Ongoing Screening Summary Report 2012 Inspection Year

Illicit Discharge Detection and Elimination Program

City of Oshkosh

March 25, 2013

OMNNI Project No. N2029B12

ENGINEERING • ARCHITECTURE • ENVIRONMENTAL



Illicit Discharge Detection and Elimination Conducted For City of Oshkosh

Ongoing Screening Summary Report

2012 Inspection Year

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EXECUTIVE SUMMARY

During the summer of 2012, OMNNI Associates, Inc. (OMNNI) assisted the City of Oshkosh with inspecting the outfalls in the City's municipal separate storm sewer system (MS4) for potential illicit discharges. Following the Illicit Discharge Ongoing Inspection Program that was developed in 2009, OMNNI inspected 97 of the approximately 357 MS4 outfalls identified in the City, including 16 outfalls that were re-screened due to potential illicit discharges in 2011. The inspections consisted of a visual screening along with a chemical analysis of any dry-weather flow that was present. The inspections revealed nine outfalls with evidence of potential illicit discharges. In addition, OMNNI responded to three requests by the City to investigate potential illicit discharges. In all three cases, OMNNI found evidence of potential illicit discharges.

The Ongoing Screening Program calls for approximately 86 outfalls to be inspected in 2013, which will complete the first four-year inspection cycle. At the conclusion of that cycle, future outfall screenings may continue the existing four-year cycle, or may be modified with a revision and WDNR approval of the Ongoing Screening Program.

BACKGROUND

Purpose

Under Section 2.3.3 of the Wisconsin Pollutant Discharge Elimination System (WPDES) Permit No WI-S050075-1 ("permit"), the City of Oshkosh is required to conduct ongoing dry weather field screening of all outfalls during the term of the permit to detect potential illicit discharges.

Under the MS4 permit, an outfall is defined as "the point at which storm water is discharged to waters of the state or leaves one municipality and enters another." The MS4 is defined as "a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, constructed channels or storm drains, which meets all of the following criteria:

- 1. Owned or operated by a municipality.
- 2. Designed or used for collecting or conveying storm water.
- 3. Which is not a combined sewer conveying both sanitary and storm water."

When applied to the City of Oshkosh, the MS4 permit requires ongoing screening of the road ditch or storm sewer outfalls where the outfalls discharge to a water of the state (i.e., a navigable or non-navigable stream, lake, or wetland) or where they discharge into an adjacent municipality or to a county or state highway right-of-way.

OMNNI assisted the City of Oshkosh with developing a four-year ongoing screening program in 2009, and completed the ongoing screening program for the first set of outfalls in 2010. This report summarizes the results of the third year of the ongoing field screening program. The City may need to include these results in the annual report required by the MS4 permit due March 31, 2013.

Outfall Identification and Mapping

In 2009, the City of Oshkosh identified major and minor outfalls within the city as part of the MS4 mapping process required by the permit. Outfalls were identified at the locations where

the City's MS4 discharged to a water of the state, to an adjacent municipality, or outside the permitted area. Approximately 348 potential outfalls were identified during this process in 2009. (The number has changed since then, due to construction of stormwater detention basins, reconfiguration of the City's storm sewer system, and reevaluation of existing outfalls.)

Topographic information was also used to define approximate drainage basins for each outfall. Based on this information, each outfall was classified as "major" or "minor." A "major outfall," as defined by the MS4 permit, is an MS4 outfall that meets one of the following criteria:

- 1. A single pipe with an inside diameter of 36 inches or more or equivalent conveyance (cross sectional area of 1,018 square inches) which is associated with a drainage area of more than 50 acres.
- 2. A single pipe with an inside diameter of 12 inches or more or equivalent conveyance (cross sectional area of 113 square inches) which receives storm water runoff from land zoned for industrial activity with 2 or more acres of industrial activity, but not land zoned for industrial activity that does not have any industrial activity present.

Outfalls not meeting the definition of a major outfall are considered "minor outfalls." OMNNI has also worked with the Wisconsin Department of Natural Resources (WDNR) to develop a third class of outfalls – "supplemental" outfalls. Supplemental outfalls are storm sewer outfalls which may not meet the definition of an outfall according to the MS4 general permit, but should be included in an ongoing field screening program. The majority of the supplemental outfalls are detention basin inlets, which do not discharge directly to a water of the state, and therefore are not technically outfalls. However, sampling the detention basin inlets is an important component of the overall screening process, as illicit discharges are more likely to be discovered at the detention basin inlets rather than at the detention basin outfall.

When necessary, field verification was used to determine outfall sizes or drainage patterns. The current outfall map includes 106 major outfalls, 235 minor outfalls, and 16 "supplemental" outfalls. These numbers are updated each year as outfalls are located during the ongoing field screening program and modifications are made to the MS4. A map showing the MS4 outfalls is included in Appendix A.

Initial Screening Program

Per Section 2.3.2 of the MS4 general permit, the City was required to conduct an initial field screening at all major outfalls during dry weather periods. This initial field screening was required to be conducted within 36 months of the date that the permit was issued. The minor and supplemental outfalls should be included in the ongoing field screening to be conducted in future years.

OMNNI conducted the initial field screening for the City of Oshkosh during the summer of 2009. During the initial field screening, 109 major outfalls throughout the City were inspected. (There has been a net decrease of three major outfalls since the initial field screening due to changes in the storm sewer system and field confirmation of measurements.) The initial field screening revealed 24 major outfalls that showed evidence of a potential illicit discharge. The results of the initial field screening were presented to the City in the *City of Oshkosh Initial Field Screening Summary Report* (May 18, 2010).

Development of Ongoing Screening Program

Section 2.3.3 of the MS4 permit requires municipalities to develop an ongoing screening program and submit it to the WDNR within 36 months of the date that the permit was issued.

The ongoing screening program must include provisions to include all outfalls (major, minor and supplemental) at least once during the 5-year permit cycle. In developing the program, consideration should be given to the hydrological conditions, total drainage area, population density, traffic density, age of the structures or buildings in the area, history of the area, and land use types.

Based on the MS4 permit requirements and other information obtained from WDNR, OMNNI developed a proposed ongoing screening program for the City of Oshkosh. The permitted area was divided into four inspection districts, each with approximately the same number of outfalls. One district would be inspected each year, resulting in a four-year inspection cycle. At the end of the first inspection cycle, the inspection results are to be evaluated to determine if the inspection cycle for each outfall should be adjusted.

The proposed ongoing screening program was presented to the City in the *CITY OF OSHKOSH IDDE ONGOING FIELD SCREENING PROGRAM* (May 19, 2010). OMNNI conducted the first round of ongoing screening inspections during the summer of 2010 and the second round of inspections was conducted during the summer 2011. The third round of inspections was conducted during the summer of 2012, and the results are included in this report. The 2012 inspection district is shown in more detail in Appendix A.

Screening Methodology

OMNNI's outfall screening methodology loosely follows the procedures outlined in *ILLICIT DISCHARGE DETECTION AND ELIMINATION: A GUIDANCE MANUAL FOR PROGRAM DEVELOPMENT AND TECHNICAL ASSESSMENTS* (Center for Watershed Protection / Robert Pitt, October 2004). The procedures were modified to comply with the MS4 permit requirements, and have evolved after several years of experience.

Outfalls that have been previously inspected are located with the assistance of GPS. For outfalls that have not been previously inspected, the available MS4 mapping is used to physically locate the outfall, and then the GPS location is recorded to assist with future inspections. The physical properties of the outfall are then recorded – type of outfall, dimensions, material, and discharge location. A photograph of the outfall is taken to show the general location and configuration.

After the physical properties have been recorded, the outfall and surrounding area are screened for indicators of current or past illicit discharges. Sample indicator parameters include floatable material, gross solids, odors, stains, color of water, turbidity, abnormal vegetation and benthic growth. If any of these physical indicators are observed, they are further described and quantified. A close-up photograph is taken of the actual discharge of the outfall, showing any indicator parameters or flow from the outfall. A short video of the flow is also taken to document the magnitude of the flow or the lack of flow at the time of inspection.

The MS4 permit specifies that the outfalls be screened during periods of dry weather. Outfall inspections are typically conducted in the summer months to avoid the effects of snowmelt runoff in the storm sewer system. OMNNI generally waits for a minimum of 72 hours following a runoff-producing rainfall event to conduct the outfall screening. This typically allows sufficient time for the stormwater to discharge through the drainage area and outfall. If, after 72 hours, the outfall still has flow, a sample is collected and screened for chemical indicators of an illicit discharge. While the actual list of chemical parameters is specific to each outfall, most flowing outfalls are screened for the following parameters:

- pH
- Chlorine (total chlorine and free chlorine)
- Copper
- Detergents
- Phenols (for outfalls in basins with industrial sources)
- Ammonia
- Temperature
- Conductivity

The list of chemical parameters was developed using the parameters that were required for the initial field screening in the MS4 permit (listed in bold), and supplemented with additional parameters that are useful for tracking illicit discharges.

In some cases, outfalls can be either partially or fully submerged. A partially submerged outfall is an outfall where the elevation of the invert is below the water level of the receiving water. A fully submerged outfall is a pipe that is entirely below the water surface. In either condition, the water is "backed up" into the discharging pipe or channel, and is not free-flowing. Under these conditions, if a sample is collected at the outfall point, the sample could consist almost entirely of the receiving water.

In the case of partially or fully submerged outfalls, OMNNI developed a sampling procedure that was approved by WDNR. The submerged outfall is screened for physical indicators. However, the flow sample is collected from the first access point (i.e., manhole, catchbasin, curb inlet) upstream of the outfall. This reduces the influence of the receiving water. Typically, if there is no flow or pooled water at the upstream location, then no sample is collected. For all upstream sampling, a note is made of the distance and land use of the area between the outfall and the upstream area to assess the potential for illicit connections between the outfall and the upstream location.

In the event that the physical or chemical indicators show that there is a potential ongoing illicit discharge, the Illicit Discharge Coordinator of the municipality is contacted. If requested, OMNNI then assists the municipality with attempting to identify the source of the discharge, usually by inspecting and/or sampling additional upstream points to attempt to isolate a particular branch of the MS4 network.

Due to the history of significant floatable debris in many of the upstream manholes, OMNNI conducted a preliminary inspection of the upstream manholes in May 2012. The purpose of this inspection was to locate the upstream manholes and identify any manholes with significant floatable material. A list of the manholes with floatable material was provided to the City following the inspection so that the manholes could be cleaned prior to the actual ongoing screening inspection. The results of these preliminary inspections were typically not included in the numbers and charts included in this summary report, unless a full screening was conducted with no additional follow-up actions required.

While not explicitly required by the MS4 permit, OMNNI also conducts a physical condition assessment for each outfall. The inspector identifies any graffiti, damage, erosion or deposition present at the outfall and assigns a severity. This information is provided to the municipality to assist with maintenance activities.

A detailed outfall report is generated for each outfall that is inspected. The outfall report includes the general outfall information that was collected, along with detailed inspection

results for each inspection conducted at the outfall. This provides a comprehensive history of the inspection results for the outfall as multiple inspections are performed over the life of the outfall.

Detailed inspection reports for each outfall are included in Appendix B. Some general observations from the field screening are noted in the following sections.

