



SSO SSDP Project Fact Sheet



SSO Project Number: S_PO_WC_PC08_M_01_C

Project Name: Lea Ann Way System Improvements

Modeled Area: Pond Creek

Branch or SSO ID: PC08

Project Type: Pipe Upgrades

Receiving Stream: Fern Creek and Northern Ditch

Project Description: This alternative includes using the restored Lea Ann Way PS with 3,255 LF of open cut sewer (12" to 18") upstream improvements to prevent the overflows.

Reason for Overflow: Pump station capacity

Design Parameters / Assumptions: This solution is based on a 1.82 inch cloudburst rain event

Project Constraints: None at this time

Estimated Capital Cost (2008 dollars): \$827,000

Weighted Benefit/Cost Ratio (Present Worth): 49.01

Overflow Points Addressed:

<u>SSO</u>	<u>SSO Name</u>	<u>Service Area</u>	<u>Overflow Type</u>	<u>Discharge To</u>	<u>Average Overflow / Incident (gallons)</u>
19360	Rockwood Dr / Monaco	West County	Manhole	Stream	Suspected-no data
19369	5221 Layne Road	West County	Manhole	Stream	Suspected-no data
29933	6926 Sandstone Blvd	West County	Manhole	Stream	Suspected-no data
29943	6906 Sandstone Blvd	West County	Manhole	Stream	Suspected-no data

29948	Sandstone Blvd	West County	Manhole	Ground	75
31083	6924 Sandstone Blvd	West County	Manhole	Stream	Suspected-no data
31084	6916 Sandstone Blvd	West County	Manhole	Stream	Suspected-no data
79076	6308 Hanses Drive	West County	Manhole	Ditch	Suspected-no data
MSD1010-PS	Lea Ann Way	West County	Pumped	Stream	3,024,040

Integrated Overflow Abatement Plan

Vol. 3 - Sanitary Sewer Discharge Plan

Pond Creek Sewershed

Solution ID # S_PO_WC_PC08_M_01_C

Lea Ann Way System Improvements

Preliminary - For Budget Development Only

Legend

- ☼ Documented SSO
- ▲ Suspected SSO
- ⬢ Haul Operation
- PS Proposed Pump Station Solution
- PS Pump Station
- WWTP
- Proposed Pipe Solution
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Proposed Off-line Storage
- Road
- ~ Streams
- ▨ Floodway
- ▭ Small WWTP Service Area
- ▭ Large WWTP Service Area
- ▭ CSO Area
- ▭ Metro Parks

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

1 inch = 400 feet
Scalable when printed on 11" X 17" paper



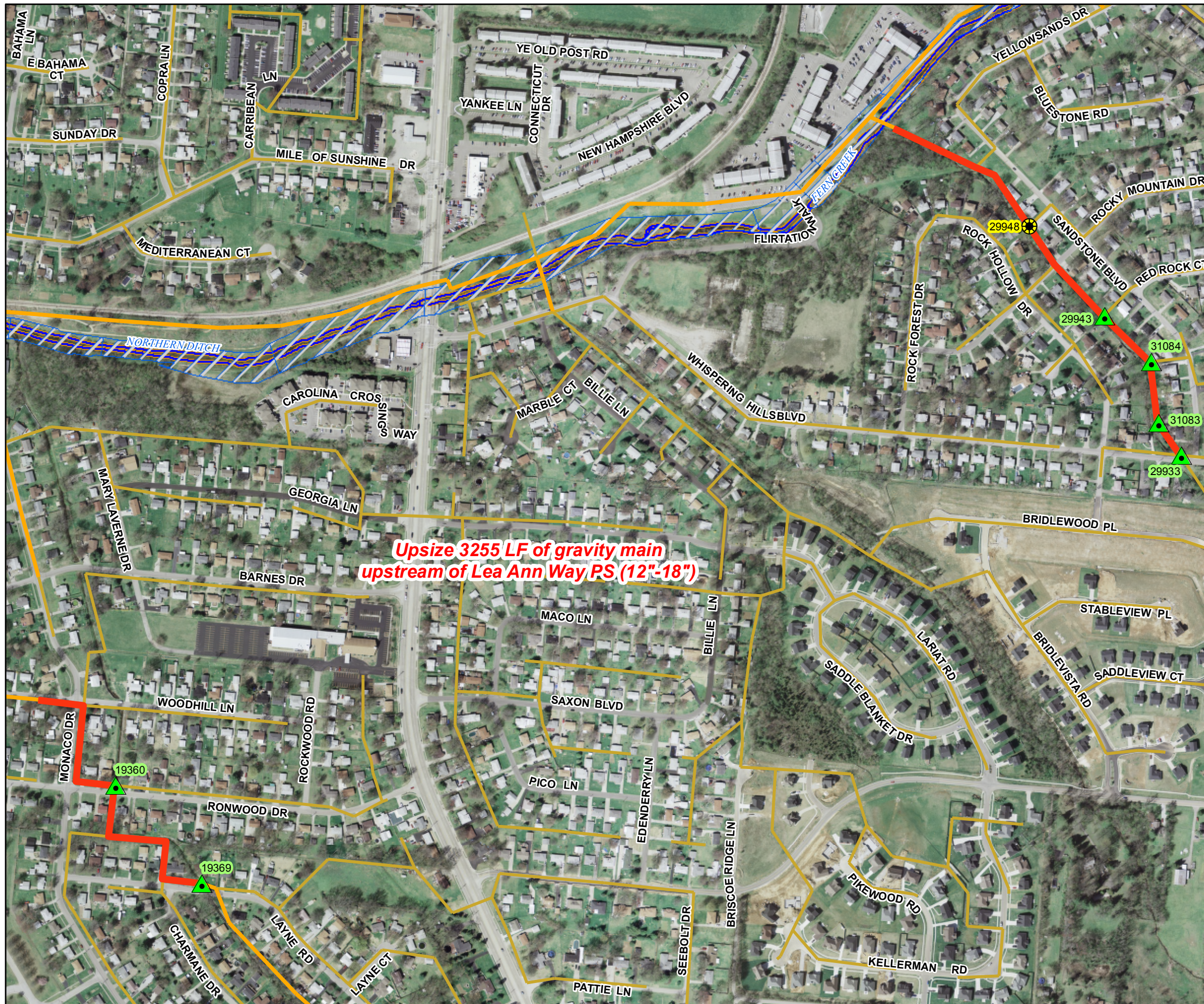
Some boundaries are uniquely symbolized within the map.

