

Annual Report #1

January 1, 2012 to December 31, 2012

Civil Action No. 1:10cv4039 - WSD

DeKalb County Department of Watershed Management



March 1, 2013

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Acronyms

C&M	Construction and Maintenance
CD	Consent Decree
CERP	Contingency and Emergency Response Plan
CMMS	Computerized Maintenance Management System
CMOM	Capacity, Management, Operations, and Maintenance
CSARP	Continuing Sewer Assessment and Rehabilitation Program
DWM	Department of Watershed Management
FOG	Fats, Oil, and Grease
FSE	Food Service Establishments
EPD	Georgia Environmental Protection Division
GIS	Geographical Information System
MMS	Maintenance Management System
O&M	Operation and Maintenance
OSARP	Ongoing Sewer Assessment and Rehabilitation Program
PASARP	Priority Area Sewer Assessment and Rehabilitation Program
SEP	Supplemental Environmental Project
SOP	Standard Operating Procedure
SSO	Sanitary Sewer Overflows
EPA	U.S. Environmental Protection Agency
WCTS	Wastewater collection and transmission system
EPD	Georgia Environmental Protection Division

Status of Programs Subject to Reporting

DeKalb County (the County) Department of Watershed Management (DWM) submits this first Annual Report in accordance with Section IX, Paragraph 58 of the Consent Decree (Civil Action 1:10cv4039-WSD) which states:

“Each Annual Report shall cover the most recent applicable twelve (12) month period and shall include, at a minimum:

- (a) A narrative summary of progress made, including key accomplishments and significant activities, under the CMOM programs implemented or modified pursuant to this Consent Decree for the most recent twelve (12) month period.
- (b) A trends analysis of the number, volume, average duration, and cause of the County’s SSOs for the previous twenty-four (24) month period.”

During the reporting period from January 1, 2012 to December 31, 2012, DWM timely submitted all required Capacity, Management, Operations and Maintenance (CMOM) programs, including the Priority Area Sewer Assessment and Rehabilitation Program (PASARP), and the Supplemental Environmental Project (SEP) to the Environmental Protection Agency (EPA) and the Environmental Protection Division (EPD) for approval. See Table 1 below.

Table 1. CONSENT DECREE SUBMITTALS & RE-SUBMITTALS – SCHEDULE AND STATUS (as of 3/1/13)

Consent Decree #	Title	CD Due Date	DWM Submittals	EPA/EPD Comments	DWM Re-submittal	EPA/EPD Approval
VI.B.(i)	Contingency and Emergency Response Plan (CERP) CMOM	6/20/12	5/15/12	9/11/12	12/18/12	1/10/13
VI.B.(iii)	Sewer Mapping CMOM	6/20/12	5/15/12	9/10/12	12/18/12	1/16/13
VI.B.(ix)	Infrastructure Acquisition CMOM	8/20/12	6/20/12	9/10/12	12/20/12	1/10/13
VI.B.(viii)	Financial Analysis CMOM	8/20/12	6/20/12	9/10/12	12/20/12	1/10/13
VI.B.(v)	Collection & Transmission System Training CMOM	9/20/12	9/10/12	1/3/13	N/A	1/3/13
VI.B.(vi)	System-Wide Flow & Rainfall Monitoring CMOM	12/20/12	12/7/12	1/3/13	1/31/13	2/14/13
VI.B.(vii)	System-Wide Hydraulic Model CMOM	12/20/12	12/7/12	1/3/13	1/31/13	2/14/13
VI.B.(x)	PASARP	12/20/10	12/20/12	2/14/13	-	-
VIII	SEP	12/20/12	12/20/12	1/31/12	-	-

As noted, this is the first annual report under the consent decree. During the reporting period, none of the CMOM programs were approved by EPA/EPD and therefore are not implementable “pursuant to the consent decree.” Nonetheless, in anticipation of agency approval, the County – at its own risk – began implementing some activities under the proposed CMOM programs it had submitted to the Agencies. The following table (Table 2) provides examples of these pre-approval activities undertaken during the reporting period. This list is not exhaustive.

The next annual report (2014) will summarize the County’s progress implementing the approved CMOM programs in accordance with the consent decree.

