

2.0 MUNICIPAL COORDINATION AND PUBLIC PARTICIPATION

Executive Summary: Maintaining meaningful stakeholder participation in the development of the Wet Weather Plan (WWP) was an important goal. ALCOSAN therefore established a stakeholder involvement process which included regular wet weather planning coordination and program update communications with its customer municipalities, regional stakeholders, and the general public. In addition, ALCOSAN’s formal public comment process on the WWP conformed to the requirements of the ALCOSAN Consent Decree (CD) and the United States Environmental Protection Agency (USEPA) Combined Sewer Overflow (CSO) Control Policy (CSO Policy)²⁻¹ as well as with the USEPA regulations covering public participation²⁻², and with the public comment requirements under the Pennsylvania Sewerage Facilities Act (Act 537). The CD required ALCOSAN to solicit comments on the Draft WWP no later than six months prior to the January 30, 2013 due date for submission to the regulatory agencies. As a result, ALCOSAN’s Draft WWP was released for public comment on July 31, 2012. The public comment period began with the WWP’s release and ended 80 days later on October 19, 2012.

Section 2 presents ALCOSAN’s approach to municipal, stakeholder, and public participation in the development of its WWP and the formal public review and comment process. Each of the sub-sections included in this section are described briefly below.

- Section 2.1 describes the municipal and public participation goals and the overall structure of the process.
- Section 2.2 outlines the regulatory requirements related to ALCOSAN’s coordination with its customer municipalities including a description of CD and regulatory requirements; information ALCOSAN sought from, and provided to, its customer municipalities; and various other regulatory driven public participation and education activities.
- The major activities for municipal coordination included creating and supporting Basin Planning Committees (BPC) and a Customer Municipality Advisory Committee (CMAC), as well as participation in various 3 Rivers Wet Weather (3RWW) working groups and forums. These efforts are described in Section 2.3.
- Public participation efforts included facilitating the Regional Stakeholder Group, Annual Customer Information Meetings, and involvement in a myriad of other activities fostering awareness and encouraging public involvement in the Wet Weather Program. These activities are described in Section 2.4.

²⁻¹ 59 FR 1862

²⁻² 40 CFR 25 Public Participation in Programs Under the Resource Conservation and Recovery Act, the Safe Drinking Water Act and the Clean Water Act. While the regulations are technically applicable primarily to grantees under the Clean Water Act, they served as a framework for ALCOSAN’s formal public comment process in that they provide a fixed standard against which ALCOSAN may demonstrate compliance if the process were to be challenged.

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- The formal public comment period began with the WWP’s release on July 31, 2012 and ended 80 days later on October 19, 2012. Section 2.5 provides a description of the formal public comment process and supporting outreach efforts. Supporting formal public comment process documentation can be found in Appendix A-8.
- Section 2.6 represents ALCOSAN’s “responsiveness summary”²⁻³. Included in this section is a summary of the public and municipal comments received on the Draft WWP as well as summaries of the key issues that were raised, including ALCOSAN responses. Supporting public and municipal comment documentation can be found in Appendix A-9.
- There have been a number of changes made to the Draft WWP since its release on July 31, 2012 in response to public and municipal comments received by ALCOSAN. There have also been changes and additions to the WWP based on agency review comments and ALCOSAN’s Amended CD. These changes and other updates are catalogued and summarized in Section 2.7, *WWP Revisions and Updates*.

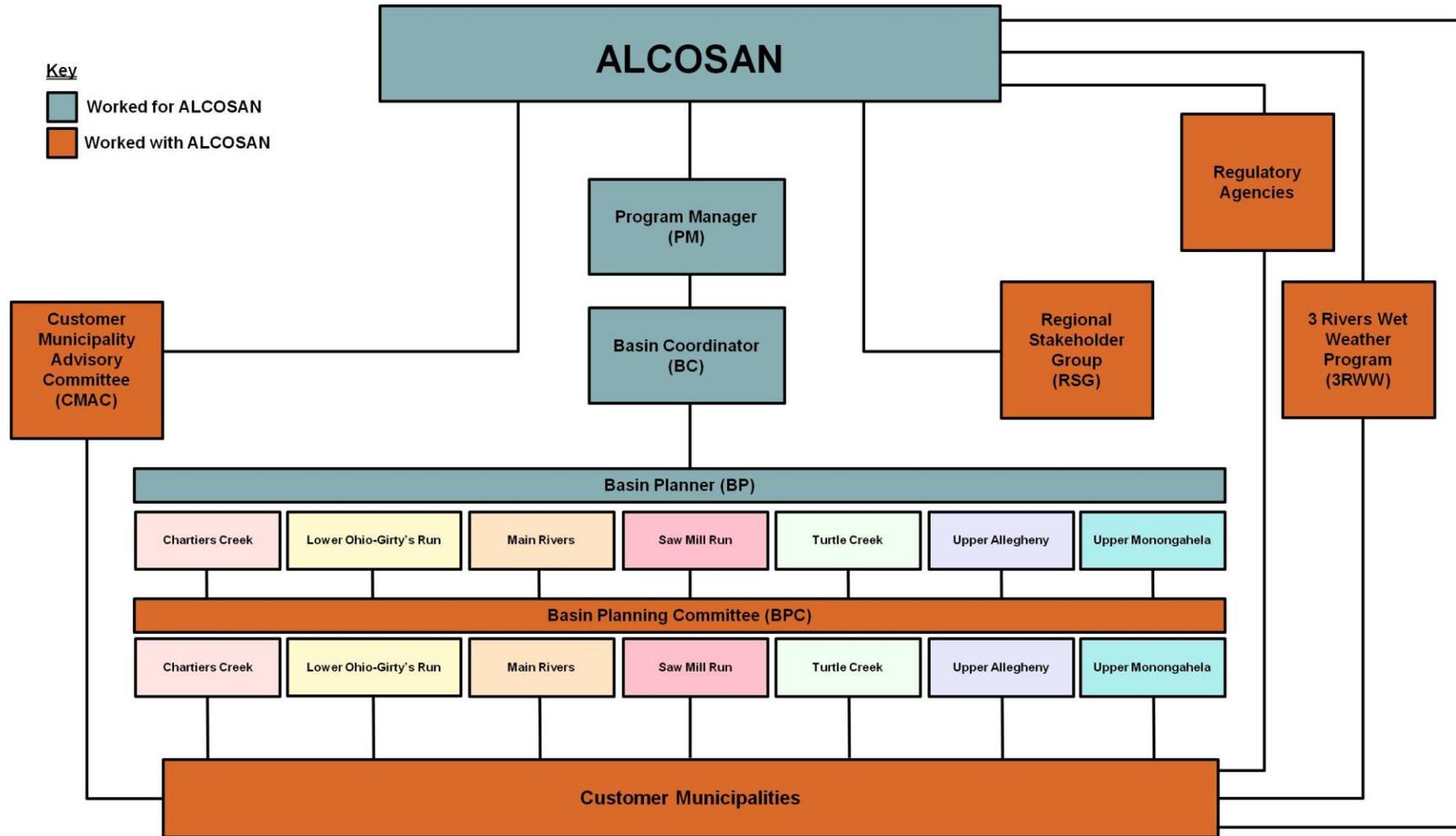
²⁻³ See 40 CFR 25.8.

2.1 Municipal and Public Participation Goals

Municipal and public input will help guide the decision-making and implementation process of the WWP. Stakeholders will benefit from successful implementation of the WWP and pay the costs associated with controlling CSOs; and therefore, need to be involved in the process. Coordination and effective communication between the various municipal and public participants will directly impact long-term planning, as well as the success of wet weather controls. The overall structure of this process is shown in Figure 2-1. ALCOSAN's goals for municipal coordination and public participation included the following:

- Maintain a positive working relationship and extensive coordination with its customer municipalities since both entities, ALCOSAN and its customer municipalities, need to work together on the development of wet weather controls. This was accomplished through various working groups and forums described later in this section.;
- Meet or exceed the specific requirements for municipal coordination in ALCOSAN's CD;
- Foster public and stakeholder understanding of the need for the WWP and garner support for its implementation;
- Comply with the CSO Policy and related CD requirements;
- Conform with the public participation requirements of Act 537 to support the use of the basin plans as updates to the customer municipalities' Act 537 plans;
- Complement and support ALCOSAN's parallel public information and education activities (ongoing and additional as required under Appendix K of the CD).

Figure 2-1: ALCOSAN Public and Municipal Outreach Organization



2.2 Regulatory Requirements

In accordance with Section N of the CD, Coordination with Customer Municipalities, the following activities were conducted:

- ALCOSAN sought data and information from its customer municipalities including:
 - Maps of the municipal collection system (CD paragraph 70.a);
 - The results of physical surveys and television inspections of the regional collection system trunk sewer lines and regulators that provide conveyance from the municipal system to the ALCOSAN Conveyance and Treatment System (CD paragraph 70.b);
 - Flow monitoring data (CD paragraph 70.c);
 - Hydraulic capacity evaluation and system hydraulic characterizations (CD paragraph 70.d);
 - Sanitary Sewer Overflow (SSO) Response Plans (CD paragraph 70.e);
 - Long Term Control Plans (LTCPs) (CD paragraph 70.f);
 - Plans regarding Nine Minimum Controls (NMCs) for CSO measures (CD paragraph 70.g).

- ALCOSAN provided information to customer municipalities, by making it accessible to view them through secure access to a municipal website. The information included:
 - CSO and SSO flow monitoring data (CD paragraph 71.a);
 - Maps and related data showing locations of known outfalls and interceptors in the ALCOSAN Conveyance and Treatment System (CTS), and “Critical Portions of the Municipal Collection System (as defined in CD Appendix P)” (CD paragraph 71.b) such as CTS with Continuous Flow Streams, CTS with Industrial Users, CTS with Rain Gages, CTS with Receiving Water Quality, CTS with Sensitive Areas, and Current System-wide Map showing the Critical Portions;
 - Hydrologic & Hydraulic (H&H) model results (CD paragraph 71.c);
 - Overflow Response Plans (CD paragraph 71.d);
 - Revised NMC Plan (CD paragraph 71.e);
 - Periodic progress reports (CD paragraph 71.f) such as the Annual Progress Report;
 - Annual Wasteload Management Report;
 - Regional Collection System Flow Monitoring Plan;

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- Basin Facilities Planning information;
- Sample Inspection and Maintenance Forms.

Information sought from, and provided to, the Customer Municipalities has been documented in a database managed by ALCOSAN. To date, ALCOSAN has met all deadlines pursuant to the CD, Section N.

- ALCOSAN requested copies of and provided comments to the Customer Municipalities regarding their proposed NMC Plans.;
- ALCOSAN submitted to the USEPA, Pennsylvania Department of Environmental Protection (PaDEP), and Allegheny County Health Department (ACHD) its Annual Report on Municipal Coordination. Contents of this document included:
 - Requirements for reporting on customer municipality data and coordination (CD paragraph 73.a);
 - Availability and utility of data received from customer municipalities (CD paragraph 73.b);
 - Conformance of data with agency-approved Flow Monitoring Plan (CD paragraph 73.c);
 - Utility of data to ALCOSAN's WWP (CD paragraph 73.d);
 - Customer municipality coordination opportunities, issues and impediments (CD paragraph 73.d). Coordination opportunities included meetings held by ALCOSAN Basin Planners, the CMAC, the Regional Stakeholder Group (RSG) and 3RWW Groups. Coordination issues and impediments between ALCOSAN and its Customer Municipalities included rare instances where a municipality did not comply in a timely manner with ALCOSAN's request to provide municipal data or the municipality's inability to provide some or all information requested.
- ALCOSAN solicited comments on the Draft WWP by providing opportunities for customer municipalities, stakeholders and the public to comment. Their comments contributed to further refinements of this WWP;
- Input was solicited from customer municipalities regarding management of sewer system flows including:
 - Forecasts of their total flow estimates tributary to each Point of Connection (POC) to the ALCOSAN CTS and total service population projections through 2035 for each POC (CD paragraph 75.a);
 - Characterization of combined and sanitary sewer flows at each POC (CD paragraph 75.b);

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- A program for managing flows from the customer municipality so that such flows to the CTS do not result in exceedances of system capacity for the 2046 planning date (CD paragraph 75.c).

ALCOSAN's WWP public participation activities conformed with the CSO Policy; which identified a process for involving the public and stakeholders in the selection of long term control alternatives:

“In developing its long-term CSO control plan, the permittee will employ a public participation process that actively involves the affected public in the decision-making to select the long-term CSO controls. The affected public includes rate payers, industrial users of the sewer system, persons who reside downstream from the CSOs, persons who use and enjoy these downstream waters, and any other interested persons.”²⁻⁴

This requirement is mentioned in the Pennsylvania CSO Policy.²⁻⁵ USEPA guidance for the development of a LTCP²⁻⁶ sets out an overall planning process, including the creation of a “Public Review Committee” after the system characterization is conducted.²⁻⁷ Activities in accordance with the CD's section on Public Participation are as follows:

- ALCOSAN developed a Public Participation Plan (PPP) to ensure that the public served by the Regional Collection System has the opportunity to be actively involved in the development of the WWP. The ALCOSAN PPP was submitted to the USEPA on July 23, 2008. Review comments were received by ALCOSAN on December 22, 2008.
 - Content of the PPP included proposed activities for providing the public with notice and information regarding the development of the WWP such as: goals of the WWP; as well as the types of, processes for evaluating, and opportunities to comment upon remedial controls and remedial activities available and being considered in the WWP to meet the requirements of the Clean Water Act (CWA) and the CD.
- ALCOSAN complied with the CD through the creation of the CMAC. This committee, originally with 14 members appointed by the Allegheny County Executive (two members for each of the seven planning basins), is designed to receive direct feedback and comments on the WWP from ALCOSAN's customer municipalities. Details regarding the CMAC are documented later in this section.
- On a quarterly basis, ALCOSAN produced and distributed informational newsletters to each of the customer municipalities and to persons or organizations requesting the information. The newsletters contained planning information specific to the particular basin, and general program planning efforts were reported also.

²⁻⁴ CSO Control Policy [59 FR 18692]

²⁻⁵ Pennsylvania Combined Sewer Overflow (CSO) Policy, Document No. 385-2000-011

²⁻⁶ Combined Sewer Overflows – Guidance for Long-Term Control Plan USEPA 832-B-95-002

²⁻⁷ LTCP Guidance Exhibit 1-2, page 1-9.

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- ALCOSAN held Annual Customer Information meetings, open to the public, beginning in 2008. The meetings were extensively advertised in local media and held throughout the service area at various times of the day to encourage attendance. The status of the WWP planning effort and other CD activities were presented and discussed with the audience as well as direction on how to participate in the program.
- ALCOSAN informed the public of outfall locations, possible health and environmental effects of the discharge of sewage, and cautions for recreational activities in areas directly impacted by the discharges of sewage. Included in this program are:
 - Posting signs with warnings at all ALCOSAN outfalls (as required by the USEPA's CSO regulations under NMCs).
 - ALCOSAN's website which indicates locations of outfalls and information on river water advisories.
 - Continued implementation of the Sewer Overflow Advisory Key (SOAK) and CSO Flag Alert Programs which are complimentary advisory programs to warn the public of possible river contamination from CSOs.

2.3 Municipal Coordination

The major activities for municipal coordination included creating and supporting BPCs and the CMAC, as well as participation in various 3RWW working groups and forums. These efforts are described in the following paragraphs.