Additional Outfall Screening

In addition to the 81 outfalls identified in the 2012 district for the ongoing field screening program, 16 outfalls from the 2011 inspection area were also re-screened in 2012. These outfalls had potential illicit discharges identified during the 2011 ongoing field screening program. The outfalls that were re-screened are listed below:

Outfall	Classification	Reason	
01-132	Potential	Severe floatable debris in upstream manhole (from 2010 program)	
01-520	Potential	Severe floatable debris in upstream manhole (from 2010 program)	
02-322	Potential	Low pH in upstream manhole	
02-357	Potential	Severe floatable debris in upstream manhole	
03-22	Potential	Severe floatable debris in upstream manhole (from 2010 program)	
03-35	Potential	Severe floatable debris in upstream manhole (from 2010 program)	
06-1694	Potential	Moderate floatable debris and oil sheen in upstream manhole (from 2010 program)	
06-221	Potential	Moderate floatable debris in upstream manhole (from 2010 program)	
		Moderate floatable debris in upstream manhole (from 2010	
09-101c	Potential	program)	
11-512	Potential	Severe floatable debris in upstream manhole	
11-803	Potential	Ammonia detection in upstream curb inlet	
14-582	Obvious	High ammonia and chlorine concentrations in flow in upstream manhole (from complaint)	
14-676	Potential	Persistent suds where outfall discharges to stream (from 2010 program)	
16-142	Potential	Floatable debris in upstream manhole (from 2010 program)	
16-201	Potential	Floatable debris and petroleum sheen in upstream manhole (from 2010 program)	
16-463	Potential	Floatable debris in upstream manhole (from 2010 program)	

Table 1 - 2011 outfalls re-screened under the 2012 program

These outfalls were screened in the same manner as the other outfalls in the 2012 inspection area. These outfalls are included in the outfall reports in Appendix B and the maps included in Appendix C (if applicable). Any suspected illicit discharges that were identified in these outfalls during the 2012 re-screening are included in the *Potential Illicit Discharges* section of this report.

RAINFALL AND FLOW

Rainfall

Weather data was obtained from the Weather Underground website. Personal weather station KWIOSHKO10 ("Northeast Oshkosh") is located near the intersection of Nicolet Avenue and Bowen Street in the City of Oshkosh. The conditions at this weather station were considered representative of the weather in the City of Oshkosh for the 2012 inspection area. The weather history from May 1 through September 30 is shown in Figure 2.







Figure 2 - Summer 2012 weather history (Weather Underground)

Outfall inspections were conducted in the City of Oshkosh on May 30, June 6, 11-13 and 20-21, and September 27, 2012. Those inspection dates (red), along with the daily rainfall history (blue), are shown in Figure 3.



Figure 3 - Rainfall history and outfall inspections

Flow

To meet the requirement of dry weather screening, outfalls were typically screened at least 72 hours after the previous runoff-producing rainfall event. Despite this time period, 5 of the 97 inspected outfalls had dry weather flow, as described below:

Table 2 - Observed	flow i	intensity a	t outfalls
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Outfall	Flow Intensity
06-880	Trickle
16-646b	Trickle
16-844	Trickle
06-622a	Moderate
13-409	Substantial

(Note that if the outfall was partially or fully submerged, it is not included in this list. Submerged outfalls, along with the observed flow patterns, are described in the next section.)



The distribution of the flow intensity of the outfalls is shown in Figure 4.



If dry weather flow was found during the field screening, a sample was collected and analyzed for the presence of indicator parameters. The analysis conducted is discussed in a later section.

Not all flow is an indicator of an illicit discharge. Following a significant rainfall event, surface water and groundwater elevations can be higher than normal. Much of the observed flow may originate from sump pump discharges, detention basin discharges, permitted discharges, and infiltration into the storm sewer system.

Submerged Outfalls

Most of the outfalls in the City were located at or below the normal levels of their respective receiving waters. Of the 97 inspected outfalls, 38 were partially submerged, and 25 were fully submerged (Figure 5). Of the 25 fully submerged outfalls, 18 could not be physically located.



Figure 5 - Submerged status of outfalls

As shown in Figure 4, of the 61 submerged outfalls, 18 could not be located, two had no flow, five had slight flow, and 36 had indeterminate flow. The submerged flow was classified as "indeterminate" if there were no physical or visual indications of flow within the submerged pool, but it was not possible to definitively rule out flow (i.e., by observing dry sections directly above and below the submerged pool).

Submerged outfalls were screened at a representative upstream location (i.e., first upstream manhole), if one was available. If flow or a submerged pool was present in the upstream location, a sample was collected. If a representative upstream location was not available, a sample was collected from the submerged pool at the outfall.

PHYSICAL INDICATOR ASSESSMENT

All outfalls, regardless of whether they exhibited dry-weather flow at the time of inspection, underwent an extensive assessment for physical indicators of past or current illicit discharges. The physical indicators are grouped into eight categories, and each category is assigned a severity rating based on the observed conditions, along with a qualitative description, if applicable. The eight categories of physical indicators are described below.

Floatables

Floatables include situations like petroleum sheens, suds, algae, and evidence of raw sewage. These conditions would typically be observed in an area of stagnant water, such as a downstream pool or an upstream manhole, although some may be observed in the actual flow. Some conditions (petroleum sheens and sewage) are almost always the result of an illicit discharge. Other floatables, like suds and algae, can have non-illicit sources, but their presence can also indicate the potential for an illicit discharge, and the source should be traced.

Vegetative debris and solid waste (litter) can also float, but these substances are included in the *Gross Solids* category, and are not considered floatables.

A *slight* severity for floatables indicates isolated occurrences of the substance in the pool or flow. A *moderate* severity indicates a broader coverage, including distinct pockets of the substance. A *severe* classification typically describes total coverage of the water surface.

Odor

Clean stormwater should have no odor. Odors may be caused by the presence of chemicals, which can indicate a potential illicit discharge. The classification of odor is somewhat subjective, and may vary depending on the inspector. Some of the odor classifications are chemical-based, and include petroleum, VOC/solvent, chlorine, and sulfur. Other odor classifications are more subjective, and include musty, fishy, sewage, and fragrant.

Odor can be difficult to quantify. As a result, the severity is based on the method that it can be detected. A *slight* severity for odor indicates that the odor can be detected in the sample bottle. A *moderate* severity indicates that the odor can be detected in the flow itself. A *severe* classification indicates that the odor can be detected from a distance.

Turbidity

Turbidity is a measure of the clarity of a water sample, reflecting the amount of suspended solids present in the water. As turbidity increases, the water becomes cloudy and eventually opaque. Turbidity has a negative impact on aquatic life, as it prevents sunlight from penetrating the water.

Turbidity is frequently caused by soil erosion that occurs upstream of the outfall. The soil erosion can be accelerated by poor erosion control management practices. Active construction sites and highly eroded areas are common sources of turbidity.

While turbidity can be measured directly using an instrument like a turbidimeter, the relative turbidity of each outfall sample was assessed qualitatively. A *slight* severity for turbidity indicates that the sample appeared slightly cloudy in the sample bottle. A *moderate* severity indicates that the sample exhibits significant cloudiness. A *severe* classification was used for a sample that was opaque in the sample bottle.

Color

Stormwater typically should be clear, with no apparent color. Certain tints and colors can indicate the presence of substances that could be a potential illicit discharge. Some tints can be caused by natural substances, such as tannins in leaves and vegetative debris causing a slight brown tint. High concentrations of suspended solids can cause orange tints (clay), brown tints (loam) or gray-black tints (organic materials). Certain colors (i.e., red, blue and green) are almost never naturally-occurring, and likely indicate an illicit discharge.

Color is most easily assessed in the sample bottle. The sample bottle can be compared to a bottle of deionized water as a standard. The general color of the sample is noted, along with the relative severity. A *slight* severity for color indicates that the color is faint in the sample bottle. A *moderate* severity indicates that the color is easily detected in the sample bottle. A

severe classification indicates that the color can be observed in the actual flow or pool, outside of the sample bottle.

Vegetation

The health of the vegetation in the area surrounding the outfall can be an indicator of potential illicit discharges from the outfall. Various chemicals in an illicit discharge can inhibit or kill the vegetation in the areas surrounding the outfall. Discharges with high nutrient levels – particularly fertilizer runoff – can significantly increase the amount of vegetation around the outfall.

Because outfalls provide a water source, the vegetation around outfalls is typically more productive than areas farther from the outfall, particularly during dry periods. It is important to distinguish between increased vegetation due to available water and excessive vegetation due to nutrients in the runoff. True vegetation impacts due to chemicals or nutrients appear to be rare compared to other physical indicator parameters.

The "vegetation" indicator parameter does not apply to vegetation growing inside the outfall pipe or on the pipe apron. This condition is evaluated under the "benthic growth" parameter.

Vegetation effects were classified as either "inhibited" or "excessive." The severity was subjectively assigned based on the extent of the vegetation impact that was observed, ranging from *slight* to *severe*.

Benthic Growth

Due to the presence of nutrients, organic materials and moisture, outfall pipes and aprons can commonly host vegetation that grows on the sides and bottoms of the structures. This is particular common in concrete pipes, which are more porous, but can occur on nearly all pipe materials. The vegetation encountered is typically algae, moss and lichens.

Some degree of benthic growth is present on nearly all storm sewer outfall pipes, and appears to increase with age. The presence of benthic growth alone is not typically a reason to classify an outfall as a potential illicit discharge. However, severe cases of benthic growth, especially when combined with other indicators, can be used to classify and trace illicit discharges.

The color of the benthic growth is noted on the inspection report. Green benthic growth is most common in outfalls with sunlight. Brown benthic growth is more common in outfalls with limited sunlight. Other colors, such as orange, can sometimes be present.

The severity of the benthic growth is determined by a subjective analysis of the thickness of the vegetation. A *slight* severity for benthic growth indicates a thin layer, usually a film or the dried stains of former growth. A *moderate* severity is used when an actual depth of vegetation can be observed, typically up to one-half inch deep. A *severe* classification is used when the vegetation changes from a short, "fuzzy" layer to longer, more defined plants with stems and leaves.

Stains

Stains inside pipes, aprons, riprap and channels can be good indicators of past illicit discharges. Clean stormwater typically would not cause stains. However, some non-illicit discharges can cause stains, including tannins from vegetation (brown), road salt (white), minerals (various colors) and suspended solids (gray or brown). Most storm sewer pipes will have some degree of staining due to natural causes, and the stains tend to increase with age. These stains are typically found at either the normal or the high flowline for the pipe. Abnormal stains are typically indicators of past illicit discharges. Common types of stains in this category include oil and grease, paint, concrete washout, and iron discharges (rust). It is important to distinguish between actual iron discharges and normal pipe corrosion, which can occur in metal pipes, and is not an illicit discharge. Corrosion typically occurs along the invert of the pipe, where water may collect and corrode the pipe. Rust stains are typically darker streaks, often originating from a lateral or other incoming pipe.

Stains are useful indicators, since they tend to be persistent, and can often be used to trace the flow path upstream to a source, even after the original illicit discharge has ended. By screening outfalls on a regular basis and documenting the stains with photographs, it is possible to compare the severity of the stains to determine if a discharge is ongoing.

Stains are classified according to the type of stain present (i.e., oil, paint, rust, etc.), as well as their relative severity. The severity is subjectively assigned based on the extent of the staining that was observed, ranging from *slight* to *severe*. Because of the subjective nature of this rating, photographs are extremely helpful for documentation.

Gross Solids

The *Center for Watershed Protection* adopted the concept of Gross Solids in regards to illicit discharge detections. Gross solids are materials that are larger than fine solids (silt and clay) and coarse solids (fine sand, fine gravel, and detritus). Gross solids consist primarily of *litter* (human derived trash larger than 4.75 mm), *organic debris* (leaves, branches, seeds, twigs and grass clippings larger than 4.75 mm), and *coarse sediments* (inorganic breakdown products from soils, pavement or building materials greater than 0.075 mm).

The type of gross solid most frequently encountered during outfall inspections appears to be litter (garbage). These materials typically enter the storm sewer from an upstream catchbasin or inlet. Paper, plastic and foam are frequently encountered in manholes, where they can become trapped as they float on the surface. These materials can also travel down storm sewer pipes and swales, ultimately discharging at the outfall.