Map Revision
May 07, 2009

Aerial Date: 2006



Copyright © 2008 LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT (MSD), LOUISVILLE WATER COMPANY, LOUISVILLE METRO GOVERNMENT, and JEFFERSON COUNTY PROPERTY VALUATION ADMINISTRATOR (PVA). All Rights Reserved.





SSO SSDP Project Fact Sheet



SSO Project Number: S_PO_WC_PC09_M_09B_C

Project Name: Outer Loop and Caven Ave. Wet Weather Storage 1
- Pipe Upgrades

Modeled Area: Pond Creek

Branch or SSO ID: PC09

Project Type: Pipe Upgrades

Receiving Stream: Pond Creek and Mud Creek

Project Description: This alternative 1,536 LF of pipe upsized to 18" downstream of MH 70212.

Reason for Overflow: System capacity

Design Parameters / Assumptions: This solution is based on a 1.82 inch cloudburst rain event

Project Constraints: None

Estimated Capital Cost (2008 dollars): \$731,000

Weighted Benefit/Cost Ratio (Present Worth): 7.08

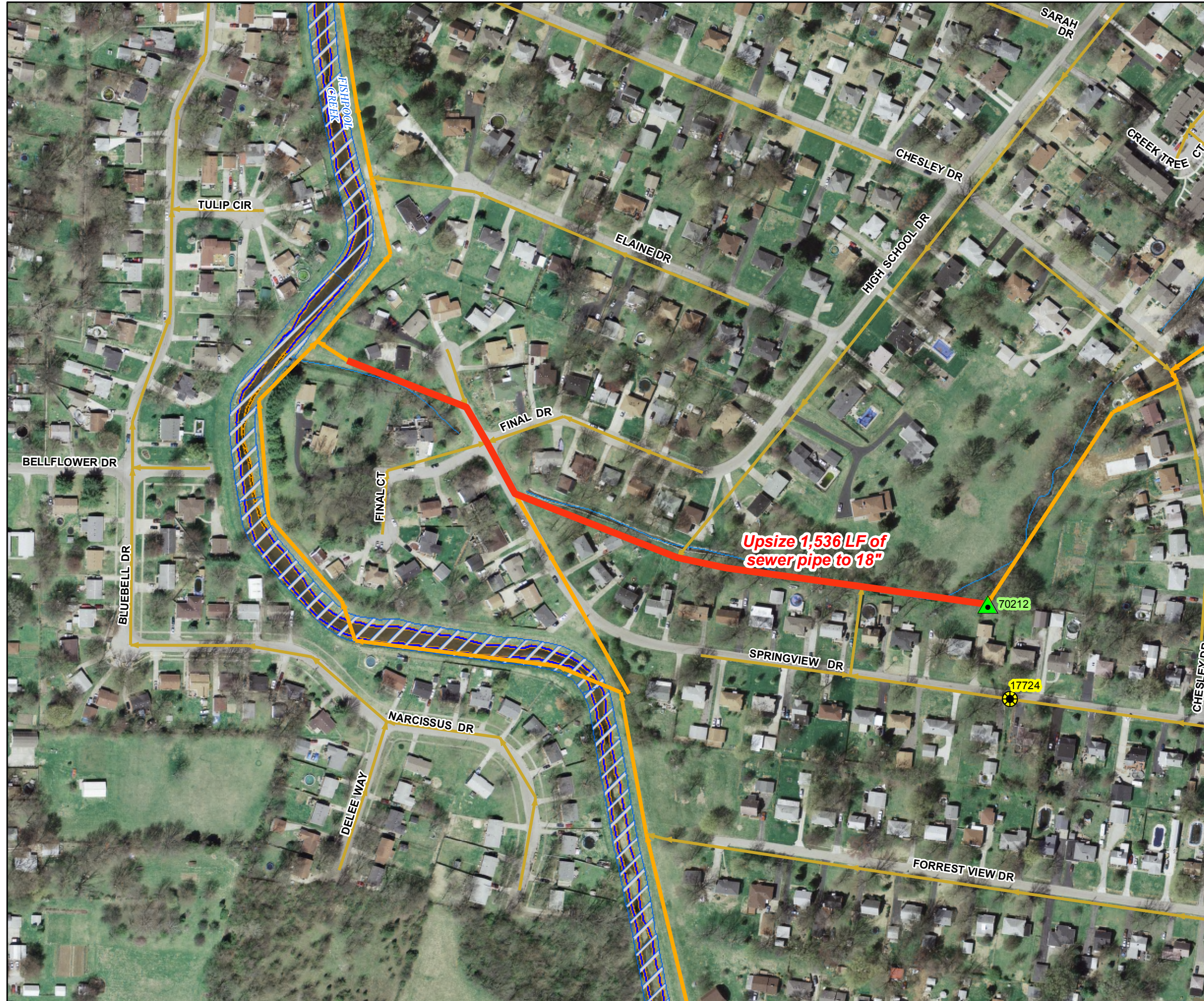
Overflow Points Addressed:

