wet Weather control Plan (WWP).

**ALCOSAN Outreach.**
*Reaching elected officials and municipal managers.* The Customer Municipality Advisory Committee **(CMAC)** has launched a correspondence campaign to encourage their peers to work closely with ALCOSAN. Like their fellow community and municipal leaders, CMAC members are held accountable for their decisions including the outcomes related to implementation of the Wet Weather Plan. Over 1,000 municipal managers and elected officials throughout the ALCOSAN service area will receive the letter. The CMAC met on May 11 for the sixth time. Members advocated the integration of green infrastructure into the WWP and gained an understanding of the current conditions of the Financial Capability Assessment – Phase 1: Affordability.

ALCOSAN. Allegheny County Sanitary Authority.

# Upper Monongahela Planning Basin

Basin Quarterly Activity Report

## In the Region… ALCOSAN Updates (continued)

*Comparing WW Programs.* The Regional Stakeholder Group **(RSG)** members wanted to know how other cities are planning and implementing their wet weather plans – what is working and what is not working. At RSG Meeting #6 on May 13, a presentation was given comparing the major components of four similar wet weather programs' system characteristics, impact on water quality, source reduction/green infrastructure, multi-municipal regional plans, and cost. RSG members heard information on the current conditions of the Financial Capability Assessment – Phase 1: Affordability, which generated a dynamic dialogue on affordability and the income disparity throughout the region.

*ALCOSAN's Technology Outreach.* Green Buildings. Green Communities. Green Actions. The word 'Green' is used to denote various means for environmental improvements that control or reduce flows (rainfall; groundwater) into the collection system. On May 12, ALCOSAN hosted a FREE workshop designed for elected officials, managers, community planners, and engineers. The workshop presentation covered green infrastructure techniques and how other communities are utilizing these techniques for wet weather benefits. All attendees received complimentary reference materials.

## On the Horizon - Future Actions

*ALCOSAN's Technology Outreach.* ALCOSAN will continue to host the NACWA (National Association of Clean Water Agencies) Flow Series webinars. The next webinar will be on **September 8** at 2 p.m. and is titled "Green Infrastructure: What's Legal?". The seminars are **FREE** and are held in the ALCOSAN Customer Service and Training Building, 3101 Preble Avenue, Pittsburgh, PA 15233. Call (412) 732-8052 or (412) 732-8035 to register and for more information.

*Basin Planning Committee Meetings, series #7.* ALCOSAN's basin planning committees will hold the seventh series of meetings throughout **June and July 2010.** The Upper Monongahela Basin Planning Committee meeting is scheduled for **Friday, June 25** at 9 a.m. at the Brentwood Library Community Room in Brentwood.

*CMAC Meeting #7.* CMAC Meeting #7 is scheduled for **Tuesday, August 3, 2010**.
*RSG Meeting #7*. RSG Meeting #7 is scheduled for **Thursday, August 12, 2010**.

## Contact Information

***Any questions or requests for additional information may be directed to:***

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report

## Closing In on Potential Basin Solutions

The portion of the ALCOSAN Conveyance and Treatment System located within the Upper Monongahela Planning Basin contains 30 ALCOSAN overflows that discharge during certain wet weather events. The Upper Monongahela Facilities Planning Team has been evaluating wet weather control technologies and potential sites and pipeline routes that may be available, as part of the work involved with developing potential solutions to control discharges from these 30 overflows.

The site and route evaluation has included high-level, GIS-based evaluations to identify currently undeveloped land, field visits to identified areas, and feedback during meetings with representatives of potentially affected municipalities and stakeholders. This information was detailed by ALCOSAN in the *Screening of Controls and Sites Report* dated February 2010.

After preliminary sites and routes were identified, the next step was to determine the most cost-effective approach to control wet weather discharges, given the available sites and routes and magnitude of discharge flow rates and volumes. The initial analysis compared constructing individual wet weather control facilities at each of the 30 overflows, to consolidating overflows via new sewers to as few as five sites where new facilities would store or treat excess sewage flows. The analysis results showed that it was more cost-effective to consolidate flows from 28 overflow locations to three control facilities and individual facilities at two overflows, rather than construct 30 individual control facilities. For this alternative, a combination of wet weather control technologies, such as retention treatment basins, screening and disinfection, and/or storage may be utilized.

In addition to the above analysis, the Facilities Planning Team is currently comparing this consolidated basin alternative to a more regional approach, such as a deep tunnel or a new satellite secondary treatment plant. A report detailing this analysis is scheduled for the end of this year.

**Attend an ALCOSAN Community Meeting in your community's basin…**

October 21, 2010 at Carnegie Library in Munhall

Your community's meeting will be held from 5:30 PM to 8:00 PM with a presentation given at 6:30 PM. This meeting will focus on the community-based potential solutions for the Upper Monongahela Basin as well as provide ALCOSAN's Annual Customer Information update. See Page 3 for more information and details.

**More inside…**

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report

## In the Upper Monongahela Communities

**Basin Planning Committee Meetings.** The next Upper Monongahela (UM) Basin Planning Committee (BPC) meeting will be held on **Friday, October 8, 2010 at 10:00 AM** at the Brentwood Library Community Room located at 3501 Brownsville Road in Brentwood. At this meeting, updated information about the development and evaluation of Basin wet weather control alternatives will be communicated. As always, municipal representation at these meetings is extremely important.

