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March 22, 2018

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U.S. Department of Justice  
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Washington DC 20044-7611

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Division of Enforcement  
Department for Environmental Protection  
300 Sower Blvd., 3<sup>rd</sup> Floor  
Frankfort, KY 40601

Chief, NPDES Permitting and Enforcement Branch  
Water Protection Division  
US EPA Region 4  
Atlanta Federal Center  
61 Forsyth Street SW  
Atlanta, GA 30303

Subject: Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion Minor Project  
Modification  
IOAP Project No. S\_MISF\_NB01\_M\_01\_C\_A1  
DOJ Case No. 90-5-1-1-08254

Attention Chiefs and Director:

MSD is requesting approval of a proposed minor project modification to the Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion project (IOAP Project No. S\_MISF\_NB01\_M\_01\_C\_A1). This request is part of the ongoing adaptive management review of the approved 2012 Integrated Overflow Abatement Plan (IOAP) dated May 2014.

#### 2009 IOAP Project Description

The original project involved the construction of 10,200 linear feet of 30-inch force main diversion to the Hikes Lane Interceptor from the Existing Upper Middle Fork Lift Station, the construction of the Middle Fork Relief Interceptor, the construction of 1.6 million gallons (MG) of covered storage, the upsizing of a pipe downstream of manhole 15138, and the construction of the 17.3 MG Buechel Basin.

#### 2012 IOAP Project Description

In 2012, the Buechel Basin portion of the project was voluntarily upsized to maximize the storage available on the site. The increased volume was calculated as accommodating a 10-year storm event. No action was taken, however, to change the level of control commitment, which remains at a 2-year, 3-hour cloudburst storm. The remainder of the project details remained the same. Because the project was going to be constructed in two phases, two fact sheets were submitted as part of the IOAP to provide additional clarity on what would be constructed by different deadlines: one for Phase 1 – Buechel Basin, and one for Phase 2 – PS Diversion and Storage, with IOAP deadlines of December 31, 2013, and December 31, 2023, respectively.

2018 Project Modification Request

As noted in the 2012 IOAP description, the Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion project was divided into two sub-projects in 2012. The project modification and clarifying information described herein affect the project names below:

Project Name	New Project Name
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1 – Buechel Basin	<i>[no name change]</i>
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 – PS Diversion and Storage	Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 – <b>PS Improvements and Diversion</b>

This request involves replacing the existing 9.0 million gallons per day (MGD) Upper Middle Fork Pump Station with a new, 30.0 MGD pump station and conveying wet weather flows in-lieu of providing covered storage on the site. The previously constructed Buechel Basin site is downstream from the Upper Middle Fork Pump Station, and can provide storage volume to make beneficial use of the higher flow capacity of the new pump station without affecting in any way the original commitment to control the 2-year, 3-hour cloudburst storm at the Buechel Basin site. The project name for Phase 2 will change to Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 – PS Improvements and Diversion. The project completion date of December 31, 2023, and the remainder of the project details remain unchanged.

Technical Justification

During the development of the 2009 IOAP, an analysis was performed to determine the optimal solution to alleviate multiple sanitary sewer overflows along the Middle Fork Interceptor in addition to overflows in the Hikes Point and Buechel Branch modeling areas. The overall selected alternative consisted of the following major components in the Sanitary Sewer Discharge Plan (SSDP) and the Interim Sanitary Sewer Discharge Plan (ISSDP):

- ISSDP Projects
  - Construction of the Hikes Lane Interceptor
  - Construction of the Southeastern Diversion Structure and Relief Interceptor to convey additional flows to the Buechel Basin
- SSDP Projects
  - Construction of Buechel Basin
  - Construction of Storage Basin at Upper Middle Fork Car Wash Site
  - Construction of the 30" force main to the Hikes Lane Interceptor
  - Construction of the Middle Fork Relief Interceptor

The SSDP portion of the project solution was split into two phases, with the Buechel Basin included the first phase, and the Middle Fork Interceptor, Diversion, and Storage Basin included in the second phase. The first phase was completed in 2013 and is currently operational. During the design development of the Buechel Basin and ISSDP projects, MSD decided to fully utilize the entire Buechel Basin site, oversizing the storage component at Buechel Basin with approximately 88 MG of additional storage capacity to be able to contain almost a 10-year, 24-hour SCS storm event. This was done primarily to provide MSD with operational flexibility in the future, although it did supply some additional level of protection. The committed level of control of a 2-year, 3-hour cloudburst event was not changed.

Recently, MSD assessed the condition of the existing Upper Middle Fork Lift Station and determined that it could not be relied upon to divert flow as required without extensive upgrades for performance, maintenance and safety reasons. Because reliability at Upper Middle Fork Lift Station was not an issue considered when the SSDP solution was developed, the existing capacity was an assumed limitation on maximum flow. In light of MSD's need for replacing the lift station, hydraulic analysis and optimization of the Upper Middle Fork #2 solution indicate that upsizing the pumps to accommodate 30 MGD and eliminating the covered storage will increase overall system reliability and reduce future maintenance costs. Additionally, because the Buechel

Basin was oversized, the overall project would still meet the 2-year, 3-hour level of control commitment in the IOAP.

For your reference, a copy of the project fact sheets and maps from the 2012 IOAP Modification dated May 2014 are included in Attachment A. New project fact sheets and maps addressing this new project modification request and clarification for Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion have been provided in Attachment B.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have questions or need additional information, please contact me at (502) 540-6136.

Sincerely,



Angela L. Akridge, P.E.  
Chief Engineer

cc: T. Parrot P. Purifoy

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Attachments

**Attachment A**

<b>Project Name</b>	Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin
<b>Project Number</b>	S_MISF_MF_NB01_M_01_C_A1
<b>Modeled Area</b>	Middle Fork Beargrass Creek
<b>Branch or SSO ID</b>	MF01
<b>Project Type</b>	Off-line Storage
<b>Receiving Stream</b>	Middle Fork Beargrass Creek, South Fork Beargrass Creek, Greasy Ditch, and Goose Creek
<b>Project Description</b>	Phase 1 of this project includes construction of a 3-cell off-line storage basin. The first two cells provide storage for the 1.82-inch cloudburst event, which was the recommended level of control resulting from the benefit cost evaluation. During design a more economical approach to expanding the available storage was identified, and this was included in the project as an bid alterantive. After bidding MSD decided to accept the alternate bid to construct a large third cell, which results in a level of control equal to the 10-year 24-hour storm event.
<b>Reason for Overflow</b>	System capacity
<b>Design Parameters</b>	The initial solution was based on a 1.82-inch cloudburst rain event. The final constructed configuration will accomodate the 10-year 24-hour rain event.
<b>Project Constraints</b>	Property Acquisition, Potential Wetlands at Buechel Site
<b>Estimated Capital Cost</b>	\$13,184,500
<b>Weighted Benefit/Cost Ratio</b>	1.26

Asset ID	SSO Start Date	Volume (Gal)
27005	1/10/2008	31050
08935-SM	1/10/2008	110880
27005	1/11/2014	6000
27005	1/13/2005	729000
47583	1/13/2013	87000
40559	1/13/2013	8250
51180	1/13/2013	26500
08935-SM	1/13/2013	8798306
45835	1/13/2013	102000
47582	1/13/2013	125000
51161	1/13/2013	42000
23211	1/13/2013	33500
51160	1/13/2013	27000
27005	1/13/2013	67500
84155	1/13/2013	30500
08935-SM	1/14/2007	4621000
90700	1/14/2013	100
47593	1/14/2013	6000
27005	1/15/2007	1539000
45835	1/15/2007	10260
08935-SM	1/17/2006	72000
27005	1/17/2006	20800
27005	1/2/2004	340000
08935-SM	1/21/2010	811385
27005	1/21/2010	48000

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

08935-SM	1/23/2006	156060
27005	1/23/2006	11400
08935-SM	1/24/2002	1000000
08935-SM	1/24/2010	242
40559	1/26/2012	15000
51161	1/26/2012	13000
23211	1/26/2012	14500
72288	1/26/2012	18000
47582	1/26/2012	82000
27005	1/26/2012	72000
90700	1/26/2012	36000
45835	1/26/2012	64000
47593	1/26/2012	27500
08935-SM	1/26/2012	253569
84155	1/26/2012	40500
51180	1/27/2012	100
51160	1/27/2012	22000
45835	1/3/2005	3726000
27005	1/3/2005	44800000
23211	1/3/2005	7590000
08935-SM	1/3/2005	10080000
08935-SM	1/4/2004	1700000
27005	1/4/2004	1900000
27005	10/18/2004	730000
08935-SM	10/18/2004	578000
45835	10/18/2004	102000
23211	10/18/2004	408000
08935-SM	10/22/2007	15120000
27005	10/22/2007	3726000
45835	10/23/2007	322080
08935-SM	10/27/2009	3078
08935-SM	10/27/2011	3071
08935-SM	10/28/2006	576000
08935-SM	10/31/2009	223896
47582	10/5/2013	208000
47583	10/5/2013	86500
51160	10/5/2013	270000
23211	10/5/2013	378000
27005	10/5/2013	125000
72289	10/5/2013	82000
08935-SM	10/5/2013	11307180
45835	10/5/2013	72000
90700	10/6/2013	62000

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30376	10/6/2013	71000
84155	10/6/2013	55000
47593	10/6/2013	115000
51160	10/9/2009	1080
08935-SM	10/9/2009	1288
27005	10/9/2009	4200
45835	10/9/2009	4200
08935-SM	11/11/2004	430000
27005	11/11/2004	490000
47583	11/17/2013	108000
90700	11/17/2013	21000
47593	11/17/2013	45000
84155	11/17/2013	19500
45835	11/17/2013	92000
27005	11/17/2013	100000
08935-SM	11/17/2013	5019348
72289	11/17/2013	100
23211	11/17/2013	68400
51160	11/17/2013	199500
47582	11/17/2013	120000
23211	11/2/2004	1510000
45835	11/2/2004	29300
27005	11/2/2004	29300
08935-SM	11/2/2004	932000
47034	11/22/2011	650
27005	11/22/2011	52000
51161	11/22/2011	9000
08935-SM	11/22/2011	684854
51160	11/22/2011	27000
23211	11/22/2011	9000
45835	11/22/2011	6000
45835	11/25/2010	7200
27005	11/25/2010	1550
08935-SM	11/25/2010	1126398
08935-SM	11/28/2011	10071059
51161	11/28/2011	504000
47593	11/28/2011	3300
23211	11/28/2011	504000
51160	11/28/2011	76500
27005	11/28/2011	72500
45835	11/28/2011	91000
40559	11/28/2011	78500
72288	11/28/2011	87000

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08935-SM	11/29/2001	2000000
30376	11/29/2011	52500
90700	11/29/2011	12000
47582	11/30/2011	1000
45835	12/10/2012	9000
08935-SM	12/13/2007	41800
45835	12/13/2007	1400
27005	12/13/2007	12000
45835	12/15/2007	81000
27005	12/15/2007	2511000
08935-SM	12/15/2007	11095000
08935-SM	12/17/2001	2000000
08935-SM	12/19/2002	200000
08935-SM	12/21/2013	6282652
47582	12/21/2013	420000
47583	12/21/2013	355000
23211	12/22/2013	31000
45835	12/22/2013	55000
72289	12/22/2013	62000
84155	12/22/2013	12000
51160	12/22/2013	12000
27007	12/23/2013	100
45796	12/23/2013	100
08935-SM	12/24/2008	2128997
45835	12/24/2008	12000
47583	12/24/2008	135000
27005	12/24/2008	216000
08935-SM	12/26/2012	901
27005	12/27/2011	1900
45835	12/27/2011	2100
115183	12/5/2011	13500
115184	12/5/2011	100
115185	12/5/2011	100
84155	12/5/2011	33000
30376	12/5/2011	132000
51161	12/5/2011	780000
90700	12/5/2011	46500
51180	12/5/2011	432000
47582	12/5/2011	145000
45835	12/5/2011	345500
40559	12/5/2011	79500
23211	12/5/2011	72000
47593	12/5/2011	97500



