Appendix A-2:

Newsletters

Basin Quarterly Activity Reports (BQAR) by Basin

Lower Ohio/Girty's Run Basin



Lower Ohio/Girty's Run Planning Basin

Quarterly Key Points

There are three general areas of planning activities in the Lower Ohio/Girty's Run (LOGR) Planning Basin: System Characterization; Basin Planning; and Alternative Development/Basin Control Plan. Key accomplishments in each area to date include:

- System Characterization
 - The on-going system information exchange between ALCOSAN and the basin municipalities continues to be excellent and comprehensive.
 - The LOGR basin planning team submitted a Draft Current Information and Conditions Report summarizing the basin's existing system information to ALCOSAN for review. They also forwarded municipal-specific excerpts to each basin municipality for their review and comments.
 - The LOGR planning team has established the extent of the computer hydraulic model network. It will be the basis for basin planning flow projections.
 - Based on the review of existing information, municipal discussions and field verifications, the LOGR planning team has firmed up the hydraulic model physical characteristics.
- Basin Planning
 - Three Basin Planning Committees (BPCs), key forums for technical and program information exchange were established and convened three times. The groups, reflecting the geographic diversity of the basin, are the Ohio River BPC, the Girty's Run BPC, and the Lowries Run BPC.
 - The Girty's Run and Lowries Run Basin Planning Committees decided to meet jointly and will continue to do so until later in the program when area-specific alternatives warrant more detailed, area-specific discussion.
- Alternative Development/Basin Control Plan
 - The basin planning team is beginning the identification of applicable treatment technologies and available sites along with the development of the screening process that will be used to prepare the "Screening of Controls and Sites Report," due at the end of October, 2009.



Lower Ohio/Girty's Run Planning Basin

On The Horizon...Your Participation

Keeping abreast of all of the important on-going activities in a municipality is very challenging. While the various forums are open to all, you may find it more efficient to stay informed through managers, engineers and other municipal representatives who have an active role in this project. Beginning in late 2009 and early 2010, there will be important decision points where your input and active participation will be needed. These opportunities will be conveyed through the Quarterly Activity Report Future Actions section.

Public Information & Outreach

ALCOSAN recently convened the Customer Municipal Advisory Committee (CMAC) and the Regional Stakeholder Group (RSG). The CMAC will be meeting quarterly to provide guidance and solicit feedback for ALCOSAN's Long Term Wet Weather Control Plan. The County Executive appointed the fourteen 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 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. As the Long Term Wet Weather Control Plan moves forward, the RSG will be engaging the LOGR to share insights, concerns, etc. Membership lists and summaries of the CMAC and RSG meetings may be found on the ALCOSAN Municipal Secure Website.

The LOGR Basin-specific public information and outreach program is beginning to take shape and an interactive overview will be presented at the next Basin Planning Committee meetings



Lower Ohio/Girty's Run Planning Basin

Program Updates

- <u>Flow monitoring</u>: During the next few months, some limited flow monitoring will continue in order to collect data to supplement the data already collected. This will yield an additional data set for the hydraulic and hydrologic model which will be used to predict sewer overflows within the basin.
- <u>CSO alternatives</u>: The criteria being used to pre-screen the types of feasible CSO treatment, storage and conveyance technologies will be presented at the June 2009 BPC Meeting. Potential sites for these alternatives (where applicable) are being identified through a combination of GIS, aerial photos, municipal maps, and municipal official interviews. This information will be presented in a future BPC Meeting and summarized in the Screening of Controls and Sites Report to be issued in late 2009.
- <u>Coordination between the municipalities and ALCOSAN</u>: A regional Feasibility Study Workgroup has recently been formed by 3 Rivers Wet Weather to foster understanding of critical technical issues and to develop a common approach for developing the Feasibility Studies required under the municipal orders. The key goal of this workgroup will be to clearly understand the levels of control and develop a balance among treatment of flows at ALCOSAN, remote treatment within municipalities, conveyance of flows from the municipalities, and source control.
- ALCOSAN will provide quarterly website updates on the wet weather plan, with future web updates scheduled for July and November of 2009. A customer friendly interactive map is planned.
- A new secure ALCOSAN Municipal website is up and running. Please visit: http://municipalities.Alcosan.org.



Lower Ohio/Girty's Run Planning Basin

Basin Planning Committee Updates

The fourth round of LOGR Basin Planning Committee Meetings will be held in late June. The Ohio River Sub Basin BPC meeting will be held on Thursday, June 25th, 1:30 P.M. at the Avalon Borough Building and the Girty's Run/Lowries Run Sub Basin BPC meeting will be held on Tuesday, June 30th, 9:00 A.M. at the Girty's Run Joint Sewer Authority Building. Agenda for the meeting includes the following topics:

- Update on the flow monitoring work that has been completed and status report on the computer hydraulic model development
- Overview of the ALCOSAN RSG/CMAC activities as well as an interactive overview of the developing LOGR Basin-specific public information and outreach program
- Presentation and discussion of the wet weather treatment control technologies that will be considered and preliminary site identification approach
- Presentation and discussion, for municipal input, of the screening criteria and approach that will be applied to narrow down the treatment technologies and sites
- Discussion of some early action projects/multi-municipal projects that ALCOSAN is exploring along with a status overview of their Act 537 Funding submittal
- An overview of the ALCOSAN LOGR Basin/Municipal informational exchanges that need to occur between June 2009 and June 2010
- An update on the approach to collect financial information to support the wet weather program objectives



Lower Ohio/Girty's Run Planning Basin

Future Actions

The technical work continues and will be primarily focused on finalizing the hydraulic collection system model, screening of control technologies, and preliminary facility sites availabilities. The Basin Planning Committee Meetings will be the primary vehicle used for information exchange in the near future. Basin forums for a wider stakeholder audience will be in the planning stages during early/mid-summer.

Contact Information

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

Dan Lockard, ALCOSAN Project Manager (412) 734-8370, daniel.lockard@alcosan.org Mark Coleman, LOGR Basin Project Manager (412) 454-5566, mcoleman@wadetrim.com



Lower Ohio/Girty's Run Planning Basin

Quarterly Key Points

This second quarterly report provides a summary of the Wet Weather Plan developments to date in each of the three Lower Ohio/Girty's Run (LOGR) Planning Basin activity areas of System Characterization, Basin Planning, and Alternative Development/Basin Control Plan.

