



SSO SSDP Project Fact Sheet



SSO Project Number: S_OR_MF_42007_S_07_C

Project Name: Sonne PS I/I Investigation and Rehabilitation

Modeled Area: Combined Sewer System

Branch or SSO ID: MSD0042-PS

Project Type: I/I Reduction

Receiving Stream: Paddy Run

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: 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): \$265,000 (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:

<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>
MSD0042-PS	Sonne Avenue	Morris Forman	Pumped	Ground	156,075

Integrated Overflow Abatement Plan
Vol. 3 - Sanitary Sewer Discharge Plan
 Combined Sewer System
 Solution ID # S_OR_MF_42007_S_07_C
 Sonne PS I&I Investigation & 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 equals 300 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



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SSO SSDP Project Fact Sheet



SSO Project Number: S_SF_MF_30917_M_09_A

Project Name: Camp Taylor System Improvements 1
- SSES

Modeled Area: Combined Sewer System

Branch or SSO ID: 30917

Project Type: SSES

Receiving Stream: South Fork Beargrass Creek, Muddy Fork Beargrass Creek, and Camp Taylor Ditch

Project Description: This phase is a special study which includes a full SSES of the entire Camp Taylor system

Reason for Overflow: System capacity and poor system conditions in some areas

Design Parameters / Assumptions: This solution is based on a 2.60 inch cloudburst rain event

Project Constraints: Some overflow volumes were estimated using regression equation not a hydraulic model.

Estimated Capital Cost (2008 dollars): \$2,279,000

Weighted Benefit/Cost Ratio (Present Worth): 68.47

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>
08717	Fincastle #2	Morris Forman	Manhole	Ground	100
13931	Camp Taylor #4	Morris Forman	Manhole	No Data	6,000
13943	Camp Taylor #3	Morris Forman	Manhole	Ground	250
36763	3520 Fincastle Road	Morris Forman	Manhole	Ground	Suspected- no data
44396	Fincastle #4	Morris Forman	Manhole	Ground	79,500

44397	Fincastle #3	Morris Forman	Manhole	Ground	41,420
66349	Fincastle #1	Morris Forman	Manhole	Ground	15
104223	Camp Taylor #1	Morris Forman	Manhole	Ground	40
104231	Camp Taylor #2	Morris Forman	Manhole	Ground	1,217



SSO SSDP Project Fact Sheet



SSO Project Number: S_SF_MF_30917_M_09_A

Project Name: Camp Taylor System Improvements 2
- Phase 1 Sewer Replacement

Modeled Area: Combined Sewer System

Branch or SSO ID: 30917

Project Type: Sewer Replacement

Receiving Stream: South Fork Beargrass Creek, Muddy Fork Beargrass Creek, and Camp Taylor Ditch

Project Description: This alternative includes replacement of target sewers based on past studies and historical work orders.

Reason for Overflow: System capacity and poor system conditions in some areas

Design Parameters / Assumptions: This solution is based on a 2.60 inch cloudburst rain event

Project Constraints: Some overflow volumes were estimated using regression equation not by a hydraulic model.

Estimated Capital Cost (2008 dollars): \$6,500,000

Weighted Benefit/Cost Ratio (Present Worth): 68.47

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>
08717	Fincastle #2	Morris Forman	Manhole	Ground	100
13931	Camp Taylor #4	Morris Forman	Manhole	No Data	6,000
13943	Camp Taylor #3	Morris Forman	Manhole	Ground	250
36763	3520 Fincastle Road	Morris Forman	Manhole	Ground	Suspected- no data
44396	Fincastle #4	Morris Forman	Manhole	Ground	79,500

44397	Fincastle #3	Morris Forman	Manhole	Ground	41,420
66349	Fincastle #1	Morris Forman	Manhole	Ground	15
104223	Camp Taylor #1	Morris Forman	Manhole	Ground	40
104231	Camp Taylor #2	Morris Forman	Manhole	Ground	1,217



SSO SSDP Project Fact Sheet



SSO Project Number: S_SF_MF_30917_M_09_A

Project Name: Camp Taylor System Improvements 3
- Phase 2 Sewer Replacement & Phase 1 Sewer Rehab

Modeled Area: Combined Sewer System

Branch or SSO ID: 30917

Project Type: Sewer Replacement and Sewer Rehabilitation

Receiving Stream: South Fork Beargrass Creek, Muddy Fork Beargrass Creek, and Camp Taylor Ditch

Project Description: Phase 2 of replacement of target sewers after full SSES is complete. Additional rehabilitation of sewers based on SSES findings.