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72288	12/5/2011	135000
27005	12/5/2011	245000
51160	12/5/2011	346000
08935-SM	12/5/2011	10245414
40559	12/9/2012	15000
08935-SM	12/9/2012	464270
72289	12/9/2012	100
27005	12/9/2012	90000
08935-SM	2/12/2008	585268
27005	2/12/2008	9000
08935-SM	2/13/2007	720000
27005	2/13/2007	891000
23211	2/17/2000	0
08935-SM	2/22/2003	55000
45835	2/24/2011	42000
08935-SM	2/24/2011	7494807
23211	2/24/2011	36000
27005	2/24/2011	37000
51160	2/24/2011	44000
90700	2/25/2011	7950
47593	2/25/2011	14750
08935-SM	2/28/2011	31027
27005	2/28/2011	96500
45835	2/28/2011	100350
72288	2/29/2012	100
08935-SM	2/5/2008	1620000
27005	2/5/2010	23000
08935-SM	2/5/2010	272
45835	2/6/2008	432000
27005	2/6/2008	432000
47583	2/6/2008	117120
27005	3/1/2007	67500
08935-SM	3/1/2007	943200
08935-SM	3/10/2008	5574432
84155	3/10/2011	500
27005	3/11/2013	1600
08935-SM	3/11/2013	198695
45835	3/12/2006	286000
08935-SM	3/12/2006	4148000
27005	3/12/2006	702000
08935-SM	3/14/2007	97502
72288	3/16/2012	50
27005	3/17/2012	13500

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**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

15194	3/17/2012	2000
27005	3/17/2013	36000
45835	3/17/2013	37500
45835	3/18/2008	1302960
47583	3/18/2008	6318000
27005	3/18/2008	2403000
08935-SM	3/18/2008	16979740
47582	3/18/2013	108000
51161	3/18/2013	108000
84155	3/18/2013	30000
40559	3/18/2013	4900
08935-SM	3/18/2013	3203055
23211	3/18/2013	126000
47583	3/18/2013	108000
51160	3/18/2013	9000
08935-SM	3/19/2002	1000000
47604	3/19/2008	45000
90700	3/19/2008	5400
23211	3/19/2008	17820
47593	3/19/2008	837000
72288	3/23/2012	250
08935-SM	3/27/2005	1537000
08935-SM	3/27/2008	7225620
27005	3/27/2008	1309500
47583	3/27/2008	1458000
45835	3/27/2008	294000
45835	3/28/2005	111000
27005	3/28/2005	2100000
47593	3/28/2008	38880
47604	3/28/2008	6210
27005	3/31/2008	19500
45835	3/31/2008	15120
08935-SM	3/31/2008	19916
47583	3/4/2008	1296000
45835	3/4/2008	395280
08935-SM	3/4/2008	12397000
47603	3/4/2008	200
27005	3/4/2008	972000
27005	3/6/2011	100
90700	3/9/2011	72000
51160	3/9/2011	81000
08935-SM	3/9/2011	22584138
27005	3/9/2011	285000

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23211	3/9/2011	25250
45835	3/9/2011	725000
47593	3/9/2011	69250
27005	4/1/2012	90000
45835	4/1/2012	63000
51160	4/1/2012	1800
40559	4/1/2012	43000
08935-SM	4/1/2012	303355
72288	4/1/2012	55000
45835	4/11/2011	2100250
27005	4/11/2011	1750250
08935-SM	4/11/2011	18668406
47593	4/12/2011	19500
51160	4/12/2011	95000
90700	4/12/2011	227250
47604	4/12/2011	142500
47034	4/12/2011	39250
84155	4/12/2011	45250
23211	4/12/2011	102500
115183	4/12/2011	9000
27005	4/13/2004	13000
27005	4/14/2007	108000
08935-SM	4/14/2007	367804
08935-SM	4/16/2011	1331416
08935-SM	4/19/2009	185884
08935-SM	4/20/2011	241203
08935-SM	4/21/2006	1656000
27005	4/21/2006	54000
45835	4/23/2011	1250000
47593	4/23/2011	42000
90700	4/23/2011	76250
08935-SM	4/23/2011	44938871
84155	4/23/2011	94550
51160	4/23/2011	3600000
23211	4/23/2011	130000
27005	4/23/2011	1650000
30376	4/27/2011	78000
47034	4/27/2011	49500
51161	4/27/2011	864000
115185	4/27/2011	46000
47582	4/28/2011	1750000
115183	4/28/2011	69500
08935-SM	4/3/2006	360000

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27005	4/3/2006	108000
08935-SM	4/3/2008	13948990
45835	4/3/2008	1218000
27005	4/3/2008	2268000
23211	4/4/2008	5724000
47593	4/4/2008	204000
23212	4/4/2008	9720
47583	4/4/2008	6156000
51161	4/4/2008	438000
51160	4/4/2008	55500
08935-SM	5/10/2013	10741
47582	5/10/2013	18250
27005	5/10/2013	10000
84155	5/10/2013	20500
47583	5/10/2013	205000
08935-SM	5/12/2010	1873
72288	5/13/2012	64000
51160	5/13/2012	4500
40559	5/13/2012	59000
27005	5/13/2012	105000
08935-SM	5/13/2012	1368241
23211	5/13/2012	4500
08935-SM	5/15/2008	521879
08935-SM	5/19/2005	468350
27005	5/19/2005	140000
45835	5/19/2005	140000
23211	5/2/2004	1400000
08935-SM	5/2/2004	875000
27005	5/2/2004	1500000
47583	5/2/2010	125000
47604	5/2/2010	29500
08935-SM	5/2/2010	17873159
51160	5/2/2010	288000
27005	5/2/2010	175000
90700	5/2/2010	31000
45835	5/2/2010	197000
47593	5/2/2010	136000
51160	5/2/2011	864000
51161	5/2/2011	432000
08935-SM	5/21/2010	456
27005	5/21/2010	1500
27005	5/23/2011	14000
27005	5/25/2004	1770000

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

23211	5/25/2004	1020000
08935-SM	5/25/2004	502000
08935-SM	5/26/2011	1342
27005	5/26/2011	9200
27005	5/27/2004	2900000
27005	5/27/2004	1640000
45835	5/27/2004	184000
08935-SM	5/27/2004	1925000
23211	5/27/2004	1040000
08935-SM	5/29/2012	1621039
72288	5/29/2012	126000
84155	5/29/2012	60000
72289	5/29/2012	60000
51161	5/29/2012	75000
47593	5/29/2012	72000
27005	5/29/2012	82000
40559	5/29/2012	126000
51160	5/29/2012	96000
23211	5/29/2012	105000
45835	5/29/2012	81500
51180	5/29/2012	1200
90700	5/29/2012	24000
84155	5/3/2011	67500
47593	5/3/2011	37500
30376	5/3/2011	29250
90700	5/3/2011	39500
47034	5/3/2011	51500
115185	5/3/2011	116000
23211	5/30/2004	2080000
45835	5/30/2004	281000
27005	5/30/2004	2710000
72288	5/31/2012	9500
27005	5/31/2012	7200
15194	5/5/2012	100
51160	5/8/2009	4500
08935-SM	5/8/2009	3867778
27005	5/8/2009	3975000
47583	5/8/2009	4500000
45835	5/8/2009	337500
90700	5/8/2009	540
47593	5/8/2009	540
08935-SM	6/1/2012	92118
45835	6/17/2013	50

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27005	6/17/2013	50
08935-SM	6/17/2013	372637
08935-SM	6/18/2009	430000
45835	6/18/2009	9000
08935-SM	6/2/2006	1008000
45835	6/2/2006	57500
27005	6/2/2006	675000
51160	6/22/2011	129600
08935-SM	6/22/2011	5665357
51161	6/22/2011	408000
23211	6/22/2011	270000
47593	6/23/2011	100
47582	6/23/2011	145000
84155	6/23/2011	75000
27005	6/23/2011	84000
45835	6/23/2011	78500
45835	6/26/2013	165000
84155	6/26/2013	120000
47593	6/26/2013	112500
08935-SM	6/26/2013	6639301
40559	6/26/2013	30000
90700	6/26/2013	75000
51160	6/26/2013	126000
27005	6/26/2013	165000
47583	6/27/2013	64000
30376	6/27/2013	45000
23211	6/27/2013	84000
51180	6/27/2013	3000
08935-SM	6/28/2007	13579
45835	6/9/2010	9700
27005	6/9/2010	50
72289	7/1/2012	100
08935-SM	7/10/2004	220000
27005	7/10/2004	199500
27005	7/10/2013	4500
08935-SM	7/13/2010	217722
08935-SM	7/14/2006	792000
72288	7/15/2012	25
08935-SM	7/17/2004	220000
27005	7/17/2004	240000
08935-SM	7/20/2010	7463
72289	7/22/2013	100
45835	7/22/2013	10500

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

27005	7/22/2013	22000
08935-SM	7/29/2009	1350710
27005	7/29/2009	240000
47604	7/29/2009	34000
90700	7/29/2009	34000
47593	7/29/2009	240000
45835	7/29/2009	240000
27005	7/6/2013	100
08935-SM	7/6/2013	126702
47583	7/6/2013	32500
47582	7/6/2013	19000
08935-SM	8/14/2010	9
45796	8/17/2010	5
08935-SM	8/21/2007	4579
27005	8/30/2005	66000
45835	8/30/2005	60500
08935-SM	8/30/2005	1065000
45835	8/4/2009	320000
08935-SM	8/4/2009	6943977
47593	8/4/2009	111000
27005	8/4/2009	270000
47583	8/4/2009	54000
51160	8/4/2009	351360
08935-SM	8/7/2011	1147
45835	9/2/2003	650000
27005	9/2/2003	1900000
08935-SM	9/2/2003	1700000
72288	9/2/2012	150
08935-SM	9/20/2009	147609
27005	9/21/2009	520000
45835	9/21/2009	490000
27005	9/21/2013	100
27005	9/22/2006	5940000
08935-SM	9/22/2006	5544000
45835	9/22/2006	527040
84155	9/23/2006	0
51161	9/26/2011	71000
45835	9/26/2011	155000
08935-SM	9/26/2011	452913
27005	9/26/2011	172000
23211	9/26/2011	56500
51160	9/26/2011	17200
08935-SM	9/27/2002	100000

