

**Appendix A-2:
Newsletters**

Basin Quarterly Activity Reports (BQAR) by Basin

Main Rivers Basin

Basin Quarterly Activity Report

Main Rivers Basin

Quarterly Key Points

The ALCOSAN Consent Decree requires ALCOSAN to comply with Combined Sewer Overflow (CSO) policy and eliminate all Sanitary Sewer overflows (SSOs). To facilitate the requirement of this legal agreement, the entire ALCOSAN service area was divided into seven planning basins which comprise ALCOSAN's regional planning area. The MR Planning Basin includes three (3) municipalities: the City of Pittsburgh/Pittsburgh Water and Sewer Authority (PWSA); a portion of Reserve Township; and a small segment of Ross Township. See Figure 1.

The planning process requires close coordination and interaction with ALCOSAN, customer municipalities, and their wet weather and sewage facilities studies and improvements. Similar planning efforts are being undertaken in the six other basins with all plans being integrated into a single, regional wet weather plan in 2011.

The first year of activities in the Main Rivers Planning Basin is complete. Key achievements during the first year of the project include:

System Characterization

- Flow monitoring data for over 300 monitoring sites within the MR Basin study area has been received and utilized in establishing model extents.
- The MR planning team submitted a Draft Current Information and Conditions Report to ALCOSAN for review. The Report summarizes the MR Basin existing system information.
- The MR Basin planning team has established the extent of the hydraulic model network. It will be the basis for MR Basin planning flow projections. As the project evolves and greater understanding of the study area is gained, the model extents may change in some areas.
- Based on the review of existing conditions and available information, along with communication with municipal representatives, the MR Basin Planning team has completed the hydraulic model physical characteristics.

Basin Planning Tools

- The MR Basin Planning Team has held four (4) Basin Planning Committee meetings. Each meeting represents a key forum to meet with municipal representatives, exchange information, provide technical and program updates, and address any questions or concerns.

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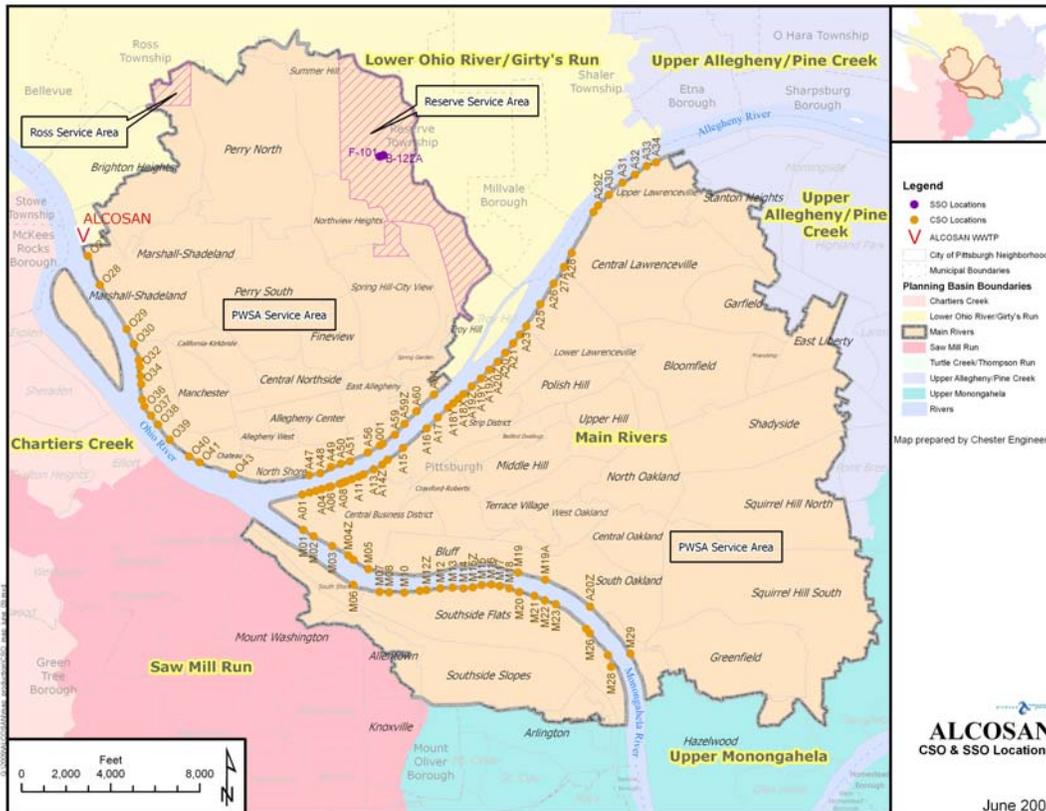
Main Rivers Basin

Alternative Development

- The MR Basin Planning Team is in the process of identifying application treatment technologies and potential sites, along with the development of the screening process that will be utilized in preparing the Screening of Controls and Sites Report, due at the end of October 2009.

Basin Accomplishments

- The Main Rivers Basin Planning Team believes that working closely with ALCOSAN, PWSA, Ross, and Reserve Townships, along with local stakeholders, is an accomplishment. This wet weather project requires working together to identify the most practical and cost effective alternatives for the entire region.



Basin Quarterly Activity Report

Main Rivers Basin

On The Horizon...Your Participation

The Main Rivers Basin Team will discuss expanded outreach initiatives with the MR Basin Planning Committee at the next quarterly meeting, scheduled for the fall of 2009. Beginning in early 2010, the first of a minimum of two (2) public forums will be held in the MR Basin. These meetings will be open to any and all interested members of the public. These public forums will provide a framework to discuss and explain wet weather issues, the planning process, potential solutions, and regional integration.

Public Information & Outreach

Public input is a key element in the wet weather planning process. To date, the key outreach mechanism has been the MR Basin Planning Committee, convened to coordinate ALCOSAN's wet weather planning efforts with the municipalities. Each BPC meeting agenda includes a public involvement update. In addition, at critical points in the planning process, such as discussion of potential facility sites, BPC meeting participation will be expanded to include basin-specific environmental groups, governmental officials, and other local stakeholders.

ALCOSAN recently convened the Customer Municipal Advisory Committee (CMAC) and the Regional Stakeholder Group (RSG). The CMAC meets quarterly to provide guidance and solicit feedback for ALCOSAN's Long-Term Wet Weather Control Plan. The County Executive appointed the 14 members of the CMAC to represent the seven planning basins and to act as the Steering Committee for the Regional Stakeholder Group. The Regional Stakeholder Group, which also meets quarterly, is comprised of approximately 35 representatives of academia, municipal government, regional government and land use entities, and special interest groups. The purpose of this group is to assist with public participation.

In the future, the outreach activities will be expanded to include public forums, distribution of printed materials, such as this Basin Quarterly Report, electronic communication, and targeted outreach efforts to ensure the participation of MR Basin stakeholders.

Contact Information

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

Mike Lichte, ALCOSAN Manager of Planning, 412-732-8004, Michael.Lichte@alcosan.org

Or

Allen Fathi, Basin Planner, Main Rivers Basin, 412-809-6600, afathi@chesterengineers.com

Basin Quarterly Activity Report

Main Rivers Basin

Basin Planning Committee Updates

The Fourth Basin Planning Committee meeting was held on Thursday, June 4, 2009 at the PWSA offices on Penn Avenue. The Agenda included discussions on the following topics:

- Update on flow monitoring work that has been completed and status report on the hydraulic model;
- Overview of stakeholder activities, meetings and outreach programs, including an update on the Municipal Advisory Committee and Regional Stakeholder Group;
- Presentation and discussion of the Alternatives Development Process, Technology Screening, Site Screening and Control Alternatives;
- Discussions on possible early action multi-municipal projects for which ALCSOAN is exploring funding opportunities; and
- Update on the approach to collecting financial information to support the wet weather program objectives.