- System Characterization
 - The on-going system information exchange between ALCOSAN and the basin municipalities continues to be excellent and comprehensive.
 - A Draft Current Information and Conditions Report summarizing the LOGR basin existing system has been prepared and is currently under review. Municipal specific excerpts from the report have been sent to each municipality and municipal comments are being incorporated into the final draft report.
 - The LOGR planning team has completed its development of the computer hydraulic model that will be the basis for wet weather flow projections. It is currently under review and will be available for municipal use by the end of this year.
 - A Draft Hydraulics and Hydrology Report has been prepared detailing the development of the system computer model. It is currently under review and will be available for municipal use by the end of this year.
- Basin Planning
 - Three Basin Planning Committees (BPCs), key forums for technical and program information exchange were established and convened. The groups, reflecting the geographic diversity of the basin, are the Ohio River BPC, the Girty's Run BPC, and the Lowries Run BPC. The Girty's Run and Lowries Run Basin Planning Committees decided to meet jointly.
- Alternative Development/Basin Control Plan
 - A draft "Screening of Controls and Sites Report," has been prepared and is currently under review. A municipal workshop to overview the report and process was held on September 1, 2009. One-on-one meetings were held with municipalities where future wet weather control facilities may be constructed to obtain their input into the viability of the proposed feasible siting locations.



Lower Ohio/Girty's Run Planning Basin

Public Information & Outreach

Public input continues to be a key element of the basin planning process. The LOGR Basin 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 LOGR Basin Planning Committee last met on Monday, September 28, 2009 and Tuesday, October 6th. The LOGR team provided an overview of the basin proposed sites and control technologies screening evaluation. In addition, attendees received technical data, 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 meeting #4 was recently convened 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 meeting #4 was recently convened on Thursday, October 15, 2009.

For more information about the Lower Ohio/Girty's Run Basin Planning Committee (BPC), the Customer Municipal Advisory Committee (CMAC) and the Regional Stakeholder Group (RSG), please visit the ALCOSAN Municipal website, at http://municipalities.Alcosan.org.



Lower Ohio/Girty's Run Planning Basin

On The Horizon...Your Participation

Please join us this fall, as the LOGR 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 Wet Weather Plan.

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

Thursday, November 5, 2009 (in collaboration with the Chartiers Creek Basin) **Father Ryan Arts Center**, 420 Chartiers Avenue, McKees Rocks, PA 15136

Wednesday, November 11, 2009 (in collaboration with the Upper Allegheny Basin) **Parkview Banquet Hall**, 726 Midway Drive, Pittsburgh, PA 15215

Wednesday, November 18, 2009 Avalon Borough Building, 640 California Avenue, Pittsburgh, PA 15202

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 LOGR 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. Public comment will be recorded at the meeting and public comment cards will be distributed for additional comments to be submitted directly to ALCOSAN.

These 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, important to your community and to the region.

If you know of an organization in your community that should be informed, please contact Mark Coleman, LOGR Basin Project Manager (contact information on page 6 of this newsletter).

> Report 2 | Fall | 2009 Page 3 of 6



Lower Ohio/Girty's Run Planning Basin

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 one system-wide model. Basin Planning teams are extending the hydraulic models to include critical portions of the municipal collections systems (as defined by the ALCOSAN Consent Decree). 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 of the region. 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 to improve water quality of the region and quality of life in general.



Lower Ohio/Girty's Run Planning Basin

Basin Planning Committee Updates

The Basin Planning Committee (BPC) is convened approximately quarterly to facilitate wet weather planning coordination between ALCOSAN and the municipalities. The meetings are attended by ALCOSAN, the basin planner (Wade Trim) and municipal managers and engineers from the LOGR Basin. Five LOGR BPC meetings have been held to date. The Ohio River Sub Basin BPC meetings are held at the Avalon Borough Building and the Girty's Run/Lowries Run Sub Basin BPC meetings are held at the Girty's Run Joint Sewer Authority Building. Since the first Basin Quarterly Activity Report, meeting discussions have centered on the following topics:

- Regular updates on the flow monitoring work that has been completed and the status of the computer hydraulic model development;
- Hydraulic model sharing technical and data needs of the municipalities;
- Overviews of hydraulic information relative to system characteristics as they become available, particularly as they relate to the design storms and typical year rainfall;
- Overview of the ALCOSAN RSG/CMAC activities as well as an interactive overview of the developing LOGR Basin specific public information and outreach program;
- Presentation and discussion of the wet weather treatment control technologies that will be considered and the approach for wet weather site identification;
- Presentation of criteria for screening and evaluation of both the control technologies and potential facility siting for consideration and refinement;
- Discussion of some early action projects/multi-municipal projects that ALCOSAN is exploring along with an overview of the funding status; and
- Overview of the ALCOSAN LOGR Basin Wet Weather planning work schedule and the ALCOSAN/Municipal informational exchanges that need to occur between now and late 2010
- Funding updates have been provided noting the meeting hosted by Congressman Doyle; that an "Affordability" model has been developed and is being integrated into the existing rate model; and cost allocation strategies are being evaluated.

The next LOGR BPC meeting #6 will be held in January, 2010, and will focus on the preliminary hydraulic model flow results, initial forming of options and alternatives for wet weather control within the LOGR Basin, and the status of municipal feasibility work.

Report 2 | Fall | 2009 Page 5 of 6



Lower Ohio/Girty's Run Planning Basin

Future Actions

During the next quarter the team will be working to finalize the technical foundation for the LOGR wet weather planning. To accomplish this, the team will:

- Finalize the Current Conditions and Information Report;
- Finalize the Screenings of Controls and Sites Report;
- Finalize the Hydraulics and Hydrology Report;
- Fine tune the hydraulic model and make adjustments as required to address municipal comments; and
- Initiate the development of preliminary wet weather control options.

The BPC meetings will be the primary vehicle used for information exchange. Basin wide public forums will be conducted in November of this year, targeting outreach to residents and stakeholders beyond the engineers and managers within the basin. The next BPC meeting is scheduled for January, 2010.

Contact Information

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

Dan Lockard, ALCOSAN Project Manager (412) 734-8370, daniel.lockard@alcosan.org

Mark Coleman, LOGR Basin Project Manager (412) 454-5566, mcoleman@wadetrim.com



Lower Ohio/Girty's Run Planning Basin

Quarterly Key Points

This third quarterly report provides a summary of the Wet Weather Plan development progress to date in each of the three Lower Ohio/Girty's Run (LOGR) Planning Basin activity areas of System Characterization, Basin Planning, and Alternative Development/Basin Control Plan.