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

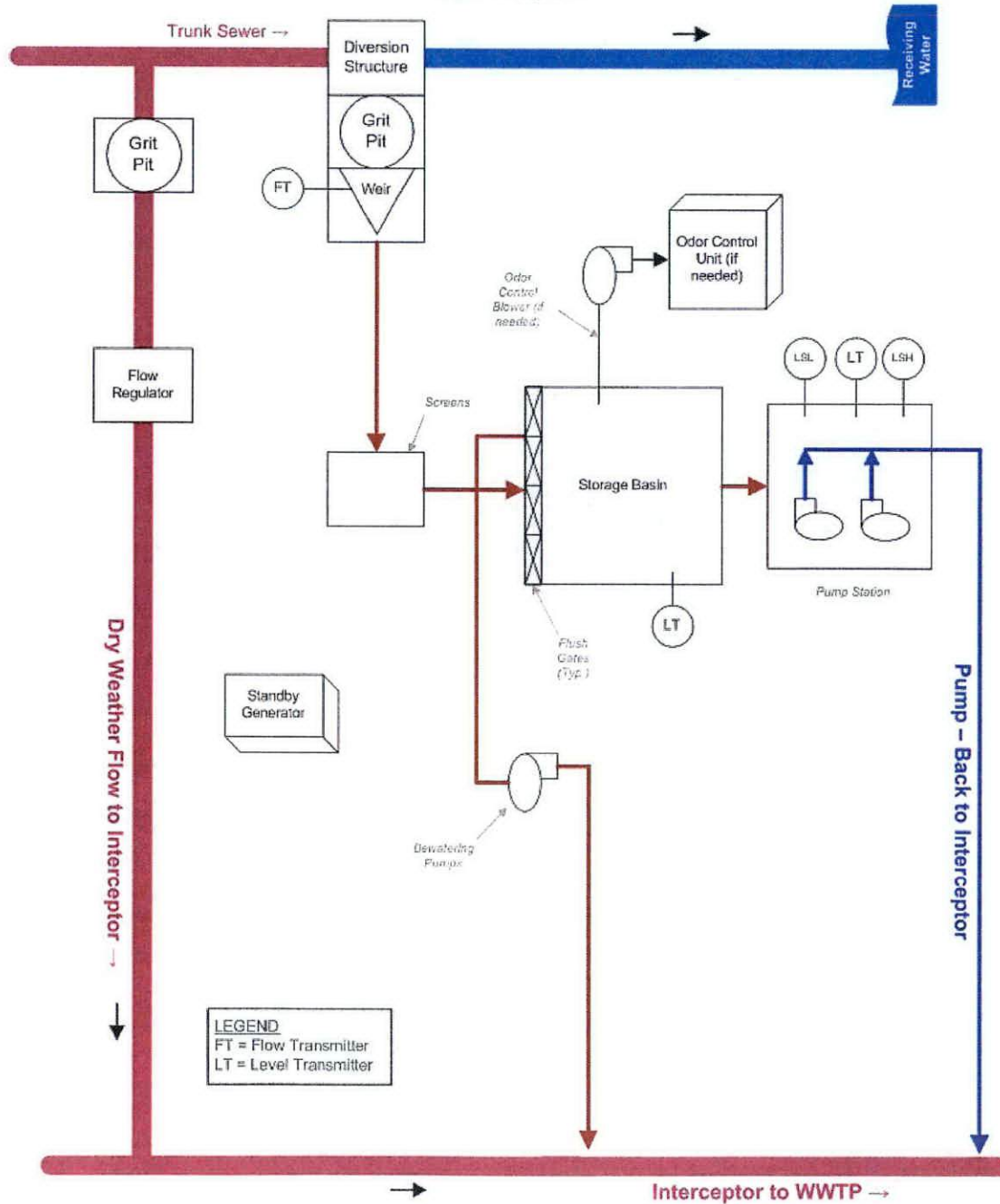
**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

08935-SM	9/3/2003	200000
72289	9/8/2012	50



# Project Fact Sheet

Off-Line Storage Pumped Effluent Flow Diagram



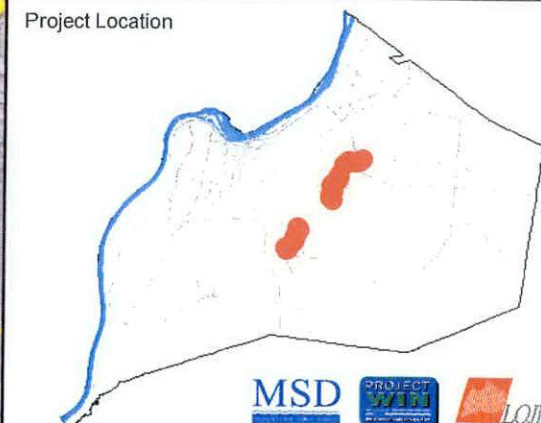
**Integrated Overflow Abatement Plan**  
**Vol. 3 - Sanitary Sewer Discharge Plan**  
 Middle Fork Sewershed  
 Middle Fork Relief Interceptor,  
 Wet Weather Storage and  
 UMFLS Diversion 1 - Buechel Basin

Preliminary - For Budget Development Only

- Documented SSO
- Suspected SSO
- Haulop Locations
- Pump Stations
- WQTC
- Proposed Pipe Solution
- Combined Sewer Pipe
- Force Main
- Collector < 12"
- Interceptor >= 12"
- Proposed Storage Solution
- Streams
- Floodway
- Jefferson County Boundary

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

1 inch = 1,000 feet      N      Aerial Date: 2012      Map Revision: April 15, 2014



MSD PROJECT WIP LOIC  
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*Construct 30" force main diversion to Hikes Lane Interceptor (10,200 LF); construct Middle Fork Relief Interceptor between Oxmoor Mall and UMFLS. 11,800 LF total new gravity pipe including Relief Interceptor, Basin piping, and relief at MH 15138.*

*Offline storage at Buechel Basin (17.3 MG) approximate*

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

**Modeled Area** Middle Fork Beargrass Creek

**Branch or SSO ID** MF01

**Project Type** Off-line Storage & Pipe Upgrades

**Receiving Stream** Middle Fork Beargrass Creek, South Fork Beargrass Creek, Greasy Ditch, and Goose Creek

**Project Description** This alternative includes constructing 10,200 LF of 30" Force Main Diversion to Hikes Lane Interceptor from Ex UMFLS. Construct Middle Fork Relief Interceptor between Oxmoor and Middle Fork at Breckenridge. Construct 1.6 MG covered basin near Car Wash Site. Upsize Pipe D/S of MH 15138 to 18".

**Reason for Overflow** System capacity

**Design Parameters** This solution is based on a 1.82 inch cloudburst rain event.

**Project Constraints** Property Acquisition, Stream Crossings for MFRI

**Estimated Capital Cost** \$13,149,000

**Weighted Benefit/Cost Ratio** 1.26

Asset ID	SSO Start Date	Volume (Gal)
08935-SM	1/10/2008	110880
27005	1/10/2008	31050
27005	1/11/2014	6000
27005	1/13/2005	729000
51160	1/13/2013	27000
45835	1/13/2013	102000
08935-SM	1/13/2013	8798306
23211	1/13/2013	33500
51161	1/13/2013	42000
47582	1/13/2013	125000
40559	1/13/2013	8250
47583	1/13/2013	87000
51180	1/13/2013	26500
27005	1/13/2013	67500
84155	1/13/2013	30500
08935-SM	1/14/2007	4621000
47593	1/14/2013	6000
90700	1/14/2013	100
45835	1/15/2007	10260
27005	1/15/2007	1539000
08935-SM	1/17/2006	72000
27005	1/17/2006	20800
27005	1/2/2004	340000
08935-SM	1/21/2010	811385
27005	1/21/2010	48000
08935-SM	1/23/2006	156060
27005	1/23/2006	11400

Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

08935-SM	1/24/2002	1000000
08935-SM	1/24/2010	242
51161	1/26/2012	13000
40559	1/26/2012	15000
47582	1/26/2012	82000
45835	1/26/2012	64000
08935-SM	1/26/2012	253569
72288	1/26/2012	18000
23211	1/26/2012	14500
47593	1/26/2012	27500
90700	1/26/2012	36000
27005	1/26/2012	72000
84155	1/26/2012	40500
51160	1/27/2012	22000
51180	1/27/2012	100
45835	1/3/2005	3726000
08935-SM	1/3/2005	10080000
27005	1/3/2005	44800000
23211	1/3/2005	7590000
08935-SM	1/4/2004	1700000
27005	1/4/2004	1900000
27005	10/18/2004	730000
23211	10/18/2004	408000
45835	10/18/2004	102000
08935-SM	10/18/2004	578000
08935-SM	10/22/2007	15120000
27005	10/22/2007	3726000
45835	10/23/2007	322080
08935-SM	10/27/2009	3078
08935-SM	10/27/2011	3071
08935-SM	10/28/2006	576000
08935-SM	10/31/2009	223896
72289	10/5/2013	82000
47582	10/5/2013	208000
08935-SM	10/5/2013	11307180
51160	10/5/2013	270000
23211	10/5/2013	378000
45835	10/5/2013	72000
47583	10/5/2013	86500
27005	10/5/2013	125000
47593	10/6/2013	115000
30376	10/6/2013	71000
84155	10/6/2013	55000

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

90700	10/6/2013	62000
45835	10/9/2009	4200
51160	10/9/2009	1080
27005	10/9/2009	4200
08935-SM	10/9/2009	1288
27005	11/11/2004	490000
08935-SM	11/11/2004	430000
51160	11/17/2013	199500
72289	11/17/2013	100
47582	11/17/2013	120000
23211	11/17/2013	68400
45835	11/17/2013	92000
47593	11/17/2013	45000
08935-SM	11/17/2013	5019348
47583	11/17/2013	108000
90700	11/17/2013	21000
84155	11/17/2013	19500
27005	11/17/2013	100000
27005	11/2/2004	29300
45835	11/2/2004	29300
23211	11/2/2004	1510000
08935-SM	11/2/2004	932000
23211	11/22/2011	9000
51161	11/22/2011	9000
45835	11/22/2011	6000
51160	11/22/2011	27000
47034	11/22/2011	650
08935-SM	11/22/2011	684854
27005	11/22/2011	52000
08935-SM	11/25/2010	1126398
45835	11/25/2010	7200
27005	11/25/2010	1550
45835	11/28/2011	91000
51161	11/28/2011	504000
47593	11/28/2011	3300
72288	11/28/2011	87000
08935-SM	11/28/2011	10071059
23211	11/28/2011	504000
51160	11/28/2011	76500
40559	11/28/2011	78500
27005	11/28/2011	72500
08935-SM	11/29/2001	2000000
30376	11/29/2011	52500

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

90700	11/29/2011	12000
47582	11/30/2011	1000
45835	12/10/2012	9000
08935-SM	12/13/2007	41800
45835	12/13/2007	1400
27005	12/13/2007	12000
45835	12/15/2007	81000
08935-SM	12/15/2007	11095000
27005	12/15/2007	2511000
08935-SM	12/17/2001	2000000
08935-SM	12/19/2002	200000
47583	12/21/2013	355000
47582	12/21/2013	420000
08935-SM	12/21/2013	6282652
72289	12/22/2013	62000
23211	12/22/2013	31000
51160	12/22/2013	12000
45835	12/22/2013	55000
84155	12/22/2013	12000
45796	12/23/2013	100
27007	12/23/2013	100
47583	12/24/2008	135000
45835	12/24/2008	12000
08935-SM	12/24/2008	2128997
27005	12/24/2008	216000
08935-SM	12/26/2012	901
45835	12/27/2011	2100
27005	12/27/2011	1900
115183	12/5/2011	13500
115184	12/5/2011	100
51161	12/5/2011	780000
115185	12/5/2011	100
72288	12/5/2011	135000
47593	12/5/2011	97500
23211	12/5/2011	72000
51160	12/5/2011	346000
51180	12/5/2011	432000
40559	12/5/2011	79500
08935-SM	12/5/2011	10245414
45835	12/5/2011	345500
47582	12/5/2011	145000
30376	12/5/2011	132000
27005	12/5/2011	245000