Vegetative debris, including leaves and grass clippings, can also enter the storm sewer through catchbasins and inlets and travel to the outfall. As with litter, an attempt is made to determine if the vegetative debris traveled through the storm sewer or was deposited at the outfall in another manner.

Coarse sediment is encountered less frequently than litter and vegetative debris. Most of the sediment encountered during outfall inspections is fine sediment that travels through the storm sewer and is deposited at the outfall. This sediment is included in the "Deposition" category of the Physical Condition Assessment on the report, and the sediment depth is recorded. Sediment is typically only considered a Gross Solid physical indicator parameter if it appears that the sediment was illicitly dumped into the storm sewer through a catchbasin, inlet or manhole.

Gross solid severity is similar to the method used for floatables. A *slight* severity for gross solids indicates isolated occurrences of the substance in the pool or flow. A *moderate* severity indicates a broader coverage, including distinct pockets of the substance. A *severe* classification typically describes total coverage of the water surface or manhole.

Observed Conditions

The presence of any physical indicators in the pipe or channel, flow, downstream pool, and surrounding area were recorded at the time of the inspection. Certain physical indicators, such

as color and turbidity, can only be evaluated if flow or downstream pools are present. (Because the inspection criteria for physical indicator parameters have evolved over the past several years, some of the parameters included in the current year's inspections may not have been evaluated in previous years, and those parameters may appear as blank or missing data on earlier reports.)

The presence of one or more physical indicator parameters does not necessarily indicate that an illicit discharge is occurring or has occurred in the past. Certain physical indicators, such as the presence of solid waste or oil sheens in the flow, strongly suggest an illicit discharge has recently occurred. Other indicators, such as staining of the pipe or channel, may indicate that an illicit discharge occurred in the past, although the exact time is not known. Still other physical indicators alone should not be the grounds for assuming an illicit discharge.

Physical indicators can also be valuable aids when tracing a suspected illicit discharge upstream to the source. Certain physical indicators – pipe and channel stains in particular – are persistent and can be used to trace the flow well after the actual flow has stopped.



The physical indicators observed during the outfall inspections are summarized in Figure 6.

Figure 6 - Physical indicator observations

Benthic growth (green and/or brown) and flowline stains were prevalent at many of the outfalls. These conditions are fairly common, and are not typically considered strong indicators of recurring illicit discharges unless they are particularly severe.

Five outfalls were classified as potential illicit discharge because of the presence of gross solids in their upstream manholes. These outfalls are discussed in more detail in the *Potential Illicit*

Discharges section of this report. No other outfalls were classified as potential illicit discharge solely due to physical indicators.

CHEMICAL ANALYSIS

When dry-weather flow is present at an outfall or upstream manhole, chemical indicator parameters can provide valuable information about whether the flow is an illicit discharge, as well as providing clues about the potential sources of the flow. Section 2.3.2.2 of the general permit requires that outfalls with dry-weather flow be sampled for pH, total chlorine, total copper, total phenol and detergents for the initial screening of major outfalls, unless detergent, ammonia, potassium and fluoride were used as alternate parameters.

Under section 2.3.3, the ongoing screening of all outfalls could be modified to include other parameters. For the ongoing screening program, OMNNI tested for the following chemical indicators:

- pH
- Temperature
- Conductivity
- Chlorine (total and free)
- Copper
- Ammonia
- Detergents
- Phenols (for drainage basins with industrial areas)

Flow samples were collected at all outfalls that exhibited dry-weather flow at the time of the inspection. For partially-submerged or fully-submerged outfalls, a sample was collected from the flow or submerged pool at the first upstream sampling location. A total of 54 stormwater samples were collected and analyzed as part of the ongoing screening process in 2012 – 9 from flow streams and 45 from pools. Depending on the specific conditions for the outfall, not all tests were run for all samples.

The indicator parameters, testing methods, and results are explained in the sections that follow.

рΗ

Background

The pH of a stormwater sample can be used to detect the presence of illicit substances in the flow. Neutral water has a pH of 7.0. However, unpolluted rainwater commonly has a pH of 5.0 to 6.0, due to the conversion of carbon dioxide in the atmosphere to carbonic acid. The presence of pollutants in the atmosphere can cause the formation of additional hydrochloric and/or nitric acid in the rainwater, which will further lower pH. The pH of the runoff is typically raised as it reacts with carbonates and other alkaline materials in the rocks and soil. Contact with concrete pipes and channels also raises the pH of the runoff.

The typical pH range for stormwater runoff is from 6.0 to 9.0. Samples with a pH lower than 6.0 or higher than 9.0 would be suspect for illicit discharges. Possible sources of high or low pH include industrial discharges and concrete truck washout.

Testing Method

During the ongoing screening program, OMNNI tested the pH of the outfall samples with an *Oakton PC-10* handheld pH/conductivity/temperature meter, which displays the pH reading to 0.01 pH units. The probe was periodically calibrated at 4.01, 7.00 and 10.01 pH values. The pH reading was taken in the sample bottle as soon as possible after the sample was collected from the outfall, as the pH of the sample can change over time.

Results

The pH results for the pH samples are shown in Figure 7.



Figure 7 - pH sample results

The pH values ranged from 6.91 to 8.73. None of the samples were outside the typical pH range, so none of the samples were considered suspect due to pH.

Temperature

Background

While not included in the list of parameters required by the general permit, the temperature of a stormwater sample can be useful in determining if the flow is originating from an illicit source. Because most stormwater is conveyed in underground pipes, the temperature of the flow at the outfall is typically expected to be similar to the ground temperature which is often cooler than the ambient temperature in summer. However, stormwater that passes through open channels or ponds upstream of the outfall can be heated directly by the sun, and may be close to ambient temperature or even slightly warmer. Temperature is normally only a consideration when the runoff is significantly lower than the ground temperature or higher than the ambient

temperature, which can indicate the presence of an industrial discharge. For example, cooling water or process water is typically significantly warmer than the ambient temperature.

Ground temperatures were typically 55 degrees or warmer in summer. As a result, the "normal" temperature range was set at 55 to 90 degrees. Any samples outside of this range could contain flow other than stormwater runoff.

Testing Method

During the ongoing screening program, OMNNI recorded the temperature of the outfall samples with an *Oakton PC-10* handheld pH/conductivity/temperature meter, which displays the temperature reading to 0.1 °C. The temperature reading was taken in the sample bottle at the same time the pH was tested, as soon as possible after the sample was collected from the outfall, as the temperature of the small volume of the sample container will rapidly change.

Results



The temperature results for the samples are shown in Figure 8.

Figure 8 - Temperature sample results

The temperature values ranged from 58 to 81 °F. The samples with the highest temperatures were collected from locations that could be influenced by solar heating, so the upper values were not considered suspect. None of the samples exhibited abnormal temperatures, so none of the samples were considered suspect due to temperature.

Conductivity

Background

While not included in the list of parameters required by the general permit, the conductivity of a stormwater sample can be useful in determining if the flow is originating from an illicit source, and identifying potential sources of the discharge. Conductivity is a measure of the ability of water to pass an electrical current. The presence of inorganic dissolved solids (chloride, nitrate,

sodium, calcium, iron, etc.) can increase the conductivity of a water sample. Organic compounds (oil, alcohol, sugar, etc.) are not good conductors, and therefore have relatively low conductivities.

Conductivity in surface water is influenced by the local geology. Streams that run through granite bedrock tend to have lower conductivity because granite is composed of more inert materials that do not ionize when washed into the water. However, streams that run through areas with clay soils tend to have higher conductivity because of the higher ionizing potential of clay. Sanitary sewage can raise the conductivity due to increased levels of chloride, phosphate and nitrate.

Conductivity is typically measured in siemens, with a typical unit of microsiemens per centimeter (μ S/cm). Distilled water has a conductivity in the range of 0.5 to 3 μ S/cm, while rivers typically have conductivities ranging from 50 to 1500 μ S/cm. Conductivity readings above 2000 μ S/cm can sometimes be associated with industrial discharges.¹

Conductivity values under 2000 μ S/cm were considered to be normal. Samples with conductivities over 2000 μ S/cm were identified as suspicious, but the discharge was not considered a potential illicit discharge unless other indicator parameters (physical or chemical) were observed.

Testing Method

During the ongoing screening program, OMNNI recorded the temperature of the outfall samples with an *Oakton PC-10* handheld pH/conductivity/temperature meter, which displays the conductivity reading to 0.01 μ S/cm. The conductivity reading was taken in the sample bottle as soon as possible after the sample was collected from the outfall, as the conductivity of the sample can change with temperature.

Results

The conductivity results for the samples are shown in Figure 9.

¹ USEPA: Water-Monitoring & Assessment – Conductivity (http://water.epa.gov/type/rsl/monitoring/vms59.cfm)



Figure 9 - Conductivity sample results

The conductivity values ranged from 170 to 5,050 μ S/cm. Two outfalls – 13-1219 US1 (2,830 μ S/cm) and 16-844 (5,050 μ S/cm) were above the 2,000 μ S/cm level for suspected industrial discharges. However, neither outfall had other abnormal physical or chemical indicators, so they were not considered suspect due to conductivity alone. Outfall 16-844 had been installed shortly before the outfall screening was conducted, so clay, concrete dust, and other construction materials could be temporarily raising the conductivity in the sample.

Chlorine

Background

The presence of chlorine in a stormwater sample usually demonstrates the presence of substances other than stormwater runoff. Chlorine is typically an indicator of either potable water (from a chlorinated municipal water supply) or an industrial discharge. It can also be caused by leaking or draining swimming pools. However, chlorine can also be present in non-illicit discharges (as defined by the general permit and the City's illicit discharge ordinance), including residential car washing, lawn irrigation, hydrant flushing, water main breaks, and industrial discharges regulated under a WPDES permit. Therefore, the presence of chlorine in a sample indicates the presence of a non-stormwater source; however, the source should be identified to determine if it is an illicit discharge.

Dissolved chlorine is measured using three different values: free chlorine, combined chlorine, and total chlorine. Free chlorine represents the "unbound" chlorine molecules in solution, which are the most effective for disinfecting. Combined chlorine represents the chlorine molecules that are bound to other organic molecules, such as chloramines, which are also commonly used in drinking water disinfection. Total chlorine represents the sum of the free chlorine and the combined chlorine. The general permit requires sampling for total chlorine.

Action levels were established by OMNNI for most chemical indicators. A test result that exceeds the action level warrants follow-up investigation. In general the action level for total

chlorine is set at 0 mg/L. Any detection of chlorine indicates the presence something other than stormwater in the sample. Depending on the source, it may or may not be an illicit discharge.

Testing Method

During the ongoing screening program, OMNNI tested the outfall samples for total chlorine and free chlorine using *Hach Free & Total Chlorine Test Strips, 0-10 mg/L*. These test strips had result steps of 0, 0.5, 1, 2, 4 and 10 mg/L. The chlorine tests were taken in the sample bottle as soon as possible after the sample was collected from the outfall, as chlorine can dissipate over time.

Results

None of the samples tested positive for free chlorine or total chlorine, so none of the samples were considered suspect due to chlorine.

Copper

Background

The presence of copper in stormwater runoff is usually due to discharge from industries that manufacture copper-based products or use copper-containing chemicals in their manufacturing process. In some cases, copper can leach from plumbing systems and enter the water. Copper concentrations as low as 0.1 mg/L can be toxic to aquatic vegetation and wildlife.

The general permit requires sampling for total copper. In general the action level for total copper is set at 0 mg/L. Any detection of copper indicates the presence something other than stormwater in the sample.

Testing Method

During the ongoing screening program, OMNNI tested the outfall samples for total copper using *Hach Copper Test Strips, 0-3 mg/L*. These test strips had result steps of 0, 0.2, 0.5, 1, and 3 ppm. The copper tests were taken in the sample bottle as soon as possible after the sample was collected from the outfall.