Reason for Overflow: System capacity and poor system conditions in some areas

Design Parameters / Assumptions: This solution is based on a 2.60 inch cloudburst rain event

Project Constraints: Some overflow volumes were estimated using regression equation not by a hydraulic model.

Estimated Capital Cost (2008 dollars): \$9,750,000

Weighted Benefit/Cost Ratio (Present Worth): 68.47

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>
08717	Fincastle #2	Morris Forman	Manhole	Ground	100
13931	Camp Taylor #4	Morris Forman	Manhole	No Data	6,000
13943	Camp Taylor #3	Morris Forman	Manhole	Ground	250
36763	3520 Fincastle Road	Morris Forman	Manhole	Ground	Suspected- no data
44396	Fincastle #4	Morris Forman	Manhole	Ground	79,500

44397	Fincastle #3	Morris Forman	Manhole	Ground	41,420
66349	Fincastle #1	Morris Forman	Manhole	Ground	15
104223	Camp Taylor #1	Morris Forman	Manhole	Ground	40
104231	Camp Taylor #2	Morris Forman	Manhole	Ground	1,217



SSO SSDP Project Fact Sheet



SSO Project Number: S_SF_MF_30917_M_09_A

Project Name: Camp Taylor System Improvements 4
- Phase 2 Sewer Rehab

Modeled Area: Combined Sewer System

Branch or SSO ID: 30917

Project Type: Sewer Rehabilitation & Offline Storage

Receiving Stream: South Fork Beargrass Creek, Muddy Fork Beargrass Creek, and Camp Taylor Ditch

Project Description: This alternative includes additional rehabilitation of sewers based on SSES findings and constructing an off-line pumped 0.038 MG storage basin at the PS to store excess wet weather flows, 3,395 LF of 8" sewer to convey flow to basin. Flow monitoring and system monitoring will be performed in the Camp Taylor system after rehab is complete. If the system is operating with no overflows at a 1.82-inch storm, no storage basin will be constructed. Documentation of this analysis will be submitted to the appropriate regulatory agencies.

Reason for Overflow: System capacity and poor system conditions in some areas

Design Parameters / Assumptions: This solution is based on a 2.60 inch cloudburst rain event

Project Constraints: Some overflow volumes were estimated using regression equation not by a hydraulic model.