Future Actions

The Basin Planning Committee meetings will continue to serve as the primary venue for information exchange. Basin forums for a wider stakeholder audience are in the planning stage. Our next meeting will be scheduled for the early fall of 2009. Local stakeholder participation is anticipated.

The MR Basin Planning Team will continue to prepare all interim reports required to assist in the development of the Final Facilities Plan. This plan must be completed and submitted by June 2011. Following the submission, ALCOSAN will begin preparing a Regional Wet Weather Plan, which will require the consolidation of the Facilities Plans for all seven ALCOSAN planning basins, together with the integration of the Municipal Feasibility Study recommendations for all 83 customer municipalities. The Municipal Feasibility Studies are due for submission to the regulatory agencies by July of 2013.

The need for coordination, cooperation and communication between ALCOSAN and the Communities will increase as the regional planning process continues and the final Regional Wet Weather Plan is developed. The Basin Planning Team's one-on-one meetings with municipalities will continue as needed.

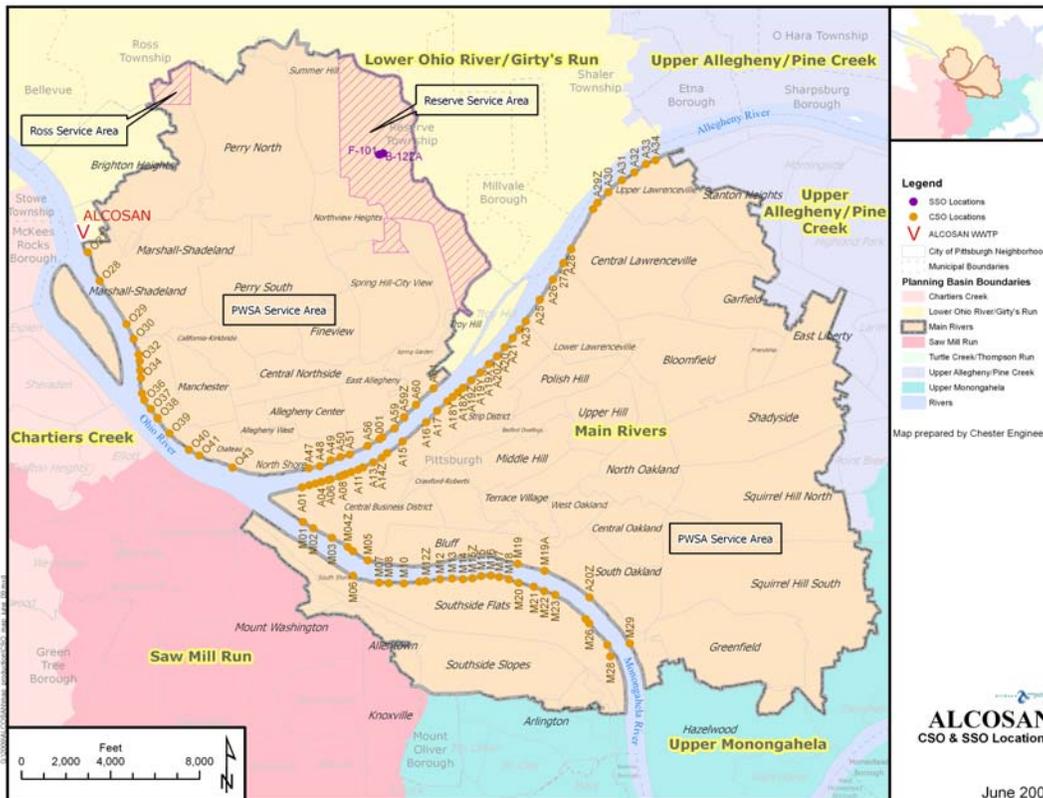
The MR Basin Planning Committee encourages PWSA, Ross and Reserve Townships to incorporate an item on their Official Meeting Agenda to update their communities on the wet weather planning process, including presentation of this Basin Quarterly Activity Report.

Basin Quarterly Activity Report

Main Rivers Basin

Quarterly Key Points

ALCOSAN's Consent Decree requires them to comply with Combined Sewer Overflow (CSO) policy and eliminate all Sanitary Sewer overflows (SSOs). The Main Rivers Planning Basin is one of seven ALCOSAN planning basins, and consists of three (3) municipalities: the City of Pittsburgh; a portion of Reserve Township; and a small segment of Ross Township.



The MR planning process requires close coordination and much interaction between ALCOSAN and their customer municipalities regarding their wet weather plans and sewage facilities studies. Similar planning efforts are being undertaken in the six other basins – all seven plans will be integrated into a single, regional wet weather plan by January, 2013. Key MR achievements during the past quarter include:



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System Characterization

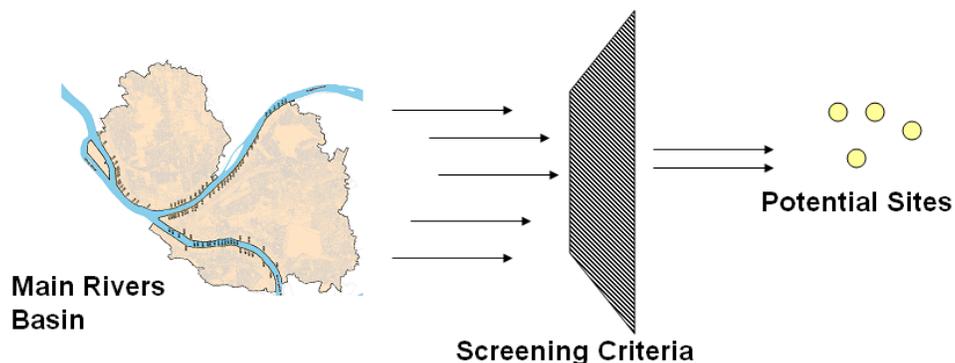
- Based on a review of existing conditions and available information, the Main Rivers Planning Basin team has completed construction of their hydraulic and hydrologic model and physical characteristics of the collection system within the basin.
- The Main Rivers Planning Basin Team has completed calibration of the hydrologic and hydraulic model. They are using this tool for the analysis and evaluation of overflow control alternatives to meet ALCOSAN Consent Decree requirements.
- The team is working on a Hydrologic and Hydraulic Model Validation and Characterization Report to be submitted to ALCOSAN.

Basin Planning Tools

- The Main Rivers Planning Basin Team recently held its fifth (5) Basin Planning Committee meeting. Each meeting is a forum to meet with municipal representatives, exchange information, provide technical and program updates, and address any questions or concerns.

Alternative Development

- The planning team is in the process of identifying applicable overflow control technologies and potential sites for such technologies within the basin. This information will be used in preparing the Final Screening of Controls and Sites Report.
- The control technologies being explored include: treatment, source controls, conveyance and storage.
- The technology screening process would eliminate unsuitable control technologies from further consideration in the MR Basin.
- The site screening process would be used to identify possible locations in the basin that control technologies could potentially be built.





ALCOSAN. Allegheny County Sanitary Authority.

Basin Quarterly Activity Report

Main Rivers Basin

On The Horizon...Your Participation

Please join us this fall, as the Main Rivers Basin team launches three public forums to allow citizens and community stakeholders the opportunity to learn about sewage overflows and the development of ALCOSAN's Regional Sewage Plan.