2.3.1 Basin Planning Committees

ALCOSAN established a BPC in each of the seven planning basins. The municipal membership in the BPC is shown on Table 2-1. The committees' purpose during the wet weather planning process was information exchange and facilitated coordination between ALCOSAN and the customer municipalities towards collaborative development of alternative overflow control strategies. The BPCs focused on professional discussions of technical and institutional issues related to the development of the basin wet weather control alternatives, such as areas in which the implementation of green stormwater infrastructure (GSI) could result in overflow reductions significant enough to meet desired levels of control.

The BPCs fostered a collaborative process of alternatives identification and analysis among the municipal stakeholders and ALCOSAN. Composition of the BPCs included representatives from ALCOSAN Engineering and Regional Conveyance Divisions, ALCOSAN's basin planning consultants, municipal managers and directors of public works and engineers (or designees), and the municipalities' consulting engineers and occasionally elected officials. Quarterly meetings were held throughout the planning period at various locations within the Planning Basins for a total of 96 meetings.

Table 2-1: ALCOSAN Municipalities by Planning Basin

Municipalities	Chartiers Creek	Lower Ohio-Girty's Run	Main Rivers	Saw Mill Run	Turtle Creek	Upper Allegheny	Upper Monongahela
Aspinwall Borough						x	
Avalon Borough		x					
Baldwin Borough							x
Baldwin Township				x			
Bellevue Borough		x					
Ben Avon Borough		x					
Ben Avon Heights Borough		x					
Bethel Park, Municipality	x			x			
Blawnox Borough						x	
Braddock Borough							x
Braddock Hills Borough					x		x

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Table 2-1: ALCOSAN Municipalities by Planning Basin

Municipalities	Chartiers Creek	Lower Ohio- Girty's Run	Main Rivers	Saw Mill Run	Turtle Creek	Upper Allegheny	Upper Monongahela
Brentwood Borough				x			x
Bridgeville Borough	x						
Carnegie Borough	x						
Castle Shannon Borough	x			x			
Chalfant Borough					x		
Churchill Borough					x	x	x
Collier Township	x						
Crafton Borough	x			x			
Dormont Borough				x			
East McKeesport Borough					x		
East Pittsburgh Borough					x		
Edgewood Borough							x
Emsworth Borough		x					
Etna Borough		x				x	
Forest Hills Borough					x		x
Fox Chapel Borough						x	
Franklin Park Borough		x					
Green Tree Borough	x			x			
Heidelberg Borough	x						
Homestead Borough							x
Indiana Township						x	
Ingram Borough	x						
Kennedy Township	x	x					
Kilbuck Township		x					
McCandless Township		x				x	
McDonald Borough	x						
McKees Rocks Borough	x						
Millvale Borough		x					
Monroeville, Municipality					x		
Mount Lebanon, Municipality	x			x			

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Table 2-1: ALCOSAN Municipalities by Planning Basin

Municipalities	Chartiers Creek	Lower Ohio-Girty's Run	Main Rivers	Saw Mill Run	Turtle Creek	Upper Allegheny	Upper Monongahela
Mount Oliver Borough				x			x
Munhall Borough							x
Neville Township		x					
North Braddock Borough					x		x
North Fayette Township	x						
North Huntingdon Township					x		
North Versailles Township					x		
Oakdale Borough	x						
O'Hara Township						x	
Ohio Township		x					
Penn Township					x		
Penn Hills, Municipality					x	x	x
Peters Township	x						
Pitcairn Borough					x		
Pittsburgh, City	x	x	x	x		x	x
Pleasant Hills Borough							x
Plum Borough					x		
Rankin Borough							x
Reserve Township		x	x				
Robinson Township	x	x					
Ross Township		x	x			x	
Rossllyn Farms Borough	x						
Scott Township	x			x			
Shaler Township		x				x	
Sharpsburg Borough						x	
South Fayette Township	x						
Stowe Township	x	x					
Swissvale Borough							x
Thornburg Borough	x						
Trafford Borough					x		

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Table 2-1: ALCOSAN Municipalities by Planning Basin

Municipalities	Chartiers Creek	Lower Ohio- Girty's Run	Main Rivers	Saw Mill Run	Turtle Creek	Upper Allegheny	Upper Monongahela
Turtle Creek Borough					x		
Upper St. Clair Township	x						
Verona Borough						x	
Wall Borough					x		
West Homestead Borough							x
West Mifflin Borough							x
West View Borough		x					
Whitaker Borough							x
Whitehall Borough				x			x
Wilkins Township					x		
Wilkinsburg Borough					x	x	x
Wilmerding Borough					x		
Total number of Municipalities per Planning Basin	24	20	3	12	20	15	21

The seven BPCs first began meeting during June 2008 and continued to meet through 2012. Twelve rounds of meetings were held in each basin. In the Lower Ohio-Girty's Run (LOGR) basin, separate meetings were held for the Lower Ohio and for the Girty's Run sub-basins, for many of the quarterly rounds of meetings. Copies of the agendas and minutes for the meetings are provided as Appendix A-1. Key topics discussed with the BPCs included:

- Information Exchange;
- Basin Models;
- Technology and Site Screening and Evaluation;
- Control Alternatives Development;
- Alternative Costing Tool (ACT);
- Preliminary Flow Estimates (PFEs);
- Act 537 Funding;
- Regional Wet Weather Control Plan and MFS;
- Financial Data Collection and Affordability Analysis;

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- Basin Planning deliverables and reports: Existing Conditions, H&H characterization, Screening of Controls and Sites (SCSR) and Feasibility Report and Present Worth Analysis (FRPWA).

In advance of BPC meetings, Basin Quarterly Activity Reports (BQARs) were distributed by mail to municipal offices, residents, elected officials, and other stakeholders allowing them to preview information that would be shared at upcoming meetings. BQARs contained basin specific planning information, overall wet weather program and ALCOSAN outreach program updates, and future meeting information. Additionally, newsletters and supplemental information was prepared and distributed at outreach events, posted on ALCOSAN’s website, and made available upon request. Other publications produced by ALCOSAN included the Municipal Connections Newsletter and Overflow Monitor Newsletter. Newsletters and publications distributed by ALCOSAN are provided in Appendix A-2.

2.3.2 Customer Municipal Advisory Committee

Pursuant to the CD, the CMAC was established in 2008. Original membership included 14 participants, two per basin, appointed by the Allegheny County Executive. Subsequently, more members were added due to lack of involvement by the original participants. Quarterly meetings were held, at which ALCOSAN was to “discuss the status and coordination” of “the development of the WWP and municipal comments on the WWP and related issues, which ALCOSAN shall consider in developing its WWP.” The committee membership is provided in Appendix A-3. A list of meeting dates, copies of the meeting agendas, and meeting minutes are also provided in Appendix A-3. CMAC was created to obtain direct feedback during the development of the WWP planning process, to inform customer municipalities of progress and findings, to facilitate sharing of tools and analysis approaches and to garner support for the program. Key topics discussed by the CMAC included:

- Wet Weather Program progress reporting;
- Coordination of ALCOSAN’s planning process and its impacts on its Customer Municipalities;
- Schedule of municipal feasibility studies (MFS) and coordination with ALCOSAN’s CD;
- Multi-municipal collaboration in complex sewersheds;
- Basin and system-wide alternatives analysis progress and emerging control strategies;
- Municipal controls and future flow estimates;
- Affordability and other implications of the planning process on municipalities;
- Effective methods to educate elected officials and municipal managers.

2.3.3 3 Rivers Wet Weather Program Groups

Municipal Basin Groups: In 2001, 3RWW²⁻⁸ established three geographically defined municipal planning groups - the Eastern, Northern and Southern Basin Groups, comprised of the 83 municipalities within the ALCOSAN service area. Basin group membership included at least two representatives (primarily elected officials) from each community and municipal authority in the respective basins. The Basin Groups did not have a direct role in the development of WWP alternatives. However, ALCOSAN participated in the group meetings and the groups provided another forum for dialogue between ALCOSAN and the municipalities. Municipal Basin Group meetings attended by ALCOSAN included:

- *Elected Officials* meetings, facilitated by 3RWW, engaged municipal elected officials from the 83 ALCOSAN customer municipalities and educated them regarding the Wet Weather Program.
- *Managers & Engineers* and *Basin Managers* meetings engaged municipal managers and engineers in the exchange of information, concerns, and ideas regarding the Wet Weather Program.

Flow Monitoring Working Group and Municipal Feasibility Study Working Group: As predecessors to the Municipal Feasibility Study Working Group (FSWG), the Flow Monitoring Working Group (FMWG) and Flow Monitoring Implementation Team (FMIT) were developed to engage the municipalities and regulatory agencies in the flow monitoring process. ALCOSAN participated with this group to help ensure the accuracy of information and understanding of the process as it relates to the WWP. Participants of the FMWG and the FMIT included municipal managers and engineers, ALCOSAN Program Managers (PMs), ALCOSAN's Program Management team, and the 3RWW PM team.

Paralleling ALCOSAN's CD, most of the municipalities within the ALCOSAN service area were placed under Administrative Consent Orders (ACOs) from the ACHD (sanitary sewerage municipalities) and/or Consent Order and Agreements (COAs) from the PaDEP (combined sewerage municipalities and separate sewerage municipalities outside Allegheny County). Municipalities who received municipal orders²⁻⁹ were required to do the following:

- Establish with ALCOSAN the quantity and rate of flow of sewage that they will convey to ALCOSAN under the WWP;
- Develop a feasibility study with alternatives analysis evaluating options to convey the municipal wet weather flows to the ALCOSAN regional interceptor system;
- To capture, store or treat wet weather flows within the municipal collection system.

²⁻⁸ 3RWW is a 501(c)(3) non-profit organization established by ALCOSAN and the Allegheny County Health Department in 1998 to assist the municipalities within the ALCOSAN service area with wet weather issues. Additional information may be obtained at: <http://www.3riverswetweather.org>

²⁻⁹ Paragraph 14.c Copies of sample municipal orders are provided as Appendix A-4.

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3RWW established the Municipal FSWG comprised of municipal engineers to coordinate these efforts. ALCOSAN was an active participant in the working group. Key topics addressed by the working group as related to ALCOSAN's WWP included:

- Coordination with ALCOSAN basin facilities planning process;
- Usage of flow monitoring data and physical surveys;
- Providing ALCOSAN's collection system H&H model for municipal use;
- Development of municipal PFEs and submission of municipal final flow estimates to ALCOSAN;
- Municipal input on the ALCOSAN ACT;
- Municipal cost estimates;
- Control alternatives development;
- MFS process and coordination with ALCOSAN's CD;
- Response to ALCOSAN Complex Sewershed Letters;
- GSI strategies for CSO control.

Tracking sheets documenting the date, time and location of the 3RWW Program Group meetings in which ALCOSAN participated are contained in Appendix A-4.

ALCOSAN and its representatives also attended and presented at the 3RWW Annual Sewer Conference. Presentation topics related to the CD and/or the ALCOSAN's WWP included:

- Municipal Coordination with the ALCOSAN CD (2007);
- Regional Flow Monitoring in the ALCOSAN Service Area (2007);
- ALCOSAN Overflow Control Facility Full-Scale Demonstration Project (2008);
- Accessing Recreational Uses for Pittsburgh Waterways Influenced by Wet Weather Sewer Overflows (2009);
- Estimating the Cost of Wet Weather Overflow Control Facilities: An Alternative Comparison Costing Tool (2009);
- ALCOSAN's Basin Planning Process (2010);
- ALCOSAN's Basin Planning Process and Status (2011);
- GSI Impact Assessment Case Study for the Louisville Metropolitan Sewer District (2011);
- Allegheny County Office Building Green Roof Demonstration (2011);
- CSO Reduction Using GSI (2011).

Rain Ways Interactive GSI Tool: Through their support of 3RWW, ALCOSAN has assisted 3RWW in the implementation of a new interactive, web-based GSI tool. This tool was created to support the planning and implementation of green solutions to address the region's wet weather problem. Included is a database of known GSI projects which have been implemented

in the region. Property owners, engineers and planners can find the necessary tools to determine the best GSI options for homes, businesses and public spaces. These tools can assist with the implementation of GSI, which in turn will increase the capture of stormwater and reduce sewage overflows.

2.3.4 One-on-One Meetings

In addition to the more structured and scheduled meetings mentioned previously in this section, ALCOSAN held one-on-one meetings with its customer municipalities. Facilitated by the BPs, One-on-One meetings were critical to the required exchange of information between ALCOSAN and its customer municipalities. Basin specific planning information and municipal data were among topics commonly discussed. Meeting participants typically included the BP, ALCOSAN PM, and various municipal representatives. One-on-One meetings occurred on an as-needed basis, generally at the discretion of the BP, ALCOSAN PM or by municipal request. These meetings were tracked on a planning basin and authority or municipal contact basis, and are provided for reference in Appendix A-5.

2.3.5 Municipal Hydraulic Capacity Assessments

To develop the regional WWP and meet CD requirements, ALCOSAN requested that the customer municipalities provide the results of the hydraulic capacity assessment analyses that had been conducted for their respective collection systems. The PaDEP had issued a COA to each ALCOSAN customer municipality served by combined sewer systems and separate sewerage systems outside of Allegheny County and the ACHD had issued an ACO to the customer municipalities served by separate sewer systems. One of the requirements contained within these municipal orders was for the municipalities to conduct hydraulic capacity evaluations of identified portions of their respective sewer collection systems. Municipalities with combined sewers were required to conduct these capacity analyses for trunk sewers providing final conveyance to the ALCOSAN system. Municipalities with separate sewers were required to analyze trunk sewers of 10 inches or more in diameter.

Available hydraulic capacity analysis results were reviewed by ALCOSAN to determine whether or not the existing municipal trunk sewers had sufficient hydraulic capacity to convey peak wet weather flow to the ALCOSAN system. The requested information was used to help identify existing municipal trunk sewers having insufficient flow capacity and to compare with collection system hydraulic model results.

2.4 Public Participation

Public participation efforts included facilitating the RSG, Annual Customer Information Meetings, and involvement in a myriad of other activities fostering awareness and encouraging public involvement in the Wet Weather Program. These efforts are described in the following paragraphs.

2.4.1 Regional Stakeholder Group

ALCOSAN established the RSG to foster input from a broad range of stakeholders as well as garner support of the WWP for improvements to the region's water quality. The RSG fulfilled the role of the Public Review Committee called for in the USEPA guidance. The role of the stakeholder group was to advise ALCOSAN in the development of the WWP and to inform ALCOSAN as to interests and concerns of the public and the various constituencies. Key topics addressed by the RSG included:

- Affordability analysis;
- Comparative analysis of national wet weather programs;
- Technology and site screening and evaluation/control alternatives development;
- Implementation of GSI in a multi-jurisdictional environment;
- Strategies for stormwater control;
- Alternatives analysis progress and emerging control strategies;
- Public outreach.

The RSG consists of approximately 35 members who comprised a broad cross-section of the community. In general, the RSG met quarterly at ALCOSAN. ALCOSAN intended that the stakeholder group be inclusive and provide a comprehensive representation of the ALCOSAN service area. Constituencies represented on the RSG included:

- Municipal and Municipal Authority officials;
- Environmental, Conservancy and River Recreation groups;
- Regional Economic Development groups;
- Organized labor;
- University and Academic expertise;
- Local foundations;
- Civic organizations;
- County and state agencies (ex-officio).