Table 2. EXAMPLES OF SIGNIFICANT ACTIVITIES UNDER THE CMOM PROGRAMS

CD #	Title	Summary of Significant Activities / Key Accomplishments
VI.B.(i)	CERP CMOM	<ol style="list-style-type: none"> 1. Performed classroom CERP training for 152 personnel to ensure the roles/responsibilities for the CERP were known and implemented 2. Conducted 47 SSO Response Review meetings to investigate SSOs, share best practices, and initiate solutions for specific SSOs 3. Completed 629 follow-up “service requests” in response to spills
VI.B.(ii)	Fats, Oil, and Grease (FOG) Management CMOM	<ol style="list-style-type: none"> 1. Divided county into eight geographic zones whereby different inspectors rotate into a different zone every four months to maintain quality control 2. Revised Standard Operating Procedures (SOPs) for Food Service Establishments (FSE) inspections, new construction evaluations, and enforcement 3. Incorporated a FOG review procedure into the Building Permit process to ensure FOG controls are installed before a Certificate of Occupancy is given
VI.B.(iii)	Sewer Mapping CMOM	<ol style="list-style-type: none"> 1. Issued Requests for Proposals to map 11 additional sewersheds and obtained final contract selection approval 2. Began the process of asset address management as a first step to integrate the Computerized Maintenance Management System (CMMS) and Geographical Information System (GIS) using a work order system
VI.B.(iv)	Maintenance Management System (MMS) CMOM	<ol style="list-style-type: none"> 1. MMS program due for submittal in December 2013 2. Initiated contracted sewer cleaning which will be incorporated into the MMS when the program receives final approval
VI.B.(v)	Collection & Transmission System Training CMOM	<ol style="list-style-type: none"> 1. Completed 10,916 hours of training in 56 different training programs 2. Installed/initiated the training tracking software “Compliance Suite” 3. Established the Training Calendar for 2013
VI.B.(vi)	System-Wide Flow & Rainfall Monitoring CMOM	Re-evaluated the current flow and rainfall monitoring program
VI.B.(ix)	Infrastructure Acquisition CMOM	<ol style="list-style-type: none"> 1. Acquired nine private projects totaling 4043 feet of pipe 2. Private projects were acquired utilizing the process detailed in the new program to ensure capacity and system robustness

CD #	Title	Summary of Significant Activities / Key Accomplishments
VI.B.(x)	CSARP	Submitted the PASARP portion of the CSARP for approval by EPA/EPD
VIII	SEP	<ol style="list-style-type: none"> 1. Conducted extensive field studies of the entire length of South River, South Fork Peachtree Creek, and Snapfinger Creek to identify locations where trash and debris were present in material quantities 2. Conducted community outreach meetings

Sanitary Sewer Overflow Trend Analysis for 2012

A trend analysis of the number (i.e. frequency), volume, average duration, and cause of the County's SSOs for the previous twenty-four (24) month period is included below, as required by the consent decree. Prior to entry of the Consent Decree, the County had not tracked all SSOs as it was not required to do so. Because the Consent Decree was entered December 20, 2011, the County only has one full year of SSO data. The next annual report, however, will include a full twenty-four (24) months of data.

Table 3. 2012 SSO INFORMATION BY FREQUENCY AND CAUSE

Cause and Frequency 2012				
Cause	Spills	Building Backups	Surface Spills	Total
Grease	59	7	31	97
Broken Line	21	1	11	33
Grease-Debris	21	2	5	28
Roots	6	10	4	20
Unknown	0	1	18	19
Grease-Roots	11	3	4	18
Debris	5	1	0	6
Roots-Debris	5	1	0	6
Other	3	1	2	6
Outside Contractor	1	0	3	4
Vandalism	3	0	1	4
Creek Crossing	2	0	1	3
Lift Station	0	0	3	3
Manhole Issue	0	0	2	2
Storm	2	0	0	2
Grease-Roots-Debris	2	0	0	2
Pump Failure	0	0	0	0
Total	141	27	85	253