Results

None of the samples tested positive for total copper, so none of the samples were considered suspect due to copper.

Ammonia

Background

While not included on the list of required parameters in the general permit, ammonia is a valuable test parameter to identify potential illicit discharges. Besides being present in industrial discharges, ammonia can also be an indicator of wastewater or washwater discharges, which are often indicators of sanitary sewer cross-connections. When tested along with potassium, it is possible to use the ratio of ammonia to potassium to distinguish between wastewater and washwater. However, since both typically originate from sanitary sewer, this determination is not usually required to identify an illicit discharge.

It should be noted that there are also several natural sources of ammonia which do not constitute an illicit discharge. Waste from pets and wildlife can cause ammonia in the runoff, particularly if wildlife frequently inhabit the storm sewer pipes and manholes. Storm sewers connected to stagnant water or wetlands frequently have elevated ammonia levels due to

microbial decay of plant and animal proteins. In addition, ammonia may be present in industrial discharges with a WPDES permit.

Because of the natural sources of ammonia, the action level for ammonia detections was set at greater than 1 ppm. Samples with ammonia concentrations of 1 ppm or lower were not investigated unless additional chemical or physical indicator parameters were present.

Testing Method

During the ongoing screening program, OMNNI tested the outfall samples for ammonia using *Hach Ammonia (Nitrogen) Test Strips, 0-6.0 ppm*. These test strips had result steps of 0, 0.25, 0.5, 1, 3, and 6 ppm NH_3 -N. The ammonia tests were conducted in a separate vial of stormwater taken from the sample bottle as soon as possible after the sample was collected from the outfall, as the ammonia concentration can dissipate over time.

Results



The ammonia results for the samples are shown in Figure 10.

Figure 10 - Ammonia sample results

The ammonia values ranged from 0 to 3 ppm. Several samples were at or below the 1 ppm action limit. Based on other factors, those outfalls may or may not have been classified as potential illicit discharges. The illicit discharge potential of the outfalls with ammonia detections are summarized in Table 3.

Table 3 - IDDE potential of outfalls with ammonia detections	

	Ammonia		
Outfall	(ppm)	IDDE Potential	Reason
			Persistent gross solids in manhole (not
01-520 US1	0.5	Potential	classified due to ammonia)
02-322 US1	3	Potential	Sewer odor in manhole; elevated pH in 2011

	Ammonia		
Outfall	(ppm)	IDDE Potential	Reason
			3 ppm ammonia concentration during pre-
			screening – may be influenced by the receiving
06-2241 US1	0.5	Potential	water
			High levels of detergent (1.3 mg/L) in manhole,
13-1716 US1	3	Potential	possibly from car wash trench drain
			Sample collected from outlet of South Park
			detention basins. No elevated ammonia in
			inlets to basin. Abundant waterfowl in and
13-409	0.5	Unlikely	around pond.
			3 ppm ammonia concentration during repeat
16-1508 US1	1	Potential	screening

The outfalls that were considered potential illicit discharges are discussed in more detail in the *Potential Illicit Discharges* section of this report.

Detergents

Background

The presence of detergents in the outfall sample is usually an indication of the presence of wastewater and/or washwater. This is typically the result of a sanitary sewer cross connection. However, detergent can also be present in non-illicit discharges (as defined by the general permit and the City's illicit discharge ordinance), including runoff from residential car washing. Therefore, the presence of detergent in a sample indicates the presence of a non-stormwater source; however, the source should be identified to determine if it is an illicit discharge.

There are four main classes of detergents:

- Anionic detergents (negatively charged) Common in dishwasher detergents, liquid and powdered laundry detergents, carwash detergents, and shampoo. Anionic detergents have excellent cleaning properties and high sudsing potential.
- Cationic detergents (positively charged) Used for germicides, fabric softeners and emulsifiers. Cationic detergents have poor cleaning properties by themselves, but can help anionic detergents be more effective.
- Nonionic detergents (ionically inert) Common in hand dishwashing liquids, household cleaners, and laundry detergents (especially in combination with anionic detergents). Nonionic detergents are excellent grease removers.
- Amphoteric detergents (negatively or positively charged, based on pH) Found in shampoo and cosmetic products due to their mild chemical nature. Amphoteric detergents are also found in hand dishwashing liquids due to their high sudsing potential.

Unfortunately, due to the diverse classes of detergents, there is no single test to detect the presence of all detergents. The most common test – the Methylene Blue Active Substances (MBAS) test – is only effective in identifying the presence of anionic detergents.

The general permit requires sampling for detergents. In general the action level for detergents is set at 0 mg/L. Any detection of detergent indicates the presence something other than stormwater in the sample. Depending on the source, it may or may not be an illicit discharge.

Testing Method

During the ongoing screening program, OMNNI tested the outfall samples for detergents using MBAS method with the equipment and reagents provided in the *Hach Stormwater Test Kit*. This is a colorimetric test method in which the intensity of the color in the reagent can be used to estimate the anionic detergent concentration. In most cases, a clear result indicates no detergent in the sample, and a blue tint indicated a positive detection of detergent.

In some samples with high turbidity, the MBAS test method results in foam or bubbles in the solution. These bubbles have no impact on the overall test result, and if the bubbles and solution are clear, the result is a negative test for detergent.



No Detergent Present



Detergent Present

Figure 11 – Typical MBAS Detergent Test Results



Turbidity Bubbles, No Detergent Present

Because of the equipment and reagents (including chloroform) used in the MBAS test, the detergent test was conducted in the office at the end of the day. OMNNI's experience with samples that have tested positive for detergent show that little dissipation occurs within 48 hours of testing, so same-day testing for detergents was an acceptable approach.

Results

The detergent results for the samples are shown in Figure 12.



Figure 12 - Detergent sample results

The detergent values ranged from 0 to 1.3 mg/L. Manhole 06-489 US1 had a trace detection of detergent (0.25 mg/L) during the June inspection. No other physical or chemical indicators were present, and no detergent was detected during the September follow-up inspection. As a result, this detection was not classified as a potential illicit discharge.

Manhole 13-1716 US1 had a fairly high detergent concentration (1.3 mg/L), along with an ammonia concentration of 3 ppm. Because of these detections, 13-1716 US1 was classified as a potential illicit discharge, and is discussed in more detail in the *Potential Illicit Discharges* section of this report.

Phenols

Background

The presence of phenol in stormwater runoff is usually due to discharge from industries that use phenol-containing chemicals in their manufacturing process. These industries include chemical, textile, paint, resin, tire, plastic, electronics and pharmaceutical manufacturing. Phenol can also occur naturally in the groundwater in some areas.

The general permit requires sampling for phenol. Because of its limited sources, the Ongoing Screening Program submitted to the WDNR proposed that phenol only be tested for outfalls with industrial sources in the drainage basin. In general the action level for phenol is set at 0 mg/L. Any detection of phenol indicates the presence something other than stormwater in the sample.

Testing Method

During the ongoing screening program, OMNNI tested the outfall samples for phenol using the equipment and reagents provided in the *Hach Stormwater Test Kit*. This is a colorimetric test method in which the intensity of the color in the reagent can be used to estimate the phenol

concentration. In most cases, a clear result indicates no phenol in the sample, and an orange tint indicated a positive detection of phenol.

Because of the equipment and reagents used in the phenol test, the phenol test was conducted in the office at the end of the day. No dissipation of the phenol was expected within 24-48 hours of collecting the sample.

Results

None of the samples tested positive for phenol, so none of the samples were considered suspect due to phenol.

POTENTIAL ILLICIT DISCHARGES

After examining the presence of physical indicators at each outfall and any chemical indicators present in the stormwater samples, each outfall was assigned one of the following classifications, in order of increasing likelihood of the presence of current or past illicit discharges:

- Unlikely no significant physical or chemical evidence of current or past illicit discharge
- Potential presence of physical and/or chemical indicators, but no strong visible evidence
- Obvious visible and/or strong chemical evidence of current or past illicit discharge

Of the 97 inspected outfalls, 88 were classified as unlikely and 9 were classified as potential. The outfalls that were classified as anything other than "unlikely" are summarized in the table below and discussed in more detail in the following sections. A map showing the locations of these outfalls is included in Appendix C.

Outfall	Classification	Reason	
		Persistent gross solids in upstream manhole (also present in 2010	
01-132	Potential	and 2011).	
		Persistent gross solids in upstream manhole (also present in 2009,	
01-520	Potential	2010 and 2011).	
02-322	Potential	Elevated ammonia and sewer odor; elevated pH in 2011.	
		Persistent gross solids in upstream manhole (also present in 2009,	
03-22	Potential	2010 and 2011).	
		Persistent gross solids in upstream manhole (also present in 2009,	
03-35	Potential	2010 and 2011).	
06-829	Potential	Persistent gross solids in upstream manhole.	
06-2241	Potential	Elevated ammonia (3 ppm) in upstream manhole.	
13-1716	Potential	Elevated detergent (1.2 mg/L) and ammonia (3 ppm) in manhole.	
16-1508	Potential	Elevated ammonia (3 ppm) in upstream manhole.	

 Table 4 - Outfalls with elevated illicit discharge classifications

The number of outfalls identified with potential illicit discharges slightly less than 2011. A chart showing the number of outfalls inspected over the past four years (starting with the initial screening in 2009) and the number of potential or obvious illicit discharges is shown in Figure 13.



Figure 13 - Illicit discharge potential of inspected outfalls

Upstream Manholes with Significant Floatable Debris

During the 2011 ongoing screening program, 11 upstream manholes contained significant amounts of floatable debris (gross solids), including plastic bottles, foam packaging, and other solid waste, and were classified as potential illicit discharges. This effect was most pronounced at manholes upstream of a fully-submerged outfall, where the storm sewer pipes within the manhole were also fully-submerged. In these cases, any floatable debris traveling along the top of the storm sewer pipe will enter the manhole, and will remain suspended in the manhole pool, as they are not able to escape through the submerged outlet pipe. In these cases, the submerged manhole acts as a trap for much of the floatable debris.

While some may not consider gross solids a true illicit discharge, it does meet the definition of an illicit discharge, since it is a substance present in the discharge that is not comprised entirely of stormwater. In most cases, there will be one or more access points which allow the debris to enter the MS4. Because of this, the presence of significant floatable debris in upstream manholes caused the illicit discharge potential of the outfall to be raised to "potential." Upstream manholes with isolated solid waste or debris (generally three or fewer pieces) are not included in this list, and were not considered potential illicit discharges.

These manholes were rescreened in June 2012, along with the upstream manholes for the outfalls in the 2012 ongoing screening program. A list of manholes with debris was provided to the City so the debris could be removed prior to conducting the ongoing screening in September. If additional debris did not accumulate prior to the ongoing screening, the illicit discharge potential of the outfall was considered "unlikely." If the debris was still present or additional debris had accumulated, the outfall was classified as "potential."
Upstream manholes that were classified as "potential" sources of illicit discharge due to significant floatable debris in 2011 are shown in Table 5. The June 2012 prescreening results are also shown, along with the September ongoing screening results (if applicable). Of the 11 manholes that were rescreened due to floatable debris in 2011, 4 manholes still had sufficient debris to be classified as "potential" illicit discharges. In some cases, it appears that the manholes were not cleaned. In other cases, the manholes appeared to accumulate new debris.

In addition to the four manholes that continued to be classified as "potential" sources from 2011, one manhole was identified from the 2012 ongoing screening district. That manhole is also listed in Table 5, along with the photos from the 2012 prescreening and ongoing screening.

Note that in some cases, sediment and/or vegetation falls into the manhole when the manhole cover is removed, and those materials also appear in the photos. The severity of the floatable debris is based on the presence of the original debris and solid waste.