<u>SSO</u>	<u>SSO Name</u>	<u>Service Area</u>	<u>Overflow Type</u>	<u>Discharge To</u>	<u>Average Overflow / Incident (gallons)</u>
17724	1096 Springview Drive	West County	Manhole	Ditch	33
27116	10306 Caven Avenue	West County	Manhole	Stream	Suspected-no data
70212	1095 Springview Drive	West County	Manhole	Stream	Suspected-no data
MSD0133-PS	Caven Avenue	West County	Pumped	Ground	15,250

Integrated Overflow Abatement Plan
Vol. 3 - Sanitary Sewer Discharge Plan
Pond Creek Sewershed
 Solution ID # S_PO_WC_PC09_M_09B_C
Outer Loop & Caven Ave Wet Weather Storage 1
Pipe Upgrades

Preliminary - For Budget Development Only

- Legend**
- Documented SSO
 - Suspected SSO
 - Haul Operation
 - Proposed Pump Station Solution
 - Pump Station
 - WWTP
 - Proposed Pipe Solution
 - Force Main
 - Collector < 12"
 - Interceptor => 12"
 - Combined Sewer Pipe
 - Proposed Off-line Storage
 - Road
 - Streams
 - Floodway
 - Small WWTP Service Area
 - Large WWTP Service Area
 - CSO Area
 - Metro Parks



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

1 inch = 200 feet
 Scalable when printed on 11" X 17" paper

Some boundaries are uniquely symbolized within the map.

Map Revision
 May 07, 2009

Aerial Date: 2006

Copyright © 2008 LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT (MSD), LOUISVILLE WATER COMPANY, LOUISVILLE METRO GOVERNMENT, and JEFFERSON COUNTY PROPERTY VALUATION ADMINISTRATOR (PVA). All Rights Reserved.



SSO SSDP Project Fact Sheet



SSO Project Number: S_PO_WC_PC09_M_09B_C

Project Name: Outer Loop and Caven Ave. Wet Weather Storage 2
- Outer Loop Wet Weather Storage

Modeled Area: Pond Creek

Branch or SSO ID: PC09

Project Type: Off-line Storage

Receiving Stream: Pond Creek and Mud Creek

Project Description: This alternative includes offline, pumped storage (closed 1.42 MG) behind the Meijer on Preston Highway. This facility may be necessary to alleviate future predicted overflows caused by upstream IOAP projects. The schedule allows for future consideration and investigation of alternate locations as well as re-evaluation of facility need based on future flow monitoring. If monitoring and modeling in the future proves this facility is not needed, documentation of the analysis will be submitted to appropriate regulatory agencies.

Reason for Overflow: System capacity

Design Parameters / Assumptions: This solution is based on a 1.82 inch cloudburst rain event

Project Constraints: The excavation at the Meijer basin will occur in rock. Depth of rock at site is unknown.