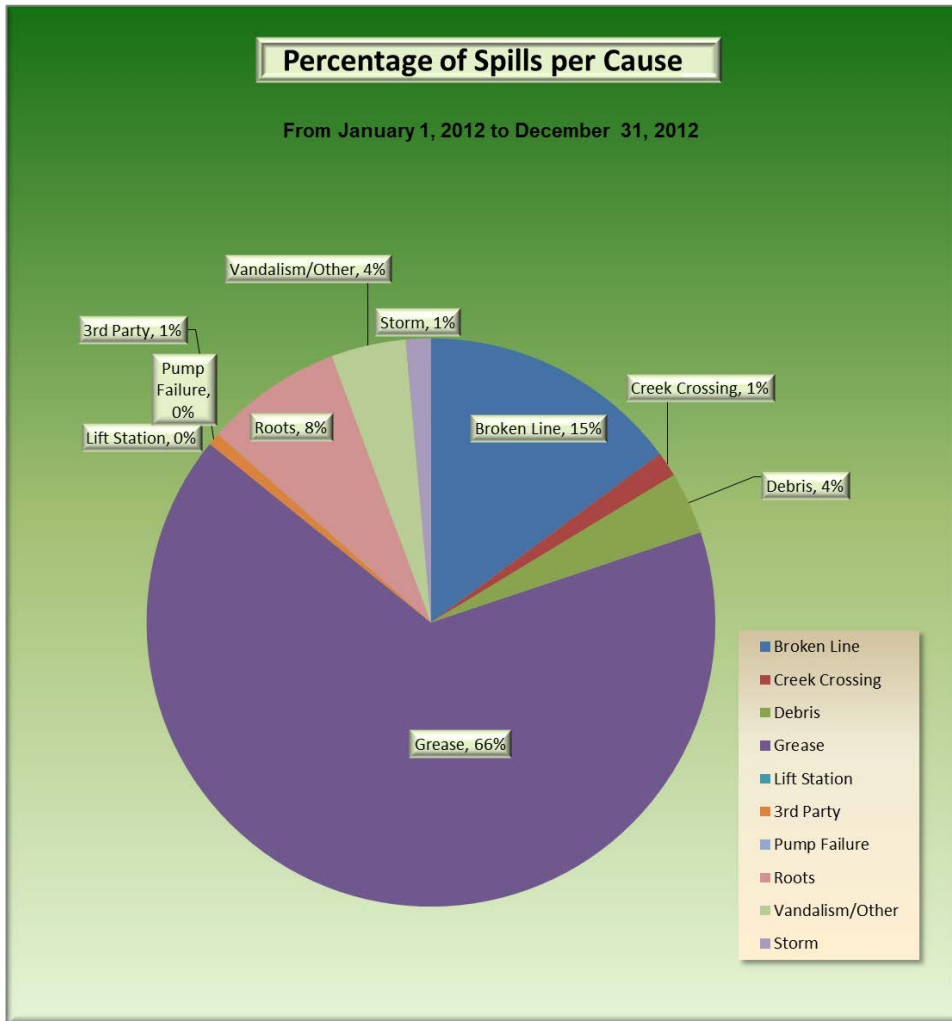
The information in Table 3 shows the totals by cause in descending order.

Table 4. 2012 SSO INFORMATION BY FREQUENCY OF OCCURANCE AND CAUSE BY MONTH

SSO's By Month By Cause 2012													
Cause	January	February	March	April	May	June	July	August	September	October	November	December	Total
Grease	12	5	9	5	8	8	6	5	4	5	7	23	97
Broken Line	1	5	5	2	5	4	3	1		4	3		33
Grease-Debris	4	2	1	2	1	2		2	1	4	3	6	28
Roots	2	2	1		1		4	1	3	1	1	4	20
Unknown	1	4	6	2		1	3		1			1	19
Grease-Roots		1		2	3		2	2	4		1	3	18
Debris		1		1		1			1	1		1	6
Roots-Debris	1	2			2					1			6
Other			1	1	1			1	1	1			6
Outside Contractor					2			2					4
Vandalism				1						1		2	4
Creek Crossing		1		1	1								3
Lift Station								1	1		1		3
Manhole Issue								1			1		2
Storm	2												2
Grease-Roots-Debris		1			1								2
Pump Failure													0
Total	23	24	23	17	25	16	18	16	16	18	17	40	253

Similar to Table 3, Table 4 shows totals by cause in descending order. Grease is the leading case of SSOs.