The most recent Upper Monongahela BPC meeting was held on June 25, 2010 in Brentwood. A total of 15 municipalities and three authorities were represented by their elected officials, managers, public works staff, or consulting engineering firms. Meeting highlights included:

- The Preliminary Flow Estimates sent to ALCOSAN by municipalities to date cover all but one of the UM Planning Basin's 30 points of connection. The UM Facility Planning Team will continue to evaluate flow estimates and coordinate with municipalities as further clarification is needed.
- Alternatives Analysis is in progress, and attendees were shown maps illustrating five potential Basin solutions for overflow control. The solutions involve combinations of shallow-cut consolidations, site-specific and consolidated storage and treatment facilities, and deep tunnel storage alternatives.
- An update of the Financial Capability Assessment was presented. Municipalities were encouraged to review their sewer system and employee costs, compute actual costs, and send updates to 3RWW.

## In the Region… ALCOSAN Updates

**Program Status.** ALCOSAN's Basin Planners have been busy of late reviewing the numerous municipal Preliminary Flow Estimates they've been receiving from their tributary municipalities. If, for a given location, they find the municipal flow estimate differs significantly from their own modeled flow estimate, they will closely coordinate with the municipality to identify the reason or reasons for the discrepancy. In this manner, ALCOSAN hopes to ensure that their hydrologic and hydraulic (H&H) model accurately reflects real-world conditions and incorporates the most up-to-date municipal information. The municipalities will also have the opportunity to use this process to update and finalize their own flow estimates with the knowledge that they will be accurately integrated into the Basin Planner's H&H model of the planning basin.

As the seven Basin Planners approach the final stages of their model development, they are simultaneously beginning to use their models to select, size, and evaluate CSO and SSO control alternatives for their basins. Then, during the Regional Optimization phase of the project, ALCOSAN will analyze and determine the overall best arrangement of control alternatives, sizes, and locations throughout ALCOSAN's entire service area.

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report

## In the Region… ALCOSAN Updates (continued)

**ALCOSAN Technology Outreach.** ALCOSAN continues to promote the use of Green Technologies as a wet weather flow management strategy whenever and wherever feasible. In support of this effort, ALCOSAN recently hosted a series of Technology Outreach seminars that focused on Climate Change, Stormwater Runoff, and Green Infrastructure. Future seminars will be planned; please visit ALCOSAN's website for more information.

At the Customer Municipality Advisory Committee (CMAC) Meeting #7, held August 3rd, the discussion focused on the issue of whether ALCOSAN could and should take over portions of municipal sewer collection systems, especially the municipal interceptors. This dynamic topic was a key concern, worthy of additional discussion with ALCOSAN and required a follow-up meeting via conference call. During the call, CMAC members provided feedback on the critical items ALCOSAN should consider in its potential response to the 3RWW Regionalization Request for Proposals. Contact your CMAC representative to share your thoughts and insight on this issue. The next meeting is scheduled for November 9th.

Regional Stakeholder Group (RSG) Meeting #7 was held on August 12th. RSG members discussed updated information regarding ALCOSAN's Affordability Analysis Process. The most notable issue was the question of which affordability factors were included in other cities' plans, and their potential impact on the development of ALCOSAN's regional Wet Weather Plan. RSG Meeting #8 is scheduled for November 16th.

## On the Horizon - Future Actions

***Sewer overflows impact everyone, and each of us can contribute to the resolution of this critical problem.*** By participating in an upcoming meeting, you can learn about what is being considered in your community to address the public health, environmental, and economic impacts of untreated sewer overflows into our region's rivers and streams.

Community meetings, identified at the right, will be held from 5:30 PM to 8:00 PM. A region-wide meeting will be held on Thursday, November 4th at the Senator John Heinz History Center from 10:00 AM to 4:00 PM. This meeting will provide a collective look at the community-based solutions for the entire ALCOSAN service area. Plan to attend a meeting most convenient for you, bring a friend, and provide your input.

### Contact Information

***Any questions or requests for information may be directed to:***

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*Visit ALCOSAN's website at: www.alcosan.org*