- System Characterization
 - The on-going system information exchange between ALCOSAN and the basin municipalities continues to be excellent and comprehensive.
 - A Current Information and Conditions Report summarizing the LOGR basin existing systems has been prepared. Municipal review comments have been solicited and are being incorporated into the final draft report.
 - The LOGR planning team has completed its development of the computerized Hydrologic and Hydraulic (H&H) model that is the tool which will be used for wet weather flow projections. It has been distributed to the municipalities for their use and an ALCOSAN workshop on the models' use and applications by municipalities was held on March 18, 2010.
 - A Hydrologic and Hydraulic (H&H) Model Report has been prepared detailing the development of the system computer model. It is currently being posted on to the ALCOSAN municipal web site for community use.
- Basin Planning
 - Three Basin Planning Committees (BPCs), key forums for technical and program information exchange were established and are convened approximately quarterly. The groups, reflecting the geographic diversity of the basin, are the Ohio River BPC, the Girty's Run BPC, and the Lowries Run BPC. The Girty's Run and Lowries Run Basin Planning Committees decided to meet jointly.
- Alternative Development/Basin Control Plan
 - A "Screening of Controls and Sites Report," has been prepared where the initial listing of potential sites and treatment technologies were screened to those applicable for further study. Tools necessary for the next alternative development and analysis (Screening and Alternative Costing Tool) have been developed and shared with the municipalities at the March BPC meetings. The initial site alternatives have been identified and their analysis is being initiated.



Lower Ohio/Girty's Run Planning Basin

Public Information & Outreach

Public input continues to be a key element of the basin planning process. The LOGR Basin 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), through basin and regional public meetings, and through distribution of quarterly reports such as this one.

CMAC and RSG Updates

ALCOSAN would like to give special thanks to RSG members for co-hosting a basin public outreach meeting in November 2009. We greatly appreciate the continued support, participation and dedication of time and resources by RSG and CMAC members relative to 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) was held on March 16th. With a full 2010 agenda, the RSG will begin evaluating implementation factors that will affect the public and discuss 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 most cost effective regional solution.

For more information about the Customer Municipal Advisory Committee and the Regional Stakeholder Group, please visit the ALCOSAN Municipal website, http://municipalities.Alcosan.org.



Lower Ohio/Girty's Run Planning Basin

Public Information & Outreach

Public Forums in the Lower Ohio/Girty's Run (LOGR) Basin

The Lower Ohio/Girty's Run Basin participated in three public forums to educate and engage Basin Planning Committee members, elected municipal officials, local stakeholder organizations, and the general public residing in the Lower Ohio/Girty's Run Basin. The LOGR Basin team led the meeting in Avalon Borough on November 18, 2009. The team also participated in the McKees Rocks meeting convened by the Chartiers Creek Basin Planning team on November 5, 2010 and the Parkview Hall in Pittsburgh meeting convened by the Upper Allegheny/Pine Creek Basin Planning team on November 11, 2009.

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

At each public forum, a formal presentation was given, including an overview of the Wet Weather issue and planning to resolve specific issues of the Lower Ohio/Girty's Run Basin. Following the presentation, there was opportunity provided to participants for questions and comments.

Regional Public Information Meetings

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

ALCOSAN Green Infrastructure Community Workshop

To encourage consideration and implementation of green infrastructure, ALCOSAN is inviting municipalities to attend a half-day, introductory workshop for stormwater management using green infrastructure. Workshops will be offered on Wednesday, May 12, 2010 from 9:00 a.m. – Noon and 6:00 p.m. – 9:00 p.m. Registration will be accepted by email at Kirsten.pastrick@alsocan.org.



Lower Ohio/Girty's Run Planning Basin

Program Updates

Major phases of ALCOSAN's wet weather planning program include following:

- 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 basin facilities plan.

The first two phases of the effort are now nearing completion, and the alternatives development and evaluation work is about to begin.

Major phases of ALCOSAN's wet weather planning program include: 1) review and analysis of existing data and information (Existing Conditions Report); 2) flow monitoring; 3) Hydrologic and Hydraulic (H&H) model and (H&H) Modeling Report); 4) alternatives development and analyses (Feasibility Report and Present Worth Analysis); and 5) development of basin facilities plan. The first three phases of the effort are either complete or nearing completion, and the alternatives development and evaluation work is about to begin.

Each basin planner submitted an Existing Conditions Report detailing the sewer systems within their basin. The basin planners also submitted draft Screening of Controls and Sites Reports in which potential wet weather overflow control technologies and viable sites or routes were evaluated. This report is expected to be completed in early 2010. Reports will be posted on the municipal secure web sites for use by ALCOSAN's customer municipalities as they are completed. In addition to these reports, the basin planners have been developing an H&H model that simulates conditions within the sewer systems during both dry and wet weather periods. The planners drafted an accompanying report (H&H Modeling Report) which details the modeling methodology and modeling results. 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.

A report on existing conditions and information has been drafted, along with a report on potential sites and/ or routes for wet weather control technologies. Once these reports are finalized (early 2010), they will be posted on the municipal secure web sites for use by ALCOSAN's customer municipalities.

> Report 3 | Spring | March, 2010 Page 4 of 6



Lower Ohio/Girty's Run Planning Basin

Basin Planning Committee Updates

The Basin Planning Committee (BPC) is convened approximately quarterly to facilitate wet weather planning coordination between ALCOSAN and the municipalities. The meetings are attended by ALCOSAN, the basin planner (Wade Trim) and municipal managers and engineers from the LOGR Basin. The Ohio River Sub Basin BPC meetings are held at the Avalon Borough Building and the Girty's Run/Lowries Run Sub Basin BPC meetings are held at the Girty's Run Joint Sewer Authority Building. Six Basin Planning Committee (BPC) meetings have been held over the last two years. A brief summary of each meeting is described below.

BPC Meeting No. 1, August 5, 2008 This was the introductory meeting where the background of the wet weather overflow problem was discussed and an overview of the planning process was presented. During the meeting it was decided that future meetings be broken into 3 sub-basin areas (Lowries Run, Girty's Run and the Ohio River Municipalities) to reflect the different planning needs within the basin.