FIGURE 1. PERCENTAGE OF SPILLS PER CAUSE

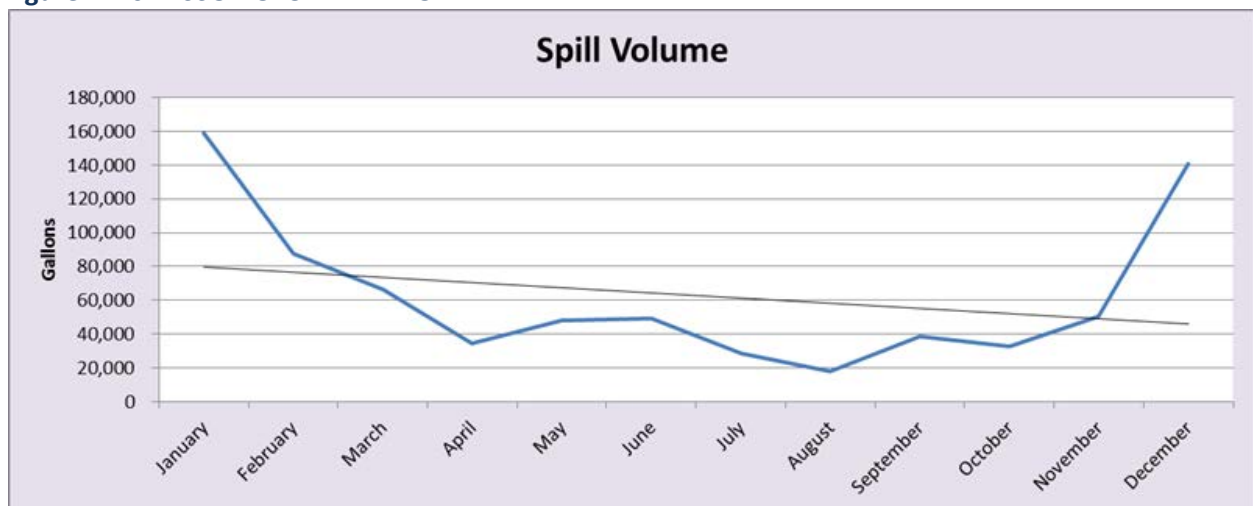


Prior to the entry of the Consent Decree, the County only analyzed the trend of spill data and not building backups or surface spills. Typically, the months of June through November have yielded slightly fewer spills as depicted in Table 5 for 2012.

Table 5. 2012 SSO INFORMATION BY MONTH

2012 SSO's by Month							
	Spills	Spill Volume, gallons	Building Back-ups	Building Back-up Volume, gallons	Surface Overflows	Surface Overflow Volume, gallons	Total
January	14	159,215	4	150	5	775	160,140
February	15	87,700	3	90	6	2,600	90,390
March	13	66,283	1	150	9	1,840	68,273
April	9	34,670	1	25	7	1,201	35,896
May	16	47,848	2	75	6	6,995	54,918
June	10	49,230	1	25	5	8,680	57,935
July	8	28,665	2	NA	8	1,450	30,115
August	9	17,823	3	965	3	7,792	26,580
September	8	38,480	3	209	7	1,472	40,161
October	9	32,453	2	2	7	12,119	44,574
November	7	50,210	0	0	10	9,261	59,471
December	23	140,525	5	14,605	13	9,395	164,525
Total	141	753,102	27	16,296	86	63,580	832,978

Figure 2. 2012 SSO VOLUME BY MONTH



There is no identifiable correlation between spill volume and month. Note also that the line in Figure 2 is a linear trend line. The data is inconclusive with this analysis.