Manhole (City ID)	2010 Ongoing Screening (October 2010)	2011 Manhole Prescreening (May 2011)	2011 Ongoing Screening (October 2011)	2012 Ongoing Screening (June 2012)	2012 Repeat Screening (September 2012)	2012 IDDE Potential				
Manholes fro	Manholes from 2011 Ongoing Screening Program									
01-132 US1 <i>(01-132)</i>	1.22.2018 10.05	Not screened due to traffic		BAZENZELE 16:28		Potential				
01-520 US1 <i>(01-520)</i>	E -22. 2010 (724)			Pirzetz 18:24		Potential				
02-357 US1 <i>(02-357)</i>						Unlikely				
03-22 US1 (03-22)						Potential				

Manhole (City ID)	2010 Ongoing Screening (October 2010)	2011 Manhole Prescreening (May 2011)	2011 Ongoing Screening (October 2011)	2012 Ongoing Screening (June 2012)	2012 Repeat Screening (September 2012)	2012 IDDE Potential
03-35 US1 <i>(N/A)</i>		PERFECT (127)				Potential
06-1694 US1						Unlikely
09-101c US1 <i>(09-47)</i>		Not screened due to traffic				Unlikely
11-512 US1 <i>(11-512)</i>						Unlikely

Manhole (City ID)	2010 Ongoing Screening (October 2010)	2011 Manhole Prescreening (May 2011)	2011 Ongoing Screening (October 2011)	2012 Ongoing Screening (June 2012)	2012 Repeat Screening (September 2012)	2012 IDDE Potential
16-142 US1						Unlikely
16-201 US1						Unlikely
16-463 US1						Unlikely
Manholes fro	om 2012 Ongoing Screening	Program				
06-829 US1 <i>(06-831)</i>						Potential

It is recommended that the outfalls with significant floatable debris be reinspected during the 2013 ongoing screening program. These manholes should be cleaned several months prior to the next outfall screening. By doing this, it will be possible to determine if the debris is from a prior discharge, or if the problem is ongoing. If it is determined that it is an ongoing problem, upstream inlets, especially those located near dumpsters or other solid waste storage areas, should be closely examined in an attempt to locate the source of the discharge. These areas could then be targeted for public education campaigns.

A map showing the locations of the manholes with floatable debris is included in Appendix D.

Outfall 02-322 (Rahr Avenue Manhole)

Outfall 02-322 consists of a 15-inch vitrified clay pipe that discharges into Lake Winnebago at the end of Rahr Avenue. During the 2011 ongoing screening inspection (October 3, 2011), the outfall was fully submerged and could not be located. As a result, the screening was conducted at the first upstream manhole, located at the end of Rahr Avenue.



Figure 14 - Upstream manhole 02-322 US1 (2011)

The upstream manhole was partially submerged, with an 8-inch deep pool at the bottom of the manhole. A sample was collected from the pool, and the pH of the sample was 5.21, which is below typical range for pH in stormwater samples.



Figure 15 - Upstream manhole 02-322 US1 (2011)

The next upstream manhole (02-322 US2) was inspected. There was no water present in the manhole, so the flow could not be tracked upstream.

The upstream manhole (02-322 US1) was reinspected on October 4, 2011. The pH was measured at 5.24, which was similar to the first sample. Once again, there was no water present in the next upstream manhole. It was recommended that this outfall be cleaned and rescreened during the 2012 ongoing screening program to determine if the low pH was an isolated incident or an ongoing discharge.

The outfall and upstream manhole was rescreened as part of the gross solids pre-screening on June 20, 2012. The upstream manhole still had significant debris and sediment, and had a strong sewer odor. The sample from the manhole pool had an ammonia concentration greater than 6 ppm (the upper limit of the test strips).



Figure 16 - Upstream manhole 02-322 US1 (6/20/2012)

The Illicit Discharge Coordinator was informed of the condition of this manhole on June 26, 2012, along with a recommendation to vacuum this segment of storm sewer. It was also recommended that the manhole be rescreened later in the year, after it was cleaned out.

The manhole was rescreened on September 27, 2012. It appeared that the amount of gross solids in the manhole had been reduced, although there was still a moderate amount of debris present. The sewer odor was still easily detected, and the sample from the manhole pool had an ammonia concentration of 3 ppm.



Figure 17 - Upstream manhole 02-322 US1 (9/27/2012)

The next upstream manhole (02-321) was inspected, and similar to 2011, it was dry, although it had significant sediment.



Figure 18 - Upstream manhole 02-321 (9/27/2012)

Based on this observation, it appears that the ammonia is entering the storm sewer between manholes 02-321 and 02-322.

A sanitary sewer manhole was observed in Rahr Avenue between the two manholes. The flowline of the manhole had a small crack, and some of the flow appeared to be escaping through this crack. This could be a potential source of the ammonia in storm manhole 02-322.

The Illicit Discharge Coordinator was informed of the findings of the investigation on October 1, 2012. The report suggested that the upstream manholes be cleaned out, and that the crack in the sanitary sewer manhole be investigated to determine if it is leaking into the storm sewer. It

is recommended that this manhole continue to be screened until the source of the ammonia and sewer odor is identified and eliminated.

Additional maps and information related to this investigation are included in Appendix D.

Outfall 06-2241 (Knapp Street)

Outfall 06-2241 is a concrete box culvert under N. Knapp Street that discharges to Campbell Creek from the south. It is located immediately west of the wastewater treatment plant and city garage. It was installed in 2011, and replaces former outfalls 06-15 and 06-560.



Figure 19 - Outfall 06-2241 (6/13/2012)

The outfall was initially screened on June 13, 2012 as part of the gross solids pre-screening. At that time, the outfall was partially submerged, and a sample was collected from the first upstream manhole. This sample had a faint sewage odor, and had an ammonia concentration of 3 ppm. The manhole was resampled on June 20, and had an ammonia concentration of 0.5 ppm and no odor. A sample was also collected from the receiving water, upstream of the outfall, and this stream sample also had an ammonia concentration of 0.5 ppm.

It was noted that the receiving water had algae and other decaying vegetation, which could cause elevated ammonia concentrations in the submerged pool. The outfall was rescreened on September 27. The receiving water was clear, and the upstream manhole sample had no ammonia or odor.

The elevated ammonia is likely the result of decaying vegetation in the receiving water, which is backing up into the upstream manhole. However, due to the proximity to the wastewater treatment plant and other industrial properties, it is recommended that this outfall be rescreened in 2013 to determine if elevated ammonia levels are present.

Additional maps and information related to this investigation are included in Appendix D.

Outfall 13-1716 (Victory Car Wash)

"Outfall" 13-1716 consists of an 18-inch PVC pipe on the south side of the detention basin on Capital Drive. The pipe is located immediately east of outfall 13-1715, and was assumed to be another pond inlet (supplemental outfall) during the field screening on June 12, 2012. Upon further review, it was discovered that this pipe is actually the pond outlet, and the adjacent manhole that was screened was the first downstream manhole.



Figure 20 - Outfall 13-1715 (right) and pond outlet 13-1716 (left)

Because the pipe was partially submerged, the manhole was screened. Upon opening the manhole, a black pool was observed along the flowline, and a petroleum odor was noted. A sample collected from the pool had an ammonia concentration of 3 ppm and a detergent concentration of 1.3 mg/L. The Illicit Discharge Coordinator was notified of the discovery on June 12.



Figure 21 - Manhole 13-1716 US1 (6/12/2012)

OMNNI met with the Illicit Discharge Coordinator on June 13 to investigate the discharge. It appeared that the PVC pipe discharging to the manhole was coming from the trench drain at the exit of the Victory Car Wash, immediately east of the pond. A sample was collected from the water in the trench drain, but there was too much turbidity interference to get a good reading. Another sample was collected from the manhole pool, which had a detergent concentration of 1.3 mg/L. A sample collected from the pond had a detergent concentration of 0.6 mg/L.



Figure 22 - Trench drain at Victory Car Wash

Based on the information collected during the June 13 investigation, it appeared that the detergent was likely coming from the trench drain at Victory Car Wash. The City planned to have the plumbing inspector investigate the trench drain connection. Because parts of the parking lot drain to this location, it may not be possible to connect this drain to the sanitary sewer due to infiltration/inflow issues.

It is recommended that this outfall be added to the 2013 ongoing screening program to determine if the detergent discharge is still occurring. If it is determined that the trench drain is connected to the storm sewer, the outfall should continue to be monitored after the trench drain is disconnected to verify that the drain was indeed the source of the detergent.

Additional maps and information related to this investigation are included in Appendix D.

Outfall 16-1508 (N. Westfield Street)

Outfall 16-1508 consists of a 54-inch reinforced concrete pipe that discharges to Sawyer Creek from the south. The outfall is located approximately 60 feet east of the Westfield Street bridge. The outfall was previously named 16-487 before it was reconstructed in 2011.



Figure 23 - Outfall 16-1508 (5/30/2012)

The outfall was initially screened on May 30, 2012 as part of the gross solids prescreening. Because the outfall was partially submerged, the upstream manhole was screened. A sample was collected from the submerged pool in the manhole, and the sample had an ammonia concentration of 1 ppm. The Illicit Discharge Coordinator was informed of the detection on May 30, 2012.

The manhole was resampled on June 6, 2012. The sample collected on this date did not have ammonia. No additional investigation was conducted for this outfall at that time, but it was decided that the outfall should be checked one more time before the end of the year.

The outfall was rescreened on September 27, 2012. At that time, the Sawyer Creek stream channel was under construction. The outfall was still partially submerged, and a sample was collected from the upstream manhole.



Figure 24 - Outfall 16-1508 (9/27/2012)

The sample collected from the upstream manhole had an ammonia concentration of 3 ppm, which was higher than the May 30 sample, and warranted tracing of the source. The various manholes upstream of the outfall were sampled in an attempt to isolate the segment of the storm sewer where the ammonia was being introduced.

After collecting samples from the various upstream manholes, it was determined that the ammonia concentration was 3 ppm at manholes 16-1508 and 16-1504. However, at the next upstream manhole (16-430), no ammonia was detected. It appeared that the ammonia was being introduced between manholes 16-460 and 16-1504.

The land use in this area consists of multifamily residential property on the west side of Westfield Street, and Red Arrow Park on the east side of the street. A building housing the restrooms for the park is located immediately to the east of this segment. Based on the elevated ammonia levels in the segment adjacent to the park restroom building, this was identified as a potential source. Additionally, Red Arrow Park is a former landfill site, and infiltration of groundwater from the site could be another potential source.



Figure 25 - Park restroom building upstream of 16-1504

The Illicit Discharge Coordinator was notified of the findings on September 28. At that time, OMNNI recommended that the storm sewer segment between manholes 16-460 and 16-1504 be televised to inspect for potential leaks or cross connections, particularly in the area of the restroom building.

It is recommended that this outfall and upstream manhole continue to be rescreened until the source of the ammonia is identified. After the source is identified and remedied, an additional screening should be conducted to verify that the ammonia is no longer present in the discharge.

Additional maps and information related to this investigation are included in Appendix D.

INVESTIGATIONS DUE TO ILLICIT DISCHARGE REPORTS

In addition to the routine outfall screenings that were conducted as part of the 2012 ongoing screening program, OMNNI also investigated three potential illicit discharges at the City's request. These investigations were prompted by reports of unusual conditions near the City's outfalls or within the storm sewer system. These three investigations are not included in the statistics in this report, but the descriptions of the investigations have been included for general reference.