We will convene three public meetings, conducted as open houses:

Tuesday, November 10, 2009

Brashear Center (Association) 2005 Sarah Street, Pittsburgh, PA 15203

Thursday, November 12, 2009

The Union Project 801 North Negley Avenue, Pittsburgh, PA 15206

Tuesday, November 17, 2009

Hilltop United Methodist Church 631 East Warrington Avenue, Pittsburgh, PA 15210

The open houses will be convened from 7:00 to 9:00 PM. At 7:30 PM, there will be an informational presentation about the wet weather issue, ALCOSAN's Wet Weather Program, and the special conditions of the Main Rivers Basin. There will be informational kiosks open to the public providing information about wet weather issues, Consent Decree requirements, source control, and wet weather technologies.

The public forums are free and open to all. Refreshments will be served and there will be children's activities available. Whether you are new to the wet weather issue or you are already informed, please join us to learn about this key issue and its importance to your community and to the region.

If you know of an organization in your community that should be informed, please contact Allen Fathi, Main Rivers Basin Planner. His contact information may be found at the end of this newsletter).



Basin Quarterly Activity Report

Main Rivers Basin

Public Information & Outreach

Public input continues to be a key element of the basin planning process. The Main Rivers Basin Planning Team has been informing and educating the public by way of the Basin Planning Committee (BPC) meetings, through meetings of the Customer Municipality Advisory Committee (CMAC) and the Regional Stakeholder Group (RSG), and through distribution of quarterly reports such as this one.

The Main Rivers Basin Planning Committee last met on Tuesday, October 20th. The MR team provided an overview of the basin sites and technologies screening evaluation. In addition, attendees received technical, financial, and public involvement updates.

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. The CMAC met recently on Wednesday, October 14, 2009.

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. The RSG met on Thursday, October 15, 2009.

For more information about the Main Rivers Basin Planning Committee, the Customer Municipality Advisory Committee and the Regional Stakeholder Group, please visit the ALCOSAN Municipal website, at <http://municipalities.Alcosan.org>.



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Basin Planning Committee Updates

The Fifth Basin Planning Committee meeting was held on Tuesday, October 20, 2009 at the PWSA offices on Penn Avenue. The Agenda included discussions on the following topics: technical data, financial data, Municipal/ALCOSAN coordination and an overview of the sites and technologies screening and evaluation process. The Basin Planning Committee meetings will continue to serve as the primary venue for information exchange. Basin forums for a wider stakeholder audience are in the planning stage. Our next meeting will be scheduled for January of 2010.

Program Updates

Regional Integration through Technical Standards

An important aspect of ALCOSAN's wet weather planning is the development of technical standards and protocols which will ensure a seamlessly integrated Wet Weather Plan that considers the local priorities identified in each of the seven basins. ALCOSAN's Program Management team is responsible for such coordination.

The flow monitoring program is one example which was carried out by four separate firms, and produced quality information that has been and will continue to be used by the Basin Planning teams and customer municipalities.

The effectiveness of this standardization should again be demonstrated when the models from each of the seven basins are integrated into a system-wide model. Basin Planning teams are extending the hydraulic models to include critical portions (identified by ALCOSAN's Consent Decree) of the municipal collections systems. These models, together with the data from the flow monitoring program will be used to assess a range of alternatives to control wet weather flow and improve water quality. Through documents, regular 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 Wet Weather Plan that addresses local and regional challenges.



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Future Actions

The planning team will continue to prepare all interim reports required to assist in the development of the Final Facilities Plan. This plan must be completed and submitted by June 2011. Following the submission, ALCOSAN will begin preparing a Regional Wet Weather Plan, which will require the consolidation of the Facilities Plans for all seven ALCOSAN planning basins, together with the integration of the Municipal Feasibility Study recommendations for all 83 customer municipalities. The Municipal Feasibility Studies are due for submission to the regulatory agencies by July of 2013.

The Main Rivers Basin Planning Team believes that working closely with ALCOSAN, PWSA, Ross, and Reserve Townships, along with local stakeholders, is an accomplishment. This wet weather project requires working together to identify the most practical and cost effective alternatives for the entire region.

The Main Rivers Planning Basin Team encourages PWSA, Ross and Reserve Townships to incorporate an item on their Official Meeting Agenda to update their communities on the wet weather planning process, including presentation of this Basin Quarterly Activity Report.

Contact Information

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Mike Lichte, ALCOSAN Manager of Planning, 412-732-8004, Michael.Lichte@alcosan.org

Or

Allen Fathi, Basin Planner, Main Rivers Basin, 412-809-6600, afathi@chesterengineers.com



Basin Quarterly Activity Report

Main Rivers Basin

Quarterly Key Points

The Main Rivers (MR) Basin Planning Committee met for the fifth time on Tuesday, October 20, 2009. At the meeting, the MR Team provided an overview of the basin sites and technologies screening evaluation process that the Team had recently finalized. In addition, attendees discussed the upcoming technical, financial, and public involvement work.

In the past several months, the MR Basin Planning Team completed the Screening of Controls and Sites Report (SCSR), which was submitted to ALCOSAN for review in December 2009. The report evaluated wet weather control technologies such as treatment processes, source controls, conveyance methods, and storage units as means of controlling overflows. Additionally, a multi-step screening process was used to identify possible sites and routes in the MR Basin where control technologies potentially could be located.

The team also completed the draft Hydrologic and Hydraulic Model Validation and Characterization Report (H&H Report) which was submitted to ALCOSAN for review in November 2009. The H&H Report summarized the development of the Hydrologic and Hydraulic Model, which is a computer generated representation of the existing collection system. The H&H Model will be used as a predictive tool for further analysis of the collection system behavior during wet weather events. Currently, the Team is working with ALCOSAN to make final refinements to the model and the associated H&H Report.

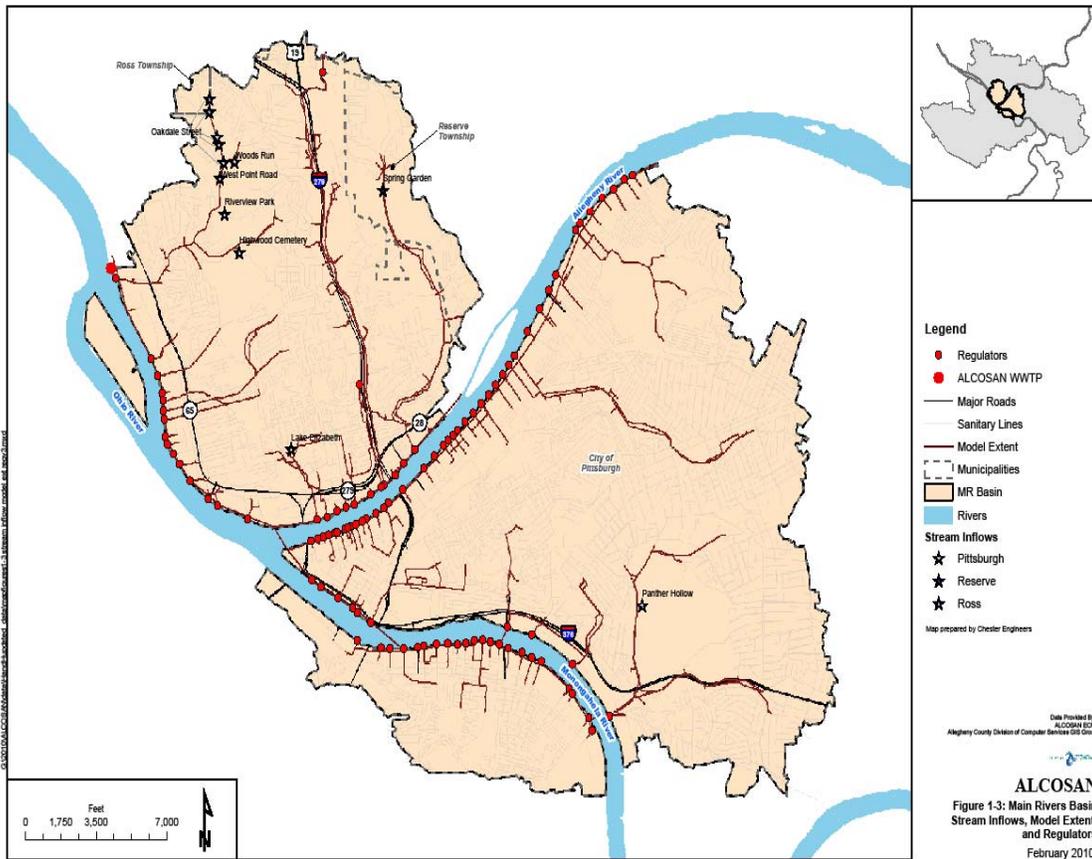
The next step is to utilize information from the SCSR and the H&H Model to develop and evaluate potentially feasible alternatives. This phase will further evaluate control technologies, sites and routes to develop cost effective alternatives within the MR Basin. This information then will be compared to and combined with alternatives from other basins to produce the most preferred solution for the Regional Wet Weather Plan.