A listing of RSG members is provided in Appendix A-6, along with the meeting agendas and meeting minutes.

2.4.2 General Public Outreach

ALCOSAN's general public participation activities paralleled and reinforced the RSG process outlined in the previous subsection. The general public had opportunities to comment on the development of the WWP through a series of public forums, including the ALCOSAN website, and comment options.

Required by the CD, ALCOSAN hosted a series of public forums, identified as Annual Customer Information Meetings, to explain wet weather issues, current conditions, the planning process, the status of the basin plans/regional integration, and to solicit public feedback. The first set of meeting occurred in the fall of 2007 after the CD was signed, and were then held annually starting in 2009. Each series of meetings included day and evening meetings within each of the seven planning basins, along with a regional meeting held at a central location. Each meeting included a presentation by ALCOSAN or its representatives (e.g., Basin Planner or Program Manager) providing a status report on the wet weather planning efforts. Key topics covered at the meetings included:

- Elected Officials Briefings (where prior to public forums Elected Officials were prepared for Q&A from the public regarding the WWP);
- Annual update on wet weather planning;
- Potential sites and technologies for consideration;
- Alternatives development/evaluation process;
- Identify opportunities for participation;
- Questions and answer period.

Copies of agendas, executive summaries, and meeting booklets distributed at the meetings, as well as a list of meeting dates are provided in Appendix A-7.

Public notification about upcoming meetings was issued by ALCOSAN at least 30 days prior to each meeting through the following media:

- Formal advertisement in the regional newspapers and community publications;
- Paid radio advertisements;
- Postings on ALCOSAN's municipal and public websites;
- E-mails to parties that have indicated an interest in such notifications, as well as targeted audiences;
- Postal notifications to parties that have indicated an interest in such notifications in lieu of e-mail notification;
- Flyers, announcements and web notices sent to service communities.

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In addition to the public meetings outlined above, ALCOSAN solicited public involvement utilizing the following mediums:

- ***E-mail and Mail List*** – ALCOSAN maintained an e-mail list and mail list of interested parties and provided notification as to forthcoming meetings or other significant events.
- ***Municipal access website*** – Documents relevant to the wet weather planning process, and as required by the CD, were posted to the secure ALCOSAN municipal website.
- ***Public website*** – Comments and questions could be sent to ALCOSAN via the public web site.
- ***Meeting forms*** – Comments were solicited by distributing a form to each meeting participant who could complete it at the meeting or submit via mail.
- ***Public Libraries and Access Points*** – Print copies of key documents (e.g., the Draft WWP) were provided to local libraries, municipal centers, and other public access repositories to allow for public review.

ALCOSAN’s public education and outreach efforts targeted all constituents of its 83 customer municipals, including the general public of all ages, municipal representatives, and stakeholders.

- ***ALCOSAN Open House*** – 2011 marked the 9th year of this award-winning event. Open to the public, guests of all ages were provided the opportunity to learn about the causes of, and solutions related to, the sewer overflow issue. Guests could also learn how to participate in the program. Information which explained the Wet Weather Program, ALCOSAN in general and GSI was distributed to attendees. In addition, input on the WWP from the public was sought.
- ***Scholastic Outreach*** – ALCOSAN offered presentations and hands-on activities for students in grades 4-12 focusing on the wet weather issue. In addition, a Summer Science Camp was offered, free of charge, to further educate students in grades 5-9 about wastewater treatment, watershed protection and sewer overflows.
- ***Municipal Associations*** – Since 2000, ALCOSAN has presented and sponsored an information booth at the Allegheny League of Municipalities (ALOM) Conference. In addition, ALCOSAN hosted a meeting with City officials and County officials to provide an update on the status of the WWP and to seek input.

Public outreach regarding overflows, as required by the CD, was achieved through several avenues. Accessible through the ALCOSAN public website, images of outfall signage were explained in detail to familiarize the public and a ‘CSO/SSO Outfall Signage Locations’ map was updated periodically. Additionally, CSO flag alert data and locations were posted to the ALCOSAN public website and updated periodically. Participation in the Pittsburgh Boat Show included a booth with information about the Wet Weather Program and the SOAK, which alerts the public when overflows in the ALCOSAN collection system are impacting area waterways during the recreational boating season, May 1 through October 31. Viewable on the ALCOSAN

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public website, the SOAK status changes as overflows are issued. If overflows occur, ALCOSAN will raise orange CSO flags at designated points along the waterways and will notify the public accordingly via the ALCOSAN Sewer Overflow Advisory line.

2.5 Formal Public Comment and Response Process

This section provides an overview of the formal public comment process, supporting outreach efforts, and ALCOSAN responses to comments received. ALCOSAN's formal public comment process conformed to the requirements of the ALCOSAN CD and the CSO Policy as well as with the USEPA regulations covering public participation²⁻¹⁰, and with the public comment requirements under Act 537.

The CD required ALCOSAN to solicit comments on the Draft WWP no later than six months prior to the January 30, 2013 due date. On June 15, 2012, ALCOSAN issued a formal public notice that the Draft WWP was available for review through legal advertisement, through e-mail and surface mail distribution lists, and through its website. The Act 537 guidance²⁻¹¹ requires a minimum 30 day public comment period. The CD does not specify the duration of the public comment period. ALCOSAN's Draft WWP was released for public comment on July 31, 2012. The public comment period began with the Plan's release and ended 80 days later on October 19, 2012.

2.5.1 Overview of the Formal Public Comment and Response Process

ALCOSAN conducted an extensive effort to educate and engage the public about the Draft WWP and to solicit feedback. These activities are listed below and supporting documentation is provided in Appendix A-8.

- Prepared print materials to supplement the WWP and simplify its message including a Companion Document and brochures;
- Issued a press release and conducted a media briefing upon the official release of the WWP for public comment;
- Posted the WWP, supplemental materials and a notice of availability on the ALCOSAN website, and distributed the notice of availability through media outlets such as print and radio advertisements;
- Delivered printed copies of the WWP and supplemental materials to the 83 customer municipalities, corresponding municipal authorities, and members of the CMAC, and the RSG. Also distributed it widely to libraries and key stakeholder groups, and made it available for distribution at each public meeting;
- Conducted 13 public meetings, where collectively 456 attendees were recorded;
- Conducted 7 public official briefings, where collectively 39 attendees were recorded;

²⁻¹⁰ 40 CFR 25 Public Participation in Programs Under the Resource Conservation and Recovery Act, the Safe Drinking Water Act and the Clean Water Act. While the regulations are technically applicable primarily to grantees under the Clean Water Act, they served as a framework for ALCOSAN's formal public comment process in that they provide a fixed standard against which ALCOSAN may demonstrate compliance if the process were to be challenged.

²⁻¹¹ PaDEP A Guide for Preparing Act 537 Update Revisions Doc. 362-0300-003 (January 2003)

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- Held 28 grassroots meetings beginning in the spring of 2012, reaching 739 people as of November 31, 2012;
- Enhanced the annual open house, including welcoming one of the more vocal advocacy groups to participate in the open house and promote their perspective on the Draft WWP;
- Provided an overview of the WWP to the CMAC and the RSG and conducted a second meeting of each group to solicit comments on the WWP and on the public engagement process;
- Presented an overview of the Plan to the 3RWW FSWG and at seven BPC meetings;
- Added a public comment section to the ALCOSAN website and received public comments via this mechanism, U.S. mail, and email in addition to written comments and oral comments and testimony received at each of the 13 public meetings;
- Prepared transcripts for all oral testimony at the 13 public meetings;
- Presented the WWP to all ALCOSAN employees via 11 presentation sessions; and
- Advertised public meetings and grassroots meetings via the ALCOSAN web site and through both print and radio advertisements

During the public comment period, members of the public and customer municipalities and authorities had the option to submit their questions or concerns in the following ways.

- Comment forms were made available at all public meetings. They could be submitted by mail or at any public meeting;
- A special email address was created to submit comments via email;
- Comments could be submitted through a link on the ALCOSAN website;
- Verbal comment could be made publicly or privately at any public meeting;
- Comments could be submitted via U.S. mail; and
- Written comments could be submitted as part of public meeting testimony

The remainder of this section describes several of the more significant activities conducted.

2.5.2 Grassroots Outreach

In order to supplement ongoing efforts to disseminate information about the release of the Draft WWP, the ALCOSAN public involvement team implemented a grassroots outreach effort. Recognizing that traditional public meeting and communication channels do not always engage stakeholders who could be most affected, the team identified and engaged stakeholders through existing forums, such as senior centers, community based organizations, and rotary clubs. Grassroots outreach meetings were convened beginning in the spring of 2012, in advance of the release of the Draft WWP, to get the public ready for the release of the WWP. The outreach meetings continued through, and beyond, the public comment period. As of November 31, 2012, 739 people were reached through 28 grassroots outreach meetings. A summary of the grassroots outreach efforts, that includes the dates, locations, attendance, etc. of these outreach meetings, can be found in Appendix A-8.

2.5.3 Outreach to Public Officials

Significant effort was made to inform and engage public officials. At the release of the Draft WWP, six briefings were held, one each for Allegheny County and City of Pittsburgh officials and four briefings for municipal officials of the 83 customer municipalities. In addition, just before the close of the comment period, a meeting was held for all officials to afford them the opportunity to view another presentation of the Draft WWP, to engage in discussion with other officials and with ALCOSAN staff and consultants, and to have an opportunity to enter comments into the public record.

2.5.4 Public Meetings

ALCOSAN held 13 public meetings in 12 different locations throughout the service area, including two day-long testimony-only meetings. Meeting locations were accessible to accommodate physically-challenged individuals. Participants with special needs (vision/hearing impaired, etc.) were encouraged to contact ALCOSAN prior to his or her desired meeting date so that accommodations could be made. Written guidelines for public comment in meetings were distributed at each meeting and can be found in Appendix A-8.

The public meetings that were held during the comment period are documented in Table 2-2.

Table 2-2: ALCOSAN Draft WWP Public Meetings

Meeting Date	Meeting Time	Municipality
Thursday, August 16	6:30 pm – 9:00 pm	Pittsburgh, South Side
Thursday, August 30	9:30 am – Noon	West View
Wednesday, September 5	9:30 am – Noon	Turtle Creek
Monday, September 10	9:30 am – Noon	Crafton
Wednesday, September 12	9:30 am – Noon	Upper St. Clair
Tuesday, September 18	6:30 pm – 9:00 pm	Pittsburgh, South Side
Wednesday, September 19	6:30 pm – 9:00 pm	Sharpsburg

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Table 2-2: ALCOSAN Draft WWP Public Meetings

Meeting Date	Meeting Time	Municipality
Wednesday, October 3	6:30 pm – 9:00 pm	Baldwin
Thursday, October 4	6:30 pm – 9:00 pm	Pittsburgh, South Side
Tuesday, October 9	6:30 pm – 9:00 pm	Monroeville
Wednesday, October 10	6:30 pm – 9:00 pm	Oakdale
Wednesday, October 17*	10:00 am – 8:00 pm	Pittsburgh, South Side
Friday, October 19*	9:00 am – 5:00 pm	ALCOSAN

*Note: These two meetings were for public testimony only. No presentation was given.

Throughout the comment period, 456 people attended public meetings. A summary of meeting attendance and comments delivered is included in Section 2.6.1.

With the exception of the final two testimony-only meetings, each meeting consisted of a presentation that included information on the following topics:

- Brief ALCOSAN History;
- Wet Weather Overflow Issues;
- ALCOSAN System Overview;
- Regulatory Requirements;
- Evaluating and Selecting Solutions;
- Selected Wet Weather Plan;
- Recommended Wet Weather Plan;
- Affordability Analysis;
- Implementation Plan; and
- Municipal and Public Involvement

At the first public meeting, attendees voiced complaints concerning the length and technical nature of the presentation. As a result, ALCOSAN staff simplified the presentation by reducing the number of slides and using fewer technical terms without compromising the message.

After each presentation, attendees were reminded of the comment guidelines and the meeting was open for public comments and questions. At each meeting, attendees had the option to comment in the following ways:

- By placing comments in written format in a designated drop box at the meeting;
- By stating comments in the main meeting area during or after the questions and answer session; and/or

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- By stating comments before an ALCOSAN representative and a stenographer in private area separate from the main meeting space at any time during the session.

ALCOSAN senior staff members were in attendance to answer questions and provide clarification on issues of concern. The proceedings from each meeting were transcribed by a court reporter. Transcripts can be found in Appendix A-9.

2.6 Public and Municipal Comment and Response Summary

ALCOSAN conducted an intensive effort to respond to the public and municipal comments received on the Draft WWP. These activities included:

- Provided immediate responses to oral comments provided at the public meetings;
- Preparing a written response letter for all individuals or organizational comments submitted with an indication that a response was requested;
- Preparing a written response letter for all comment letters received from customer municipalities and authorities;
- Revised the Draft WWP to fully document the formal public comment process, comments and responses, and related materials; and
- Revised the Draft WWP to address the comments received, where appropriate

This section represents ALCOSAN’s “responsiveness summary,”

The contents of this section, and supporting Appendices, are described below.

Section 2.6.1 Public Comments, includes:

- Summary of written and oral comments received from the public and interested parties in response to the Draft WWP and public meetings
- Identification of key public comment issues, including ALCOSAN responses

Section 2.6.2 Municipal Comments, includes:

- Summary of municipal comments received.
- Identification of key municipal comment issues, including ALCOSAN responses

Appendix A-9 Public and Municipal Comment and Response Documentation, includes:

- A public comment tracking log
- Public meeting transcripts
- A summary of meetings held with public officials
- Comment forms submitted at meetings
- Comments submitted via email or the ALCOSAN website
- Written testimony submitted
- Municipal comment letters received

2.6.1 Public Comments

As described in Section 2.5, ALCOSAN's Draft WWP was released for public comment on July 31, 2012. The public comment period began with the Plan's release and ended on October 19, 2012. This section summarizes the verbal comments received at public meetings as well as written comments received at meetings, through the mail, via email, and through the ALCOSAN website. It identifies the types of comments that were submitted, key issues associated with them, and summarizes ALCOSAN's responses to these issues. Comments received on the Draft WWP from ALCOSAN's customer municipalities are addressed separately in Section 2.6.2.

Table 2-3 provides a summary of the public comments received on the Draft ALCOSAN WWP, including a summary (by public meeting) of the number of attendees and the categories and number of comments received. All of the public comments received are documented in the Public Comment Tracking Log found in Appendix A-9.

The following organizations submitted comments on the Draft WWP:

- Action United/Unite Here Local 57
- Allegheny Conference on Community Development
- Allegheny County Conservation District
- Allegheny Group of the Sierra Club
- Clean Rivers Campaign
- Clean Water Action
- CONNECT, the Congress of Neighboring Communities
- Environmental Advocacy Collaborative
- First Unitarian Church of Pittsburgh
- Forest Hills Council
- Hollow Oak Land Trust
- Kennedy Township Board of Commissioners
- Mt. Lebanon Environmental Sustainability Board
- Nine Mile Run Watershed Association
- North Fayette Township
- PA Economy League of Greater Pittsburgh
- Penn State Center - Engaging Pittsburgh
- PennFUTURE
- Pennsylvania Environmental Council
- Pittsburgh Parks Conservancy
- Pittsburgh Shade Tree Commission
- Pittsburgh United

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- Pittsburgh Water and Sewer Authority
- SEEDS, Inc.
- Sierra Club
- The Kingsley Association / Larimer Consensus Group / Larimer Green Team
- Three Rivers Rowing Association
- Three Rivers Waterkeeper
- Urban Redevelopment Authority of Pittsburgh

A summary of the comments received during the public comment period, as well as ALCOSAN's responses to them, have been organized into the following categories.