Outfall 14-582 (W. 28th Avenue)

Outfall 14-582 consists of a 27-inch reinforced concrete pipe that discharges to the stream at the east end of W. 28th Avenue. The outfall was investigated in 2011 due to an illicit discharge of ammonia and chlorine from the Hydrite Chemical facility at the west end of W. 28th Avenue. The cross-connection was identified and remedied, and subsequent inspections showed no discharge from the facility. (Additional information is available in the *City of Oshkosh 2011 Ongoing Screening Summary Report* (March 6, 2012).

As recommended in the 2011 Summary Report, the outfall was rescreened as part of the 2012 ongoing screening program. The outfall was screened on June 20, 2012. No abnormal physical or chemical indicators were observed at the outfall. The upstream manhole near Hydrite Chemical was also screened. The manhole was wet at the time of the inspection, but there was no flow observed. Based on the observations, it appeared that the illicit discharge from 2011 had been resolved.



Figure 26 - Outfall 14-582 (6/20/2012)



Figure 27 - Manhole 14-582 US1 (6/20/2012)

The City contacted OMNNI on September 5, 2012 with a request to investigate a report of a black discharge into the stream near the outfall pipe. OMNNI investigated the outfall on September 5. Upon arriving, a black pool was observed in the stream around the outfall pipe, and a strong odor was present in the surrounding area. The odor was similar to the odor associated with anaerobic decomposition.



Figure 28 - Black discharge at outfall 14-582 (9/5/2012)

The upstream manholes along W. 28th Avenue were inspected. Evidence of the discharge was not observed in any of the upstream manholes. No apparent discharge to the storm sewer was identified.

The upstream and downstream extents of the plume were located. The plume appeared to extend approximately 280 feet upstream from the outfall, and 350 feet downstream from the outfall. While identifying the extents of the plume, the shoreline was searched for potential unidentified outfalls. No additional outfalls were located.

The samples collected from the stream did not contain any abnormal chemical indicators to help identify the substance in the stream, other than a low pH. A sanitary sewer line and lift station was observed in the area around the outfall, so OMNNI recommended that the City investigate if there were any leaks in the sanitary sewer or lift station. Another potential source would be an illegal dumping of material from the bridge. OMNNI notified the City of the inspection results in an email on September 5.

The outfall was re-screened on September 27. At that time, there was no trace of the black discharge in the stream.

Based on this discharge and the history of illicit discharges at this outfall, it is recommended that this outfall be rescreened during the 2013 ongoing screening program.

Additional information and maps related to this investigation are included in Appendix E.

Outfall 02-184 (Legion Place)

The City contacted OMNNI on December 4, 2012 with a request to investigate a report of suds in Lake Winnebago near outfall 02-184. The City had received a complaint about suds along the shoreline from a resident on Legion Place on November 9, 2012. The resident had stated that the suds were common during the summer of 2011, and that they were again present. The City investigated the report, but no suds were observed during the investigation. The caller was advised to notify the City if the suds reappeared. The resident contacted the City on November 30 to report that the suds were present again at that time.

OMNNI investigated the area around the outfall on December 6. Outfall 02-184 consists of an 8inch clay pipe that is fully submerged and could not be located. The first upstream manhole (02-184) is located directly west of the outfall on Legion Place, and has two short segments to the north and south of the manhole. The actual drainage basin only consists of five residential parcels along the shoreline. A separate storm sewer pipe runs parallel to this branch in Legion Place, and discharges at outfall 02-357, north of outfall 02-184.

OMNNI met with the resident that reported the suds to the City. Some suds were present on the shoreline near the outfall. Samples of the suds and lake water were collected near the outfall and at two locations along the shoreline north of the outfall. Because the outfall was submerged, a sample was also collected from the pool in the upstream manhole.



Figure 29 - Suds along shoreline north of outfall 02-184



Figure 30 - Pool in upstream manhole 02-184 US1

The suds observed on December 6 were consistent with the appearance of the suds that can be formed by natural surfactants in surface water. However, the sample that was collected from the pool in the upstream manhole had a detergent concentration of 0.2 mg/L, and an ammonia concentration of 3-6 ppm. These chemical indicators suggest that sanitary sewage may be present in the storm sewer, which could be causing the suds in the lake.



Figure 31 - Ammonia test from upstream manhole 02-184 US1



Figure 32 - Detergent test from upstream manhole 02-184 US1

Based on the sample results, OMNNI recommended that the City televise the entire storm sewer branch to locate any potential sanitary cross connections. An email was sent to the Illicit Discharge Coordinator on December 6 summarizing the results and the recommended action. After the storm sewer was televised, it appeared that the storm sewer outfall had been abandoned. The City will conduct additional follow-up to check for connections.

It is recommended that this outfall be screened again in 2013 to determine if the discharge of ammonia and detergent is ongoing.

Additional information and maps related to this investigation are included in Appendix E.

Outfall 13-1758 (Washburn Street)

The City contacted OMNNI on December 11, 2012 to report that city crews had encountered oil in a storm sewer manhole while surveying the area around Washburn Street just south of STH 44, and requested that OMNNI assist with identifying the source of the oil. OMNNI conducted an investigation on December 12 to identify the source of the oil and define the downstream extent of the contamination.



Figure 33 - Oil on survey rod from storm manhole 13-1743 (12/11/2012)

With assistance from two city survey staff, the storm sewer branch for outfall 13-1758 was investigated. Outfall 13-1758 is a reinforced concrete pipe that discharges to the USH 41 southbound right-of-way, south of STH 44. The pipe was partially submerged, and an oil sheen was present in the pool at the end of the pipe. After discharging from the outfall, the flow followed a swale in the USH 41 right-of-way, and crossed under STH 44 through another concrete pipe. This pipe discharged to the USH 41 right-of-way north of STH 44. There is a small pool at the discharge of this culvert pipe, which also contained an oil sheen. The pool stopped a short distance north of the pipe, and no additional flow or sheen was observed.



Figure 34 - Pool at end of outfall 13-1748 (12/12/2012)



Figure 35 - Downstream extent of oil sheen

Various branches of the storm sewer system upstream of outfall 13-1748 were investigated to determine the extent of the oil, and to identify potential sources. Oil was present in the detention basin on the east side of Washburn Street, and the heaviest concentration of oil seemed to be in manhole 13-1743, which received flow from the swale on the west side of Washburn Street.



Figure 36 - Drainage swale pipe connection to manhole 13-1743

A sample was collected from manhole 13-1743. No chemical tests were conducted on this sample, as it was obviously a petroleum product. Based on the odor, it appeared to be diesel fuel or a heavier oil.



Figure 37 - Sample collected from manhole 13-1743

After investigating the area around the drainage swale, a 4-inch PVC pipe was located coming from Quent's service center. When the pipe was exposed, water and petroleum discharged to the drainage swale. The appearance and odor from the discharge was consistent with the oil that was observed in the downstream manholes.

The Illicit Discharge Coordinator was called at approximately 12:00 pm and notified of the discovery. OMNNI marked the pipe location and left the site. The Illicit Discharge Coordinator visited the site during the afternoon and had the Hazardous Materials Response Team deploy oil containment booms in the area.

The pipe was identified as the sump pump discharge from Quent's Service Center. The Fire Chief investigated the inside of the building on December 12, and observed oil on the surface of the sump pit. The City reported the discharge to the WDNR spills hotline.

The WDNR sent a letter to the owner of Quent's Service Center on December 27 informing them of the reported contamination and their responsibility to restore the site. From this point forward, the WDNR will be leading the investigation.

It is recommended that this outfall be rescreened during the 2013 ongoing screening program to monitor the progress of the cleanup and check for any additional discharges.

Additional information and maps related to this investigation are included in Appendix E.

OUTFALL CONDITION ASSESSMENTS

While not required for the illicit discharge field screening, OMNNI inspectors noted the presence of any structural damage, significant deposition or erosion, or graffiti at the outfalls. This information can be passed along to the appropriate personnel for any necessary action.

Damage

Eighteen outfalls showed signs of damage that may require attention in the near future. Common types of damage included corroded metal pipes and aprons, displaced concrete apron sections, and damaged concrete pipes and abutments.

The outfall damage that was observed during the ongoing screening program is summarized in Table 6.

Outfall	Severity	Description
06-3	Minor	Corrosion on pipe and apron
06-1083	Minor	Damaged concrete pipe
06-1132	Minor	Apron displacement
06-1149 US1	Minor	Concrete damage in manhole
06-1814	Minor	Concrete spalling on apron
06-961	Minor	Undercut outfall pipe
06-977	Minor	Apron displacement and undercut
13-1109	Minor	Damaged plastic pipe
13-1715	Moderate	Damaged PVC pipe and corroded and undercut apron
13-3127a	Minor	Apron displacement
13-337	Moderate	Corroded pipe
13-95	Moderate	Corroded pipe
14-676	Minor	Corroded pipe
16-622	Minor	Corroded and crushed pipe
16-629	Minor	Corroded pipe
16-826	Moderate	Corroded pipe and damaged concrete
16-830	Minor	Corroded pipe and damaged concrete
16-941	Minor	Displaced Grate

Table 6 - Outfalls with damage

The outfall damage is shown in the photos that follow. The locations of the damaged outfalls are shown on the map in Appendix C.



Figure 38 - Outfall 06-3 corrosion on pipe and apron (minor damage)



Figure 39 - Outfall 06-1083 damaged concrete pipe (minor damage)



Figure 40 - Outfall 06-1132 apron displacement (minor damage)



Figure 42 - Outfall 06-1814 concrete spalling on apron (minor damage)



Figure 44 - Outfall 06-977 apron displacement and undercut (minor damage)



Figure 41 - Manhole 06-1149 US1 concrete damage (minor damage)



Figure 43 - Outfall 06-961 undercut outfall pipe (minor damage)



Figure 45 - Outfall 13-1109 damaged plastic pipe (minor damage)



Figure 46 - Outfall 13-1715 damaged plastic pipe and corroded and undercut apron (moderate damage)



Figure 48 - Outfall 13-337 corroded pipe (moderate damage)



Figure 50 - Outfall 14-676 corroded pipe (minor damage)



Figure 47 - Outfall 13-3127a apron displacement (minor damage)



Figure 49 - Outfall 13-95 corroded pipe (moderate damage)



Figure 51 - Outfall 16-622 corroded and crushed pipe (minor damage)



Figure 52 - Outfall 16-629 corroded pipe (minor damage)



Figure 54 - Outfall 16-830 corroded pipe and damaged concrete(minor damage)



Figure 53 - Outfall 16-826 corroded pipe and damaged concrete (moderate damage)



Figure 55 - Outfall 16-941 displaced grate (minor damage)

Deposition

A total of 19 outfalls showed minor, moderate or significant deposition at the end of the outfall pipe or channel. As deposition increases, flow may become restricted in the pipe or downstream channel. Outfalls with moderate or severe deposition may need to undergo maintenance to remove the deposited sediment and debris and maintain proper flow.

The outfall deposition that was observed during the ongoing screening program is summarized in Table 7.

Outfall	Severity	Description
03-35 US1	Minor	3" of sediment at bottom of manhole (estimated by probing)
06-1083	Minor	1" of sediment on apron
06-1132	Minor	3" of sediment and rocks at end of apron
06-1136	Moderate	4" of sediment and rocks in pipe and apron

Table 7 - Outfalls with deposition

Outfall	Severity	Description
13-1716	Moderate	8" of sediment and vegetation on apron
13-2666	Moderate	6" of sediment and rocks on apron
13-2768	Minor	3" of sediment on apron
13-2768 US1	Minor	1" of sediment at bottom of curb inlet
13-2886	Minor	1" of sediment in pipe and apron
13-3097	Minor	2" of sediment and vegetation on apron
13-3099	Moderate	6" of sediment and vegetation on apron
13-3243	Moderate	6" of sediment and debris on apron
13-948 US1	Minor	Gravel and stones at bottom of manhole (below pipe flowline)
13-95 US1	Moderate	8" of sediment at bottom of manhole (estimated by probing)
16-660	Minor	1" of sediment on apron
16-828	Minor	3" of sediment and rocks on apron
16-93 US2	Moderate	8" of sediment at bottom of manhole (estimated by probing)
16-995	Moderate	8" of sediment and vegetation at end of apron
STH21_Out	Minor	3" of sediment on apron

The outfall deposition is shown in the photos that follow. The locations of the outfalls with deposition are shown on the map in Appendix C.