### ALCOSAN Community Meeting Schedule

***Monday, Oct 18 -*** Heidelberg VFD
456 1st Street, Carnegie, PA 15106

***Tuesday, Oct 19 -*** East Liberty Presbyterian Church
116 S. Highland Avenue, Pittsburgh, PA 15206

***Wednesday, Oct 20 -*** Bellevue Christian Church
680 Lincoln Avenue, Bellevue, PA 15202

***Thursday, Oct 21 -*** Carnegie Library of Homestead
510 E. 10th Avenue, Munhall, PA 15120

***Monday, Oct 25 -*** Clarence Fugh Memorial Hall – Etna
437 Butler Street, Pittsburgh, PA 15223

***Tuesday, Oct 26 -*** Wm. Anderson Library of Penn Hills
1037 Stotler Road, Pittsburgh, PA 15235

***Wednesday, Oct 27 -*** St. Mark's Evangelical Lutheran Church
933 Brookline Boulevard, Pittsburgh, PA 15226

***Thursday, Nov 4 (REGION-WIDE) -*** Senator John Heinz History Center
1212 Smallman Street, Pittsburgh, PA 15222

***Tuesday, Nov 9 -*** Upper St. Clair Community & Rec. Center
1551 Mayview Road, Upper St. Clair, PA 15241

***Wednesday, Nov 10 -*** Boyd Community Center
1220 Powers Run Road, Pittsburgh, PA 15238

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report

## From *Feasibility Report* to *Basin Facilities Plan*

ALCOSAN and the Basin Planning Team have continued to analyze, develop, and evaluate alternatives for the control of combined sewer overflows (CSOs) in the Upper Monongahela Basin area. The goal is to develop the lowest cost, best alternative for the Basin. A *Draft Feasibility Report* on the feasibility and present worth of alternatives developed thus far was submitted to ALCOSAN in November 2010. Evaluations have identified alternatives consisting of shallow cut pipelines, consolidating flows to storage and treatment facilities, and deep tunnel storage or conveyance alternatives. These evaluations have led to the development of two preferred alternatives, the Planning Basin-based Alternative and the Regional Basin-based Alternative. The Basin-level Alternative consists of shallow cut consolidation pipelines and five CSO treatment facilities and related influent pump stations in the vicinity of Hazelwood, Streets Run, Ninemile Run, Rankin, and Braddock. The Regional Basin Based Alternative includes shallow cut consolidations, seven drop shafts, and a deep storage tunnel. This alternative aims to minimize above-ground facilities region-wide.

Basin-level Alternatives must now be integrated into a set of regional alternatives in a process called Regional Optimization. ALCOSAN will utilize the most promising Basin solution(s) and sites to assemble a set of regional control alternatives. The resulting set of regional alternatives must then be evaluated based on the suitability of sites and locations, the level of improvement they provide over the Basin Alternatives, and the relative increase in operational performance across the seven Basins.

It is anticipated that the combining of basin flows and volumes will result in the need for fewer, but larger, control facilities. Therefore, a regional overflow storage tunnel will likely become an important component of many of the regional alternatives. These tunnel-based regional alternatives must then be closely evaluated using both monetary (cost) and non-monetary (construction impact, etc.) criteria in an effort to determine the most beneficial regional alternative.

## In the Upper Monongahela Communities

ALCOSAN hosted Upper Monongahela BPC Meeting #8 on October 8, 2010. Key topics included a discussion of the potential alternatives under development for CSO controls in the Basin. The upcoming BPC Meeting #9 will be held on **Friday, February 18 at 9:30 a.m.** at the **West Homestead Borough Council Chambers Room** at 456 W. 8th Ave. in West Homestead.

(continued on Page 2)

### Contact Information

***Any questions or requests for information may be directed to:***

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Curt Courter, P.E., Basin Planner, Upper Monongahela Basin, 412-281-6161, ccourter@hazenandsawyer.com

*Visit ALCOSAN's website at:*
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**More inside…**

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report

## In the Upper Monongahela Communities (*continued from Page 1*)

In addition to the BPC meetings, ALCOSAN has continued to meet with municipal representatives to discuss municipalities' plans for addressing overflows and capacity limitations within the municipal sewer systems. On October 25, 2010, ALCOSAN held Planning Workshops with several municipalities that contribute flow to the six most complex points of connection, with the goal to resolve flow estimates, detail the current status of ALCOSAN planning, and gain an understanding of the current state of municipal feasibility planning. Since that meeting, follow-up meetings have been held in December and two more times in January to continue coordination.

## In the Region … ALCOSAN Updates

**Advancing Green Solutions.** Implementing successful pilot projects is important for promoting green solutions. Two communities, Bells Run (in the City of Pittsburgh) and West View Borough, are currently pursuing funding for green pilot projects. Bells Run plans include a commercial area designed to capture runoff and store and discharge flow at a controlled rate, vegetated swales in a residential community, and rain gardens at an apartment complex. In West View Borough, a commercial area will include both porous pavement and a bio-retention basin to capture and discharge flow. Porous pavement, rain gardens, and a vegetated swale are also planned for a residential street. Approximately 78% of 2,800 West View residential properties appear suitable for downspout disconnections. The communities are interested in these early action projects that will help to develop the local standards needed for widespread implementation.

**Affordability.** United States Environmental Protection Agency (U.S. EPA) guidelines suggest that if the ratio of total wastewater costs, when compared to an area's median household income, exceeds 2%, the costs are considered a "high burden" to the ratepayers. This ratio is called the Residential Indicator. Under the *CSO Policy*, a ratio of greater than 2% may open up some flexibility in the construction schedule that can be used to mitigate the burden on the ratepayer.

Last spring, ALCOSAN estimated additional wastewater infrastructure costs that, when added to current ALCOSAN and municipal sewer rates, could cause the Residential Indicator to exceed 2%. The estimate came to roughly $2.0 billion (in 2010 dollars). Though it was a simple snapshot that assumed all costs would be incurred simultaneously and inflation rates were negligible, it now provides a means to identify those infrastructure components whose costs may contribute the most toward the 2% threshold. It will also serve as a benchmark to gauge the impact that various levels of wastewater spending may have.

Currently, ALCOSAN is expanding its financial capability model so that it can take into account potential construction scheduling, program phasing, and a wide range of potential economic and financial conditions. Examples include: inflation of construction and operating costs; changes in residential incomes, populations, and households; changes to interest rates and terms; and municipal and ALCOSAN equipment renewal and replacement costs. The resultant predictions of current and future annual operation and maintenance costs, borrowing requirements, annual available regional "affordability," and typical household costs (i.e., the Residential Indicator) can be used to evaluate and prioritize the many wet weather control strategies being considered.