Basin Quarterly Activity Report

Main Rivers Basin

MAIN RIVERS BASIN MODEL EXTENT



Basin Quarterly Activity Report

Main Rivers Basin

Public Information and Outreach

Public input continues to be a key element of the basin planning process. The MR Basin Team has been informing and educating the public by way of the Basin Planning Committee (BPC) meetings, meetings of the Customer Municipality Advisory Committee (CMAC) and the Regional Stakeholder Group (RSG), basin and regional public meetings, and through the distribution of quarterly reports such as this one.

CMAC and RSG Updates

ALCOSAN would like to thank the municipalities that allowed the MR Basin Team to utilize their facilities for hosting the public outreach meetings in November 2009. ALCOSAN greatly appreciates the continued support, participation and dedication of time and resources by the RSG (Regional Stakeholder Group) and CMAC (Customer Municipality Advisory Committee) members relative to the development of the long-term, regional Wet Weather Plan.

The first quarterly meeting of 2010 for the CMAC (meeting #5) was held on Tuesday, March 2nd. Informative discussions with CMAC members have provided ALCOSAN with valuable insight when coordinating with its customer municipalities. Select 2010 goals for the CMAC 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.

The RSG's first quarterly meeting of 2010 (meeting #5) will be held on March 16th. With a full 2010 agenda, the RSG will begin evaluating implementation factors that will affect the public and discussing relevant CSO control technologies. Throughout the year, RSG members also will use their organization's network to help build public consensus for the development of a regional solution.

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Public Information & Outreach

Public Forums in the Main Rivers Basin

The MR Basin Team convened and led three public forums to educate and engage elected municipal officials, local stakeholder organizations, and the general public residing in the MR Basin. The MR Basin Team led meetings on the South Side at Brashear Center on November 10, 2009, and in the East End at the Union Project on November 12, 2009. The team also participated in a joint meeting in Mount Oliver on November 17, 2009, led by the Saw Mill Run Basin team.

The public forums were conducted as open houses to allow people with varying degrees of knowledge, educational background, and interest the opportunity to learn more about the wet weather issues in their community and the ALCOSAN Wet Weather Program. Stations were set up around the room for attendees to visit and learn more about the wet weather problem, the basin planning process, and possible solutions. Representatives of the MR team were positioned around the room to engage visitors in conversation and to answer questions about the displays.

At each public forum, a formal presentation was given, including an overview of the Wet Weather issue and planning along with specific issues of the MR Basin. Following the presentation, there was an opportunity for questions and comments.

Regional Public Information Meetings

ALCOSAN convened a series of public informational meetings at the end of January and the beginning of February 2010. These meetings were held in the north, east, west, and south sectors of the ALCOSAN area and in the City of Pittsburgh to provide updates on ALCOSAN's progress toward meeting the federal requirements to address sewer overflows in this region.

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Basin Planning Committee Updates

The Sixth MR Basin Planning Committee meeting will be held on Thursday, March 11, at 10:00 AM, at the Pittsburgh Water and Sewer Authority. The agenda items include:

- Program update;
- H&H modeling;
- Municipal preliminary flow estimates;
- Feasibility Report and PW analysis;
- Public meetings wrap-up;
- Public outreach; and
- Municipal outreach and financial data collection.

Program Updates

Major phases of ALCOSAN's wet weather planning program include: 1) review and analysis of existing data and information; 2) hydrologic and hydraulic (H&H) modeling; 3) alternatives development and analyses; and 4) development of a basin facilities plan. The first two phases of the effort are nearing completion, and the alternatives development and evaluation work has started.

A report on existing conditions has been drafted, along with a report on potential sites and routes for wet weather control technologies. Once these reports are finalized (early 2010), they will be posted on the municipal web sites for use by ALCOSAN's customer municipalities. These models will be "rolled out" through the Feasibility Study Working Group (FSWG) facilitated by Three Rivers Wet Weather.

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. These facilities plans will then be integrated into an overall Wet Weather Plan (WWP) for the region.

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Main Rivers Basin

Future Actions

The Basin Planning Committee meetings will continue to serve as the primary venue for information exchange. During the next few months, ALCOSAN's Technology Outreach program will be hosting a series of Web Seminars by the National Association of Clean Water Agencies (NACWA). Join colleagues from ALCOSAN and their customer municipalities in addressing some of the hottest issues in wet weather and stormwater management. The following seminars will be offered at no cost to registered participants and are scheduled from 2:00 – 3:00 pm in the ALCOSAN Customer Service and Training Building:

- March 10, 2010 - Climate Change: It's All About Water
- June 9, 2010 - The True Impact of Stormwater Runoff
- September 8, 2010 - Green Infrastructure: What's Legal?

For more information, please contact Leah Berfield (412) 732-8052 or leah.berfield@alcosan.org.

The MR Basin Planning Team will continue to work on development of the Final Facilities Plan. This plan must be completed by June 2011. Following the completion of MR Basin Facilities Plan, ALCOSAN will begin preparing a Regional Wet Weather Plan (WWP). The Regional WWP will consolidate the Facilities Plans for all seven ALCOSAN planning basins and the Municipal Feasibility Study recommendations for all 83 customer municipalities. The Municipal Feasibility Studies are due for submission to the regulatory agencies by July of 2013.

The need for coordination, cooperation and communication between ALCOSAN and the Communities will increase as the regional planning process continues and the final Regional WWP is developed. The Basin Planning Team's one-on-one meetings with municipalities will continue as needed. The MR Basin Planning Committee encourages PWSA, Ross and Reserve Townships to incorporate an item on their Official Meeting Agenda to update their communities on the wet weather planning process, including presentation of this Basin Quarterly Activity Report.

Contact Information

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Or

Allen Fathi, Basin Planner, Main Rivers Basin, 412-809-6600, afathi@chesterengineers.com

Main Rivers Planning Basin

Basin Quarterly Activity Report

Development of Wet Weather Control Alternatives

Combined sewer systems are designed to collect rainwater runoff and sanitary sewage in the same underground piping system. Most of the time, combined sewer systems convey all of their wastewater to the ALCOSAN Treatment Plant, where it is treated and then discharged to the Ohio River. However, during periods of heavy rainfall or snowmelt, the amount of stormwater in combined sewers can exceed the capacity of the sewer system or treatment plant and occasionally, these excess combined flows overflow directly to local rivers and streams. In the Main Rivers basin, this occurs through 101 combined sewer overflows (CSOs) and two sanitary sewer overflows (SSOs).