Estimated Capital Cost (2008 dollars): \$4,280,000

Weighted Benefit/Cost Ratio (Present Worth): 7.08

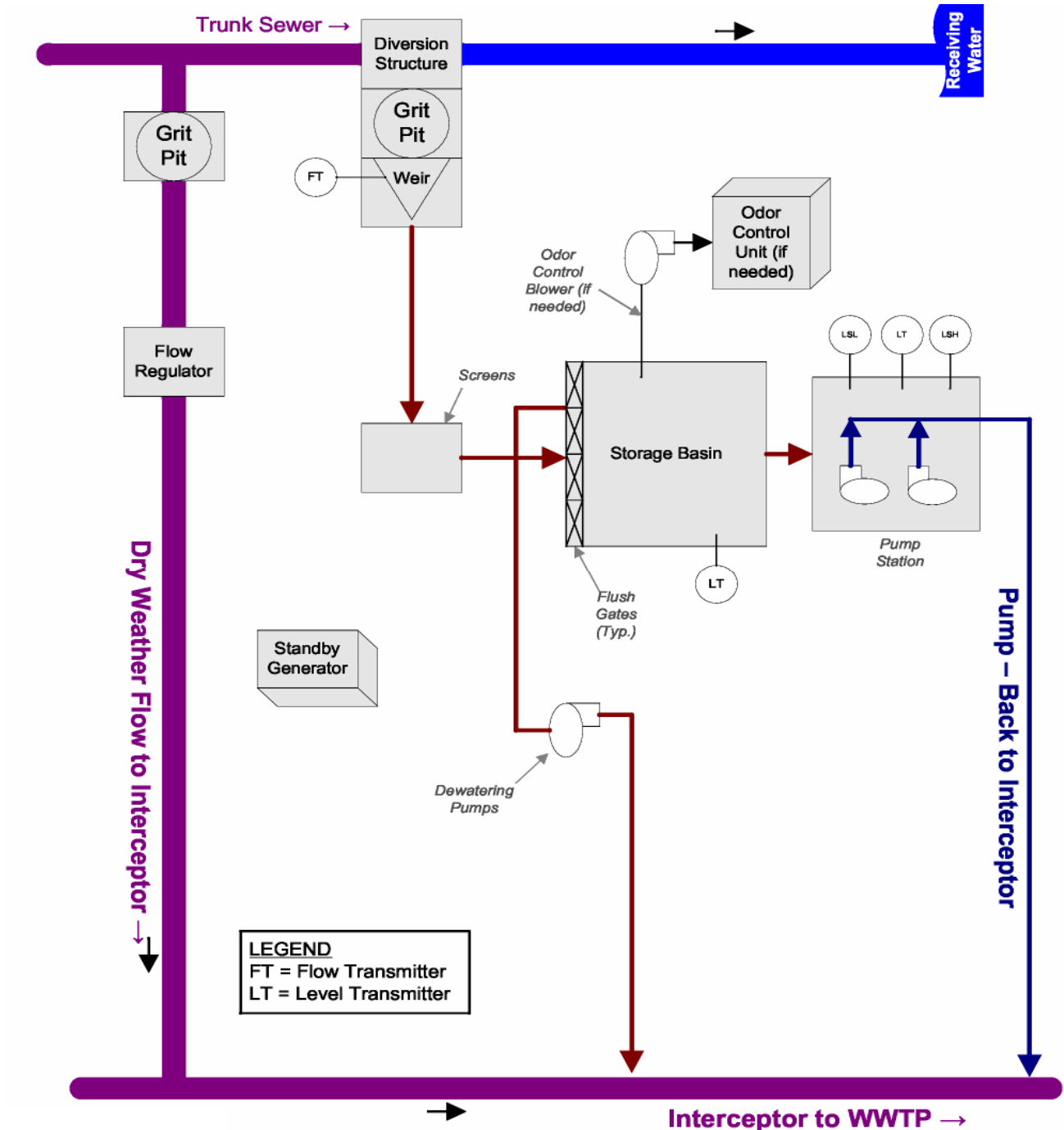
Overflow Points Addressed:

SSO	SSO Name	Service Area	Overflow Type	Discharge To	Average Overflow / Incident (gallons)
17724	1096 Springview Drive	West County	Manhole	Ditch	33
27116	10306 Caven Avenue	West County	Manhole	Stream	Suspected-no data
70212	1095 Springview Drive	West County	Manhole	Stream	Suspected-no data
MSD0133-PS	Caven Avenue	West County	Pumped	Ground	15,250

SSO Project Number:

S_PO_WC_PC09_M_09B_C

**Off-Line Storage
Pumped Effluent
Flow Diagram**



Integrated Overflow Abatement Plan
Vol. 3 - Sanitary Sewer Discharge Plan
Pond Creek Sewershed
 Solution ID # S_PO_WC_PC09_M_09B_C
Outer Loop & Caven Ave Wet Weather Storage 2
Outer Loop Wet Weather Storage

Preliminary - For Budget Development Only

Legend

- Documented SSO
- Suspected SSO
- Haul Operation
- Proposed Pump Station Solution
- Pump Station
- WWTP
- Proposed Pipe Solution
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Proposed Off-line Storage
- Road
- Streams
- Floodway
- Small WWTP Service Area
- Large WWTP Service Area
- CSO Area
- Metro Parks