(continued on Page 3)

## In the Region … ALCOSAN Updates (*continued from Page 2*)

**ALCOSAN Outreach.** The Feasibility Study Process and Regional Sewer System Management were key topics at the Customer Municipality Advisory Committee (CMAC) Meeting #8 held on November 9, 2010. ALCOSAN presented their response to the 3RWW Regionalization request for proposal (RFP) to CMAC members. It included an outline of scope and potential regionalization options. Suggestions, such as using a steering committee to lead the study, were discussed and well received by ALCOSAN. In addition, CMAC members reviewed a memo from the 3RWW Feasibility Study Working Group (FSWG) addressing rates, planning schedule, basis of design, and planning issues. As follow-up, CMAC sent a representative to the FSWG meeting in December to engage meeting attendees in further discussion regarding key topics.

Green Technologies and Stormwater Management continue to be points of emphasis for the Regional Stakeholder Group (RSG). At RSG Meeting #8 held on November 16, 2010, CMAC member Michael Kenney, then Executive Director of PWSA, discussed the City of Pittsburgh's plans to issue an RFP to develop a plan for a stormwater utility. Also, the plans being made to implement pilot studies of green technologies in two communities – Bells Run and West View Borough – were discussed and supported by the RSG. A handout was distributed containing information on green technologies implemented in other cities throughout the country.

During October and November 2010, community meetings were held within the ALCOSAN service area. In the Upper Monongahela Basin, a meeting was held on October 21 at the Carnegie Library of Homestead in Munhall. There was one meeting in each of the following Basins: Saw Mill Run, Main Rivers, Turtle/Thompson, Upper Monongahela, and Lower Ohio/Girty's Run. Two meetings were held in the Chartiers Creek and Upper Allegheny basins, and a region-wide meeting was held in downtown Pittsburgh. The total attendance at the ten meetings was approximately 170 people. Attendees included elected officials, municipal staff, stakeholder group members, representatives from environmental and development groups, and general citizens. The meetings served to meet the Consent Decree requirements for an annual meeting as well as present information on potential solutions in each basin. Those who attended found the information beneficial and indicated they better understood the need to address wet weather overflows.

ALCOSAN also hosted a booth to inform the public about the Sewer Overflow Advisory Key (SOAK) program at the Pittsburgh Boat Show, which was held at the Monroeville Convention Center from January 27 - 30, 2011.

## On the Horizon – Future Actions

This winter, ALCOSAN will participate in several regional events to provide information to the public about the development of the Wet Weather Plan and the SOAK program. We encourage you to tell your constituents and attend. Please spread the word!

- **Monroeville Home Show** (Monroeville Convention Center) – Thursday, 2/24 through Sunday, 2/27
- **Pittsburgh Home & Garden Show** (Pittsburgh Convention Center) – Friday, 3/4 through Sunday, 3/13

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report #7

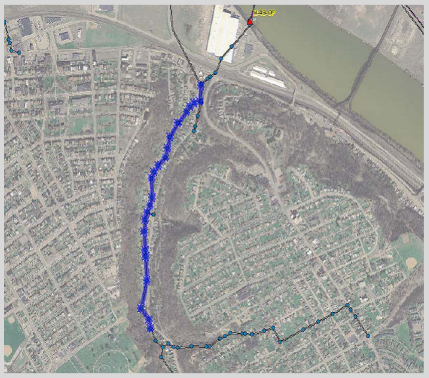
## Developing the *Basin Facility Plan*

This *Basin Quarterly Activity Report* (BQAR) summarizes the activities of the Upper Monongahela Basin Planning Team since February 2011. Much of the work by ALCOSAN and the basin planners in the last three months has been to integrate the preferred Basin Alternatives from each of the seven Planning Basins into a set of regional control alternatives, through a process called Regional Optimization. ALCOSAN is combining the most promising Basin solutions and sites into a suite of regional control alternatives. The developed set of systemwide alternatives is being evaluated based on the level of improvement they provide compared with the preferred Basin Alternatives, and the relative increase in operational performance across the seven basins. Regional alternatives are being evaluated with monetary and non-monetary factors (construction impacts, etc.) with the goal of developing the most beneficial alternative. Present worth estimates are being developed to represent life cycle costs of the alternatives, which includes capital, operation and maintenance (O&M), and renewal and replacement costs. Combinations of control facilities to achieve a variety of CSO control levels, along with phasing, are also being examined.

In the Upper Monongahela Basin, the preferred Basin alternative includes shallow cut consolidation pipelines and five CSO treatment facilities and related influent pump stations in the areas of Hazelwood, Streets Run, Nine Mile Run, Rankin, and Braddock. The Systemwide control alternatives being evaluated include additional regional conveyance to the WWTP and phasing alternatives, which involve analyzing the subset of controls that could be implemented based on regional affordability.

Coordination among ALCOSAN and municipal representatives has been actively continuing as well, so that ALCOSAN can understand the municipalities' plans to control overflows within each city or borough. ALCOSAN has requested municipalities to share the preferred technologies and anticipated future flow rates for various CSO and SSO control levels, and their associated capital, O&M, and renewal and replacement costs for each sewershed upstream of the point of connection to an ALCOSAN interceptor. These types of data were requested to be provided by April 30, so they can be incorporated and integrated into ALCOSAN's planning strategies.