In order to reduce the amount of overflows to the rivers, alternatives to control them are being developed. Examples of control alternatives include tunnels and storage tanks where wet weather flows are temporarily stored until such time that the treatment plant can process the flow. Other alternatives focus on minimizing intrusion of runoff from rain or snowmelt into the combined sewer system. These methods redirect the runoff directly to the rivers by removing stormwater from the combined system through sewer separation or by installing green infrastructure such as rain gardens or retention ponds to slow the flow. Overflow treatment alternatives including Retention and Treatment Basins, Vortex Separators, Screening and Disinfection facilities and High-Rate Clarification units are also being evaluated.

The Main Rivers Screening of Controls and Sites Report was developed to evaluate various control technologies and sites that may be utilized within the basin. Considering that the Main Rivers basin includes mainly densely developed and populated areas of the city, including the business district in downtown Pittsburgh, the alternatives need to be technically appropriate and cost effective. They will also need to be integrated aesthetically into their surroundings.

The next step for the planning team is to meet with the communities in the basin to discuss the alternative development process at the next Main Rivers Basin Planning Committee Meeting.



The photograph shown above is a typical underground storage tunnel. Identified as a potential Wet Weather Control Alternative, storage is the process of controlling the flow rate to a wastewater treatment system by temporarily storing the overflow volume and discharging it to the treatment plant at a controlled rate.

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Main Rivers Planning Basin

Basin Quarterly Activity Report

In the Main Rivers Communities

The Main Rivers Basin Planning Committee (BPC) held their most recent meeting on March 11, 2010 at the offices of PWSA. Several topics were discussed including Hydrologic and Hydraulic (H&H) Modeling, Municipal Preliminary Flow Estimates (PFEs), the Screening of Controls and Sites Report, and guidance for the Main Rivers Feasibility Report and Present-Worth Analysis.

The committee participated in an exercise to help determine which criteria were considered most important when selecting wet weather control alternatives and sites. The following factors were weighted by all basins for alternatives analysis: 1) Economic Factors; 2) Water Quality, Public Health & Environmental Impacts; 3) Public Factors; 4) Operations Impacts; and 5) Implementation Factors. Economic factors, followed closely by water quality, public health and environmental impacts were considered to be the most important. Public Factors were also identified as important. Of least importance to the committee members were operations and implementation impacts.

The Main Rivers Basin Team will meet in the near future with each of the member municipalities on a one-on-one basis to explore options for wet weather control alternatives in each municipality.

In the Region... ALCOSAN Updates

Program Status

Now that existing conditions have been defined and the hydraulic and hydrologic 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 associated 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 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 have a vested interest in the successful outcome of the regional wet weather plan 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 variables of the financial capability assessment

Main Rivers 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. At RSG meeting #6 (May 13th) a presentation was given comparing the major components of four similar wet weather program's system characteristics, impact on water quality, source reduction/green infrastructure, multi-municipal regional plans and cost. RSG members heard information on the variables of the financial capability assessment 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 its series of NAWCA (National Association of Clean Water Agencies) Flow series webinars. The next webinar titled "Green Infrastructure: What's Legal" will be on **September 8, 2010** from 2-3pm. 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: ALCOSAN's basin planning committees will hold the 7th series of meetings throughout **June and July 2010**. The Main Rivers Basin Planning Committee Meeting is scheduled for

- Tuesday, June 29, 2010 at 10:00 am at PWSA Offices, 1250 Penn Avenue

CMAC meeting #7 is scheduled for Tuesday, **August 3, 2010**.

RSG meeting #7 is scheduled for Thursday, **August 12, 2010**.

Contact Information

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

Mike Lichte, ALCOSAN Manager of Planning, 412-732-8004, Michael.Lichte@alcosan.org

Or

William Sukenik, Basin Planner, Main Rivers Basin, 412-809-6600, wsukenik@chesterengineers.com

Or

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

Main Rivers Planning Basin

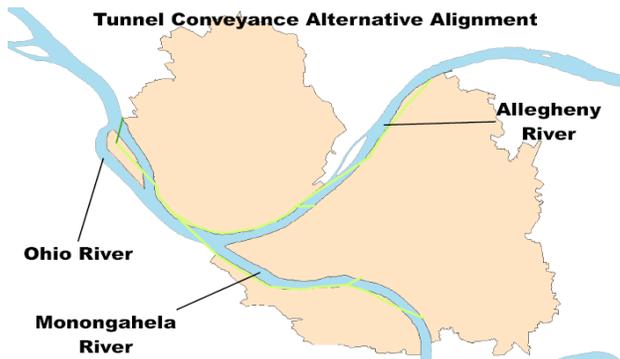
Basin Quarterly Activity Report

Closing in on Potential Basin Solutions – Evaluations of Potential Sites are Key

In the Main Rivers Basin, work is progressing on identifying the most appropriate alternatives for the basin. Potential sites were identified which could accommodate Combined Sewer Overflow (CSO) control facilities. An extensive screening process was developed to eliminate all but the most appropriate sites.

The Allegheny County Tax Assessment database was used to identify possible control facility sites by parcel. The parcels were then subjected to a “fatal flaw” analysis through which concerns for public safety, the presence of critical infrastructure, and the proximity of sensitive areas could be cause to remove it from consideration. The potential for use of each surviving parcel was then rated using an objective scoring system that utilized the following criteria; availability, distance to the nearest CSO, current zoning classification, and size. Parcels scoring well in that evaluation were then evaluated further based on critical factors, i.e., environmental, economic, and social impacts associated with the development of CSO control facilities. The final tally indicated a total of 63 sites having the potential to host a CSO control facility within the Main Rivers Basin.

Once the sites were narrowed down, various configurations of control technologies were applied to those sites to compare the area of the site to the layout area requirements for each control alternative. Again, a ranking of each site was determined with the higher ranked sites being “preferred”. Often groups of existing CSO outfalls could be routed to a single potential control facility, which significantly reduced the number of site and facilities required.



As a result, there are approximately 22 potential sites remaining in the Main Rivers Basin following the rigorous evaluation and screening process.



Attend an ALCOSAN Community Meeting

*October 19, East Liberty
November 4, Downtown*

The community meeting in East Liberty 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 Main Rivers Basin as well as provide ALCOSAN's Annual Customer Information update. The Downtown meeting will be from 10:00 AM to 4:00 PM and will provide a collective look at the community-based solutions for the entire ALCOSAN service area.

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Main Rivers Planning Basin

Basin Quarterly Activity Report

In the Main Rivers Basin Communities

The Main Rivers Basin Planning Committee (BPC) held its most recent meeting on June 29, 2010 at the Offices of the Pittsburgh Water and Sewer Authority. Topics discussed included hydraulic modeling, municipal Preliminary Flow Estimates, development of control alternatives for specific sites and for the Main River Basin as a whole, and ALCOSAN Program Updates. An overview of the status of the Main Rivers Basin CSO control planning efforts indicated that significant progress has been made to carefully select sites and technologies for further consideration. Additional discussions included the viability of Green Infrastructure Technology to manage stormwater flows (roof gardens, street median swales, pervious paving).

In addition, a Financial Data Collection Status and Affordability Analysis was presented. It included information regarding the financial capability of ALCOSAN and their customers to pay for needed improvements based on anticipated capital, operation and debt service burdens and the annual household incomes found within each of the customer municipalities. The presentation, though based on a very preliminary analysis, was found to be very informative and generated several comments from the committee.

The next BPC meeting is scheduled for October 11, 2010 at the PWSA Offices.

In the Region... ALCOSAN Updates

Program Status

ALCOSAN's Basin Planners have been busy of late reviewing the numerous municipal Preliminary Flow Estimates (PFEs) 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 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 BP's planning basin H&H model.

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. ALCOSAN's Project Manager is also heavily involved in the process, combining all seven H&H models into a single Regional Balance Model (RBM). The RBM will be used during the Regional Optimization phase of the project, and will allow ALCOSAN to determine the overall best arrangement of control alternatives sizes and locations throughout ALCOSAN's entire service area.