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

90700	12/5/2011	46500
84155	12/5/2011	33000
40559	12/9/2012	15000
08935-SM	12/9/2012	464270
72289	12/9/2012	100
27005	12/9/2012	90000
08935-SM	2/12/2008	585268
27005	2/12/2008	9000
08935-SM	2/13/2007	720000
27005	2/13/2007	891000
23211	2/17/2000	0
08935-SM	2/22/2003	55000
51160	2/24/2011	44000
45835	2/24/2011	42000
08935-SM	2/24/2011	7494807
27005	2/24/2011	37000
23211	2/24/2011	36000
47593	2/25/2011	14750
90700	2/25/2011	7950
45835	2/28/2011	100350
08935-SM	2/28/2011	31027
27005	2/28/2011	96500
72288	2/29/2012	100
08935-SM	2/5/2008	1620000
27005	2/5/2010	23000
08935-SM	2/5/2010	272
47583	2/6/2008	117120
45835	2/6/2008	432000
27005	2/6/2008	432000
08935-SM	3/1/2007	943200
27005	3/1/2007	67500
08935-SM	3/10/2008	5574432
84155	3/10/2011	500
08935-SM	3/11/2013	198695
27005	3/11/2013	1600
08935-SM	3/12/2006	4148000
45835	3/12/2006	286000
27005	3/12/2006	702000
08935-SM	3/14/2007	97502
72288	3/16/2012	50
15194	3/17/2012	2000
27005	3/17/2012	13500
45835	3/17/2013	37500

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

27005	3/17/2013	36000
45835	3/18/2008	1302960
47583	3/18/2008	6318000
27005	3/18/2008	2403000
08935-SM	3/18/2008	16979740
08935-SM	3/18/2013	3203055
51161	3/18/2013	108000
51160	3/18/2013	9000
47583	3/18/2013	108000
40559	3/18/2013	4900
23211	3/18/2013	126000
47582	3/18/2013	108000
84155	3/18/2013	30000
08935-SM	3/19/2002	1000000
47604	3/19/2008	45000
47593	3/19/2008	837000
23211	3/19/2008	17820
90700	3/19/2008	5400
72288	3/23/2012	250
08935-SM	3/27/2005	1537000
45835	3/27/2008	294000
47583	3/27/2008	1458000
27005	3/27/2008	1309500
08935-SM	3/27/2008	7225620
27005	3/28/2005	2100000
45835	3/28/2005	111000
47604	3/28/2008	6210
47593	3/28/2008	38880
45835	3/31/2008	15120
27005	3/31/2008	19500
08935-SM	3/31/2008	19916
47603	3/4/2008	200
45835	3/4/2008	395280
47583	3/4/2008	1296000
27005	3/4/2008	972000
08935-SM	3/4/2008	12397000
27005	3/6/2011	100
08935-SM	3/9/2011	22584138
51160	3/9/2011	81000
45835	3/9/2011	725000
47593	3/9/2011	69250
90700	3/9/2011	72000
27005	3/9/2011	285000



**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

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23211	3/9/2011	25250
72288	4/1/2012	55000
40559	4/1/2012	43000
45835	4/1/2012	63000
08935-SM	4/1/2012	303355
51160	4/1/2012	1800
27005	4/1/2012	90000
08935-SM	4/11/2011	18668406
45835	4/11/2011	2100250
27005	4/11/2011	1750250
47593	4/12/2011	19500
47604	4/12/2011	142500
47034	4/12/2011	39250
23211	4/12/2011	102500
51160	4/12/2011	95000
115183	4/12/2011	9000
90700	4/12/2011	227250
84155	4/12/2011	45250
27005	4/13/2004	13000
27005	4/14/2007	108000
08935-SM	4/14/2007	367804
08935-SM	4/16/2011	1331416
08935-SM	4/19/2009	185884
08935-SM	4/20/2011	241203
08935-SM	4/21/2006	1656000
27005	4/21/2006	54000
47593	4/23/2011	42000
23211	4/23/2011	130000
08935-SM	4/23/2011	44938871
51160	4/23/2011	3600000
45835	4/23/2011	1250000
27005	4/23/2011	1650000
90700	4/23/2011	76250
84155	4/23/2011	94550
47034	4/27/2011	49500
115185	4/27/2011	46000
51161	4/27/2011	864000
30376	4/27/2011	78000
47582	4/28/2011	1750000
115183	4/28/2011	69500
08935-SM	4/3/2006	360000
27005	4/3/2006	108000
45835	4/3/2008	1218000

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

08935-SM	4/3/2008	13948990
27005	4/3/2008	2268000
51161	4/4/2008	438000
47593	4/4/2008	204000
47583	4/4/2008	6156000
23212	4/4/2008	9720
23211	4/4/2008	5724000
51160	4/4/2008	55500
47582	5/10/2013	18250
47583	5/10/2013	205000
08935-SM	5/10/2013	10741
27005	5/10/2013	10000
84155	5/10/2013	20500
08935-SM	5/12/2010	1873
23211	5/13/2012	4500
08935-SM	5/13/2012	1368241
51160	5/13/2012	4500
40559	5/13/2012	59000
27005	5/13/2012	105000
72288	5/13/2012	64000
08935-SM	5/15/2008	521879
08935-SM	5/19/2005	468350
27005	5/19/2005	140000
45835	5/19/2005	140000
23211	5/2/2004	1400000
08935-SM	5/2/2004	875000
27005	5/2/2004	1500000
08935-SM	5/2/2010	17873159
47604	5/2/2010	29500
47583	5/2/2010	125000
45835	5/2/2010	197000
47593	5/2/2010	136000
51160	5/2/2010	288000
27005	5/2/2010	175000
90700	5/2/2010	31000
51160	5/2/2011	864000
51161	5/2/2011	432000
08935-SM	5/21/2010	456
27005	5/21/2010	1500
27005	5/23/2011	14000
08935-SM	5/25/2004	502000
27005	5/25/2004	1770000
23211	5/25/2004	1020000

Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

08935-SM	5/26/2011	1342
27005	5/26/2011	9200
23211	5/27/2004	1040000
27005	5/27/2004	2900000
27005	5/27/2004	1640000
08935-SM	5/27/2004	1925000
45835	5/27/2004	184000
45835	5/29/2012	81500
72288	5/29/2012	126000
51180	5/29/2012	1200
72289	5/29/2012	60000
23211	5/29/2012	105000
40559	5/29/2012	126000
08935-SM	5/29/2012	1621039
47593	5/29/2012	72000
51160	5/29/2012	96000
51161	5/29/2012	75000
90700	5/29/2012	24000
84155	5/29/2012	60000
27005	5/29/2012	82000
115185	5/3/2011	116000
47034	5/3/2011	51500
47593	5/3/2011	37500
30376	5/3/2011	29250
90700	5/3/2011	39500
84155	5/3/2011	67500
27005	5/30/2004	2710000
23211	5/30/2004	2080000
45835	5/30/2004	281000
72288	5/31/2012	9500
27005	5/31/2012	7200
15194	5/5/2012	100
47593	5/8/2009	540
47583	5/8/2009	4500000
45835	5/8/2009	337500
27005	5/8/2009	3975000
90700	5/8/2009	540
51160	5/8/2009	4500
08935-SM	5/8/2009	3867778
08935-SM	6/1/2012	92118
45835	6/17/2013	50
08935-SM	6/17/2013	372637
27005	6/17/2013	50

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

45835	6/18/2009	9000
08935-SM	6/18/2009	430000
08935-SM	6/2/2006	1008000
45835	6/2/2006	57500
27005	6/2/2006	675000
51161	6/22/2011	408000
23211	6/22/2011	270000
08935-SM	6/22/2011	5665357
51160	6/22/2011	129600
47593	6/23/2011	100
47582	6/23/2011	145000
45835	6/23/2011	78500
84155	6/23/2011	75000
27005	6/23/2011	84000
40559	6/26/2013	30000
51160	6/26/2013	126000
45835	6/26/2013	165000
08935-SM	6/26/2013	6639301
47593	6/26/2013	112500
84155	6/26/2013	120000
27005	6/26/2013	165000
90700	6/26/2013	75000
51180	6/27/2013	3000
47583	6/27/2013	64000
23211	6/27/2013	84000
30376	6/27/2013	45000
08935-SM	6/28/2007	13579
45835	6/9/2010	9700
27005	6/9/2010	50
72289	7/1/2012	100
27005	7/10/2004	199500
08935-SM	7/10/2004	220000
27005	7/10/2013	4500
08935-SM	7/13/2010	217722
08935-SM	7/14/2006	792000
72288	7/15/2012	25
27005	7/17/2004	240000
08935-SM	7/17/2004	220000
08935-SM	7/20/2010	7463
45835	7/22/2013	10500
72289	7/22/2013	100
27005	7/22/2013	22000
47604	7/29/2009	34000

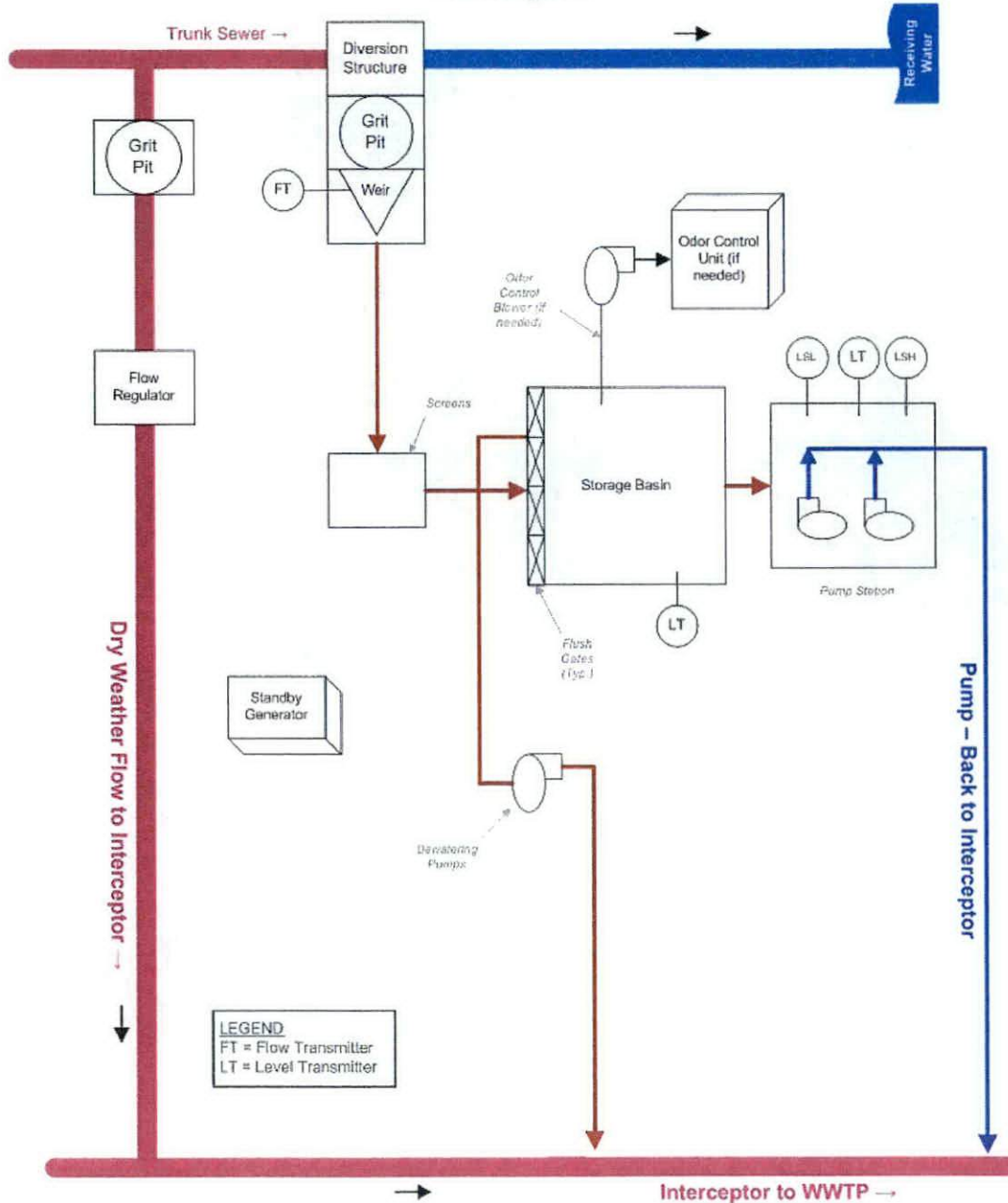
Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