Results and conclusions will be presented in a *Basin Facility Plan*, which will be submitted to ALCOSAN near the end of 2011. The control alternatives developed by the municipalities will be summarized in Section 5 of this report, and the regional integration evaluation will be in Section 6 of the report.



**Munhall is considering increasing the diameter of approximately 4,000 feet of the Homestead Run Interceptor between Manholes LBs_1053910 and LBs_1053524 to between 20 and 48 inches, to be able to convey more wet weather flow to the ALCOSAN M-49 point of connection (POC). The UMPB Team is working with the municipal engineer to understand how this would affect flows and volumes at the POC in order to appropriately size the proposed ALCOSAN facilities downstream.**

**More inside…**

ALCOSAN. Allegheny County Sanitary Authority.

# Upper Monongahela Planning Basin

Basin Quarterly Activity Report #7

## In the Upper Monongahela Communities

Several meetings with ALCOSAN, municipal representatives, and stakeholders have occurred to coordinate ALCOSAN's and the municipalities' planning efforts. Meeting topics have covered flow estimates, informational needs, alternatives under consideration, including plans for flow reduction and degree of conveying wastewater flows downstream, and potential for green solutions.

ALCOSAN hosted the Upper Monongahela Basin Planning Committee (BPC) Meeting #9 on February 18, 2011. Key topics included an update of the Basin and Regional-based Alternatives analyses, a discussion of the municipalities' wet weather planning information to date, as well as a discussion of municipal utility consolidation and regionalization alternatives.

## In the Region … ALCOSAN Updates

**CSO Flag Program.** The CSO Flag Program, managed by the Allegheny County Health Department (ACHD), provides an advisory when a combined sewer overflow (CSO) alert has been issued. Alerts are issued when significant rainfall causes sewers carrying a combination of sewage and storm water to overflow into rivers and streams. There are CSO flag locations along the Allegheny, Ohio, and Monongahela Rivers. The 2011 CSO Flag Program's public notification period is May 15 through September 30. For more information, visit www.achd.net.

In addition, ALCOSAN complements the CSO Flag Program with its SOAK Program. The Sewer Overflow Advisory Key (SOAK) provides up-to-the-minute plant operation related to CSOs. It also spells out what activities are advisable during the red-yellow-green stages. Visit www.alcosan.org and click on the SOAK program on the right hand side of the home page.

**ALCOSAN Community Outreach.** ALCOSAN hosted a booth at the 2011 Allegheny League of Municipalities (ALOM) Spring Conference. Over 200 attendees visited ALCOSAN's booth and received information about wet weather control technologies and ALCOSAN's regional wet weather control planning efforts. In addition, an informational booklet was made available that provided a comprehensive update on the overall ALCOSAN Wet Weather Program. Over one hundred people attended a presentation by ALCOSAN Executive Director Arletta Scott Williams entitled "16 Months Left to Speak Out – Don't Miss Your Opportunity". Extra booklets are available by calling (412) 734-8733.

Communicating and coordinating with elected officials and municipal managers was a key topic of discussion at the 9th Customer Municipality Advisory Committee (CMAC) meeting held on March 1, 2011. ALCOSAN also presented information on the progress of the Wet Weather Plan through December 2011. This update provided insight on the development of regional alternatives, as well as the status of ALCOSAN's requests for municipal planning information required by the Municipal Consent Orders. Finally, it was documented that the CMAC is supportive of ALCOSAN's proposed regionalization study to be undertaken by the Allegheny Conference on Community Development.

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report #7

## In the Region … ALCOSAN Updates (continued)

The 9th Regional Stakeholder Group (RSG) meeting, held on March 17, 2011, included a presentation of Etna Borough's downspout disconnection program; a discussion on municipal wet weather controls; and, the development of regional wet weather controls. Green technologies and storm water management continue to be points of emphasis for the RSG.

**Meetings.** Your constituents reach you at home, by phone, at council meetings, and in the supermarket. Will you be ready? Please make the effort to attend, participate in, and promote any and all wet weather planning meetings. The clock is winding down until the Regional Wet Weather Plan is complete, and it is too comprehensive to digest AFTER it is completed. Take advantage of ALCOSAN's offer to meet with you or your council to discuss. If you have a particular group that will benefit from a presentation, contact ALCOSAN at (412) 734-8353.

## On the Horizon - Future Actions

***Save the date***… ALCOSAN's annual Open House will be held on September 17, 2011. The Open House is fun, educational, and includes activities for all ages.

***Get ready***…This fall, ALCOSAN will again host a series of informational community meetings to provide updates on basin planning activities. Meeting dates and locations will be published in the next *Basin Quarterly Activity Report*.