- GSI/Flow Reduction
- Institutional Framework
- Design and Construction
- Cost/Rates
- Public Engagement
- Community Impact
- Water Quality
- CD Compliance

The following provides a summary of the types of public comments that were received on the ALCOSAN Draft WWP and the key issues associated with these comment categories. Also included are summaries of the ALCOSAN responses to these comments and concerns. All of the public comments received are documented in the Public Comment Tracking Log found in Appendix A-9.

Table 2-3: Summary of Public Meetings and Public Comments Received

Meeting Date / Location	8/16 Sheraton Station Square (Pittsburgh)	8/30 West View Fire Dept. (Pittsburgh)	9/5 Hilltop Hall (Turtle Creek)	9/10 Crafton Municipal Bldg.	9/12 Crowne Plaza (Pittsburgh)	9/18 I.B.E.W. (Pittsburgh)	9/19 Sharpsburg Borough	10/3 Baldwin High School	10/4 Gateway Clipper	10/9 DoubleTree Hilton (Monroeville)	10/10 N. Fayette Fire Hall (Oakdale)	10/17 Sheraton Station Square (Pittsburgh)	10/19/12 ALCOSAN CS&T Bldg.	Public Meeting Totals	Comments Submitted via Web Site	Public Officials Meetings	<u>TOTALS</u>
Total Attendees	115	30	9	12	16	17	No Sign-In Sheet	23	22	24	10	7 (No Sign-In Sheet)	171	456	<i>n/a</i>	39	495
Total Oral Comments and Questions	26	13	4	4	8	9	5	12	13	21	11	3	39	168	<i>n/a</i>	10	178
Total Written Comments	10	2	0	0	0	1	1	0	0	0	3	2	42	61	51	1	113
	Categories and Number of Occurrences in Public Comments																
GSI / Flow Reduction	23	10	3	2	3	4	2	3	2	4	7	2	71	136	43	3	182
Cost / Rates	6	2	1	0	1	1	1	2	2	7	0	3	5	31	2	3	36
Institutional Framework	2	2	0	0	2	1	1	3	3	4	2	1	5	26	6	4	36
Design & Construction	4	1	0	0	1	2	2	1	2	1	4	0	6	24	3	2	29
CD Compliance	0	0	1	2	2	0	0	1	1	0	1	1	4	13	8	0	21
Community Impact	3	0	1	1	0	0	1	0	0	0	0	1	12	19	0	1	20
Public Engagement	3	1	0	0	0	1	0	0	3	1	1	0	2	12	0	0	12
Water Quality	0	0	0	0	0	0	0	0	1	1	0	0	2	4	1	0	5
Other	5	1	1	1	0	2	0	2	2	1	0	0	2	17	1	0	18

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Comment Category – Flow Reduction / Green Stormwater Infrastructure:

At the public meetings early in the comment period, proponents of GSI commented that the Draft WWP has too much “grey” (conventional infrastructure) and not enough “green.” At meetings throughout the comment period, ALCOSAN representatives explained the limitations of their institutional jurisdiction and control, ALCOSAN’s support for flow reduction wherever possible, ALCOSAN’s previous procurement of funding for green municipal demonstration projects, the sponsorship of workshops on GSI, and technical support for municipalities’ efforts to include GSI in their MFS.

As a result, the testimony of GSI proponents evolved into recognizing the institutional constraints on ALCOSAN, but continuing to request that ALCOSAN take the lead in educating municipalities on the benefits of GSI, offering incentives via ALCOSAN’s rate structure, and ultimately, providing financial resources to municipalities to achieve green solutions.

GSI proponents advocated that green projects would provide sustainable jobs, community beautification and other benefits. Some also expressed concern for the lack of flow reduction measures to remove extraneous infiltration and inflow from separate sanitary sewer systems. In addition, they suggested that a green solution might be less costly than a grey solution. Other members of the public countered that GSI would only alleviate a fraction of the sewer overflow problem and would not be cost effective. GSI proponents requested that studies be done to quantify the potential of GSI.

ALCOSAN Response: Since ALCOSAN and the ACHD formed 3RWW in 1997 to provide technical assistance to the municipalities in addressing overflow compliance challenges, with an initial focus on flow reduction, ALCOSAN has continued to support organizations and municipalities in all efforts to remove extraneous flow from their sewer systems, including the use of GSI.

Given that ALCOSAN’s customer municipalities have jurisdiction over implementing flow reduction, the coordinated ALCOSAN and municipal wet weather planning effort was based on municipalities evaluating the potential for GSI as a CSO control measure. To support this effort, ALCOSAN offered technical resources to municipalities interested in considering GSI. ALCOSAN hosted workshops, provided support in pursuing State and Federal funding, and developed concept plans for interested municipalities. It should be noted that since GSI controls storm water runoff, it is of limited use in addressing overflows from sanitary sewer systems. This is not to say that GSI would not have water quality and other benefits when used to control runoff to separate storm sewer systems.

ALCOSAN has already implemented a number of green flow reduction solutions. To date, ALCOSAN has partnered with municipalities to complete five projects which have re-routed natural streams that over the years had been directed to drain into municipal combined sewers, wasting valuable sewer system capacity. The funding for these projects has been provided through ALCOSAN’s legislative liaison efforts and the support of the region’s Congressional delegation. Two of the projects included the restoration of the stream to natural riparian habitats. Taking those streams out of the municipal sewer systems provides a large return on

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investment. Unfortunately, not every community that could partner has done so because it requires a financial commitment from the community.

There are challenges to ALCOSAN's ability to influence the use of more green control measures in the WWP, as ALCOSAN does not have the authority to mandate GSI applications in municipalities. Most of the other large urban wastewater agencies that have implemented GSI as a CSO control measure have different organizational structures. In many cases, a single entity, such as a city, has integrated control over and responsibilities for the sewer system, streets and land development practices. In ALCOSAN's system, like many other parts of Southwestern Pennsylvania, fragmentation can work against regional solutions. ALCOSAN does not have the institutional jurisdiction to dictate how municipalities control or manage their flows. ALCOSAN does have the responsibility to accept municipal flows, however.

GSI and other flow reduction options were evaluated as part of a screening level alternatives analysis during the development of the WWP. These evaluations resulted in the identification of sewersheds where GSI flow reduction techniques had potential for meeting water quality compliance objectives. The analysis demonstrated that opportunities for controlling overflows with GSI do indeed exist. However, it also demonstrated that for the ALCOSAN system GSI alone cannot meet the requirements of the CSO Policy in accordance with the CD. The analysis results were provided to the municipalities for consideration in development of their MFS. Following these efforts, municipalities provided ALCOSAN with preliminary future flow estimates and MFS, indicating the types of controls being considered by municipalities. In general, the MFS submitted in 2013 focused on conveying flows to ALCOSAN rather than controlling flows through GSI or other flow reduction methods.

In response to the comments received and suggestions to more closely evaluate GSI and other flow reduction alternatives, ALCOSAN conducted a regional analysis of the potential for GSI to control overflows and reduce the amount of grey infrastructure needed to meet regulatory compliance requirements. ALCOSAN worked closely with 3RWW and its customer municipalities to identify opportunities to utilize flow reduction techniques. This study is included in this WWP as Chapter 10: Starting at the Source ... How Our Region Can Work Together for Clean Water and includes the following:

- A review of national and regional GSI and other flow reduction practices;
- A regional analysis of the potential for flow reduction methods to address compliance requirements;
- A cost-performance alternatives analysis that identifies areas where flow reduction technologies might reduce the need for grey infrastructure;
- A GSI outreach program aimed at nurturing municipal interest through the development concept plans that help visualize possibilities;
- An assessment of potential flow reduction incentive options; and
- The recommendation of an ALCOSAN led regional flow reduction program that advocates for, and incentivizes the use of, GSI and other flow reduction methods.

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The study identified numerous opportunities to incorporate GSI and other flow reduction methods into the WWP and was provided to customer municipalities as a technical resource.

ALCOSAN continues to support the municipalities in consideration of flow reduction as they develop Municipal Source Reduction Studies (MSRS) in response to recent PaDEP orders and is an active participant in the 3RWW Source Flow Reduction and Flow Targets Sub-committee. ALCOSAN has also worked closely with the regulatory agencies to develop a WWP implementation framework that fully supports the use of GSI and other flow reduction practices. This framework will allow for the use of flow reduction projects instead of grey infrastructure in cases where they can be shown to provide the same or better performance. This framework is described further in Section 11.3.

In addition, ALCOSAN has initiated a regional Flow Reduction Program that incentivizes the construction of municipal flow reduction projects and is described further in Section 11.2.1. In this context, if MSRS indicate that municipalities are committing to incorporate significant flow reduction measures within their collection systems, ALCOSAN will propose corresponding modifications to the WWP.

Comment Category - Institutional Framework:

Members of the public encouraged ALCOSAN to better communicate their institutional limitations as well as the roles and responsibilities of municipalities and agencies. The regional institutional framework was brought into clear focus when members of the public compared ALCOSAN's Draft WWP to other localities, particularly on the topic of GSI. They stated that other cities, such as Philadelphia, Indianapolis, and Cleveland, were utilizing GSI to address their wet weather issues. Meeting attendees also asked about the purpose and progress of the Sewer Regionalization Study and whether the results would be incorporated into the Final WWP.

ALCOSAN Response:

ALCOSAN conducted a Sewer Regionalization Study and collaborated with the Allegheny Conference on Community Development to convene a Regionalization Review Panel to advise on the study's scope, methods, and findings. Although the study was not a requirement of the CD, ALCOSAN recognized the importance of identifying and evaluating options for regionalization of the sewer system.

The study concluded that the regionalization of inter-municipal trunk sewers was a logical first step towards potentially more extensive regionalization thereafter. Currently, ALCOSAN is working with its member municipalities to transfer ownership and maintenance responsibility for multi-municipal trunk sewers to ALCOSAN. More than 200 multi-municipal miles of trunk sewers have been identified by ALCOSAN that meet the definition agreed to by a Sewer Regionalization Implementation Committee that was formed after the study was completed.

ALCOSAN has been gathering relevant municipal information in an effort to identify any additional sewers that are multi-municipal; evaluate the location and condition of the 200 miles of sewers; and determine approximate extents, exhibits, and mapping for the transfer

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agreements. To date, approximately 20,000 pieces of municipal information have been received. ALCOSAN has also been meeting with local municipal officials and engineers in an effort to understand any concerns that may affect the agreements or schedule of transfer. Municipal officials are also being asked for any additional sewer extents they would like to be considered by ALCOSAN. To facilitate the transfer process, ALCOSAN is conducting closed circuit television (CCTV) evaluation and inspection of the 200 miles of municipal trunk sewers. Once all sewers and facilities are inspected and evaluated, ALCOSAN will begin facilitation of the transfer agreements.

As part of the regionalization process, ALCOSAN is evaluating operational and maintenance budget requirements as well as future Capital Planning budget requirements associated with the multi-municipal facility transfer. Budgets for infrastructure renewal/replacement will be included in this capital project.

Comment Category - Design and Construction:

Faced with a regional public works project of the magnitude of the WWP, some expressed concern over the “life expectancy” of the proposed regional tunnels. Others asked about benchmarks for good, or successful, combined sewer overflow control initiatives from other cities, from an engineering and design perspective. Finally, members of the public asked about the use of new technologies, such as ultraviolet disinfection, and, in general, asked for more explanation of control technologies, such as retention treatment basins and regional conveyance tunnels.

ALCOSAN Response: According to the 2008 CD, the WWP initiatives are to be completed by 2026 and are to have sufficient design capacity to accommodate 20 additional years of projected growth and flow increase. Therefore, the tunnels and other control facilities have been sized utilizing flow projections based on the Southwestern Pennsylvania Commission’s (SPC) population forecasts for 2046. The overflow calculations are based on a typical year of precipitation that is based on analysis of over 60 years of historical gauged precipitation data.

When properly maintained, large scale wastewater systems have long and reliable useful lives. For example, ALCOSAN’s existing “deep tunnel” conveyance interceptor sewer system went on line in 1959, is in excellent overall condition and will remain in useful service for the foreseeable future.

Alternative control technologies considered for the development of the WWP are described in Section 8 of the WWP. In addition, a construction timeline for an Interim Wet Weather Plan (IWWP) is included in Section 11 of the WWP which addresses project implementation through 2036, as extended from the prior 2026 completion date.

Comment Category - Cost / Rate Structure:

Members of the public expressed serious concern over the cost of compliance. They respected ALCOSAN's position to put forward the Recommended Plan that moves toward compliance while recognizing that full compliance would impose too high a burden on rate payers. Nevertheless, even the increase in rates required for the Recommended Plan was viewed as onerous to those on fixed incomes and to low income rate payers. Furthermore, in reviewing the maps showing Residential Indicators by municipality, some attendees noted that ALCOSAN should not forget that there are great income level variations among City of Pittsburgh neighborhoods. Utilizing the median income for the City as a whole is misleading in terms of the real burden on residential rate payers.

A number of meeting attendees wanted to know when the rates would begin to be significantly increased. They urged elected officials to take a more active role in identifying and securing funding for the WWP in order to mitigate the impact on the rate payers. They also encouraged ALCOSAN to coordinate closely with customer municipalities to reduce ratepayer costs.

Finally, members of the public inquired about the possibility of changing the way ALCOSAN charges its rate payers. Instead of charging the same fee, based on metered water consumption, across the service area, it was suggested that ALCOSAN examine a rate structure that would reward residents and municipalities for removing stormwater from the system. When ALCOSAN staff responded that a rate study has been undertaken, it was recommended that ALCOSAN also examine charging a stormwater runoff fee to offset the cost of the wet weather improvements.

ALCOSAN Response: ALCOSAN shares the concerns as to the affordability of the required wet weather controls and the uneven impacts on the lower income residents of the service area. In March of 2015, the ALCOSAN Board of Directors established a sub-committee of the Board to work with the ALCOSAN staff to develop a comprehensive program to provide assistance to low income ratepayers throughout the ALCOSAN service area.

USEPA's Residential Indicator is a measure of household cost burden based upon service area-wide median household incomes and typical annual total wastewater costs. Wastewater costs that comprise more than 2% of median household income are considered to constitute a high burden. While this is a useful measurement, it is limited for an area as large and complex as ALCOSAN's service area. For example, if the Residential Indicator is at 2% of median household income, by definition, half of the households would be paying more than 2% of their incomes for wastewater services.

That is why ALCOSAN's analysis in Section 6 (current conditions) and Section 11.3.5 (Affordability and Financial Capability Assessment) look at the differences in income within the City of Pittsburgh and other municipalities. The analysis also looks at additional metrics such as household size, population age characteristics and income differences between the smaller municipalities. These various measurements are intended to build the argument that the ALCOSAN service area has limited abilities to fund wet weather controls.