BPC Meeting No.2, October 20 & 27, 2008. Discussions relative to the flow monitoring work being performed, the contents of the Current Information and Conditions Report, extent and potential ALCOSAN model extensions, and an identification of the individual responsibilities of ALCOSAN and the municipalities in the basin planning process. It was also decided to combine the Lowries and Girty's Run meetings to better manage municipalities meeting time commitments.

BPC Meeting No.3, March 11& 16, 2009 Municipal financial data collection, an update of the basin planning activities, preliminary site selection activities for facilities to help solve the wet weather issues, and the extent of the model were reviewed. A flow chart for the planning process identifying a time line, tasks, and individual responsibilities was distributed and reviewed.

BPC Meeting No.4, June 25 & 30, 2009 This meeting introduced screening criteria for sites and treatment technologies, presented an overview of the flow monitoring program and potential municipal impacts, and reviewed the distributed coordinated schedule for the basin planning activities and the municipal feasibility work.

BPC Meeting No. 5, September 28 & October 6, 2009 This meeting presented the screening results and potential surviving sites, discussed draft footprints for major control technologies, shared the status of the model and technical program elements, and discussed an overview of the upcoming progressive alternative development and analysis phase of the program.

Report 3 | Spring | March, 2010 Page 5 of 6



Lower Ohio/Girty's Run Planning Basin

BPC Meeting No. 6, March 4 & 9, 2010 This meeting provided an update on the H&H model, discussed preliminary flow estimates required from the municipalities, discussed alternatives development process, and presented updates on public participation and outreach. The meeting included an Alternatives Development Criteria Exercise conducted to engage the meeting participants to find out what their highest priority is during the alternatives development process. Five primary weighing criteria were identified and a draft importance weight assigned. The participants were broken into groups to discuss the ranking and change as they deemed appropriate. The groups were reassembled and the following summarizes the consensus from each meeting.

- □ Economic Factors 30%
- □ Public Factors 20%
- □ Water Quality, Public Health, and Environmental Impacts 25%
- □ Operational Impacts 15% (12.5% LR/GR)
- □ Implementation Factors 10% (12.5% LR/GR)

Future Actions

During the next quarter the team will be working on the development and analysis of basin site alternatives which is the first step toward the definition of the best basin wide alternative. To accomplish this, the team will:

- Continue to fine tune the hydraulic model and make adjustments as required to address municipal comments and needs;
- Develop site alternatives for the various levels of control (1, 2, 5 and 10 year design storm for SSO's and 0, 1-3, 4-6,7-12 and 20 untreated overflows in a typical year 2003 for CSO's) and varying outlet boundary conditions and/or WWTP capacities;
- Screen and rank each site alternative using the screening tool discussed at the last BPC meeting #6 and the ALCOSAN Alternative Costing Tool; and
- Optimize the screened site alternatives for each control level and begin to identify a basin alternative for each control level.

The BPC meetings will be the primary vehicle used for information exchange.

Contact Information

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

Dan Lockard, ALCOSAN Project Manager (412) 734-8370, <u>daniel.lockard@alcosan.org</u> Mark Coleman, LOGR Basin Project Manager (412) 454-5566, mcoleman@wadetrim.com

> Report 3 | Spring | March, 2010 Page 6 of 6



Development of Wet Weather Control Alternatives

During the Spring, the Lower Ohio/Girty's Run (LOGR) basin planning team's work focused on the continued development of the first round of Wet Weather Control Alternatives to reduce the amount of overflows in the LOGR basin. During dry weather, the sewage collection system operates efficiently. However, during heavy rain or snow melt, extra storm water enters the sewage collection system. The extra volume of water overloads the collection system and raw sewage overflows into waterways, overflows from manholes, or backs up into basements.

The LOGR basin planning team has been evaluating different types of technologies to control overflows while identifying sites within the basin that could accommodate control facilities. The sanitary sewer overflow (SSO) controls reflected in the alternatives include storage facilities, transport to ALCOSAN's Wet Weather Treatment Plant, and a satellite wastewater treatment plant. These control alternatives are being evaluated for potential sites primarily along the north shore of the Ohio River.

The combined sewer overflow (CSO) controls reflected in the alternatives include storage, end of pipe treatment, separation, and transport to ALCOSAN's Wastewater Treatment Plant. The CSO control alternatives are being evaluated for potential sites along the north and south shores of the Ohio River and along the north shore of the Allegheny River. In addition, the LOGR basin planning team is investigating consolidating improvements with adjoining planning basins.

The LOGR basin planning team has been screening the alternatives utilizing screening criteria discussed at the last Basin Planning Committee (BPC) meetings held in early March. Input received from the BPCs within each planning basin and from other ALCOSAN stakeholder groups was used to prioritize/weight each of the five criteria that included Public Factors; Economic Factors; Water Quality, Public Health & Environmental Impacts; Operations Impacts; and Implementation Factors. Economic Factors, followed closely by Water Quality and Public Factors, were voted the highest importance.

The analysis of alternatives is expected to be completed this fall. Following its completion, the results from the seven ALCOSAN planning basins will be integrated. The integrated regional wet weather plan is expected to be ready in September of 2011 and will be available for review and comment by the BPC in 2012.

Basin Quarterly Activity Report No.4



The basin storage facility above, located in Van Buren Township, Michigan, is an example of one the types of control of technologies being evaluated to control overflows in the LOGR Basin. This 1.3-MG storage basin is used to balance sewage flows between available capacities in three regional sewer systems. It is covered by earth and features green storm water management practices including a bioswale and storm water reuse to flush the basin after use.

More inside...

- In the Lower Ohio/Girty's Run Communities – Page 2
- In the Region...ALCOSAN Updates – Page 2
- On the Horizon Future Actions – Page 3



Basin Quarterly Activity Report No.4

In the Lower Ohio/Girty's Run Communities

The seventh series of LOGR Basin Planning Committee meetings have been scheduled for: Girty's Run and Lowries Run Sub-basin Thursday, July 8, 2010, 9:00 AM Ross Township Municipal Building, 1000 Ross Municipal Drive, Pittsburgh, PA 15237

Ohio River Sub-basin Friday, July 9, 2010, 9:00 AM Avalon Borough Building, 640 California Avenue, Pittsburgh, PA 15202

These meetings will include presentations by the LOGR basin planning team on continued development of the Wet Weather Control Alternatives, discussion of the LOGR basin communities' Feasibility Study work and Peak Flow Estimates (PFEs), and overall Wet Weather Program updates.