Main Rivers 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.

ALCOSAN Community Outreach. At 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 RFP. Contact your CMAC representative to share your thoughts and insight on this issue. The next meeting is scheduled for November 9th.

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 WWP. 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 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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Michael.Lichte@alcosan.org

Or

William Sukenik, Basin Planner, Main Rivers Basin, 412-809-6600
wsukenik@chesterengineers.com

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

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



Main Rivers Planning Basin

Basin Quarterly Activity Report # 6

From Feasibility Report to Basin Facilities Plan

This Basin Quarterly Activity Report (BQAR) summarizes activities within the Main Rivers (MR) Basin since the fall of 2010. In November, a Feasibility Report and Present Worth Analysis was submitted to ALCOSAN by the MR Basin Planning Team for review and refinement. This report provides a detailed analysis of potential MR basin control alternatives, and includes a review of existing overflow conditions, hydraulic limitations and site evaluations. Anticipated future service area conditions are discussed, as is the analysis of future hydraulic loadings to the ALCOSAN system through 2046.

The Feasibility Report first provides descriptions of control technologies and sites under consideration, followed by a description of the approach used to conduct more detailed analyses of those technologies and sites. These analyses lead to the development of wet weather control alternatives for the MR Basin. Next, evaluation results and rankings for a variety of performance levels are presented. Finally, an overall summary includes cost and performance analysis for the most preferred basin alternatives, a summary of the related hydraulic modeling results, and an estimate of the capital, operations & maintenance and present worth costs for the MR Basin.

The MR Basin is unique given its proximity to a number of the other ALCOSAN Basins; thus, the consideration of preferred MR alternatives will be integral to the inter-basin cooperation/regionalization effort.

Depending upon site parameters and projected overflow rates and volumes, the preferred alternatives for the MR Basin include combinations of technologies such as RTBs, Screening & Disinfection facilities, and Storage Tanks. Specific alternative/site combinations were often governed by existing, urban site limitations.

Geographic limits and population densities also played a role in the determination of preferred MR alternatives under a Regionally Based perspective, in which the MR basin's control alternatives were developed under the assumption that ALCOSAN's wastewater conveyance and treatment capabilities will be greater than existing capacities.. MR's preferred Regionally Based alternatives, which are still under development, include large diameter storage tunnels, shallow cut tunnels, and source control measures (i.e. sewer separation, inflow reduction, etc).

The MR alternatives must now be integrated into a set of Regional Alternatives during the upcoming Regional Optimization phase. The most promising basin alternatives and sites from each of the seven planning basins will be used to assemble a set of regional control alternatives. Each of these must then be evaluated based on the suitability of available sites and locations, the level of improvement they provide over individual basin alternatives, and the relative benefits to overall operational performance.

It is anticipated that the combining of flows and volumes from the seven planning basins will result in the need for fewer, but larger control facilities. Therefore, a regional overflow control 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 and cost effective regional alternative.



One potential control method being considered in the Main Rivers Basin is the Retention Treatment Basin (RTB). An RTB is a large tank designed to capture and treat combined sewage that would otherwise be released directly into one of our rivers or streams during wet weather events. RTBs treat the combined sewage using settling, screening and disinfection processes before it is discharged.

More inside...

- In the Main Rivers Communities – Page 2
- In the Region...ALCOSAN Updates – Page 2
- On the Horizon – Future Actions – Page 3



Main Rivers Planning Basin

Basin Quarterly
Activity Report # 6

In the Main Rivers Communities

Basin Planning Committee (BPC) meeting No. 8 was held on October 11, 2010, at the offices of the Pittsburgh Water and Sewer Authority (PWSA). Topics discussed included Hydrologic and Hydraulic (H&H) Modeling, Preliminary Flow Estimates (PFEs), the Feasibility Report and Present Worth Analysis, and Program updates. *BPC No. 9 is scheduled for Thursday, February 24, 2011, at 10 AM at the PWSA offices.* Agenda items include Basin Alternatives and their integration into the Regional Plan, Municipal Feasibility Studies, and the 2011 Basin Planning schedule.

Main Rivers Basin representatives also met in December 2010 with the Urban Redevelopment Authority of Pittsburgh and the City of Pittsburgh Department of City Planning to discuss the availability of some potential sites.

In the Region...ALCOSAN Updates

Advancing Green Solutions Implementing successful pilot projects is important for promoting green solutions. ALCOSAN is aware of two local communities that are currently pursuing funding for green pilot projects. The first community's concept plans include using a commercial area to capture runoff, then store and discharge that runoff at a controlled rate. Another concept considers using vegetated swales in a residential community and rain gardens in an apartment complex.

The second community's projects include a concept plan that shows how a commercial area can use porous pavement and a bio-retention basin to capture, store and discharge runoff. Their additional concept plans include porous pavement, rain gardens and a vegetated swale along a residential street. Additionally, approximately 78% of the community's 2,800 residential properties are potential candidates for downspout disconnections.

Both communities are interested in implementing their concept plans. When implemented, these projects will help to develop the local standards needed for widespread implementation.

Affordability United States Environmental Protection Agency (USEPA) 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 Combined Sewer Overflow (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%. 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 most toward the 2% threshold. It will also serve as a benchmark to gauge the impacts of various levels wastewater spending.

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 (O&M) 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.



Main Rivers Planning Basin

Basin Quarterly
Activity Report # 6

In the Region...ALCOSAN Updates (continued)

ALCOSAN Outreach The Feasibility Study Process and Regional Sewer System Management were key topics at the 8th CMAC meeting held on November 9th 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 were 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 December FSWG meeting.

Green Technologies and Stormwater Management continue to be points of emphasis for the RSG. At RSG meeting #8, held on November 16th 2010, CMAC member Michael Kenney, then Executive Director of PWSA, discussed the PWSA's plans to issue an RFP to determine the feasibility of developing a stormwater utility. Also, the plans being made to implement pilot studies of green technologies in two local communities were discussed and supported by the RSG.

During October and November of 2010 community meetings were held within the ALCOSAN service area. There was one meeting in each of the seven basins, except for the Chartiers Creek and Upper Allegheny basins, which each held two meetings. A regional meeting was also held in downtown Pittsburgh. The total attendance at the ten meetings was approximately 170 people. Attendees included elected officials, municipal staff, stakeholder group members, and general citizens. The meetings served to meet the consent order requirements for an annual meeting as well as present information on potential solutions in each basin.

ALCOSAN also hosted a booth to inform the public about the Sewer Overflow Advisory Key (S.O.A.K.) program at the Pittsburgh Boat Show (Monroeville Convention Center) Thursday, January 27 through Sunday, January 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 (WWP) and the S.O.A.K. program. We encourage you to tell your constituents and to attend. Please spread the word!

- **Monroeville Home Show** (Monroeville Convention Center) – Thursday, February 24 through Sunday, February 27.
- **Pittsburgh Home & Garden Show** (Pittsburgh Convention Center) – Friday, March 4 through Sunday, March 13.

Contact Information

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Main Rivers Planning Basin

Basin Feasibility Study

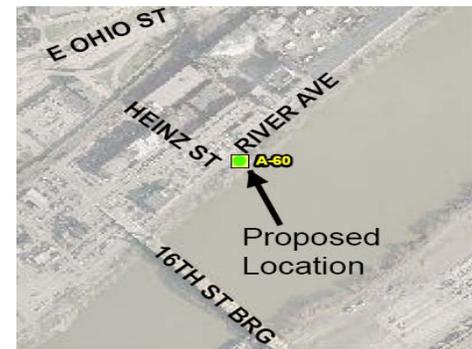
This Basin Quarterly Activity Report (BQAR) summarizes the activities of the Main Rivers Basin Planning team since winter 2010. Additional work has been done to update the Draft Feasibility Report and Present Worth Analysis. A detailed analysis of “future conditions” was conducted to identify anticipated changes to current flow estimates resulting from population changes, development and planned sewer system improvements. These “future conditions” established a baseline from which to evaluate a variety of basin and regional control alternatives for resolving combined and sanitary sewer overflows. Additional topics addressed in this report include a more thorough review of siting options being considered in the Main Rivers Basin and a discussion of how each site was evaluated. Finally, the cost estimates for implementation of these alternatives were refined.