Figure 3. VOLUME OF SPILLS BY CAUSE FOR 2012

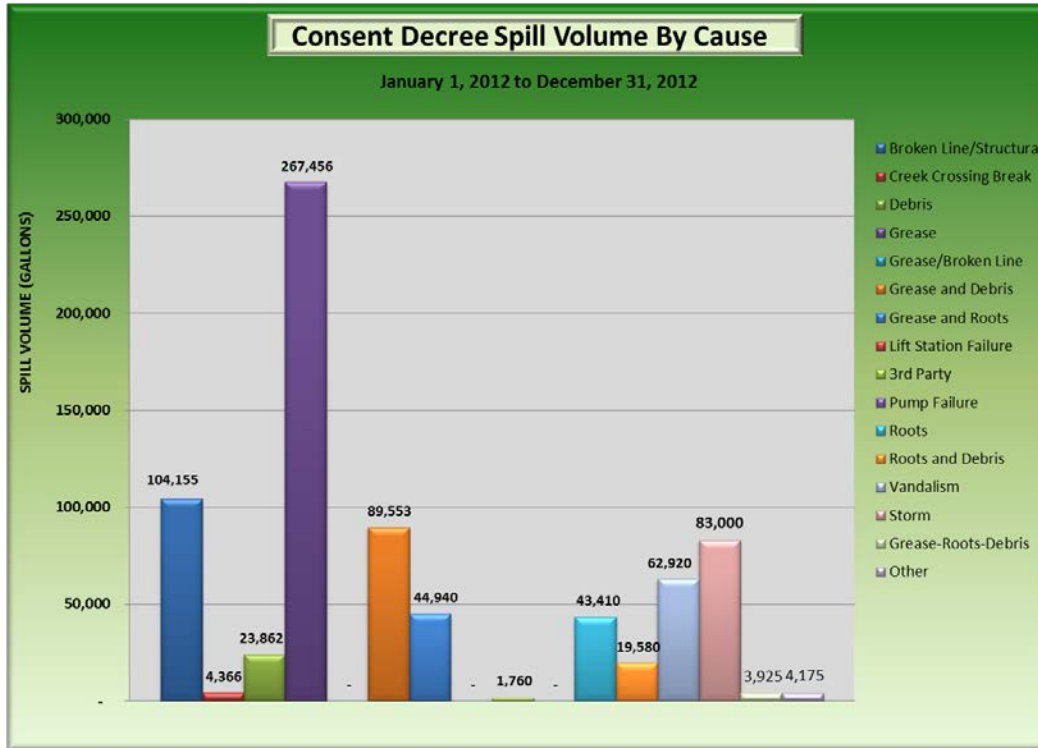
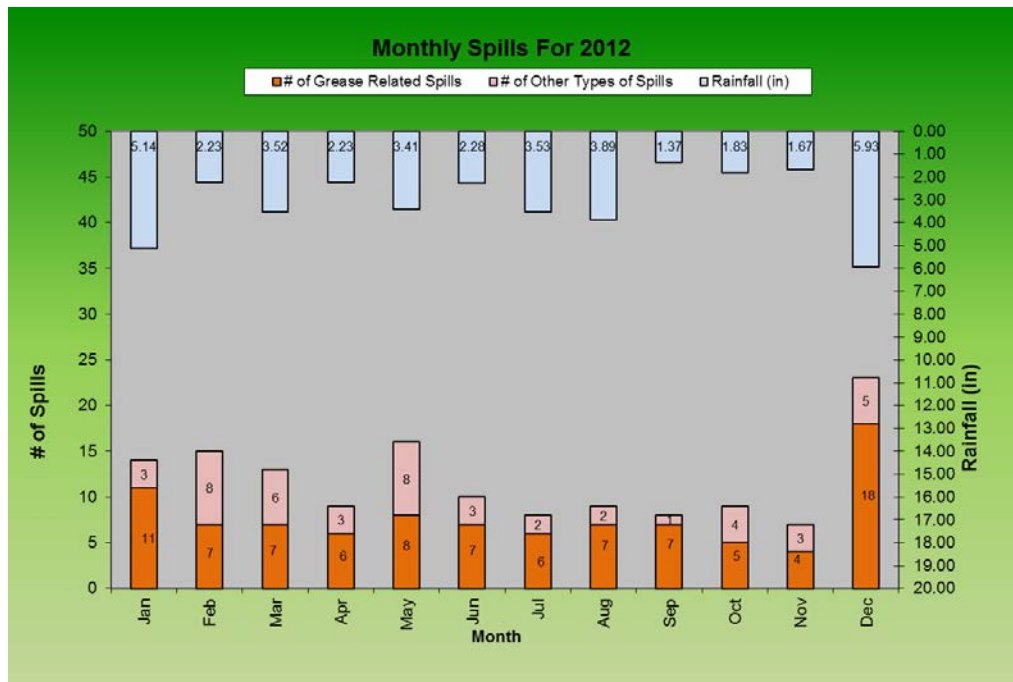
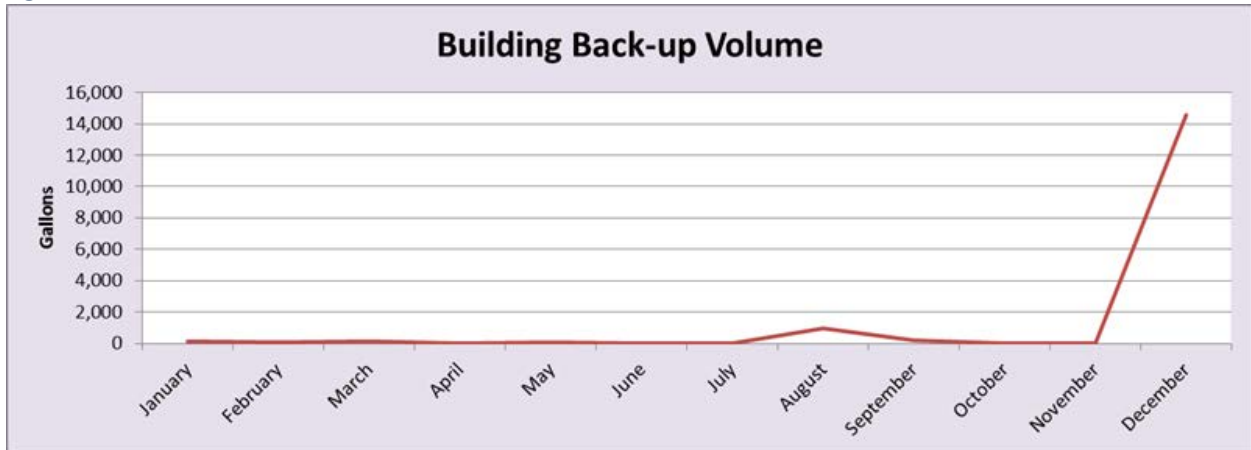