The next basin public forums are anticipated to be held in October. Please help us get the word out in the LOGR Basin. If you have ideas for reaching citizens and stakeholders and suggestions to encourage participation, please contact Dan Lockard, ALCOSAN Project Manager or Mark Coleman, LOGR Basin Planner.

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 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 have a vested interest in the successful outcome of the regional 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.



Basin Quarterly Activity Report No.4

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 (May 13th) 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 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 NACWA (National Association of Clean Water Agencies) Flow series webinars. The next webinar titled "Green Infrastructure: What's Legal" reviews the potential legal and regulatory hurdles involved in using green infrastructure will be on **September 8, 2010**. 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.

ALCOSAN's Annual Open House will be held on Saturday, **September 18, 2010** at ALCOSAN WWTP located at 3300 Preble Avenue, Pittsburgh, PA 15233. For information, call (412) 766-4810.

CMAC meeting #7 is schedule 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:

Dan Lockard, ALCOSAN Project Manager (412) 734-8370, <u>daniel.lockard@alcosan.org</u> Or Mark Coleman, Basin Planner, LOGR Basin, (412) 454-5566, <u>mcoleman@wadetrim.com</u> Or

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

Report # 4| Summer | 2010 Page 3 of 3



Closing in on Potential Basin Solutions

This Quarterly Activity Report provides an overview of the progress made in the development and evaluation of the Lower Ohio/Girty's Run (LOGR) basin alternatives. The LOGR basin team utilized a Hydrologic and Hydraulic (H&H) model, a computer simulation of pipes, tributaries, and rainfall, to estimate the basin's overflow statistics. The planning team also developed a future conditions model utilizing the Southwestern Pennsylvania Commission's (SPC) 2035 population projections. During various meetings with the LOGR municipalities, including the last Basin Planning Committee meeting (#7), the basin planning team vetted the technical assumptions of the model, a key tool in the planning process, as well as the population assumptions.

In addition, the LOGR team has been reviewing the Preliminary Flow Estimates (PFEs) submitted by the municipalities. The PFEs are estimates of the maximum amount of flow each municipality intends to potentially send to ALCOSAN in the future. They are key components of ALCOSAN's planning program, since they identify how much flow ALCOSAN will need to manage. The LOGR team is analyzing the PFE data in order to understand the changes, and resultant impacts, that will occur between now and 2046.

The basin planning team identified 59 potential facility sites. The sites were evaluated and screened against established criteria resulting in 23 "preferred" sites. The "preferred" sites were combined into 9 "consolidated preferred" sites. Utilizing a uniform ALCOSAN costing approach, the Alternatives Costing Tool (ACT), the LOGR basin planning team evaluated capital costs and operation and maintenance costs of various basin alternatives.

The alternative components analyzed include collector sewers and new diversion chambers, pump stations, facilities (such as storage tanks, retention treatment basins, screening and disinfection, etc.), and dewatering pumps and lines. The basin alternative preferred approach that is emerging appears to include a conveyance/storage conduit along the north side of the Ohio River, a treatment/storage facility on the south side of the Ohio River (in Stowe) and treatment/storage facilities on the north side of the Ohio and Allegheny Rivers (in Pittsburgh). In addition, alternatives will be developed and analyzed that would transport the flows from two of the treatment/storage facilities to potential facilities in the Main Rivers and Chartiers Creek basins.

Basin Quarterly Activity Report #5



Attend an ALCOSAN Community Meeting in your community's basin...

Wednesday, October 20, 2010 Bellevue Christian Church 680 Lincoln Avenue Bellevue, PA 15202

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 Lower Ohio/Girty's Run Basin as well as provide ALCOSAN's Annual Customer Information update. See page 3 for more information and details.

More inside...

- In the Lower Ohio/Girty's Run Communities – Page 2
- In the Region...ALCOSAN Updates – Page 2
- On the Horizon Upcoming Community Meetings – Page 3



Basin Quarterly Activity Report #5

In the Lower Ohio/Girty's Run Communities

The LOGR team convened the seventh series of Basin Planning Committee meetings on July 8, 2010 (Girty's Run and Lowries Run Sub-basin) and July 9, 2010 (Ohio River Sub-basin). The LOGR basin planning team presented a progress report on the development and evaluation of the LOGR basin alternatives and a summary of the status of Preliminary Flow Estimate (PFE) information for the municipalities in the LOGR basin. Basin Planning Committee members participated in a discussion of their progress on providing the PFEs. The LOGR basin planning team indicated that they would only request follow-up meetings with the municipalities regarding their PFEs if the PFEs are not consistent with the LOGR future conditions model.

Representatives of ALCOSAN introduced a Financial Capability Assessment, which includes the residential indicator (the rate payers' ability to pay) and a financial management indicator (ALCOSAN's ability to finance). Finally, the AECOM public relations team presented an update on municipal and public outreach efforts.

The LOGR Basin Planning team has been continuing to receive PFEs from each of the municipalities. They will continue to work with the municipalities on the estimates to ensure that all parties are comfortable with the future flow projections that will be included in the Regional Wet Weather Plan.

The next LOGR Basin Planning Committee meeting is scheduled for Tuesday, October 12, 2010, at 10:30 AM, at the Avalon Borough Building, 640 California Avenue, Pittsburgh, PA 15202. This will be a combined meeting of the Girty's Run/Lowries Run and Ohio River Sub-basins.

In the Region... ALCOSAN Updates

Program Status. ALCOSAN's Basin Planners (BP) have been busy of late reviewing the numerous municipal 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 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 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.