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ALCOSAN's current rate structure consists of a commodity charge, based on metered water consumption and on a fixed service charge, which recognizes that many system costs do not vary significantly by the amount of water used or sewage generated. For example, debt service payments do not change as wastewater flows vary. This is analogous to one's car payments remaining even if the car is not driven for a month or two. There is no differentiation in the rate structure between customers in separated systems and those in combined sewer systems or between customers whose sanitary sewers are leaky and admit much extraneous flows and customers whose systems are not leaky. This system has been in place since ALCOSAN started operation in 1959; and has been perfectly logical as long as sanitary or combined sewer overflows do not impose costs.

ALCOSAN charges the rate payer for conveyance and treatment, including collecting the flow that comes from the municipality, conveying it through large interceptors, and then treating it at the treatment facility. The municipalities charge rate payers for maintaining and operating the sewers within their community. The municipalities have the ability to add a fee on to the ALCOSAN fee. Therefore, the overall sewage rate varies by municipality. As wet weather controls are implemented, ALCOSAN will make every effort to efficiently and equitably allocate the costs of wet weather controls and has also initiated a flow reduction program that incentivizes green and other flow reduction practices. The flow reduction program, ALCOSAN's GROW Program, is described further in Section 11.2.1.

ALCOSAN is continuing to exchange information with the municipalities about how much flow they will be sending, what level of sewer system improvements will be made, and what municipal financial burden will result. There is a section in the WWP that addresses this issue but the information ALCOSAN received varies greatly by municipality. The Draft WWP was completed prior to submission of the MFS to the regulatory agencies in July of 2013. Subsequent events have resulted in the regulatory agencies (ACHD and PaDEP) deferring decisions on the MFS until municipal flow reduction can be more thoroughly evaluated and regionalization extents are determined. Consequently, the financial burden on individual municipalities remains to be resolved.

On October 24, 2013 the ALCOSAN Board of Directors enacted a four-year rate increase strategy. Rates for 2014 were raised by 17 percent and rates for each of 2015 through 2017 were raised by 11%. For planning purposes, it has been projected that rates will subsequently rise between 6% to 9% annually through 2036. Actual future rates will be determined based upon then current conditions.

ALCOSAN has successfully lobbied for funds with the Federal Government since 1998, receiving \$40 million in funding since 1997 for use on municipal projects such as the stream re-routing projects described above. Despite these successes, the funding support received to date is a small fraction of total long-term needs. ALCOSAN and its customer municipalities are not alone in this problem as cities and regions large and small deal with huge demands for infrastructure investments and limited funding support from the state and federal governments. ALCOSAN is working at a national level with similar wastewater authorities and their national trade groups towards long term solutions.

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Funding assistance is available to the municipalities for municipal improvements through the Pennsylvania State Infrastructure Investment Authority, better known as PennVEST, which offers loans at favorable rates. Restrictions on the total amount that can be loaned to an individual authority or municipality (\$20 million) limit the program's usefulness for ALCOSAN.

ALCOSAN has revised its Affordability Analysis, including municipal Residential Indicators based upon current (2017) conditions. The results of this revised analysis are presented in Section 11.3.5.

Comment Category - Public Engagement:

At the start of the public meetings, attendees voiced concerns that the presentation was too long and technical. Despite the media coverage of the Draft WWP and sewer overflow issues, some members of the public voiced concern that there was not more information "out there" about the problem and the necessity for the WWP. In addition, some meeting attendees were dismayed that the audiences were not bigger and speculated that people would not really pay attention until they started seeing substantial rate increases.

ALCOSAN Response: In response to public comment, the presentation was made less technical and shortened to keep the audience focused and allow more time for discussion and public comment.

ALCOSAN has shared information about the WWP through notices within ratepayers' bills, direct mailings, and television commercials. In addition, news articles have been written for regional and local newspapers and municipal newsletters. Printed materials were delivered to libraries throughout the service area and to all 83 municipal offices. Extensive materials, including the WWP and Companion Document, were made available on the ALCOSAN web site. In addition to the annual customer information meetings, ALCOSAN Open House, and information booths at various regional events, ALCOSAN also launched a grassroots outreach effort to reach audiences that are not reached through traditional public meetings.

Comment Category - Community Impact:

Many who commented stated that ratepayers would like to see the visible impact of their rate dollars in their communities and that GSI initiatives would improve the quality of life of communities. Others voiced concern that increased rates would discourage homeownership in the service area in the long term. Finally, some expressed concern about issues caused by construction, such as road closings, decreased property values near proposed tunnels, potential demolitions, etc.

ALCOSAN Response: ALCOSAN staff reiterated their support for flow reduction, including GSI, while explaining that ALCOSAN does not have the institutional jurisdiction to compel municipalities and/or property owners to implement green solutions.

Regarding issues that result from construction, ALCOSAN staff noted that preliminary tunnel routes and other facility locations have been laid out by engineers, but not in detail. ALCOSAN recognizes that there will need to be significant discussion around the planning and design of

those facilities. ALCOSAN respects the fact that disruption will need to be minimized as much as possible through construction. There will be coordination with municipalities, particularly with the City of Pittsburgh that will have the most impact from tunnel construction. Because tunnels are along the rivers' shore lines, there will be added sensitivity to environmental and quality of life issues such as trails and recent river-oriented development. It should be noted that tunnel construction would pose relatively little impacts at the surface compared to the construction of conventional open cut sewer installation.

Comment Category - Water Quality:

In general, meeting attendees did not dispute the need for improved water quality, although they did have questions about what defines good water quality. They recognized that being able to swim, boat, and fish in the rivers is a quality of life issue. That said, there were some who questioned whether the rivers were "clean enough" already while others expressed their concern about the health impacts on people recreating in and around the streams and rivers. Some wondered whether the environmental compliance bar would be continually raised and that this major project might be only the beginning.

ALCOSAN Response: The PaDEP has established Designated Uses for the rivers and streams such as public water supply, recreational usage, etc. Water quality standards are set to protect these designated uses and discharge limits are established to control the amount of pollutants discharged to the rivers and streams. PaDEP is required to review their water quality standards every three years and revise them as appropriate. In addition to the state regulations, the Ohio River is subject to another set of water quality standards established by the Ohio River Valley Water Sanitation Commission (ORSANCO). Section 5.2 provides a comprehensive review of the water quality standards applicable to ALCOSAN's receiving waters.

The water quality standard most impacted by the sewage overflows in the region concerns fecal coliform bacteria, a common intestinal organism whose presence indicates wastes from warm blooded animals. Regionally, ALCOSAN estimates that there are about 9.6 billion gallons of overflow annually. Approximately 93% of the overflow discharge volume comes from combined sewer overflows, which constitute a mix of sewage and stormwater. Sections 5.4 and 5.5 describe the water quality monitoring and modeling that has been done to characterize the impacts sewer overflows have on receiving waters. Fecal coliform bacteria levels far exceed established limits downstream of overflow points during and following significant wet weather events such that PaDEP defined designated uses are not fully protected. The WWP is designed to prevent sewer overflows from causing the exceedance of water quality standards. In addition, the CD requires special consideration for sensitive areas such as drinking water intakes, public boat launches, and marinas. As a result, the WWP is designed to provide a higher level of sewer overflow control along select segments of the three main river shorelines.

Comment Category - Consent Decree Compliance:

More than a few people asked what would happen if ALCOSAN refused to comply with the CD. When it was explained that significant penalties and fines would be charged, others were extremely vocal that an unfunded mandate is simply unfair. Some requested that ALCOSAN negotiate more with the USEPA to allow more time to investigate green opportunities and to reduce costs.

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Although the public understood that ALCOSAN was “defending” the rate payers by putting forward the \$2B Recommended Plan, some stated that ALCOSAN should strive for full compliance by implementing the \$3.6B Selected Plan.

ALCOSAN Response: If ALCOSAN were not to comply with the requirements of the CD, which are based on the requirements of the CWA, there would likely be significant stipulated penalties which would continue to accrue until ALCOSAN came into compliance. Because ALCOSAN’s ratepayers are its only revenue stream, stipulated penalties would lead to rate increases, but without the benefit of constructed facilities that will bring ALCOSAN into compliance with the CD. ALCOSAN negotiated with federal, state and county regulatory agency representatives for seven years prior to entering into the CD in 2008 with the objective of managing the financial burden on ratepayers, while still complying with its environmental compliance responsibilities.

In response to public comments received on the WWP, ALCOSAN requested more time to investigate whether green solutions could reduce the cost of compliance and conducted a regional study in coordination with 3RWW and its customer municipalities. This study identified numerous opportunities to use GSI to control sewer overflows and has led to the development of an ALCOSAN led regional Flow Reduction Program which will incentivize the use of flow reduction practices, such as GSI. The full study: *Starting at the Source: How Our Region Can Work Together for Clean Water* is included as Section 10 of this WWP. Following the completion of ALCOSAN’s regional flow reduction study, PaDEP ordered the municipalities to submit a MSRS by December 2017.

In addition, ALCOSAN has also been negotiating with the regulatory agencies since early 2013 to modify the CD so that it more fully supports the use of flow reduction solutions such as GSI. The modified CD will allow for using green solutions instead of grey infrastructure if studies can demonstrate that they will provide equivalent performance. Section 11.3.7 provides a more comprehensive description of this adaptive management framework that allows more time to investigate green solutions and incorporate them into the plan.

2.6.2 Municipal Comments

As described in Section 2.5, ALCOSAN’s Draft WWP was released for public comment on July 31st, 2012. The public comment period began with the Plan’s release and ended on October 19th, 2012. As part of the customer municipality coordination component of this public release and comment process, a printed copy of the Draft WWP was delivered to each of ALCOSAN’s 83 customer municipalities, and associated authorities, for review and comment.

This section summarizes the comments received from ALCOSAN’s customer municipalities, identifies the types of comments and key issues associated with them, and summarizes ALCOSAN’s responses to these issues. All of the individual municipal comment letters received can be found in Appendix A-9.

A total of 31 municipalities/authorities submitted written comments on the Draft WWP to ALCOSAN during the public comment period. Table 2-4 lists the municipalities/authorities that submitted formal written comments.

Table 2-4: List of Municipalities / Authorities who Submitted Comments on the Draft WWP

Municipality or Authority	Municipality or Authority
Borough of Baldwin	Borough of Heidelberg
Borough of Ben Avon Heights	Borough of Ingram
Municipality of Bethel Park	McCandless Township Sanitary Authority
Brentwood Borough	Borough of Mt. Oliver
Bridgeville Borough	Township of North Fayette
Borough of Carnegie	Municipality of Penn Hills
Borough of Castle Shannon	Pittsburgh Water and Sewer Authority
Churchill Borough	Ross Township
Collier Township	Borough of Rosslyn Farms
Collier Township Municipal Authority	Township of Scott
Borough of Crafton	Township of Shaler
Borough of Dormont	Borough of Thornburg
Borough of Edgewood	Township of Upper St. Clair
Borough of Emsworth	West Mifflin Sanitary Sewer Municipal Authority
Borough of Etna	Whitehall Borough
Borough of Fox Chapel	

A total of 192 individual comments were provided in the 31 municipal comment letters that were received by ALCOSAN during the public comment period. Table 2-5 provides a summary

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of the municipal comments that were received. Shown are the municipalities /authorities that submitted comments and the total number of comments submitted by each. Also shown are the various categories (or types) of comments that were received and the number of occurrences that a particular municipal comment fell into one of these categories. In some cases, an individual comment fell into more than one category. The categories, and the issues raised under them, are described in more detail in the summary of key issues below.

The following provides a summary of the most common types of comments that were received on the ALCOSAN Draft WWP from ALCOSAN's customer municipalities and the general issues associated with these comment categories. Also included are summaries of the ALCOSAN responses to these comments and concerns. Individual letters of response have been prepared and will be issued shortly to each municipality/authority that provided written comments.

Comment Category - Lack of ALCOSAN Improvements Downstream of Municipal Improvements:

A common concern that was expressed by the customer municipalities was that, based on the affordability analysis, not all ALCOSAN projects within the Selected Plan can be completed by 2026, yet ALCOSAN assumed based on Agency guidance to the municipalities that all municipal projects would be completed by 2026. Therefore, they questioned how additional flows sent to ALCOSAN would be handled if the municipalities were to increase the conveyance capacities of their systems but ALCOSAN does not. Similarly, they questioned how additional flows would be handled if the municipalities were to complete their construction projects prior to downstream ALCOSAN projects. Also, if not all SSOs will be eliminated in areas where no improvements are being made by ALCOSAN, how will these SSOs be handled? If every municipality were to decide to convey flows to ALCOSAN, but no regional system work is being completed by ALCOSAN in a basin, will new or increased SSOs be created? Furthermore, what restrictions will exist at points of connection to the ALCOSAN system if no new facilities are being proposed by ALCOSAN? Who will be responsible for any overflows that occur at the point of connection? Will ALCOSAN provide sufficient capacity for all flows conveyed by a municipality up to, and including the 10-year design storm? Some comments also implied that since the recommended Balanced Priority Alternative does not include ALCOSAN improvements in all planning basins, that it would provide no benefit to those planning basins.

ALCOSAN Response: The compatibility between municipal and ALCOSAN projects and their schedules has been raised by ALCOSAN in meetings with the regulatory agencies, and has led to the agencies directing an alternative approach to what was proposed in the Draft WWP. The agencies have emphasized the importance of regionalization and the corresponding transfer of inter-municipal trunk sewers to ALCOSAN. When a municipality transfers ownership to ALCOSAN, it is anticipated that it will also transfer responsibility for implementing projects necessary to control overflows along the transferred sewer(s) and that specific provisions will be incorporated into transfer agreements. Since some municipal overflows exist along sewers that are not currently envisioned for transfer, those overflow control measures will remain the responsibility of the corresponding municipality.

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In addition to requiring regionalization as a part of the WWP, the regulatory agencies have also directed that the municipalities focus on flow reduction and have ordered the municipalities to submit a MSRS by December 2017. In concert with these orders, the agencies have directed ALCOSAN to establish flow targets for its customer municipalities and to enter into enforceable flow reduction agreements with each municipality.

Since regionalization and flow reduction could impact the projects previously identified for implementation by the municipalities, the revised approach relies on an adaptive management implementation framework that defers reconciling the controls necessary to address overflows along sewers currently owned and operated by customer municipalities until after the impacts of regionalization and flow reduction are better understood. This adaptive management approach is described in more detail in Section 11.3.7 of this WWP, and includes milestones for identifying necessary projects and implementation schedules.