Figure 56 - Minor deposition at manhole 03-35 US1



Figure 57 - Minor deposition at outfall 06-1083



Figure 58 - Minor deposition at outfall 06-1132



Figure 60 - Moderate deposition at outfall 13-1716



Figure 62 - Minor deposition at outfall 13-2768



Figure 59 - Moderate deposition at outfall 06-1136



Figure 61 - Moderate deposition at outfall 13-2666



Figure 63 - Minor deposition at inlet 13-2768 US1



Figure 64 - Minor deposition at outfall 13-2886



Figure 66 - Moderate deposition at outfall 13-3099



Figure 68 - Minor deposition at manhole 13-947 US1



Figure 65 - Minor deposition at outfall 13-3097



Figure 67 - Moderate deposition at outfall 13-3243



Figure 69 - Moderate deposition at manhole 13-95 US1



Figure 70 - Minor deposition at outfall 16-660



Figure 72 - Moderate deposition at manhole 16-93 US2



Figure 71 - Minor deposition at outfall 16-828



Figure 73 - Moderate deposition at outfall 16-995



Figure 74 - Minor deposition at outfall STH21_Out

Erosion

Four of the outfalls showed signs of erosion at the end of the outfall pipe or channel. Most of the outfalls with minor erosion could be repaired with minor landscaping repairs. Those outfalls

with moderate or severe erosion may need additional structural reinforcement, such as turf reinforcement mat or riprap.

The erosion that was observed during the ongoing screening program is summarized in Table 8.

Outfall	Severity	Description
06-961	Minor	Minor erosion downstream of outfall pipe
06-977	Minor	Minor erosion at end of outfall pipe
16-622	Minor	Minor erosion at end of outfall pipe
16-629	Minor	Minor erosion at end of outfall pipe

Table 8 - Outfalls with erosion

The outfall erosion is shown in the photos that follow. The locations of the outfalls with erosion are shown on the map in Appendix C.



Figure 75 - Minor erosion near outfall 06-961



Figure 77 - Minor erosion near outfall 16-622



Figure 76 - Minor erosion near outfall 06-977



Figure 78 - Moderate erosion near outfall X47-15B

Graffiti

Graffiti was observed in or around three outfalls. The graffiti was relatively minor, but should probably be monitored to make sure that it does not become more severe.

The graffiti that was observed during the ongoing screening program is summarized in Table 9.

Table	9 -	Outfalls	with	graffiti
I GOIC	-	outiuns		Branner

Outfall	Severity	Description
13-2957	Minor	Graffiti painted on concrete behind wingwall
16-826	Moderate	Graffiti painted on bridge abutment
16-830	Minor	Graffiti painted on bridge abutment

The graffiti is shown in the photos that follow. The locations of the outfalls with graffiti are shown on the map in Appendix C.



Figure 79 - Graffiti near outfall 13-2957



Figure 80 - Graffiti near outfall 16-826



Figure 81 - Graffiti near outfall 16-826

CONCLUSION

OMNNI assisted the City of Oshkosh with the 2012 ongoing screening of the MS4 outfalls, as required by the MS4 permit. A total of 97 outfalls were screened, along with upstream monitoring locations when necessary. Sixteen of those outfalls were included due to potential illicit discharges identified in the 2011 screening program. Of those 97 outfalls, 88 exhibited



unlikely potential of past illicit discharges and 9 were classified as "potential." These results are summarized in Figure 82:

Figure 82 - Illicit discharge potential

Those outfalls classified as "potential" or "obvious" should be given special attention in the ongoing screening program.

In addition, OMNNI investigated three potential illicit discharge incidents at the request of the City. In all three cases, evidence of potential illicit discharges was documented.

The ongoing screening also identified 18 outfalls with structural damage, 19 with deposition, 4 with noticeable erosion, and 3 with graffiti. While none of these posed an immediate danger, the City will likely want to address these issues as part of the regular storm sewer system maintenance.

The ongoing screening program will continue in 2013 with the inspection of approximately 85 outfalls, plus the 9 outfalls from the 2012 program that were recommended for rescreening. At the conclusion of the 2013 ongoing screening, all identified major, minor and supplemental outfalls in the City will have been inspected at least once. Future outfall screenings may continue the existing four-year cycle, or be modified with a revision and subsequent WDNR approval of the Ongoing Screening Program.

STANDARD OF CARE

The conclusions presented in this report were arrived at using generally accepted engineering practices. The conclusions presented herein represent our professional opinions, based on data collected at the time of the inspections, at the specific inspection locations discussed in this report. Conditions at other locations in the City or at different times may be different than

described in this report. The scope of this report is limited to the specific project and the inspection locations described herein.

Prepared By:

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Reviewed By:

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Appendix A MS4 Outfall Maps

- A-1 MS4 Outfall Map
- A-2 2012 Ongoing Screening District Map



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Appendix B Outfall Inspection Reports

City of Oshkosh

Outfall ID: 01-132

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material:

Cast Iron

City ID: N/A

Drainage Basin: Division St

-Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precision:Desktop mapping estimate✓Not Physically Located

09/27/2012 09:55

o20120927085528.JPG

Outfall Notes:

Storm sewer from Jackson St discharges to river from north under bridge. Outfall not located - pipe info from MS4 map.

County Coo	ordinates:	State F
Northing:	472,365	Northir
Easting:	791.802	Easting

tate Plane Coordinates: orthing: 737,895 asting: 2,351,892





Inspection	Date: 9/27	/2012 9:51:28 AM Ir	nspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	ription: Sub	merged (not located)	Notes: Outfal	fully submerged; scre	eened upstream			1.1.1
Submerged	: Fully	Depth (in):	at 01-1	132 US1.		Out		A A A A A A A A A A A A A A A A A A A
Illicit Disch	arge Potentia	al: Potential	Field F	ollow-up Of	fice Follow-up		+	a series
Floatables:	None	Petrol.	. Sheen 🗌 Suds	Sewage Al	gae 🗌 Other			
Odor:	None	Petrole	eum 🗌 Musty	🗌 Sewage 🗌 Cł	nlorine 🗌 Other	Loca	teo	
			Solvent 🗌 Fishy	Sulfur Fr	agrant	1 Actions		012 08:55
Turbidity:	None							
Color:	None					0201209270855	534.JP	²G
Gross Solid	s: None	Litter	Debris	Sediment 🗌 🤇	Other	Sampling Results		
Vegetation:	None	Inhibite	ed 🗌 Excessiv	/e		Sample Location:		
Benthic Gro	wth: None	Green	Brown			Sample ID:		
Stains:	None	Flow L	ine 🗌 Oil	Rust Stains		Time Collected		
			sion 🗌 Paint	Other		Total Chlorine (field):		ррт
Non-illicit:	None	Natura	al Sheen 🗌 Nati	ural Suds/Foam		Free Chlorine (field):		ррт
- Physical	Condition Ass	essment				Total Copper (field):		ppm
Oreffiti	Name	cooment				Ammonia (field):		ррт
Gramu:	None					pH (field):		units
Erosion:	None	Develle (he)				Temperature:		°F
Depositio	n: None	Deptn (in):				Conductivity:		µS/cm
Damage:	None	Displacement	Undercut	Crushed		Detergents:		mg/L
			Cracks/Structural	Damage		Phenol:		mg/L
Outfall	ID:	01-132						
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Inspection Date: 6/21/	2012 10:35:50 AM Ir	spector: JCW	Inspection Type:	Other	Previous Rainfall (hrs):	0-24
Flow Description: Subr	merged (not located)	Notes: Gross	solids pre-screening.	Outfall fully		N 0 0 0 . 0.
Submerged: Fully	Depth (in):	Subme US1.	rged; screened upste	am at 01-132	Out	
Illicit Discharge Potentia	I: Potential	Field F	ollow-up 🗌 O	ffice Follow-up		ot and a
Floatables: None	Petrol.	Sheen 🗌 Suds	Sewage A	lgae 🗌 Other		
Odor: None	Petrole	eum 🗌 Musty olvent 🗌 Fishy	Sewage C	hlorine 🗌 Other ragrant	Loca	ted
Turbidity: None						06/21/2012 10:27
Color: None					020120621092	756.JPG
Gross Solids: None	Litter	Debris	Sediment	Other	Sampling Results	
Vegetation: None	🗌 Inhibite	ed 🗌 Excessiv	ve		Sample Location:	
Benthic Growth: None	Green	Brown			Sample ID:	
Stains: None	Flow L	ine 🗌 Oil	Rust Stains		Time Collected	
		ion 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit: None	Natura	I Sheen 🗌 Natu	ıral Suds/Foam		Free Chlorine (field):	ppm
Physical Condition Asse	essment				Total Copper (field):	ppm
Graffiti: None					Ammonia (field):	ppm
Erosion: None					pπ (iieiu): Temperature:	units
Deposition: None	Depth (in):				Conductivity.	11S/cm
Damage: None	Displacement D	Indercut	Crushed		Detergents:	ma/l
		Cracks/Structural [Damage		Phenol:	mg/L
			I			-

Inspection	Date: 10/1	1/2011 2:32:00 PM	nspector:	JCW	Inspection T	ype: C	Ongoing	Previous Rai	nfall (hrs):	72+	
Flow Desci Submerged	ription: Sub : Fully	merged (not located) Depth (in):	Notes:	2010 sc manhole screene	reening follow-u e rescreened. A ed.	ip. Ups Actual of	tream utfall not		Outf	alı	1
Illicit Disch	arge Potentia	al: Potential		Field Fo	llow-up	Office	e Follow-up		No	t	
Floatables:	None	Petrol	. Sheen 🗌	Suds	Sewage	Algae	e Other	·			
Odor:	None	Petrol	eum 🗌	Musty	Sewage	Chlo	rine 🗌 Other	·	-ocai	te	
Turbidity:	None		Solvent	Fishy	Sulfur	Fragi	rant	Photo	Not A	vai	lable
Color:	None										
Gross Solid	s: None	Litter		Debris	Sediment	Oth	ner	Sampling Resu	ılts —		
Vegetation:	None	🗌 Inhibit	ed 🗌 E	Excessive	9			Sample Locat	ion:		
Benthic Gro	wth: None	Greer	ı 🗌 E	Brown				Sample ID:			
Stains:	None	Flow I	_ine 🗌 (Dil	Rust Stains	S		Time Collecte	d		
			sion 🗌 F	Paint	Other			Total Chlorine	(field):		ppm
Non-illicit:	None	Natura	al Sheen	Natur	al Suds/Foam			Free Chlorine	(field):		ррт
- Physical	Condition Ass	essment						Total Copper	(field):		ррт
Graffiti	None							Ammonia (fiel	d):		ppm
Frosion:	None							pH (field):			or
Depositio	n: None	Depth (in): 0						Conductivity			°F uC/am
Damage:	None		Undorout		rushed			Detergente:			μ3/cm ma/l
			Cracks/Str	uctural Da	amage			Phenol:			mg/L