Report # 5 | Fall | 2010 Page 2 of 3



Basin Quarterly Activity Report #5

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 if 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 **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 key topic required further discussion with ALCOSAN 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. **The Regional Stakeholder Group (RSG)** meeting #7 was held on August 12th. RSG members discussed ALCOSAN's Affordability Analysis Process. They were particularly interested in the affordability factors 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:

Dan Lockard, ALCOSAN Project Manager, (412) 734-8370, <u>daniel.lockard@alcosan.org</u> Or

Mark Coleman, Basin Planner, Lower Ohio/Girty's Run Basin, (412) 454-5566, <u>mcoleman@wadetrim.com</u>

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

Report # 5 | Fall | 2010 Page 3 of 3



From Feasibility Report to Basin Facilities Plan

The Lower Ohio/Girty's Run (LOGR) basin planning team submitted the Draft LOGR Feasibility Report to ALCOSAN on November 1, 2010. The Draft LOGR Feasibility Report outlines the process by which the LOGR basin planning team evaluated various technologies and sites identified in the Screening of Controls & Sites Report to develop basin-level alternatives for five levels of CSO control for typical year and SSO control at the 2-year design storm. These alternatives were then evaluated based on monetary and non-monetary factors. Based on the results on this evaluation, the highest ranked alternatives include a storage tunnel along the north side of the Ohio River to control the Sanitary Sewer Overflows from Emsworth Borough to Bellevue Borough. In addition, three Retention Treatment Basins (RTBs) will be used to control the LOGR Combined Sewer Overflows (CSOs) in the City of Pittsburgh, Stowe Township and Millvale Borough. The sizing of these alternatives are preliminary and will be refined as the final flow estimates are received from the tributary municipalities. The report also identified potential cross basin alternatives where there are potential cost savings to consolidate control facilities with neighboring planning basins such as Chartiers Creek and Main Rivers.

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 the most cost effective regional control alternatives. The resulting set of regional alternatives must then be evaluated based on the suitability of available sites and locations, the level of improvement they provide over the basin alternatives, and the relative increase in operational performance across the seven basins which comprise the ALCOSAN service area.

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 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 regional alternative.

Once the Regional Optimization is completed and the preferred alternatives from a regional perspective are identified, the facilities within the LOGR planning basin will be further detailed in the LOGR Basin Facilities Plan which will be submitted to ALCOSAN by the end of the year 2011.

Basin Quarterly Activity Report #6



Retention Treatment Basins (RTBs) are one of the proposed technologies for the control of CSOs within the LOGR Planning Basin. The overflows from the existing CSO outfalls would be directed to these RTBs where the CSOs would be treated by screening and disinfecting the flow prior to discharge to the Ohio River. The above graphic shows a potential layout of an RTB to control the CSOs within Stowe Township.

More inside...

- In the Lower Ohio/Girty's Run Basin Communities – Page 2
- In the Region...ALCOSAN
 Updates Page 2
- On the Horizon Future Actions – Page 3

Report 6 | Winter | 2011 Page 1 of 3



Basin Quarterly Activity Report #6

In the Lower Ohio/Girty's Run Communities

The Lower Ohio/Girty's Run Basin Planning Committee (BPC) held their most recent meeting #8 on October 12, 2010, at the Avalon Borough Building. Topics discussed included an update on the planning process, Preliminary Flow Estimates, the Feasibility Report and Present Worth Analysis, Municipal Feasibility Study Work, Alternatives Development, and Program updates. In March, the Basin Planning Committee meeting # 9 will be convened by sub basins. The Girty's Run/Lowries Run Sub Basin will meet on Monday, March 7, at 1:00 p.m. at the Ross Township Municipal Building. The Ohio River Communities Sub Basin will meet on Tuesday, March 8, at 1:00 p.m. at the Avalon Borough Building. Agenda items will include Basin Alternatives and their integration into the Regional Plan, Municipal Feasibility Studies, Program updates, and the 2011 Basin Planning schedule.

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 concept plans include using a commercial area to capture runoff, store and discharge flow at a controlled rate. Another concept considers vegetated swales in a residential community and rain gardens in an apartment complex. In West View Borough the concept plan shows how a commercial area can use porous pavement and a bio-retention basin to capture and discharge flow. Additional concept plans show porous pavement, rain gardens and a vegetated swale for a residential street. As well, approximately 78% of 2,800 West View residential properties appear to have potential for downspout disconnections. The Bells Run and West View Borough communities are interested in implementing these 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 likely 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%. 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 wastewater spending may have.

Currently, ALCOSAN is expanding its financial capability model so that is 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.

Report 6 | Winter | 2011 Page 2 of 3



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 Customer Municipality Advisory Committee (CMAC) meeting No. 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 No. 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. 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 (S.O.A.K.) program at the Pittsburgh Boat Show, January 27 through 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 and the S.O.A.K. program. We encourage you to attend and to tell your constituents. 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 Any questions or requests for information may be directed to:

Dan Lockard, ALCOSAN Project Manager, (412) 734-8370, <u>daniel.lockard@alcosan.org</u>

Mark Coleman, Basin Planner, Lower Ohio/Girty's Run Basin, (412) 454-5566, <u>mcoleman@wadetrim.com</u>

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

Report 6 | Winter | 2011 Page 3 of 3



Update on the Basin Feasibility Study

This Basin Quarterly Activity Report (BQAR) summarizes the activities of the Lower Ohio/Girty's Run (LOGR) Basin Planning team since winter 2011. The team has been preparing the revised draft Basin Feasibility Study Report for submission in the third quarter of 2011. The Report summarizes the conclusions of earlier prepared reports, outlines the development and assessments of future LOGR Basin conditions, provides an overview of site alternative development and screening, and summarizes the process and conclusions of the Basin alternative development screening and selection process. In addition, the Report identifies the municipal planning information provided and details how the information has been integrated into the Basin planning work. Finally, the Report summarizes the objectives and process of the regional integration of the seven basin facility plans.

Section 5 of the Basin Feasibility Study Report outlines the incorporation of municipal controls into the Basin Facility Plan. The LOGR Basin Planning team has continued their information exchange with the Basin municipalities at the Basin Planning Committee meetings, most recently convened on March 7 and 8, 2011. The planning team has been receiving municipal planning information from the Basin municipalities and reflecting the information in the development of the Basin Based Preferred Alternatives. The Planning team has met with the Stowe Board of Commissioners and neighborhood representatives within the City of Pittsburgh to share Wet Weather Program progress and future directions.

The planning team has been coordinating cross-basin alternatives with the Chartiers Creek Basin for Lower Ohio South overflows and with the Main Rivers Basin for Lower Northern Allegheny overflows. Both alternatives appear cost effective for some of the levels of control being analyzed.

The Preferred Basin Alternative for the Lower Northern Allegheny area is either a retention treatment basin off of River Avenue or conveyance to a Main Rivers Basin facility or regional tunnel. The Preferred Alternative for the Lower Ohio North area is a storage tunnel to control the SSOs and a retention treatment basin or storage tank (depending on the level of control) at the northern end of the ALCOSAN Waste Water Treatment Plant property to control the CSOs. The Preferred Alternative for the Lower Ohio South area is either a retention treatment basin or storage tank (depending on the level of control) or conveyance to a Chartiers Creek Basin facility or regional tunnel.