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

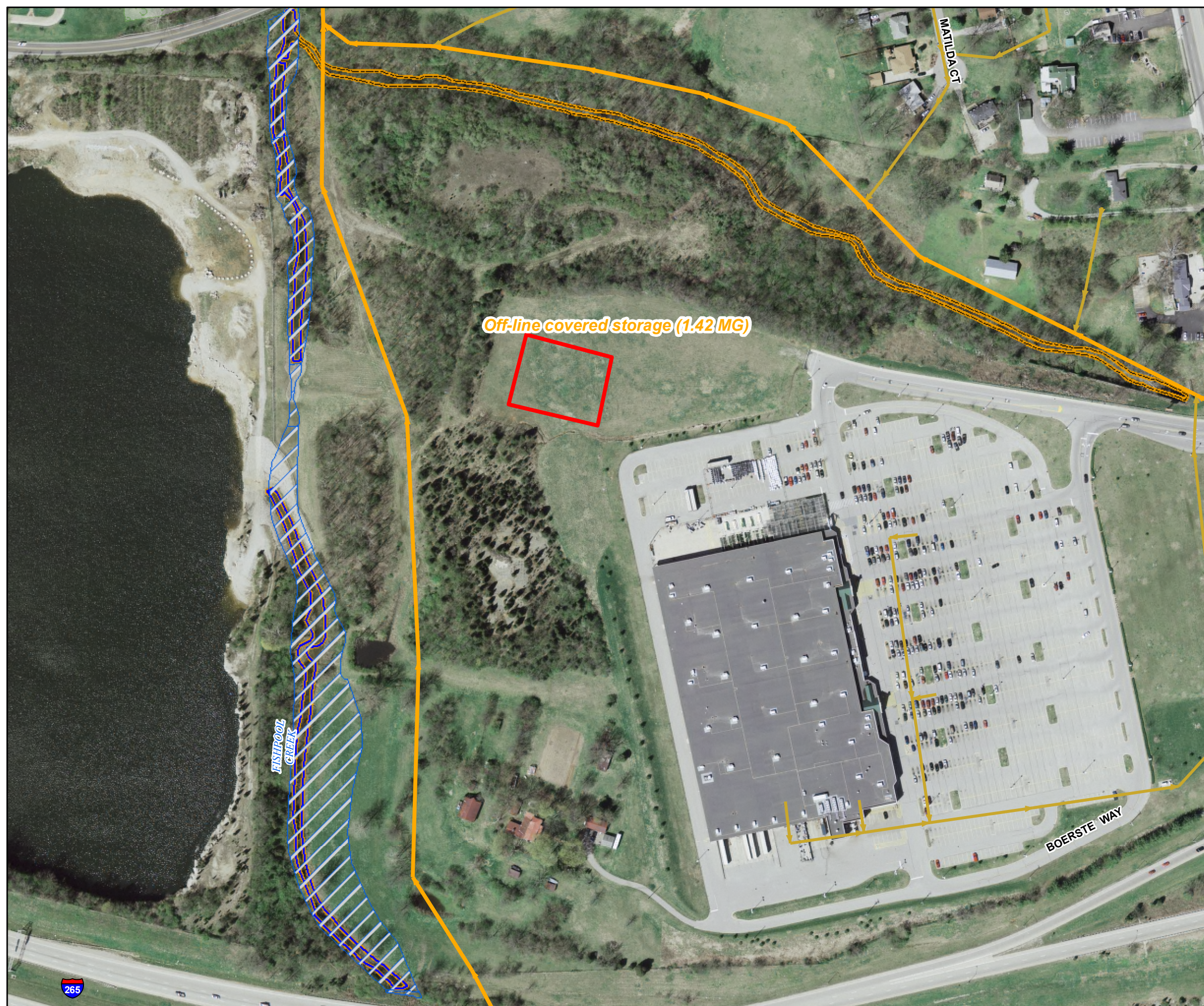
1 inch = 200 feet
 Scalable when printed on 11" X 17" paper



Some boundaries are uniquely symbolized within the map.
 Map Revision
 May 07, 2009
 Aerial Date: 2006



Copyright © 2008 LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT (MSD), LOUISVILLE WATER COMPANY, LOUISVILLE METRO GOVERNMENT, and JEFFERSON COUNTY PROPERTY VALUATION ADMINISTRATOR (PVA). All Rights Reserved.





SSO SSDP Project Fact Sheet



SSO Project Number: S_PO_WC_PC09_M_09B_C

Project Name: Outer Loop and Caven Ave. Wet Weather Storage 3
- Caven Ave Wet Weather Storage

Modeled Area: Pond Creek

Branch or SSO ID: PC09

Project Type: Off-line Storage

Receiving Stream: Pond Creek and Mud Creek

Project Description: This alternative includes an off-line gravity storage (covered 0.21 MG) at Caven Avenue PS

Reason for Overflow: System capacity

Design Parameters / Assumptions: This solution is based on a 1.82 inch cloudburst rain event