47593	7/29/2009	240000
45835	7/29/2009	240000
08935-SM	7/29/2009	1350710
27005	7/29/2009	240000
90700	7/29/2009	34000
08935-SM	7/6/2013	126702
47582	7/6/2013	19000
47583	7/6/2013	32500
27005	7/6/2013	100
08935-SM	8/14/2010	9
45796	8/17/2010	5
08935-SM	8/21/2007	4579
45835	8/30/2005	60500
27005	8/30/2005	66000
08935-SM	8/30/2005	1065000
47583	8/4/2009	54000
45835	8/4/2009	320000
47593	8/4/2009	111000
27005	8/4/2009	270000
51160	8/4/2009	351360
08935-SM	8/4/2009	6943977
08935-SM	8/7/2011	1147
27005	9/2/2003	1900000
08935-SM	9/2/2003	1700000
45835	9/2/2003	650000
72288	9/2/2012	150
08935-SM	9/20/2009	147609
45835	9/21/2009	490000
27005	9/21/2009	520000
27005	9/21/2013	100
08935-SM	9/22/2006	5544000
45835	9/22/2006	527040
27005	9/22/2006	5940000
84155	9/23/2006	0
45835	9/26/2011	155000
51161	9/26/2011	71000
23211	9/26/2011	56500
51160	9/26/2011	17200
08935-SM	9/26/2011	452913
27005	9/26/2011	172000
08935-SM	9/27/2002	100000
08935-SM	9/3/2003	200000
72289	9/8/2012	50

**Project Fact Sheet**

Off-Line Storage  
Pumped Effluent  
Flow Diagram



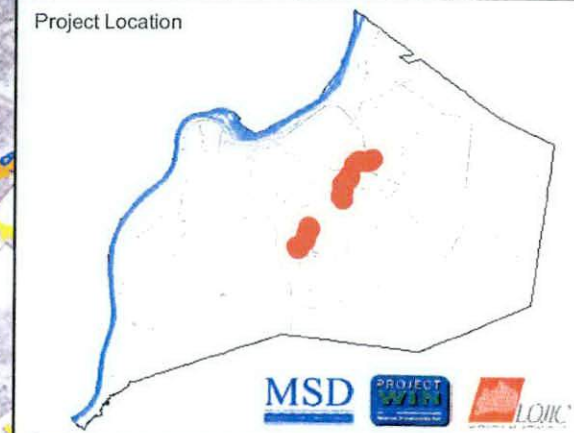
**Integrated Overflow Abatement Plan**  
**Vol. 3 - Sanitary Sewer Discharge Plan**  
 Middle Fork Sewershed  
 Middle Fork Relief Interceptor,  
 Wet Weather Storage and  
 UMFLS Diversion 2 - PS Diversion and Storage

Preliminary - For Budget Development Only

- Documented SSO
- Suspected SSO
- Haulop Locations
- Pump Stations
- WQTC
- Proposed Pipe Solution
- Combined Sewer Pipe
- Force Main
- Collector < 12"
- Interceptor >= 12"
- Proposed Storage Solution
- Streams
- Floodway
- Jefferson County Boundary

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

1 inch = 1,320 feet       Aerial Date: 2009    Map Revision: April 9, 2012



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Offline underground covered storage at Breck Car wash (1.6 MG)

Construct 30" force main diversion to Hikes Lane Interceptor (10,200 LF), construct Middle Fork Relief Interceptor between Oxmoor Mall and UMFLS. 11,800 LF total new gravity pipe including Relief Interceptor, Basin piping, and relief at MH 15138

**Attachment B**



<b>Project Name</b>	Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin
<b>Project Number</b>	S_MISF_MF_NB01_M_01_C_A1
<b>Modeled Area</b>	Middle Fork Beargrass Creek
<b>Branch or SSO ID</b>	MF01
<b>Project Type</b>	Off-line Storage
<b>Receiving Stream</b>	Middle Fork Beargrass Creek, South Fork Beargrass Creek, Greasy Ditch, and Goose Creek
<b>Project Description</b>	Phase 1 of this project includes construction of a 3-cell off-line storage basin. The first two cells provide storage for the 1.82-inch cloudburst event, which was the recommended level of control resulting from the benefit cost evaluation. During design a more economical approach to expanding the available storage was identified, and this was included in the project as a bid alternative. After bidding MSD decided to accept the alternate bid to construct a large third cell, which results in a greater level of control than required.
<b>Reason for Overflow</b>	System capacity
<b>Design Parameters</b>	The initial solution was based on a 1.82-inch cloudburst rain event. The final constructed configuration will nearly accommodate the 10-year 24-hour rain event.
<b>Project Constraints</b>	Property Acquisition, Potential Wetlands at Buechel Site
<b>Estimated Capital Cost</b>	\$13,184,500
<b>Weighted Benefit/Cost Ratio</b>	1.26

Asset ID	SSO Start Date	Volume (Gal)
08935-SM	1/10/2008	110880
27005	1/10/2008	31050
27005	1/11/2014	6000
27005	1/13/2005	729000
40559	1/13/2013	8250
45835	1/13/2013	102000
47582	1/13/2013	125000
08935-SM	1/13/2013	8798306
47583	1/13/2013	87000
84155	1/13/2013	30500
51161	1/13/2013	42000
51180	1/13/2013	26500
27005	1/13/2013	67500
23211	1/13/2013	33500
51160	1/13/2013	27000
08935-SM	1/14/2007	4621000
47593	1/14/2013	6000
90700	1/14/2013	100
45835	1/15/2007	10260
27005	1/15/2007	1539000
27005	1/17/2006	20800
08935-SM	1/17/2006	72000
27005	1/2/2004	340000
08935-SM	1/21/2010	811385
27005	1/21/2010	48000

**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

27005	1/23/2006	11400
08935-SM	1/23/2006	156060
08935-SM	1/24/2002	1000000
08935-SM	1/24/2010	242
08935-SM	1/26/2012	253569
47593	1/26/2012	27500
45835	1/26/2012	64000
47582	1/26/2012	82000
40559	1/26/2012	15000
72288	1/26/2012	18000
23211	1/26/2012	14500
27005	1/26/2012	72000
84155	1/26/2012	40500
51161	1/26/2012	13000
90700	1/26/2012	36000
51160	1/27/2012	22000
51180	1/27/2012	100
27005	1/3/2005	44800000
45835	1/3/2005	3726000
23211	1/3/2005	7590000
08935-SM	1/3/2005	10080000
27005	1/4/2004	1900000
08935-SM	1/4/2004	1700000
45835	10/18/2004	102000
23211	10/18/2004	408000
27005	10/18/2004	730000
08935-SM	10/18/2004	578000
27005	10/22/2007	3726000
08935-SM	10/22/2007	15120000
45835	10/23/2007	322080
08935-SM	10/27/2009	3078
08935-SM	10/27/2011	3071
08935-SM	10/28/2006	576000
08935-SM	10/31/2009	223896
45835	10/5/2013	72000
47582	10/5/2013	208000
08935-SM	10/5/2013	11307180
51160	10/5/2013	270000
72289	10/5/2013	82000
23211	10/5/2013	378000
27005	10/5/2013	125000
47583	10/5/2013	86500
47593	10/6/2013	115000

Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

84155	10/6/2013	55000
30376	10/6/2013	71000
90700	10/6/2013	62000
45835	10/9/2009	4200
08935-SM	10/9/2009	1288
51160	10/9/2009	1080
27005	10/9/2009	4200
27005	11/11/2004	490000
08935-SM	11/11/2004	430000
08935-SM	11/17/2013	5019348
47593	11/17/2013	45000
47582	11/17/2013	120000
45835	11/17/2013	92000
84155	11/17/2013	19500
47583	11/17/2013	108000
23211	11/17/2013	68400
27005	11/17/2013	100000
51160	11/17/2013	199500
72289	11/17/2013	100
90700	11/17/2013	21000
27005	11/2/2004	29300
08935-SM	11/2/2004	932000
23211	11/2/2004	1510000
45835	11/2/2004	29300
45835	11/22/2011	6000
47034	11/22/2011	650
08935-SM	11/22/2011	684854
51161	11/22/2011	9000
51160	11/22/2011	27000
23211	11/22/2011	9000
27005	11/22/2011	52000
08935-SM	11/25/2010	1126398
45835	11/25/2010	7200
27005	11/25/2010	1550
47593	11/28/2011	3300
40559	11/28/2011	78500
45835	11/28/2011	91000
08935-SM	11/28/2011	10071059
72288	11/28/2011	87000
51161	11/28/2011	504000
51160	11/28/2011	76500
27005	11/28/2011	72500
23211	11/28/2011	504000

Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

08935-SM	11/29/2001	2000000
30376	11/29/2011	52500
90700	11/29/2011	12000
47582	11/30/2011	1000
45835	12/10/2012	9000
45835	12/13/2007	1400
08935-SM	12/13/2007	41800
27005	12/13/2007	12000
45835	12/15/2007	81000
08935-SM	12/15/2007	11095000
27005	12/15/2007	2511000
08935-SM	12/17/2001	2000000
08935-SM	12/19/2002	200000
08935-SM	12/21/2013	6282652
47583	12/21/2013	355000
47582	12/21/2013	420000
45835	12/22/2013	55000
51160	12/22/2013	12000
23211	12/22/2013	31000
84155	12/22/2013	12000
72289	12/22/2013	62000
27007	12/23/2013	100
45796	12/23/2013	100
45835	12/24/2008	12000
47583	12/24/2008	135000
08935-SM	12/24/2008	2128997
27005	12/24/2008	216000
08935-SM	12/26/2012	901
45835	12/27/2011	2100
27005	12/27/2011	1900
08935-SM	12/5/2011	10245414
115183	12/5/2011	13500
115184	12/5/2011	100
47593	12/5/2011	97500
115185	12/5/2011	100
45835	12/5/2011	345500
40559	12/5/2011	79500
47582	12/5/2011	145000
51180	12/5/2011	432000
51160	12/5/2011	346000
84155	12/5/2011	33000
51161	12/5/2011	780000
30376	12/5/2011	132000



SSO Project Fact Sheet  
2018 IOAP Project Modification



Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

90700	12/5/2011	46500
23211	12/5/2011	72000
27005	12/5/2011	245000
72288	12/5/2011	135000
08935-SM	12/9/2012	464270
40559	12/9/2012	15000
27005	12/9/2012	90000
72289	12/9/2012	100
08935-SM	2/12/2008	585268
27005	2/12/2008	9000
27005	2/13/2007	891000
08935-SM	2/13/2007	720000
23211	2/17/2000	0
08935-SM	2/22/2003	55000
08935-SM	2/24/2011	7494807
45835	2/24/2011	42000
51160	2/24/2011	44000
27005	2/24/2011	37000
23211	2/24/2011	36000
47593	2/25/2011	14750
90700	2/25/2011	7950
08935-SM	2/28/2011	31027
45835	2/28/2011	100350
27005	2/28/2011	96500
72288	2/29/2012	100
08935-SM	2/5/2008	1620000
27005	2/5/2010	23000
08935-SM	2/5/2010	272
45835	2/6/2008	432000
27005	2/6/2008	432000
47583	2/6/2008	117120
27005	3/1/2007	67500
08935-SM	3/1/2007	943200
08935-SM	3/10/2008	5574432
84155	3/10/2011	500
08935-SM	3/11/2013	198695
27005	3/11/2013	1600
45835	3/12/2006	286000
08935-SM	3/12/2006	4148000
27005	3/12/2006	702000
08935-SM	3/14/2007	97502
72288	3/16/2012	50
27005	3/17/2012	13500

Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

15194	3/17/2012	2000
45835	3/17/2013	37500
27005	3/17/2013	36000
45835	3/18/2008	1302960
47583	3/18/2008	6318000
27005	3/18/2008	2403000
08935-SM	3/18/2008	16979740
40559	3/18/2013	4900
47583	3/18/2013	108000
08935-SM	3/18/2013	3203055
47582	3/18/2013	108000
51161	3/18/2013	108000
23211	3/18/2013	126000
84155	3/18/2013	30000
51160	3/18/2013	9000
08935-SM	3/19/2002	1000000
47604	3/19/2008	45000
90700	3/19/2008	5400
47593	3/19/2008	837000
23211	3/19/2008	17820
72288	3/23/2012	250
08935-SM	3/27/2005	1537000
45835	3/27/2008	294000
47583	3/27/2008	1458000
08935-SM	3/27/2008	7225620
27005	3/27/2008	1309500
45835	3/28/2005	111000
27005	3/28/2005	2100000
47604	3/28/2008	6210
47593	3/28/2008	38880
45835	3/31/2008	15120
27005	3/31/2008	19500
08935-SM	3/31/2008	19916
47603	3/4/2008	200
47583	3/4/2008	1296000
27005	3/4/2008	972000
45835	3/4/2008	395280
08935-SM	3/4/2008	12397000
27005	3/6/2011	100
47593	3/9/2011	69250
45835	3/9/2011	725000
08935-SM	3/9/2011	22584138
27005	3/9/2011	285000

Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

23211	3/9/2011	25250
90700	3/9/2011	72000
51160	3/9/2011	81000
40559	4/1/2012	43000
08935-SM	4/1/2012	303355
45835	4/1/2012	63000
72288	4/1/2012	55000
51160	4/1/2012	1800
27005	4/1/2012	90000
45835	4/11/2011	2100250
08935-SM	4/11/2011	18668406
27005	4/11/2011	1750250
47034	4/12/2011	39250
47593	4/12/2011	19500
115183	4/12/2011	9000
47604	4/12/2011	142500
90700	4/12/2011	227250
23211	4/12/2011	102500
51160	4/12/2011	95000
84155	4/12/2011	45250
27005	4/13/2004	13000
08935-SM	4/14/2007	367804
27005	4/14/2007	108000
08935-SM	4/16/2011	1331416
08935-SM	4/19/2009	185884
08935-SM	4/20/2011	241203
27005	4/21/2006	54000
08935-SM	4/21/2006	1656000
45835	4/23/2011	1250000
08935-SM	4/23/2011	44938871
47593	4/23/2011	42000
51160	4/23/2011	3600000
23211	4/23/2011	130000
90700	4/23/2011	76250
27005	4/23/2011	1650000
84155	4/23/2011	94550
115185	4/27/2011	46000
47034	4/27/2011	49500
51161	4/27/2011	864000
30376	4/27/2011	78000
47582	4/28/2011	1750000
115183	4/28/2011	69500
08935-SM	4/3/2006	360000

Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

27005	4/3/2006	108000
45835	4/3/2008	1218000
27005	4/3/2008	2268000
08935-SM	4/3/2008	13948990
47583	4/4/2008	6156000
51160	4/4/2008	55500
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47593	4/4/2008	204000
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51161	4/4/2008	438000
47583	5/10/2013	205000
47582	5/10/2013	18250
08935-SM	5/10/2013	10741
84155	5/10/2013	20500
27005	5/10/2013	10000
08935-SM	5/12/2010	1873
08935-SM	5/13/2012	1368241
40559	5/13/2012	59000
72288	5/13/2012	64000
23211	5/13/2012	4500
27005	5/13/2012	105000
51160	5/13/2012	4500
08935-SM	5/15/2008	521879
45835	5/19/2005	140000
08935-SM	5/19/2005	468350
27005	5/19/2005	140000
08935-SM	5/2/2004	875000
27005	5/2/2004	1500000
23211	5/2/2004	1400000
08935-SM	5/2/2010	17873159
47583	5/2/2010	125000
47593	5/2/2010	136000
47604	5/2/2010	29500
45835	5/2/2010	197000
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27005	5/21/2010	1500
27005	5/23/2011	14000
08935-SM	5/25/2004	502000



Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

27005	5/25/2004	1770000
23211	5/25/2004	1020000
08935-SM	5/26/2011	1342
27005	5/26/2011	9200
45835	5/27/2004	184000
27005	5/27/2004	1640000
23211	5/27/2004	1040000
08935-SM	5/27/2004	1925000
27005	5/27/2004	2900000
08935-SM	5/29/2012	1621039
47593	5/29/2012	72000
45835	5/29/2012	81500
40559	5/29/2012	126000
51161	5/29/2012	75000
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23211	5/29/2012	105000
51180	5/29/2012	1200
72288	5/29/2012	126000
72289	5/29/2012	60000
84155	5/29/2012	60000
51160	5/29/2012	96000
90700	5/29/2012	24000
47034	5/3/2011	51500
115185	5/3/2011	116000
47593	5/3/2011	37500
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30376	5/3/2011	29250
84155	5/3/2011	67500
27005	5/30/2004	2710000
45835	5/30/2004	281000
23211	5/30/2004	2080000
27005	5/31/2012	7200
72288	5/31/2012	9500
15194	5/5/2012	100
45835	5/8/2009	337500
47583	5/8/2009	4500000
51160	5/8/2009	4500
27005	5/8/2009	3975000
08935-SM	5/8/2009	3867778
90700	5/8/2009	540
47593	5/8/2009	540
08935-SM	6/1/2012	92118
08935-SM	6/17/2013	372637

Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

45835	6/17/2013	50
27005	6/17/2013	50
45835	6/18/2009	9000
08935-SM	6/18/2009	430000
45835	6/2/2006	57500
08935-SM	6/2/2006	1008000
27005	6/2/2006	675000
08935-SM	6/22/2011	5665357
51160	6/22/2011	129600
23211	6/22/2011	270000
51161	6/22/2011	408000
45835	6/23/2011	78500
47582	6/23/2011	145000
47593	6/23/2011	100
27005	6/23/2011	84000
84155	6/23/2011	75000
08935-SM	6/26/2013	6639301
40559	6/26/2013	30000
45835	6/26/2013	165000
47593	6/26/2013	112500
90700	6/26/2013	75000
84155	6/26/2013	120000
51160	6/26/2013	126000
27005	6/26/2013	165000
47583	6/27/2013	64000
23211	6/27/2013	84000
51180	6/27/2013	3000
30376	6/27/2013	45000
08935-SM	6/28/2007	13579
45835	6/9/2010	9700
27005	6/9/2010	50
72289	7/1/2012	100
08935-SM	7/10/2004	220000
27005	7/10/2004	199500
27005	7/10/2013	4500
08935-SM	7/13/2010	217722
08935-SM	7/14/2006	792000
72288	7/15/2012	25
08935-SM	7/17/2004	220000
27005	7/17/2004	240000
08935-SM	7/20/2010	7463
45835	7/22/2013	10500
72289	7/22/2013	100

Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

27005	7/22/2013	22000
47604	7/29/2009	34000
45835	7/29/2009	240000
47593	7/29/2009	240000
08935-SM	7/29/2009	1350710
90700	7/29/2009	34000
27005	7/29/2009	240000
47583	7/6/2013	32500
08935-SM	7/6/2013	126702
47582	7/6/2013	19000
27005	7/6/2013	100
08935-SM	8/14/2010	9
45796	8/17/2010	5
08935-SM	8/21/2007	4579
45835	8/30/2005	60500
27005	8/30/2005	66000
08935-SM	8/30/2005	1065000
47583	8/4/2009	54000
47593	8/4/2009	111000
45835	8/4/2009	320000
27005	8/4/2009	270000
51160	8/4/2009	351360
08935-SM	8/4/2009	6943977
08935-SM	8/7/2011	1147
45835	9/2/2003	650000
27005	9/2/2003	1900000
08935-SM	9/2/2003	1700000
72288	9/2/2012	150
08935-SM	9/20/2009	147609
45835	9/21/2009	490000
27005	9/21/2009	520000
27005	9/21/2013	100
45835	9/22/2006	527040
08935-SM	9/22/2006	5544000
27005	9/22/2006	5940000
84155	9/23/2006	0
45835	9/26/2011	155000
08935-SM	9/26/2011	452913
27005	9/26/2011	172000
51160	9/26/2011	17200
23211	9/26/2011	56500
51161	9/26/2011	71000
08935-SM	9/27/2002	100000

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Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin  
Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1  
08935-SM 9/3/2003 200000  
72289 9/8/2012 50

**Integrated Overflow Abatement Plan**  
**Vol. 3 - Sanitary Sewer Discharge Plan**  
 Middle Fork Sewershed  
 Middle Fork Relief Interceptor,  
 Wet Weather Storage and  
 UMFLS Diversion 1 - Buechel Basin

Preliminary - For Budget Development Only



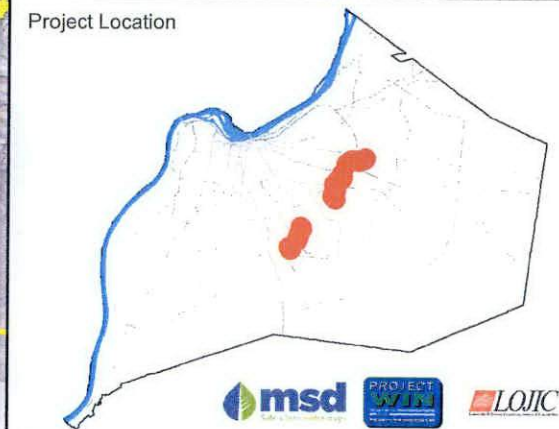
- Documented SSO
- Suspected SSO
- Haulop Locations
- Pump Stations
- WQTC
- Proposed Pipe Solution
- Combined Sewer Pipe
- Force Main
- Collector < 12"
- Interceptor >= 12"
- Proposed Storage Solution
- Streams
- Floodway
- Jefferson County Boundary

Offline storage at Buechel Basin  
 Approximately 107 MG Total  
 (17.3 MG required volume)

Construct 30" force main diversion to Hikes Lane  
 Interceptor (10,200 LF), construct Middle Fork Relief  
 Interceptor between Oxmoor Mall and UMFLS. 11,800  
 LF total new gravity pipe including Relief Interceptor,  
 Basin piping, and relief at MH 15138

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

1 inch = 1,000 feet      Aerial Date: 2012      Map Revision: January 04, 2018



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## SSO Project Fact Sheet

### 2018 IOAP Project Modification



**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

**Modeled Area** Middle Fork Beargrass Creek

**Branch or SSO ID** MF01

**Project Type** Off-line Storage & Pipe Upgrades

**Receiving Stream** Middle Fork Beargrass Creek, South Fork Beargrass Creek, Greasy Ditch, and Goose Creek

**Project Description** This alternative includes constructing 10,200 LF of 30" Force Main Diversion to Hikes Lane Interceptor from Ex UMFLS. Construct Middle Fork Relief Interceptor between Oxmoor and Middle Fork at Breckenridge. Construct new pump station at Car Wash Site. Upsize Pipe D/S of MH 15138 to 18".