Figure 4. COMPARISON OF SPILLS TO RAINFALL FOR 2012



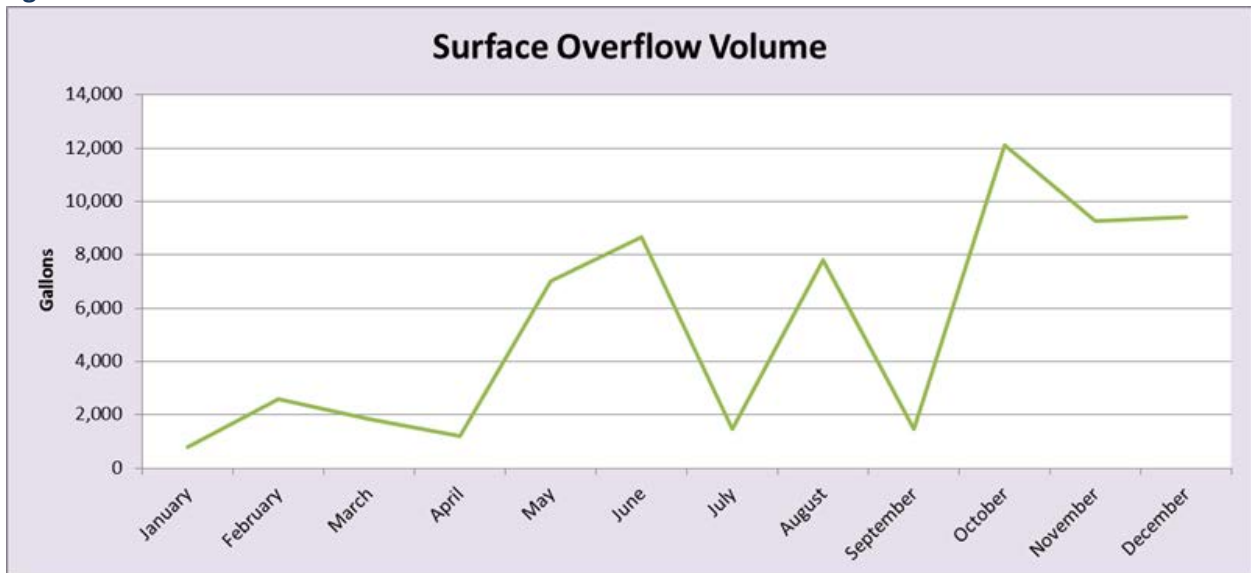
Where the spill data are plotted relative to rainfall, no strong correlation is found. See Figure 4, above. Figures 5, 6, and 7 below depict the data the County began collecting as a result of the Consent Decree, namely building back-up volume and surface overflow volume.