***Upcoming Meetings***
CMAC Meeting #11 – Tuesday, August 2, 2011
RSG Meeting #11 – Thursday, August 18, 2011

### Contact Information

***Any questions or requests for information may be directed to:***

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report #8

## Evaluations and Municipal Coordination for the *Basin Facility Plan*

This Basin Quarterly Activity Report (BQAR) summarizes the activities of the Upper Monongahela Basin Planning Team since May 2011. Much of the work by ALCOSAN and the Basin Planners in the last four months has been to integrate the preferred Basin Alternatives from each of the seven Planning Basins into a set of regional control alternatives, through a process called Regional Optimization. ALCOSAN is evaluating the relative increase in operational performance across the Regional Treatment and Collection System from numerous combinations of system-wide and basin level controls. Alternatives are being evaluated based on monetary and non-monetary factors with the goal of developing the most beneficial alternative. Present worth estimates are being developed to represent life cycle costs of the alternatives, which includes capital, operation and maintenance, and renewal and replacement costs. Combinations of control facilities to achieve a variety of CSO control levels, along with phasing, are also being examined.

In the Upper Monongahela Basin, these alternatives include shallow cut consolidation pipelines that would transport wet weather flow from a number of existing overflow points to sites in the areas of Hazelwood, Streets Run, Nine Mile Run, Rankin, and Braddock. Depending on the optimum combination of alternatives, these sites may accommodate a storage tank, a retention treatment basin, or a new drop shaft to a regional storage and conveyance tunnel. The preferred controls will become part of the *Regional Wet Weather Plan* to be submitted for regulatory consideration. The alternative identified in the approved *Plan* would then be implemented based on regional affordability.

Close coordination between ALCOSAN and municipal representatives has been actively continuing, so that ALCOSAN can understand the municipalities' plans to control wet weather flows for each sewershed upstream of the point of connection to an ALCOSAN interceptor. Data such as the control technologies planned, sizing, and cost estimates are relevant to ALCOSAN's analyses. This information is assisting ALCOSAN and the Basin Planners in optimizing the *Regional Wet Weather Plan*.

Results and conclusions will be presented in a *Basin Facility Plan*, which will be submitted to ALCOSAN for review by the end of this year. The control alternatives developed by the municipalities will be summarized in the report, and will be accounted for in the regional integration evaluation.

**ALCOSAN is coordinating with the City of Pittsburgh, Pittsburgh Water and Sewer Authority, the Nine Mile Run Watershed Association, and other stakeholders to identify an acceptable site for a potential facility within Frick Park. Any facility would be mostly below ground and would be coordinated with the Pittsburgh Parks Master Plan.**

**More inside…**

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report #8

## In the *Upper Monongahela Basin* Communities

The next Upper Monongahela Basin Planning Committee meeting will be held on **October 13, 2011 from 9:30 am to 11:00 am** at the West Homestead Borough Building in the Council Chamber Room. The building is located at 456 West 8th Avenue in West Homestead.

At the previous meeting on May 20, the Basin Planner provided updates about the Basin Alternatives Development and the System-Wide (seven-basin region) Alternatives Development. An updated Program Schedule was distributed, with particular note that draft *Basin Facilities Plans* are scheduled for later this year. By November, ALCOSAN will need another update from the municipalities about overflow control plans before the *Facilities Plans* are drafted.

## In the Region … ALCOSAN Updates

*Development of System-Wide Alternatives* ALCOSAN has integrated the preferred basin alternatives from each of the seven Planning Basins with needed accompanying regional conveyance, storage, and treatment facilities. Each of the resulting System-Wide Alternatives represents a complete plan to control all ALCOSAN and municipal combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs) to a selected level of control.

Upon evaluating the overall impacts of the System-Wide Alternatives, ALCOSAN recommended modifications to various components of the basin alternatives to enhance their benefits to water quality and/or to reduce regional implementation costs. Many technical, economic, and regulatory factors were also considered, including:

- Municipal flow projections and planned overflow control improvements
- Maximizing the value of existing conveyance and treatment plant infrastructure
- The cost vs. benefit of treatment plant expansion
- Opportunities to consolidate planning basin facilities
- Co-mingling of sanitary and combined flow
- Water quality benefits, including increased control in or near “sensitive” areas
- Balancing financial capability limitations with regulatory compliance requirements

To identify the most cost-effective mix of basin-based and regional facilities, a number of hybrid alternatives were identified and evaluated. Six different tunnel configurations with various combinations of remote CSO and SSO facilities along the rivers were analyzed. Control variables included SSO control for three different storm intensities and two increased treatment plant capacities at the Woods Run facility.

At a CSO control level of 4 to 6 overflows per year and an SSO control level corresponding to the 2-year frequency storm, one of the leading system-wide control alternatives appears to be a new regional storage / conveyance tunnel extending from the Woods Run WWTP up the Allegheny and Monongahela Rivers to serve the Main Rivers, Lower Ohio Girty’s Run (Allegheny portion), Upper Allegheny, Upper Monongahela, Chartiers Creek, and Saw Mill Run Planning Basins. The Lower Ohio Girty’s Run (Ohio portion) and Turtle Creek Basins are to retain their preferred basin-based overflow control alternative components.