Project Constraints: None

Estimated Capital Cost (2008 dollars): \$1,073,000

Weighted Benefit/Cost Ratio (Present Worth): 7.08

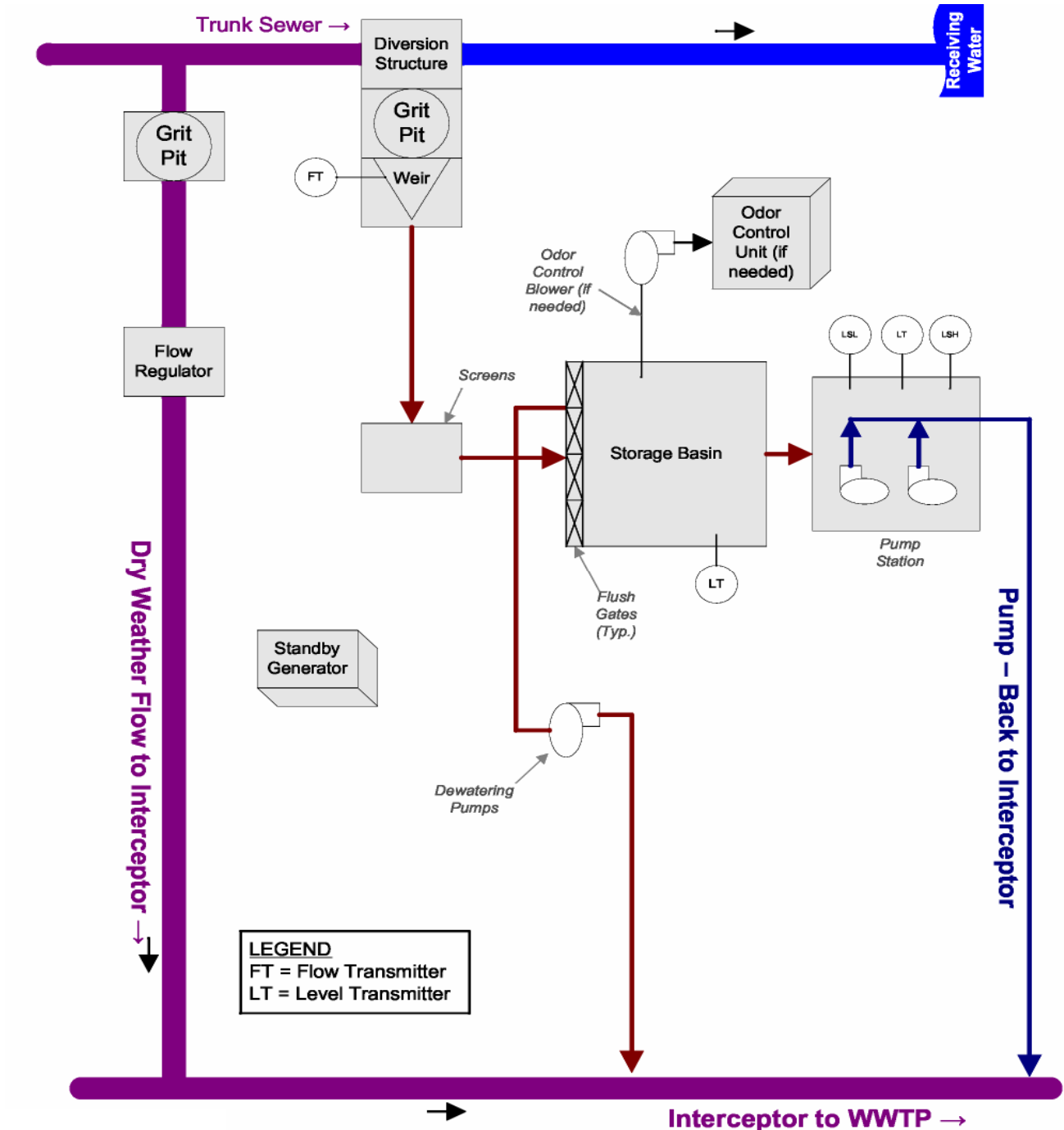
Overflow Points Addressed:

<u>SSO</u>	<u>SSO Name</u>	<u>Service Area</u>	<u>Overflow Type</u>	<u>Discharge To</u>	<u>Average Overflow / Incident (gallons)</u>
17724	1096 Springview Drive	West County	Manhole	Ditch	33
27116	10306 Caven Avenue	West County	Manhole	Stream	Suspected-no data
70212	1095 Springview Drive	West County	Manhole	Stream	Suspected-no data
MSD0133-PS	Caven Avenue	West County	Pumped	Ground	15,250

SSO Project Number:

S_PO_WC_PC09_M_09B_C

**Off-Line Storage
Pumped Effluent
Flow Diagram**



Integrated Overflow Abatement Plan
Vol. 3 - Sanitary Sewer Discharge Plan
Pond Creek Sewershed
 Solution ID # S_PO_WC_PC09_M_09B_C
Outer Loop & Caven Ave Wet Weather Storage 3
Caven Ave. Wet Weather Storage

Preliminary - For Budget Development Only

- Legend**
- Documented SSO
 - Suspected SSO
 - Haul Operation
 - Proposed Pump Station Solution
 - Pump Station
 - WWTP
 - Proposed Pipe Solution
 - Force Main
 - Collector < 12"
 - Interceptor => 12"
 - Combined Sewer Pipe
 - Proposed Off-line Storage
 - Road
 - Streams
 - Floodway
 - Small WWTP Service Area
 - Large WWTP Service Area
 - CSO Area
 - Metro Parks






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

1 inch = 100 feet
 Scalable when printed on 11" X 17" paper

Some boundaries are uniquely symbolized within the map.