Estimated Capital Cost (2008 dollars): \$9,750,000

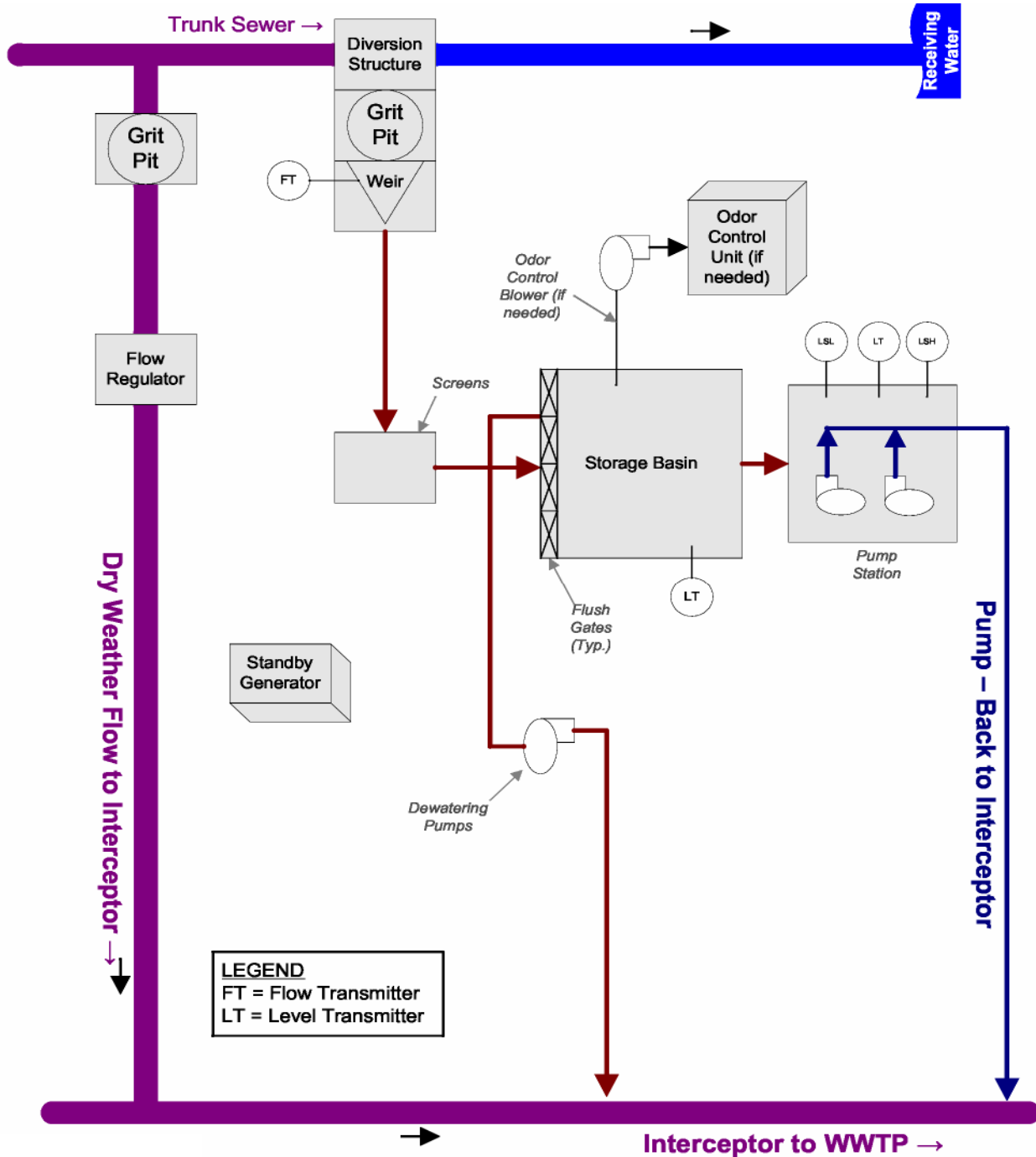
Weighted Benefit/Cost Ratio (Present Worth): 68.47

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>
08717	Fincastle #2	Morris Forman	Manhole	Ground	100
13931	Camp Taylor #4	Morris Forman	Manhole	No Data	6,000
13943	Camp Taylor #3	Morris Forman	Manhole	Ground	250

36763	3520 Fincastle Road	Morris Forman	Manhole	Ground	Suspected- no data
44396	Fincastle #4	Morris Forman	Manhole	Ground	79,500
44397	Fincastle #3	Morris Forman	Manhole	Ground	41,420
66349	Fincastle #1	Morris Forman	Manhole	Ground	15
104223	Camp Taylor #1	Morris Forman	Manhole	Ground	40
104231	Camp Taylor #2	Morris Forman	Manhole	Ground	1,217

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



Integrated Overflow Abatement Plan
Vol. 3 - Sanitary Sewer Discharge Plan
 Combined Sewer System
 Solution ID # S_SF_MF_30917_M_09_A
 Camp Taylor System Improvements