Table 2-5: General Statistics for Municipal Comments Received on Draft ALCOSAN WWP

Municipality / Authority	Borough of Baldwin	Borough of Ben Avon Heights	Municipality of Bethel Park	Brentwood Borough	Bridgeville Borough	Borough of Carnegie	Borough of Castle Shannon	Churchill Borough	Collier Township	Collier Township Municipal Authority	Borough of Crafton	Borough of Dormont	Borough of Edgewood	Borough of Emsworth	Borough of Etna	Borough of Fox Chapel	Borough of Heidelberg	Borough of Ingram	McCandless Township Sanitary Authority	Borough of Mt. Oliver	Township of North Fayette	Municipality of Penn Hills	Pittsburgh Water and Sewer Authority	Ross Township	Borough of Rosslyn Farms	Township of Scott	Township of Shaler	Borough of Thornburg	Township of Upper St. Clair	West Mifflin Sanitary Sewer Municipal Authority	Whitehall Borough	TOTALS
Total Written Comments	3	3	5	5	3	4	9	5	5	5	5	4	5	6	10	12	5	4	22	5	7	5	9	4	6	7	10	6	3	5	5	192
Categories and Number of Occurrences in Municipal Comments																																
Lack of ALCOSAN Improvements Downstream of Municipal Improvements	1	0	1	3	1	1	2	3	1	0	2	2	3	3	1	1	2	1	2	3	3	3	3	3	2	1	1	2	1	1	3	56
Municipal Cost and Residential Indicator	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	0	1	30
Implementation Schedule	0	0	0	1	1	1	0	1	0	0	1	0	0	1	4	1	1	1	4	1	0	1	2	1	1	0	1	1	1	0	1	27
Municipal Planning Information	0	1	0	1	1	1	0	1	0	2	0	1	0	1	1	1	1	0	0	0	1	1	0	0	1	4	0	1	1	0	1	22
Proposed ALCOSAN Facilities	0	0	0	0	0	1	0	0	0	0	2	0	0	1	1	0	1	2	5	1	0	0	1	0	2	0	2	1	0	0	0	20
Existing Municipal Systems	0	0	0	0	0	0	5	0	2	5	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	17
Cost / Rates	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	3	0	0	1	0	0	0	0	1	0	0	4	1	15
Other Issues	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	5	0	0	0	1	0	0	0	1	0	0	0	0	10
CD Compliance	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	0	1	0	0	0	0	1	2	0	0	0	0	10
Projected Flow Rates at Each POC	1	1	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	8
GSI / Flow Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	6
Water Quality	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3
Legal Issues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Regionalization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
H&H Modeling	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

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Comment Category - Municipal Cost and Residential Indicator:

A common comment was that the Draft WWP assumes an annual cost per municipality of \$210 per customer based on uniform distribution of all the municipal costs and that the municipalities will be further refining these numbers based on debt service, annual operation and maintenance costs, financing options, etc. as part of the financial impact section of the MFS due in July 2013. Similarly, the Draft WWP assigns a value of \$530 million dollars for municipal improvements and then spreads these costs evenly among all other municipalities within the ALCOSAN service area. It was expressed that it was not clear what the sources of the \$530 million-dollar value are and that there is a figure provided in the Draft WWP that shows the proposed municipal projects, however, a corresponding table that lists the projects along with the costs for each would be helpful. Also, numerous municipal comments pointed out that they reviewed the cost estimates and residential indicators for their municipality and, either didn't see a problem with the estimates but pointed out that the numbers will be refined as part of the MFS, or indicated that the estimates are incorrect and provided the expected amounts for capital improvements and how these projects will be funded.

ALCOSAN Response: There have been a number of developments relative to municipal project requirements and cost impacts since the Draft WWP in July 2012, making the \$530 million municipal cost estimate somewhat obsolete, at least for the time being. More specifically, the agencies focused municipal priorities towards regionalization and the corresponding transfer of inter-municipal trunk sewers to ALCOSAN. When a municipality transfers ownership to ALCOSAN, it will also transfer responsibility for implementing projects necessary to control overflows along the transferred sewer(s). Since some municipal overflows exist along sewers that are not currently envisioned for transfer, those overflow control measures will remain the responsibility of the corresponding municipality.

In addition to requiring regionalization as a part of the WWP, the regulatory agencies have also directed that the municipalities focus on flow reduction and have ordered the municipalities to submit a MSRS by December 2017. In concert with these orders, the agencies have directed ALCOSAN to establish flow targets for its customer municipalities and to enter into enforceable flow reduction agreements with each municipality.

Since regionalization and flow reduction could impact the projects previously identified for implementation by the municipalities, the revised approach relies on an adaptive management implementation framework that defers reconciling the controls necessary to address overflows along sewers currently owned and operated by customer municipalities until after the impacts of regionalization and flow reduction are better understood. This adaptive management approach is described in more detail in Section 11.3.7 of this WWP, and includes milestones for identifying necessary projects and implementation schedules.

ALCOSAN's revised affordability analysis and residential indicator based upon current (2017) conditions is presented in Section 11.3.5 of this document. However, since the municipal compliance costs and schedules remain uncertain, updates still use the uniform cost distribution to approximate the system-wide municipal affordability impacts. The even distribution of municipal costs amongst all municipalities is explained as follows. The total costs facing a given municipality could include both collection system improvements within the municipality and the municipalities' proportionate share of downstream inter-municipal improvements (if any).

In addition, municipal costs for flow reduction efforts remain uncertain and regionalization will impact cost allocations for projects needed along transferred inter-municipal trunk sewers. Since several uncertainties remain, ALCOSAN does not yet have access to the expected capital cost of compliance for most municipalities.

Comment Category - Implementation Schedule:

Numerous municipal comments pointed out that Section 11 of the Draft WWP indicated the municipalities will begin construction of their projects immediately following the approval of the MFS. Their concern is, if the municipalities complete their construction projects prior to ALCOSAN projects, increased municipal flows could potentially create new hydraulic issues to their systems or downstream municipalities. The comments reflected that the ALCOSAN and municipal schedules need to be on parallel tracks. Several comments also point out that the implementation schedule required by the ALCOSAN CD is atypical as compared to other metropolitan wet weather compliance programs and question how this region ended up with what is perceived as a compressed schedule. Finally, several comments raised concerns about the limited number of contractors nationally with the capabilities to execute large tunnel projects thus creating a high potential for cost overruns.

ALCOSAN Response: For clarification, the Draft WWP implementation schedule intended to refer broadly to all aspects of implementing a project from preliminary design through initiation of operation and did not commit to a start date for construction of municipal improvements. Rather, the schedule assumed that all municipal improvements would be implemented between an assumed MFS approval date (July 31, 2014) and the 2026 completion date defined in the ALCOSAN CD. In any event, the collective public, municipal and agency comments on the Draft WWP have led to an alternative approach for municipal project implementation priorities.

The agencies have emphasized the importance of regionalization and the corresponding transfer of inter-municipal trunk sewers to ALCOSAN. When a municipality transfers ownership to ALCOSAN, it will also transfer responsibility for implementing projects necessary to control overflows along the transferred sewer(s). Since some municipal overflows exist along sewers that are not currently envisioned for transfer, those overflow control measures will remain the responsibility of the corresponding municipality.

In addition to requiring regionalization as a part of the WWP, the regulatory agencies have also directed that the municipalities focus on flow reduction and have ordered the municipalities to submit a MSRS by December, 2017. The agencies have also directed ALCOSAN to establish flow targets for its customer municipalities and to enter into enforceable flow reduction agreements with each municipality.

Since regionalization and flow reduction could impact the projects previously identified for implementation by the municipalities, the revised approach relies on an adaptive management implementation framework that defers reconciling the controls necessary to address overflows along sewers currently owned and operated by customer municipalities until after the impacts of regionalization and flow reduction are better understood. This adaptive management

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approach is described in more detail in Section 11 of this WWP, and includes milestones for identifying necessary projects and implementation schedules.

Regarding concerns that the CD is holding the region to a more aggressive schedule than other regions, when the CD negotiations started in 2000, the regulatory agencies were citing USEPA guidance which indicated that long term control plans that would result in a high (>2.0%) affordability burden could have an implementation schedule of "up to 15 years". The guidance noted that in extreme cases, the implementation period might be extended to 20 years through negotiation. Typically, CDs are lodged after the WWP is developed or the CD is modified upon regulatory approval of a WWP to reflect implementation schedules.

ALCOSAN is also concerned about the availability of contractor resources to timely and efficiently implement the WWP and has been negotiating a modified CD which calls for the implementation of priority projects by 2036, rather than 2026. This extended schedule will support a more sequential project construction approach and allow for competitive bidding at a project size range that is suitable for more contractors. Section 11 provides more information on the modified CD and implementation schedule.

Comment Category - Municipal Planning Information:

Numerous comments were provided that related to the municipal planning information that was summarized in Section 9.3.3 of the Draft WWP. Many of the comments included updated information which was received after the release of the Draft WWP or confirmations that the municipalities' planned projects were shown correctly. A few provided updates to the municipal information that was presented (commonly including clarification of which POCs that they contribute flow to).

ALCOSAN Response: ALCOSAN responses to comments related to municipal planning information were handled on a case-by-case basis. Often times, the response included an acknowledgement of the updated information with a statement that the information has been updated/corrected accordingly in the WWP.

Comment Category - Proposed ALCOSAN Facilities:

There were several municipal comments pertaining to the CSO retention treatment basin (RTB) that is proposed to be installed in Crafton Borough and it was asked how many times it is anticipated to discharge in a typical year, how will odor and noise be controlled, and could additional flooding occur based on increased flow to the area. In addition, numerous comments were submitted clarifying the projects proposed (or lack thereof) in their particular municipality. Finally, several comments questioned the alternatives analysis (including cost estimation methodology) pertaining to secondary satellite plants (SSTs) and questioned why SSTs did not receive fuller consideration as a stand-alone plan.

ALCOSAN Response: Agency feedback on the Draft WWP has led to an alternative approach that no longer includes construction of the CSO RTB during the initial phases of WWP implementation. As a result, decisions regarding ALCOSAN facilities to control sewer overflows from Upper Chartiers Creek are expected to be deferred until after 2036, except for SSO control projects along transferred inter-municipal trunk sewers which must be identified

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by January, 2024, including a proposed schedule for implementation during the Interim or Final Measures phases. This approach is discussed in more detail in Section 11.

ALCOSAN responses to municipal comments clarifying the projects proposed (or lack thereof) in their particular municipality were addressed on a case-by-case basis often times confirming the projects or reiterating that there are no ALCOSAN projects proposed.

As described in Section 8 of the Draft WWP, each of the ALCOSAN Basin Planners analyzed the potential of an SST alternative within their respective planning basin. The process for analyzing the viability of SST plants as a basin alternative varied slightly for each of the seven basins. However, it was common to screen the technology considering the technical and financial feasibility of carrying forward an SST control technology through the basin planning process. The analyses also included assessing the available land, set back requirements, access, site difficulties, permitting requirements, and prior cost estimates from the preliminary evaluation. In many cases, the SST alternative was eliminated as a viable technology for concerns over technical limitations and/or cost effectiveness. SSTs were also given consideration as an alternative to the proposed wet weather routing at the ALCOSAN WWTP as presented in Section 9.2 of the Draft WWP. This evaluation concluded that SSTs are neither technically feasible, nor cost effective for treatment of just the portion of wastewater flows above the secondary treatment capacity that would be conveyed to the expanded ALCOSAN WWTP during wet weather events. Thus, it was considered impractical to expand the satellite treatment approach to a stand-alone regional plan. In addition, the decentralization of wastewater treatment resulting from a SST approach would in effect reduce the secondary treatment capacity of the Woods Run WWTP by reducing the average daily flow and organic loading while gaining nowhere near enough peak wet weather flow capacity to be an effective regional approach.

Comment Category - Existing Municipal Systems:

Comments were received that pointed out apparent mistakes and/or misunderstandings in the way a municipality's existing collection system was presented in the Draft WWP. Examples include questions related to ownership of structures and pump stations, missing and/or mistaken points of connection in which a municipality contributes flow to, and structure/manhole numbering. The comments generally involved WWP Sections 3, 4 and 9.3.3.

ALCOSAN Response: ALCOSAN responses to municipal comments related to their existing systems were handled on a case-by-case basis. In many cases, ALCOSAN agreed with the comment and updated the WWP accordingly. For instances whereby a municipality pointed out a missing point of connection, ALCOSAN explained that some smaller sewersheds were combined in the development in the H&H model due to model size limitations. In response to comments related to ownership of pump stations, privately owned pump stations were removed so that the WWP only lists municipality owned and operated pump stations.

Comment Category - Cost / Rates:

A variety of municipal comments were received related to WWP costs and rate structure. Some comments addressed the inequities of spending by the 83 tributary communities stating that it appears that ALCOSAN is developing an overall rate structure that treats all customers

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similarly whether or not a community has completed improvements. Another comment expressed that ALCOSAN should allocate costs based on wet weather costs versus metered water usage and that SSO communities with active lateral replacement programs that contribute minimal wet weather flow should not be assessed with CSO communities. Similarly, a question was raised on whether ALCOSAN would intend to charge combined sewer communities at a higher rate than separate sewer communities since they would appear to need larger pipes and infrastructure than separate sewer communities. Another comment expressed concern that there is no federal or state participation in funding this huge program.

ALCOSAN Response: ALCOSAN appreciates the investments that many municipalities have made to properly maintain their collection systems and to address deficiencies when necessary. ALCOSAN understands the cost allocation issues raised, however, since the WWP will become an enforceable document, it is not the appropriate venue for long term policy decisions about cost allocation.

ALCOSAN shares the concern as to the lack of federal and state funding. Of necessity, the WWP has based the affordability analysis and financial planning on the continuation of the current grim prospects for state and federal assistance with the large state and federal mandates. ALCOSAN has and will continue to work assiduously with state and federal legislative delegations and with organizations that represent municipal wastewater agencies (e.g. the National Association of Clean Water Agencies) towards a coherent and comprehensive matching of regulatory mandates and resources.

Comment Category - CD Compliance:

Several comments pointed out that 11 Chartiers Creek communities and ALCOSAN entered into a CD with the Pennsylvania Environmental Defense Fund (PEDF) requiring that all SSOs be eliminated by 2019. The comments asked if ALCOSAN intends to renegotiate with PEDF to extend the deadline and will ALCOSAN accept any remaining overflows after 2019. Further, ALCOSAN is proposing a 2-year design storm, while the PEDF CD requires all SSOs be eliminated without any specifics on a design storm. Several other comments pointed out that the ALCOSAN WWP does not provide an endpoint for the region's expenditures and that if performance standards are not met then additional investments would be required. Although implementation of the WWP is said to carry to 2046, the control facilities must be in place for SSO control by 2026.

ALCOSAN Response: Since the submission of the Draft WWP, the regulatory agencies have directed ALCOSAN to implement a modified version of the Water Quality Priority Alternative which does not include early implementation of the SSO control projects that would bring ALCOSAN into compliance with the PEDF CD. ALCOSAN expressed concern regarding the PEDF CD requirements and the agencies offered to support ALCOSAN in re-negotiating the PEDF CD to better align with overall WWP implementation schedule priorities. PEDF parties have indicated they are open to such discussions.

Since the PEDF suit does not prescribe any level of control, ALCOSAN is ultimately proposing a two-year level of control for SSOs, which means a long-term average overflow frequency of one overflow every two years. (The two-year design storm was used only for the purpose of

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preliminary sizing of facilities and conveyance.) ALCOSAN believes that this level of control will meet the compliance requirements of the PEDF CD. Several upstream municipalities have proposed a similar solution to comply with their ACOs. Liability for any future overflows will be determined based upon the relevant facts and the state of the law at that time.

ALCOSAN and the agencies have been negotiating a modified CD that directs ALCOSAN to proceed with a modified version of the Water Quality Priority Alternative and to complete those projects by 2036. This approach is described in Section 11. Following the completion of those projects, ALCOSAN will conduct post construction monitoring and modeling to assess the remaining controls necessary to achieve full compliance with the CD and provide the agencies with an implementation schedule for remaining projects that is as expeditious as practicable.