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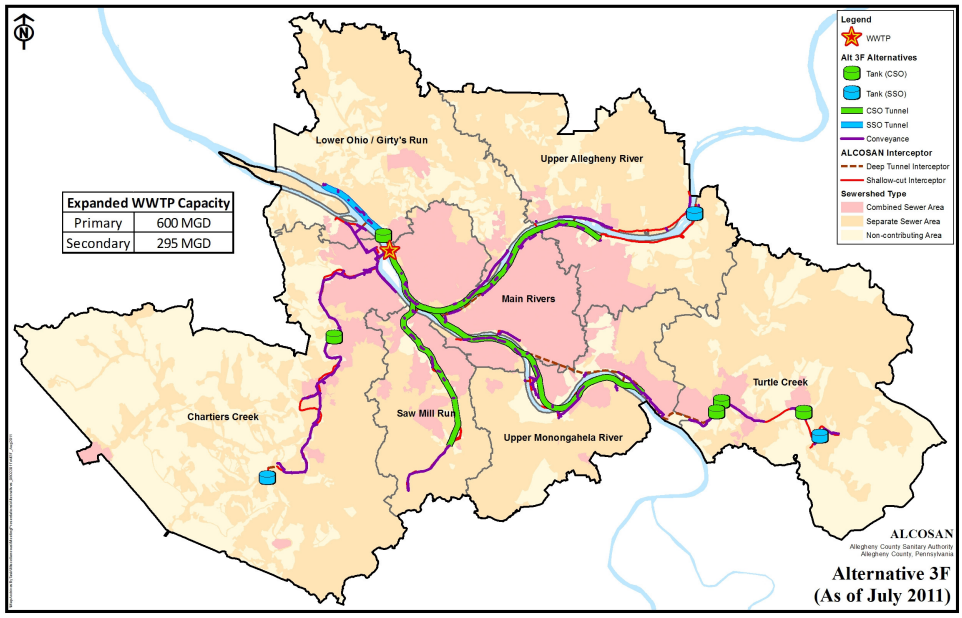
# Upper Monongahela Planning Basin

Basin Quarterly Activity Report #8

## In the Region … ALCOSAN Updates (continued)

Variations of this alternative were also analyzed at SSO control levels corresponding to the 10-year frequency storm and the Typical Year rainfall. This system-wide alternative is illustrated in the figure below.




## On the Horizon - Future Actions

***Get ready***…This Fall, ALCOSAN will host a series of informational Town Hall meetings to provide updates on basin planning activities. Dates for **Upper Mon Basin-specific Town Hall meetings** are as follows:

- Monday, October 24 (5:30 PM – 7:30 PM), Brentwood Library Community Room
- Thursday, November 3 (10:00 AM – Noon), Courtyard by Marriott, West Homestead

**Region-wide Town Hall meetings** will also be held at the following locations:

- Wednesday, November 9 (5:30 PM - 7:30 PM), IBEW #5 Circuit Centre
- Tuesday, November 15 (10:00 AM - 4:00 PM), Heinz History Center

***For more information, and for a list of all of the upcoming Town Hall meetings, please go to www.alcosan.org***

### Contact Information

***Any questions or requests for information may be directed to:***


Timothy Prevost, P.E., ALCOSAN Manager of Wet Weather Programs, 412-734-8731, timothy.prevost@alcosan.org

Or

Curt Courter, P.E., Basin Planner, Upper Monongahela Basin, 412-281-6161, ccourter@hazenandsawyer.com

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report #9

## Finalizing the Upper Monongahela Facilities Plan

This Basin Quarterly Activity Report (BQAR) summarizes the activities of the Upper Monongahela (UM) Basin Planning team since fall 2011. The UM Basin Planning team is in the process of finalizing the Final Basin Facilities Plan (BFP). The Final BFP is part of the larger Wet Weather Plan (WWP) required by the United States Environmental Protection Agency to address problems associated with combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs) in the ALCOSAN service area.

The UM Basin Facilities Plan defines the facilities and conveyances specific to the UM Basin that are important components of ALCOSAN's preferred System-Wide Alternative, known as Alternative 3f-modified. Regionally, Alternative 3f-modified eliminates ALCOSAN SSOs for a 2-year design storm (even though there are no ALCOSAN SSOs in the UM Basin), and the Plan also generally controls ALCOSAN CSOs to 4-6 overflows/year, with the exception being the elimination of those CSOs near Sensitive Areas. The UM Basin Facilities Plan describes the proposed facilities and conveyances and demonstrates the technical feasibility and cost-effectiveness of the proposed control measures. The Plan also ensures the use of practical and feasible sites and routes.

The UM Basin Facilities Plan represents the culmination of the Feasibility and Present Worth Analyses. The Feasibility Report and Present Worth Analysis identified, developed, and evaluated Site Alternatives (site-specific control alternatives) and Basin Alternatives (Basin-wide control alternatives). The report focused on the identification of the preferred control alternative at the Planning Basin level, while discussing the general approach to identifying and evaluating control alternatives. Throughout this process, the UM Basin Planning team collaborated with the 20 UM Basin customer municipalities and three authorities to ensure that the proposed ALCOSAN and municipal control technologies and sites were reviewed and discussed.

The UM Basin Facilities Plan proposes to consolidate excess wet weather flows from outfalls within several areas (Hazelwood, Homestead Run, Waterfront/Streets Run, and the Mon Valley) to a new storage and conveyance tunnel, which generally follows the alignment of the Monongahela River from Pittsburgh up to the eastern side of Rankin. Drop shafts would be constructed to intercept and divert the flow in the relatively shallow consolidation sewers to the deeper level of the tunnel. Another feature of Alternative 3f-modified in the UM Basin is the greater degree of CSO control in the sensitive area of the river near Sandcastle Water Park.