Map Revision
 May 07, 2009

Aerial Date: 2006

Copyright © 2008 LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT (MSD), LOUISVILLE WATER COMPANY, LOUISVILLE METRO GOVERNMENT, and JEFFERSON COUNTY PROPERTY VALUATION ADMINISTRATOR (PVA). All Rights Reserved.





SSO SSDP Project Fact Sheet



SSO Project Number: S_PO_WC_PC10_M_01_C

Project Name: Leven PS Elimination

Modeled Area: Pond Creek

Branch or SSO ID: PC10

Project Type: Diversion

Receiving Stream: Pennsylvania Run

Project Description: Eliminate Leven PS by constructing 890 LF of 10" pipe. Existing PS and force main will remain functional, but dormant, to allow for monitoring downstream impacts of the new diversion. If no impacts are noted, station will be eliminated and force main taken out of service. If downstream impacts arise, the PS will be reconfigured to supplement the capacity of the new diversion line.

Reason for Overflow: Pump station capacity and hydraulic bottlenecks

Design Parameters / Assumptions: This solution is based on a 1.82 inch cloudburst rain event

Project Constraints: None

Estimated Capital Cost (2008 dollars): \$376,000

Weighted Benefit/Cost Ratio (Present Worth): 95.93

Overflow Points Addressed:

<u>SSO</u>	<u>SSO Name</u>	<u>Service Area</u>	<u>Overflow Type</u>	<u>Discharge To</u>	<u>Average Overflow / Incident (gallons)</u>
36419	10601 Leven Blvd	West County	Manhole	Ditch	Suspected-no data
MSD1019-PS	Leven	West County	Pumped	Stream	Suspected-no data

Integrated Overflow Abatement Plan

Vol. 3 - Sanitary Sewer Discharge Plan




















Pond Creek Sewershed

Solution ID # S_PO_WC_PC10_M_01_C

Leven PS Elimination

Preliminary - For Budget Development Only

Legend

-  Documented SSO
-  Suspected SSO
-  Haul Operation
-  Proposed Pump Station Solution
-  Pump Station
-  WWTP
-  Proposed Pipe Solution
-  Force Main
-  Collector < 12"
-  Interceptor => 12"
-  Combined Sewer Pipe
-  Proposed Off-line Storage
-  Road
-  Streams
-  Floodway
-  Small WWTP Service Area
-  Large WWTP Service Area
-  CSO Area
-  Metro Parks