Comment Category - Projected Flow Rates at Each POC:

Several comments were directed to the average dry and wet weather flow values at each ALCOSAN POC that was provided in Appendix B and questioned if it's ALCOSAN's intent to hold the communities to those POCs to that flow rate. These same comments also suggested that a column be added to this table to show the peak wet weather flow rate for each POC that ALCOSAN has designed its facilities for.

ALCOSAN Response: The information presented in Appendix B is intended to fulfill a portion of Paragraph 6, Appendix V of the ALCOSAN CD which requires the reporting of predicted population forecasts and flow rates. It is not intended to represent flow limits that the communities would be held to. However, agency comments on the Draft WWP have directed ALCOSAN to establish flow targets and enter into enforceable flow reduction agreements with each customer municipality. ALCOSAN is currently participating in a 3RWW Source Flow Reduction and Flow Targets Subcommittee aimed at collaboratively developing flow targets with customer municipalities.

Design flows cannot be provided for the proposed ALCOSAN facilities and conveyances as the design flows for the contributing municipal systems have not yet been established by the municipalities. Preliminary sizing for ALCOSAN facilities and conveyances was based on models which reflected preliminary municipal planning information. However, a new Appendix C has been added to the WWP which provides the estimated municipal peak flow rate at each point of connection to the ALCOSAN system, based on the Selected Plan.

Comment Category – Green Stormwater Infrastructure / Flow Reduction:

Three of the 31 commenting municipalities provided questions or comments about GSI and/or other flow reduction measures, resulting in six comments. One comment questioned why ALCOSAN did not offer additional guidance that could be utilized by the municipalities to fully evaluate the merits of GSI technologies. Another provides an analysis of the areas outlined in the WWP where GSI may be feasible and asks for confirmation that it can be concluded that the role of GSI from a CSO mitigation standpoint is small. Another municipality comments that the current institutional framework that limits ALCOSAN from mandating the reduction of wet weather flows from municipal collection systems through GSI and other source controls is outdated. This same municipality is in favor of municipalities implementing

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green programs and claims that ALCOSAN has been encouraging municipalities to convey flows to ALCOSAN rather than control them at the source. The third commenting municipality asks if ALCOSAN's final WWP will include more GSI to decrease the flow which is conveyed to the treatment plant and promote local jobs, while citing that Philadelphia's plan includes a more prominent GSI element.

ALCOSAN Response: In 2008, ALCOSAN met with its customer municipalities to discuss the beginning of a collaborative planning process that addressed the requirements of ALCOSAN's WWP and the municipalities' MFS. At that time, it was discussed that the municipalities would evaluate source controls, such as GSI, as a part of their feasibility study alternatives analysis. ALCOSAN would perform basin and regional alternatives analysis based on future flow estimates provided by customer municipalities.

ALCOSAN's CD requires that ALCOSAN design and construct facilities to manage all municipal flows, unless a municipality has plans to manage flows otherwise. However, ALCOSAN did not encourage municipalities to convey all flows. ALCOSAN only informed the municipalities that ALCOSAN was obliged to accept all flows that the municipalities planned on conveying. In fact, to support the incorporation of flow reduction alternatives in the WWP, ALCOSAN provided various technical support services to customer municipalities. ALCOSAN hosted GSI workshops and provided participants with technical information and resources to assist municipalities in evaluating the use of GSI. ALCOSAN continued working with interested municipalities to develop concept plans and funding mechanisms. In addition, ALCOSAN's basin planners conducted screening level evaluations to identify areas where GSI might be suitable for meeting regulatory requirements as a stand-alone technology. These results demonstrated that opportunities for controlling overflows with GSI do indeed exist, but that for the ALCOSAN system GSI alone cannot meet the requirements of the CSO Policy in accordance with the CD. However, the municipalities could apply GSI where feasible, either as a stand-alone control or as a supplement to grey infrastructure.

These results were shared with customer municipalities. Following these efforts, municipalities provided ALCOSAN with preliminary future flow estimates and planning information, indicating the types of controls being considered by municipalities. In general, municipal plans focused on conveying flows to ALCOSAN rather than controlling flows through GSI or other flow reduction methods. ALCOSAN used the collective future flow estimates from its customer municipalities to develop its Draft WWP.

In response to the comments received and suggestions to more closely evaluate GSI and other flow reduction alternatives, ALCOSAN conducted a regional analysis of the potential for GSI to control overflows and reduce the amount of grey infrastructure needed to meet regulatory compliance requirements. ALCOSAN worked closely with 3RWW and its customer municipalities to identify opportunities to utilize flow reduction techniques. This study is included in this WWP as Chapter 10: Starting at the Source ... How Our Region Can Work Together for Clean Water and includes the following:

- A review of national and regional GSI and other flow reduction practices;

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- A regional analysis of the potential for flow reduction methods to address compliance requirements;
- A cost-performance alternatives analysis that identifies areas where flow reduction technologies might reduce the need for grey infrastructure;
- A GSI outreach program aimed at nurturing municipal interest through the development concept plans that help visualize possibilities;
- An assessment of potential flow reduction incentive options; and
- The recommendation of an ALCOSAN led regional flow reduction program that advocates for, and incentivizes the use of, GSI and other flow reduction methods.

The study identified numerous opportunities to incorporate GSI and other flow reduction methods into the WWP and was provided to customer municipalities as a technical resource.

ALCOSAN continues to support the municipalities in consideration of flow reduction as they develop MSRS in response to recent Pennsylvania Department of Environmental Protection orders and is an active participant in a 3RWW Source Flow Reduction and Flow Targets Subcommittee. ALCOSAN has also worked closely with the regulatory agencies to develop a WWP implementation framework that fully supports the use of GSI and other flow reduction practices. This framework will allow for the use of flow reduction projects instead of grey infrastructure in cases where they can be shown to provide the same or better performance. This framework is described further in Section 11.3.7.

In addition, ALCOSAN has initiated its Green Revitalization of Our Waterways (GROW) Program that incentivizes the construction of municipal flow reduction projects and is described further in Section 11.2.1. In this context, if MSRS indicate that municipalities are committing to incorporate significant flow reduction measures within their collection systems, ALCOSAN will propose corresponding modifications to the WWP.

Regarding the comments about institutional framework constraints and Philadelphia's plan, ALCOSAN's institutional framework is very different from Philadelphia's. The primary difference is that the City of Philadelphia owns and operates the entire wastewater collection, conveyance and treatment system so that flow reduction techniques such as GSI can be implemented by the City. In contrast, within the ALCOSAN service area, ALCOSAN has 83 customer municipalities which own and operate the collection systems and, are now considering GSI and other source controls as potential solutions to sewer overflows as a part of MSRS ordered by PADEP.

ALCOSAN prepared a Draft WWP consistent with its current compliance responsibilities, service agreements and institutional setting according to deadlines specified in the CD. The municipal coordination, stakeholder involvement and public comment elements of this process raised some fundamental questions regarding long established institutional frameworks that could not be fully addressed within the timeframe necessary to meet the deadline for release of the Draft WWP. However, since that time ALCOSAN has been investigating these concerns and

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is now advancing plans to regionalize inter-municipal trunk sewers and incentivize municipalities to implement flow reduction projects, such as GSI.

Comment Category – Other Issues:

A number of much less frequent, but equally important, municipal comments were received by ALCOSAN during the public comment period that did not fit into one of the established comment categories. See Appendix A-9 for the individual municipal comment letters received for more details.

2.7 WWP Revisions and Updates

During the review and comment period for the Draft WWP, comments were received and documented from the public and from customer municipalities. Subsequent to the public review and comment period, responses were prepared and distributed. Many of the responses did not require a revision or update to be made to the WWP. However, some of the comments and responses resulted in revisions to the draft plan. In addition, changes and additions to the WWP have been made based on Agency review comments, negotiations between ALCOSAN and the regulatory agencies, and ALCOSAN's amended CD.

There were five general categories of WWP revisions:

- Category A, Changes to the WWP based on public comments that were received
- Category B, Changes to the WWP based upon customer municipality and/or municipal authority comments that were received.
- Category C, Changes and additions to the WWP based on agency review comments on the WWP and ALCOSAN's amended CD.
- Category D, Other changes and refinements to the WWP that ALCOSAN wanted to implement.
- Minor typographic and formatting revisions that had no impact to the content or meaning of the information being communicated in the WWP.

Tables 2-6 summarizes and documents the WWP changes for the first four categories.

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Table 2-6: Summary of Changes to the Wet Weather Plan

Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
Revisions to WWP Section 1: Introduction		
A – Public B – Municipal C – Agency	A new Section 1.6, <i>WWP Revisions and Updates</i> was added to briefly introduce the kinds of changes that were made to the Draft WWP as a result of the public and municipal comments that were made and submitted during the public comment period as well as agency review comments on the WWP and ALCOSAN’s amended CD. A reference to new WWP Section 2.7, <i>WWP Revisions and Updates</i> , was included for a more inclusive summary of the specific revisions.	<ul style="list-style-type: none"> • Section 1.6
Revisions to WWP Section 2: Municipal Coordination and Public Participation		
A - Public	Section 2.3.6, <i>GSI</i> , was deleted. In response to public comments, the topics of flow reduction and GSI are now addressed in a new and more comprehensive WWP Section 10, <i>Starting at the Source: How Our Region Can Work Together for Clean Water</i> .	<ul style="list-style-type: none"> • Former Section 2.3.6
A - Public B - Municipal	Section 2.5, <i>Formal Public Comment Period</i> , was replaced by a new Section 2.5 titled <i>Formal Public Comment and Response Process</i> . This new section documents how the Draft WWP was released to the public and customer municipalities, how the public review and comment process was conducted, and the various means by which comments were submitted to ALCOSAN.	<ul style="list-style-type: none"> • Section 2.5
A – Public B – Municipal	Section 2.6, <i>Responsiveness Documentation</i> , was replaced by a new Section 2.6 titled <i>Public and Municipal Comment and Response Summary</i> . This new section summarizes the number and type of public and municipal comments received, including a summary of the most common comment categories and ALCOSAN’s response.	<ul style="list-style-type: none"> • Section 2.6
A – Public B – Municipal C – Agency	Section 2.7, <i>WWP Revisions and Updates</i> , was added to summarize the revisions that were made to the Draft WWP as a result of the public and municipal comments received, as well as a result of agency review comments on the WWP, negotiations between ALCOSAN and the regulatory agencies, and ALCOSAN’s modified CD.	<ul style="list-style-type: none"> • Section 2.7

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Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
Revisions to WWP Section 3: Existing Conditions		
B - Municipal	<p>The number of municipal CSO and SSO regulator structures was revised to reflect new information provided by the customer municipalities during the WWP public review and comment period. This includes two new Turtle Creek Borough CSO regulators in the TR-01-06z sewershed (regulator structures T-MH-075 and GI-12) and one new Monroeville SSO regulator in the TR-06 sewershed (regulator MH-2363). See corresponding revision B4-4.</p>	<ul style="list-style-type: none"> • Page 3-5: Total number of municipal CSO and SSO regulator structures was updated • Table 3-4B: Additional Planning Basin Overview Information, Number of Municipal CSO/SSO Regulators columns • Page 3-12: Total number of municipal CSO and SSO regulator structures was updated • Figure 3-14: Turtle Creek Planning Basin • Page 3-90: Revised narrative providing total number of municipal CSO/SSO regulator structures • Tables 3-39 and 3-40: Municipal CSO and SSO Regulator Structures in the TC Planning Basin
B - Municipal	<p>In response to comments submitted by various municipalities and municipal authorities, the WWP tables in Section 3, and the corresponding table footnotes and descriptive narrative were revised and updated to more clearly indicate which municipal collections systems are owned, operated and maintained by municipal authorities (as opposed to the municipality). Narrative was added explaining the variety of alternative institutional arrangements between authorities and their respective municipalities. New updated information on municipal authorities was also incorporated. See corresponding revisions B4-1 and B6-1.</p>	<ul style="list-style-type: none"> • Page 3-12: Updated the total number of customer municipalities where the collection sewers are owned, operated and maintained by municipal authorities. • Page 3-30: Updated narrative in Section 3.2.2 Municipal Collection System Overviews, CC basin • Tables 3-12 and 3-13: Municipal CSO/SSO Regulator structures within the Chartiers Creek Basin • Pages 3-39 and 3-45; relocated narrative on municipal authorities to Section 3.3.2 for better flow and consistency with other planning basin descriptions • Page 3-47: Updated narrative in Section 3.3.2 Municipal Collection System Overviews, LOGR basin. • Tables 3-11, 3-18, 3-25, 3-31, 3-38, 3-46, and 3-53: The Municipality or Authority column was modified for each of the seven planning basin areas, • Tables 3-19 and 3-20 Municipal CSO Regulator structures within the LOGR Planning Basin

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Table 2-6: Summary of Changes to the Wet Weather Plan

Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
		<ul style="list-style-type: none"> • Page 3-62: Updated narrative in Section 3.4.2 Municipal Collection System Overviews, Main Rivers basin. • Table 3-26: Municipal CSO and SSO Regulator structures within the MRs Basin • Page 3-71: Updated narrative in Section 3.5.2 Municipal Collection System Overviews, SMR basin. • Tables 3-32 and 3-33: Municipal CSO/SSO Regulator structures in the SMR Basin • Page 3-80: Relocated narrative on municipal authorities to Section 3.6.2 for better flow and consistency with other planning basin descriptions. • Page 3-88: Updated narrative in Section 3.6.2 Municipal Collection System Overviews, TC basin. • Tables 3-39 and 3-40: Municipal CSO/SSO Regulator structures in the TC Basin • Page 3-101: Updated narrative in Section 3.7.2 Municipal Collection System Overviews, UA basin. • Tables 3-47 and 3-48: Municipal CSO/SSO Regulator structures in the UA Basin • Page 3-107: Relocated narrative on municipal authorities to Section 3.8.2 for better flow and consistency with other planning basin descriptions. • Page 3-115: Updated narrative in Section 3.8.2 Municipal Collection System Overviews, UM basin. • Tables 3-54 and 3-55: Municipal CSO/SSO Regulator structures in the UM Basin
B - Municipal	In response to a review comment submitted by the Collier Township Municipal Authority, the Waterford pump station was deleted from the list of municipal pump stations located within the Chartiers Creek basin. This pump station is owned, operated and maintained by a private developer and not the municipal authority	<ul style="list-style-type: none"> • Page 3-38: Municipal Pump Stations

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Table 2-6: Summary of Changes to the Wet Weather Plan

Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
B - Municipal	<p>For consistency in the way municipal SSOs were reported in the WWP, all known municipal pump station emergency overflow structures and emergency overflow structures associated with municipal flow equalization facilities were identified in the WWP narrative. The narrative also indicated the possibility for additional overflows from popping municipal manholes.</p>	<ul style="list-style-type: none"> • Page 3-32: Municipal CSO and SSO regulators in the CC Basin • Page 3-49: Municipal CSO and SSO regulators in the LOGR Basin • Page 3-90: Municipal CSO and SSO regulators in the TC Basin • Pages 3-102 and 3-103: Municipal CSO and SSO regulators in UA Basin
B - Municipal	<p>On 1/9/13, ALCOSAN was informed by the PWSA that the Palm Avenue SSO regulator, regulator MH062F029 in the Plumbers Run sewershed in the Saw Mill Run basin, had been eliminated and the corresponding connection to the adjacent storm water system was sealed. This SSO regulator was therefore removed from the Draft WWP. Since this regulator shares a common outfall with other CSO regulators within the sewershed, outfall information in Section 4 is not affected by this revision.</p>	<ul style="list-style-type: none"> • Table 3-33: Municipal SSO Regulator structures in the Saw Mill Run Basin.
D - Other	<p>The Thompson Run Interceptor is owned by the tributary municipalities, and not ALCOSAN. ALCOSAN operates and maintains the interceptor system and associated regulator structures under a maintenance contract with the municipalities. To clarify this situation, the official name of the planning basin is the Turtle Creek Basin, though it is often referred to as the Turtle Creek–Thompson Run Basin. The reported total lengths for the ALCOSAN interceptors and associated connector pipe categories were adjusted to delete the length of the Thompson Run Interceptor. While these revisions were being made, ALCOSAN incorporated the most recent and refined GIS database information into the WWP tables and narrative.</p> <p>Similarly, the ALCOSAN service area maps were revised to reflect the municipal ownership of the Thompson Run interceptor and the name of the Turtle Creek planning basin.</p>	<ul style="list-style-type: none"> • Page 3-2: Collection System Overview • Figure 3-1: ALCOSAN Conveyance and Treatment System • Table 3-1: Summary of ALCOSAN Interceptor System Pipe Categories • Table 3-4B: Additional Planning Basin Overview Information, Miles of ALCOSAN Interceptor column • Table 3-8: CC Basin Interceptor Pipe Components • Table 3-16: LOGR Basin Interceptor Pipe Components • Table 3-23: Main Rivers Basin Interceptor Pipe Components • Table 3-29: SMR Basin Interceptor Pipe Components • Figure 3-14: Turtle Creek Planning Basin • Table 3-36: TC Basin Interceptor Pipe Components • Table 3-44: UA Basin Interceptor Pipe Components • Table 3-51: UM Basin Interceptor Pipe Components

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Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
D - Other	Updates were made to reflect ALCOSAN and municipal regulators that have been abandoned and sealed since submission of the Draft WWP.	<ul style="list-style-type: none"> • Page 3-5: Collection system overview • Table 3-4B: Additional Planning Basin Overview Information • Table 3-12: Municipal CSO Regulator Structures within the Chartiers Creek Basin • Table 3-13: Municipal SSO Regulator Structures within the Chartiers Creek Basin • Page 3-26: Interceptor System Overview • Table 3-39: Municipal CSO Regulator Structures in the TC Planning Basin • Table 3-10: ALCOSAN CSO and SSO Regulator Structures in the Chartiers Creek Planning Basin • Page 3-45: Interceptor System Overview • Table 3-17: ALCOSAN CSO and SSO Regulator Structures within the LOGR Planning Basin • Page 3-114: Interceptor System Overview • Table 3-52: ALCOSAN CSO and SSO Regulator Structures in the Upper Monongahela Planning Basin • Table 3-54: Municipal CSO Regulator Structures in the Upper Monongahela River Basin
Revisions to WWP Section 4: Hydrologic and Hydraulic Characterization		
B - Municipal	In response to comments submitted by various municipalities and municipal authorities, the WWP tables in Section 4, and the corresponding table footnotes and descriptive narrative were revised and updated to more clearly indicate which municipal collections systems are owned, operated and maintained by municipal authorities (as opposed to the municipality). The "Owner" columns in the WWP CSO/SSO outfall statistics were revised as needed to reflect the most updated information on whether the collection system is under the jurisdiction of the municipality or a municipal authority.	<ul style="list-style-type: none"> • Tables 4-5 and 4-7: Municipal CSO/SSO outfalls in the CC Basin • Tables 4-9 and 4-11: Municipal CSO/SSO outfalls in the LOGR Basin • Table 4-13: Municipal CSO outfalls in the Main Rivers Basin • Tables 4-15 and 4-17: Municipal SSO outfalls in the SMR Basin • Table 4-21: Municipal SSO outfalls in the TC Basin • Table 4-23 in the UA Basin • Table 4-27 and 4-28: Municipal CSO/SSO outfalls in the UM Basin

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Table 2-6: Summary of Changes to the Wet Weather Plan

Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
B - Municipal	In response to comments by various municipalities and for consistency in the way municipal SSOs were reported in the WWP, all known municipal pump station emergency overflow structures and emergency overflow structures associated with municipal flow equalization facilities were identified in the WWP narrative. They were not included in the SSO outfall tables. The narrative also indicated the possibility for additional overflows from popping municipal manholes.	<ul style="list-style-type: none"> • Page 4-44: CC Basin • Page 4-56: LOGR Basin • Page 4-69: Main Rivers Basin • Page 4-93: TC Basin • Page 4-106: UA Basin
B - Municipal	To be consistent with comment B4-2 above, the two emergency overflows associated with the LRJOC storage and flow equalization facilities were deleted from Table 4-11 and were documented in the narrative located below the table.	<ul style="list-style-type: none"> • Table 4-11 reduced the number of municipal SSOs in the LOGR basin by 2 • Table 4-11 and following narrative on page 4-55
B - Municipal	The number of municipal CSO and SSO outfalls was revised to reflect new information provided by the customer municipalities during the WWP public review and comment period. This includes two new Turtle Creek Borough CSO regulators in the TR-01-06z sewershed and one new Monroeville SSO regulator in the TR-06 sewershed.	<ul style="list-style-type: none"> • Table 4-2: Number of Municipal CSO and SSO outfalls in the TC Basin • Table 4-3: Number of Municipal CSO outfalls in TC • Page 4-90: Narrative providing the total number of Municipal SSO outfalls in the TC basin • Table 4-19: Municipal CSO Discharge Summary for the TC Basin • Table 4-21: Municipal SSO Discharge Summary for the TC Basin
D – Other	Changed wording in the first column of the table from “Structures” to Outfalls” to avoid potential confusion for readers and to clarify differences between Section 3, which addresses the regulator structures, and Section 4, which addresses the CSO/SSO outfalls.	<ul style="list-style-type: none"> • Table 4-2, first column
D - Other	While revisions were being made to the CSO/SSO outfall statistics tables (revision B4-1 above), it was noticed that some of the outfall listings were not in alphabetical order. The affected tables were corrected so that all entries appear in alphabetical order.	<ul style="list-style-type: none"> • Tables 4-5 and 4-7: Municipal CSO/SSO outfalls in CC Basin • Table 4-11: Municipal SSO outfalls in the LOGR Basin • Table 4-25: Municipal SSO outfalls in the UA Basin
D - Other	Updates were made to ALCOSAN and municipal outfalls that have closed since submission of the Draft WWP.	<ul style="list-style-type: none"> • Table 4-2 and 4-3: Existing Condition, Typical Year Annual CSO and SSO Discharge Volume and Sewage Capture Summary for the ALCOSAN Service Area

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Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
		<ul style="list-style-type: none"> • Table 4-4: Existing Condition, Typical Year Annual CSO Discharge Summary – ALCOSAN Outfalls within the Chartiers Creek Planning Basin Area • Table 4-8: Existing Condition, Typical Year Annual CSO Discharge Summary ALCOSAN Outfalls within the LOGR Planning Basin Area • Table 4-26: Existing Condition, Typical Year Annual CSO Discharge Summary ALCOSAN Outfalls within the Upper Monongahela River Planning Basin Area
Revisions to WWP Section 5: Receiving Waters Characterization		
D - Other	<p>Updated the WWP narrative and tables to reflect changes to the PA water quality standards. These updates included the following:</p> <ul style="list-style-type: none"> • Revised descriptions of protected water uses • List of streams designated use for aquatic life • Water quality criteria for dissolved oxygen • Temperature standards for aquatic life use <p>Updated the WWP narrative and tables to reflect the revisions to the ORSANCO water quality standards that were passed in 2012, plus minor refinements not related to the changed standards. These updates included the following:</p> <ul style="list-style-type: none"> • Beginning the designated recreation season on April 1 (was May1) • Computing E. coli compliance utilizing a 90-day geometric mean (was monthly) • The E. coli concentrations must not exceed 240 cfu/100ml in more than 25% of the samples (was any one of the samples). • Revised temperatures for computing ammonia nitrogen standards and corrected wording • Revised equations for computing the cadmium standards 	<ul style="list-style-type: none"> • Table 5-11: Protected Water Uses in Pennsylvania • Table 5-12: Designated Uses for Aquatic Life in and Around the ALCOSAN Service Area • Table 5-13: Standard Water Quality Criteria • Table 5-14: Temperature Standards by Aquatic Life Use • Page 5-31: Updated ORSANCO water quality standard revision date to 2015 • Page 5-32: Updated language for the ammonia nitrogen standard • Page 5-32: Updated equations for the cadmium standard • Page 5-32: Updated the recreation season and standards for E. coli • Page 5-32 and Table 5-17: Updated temperatures for computing the ammonia nitrogen standard
Revisions to WWP Section 6: Current Conditions Financial & Institutional Assessment		
B - Municipal	In response to comments submitted by various municipalities and municipal authorities, and consistency with Sections 3 and 4, Table 6-30 and the corresponding descriptive narrative were revised to incorporate the most up to	<ul style="list-style-type: none"> • Table 6-30: Municipal Wastewater Authorities within the ALCOSAN Service Area

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Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
	date information on which municipal collections systems are owned, operated and maintained by municipal authorities (as opposed to the municipality).	<ul style="list-style-type: none"> Page 6-49: Updated the number of authorities discussed in the narrative of Section 6.6.3
Revisions to WWP Section 7: Future Conditions		
	There were no revisions to the WWP within Section 7	
Revisions to WWP Section 8: Overview of Technology and Site Screening		
	There were no revisions to the WWP within Section 8	
Revisions to WWP Section 9: Alternatives Analysis		
B - Municipal	WWP narrative was updated to acknowledge the July 2012 receipt of the municipal Draft Feasibility Studies for the 48 designated complex, multi-municipal POCs.	<ul style="list-style-type: none"> Page 9-79, Page 9-81
B – Municipal D - Other	Revisions and updates were made to the tables documenting the preferred or assumed municipal flow management approach for each POC to address municipal comments. Updates were also made to reflect points of connections (POCs) that have been eliminated since the submission of the Draft WWP. Updates were also made to contributing municipalities based on input from the regionalization process and municipal source reduction studies.	<ul style="list-style-type: none"> Tables 9-27 through 9-34, grouped by planning basin
B - Municipal	Additional narrative documentation was added to identify POCs where the July 2012 draft MFS indicated a definitive change to the flow management strategy from the municipalities within the complex, multi-municipal sewersheds.	<ul style="list-style-type: none"> Section 9.3.5
B - Municipal	In response to requests from several municipalities, a reference was added to a new Appendix C, which was added to the WWP to document the predicted peak flow rate at each point of connection to the ALCOSAN system based upon the H&H Model of the Selected Plan.	<ul style="list-style-type: none"> Section 9.6.1, <i>Performance Benefits of Selected Plan</i>
D - Other	Modified the proposed approach for the Lower Ohio planning area by upsizing a portion of the Lower Ohio South interceptor and associated regulator structure modifications to prevent ALCOSAN from contributing to a municipal SSO.	<ul style="list-style-type: none"> Section 9.6.1, after Figure 9-112 Section 9.7.1, second bullet

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Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
D - Other	Substituted newer residential indicator maps that were used for the public presentations, which incorporate updated financial information.	<ul style="list-style-type: none"> • Figure 9-138, ALCOSAN Selected Alternative – Residential Indicators by Municipality • Figure 9-139, ALCOSAN Selected Alternative – Residential Indicators Showing Intra-Municipal Variations • Figure 9-141, ALCOSAN Selected Alternative – Residential Indicators by Census Block Groups
Revisions to Prior WWP Section 10: Recommended Plan for 2026		
C - Agency	Entire prior Section 10 was removed and replaced by new <i>Section 11: Interim Measures Wet Weather Plan</i> . A new Section 10, <i>Starting at the Source – How Our Region Can Work Together for Clean Water</i> , was added that documents the results of a regional study that was conducted to identify opportunities to include GSI, and other flow reduction measures, in the WWP.	<ul style="list-style-type: none"> • Section 10
New WWP Section 10: Starting at the Source – How Our Region Can Work Together for Clean Water		
A - Public	In response to public comments supporting greater use of GSI in the ALCOSAN WWP, a new Section 10 was added to provide a more comprehensive analysis and narrative on the subject. This section documents a regional study that was conducted to identify opportunities to include GSI, and other flow reduction measures, in the Draft WWP.	<ul style="list-style-type: none"> • New WWP Section 10
New WWP Section 11: Interim Measures Wet Weather Plan		
C - Agency	A new Section 11 has been added that describes the details of IWWP that provides opportunities to integrate GSI and other source reduction practices, while prioritizing the regionalization of inter-municipal trunk sewers, and key grey infrastructure projects such as the expansion of the wastewater treatment plant. The prior Section 11: Implementation Plan is included as Section 11.3 of this new section.	<ul style="list-style-type: none"> • Section 11

ALCOSAN Clean Water Plan
Section 2 – Municipal Coordination and Public Participation

Table 2-6: Summary of Changes to the Wet Weather Plan

Revision Type	Description of WWP Revision(s) and Reasons for the Change(s)	Location of WWP Revisions
Revisions to WWP Appendix A: Municipal Coordination and Public Participation		
A - Public	Appendix A-8, <i>Formal Public Comment Process Documentation</i> , was added to the Plan to provide supplemental information used during the public comment process as referenced in Section 2.5.	<ul style="list-style-type: none"> • New Appendix A-8
A – Public B - Municipal	Appendix A-9, <i>Public and Municipal Comment Documentation</i> , was added to provide all public and municipal comments received as referenced in Section 2.6. This appendix includes all public and municipal comments, transcripts of all public meetings, & summaries of meetings with municipal officials.	<ul style="list-style-type: none"> • New Appendix A-9
Revisions to WWP Appendix B: Anticipated Populations and Flow Volumes at each Point of Connection		
B – Municipal D - Other	Appendix B, <i>Anticipated Populations and Flow Volumes at Each Point of Connection</i> , was revised as follows. Inch-mile values were updated based on assumed pipe diameters to replace prior 'NA' values. In addition, a minor change was made to the table heading in response to municipal comments. Also, minor changes were made to the reported results based on refined model results.	<ul style="list-style-type: none"> • Table in Appendix B
New WWP Appendix C: Estimated Peak Flow Rate for Selected Plan at each Point of Connection		
B - Municipal	Appendix C, <i>Estimated Peak Flow Rate for Selected Plan at each Point of Connection</i> , was added to the Plan in response to several municipal comments which requested the municipal peak flow rates at each point of connection as used by ALCOSAN to develop its WWP.	<ul style="list-style-type: none"> • Appendix C
New WWP Appendix D: Municipal Comments on Starting at the Source: How Our Region Can Work Together for Clean Water		
B - Municipal	Appendix D, <i>Municipal Comments on Starting at the Source: How Our Region Can Work Together for Clean Water</i> , was added to the Plan as Section 10. This appendix includes written comments received from the customer municipalities on this study.	<ul style="list-style-type: none"> • Appendix D
New WWP Appendix E: Appendices from Starting at the Source: How Our Region Can Work Together for Clean Water		
A – Public	Appendix E, Appendices from the study <i>Starting at the Source: How Our Region Can Work Together for Clean Water</i> , was added as a new Appendix E and are referenced throughout new WWP Section 10.	<ul style="list-style-type: none"> • Appendix E