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

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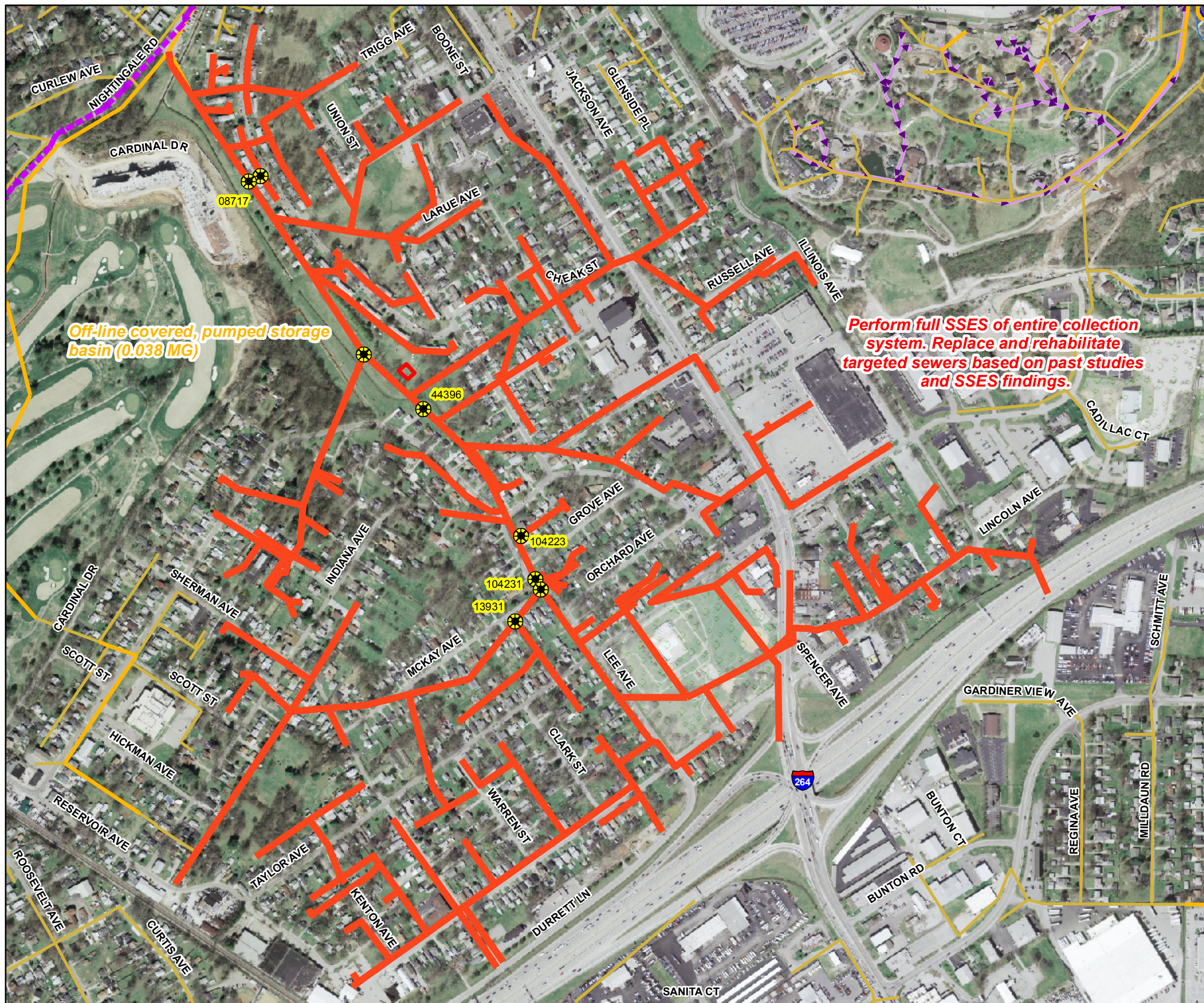
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Map Revision
 May 7, 2009

Aerial Date: 2006



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SSO SSDP Project Fact Sheet



SSO Project Number: S_MC_MF_55665_S_07_C

Project Name: Hazelwood PS I/I Investigation and Rehabilitation

Modeled Area: Combined Sewer System

Branch or SSO ID: 55665

Project Type: I/I Reduction

Receiving Stream: Upper Mill 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 and Pipe Upgrades.

Reason for Overflow: Pump Station capacity

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

Project Constraints: None

Estimated Capital Cost (2008 dollars): \$173,000 (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:

<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>
55665	Hazelwood PS wetwell	Morris Forman	Manhole	Ditch	28,000

Integrated Overflow Abatement Plan
Vol. 3 - Sanitary Sewer Discharge Plan
 Combined Sewer System
 Solution ID # S_MC_MF_55665_S_07_C
 Hazelwood PS I&I Investigation & 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

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