Much of the new consolidation sewers in the UM Basin Facilities Plan will be constructed using trenchless technology like microtunneling (pictured above) to minimize surface disruption

**UM Basin Planning Committee Meeting #12**
**May 11, 2012 9:30 AM**
West Homestead Borough Bldg.
456 West 8th Avenue
West Homestead, PA 15120

**More inside…**

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report #9

## In the Upper Monongahela Communities

Basin Planning Committee (BPC) Meeting No. 11 was held on October 13, 2011 at the West Homestead Borough Building in Council Chambers. Discussion topics included an overview of the project to date, progress on the basin planning process, the DRAFT Basin Facilities Plan, status of municipal planning within the UM Basin, as well as updates on the progress of the ALCOSAN Wet Weather Program and the 18-month Regionalization Study.

BPC Meeting No. 12 will be held at 9:30 AM on May 11, 2012, at the West Homestead Borough Building, 456 West 8th Avenue, West Homestead, PA 15120. The meeting will include a report on the Final UM Basin Facilities Plan and an update by the Program Manager on the draft WWP.

## In the Region … the Draft Wet Weather Plan

A strategic planning effort, mandated by a federal Consent Decree (CD), will achieve an important milestone when ALCOSAN officially releases its draft WWP for public review and comment on July 31, 2012. The WWP will provide a detailed strategy to eliminate existing SSO discharges and control CSO discharges in order to improve water quality in the region's rivers and streams for aquatic life, public water supply, and recreational use protection.

A comprehensive list of potential control alternatives was developed, subjected to computer simulation modeling, water quality and financial analyses, and then integrated to identify the most cost effective solution for the region. Facility improvements described in the Plan are intended to provide the needed sewer system capacity for continued population and economic growth throughout the ALCOSAN service area through 2046. The CD requires that, after review and approval by federal, state, and county regulatory agencies, construction to implement the Plan would be completed by 2026.

A recommended Plan has been developed that would begin with the expansion of the ALCOSAN WWTP from its current capacity of 250 million gallons per day (mgd) to 600 mgd for primary treatment and 295 mgd for secondary treatment. The Plan also includes a new tunnel conveyance and storage system, parallel to the existing interceptor sewers, which would extend along the Allegheny, Ohio, and Monongahela Rivers and along Saw Mill Run. Additional relief sewers along Chartiers Creek and Turtle Creek would convey additional wastewater flow from municipal customers to the ALCOSAN plant. A series of storage facilities placed at strategic locations would capture peak wet weather flow to be later released for treatment. The plan would meet regulatory requirements and achieve the desired goals, but the estimated cost of $3.6 billon is far more than the region can afford.

According to an analysis utilizing federal affordability criteria, the region's affordability guidelines establish an upper limit of $2 billion through the 2026 construction period required by the CD. Three options that prioritize different improvements are being considered that would stay within affordability guidelines and allow for cost effective expansion for additional improvement phases in the future. One would give priority to eliminating SSOs. A second option would give priority to improving water quality. A third alternative would attempt to provide balanced priorities between CSO and SSO control, water quality improvement, and continued economic development.

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# Upper Monongahela Planning Basin

Basin Quarterly Activity Report #9

## In the Region… ALCOSAN Community Outreach

**Customer Municipalities Advisory Committee (CMAC)**
Throughout 2012, CMAC members will be engaged as partners in ALCOSAN's effort to educate municipal representatives and solicit comments on the draft Wet Weather Plan (WWP). During meeting #13, convened on March 20, 2012, CMAC members previewed the progress of the draft WWP, provided comments on the long-term recommended plan, and were presented with three options to prioritize improvements while staying in affordability guidelines.

**Regional Stakeholder Group (RSG)**
ALCOSAN will continue to reinforce its partnership with the Regional Stakeholder Group (RSG) by actively engaging the RSG for the citizen perspective and as ambassadors for the draft WWP. During meeting #13, held on March 28, 2012, RSG members shared their perspectives on each of the prioritized control plans that adhere to the affordability guidelines. Members expressed an interest in a flexible Plan that moves toward compliance but allows the ability to investigate green infrastructure.

**New Outreach Initiative**
ALCOSAN is taking the show on the road! This spring, ALCOSAN will launch a Grassroots Outreach initiative to increase awareness and inform the public about ALCOSAN and the Wet Weather Plan (WWP). ALCOSAN recognizes that there are multiple ways to inform and involve service area stakeholders. To supplement its ongoing public outreach efforts, ALCOSAN has prepared a brief presentation designed to explain the "why" and "what" of the draft WWP and how the public may review and comment on the draft. To schedule a presentation as an agenda item at your community based organization or at your municipal council meeting, contact the ALCOSAN Public Relations Department at (412) 734-8353.

## On the Horizon - Future Actions

***Get ready***…
This fall, following the release of the draft Wet Weather Plan, ALCOSAN will host a series of public hearings to solicit public comment on the draft Plan. For hearing dates, times, and locations, please visit the ALCOSAN website at www.alcosan.org in July.

***Save the date***…
ALCOSAN's annual Open House will be held on Saturday, September 15, 2012. In addition to presentations about the draft WWP, this free annual event features tours of the treatment plant and laboratory, hands-on activities and exhibits, games, food, and fun for all ages.

**Contact Information**
***Any questions or requests for information may be directed to:***

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Visit ALCOSAN's website at: www.alcosan.org