Basin Quarterly Activity Report #7



A preferred alternative for the Lower Ohio North area is a storage tunnel that will intercept and store SSOs. After the storm event, the captured SSO will be delivered to the ALCOSAN WWTP for treatment.

It will operate in a manner similar to an 8 foot diameter SSO tunnel currently under construction in the City of Allen Park, Michigan as seen in the above photo. This 1.34 million gallon tunnel also captures SSOs holding it until it can be treated at the Detroit WWTP.

More inside...

- In the Lower Ohio/Girty's Run Communities – Page 2
- In the Region...ALCOSAN Updates – Page 2
- On the Horizon Future Actions – Page 3



Basin Quarterly Activity Report #7

Update on the Basin Feasibility Study (continued)

The LOGR Basin Alternatives along with the other six basin's alternatives will be integrated into a Regional Wet Weather Control Plan using two strategies that fall at opposite ends of the approach spectrum. One approach is entirely basin based wherein flows are controlled within each basin without additional regional conveyance. This strategy results in many remote CSO and SSO control facilities. The second approach assumes a tunnel based control in which additional regional conveyance is provided. This strategy results in some SSO and CSO remote facilities with most flows managed by an extensive new tunnel system. These two strategies will be used to develop hybrid and other control strategies that will be refined and screened to develop the final Regional Wet Weather Control Plan.

The regional planning process may impact the LOGR Basin Plan by impacting the size of the Lower Ohio North tunnel, either eliminating or expanding the Lower Ohio South treatment facility, and eliminating the Lower Northern Allegheny treatment facility.

In the Lower Ohio/Girty's Run Communities

The Lower Ohio/Girty's Run Basin Planning Committee (BPC) held the Girty's Run/Lowries Run Sub Basin meeting on Monday March 7, at the Ross Township Municipal Building and the Ohio River Communities Sub Basin meeting on March 8, at the Avalon Borough Building. Topics discussed included the Basin Feasibility Report, Municipal Feasibility Studies, and Program status and updates. In June, the Basin Planning Committee_meetings will again be convened by sub basin. The Ohio River Communities Sub Basin will meet on Friday, June 3, at 9:00 AM, at the Avalon Borough Building. The Girty's Run/Lowries Run Sub Basin will meet on Friday June 10, at 9:00 AM, at the Ross Township Municipal Building. Agenda items will include the Basin Facilities Plan, municipal planning, Wet Weather Program updates, regionalization, upcoming activities, and project schedule.

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 Sewer Overflow Advisory Key (SOAK) Program. 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 <u>www.alcosan.org</u> and click on the SOAK Program on the right hand side of the home page.

Report 7 | Spring | 2011 Page 2 of 3



Basin Quarterly Activity Report #7

In the Region... ALCOSAN Updates (continued)

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 (**4**12) 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. The 9th 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:

Dan Lockard, ALCOSAN Project Manager, (412) 734-8370, daniel.lockard@alcosan.org

Or

Mark Coleman, Basin Planner, Lower Ohio/Girty's Run Basin, (412) 454-5566, <u>mcoleman@wadetrim.com</u>

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

Report 7 | Spring | 2011 Page 3 of 3



Basin Quarterly Activity Report #8

Basin Facilities Plan Development

This Basin Quarterly Activity Report (BQAR) summarizes the activities of the Lower Ohio Girty's Run (LOGR) Basin Planning Team since Spring 2011. The LOGR Basin Planning Team completed the Draft Feasibility Study and Present Worth Analysis Report which details the Basin planning activities and Basin alternative analysis and conclusions. The Team summarized the earlier prepared reports and identified the information within them that was used to develop the Feasibility Study and Present Worth Analysis Report. In the Report, the LOGR Basin Planning Team identified the most feasible alternatives for the various levels of control and developed a present worth cost analysis for those alternatives. The Report identified the municipal planning information provided and its impact on the basin alternative analysis. Finally, the Report outlined and analyzed areas of LOGR Basin alternatives integration with adjoining basins and regional planning efforts.

The LOGR Draft Feasibility Study and Present Worth Analysis Report will become the LOGR Basin Facility Plan. The Facility Plan will outline the facilities that could be constructed, or the actions that ALCOSAN could take, within the LOGR Basin to address the Consent Decree requirements.

The LOGR Basin Planning Team evaluated 13 different regional alternatives with specific focus on Alternative 3f, which controls to the two-year Sanitary Sewer Overflow (SSO) and meets water quality standards for the Combined Sewer Overflow (CSO) discharges. The Basin Planning team is currently focusing on the following alternatives for the three distinct areas of the LOGR Basin:

- For Lower Ohio North, the alternative is to construct an SSO storage tunnel along the north side of the Lower Ohio River and a CSO storage facility at the ALCOSAN Waste Water Treatment Plant.
- For Lower Ohio South, the alternative is to construct transport sewers along the south side of the Lower Ohio River to connect to a Chartiers Creek conveyance line that would then connect to a regional tunnel system.
- For Lower Northern Allegheny, the alternative is to construct a transport sewer along the north side of the Allegheny River to connect to a regional tunnel system.

In addition, the LOGR Team is evaluating a modified Alternative 3f that would relocate resultant overflows from the Lower Northern Allegheny outfalls to downstream of the Herr's Island back channel. The LOGR Team will continue to refine the alternatives as the overarching Wet Weather Plan is developed.



Top ranked alternatives for the LOGR Planning Basin involve storage tunnels that will intercept and store excess wet weather flows. After the storm event, the captured flow will be delivered to the ALCOSAN WWTP.

As shown in the above photo, a similar 10.5-mile long storage tunnel was constructed in Wayne County, Michigan to capture excess wet weather sanitary flow and store it until the regional WWTP had capacity to treat the flow.

More inside...

- In the Lower Ohio/Girty's Run Communities – Page 2
- In the Region...ALCOSAN Updates – Page 2
- On the Horizon Future Actions – Page 3



Basin Quarterly Activity Report #8

In the Lower Ohio/Girty's Run Communities

The Lower Ohio/Girty's Run Basin Planning Committee (BPC) held the Girty's Run/Lowries Run Sub Basin meeting on Friday, June 10, at the Ross Township Municipal Building and the Ohio River Communities Sub Basin meeting on Friday, June 3, at the Avalon Borough Building. Topics discussed included the Basin Facilities Plan, municipal planning, Wet Weather Program updates, regionalization, upcoming activities, and project schedule.