Figure 5. 2012 SSO BUILDING BACK-UP VOLUME BY MONTH



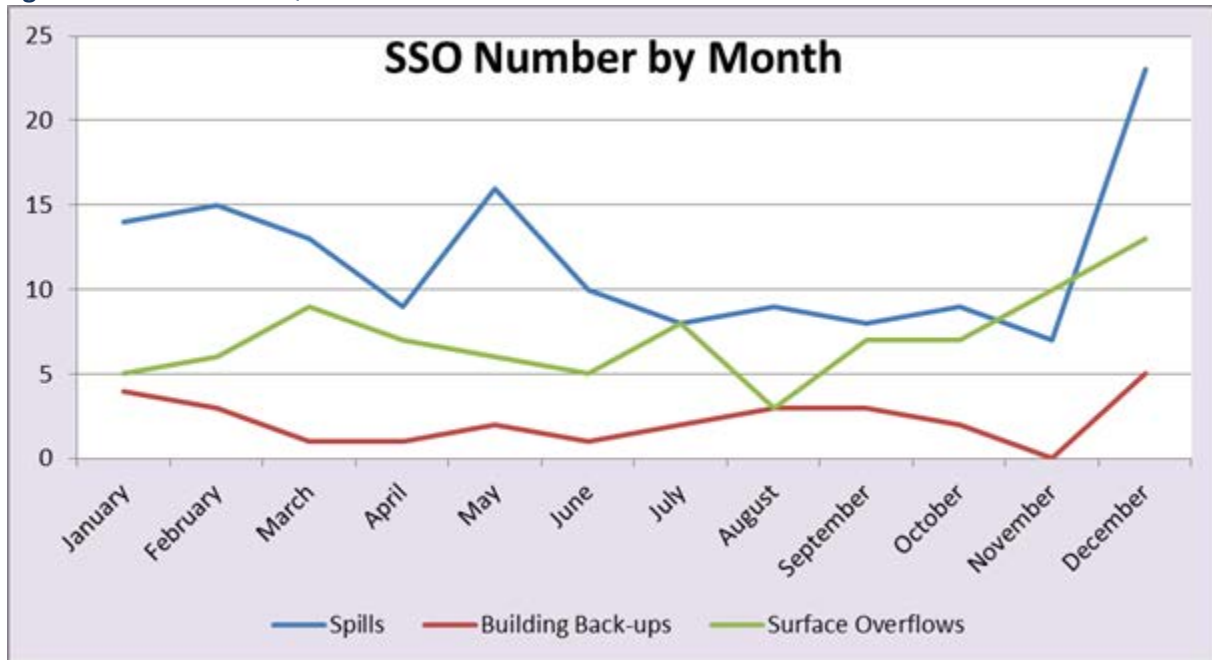
There is no identifiable correlation between building-backup volume and month. The data is inconclusive given the limited sample of only one year. With additional data, a more thorough analysis will be feasible in the future.

Figure 6. 2012 SSO SURFACE OVERFLOW VOLUME BY MONTH



There is no strong correlation between the surface overflow volume and month. The data is inconclusive given the limited sample of only one year. With additional data, a more thorough analysis will be feasible in the future.

Figure 7. 2012 SSO FREQUENCY BY MONTH



There is no conclusive correlation between spills, building backup, and surface overflows for a specified period. Given the limited sampling period, there was not enough lapsed time for a valid conclusion other than that the November and December holiday period shows increased spills.

The average response time for the 2012 period is documented in Table 6 below. The average response time was 1 hour and 58 minutes with the minimum time taken to stop a spill being 15 minutes while the maximum time to stop a spill was 13 hours and 24 minutes.

Table 6. 2012 SPILL RESPONSE TIMES

Response Time To Stop Spill	
Overall Average Response	1:58
Overall Median Response	1:20
Maximum Time to Stop	13:24
Minimum Time to Stop	0.15