Municipal Planning & Interbasin Alternatives. In support of these efforts, Municipalities within the MR Basin have provided ALCOSAN with local planning information to help establish the “future conditions” baseline. For example, any measures the municipalities plan to take as they implement their own wet weather controls will be incorporated into the ALCOSAN plan. Inter-basin alternatives are also being evaluated for inclusion in the draft feasibility report. Inter-basin opportunities occur when two neighboring basins combine site or basin alternatives at a single location by applying a single technology. These alternatives were developed and evaluated through the collaborative efforts of the MRB planning team and neighboring planning Basins. Preliminary findings indicate that a potential facility planned for the MR Basin may be eliminated by conveying overflows to a shared facility in the Upper Allegheny Basin. Other findings have supported plans for the MR Basin to share two potential drop shaft sites with Lower Ohio/Girty’s Run. The results are intended to further refine alternatives to support a “System Wide” regional plan.

Integration with System-wide Alternatives. The basin planners are working on an additional section to the Basin Feasibility Report titled *Regional Integration*, which will describe how some or all of the MR Basin alternatives will be incorporated in to system-wide alternatives being considered. Additional modeling will also be conducted for defined levels of control (i.e.; 2 years SSO, and 4-6 overflows per year CSO). The goal of this Regional Integration is to aid in determining the best alternatives system-wide, which will help to focus on the most appropriate solutions within the Main Rivers Basin.

Preferred Main Rivers Basin Alternative. Based on current status and information available, it appears that an alternative based on a storage and conveyance tunnel may be the preferred regional Alternative for the Main Rivers Basin. After the lengthy evaluation described above and the geography of the MR Basin, many other alternatives are less suitable to the tight confines of the Basin’s urban area. Further updates to the Draft Feasibility Report and Present Worth Analysis are due by July 1, 2011 and results will be reported in future Basin Quarterly Reports.

Basin Quarterly Activity Report #7



The Main Rivers Basin has identified potential sites, such as the one shown above, for construction of vertical drop shafts to a storage tunnel. Unlike sites for control facilities, drop shaft sites would require much less area for construction and even less space once construction is completed. Drop shafts are designed to route overflows to a deep tunnel used to store and convey it to a centralized treatment facility.

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Main Rivers Planning Basin

Basin Quarterly
Activity Report #7

In the Main Rivers Communities

The Main Rivers (MR) Basin Planning Committee (BPC) meeting No. 9 was held on February 24, 2011, at the offices of the Pittsburgh Water and Sewer Authority (PWSA). Topics discussed included the Basin Feasibility Report, Status of Municipal Feasibility Studies, ALCOSAN Program updates, summaries of recent meetings, and planned “next steps” for the MR Basin team.

BPC No. 10 was held on Thursday, May 26, 2011, at 10 AM at the PWSA offices. Agenda items included Basin Alternatives and their integration into the Regional Plan, Municipal Feasibility Studies, and the 2011 Basin Planning schedule. The Basin Planning team reported on the detailed development of the first preferred MR basin based and regional based alternatives, including cost estimates, site plans, and non-monetary factors.

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 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 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.

Main Rivers Planning Basin

Basin Quarterly
Activity Report #7

In the Region... ALCOSAN Updates (continued)

Sewer overflows impact everyone, and each of us can contribute to the resolution of this critical problem.

Collaboration with the Pittsburgh Water and Sewer Authority (PWSA) continues to be critical, especially in the development of system-wide alternatives. As PWSA is working on completing their own Feasibility Report, the Main Rivers Basin has been meeting with PWSA at the quarterly Basin Planning Committee Meetings, and as-needed to share updates. As the Main Rivers Basin alternatives become more refined, siting and routing opportunities are becoming more understood. The meetings have proved to be valuable in identifying and verifying areas where new developments have created areas of sewer separation that can impact and possibly improve the preferred control alternative. The next anticipated meeting with PWSA will be the regular Basin Planning Meeting scheduled for May 26, 2011 at the PWSA offices. The Main River Basin plans to meet again with PWSA shortly after their completion and distribution of the Feasibility Study.

The 9th RSG meeting on March 17, 2011, included a presentation on 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 can 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 completed, 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 would benefit from a presentation, please 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. 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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Visit ALCOSAN's website at: www.alcosan.org

Main Rivers Planning Basin

Basin Quarterly Activity Report #8

Basin Facilities Plan Development

This Basin Quarterly Activity Report (BQAR) summarizes the activities of the Main Rivers (MR) Basin Planning team since Spring 2011. The MR Basin Planning team completed the Draft Feasibility Study and Present Worth Analysis Report (“the Report”) on the Basin planning activities and Basin alternative analysis and conclusions.

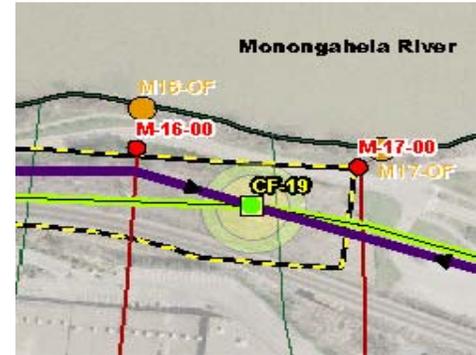
The team summarized earlier prepared reports and identified information within them that was used to develop the Report. In this Report, the MR Basin Planning team identified the most feasible alternatives for the various levels of control, which allowed them to develop the Present Worth Cost analysis for those alternatives. The Report also identified the municipal planning information provided and its impact on the basin alternative analysis. Finally, the Report outlined and analyzed areas of MR Basin integration with adjoining basins and regional planning efforts.

With addition of a seventh and final section, the Report will transform into the MR Basin Facilities Plan. It will outline the facilities that could be constructed, or the actions that ALCOSAN could take, within the MR Basin to address the Consent Decree requirements.

While use of treatment and storage facilities is applicable to some of the basins, for MR, a new tunnel is the primary means for accomplishing the required overflow control. A total of 28 vertical drop shafts are proposed throughout the Basin to convey overflow to the new tunnel. Proposed shallow depth sewers that consolidate and convey overflow to the tunnel are sized to accommodate the “design storm,” a pre-selected storm whose magnitude has a probability of occurrence only once in a specified interval.

Higher levels of control are incorporated in areas deemed sensitive, such as drinking water intakes, marinas, boat ramps, and parks on the main rivers. Under Alternative 3f, this level of control can be achieved by further reducing overflow frequencies to zero overflows per year. Basin Planners are awaiting direction for refinement of Alternative 3f. However, it is anticipated that sensitive area considerations already developed will be incorporated as part of a newly defined “Alternative 3f-modified”.

As the Basin Facilities Plan is advanced, the MR Basin team continues to work with the City of Pittsburgh as sewer system upgrades are evaluated, including a small area of separation of combined sewers within the East Street drainage area.



Legend

-  Drop Shaft
-  Tunnel
-  Regulator
-  CSO
-  Shallow-cut Interceptor
-  Proposed Site

The above graphic depicts Site CF-19 near CSO M-17, located just west of the Birmingham Bridge. A drop shaft to a new tunnel is proposed for this site. Consolidation lines will channel local flow to this point.