The next BPC meeting will be a combined meeting of the Girty/s Run/Lowries Run and Ohio River Sub Basins. It will be held on Thursday, October 13, 2011, at 1:30 PM, at the Ross Township Municipal Building. Agenda items will include the Basin Facilities Plan, municipal planning, Wet Weather Program updates, the ALCOSAN Regionalization Study, and next steps.

In the Region... ALCOSAN Updates

<u>Development of System-Wide Alternatives</u> ALCOSAN has integrated the preferred basin alternatives from each of the seven Planning Basins with needed accompanying regional conveyance (the storage and treatment facilities are the preferred basin alternatives). 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.

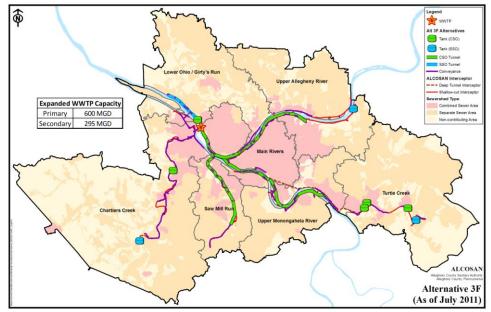
Report 8 | Fall | 2011 Page 2 of 3



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 BPs will each base their Facility Plan on the portions of the recommended system-wide alternative.

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 LOGR Basin specific Town Hall meetings are as follows:

- Monday, October 24 (10:00 AM Noon), Holiday Inn Pittsburgh North
- Thursday, November 3 (5:30 PM 7:30 PM), Troy Hill Grace Lutheran Church

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 <u>www.alcosan.org</u> Contact Information Any questions or requests for information may be directed to:

Dan Lockard, ALCOSAN Project Manager, (412) 734-8370, daniel.lockard@alcosan.org

Or

Mark Coleman, Basin Planner, Lower Ohio/Girty's Run Basin, (412) 454-5566, mcoleman@wadetrim.com

Report 8 | Fall | 2011 Page 3 of 3



Finalizing the Basin Facilities Plan

This Basin Quarterly Activity Report (BQAR) summarizes the activities of the Lower Ohio/Girty's Run (LOGR) Basin Planning team since fall 2011. The LOGR Basin Planning Team completed their Draft Basin Facility Plan which is currently under review by ALCOSAN.

The Draft Plan recommended a single, large diameter collector and transport sewer along the north side of the Allegheny River connecting to the proposed regional tunnel on the north side of the Allegheny River. Since the Draft Plan was submitted, the LOGR Team has also considered an alternative that includes a tunnel under the Allegheny River to transport Girty's Run excess wet weather flow to a regional tunnel system located on the southern side of the Alleghany River. This alternative also includes a collector and transport sewer along the north side of the Allegheny River to transport excess wet weather flow from the other Lower Northern Allegheny (LNA) outfalls southwest to the regional tunnel on the north side of the Allegheny River. Both of these alternatives have the advantage of effectively relocating overflows during events up to the design level of control to downstream of the Allegheny River backwater sensitive area. Final alternative selection will depend on the System-wide Regional Plan implementation schedule.

For the Lower Ohio South (LOS) area, the recommended alternative is a collector and transport sewer to direct excess wet weather flow toward the Chartiers Creek Planning Basin conveyance sewer and on to a regional tunnel. For the Lower Ohio North (LON) area, the recommended alternative is a mixed use storage tunnel designed to capture the total peak wet weather SSO and CSO volumes for a 2-year design storm. A new pumping station will dewater the tunnel into the existing ALCOSAN interceptor for transport to the ALCOSAN WWTP when transport and treatment capacity are available.

There were no environmental issues found on the alternative sites that would prevent the implementation of any of the proposed control facilities. However, there will be a need for some additional environmental reviews during design to address some identified site issues, such as potential brownfields in LOS and an assessment of the Allegheny River bottom geotechnical and environmental conditions in LNA. There are also implementation factors that will be considered during design including determination of actual geotechnical and groundwater conditions, railroad crossing coordination, specific locations of utilities, and the acquisition of property easements and permits. While important, none of these factors pose a significant impediment to the implementation of the recommended alternatives.

Basin Quarterly Activity Report #9



The preferred alternatives for the LOGR Planning Basin involve construction of large diameter sewers to convey and store excess wet weather flows. After the storm event, the captured flow would be delivered to the ALCOSAN WWTP for treatment.

The large diameter sewer would operate in a manner similar to the 8 foot diameter SSO tunnel, shown above, currently under construction in the City of Allen Park, Michigan. This 1.34 million gallon tunnel also captures SSOs holding the flow until it can be treated at the Detroit WWTP.

More inside...

- In the Lower Ohio/Girty's
 Run Communities Page 2
- In the Region...ALCOSAN
 Updates Page 2
- On the Horizon Future Actions – Page 3



Basin Quarterly Activity Report #9

In the Lower Ohio/Girty's Run Basin Communities

The LOGR Basin Planning Committee (BPC) held a combined meeting of the Girty's Run/Lowries Run and Ohio River Sub Basins on Thursday, October 13, 2011 at 1:30 P.M. at the Ross Township Municipal Building. Topics discussed 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 basin, as well as updates on the progress of the ALCOSAN Wet Weather Program and 18 month Regionalization Study. Since that time, LOGR team has been working closely with several municipalities to confirm compatibility among the Basin Planning and Municipal Planning activities.

The next BPC meeting will be a combined meeting. It will be held on May 9, 2012 at 9:00 AM at the Avalon Municipal Building, 640 California Ave., Pittsburgh, PA 15202. The meeting will include a report on the Final LOGR 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 long-term 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 could afford up to \$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.

Report 9 | Spring 2012 Page 2 of 3



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 with an implementation schedule that allows time to implement source reduction and 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. Contact ALCOSAN today to schedule a presentation as an agenda item at your community based organization or at your municipal council meeting.

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 <u>www.alcosan.org</u>.

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:

Dan Lockard, ALCOSAN Project Manager, (412) 734-8370, daniel.lockard@alcosan.org

or

Mark Coleman, Basin Planner, Lower Ohio/Girty's Run Planning Basin, (412) 454-5566, mcoleman@wadetrim.com

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

Report 9 | Spring 2012 Page 3 of 3