**Reason for Overflow** System capacity

**Design Parameters** This solution is based on a 1.82 inch cloudburst rain event.

**Project Constraints** Property Acquisition, Stream Crossings for MFRI

**Estimated Capital Cost** \$13,149,000

**Weighted Benefit/Cost Ratio** 1.26

Asset ID	SSO Start Date	Volume (Gal)
08935-SM	1/10/2008	110880
27005	1/10/2008	31050
27005	1/11/2014	6000
27005	1/13/2005	729000
23211	1/13/2013	33500
47583	1/13/2013	87000
51160	1/13/2013	27000
45835	1/13/2013	102000
27005	1/13/2013	67500
08935-SM	1/13/2013	8798306
40559	1/13/2013	8250
51161	1/13/2013	42000
84155	1/13/2013	30500
51180	1/13/2013	26500
47582	1/13/2013	125000
08935-SM	1/14/2007	4621000
90700	1/14/2013	100
47593	1/14/2013	6000
45835	1/15/2007	10260
27005	1/15/2007	1539000
27005	1/17/2006	20800
08935-SM	1/17/2006	72000
27005	1/2/2004	340000
27005	1/21/2010	48000
08935-SM	1/21/2010	811385
27005	1/23/2006	11400
08935-SM	1/23/2006	156060



SSO Project Fact Sheet  
2018 IOAP Project Modification



Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

08935-SM	1/24/2002	1000000
08935-SM	1/24/2010	242
08935-SM	1/26/2012	253569
47582	1/26/2012	82000
90700	1/26/2012	36000
27005	1/26/2012	72000
23211	1/26/2012	14500
51161	1/26/2012	13000
84155	1/26/2012	40500
45835	1/26/2012	64000
47593	1/26/2012	27500
40559	1/26/2012	15000
72288	1/26/2012	18000
51180	1/27/2012	100
51160	1/27/2012	22000
27005	1/3/2005	44800000
08935-SM	1/3/2005	10080000
45835	1/3/2005	3726000
23211	1/3/2005	7590000
27005	1/4/2004	1900000
08935-SM	1/4/2004	1700000
23211	10/18/2004	408000
45835	10/18/2004	102000
27005	10/18/2004	730000
08935-SM	10/18/2004	578000
08935-SM	10/22/2007	15120000
27005	10/22/2007	3726000
45835	10/23/2007	322080
08935-SM	10/27/2009	3078
08935-SM	10/27/2011	3071
08935-SM	10/28/2006	576000
08935-SM	10/31/2009	223896
45835	10/5/2013	72000
51160	10/5/2013	270000
47583	10/5/2013	86500
23211	10/5/2013	378000
27005	10/5/2013	125000
72289	10/5/2013	82000
08935-SM	10/5/2013	11307180
47582	10/5/2013	208000
30376	10/6/2013	71000
84155	10/6/2013	55000
90700	10/6/2013	62000



SSO Project Fact Sheet  
2018 IOAP Project Modification



Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

47593	10/6/2013	115000
08935-SM	10/9/2009	1288
45835	10/9/2009	4200
51160	10/9/2009	1080
27005	10/9/2009	4200
08935-SM	11/11/2004	430000
27005	11/11/2004	490000
27005	11/17/2013	100000
90700	11/17/2013	21000
47593	11/17/2013	45000
47582	11/17/2013	120000
45835	11/17/2013	92000
72289	11/17/2013	100
51160	11/17/2013	199500
84155	11/17/2013	19500
47583	11/17/2013	108000
23211	11/17/2013	68400
08935-SM	11/17/2013	5019348
08935-SM	11/2/2004	932000
45835	11/2/2004	29300
23211	11/2/2004	1510000
27005	11/2/2004	29300
51160	11/22/2011	27000
23211	11/22/2011	9000
45835	11/22/2011	6000
08935-SM	11/22/2011	684854
47034	11/22/2011	650
51161	11/22/2011	9000
27005	11/22/2011	52000
08935-SM	11/25/2010	1126398
45835	11/25/2010	7200
27005	11/25/2010	1550
72288	11/28/2011	87000
45835	11/28/2011	91000
27005	11/28/2011	72500
08935-SM	11/28/2011	10071059
51161	11/28/2011	504000
23211	11/28/2011	504000
40559	11/28/2011	78500
47593	11/28/2011	3300
51160	11/28/2011	76500
08935-SM	11/29/2001	2000000
30376	11/29/2011	52500





SSO Project Fact Sheet  
2018 IOAP Project Modification



Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

90700	11/29/2011	12000
47582	11/30/2011	1000
45835	12/10/2012	9000
08935-SM	12/13/2007	41800
27005	12/13/2007	12000
45835	12/13/2007	1400
08935-SM	12/15/2007	11095000
27005	12/15/2007	2511000
45835	12/15/2007	81000
08935-SM	12/17/2001	2000000
08935-SM	12/19/2002	200000
47582	12/21/2013	420000
47583	12/21/2013	355000
08935-SM	12/21/2013	6282652
45835	12/22/2013	55000
72289	12/22/2013	62000
84155	12/22/2013	12000
23211	12/22/2013	31000
51160	12/22/2013	12000
45796	12/23/2013	100
27007	12/23/2013	100
45835	12/24/2008	12000
47583	12/24/2008	135000
27005	12/24/2008	216000
08935-SM	12/24/2008	2128997
08935-SM	12/26/2012	901
45835	12/27/2011	2100
27005	12/27/2011	1900
115184	12/5/2011	100
30376	12/5/2011	132000
51160	12/5/2011	346000
115183	12/5/2011	13500
115185	12/5/2011	100
08935-SM	12/5/2011	10245414
72288	12/5/2011	135000
90700	12/5/2011	46500
40559	12/5/2011	79500
45835	12/5/2011	345500
47582	12/5/2011	145000
51161	12/5/2011	780000
84155	12/5/2011	33000
23211	12/5/2011	72000
51180	12/5/2011	432000



# SSO Project Fact Sheet

## 2018 IOAP Project Modification



Project Name	Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion	
Project Number	S_MISF_MF_NB01_M_01_C_A1	
47593	12/5/2011	97500
27005	12/5/2011	245000
40559	12/9/2012	15000
08935-SM	12/9/2012	464270
72289	12/9/2012	100
27005	12/9/2012	90000
27005	2/12/2008	9000
08935-SM	2/12/2008	585268
08935-SM	2/13/2007	720000
27005	2/13/2007	891000
23211	2/17/2000	0
08935-SM	2/22/2003	55000
51160	2/24/2011	44000
08935-SM	2/24/2011	7494807
45835	2/24/2011	42000
27005	2/24/2011	37000
23211	2/24/2011	36000
90700	2/25/2011	7950
47593	2/25/2011	14750
27005	2/28/2011	96500
45835	2/28/2011	100350
08935-SM	2/28/2011	31027
72288	2/29/2012	100
08935-SM	2/5/2008	1620000
27005	2/5/2010	23000
08935-SM	2/5/2010	272
45835	2/6/2008	432000
27005	2/6/2008	432000
47583	2/6/2008	117120
08935-SM	3/1/2007	943200
27005	3/1/2007	67500
08935-SM	3/10/2008	5574432
84155	3/10/2011	500
08935-SM	3/11/2013	198695
27005	3/11/2013	1600
08935-SM	3/12/2006	4148000
27005	3/12/2006	702000
45835	3/12/2006	286000
08935-SM	3/14/2007	97502
72288	3/16/2012	50
15194	3/17/2012	2000
27005	3/17/2012	13500
27005	3/17/2013	36000



SSO Project Fact Sheet  
2018 IOAP Project Modification



Project Name	Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion	
Project Number	S_MISF_MF_NB01_M_01_C_A1	
45835	3/17/2013	37500
45835	3/18/2008	1302960
47583	3/18/2008	6318000
08935-SM	3/18/2008	16979740
27005	3/18/2008	2403000
08935-SM	3/18/2013	3203055
47583	3/18/2013	108000
51160	3/18/2013	9000
51161	3/18/2013	108000
23211	3/18/2013	126000
40559	3/18/2013	4900
84155	3/18/2013	30000
47582	3/18/2013	108000
08935-SM	3/19/2002	1000000
47604	3/19/2008	45000
90700	3/19/2008	5400
47593	3/19/2008	837000
23211	3/19/2008	17820
72288	3/23/2012	250
08935-SM	3/27/2005	1537000
47583	3/27/2008	1458000
27005	3/27/2008	1309500
45835	3/27/2008	294000
08935-SM	3/27/2008	7225620
45835	3/28/2005	111000
27005	3/28/2005	2100000
47604	3/28/2008	6210
47593	3/28/2008	38880
08935-SM	3/31/2008	19916
27005	3/31/2008	19500
45835	3/31/2008	15120
27005	3/4/2008	972000
47603	3/4/2008	200
47583	3/4/2008	1296000
08935-SM	3/4/2008	12397000
45835	3/4/2008	395280
27005	3/6/2011	100
47593	3/9/2011	69250
45835	3/9/2011	725000
90700	3/9/2011	72000
08935-SM	3/9/2011	22584138
51160	3/9/2011	81000
27005	3/9/2011	285000



# SSO Project Fact Sheet

## 2018 IOAP Project Modification



Project Name Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion

Project Number S\_MISF\_MF\_NB01\_M\_01\_C\_A1

23211	3/9/2011	25250
45835	4/1/2012	63000
08935-SM	4/1/2012	303355
27005	4/1/2012	90000
51160	4/1/2012	1800
72288	4/1/2012	55000
40559	4/1/2012	43000
45835	4/11/2011	2100250
08935-SM	4/11/2011	18668406
27005	4/11/2011	1750250
84155	4/12/2011	45250
47604	4/12/2011	142500
47593	4/12/2011	19500
47034	4/12/2011	39250
51160	4/12/2011	95000
90700	4/12/2011	227250
23211	4/12/2011	102500
115183	4/12/2011	9000
27005	4/13/2004	13000
27005	4/14/2007	108000
08935-SM	4/14/2007	367804
08935-SM	4/16/2011	1331416
08935-SM	4/19/2009	185884
08935-SM	4/20/2011	241203
27005	4/21/2006	54000
08935-SM	4/21/2006	1656000
84155	4/23/2011	94550
47593	4/23/2011	42000
45835	4/23/2011	1250000
90700	4/23/2011	76250
08935-SM	4/23/2011	44938871
51160	4/23/2011	3600000
27005	4/23/2011	1650000
23211	4/23/2011	130000
30376	4/27/2011	78000
47034	4/27/2011	49500
51161	4/27/2011	864000
115185	4/27/2011	46000
47582	4/28/2011	1750000
115183	4/28/2011	69500
08935-SM	4/3/2006	360000
27005	4/3/2006	108000
27005	4/3/2008	2268000