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

1 inch = 100 feet
Scalable when printed on 11" X 17" paper



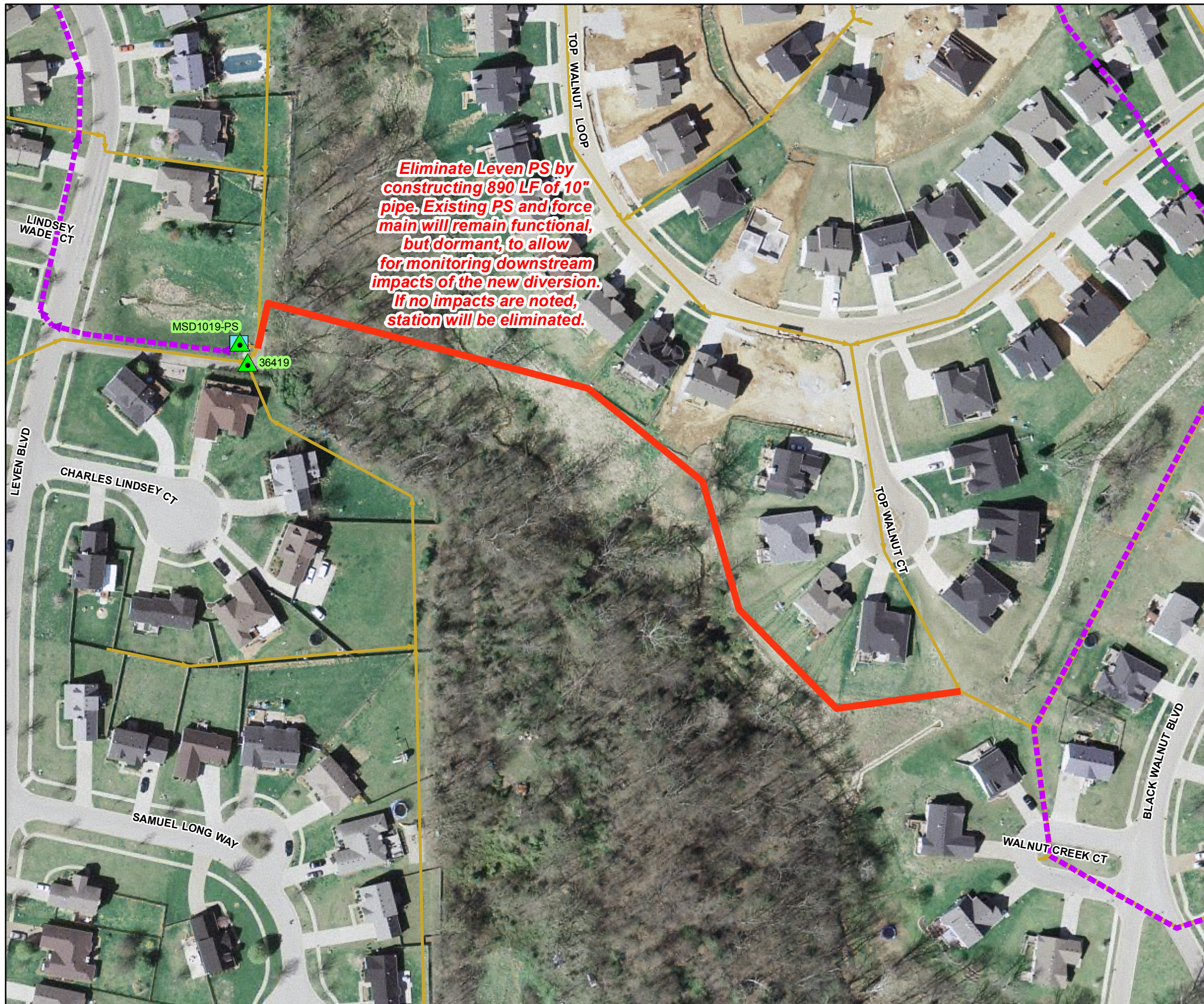
Some boundaries are uniquely symbolized within the map.

Map Revision
May 7, 2009

Aerial Date: 2006



Copyright © 2008 LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT (MSD), LOUISVILLE WATER COMPANY, LOUISVILLE METRO GOVERNMENT, and JEFFERSON COUNTY PROPERTY VALUATION ADMINISTRATOR (PVA). All Rights Reserved.





SSO SSDP Project Fact Sheet



SSO Project Number: S_PO_WC_PC11_M_07_C

Project Name: Edsel PS I/I Investigation and Rehabilitation

Modeled Area: Pond Creek

Branch or SSO ID: PC11

Project Type: I/I Reduction

Receiving Stream: Fern Creek

Project Description: This location will be targeted for I/I source control (I/I rehab and private property program). A full SSES will be performed upstream of this PS. If I/I reduction is deemed unsuccessful in eliminating the SSO, the next best alternative will be implemented, which is Offline Storage.

Reason for Overflow: Pump station capacity and hydraulic bottlenecks

Design Parameters / Assumptions: This solution is based on a 1.82 inch cloudburst rain event

Project Constraints: None

Estimated Capital Cost (2008 dollars): \$367,000 (Cost is for SSES only; rehabilitation will be performed under Annual I/I Rehab contracts and the private property program)

Weighted Benefit/Cost Ratio (Present Worth): Only cost calculated for SSES, no benefits are calculated

Overflow Points Addressed:

SSO	SSO Name	Service Area	Overflow Type	Discharge To	Average Overflow / Incident (gallons)
92098	7801 Edsel Lane (Upstream of Edsel Lane PS)	West County	Pumped	Ground	3,600
MSD1048-PS	Edsel	West County	Lift Station	Ground	91,500

Integrated Overflow Abatement Plan

Vol. 3 - Sanitary Sewer Discharge Plan

Pond Creek Sewershed

Solution ID # S_PO_WC_PC11_M_07_C

Edsel PS I&I Investigation and Rehabilitation

Preliminary - For Budget Development Only

Legend

- Documented SSO
- Suspected SSO
- Haul Operation
- Proposed Pump Station Solution
- Pump Station
- WWTP
- Proposed Pipe Solution
- Force Main
- Collector < 12"
- Interceptor => 12"
- Combined Sewer Pipe
- Proposed Off-line Storage
- Road
- Streams
- Floodway
- Small WWTP Service Area
- Large WWTP Service Area
- CSO Area
- Metro Parks

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

1 inch = 400 feet
Scalable when printed on 11" X 17" paper



Some boundaries are uniquely symbolized within the map.

Map Revision
May 07, 2009

Aerial Date: 2006



Copyright © 2008 LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT (MSD), LOUISVILLE WATER COMPANY, LOUISVILLE METRO GOVERNMENT, and JEFFERSON COUNTY PROPERTY VALUATION ADMINISTRATOR (PVA). All Rights Reserved.