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Main Rivers Planning Basin

Basin Quarterly
Activity Report #8

In the *Basin Name* Communities

The Main Rivers (MR) Basin Planning Committee (BPC) meeting No. 10 was held on May 26, 2011, at the offices of the Pittsburgh Water and Sewer Authority (PWSA). Topics discussed included the ALCOSAN Feasibility Report and Basin Facilities Plan, System-wide Analysis and Alternatives, Municipal Planning, Updates on outreach Initiatives, the ALCOSAN Regionalization Study, and next steps for the MR Basin team.

BPC No. 11 is scheduled for Thursday, October 27, 2011, at 10 AM at the PWSA office. The agenda will include a report on the MR Basin Facilities Plan, including Plan progress, integration of Municipal Alternatives, and schedule update. There will also be an update on Municipal Planning Information and a discussion of the status of Municipal Feasibility Studies. An update on public outreach efforts will be given with an emphasis on the upcoming public Town Hall meetings. Finally, there will be a report on the ALCOSAN Regionalization Study.

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 CSOs and 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
- Comingling 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.

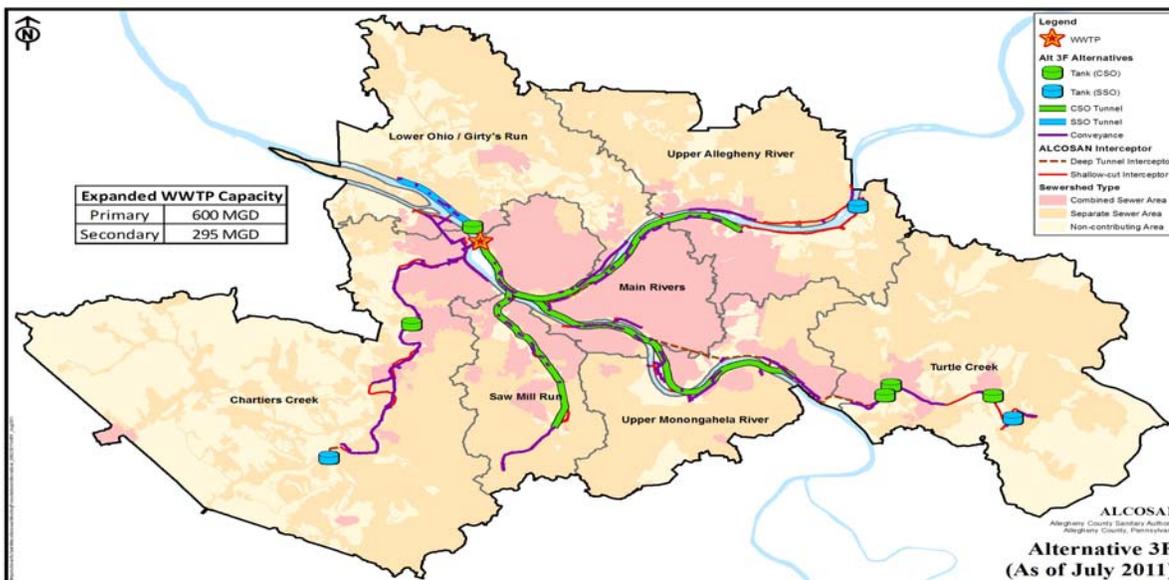
At a CSO control level of 4-6 overflows per year and an SSO control level corresponding to the 2-yr storm, one of the leading system-wide control alternatives appears to be a new regional storage / conveyance tunnel extending from the Woods Run WWTP up the Allegheny and Monongahela rivers to serve the MR, LOGR (Allegheny portion), UA, UM, CC and SMR planning basins. The LOGR (Ohio portion) and Turtle Creek basins are to retain their preferred basin-based overflow control alternative components.

Main Rivers 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-yr storm and the Typical Year rainfall. This system-wide alternative is illustrated in the figure below.



The seven Basin Planners will each base their Facilities Plan on the portions of the recommended system-wide alternative contained in their respective planning basin.

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. The Town Hall meetings for MR are being combined with the Region-wide Town Hall meetings. They will be held as follows:

- 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

Other Upcoming Meetings

- RSG Meeting #12 – Wednesday, November 9, 2011
- CMAC Meeting #12 – Thursday, November 10, 2011

Contact Information

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Main Rivers Planning Basin

Basin Quarterly Activity Report #9

Finalizing the Main Rivers Facilities Plan

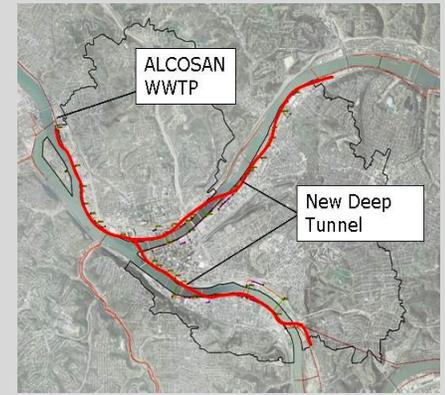
This Basin Quarterly Activity Report (BQAR) summarizes the activities of the Main Rivers (MR) Basin Planning team since fall 2011. The MR Basin Planning team is in the process of finalizing the Final Basin Facilities Plan (BFP). The Final BFP is part of the larger Wet Weather Plan (WWP) required by the 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 MR Basin Facilities Plan defines the facilities and conveyances specific to the MR Basin which are important components of ALCOSAN's preferred System-Wide Alternative, known as Alternative 3f-modified. Alternative 3f-modified eliminates ALCOSAN SSOs for a 2-year design storm and generally controls ALCOSAN CSOs to 4-6 overflows/year, with the exception being the elimination of those CSOs near sensitive areas. The MR 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 MR 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 MR Basin Planning team collaborated with MR Basin customer municipalities to ensure that the proposed ALCOSAN and municipal control technologies and sites were reviewed and discussed.

The recommended MR Basin facilities include 41 drop shafts that connect to a proposed deep tunnel system with tunnel runs along the banks of Pittsburgh's three rivers. A significant portion of flows during wet weather, that otherwise would overflow to the rivers, will be discharged to the tunnel. The tunnel will terminate at ALCOSAN's wastewater treatment plant. Shallow conveyance piping will connect each of the new or existing regulators, which are currently connected to outfalls, to the rivers and drop shafts to the tunnel. They will flow by gravity. Conveyance piping will be installed by open cut construction or by trenchless technologies such as microtunneling, which impose fewer construction impacts. More land intensive small treatment or storage facilities will not be necessary in order to achieve the required control of overflows.

Limited areas for potential stormwater source control, such as sewer separation and green infrastructure (e.g., green roofs), remain for further investigation as measures to supplement the overall control strategy. However, it was previously determined that a more broadly applied strategy of basin-wide source control was not cost-effective and could face substantial institutional issues impacting their timely implementation.



The recommended Basin Alternative includes a new deep tunnel, with approximately 41 drop shaft connections, that conveys wet weather flow to the ALCOSAN Treatment Facility.

MR Basin Planning Committee Meeting #12 May 4, 2012 10:00 AM

PWSA Offices
1200 Penn Avenue, 2nd Floor
Pittsburgh, PA 15222

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Main Rivers Planning Basin

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In the Main Rivers Basin Communities

Basin Planning Committee (BPC) Meeting No. 11 was held on October 27, 2011 at the offices of the Pittsburgh Water and Sewer Authority. 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 MR Basin, as well as updates on the progress of the ALCOSAN Wet Weather Program and 18 month Regionalization Study.

BPC Meeting No. 12 will be held at 10 AM on May 4, 2012, at the Pittsburgh Water and Sewer Authority, located at 1200 Penn Avenue, Pittsburgh, PA 15222. The meeting will include a report on the Final MR 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 billion 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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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