# SSO Project Fact Sheet

## 2018 IOAP Project Modification



Project Name	Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion	
Project Number	S_MISF_MF_NB01_M_01_C_A1	
08935-SM	4/3/2008	13948990
45835	4/3/2008	1218000
47583	4/4/2008	6156000
23212	4/4/2008	9720
47593	4/4/2008	204000
23211	4/4/2008	5724000
51160	4/4/2008	55500
51161	4/4/2008	438000
47583	5/10/2013	205000
84155	5/10/2013	20500
27005	5/10/2013	10000
08935-SM	5/10/2013	10741
47582	5/10/2013	18250
08935-SM	5/12/2010	1873
72288	5/13/2012	64000
23211	5/13/2012	4500
40559	5/13/2012	59000
27005	5/13/2012	105000
51160	5/13/2012	4500
08935-SM	5/13/2012	1368241
08935-SM	5/15/2008	521879
27005	5/19/2005	140000
45835	5/19/2005	140000
08935-SM	5/19/2005	468350
27005	5/2/2004	1500000
08935-SM	5/2/2004	875000
23211	5/2/2004	1400000
27005	5/2/2010	175000
47604	5/2/2010	29500
90700	5/2/2010	31000
08935-SM	5/2/2010	17873159
47593	5/2/2010	136000
45835	5/2/2010	197000
51160	5/2/2010	288000
47583	5/2/2010	125000
51160	5/2/2011	864000
51161	5/2/2011	432000
27005	5/21/2010	1500
08935-SM	5/21/2010	456
27005	5/23/2011	14000
27005	5/25/2004	1770000
23211	5/25/2004	1020000
08935-SM	5/25/2004	502000



SSO Project Fact Sheet  
2018 IOAP Project Modification



Project Name	Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion	
Project Number	S_MISF_MF_NB01_M_01_C_A1	
27005	5/26/2011	9200
08935-SM	5/26/2011	1342
27005	5/27/2004	1640000
08935-SM	5/27/2004	1925000
27005	5/27/2004	2900000
45835	5/27/2004	184000
23211	5/27/2004	1040000
51180	5/29/2012	1200
47593	5/29/2012	72000
45835	5/29/2012	81500
51161	5/29/2012	75000
40559	5/29/2012	126000
90700	5/29/2012	24000
23211	5/29/2012	105000
27005	5/29/2012	82000
72289	5/29/2012	60000
72288	5/29/2012	126000
08935-SM	5/29/2012	1621039
84155	5/29/2012	60000
51160	5/29/2012	96000
30376	5/3/2011	29250
90700	5/3/2011	39500
115185	5/3/2011	116000
47034	5/3/2011	51500
47593	5/3/2011	37500
84155	5/3/2011	67500
45835	5/30/2004	281000
23211	5/30/2004	2080000
27005	5/30/2004	2710000
27005	5/31/2012	7200
72288	5/31/2012	9500
15194	5/5/2012	100
51160	5/8/2009	4500
08935-SM	5/8/2009	3867778
47583	5/8/2009	4500000
47593	5/8/2009	540
27005	5/8/2009	3975000
45835	5/8/2009	337500
90700	5/8/2009	540
08935-SM	6/1/2012	92118
08935-SM	6/17/2013	372637
45835	6/17/2013	50
27005	6/17/2013	50



# SSO Project Fact Sheet

## 2018 IOAP Project Modification



**Project Name** Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion

**Project Number** S\_MISF\_MF\_NB01\_M\_01\_C\_A1

08935-SM	6/18/2009	430000
45835	6/18/2009	9000
45835	6/2/2006	57500
08935-SM	6/2/2006	1008000
27005	6/2/2006	675000
51161	6/22/2011	408000
51160	6/22/2011	129600
08935-SM	6/22/2011	5665357
23211	6/22/2011	270000
47582	6/23/2011	145000
27005	6/23/2011	84000
45835	6/23/2011	78500
84155	6/23/2011	75000
47593	6/23/2011	100
45835	6/26/2013	165000
90700	6/26/2013	75000
27005	6/26/2013	165000
51160	6/26/2013	126000
84155	6/26/2013	120000
08935-SM	6/26/2013	6639301
47593	6/26/2013	112500
40559	6/26/2013	30000
30376	6/27/2013	45000
23211	6/27/2013	84000
51180	6/27/2013	3000
47583	6/27/2013	64000
08935-SM	6/28/2007	13579
45835	6/9/2010	9700
27005	6/9/2010	50
72289	7/1/2012	100
08935-SM	7/10/2004	220000
27005	7/10/2004	199500
27005	7/10/2013	4500
08935-SM	7/13/2010	217722
08935-SM	7/14/2006	792000
72288	7/15/2012	25
08935-SM	7/17/2004	220000
27005	7/17/2004	240000
08935-SM	7/20/2010	7463
27005	7/22/2013	22000
45835	7/22/2013	10500
72289	7/22/2013	100
27005	7/29/2009	240000



# SSO Project Fact Sheet

## 2018 IOAP Project Modification



Project Name	Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Improvements and Diversion	
Project Number	S_MISF_MF_NB01_M_01_C_A1	
90700	7/29/2009	34000
47604	7/29/2009	34000
47593	7/29/2009	240000
08935-SM	7/29/2009	1350710
45835	7/29/2009	240000
27005	7/6/2013	100
08935-SM	7/6/2013	126702
47582	7/6/2013	19000
47583	7/6/2013	32500
08935-SM	8/14/2010	9
45796	8/17/2010	5
08935-SM	8/21/2007	4579
27005	8/30/2005	66000
45835	8/30/2005	60500
08935-SM	8/30/2005	1065000
08935-SM	8/4/2009	6943977
51160	8/4/2009	351360
45835	8/4/2009	320000
47593	8/4/2009	111000
47583	8/4/2009	54000
27005	8/4/2009	270000
08935-SM	8/7/2011	1147
45835	9/2/2003	650000
08935-SM	9/2/2003	1700000
27005	9/2/2003	1900000
72288	9/2/2012	150
08935-SM	9/20/2009	147609
45835	9/21/2009	490000
27005	9/21/2009	520000
27005	9/21/2013	100
27005	9/22/2006	5940000
45835	9/22/2006	527040
08935-SM	9/22/2006	5544000
84155	9/23/2006	0
51161	9/26/2011	71000
51160	9/26/2011	17200
23211	9/26/2011	56500
45835	9/26/2011	155000
08935-SM	9/26/2011	452913
27005	9/26/2011	172000
08935-SM	9/27/2002	100000
08935-SM	9/3/2003	200000
72289	9/8/2012	50



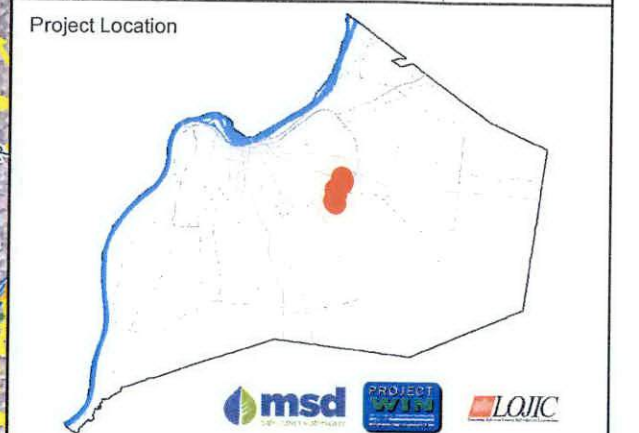
**Integrated Overflow Abatement Plan**  
**Vol. 3 - Sanitary Sewer Discharge Plan**  
 Middle Fork Sewershed  
 Middle Fork Relief Interceptor,  
 Wet Weather Storage and  
 UMFLS Diversion 2 - PS Upgrades and Diversion

Preliminary - For Budget Development Only

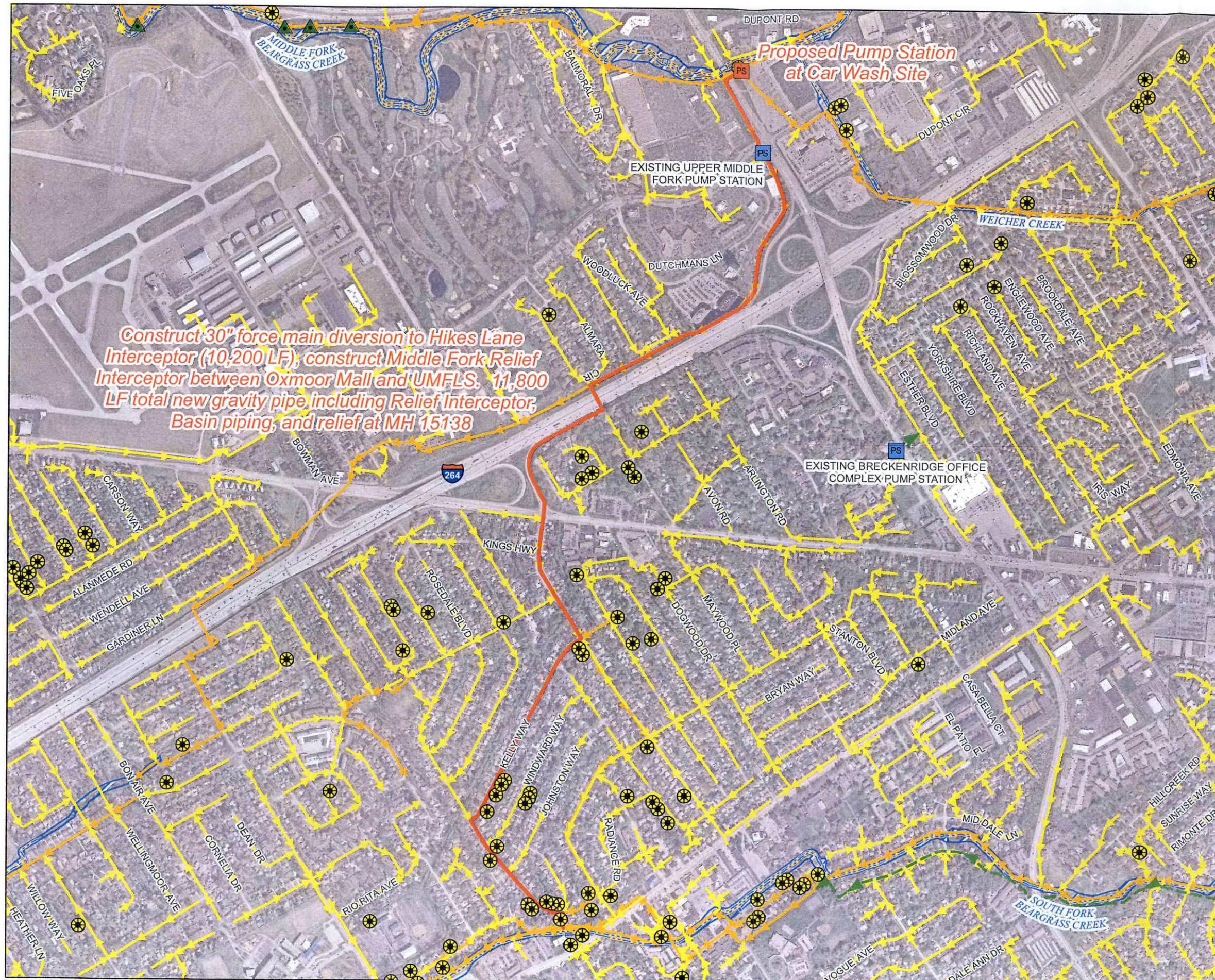
- Documented SSO
- Suspected SSO
- Haulop Locations
- Proposed Pump Station Solution
- Pump Stations
- WQTC
- Combined Sewer Pipe
- Force Main
- Collector < 12"
- Interceptor >= 12"
- Streams
- Floodway
- Jefferson County Boundary

General representation of overflow abatement solutions are for preliminary planning purposes. Alignments and locations may be altered during design.

1 inch = 1,000 feet       Aerial Date: 2012    Map Revision: January 04, 2018



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**Construct 30" force main diversion to Hikes Lane Interceptor (10,200 LF), construct Middle Fork Relief Interceptor between Oxmoor Mall and UMFLS. 11,800 LF total new gravity pipe including Relief Interceptor, Basin piping, and relief at MH 15138**