Outfall	ID:	01-132
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Inspection [Date: 10/20	0/2010 10:13:00 AM Ir	spector:	JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descri Submerged:	ption: Subn Fully	nerged (not located) Depth (in):	Notes:	Outfall fully located. C 132 US1.	y submerged and Outfall screened u	not physically pstream at 01-	Out	fal	
Illicit Discha	arge Potentia	I: Potential] Field Follov	w-up 🗌 O	ffice Follow-up	Ne	ot i	
Floatables:	None	Petrol.	Sheen	Suds	Sewage 🗌 A	gae 🗌 Othe	er 🖉		
Odor:	None	Petrole	eum	Musty] Sewage 🗌 C	hlorine 🗌 Othe	er LOCA	ite	0
			olvent	Fishy	Sulfur 🗌 Fi	ragrant	12.18		
Turbidity:	None						ALC /	107	29.2018 18 13
Color:	None						02010102010	1356.jp)g
Gross Solids	: None	Litter		Debris	Sediment	Other	-Sampling Results		
Vegetation:	None	Inhibite	ed 🗌	Excessive			Sample Location:		
Benthic Grov	wth: None	Green		Brown			Sample ID:		
Stains:	None	Flow L	ine 🗌	Oil	Rust Stains		Time Collected		
			ion 🗌	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	l Sheen	Natural S	Suds/Foam		Free Chlorine (field):		ppm
- Physical (Condition Asse	essment					Total Copper (field):		ppm
	Sonulion Asse	-331110111					Ammonia (field):		ppm
Graffiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Deposition	n: None	Depth (in): 0					Conductivity:		μS/cm
Damage:	None	🗌 Displacement 🗌 l	Indercut	Crus	shed		Detergents:		mg/L
		Corrosion	Cracks/Sti	ructural Dam	age		Phenol:		mg/L

Outfall ID: 01-132 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 01-132

Odor:

Color:

Stains:

Graffiti:

Erosion:

Damage:

Deposition:

Drainage Basin: **Division St**

Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120927084522.JPG

Outfall Notes:

Upstream manhole located approx 87 ft N of outfall 01-132. Intermediate area consists of street right-ofway.

County Co	ordinates:	State Plane
Northing:	472,451	Northing:
Easting:	791,814	Easting:

e Coordinates: 737,982 2,351,902

JCW 9/27/2012 9:45:39 AM Inspection Date: Inspector: Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: 2011 gross solids follow-up. Depth not measured due to traffic. Submerged: Fully Depth (in): Illicit Discharge Potential: Potential Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927084532.JPG None ✓ Litter Gross Solids: Moderate ✓ Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: None Green Brown Sample ID: 120927-37 Flow Line Slight Rust Stains **Time Collected** Oil 09:42 Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam

Location Map



Total Copper (field):

Ammonia (field):

Temperature:

Conductivity:

Detergents:

Phenol:

pH (field):

Checked by: BDW 12/27/2012

Depth (in):

Corrosion

Displacement Undercut

Physical Condition Assessment

None

None

None

None

Crushed

Cracks/Structural Damage

0 ppm

0 ppm

units

°F 60

µS/cm

8.17

456

0 mg/L

-mg/L

Outfall ID: 01-132 US1

Inspection	Date: 6/21/	2012 10:32:01 AM	nspector: JC	W Inspe	ction Type: Oth	ner	Previous Rainfall (hrs):	0-24	4
Flow Descr	ription: Subr	nerged, indeterminate	Notes: Gr	oss solids pre-	screening.				
Submerged	: Fully	Depth (in):					1 and the second		
Illicit Disch	arge Potentia	I: Potential	Fie	eld Follow-up	Office	Follow-up			
Floatables:	None	Petrol.	Sheen 🗌 Su	ds 🗌 Sew	age 🗌 Algae	Other			
Odor:	None	Petrole	eum 🗌 Mu	isty 🗌 Sew	age 🗌 Chlorir	ne 🗌 Other		2	
	L		Solvent 🗌 Fis	hy 🗌 Sulfi	ur 🗌 Fragra	nt	the second		
Turbidity:	None						and the second second	06/21/3	1012 10:20
Color:	None						020120621092	'028.JF	ЪG
Gross Solid	s: Moderate	✓ Litter	🖌 Debi	ris 🗌 Sedi	ment 🗌 Othe	r _	Sampling Results		
Vegetation:	None	Inhibite	ed 🗌 Exce	essive			Sample Location:		
Benthic Gro	wth: None	Green	Brov	vn			Sample ID:		
Stains:	None	Flow L	.ine 🗌 Oil	Rust	t Stains		Time Collected		
			ion 🗌 Pain	t 🗌 Othe	er		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	al Sheen 🔲 I	Natural Suds/F	oam		Free Chlorine (field):		ppm
– Physical	Condition Asse	essment			7		Total Copper (field):		ppm
Oneffilie	News	Somen					Ammonia (field):		ppm
Graffiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 I	Jndercut	Crushed			Detergents:		mg/L
			Cracks/Structu	ıral Damage			Phenol:		mg/L

Inspection Date:	: 10/11/2011 2:32:4	46 PM Inspector	JCW I	nspection Type:	Ongoing	Previous Rainfall (hrs):	72+			
Flow Description	n: Submerged, inde	eterminate Notes	: 2010 screer	ing follow-up. F	loatable debris		-100			
Submerged: Ful	lly Depth (ii		1							
Illicit Discharge	Illicit Discharge Potential: Potential Field Follow-up Office Follow-up									
Floatables: None	e	Petrol. Sheen	Suds	Sewage 🗌 Al	gae 🗌 Othe	r				
Odor: None	e	☐ Petroleum [☐ VOC/Solvent [_ Musty Fishy	Sewage 🗌 Cl Sulfur 🗌 Fr	hlorine 🗌 Othe agrant	r		A State		
Turbidity: None	е						10/+1/1	1011 14:31		
Color: None	e					o20111011143	148.JF	Ъ		
Gross Solids:	Severe	Litter	Debris	Sediment	Other	- Sampling Results ———]		
Vegetation:	None	Inhibited	Excessive			Sample Location:				
Benthic Growth:	None	Green	Brown			Sample ID:				
Stains:	None	Flow Line	Oil	Rust Stains		Time Collected				
		Corrosion	Paint 🗌	Other		Total Chlorine (field):		ppm		
Non-illicit:	None	Natural Sheen	Natural S	uds/Foam		Free Chlorine (field):		ppm		
– Physical Cond	lition Assessment —					Total Copper (field):		ppm		
Craffiti	Nege					Ammonia (field):		ppm		
Gramu:	None					pH (field):		units		
Erosion: I	None Name					Temperature:		°F		
Deposition:	None Depth (in)	: 0				Conductivity:		µS/cm		
Damage: I	None Displac	cement 🗌 Undercut	: Crusł	led		Detergents:		mg/L		
	Corros	ion Cracks/S	tructural Dama	ge		Phenol:		mg/L		

Outfall ID: 01-132 US1

Inspection Date: 10/20/2010 10:09	04 AM Inspector: JCW Inspection Type: Ongoing	Previous Rainfall (hrs): 72+						
Flow Description: Submerged, inde	terminate Notes: Significant floatable debris in manhole.	A REAL PROPERTY IN						
Submerged: Fully Depth (in): 26								
Illicit Discharge Potential: Potential Field Follow-up Office Follow-up								
Floatables: None	Petrol. Sheen Suds Sewage Algae Othe	er 💦 👘						
Odor: None	Petroleum Musty Sewage Chlorine Othe	ar an						
	VOC/Solvent Fishy Sulfur Fragrant							
Turbidity: Slight cloudiness		16.20.2010 10:05						
Color: Clearly visible in bottle	Brown	o20101020100524.jpg						
Gross Solids: Severe	Litter Debris Sediment Other	-Sampling Results						
Vegetation: None	Inhibited Excessive	Sample Location: Pool						
Benthic Growth: None	Green Brown	Sample ID: 101020-60						
Stains: None	Flow Line Oil Rust Stains	Time Collected 10:10						
	Corrosion Paint Other	Total Chlorine (field): 0 ppm						
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm						
- Physical Condition Assessment		Total Copper (field): 0 ppm						
		Ammonia (field): 0 ppm						
Graffiti: None		pH (field): 7.55 <i>units</i>						
Erosion: None		Temperature: 55 °F						
Deposition: None Depth (in):	U	Conductivity: µS/cm						
Damage: None 🗌 Displac	ement 🗌 Undercut 🗌 Crushed	Detergents: 0 mg/L						
Corrosi	on Cracks/Structural Damage	Phenol: mg/L						

Outfall ID: 01-520

Major Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: **Division St**

Dimensions

Diameter (in): 54 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located o20120927085730.JPG

Outfall Notes:

Storm sewer from Jackson St discharges to river from north. Outfall fully submerged - pipe info from MS4 map. (OSH-9424 in early reports.)

County Co	ordinates:	State Plai	ne Coordinates:
Northing:	472,395	Northing:	737,924
Easting:	791,740	Easting:	2,351,829

Inspection Type: Ongoing **Inspection Date:** 9/27/2012 9:53:44 AM Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: Outfall fully submerged; screened upstream at 01-520 US1. Submerged: Fully Depth (in): 40 Illicit Discharge Potential: Potential Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927085734.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall	ID:	01-520
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Inspection	Date:	6/21/2012 10:35:1	I 0 AM In	spector:	JCW	Inspec	tion Type:	Other		Previous Rainfall (hrs):	0-24	4
Flow Desci Submerged	r iption: : Fully	Submerged (not Depth (ir	located)	Notes:	Gross s submer US1.	solids pre-s rged; scree	creening. ned upste	Outfall fu am at 01-	ılly -520	Seout	fal	
Illicit Disch	arge Po	tential: Potentia	I		Field Fo	ollow-up	Of	ffice Follo	w-up	CHS NO	nt.	E.
Floatables:	None		Petrol.	Sheen	Suds	Sewa	ge 🗌 Al	gae	Other			1
Odor:	None			um] Musty	Sewa	ige 🗌 Cl	hlorine	Other	LOCE	<i>lle</i>	a
Turbidity:	None]				. []	ayıanı			08/21/	2012 10:28
Color:	None]							020120621092	2646.JI	PG
Gross Solid	s: Nor	ne	Litter		Debris	Sedin	nent 🗌 (Other		Sampling Results		
Vegetation:	Nor	ne	🗌 Inhibite	d 🗌	Excessiv	е				Sample Location:		
Benthic Gro	wth: Nor	ne	Green		Brown					Sample ID:		
Stains:	Nor	ne	🗌 Flow Li	ne 🗌	Oil	Rust	Stains			Time Collected		
			Corros	on 🗌	Paint	Other				Total Chlorine (field):		ррт
Non-illicit:	Nor	ne	Natura	Sheen	🗌 Natu	ral Suds/Fo	bam			Free Chlorine (field):		ppm
– Physical	Conditio	n Assessment —	1							Total Copper (field):		ррт
Graffiti:	Nor	1e								Ammonia (field):		ppm
Erosion:	Nor	ie								pH (field):		units ° E
Depositio	n: Nor	ne Depth (in):								Conductivity:		°F uC/am
Damage:	Nor		omont 🗔 I	ndorout		Cruchod				Detergente:		μ3/cm ma/l
										Deleigenis. Dhonol:		nig/L ma/l
				12013/31	iuciuial L	anaye				i nenoi.		niy/L

Inspection Date:	: 10/11/2011 2:19:3	B7 PM Inspector	: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description	n: Submerged, inde	eterminate Notes	: 2010 sc submerg	reening follow-up. Ou ged. Outfall screene	utfall fully d upstream at		0	
Submerged. Tu	ily Deptil (il	l).	01-520 l	US1.			-	
Illicit Discharge	Potential: Potentia	l [Field Fo	llow-up 🗌 Of	fice Follow-up			-
Floatables: None	е	Petrol. Sheen	Suds	Sewage Alg	gae 🗌 Other	- And and a second		
Odor: None	e	Petroleum	Musty	Sewage Ch	nlorine Other	CALL OF		
		VOC/Solvent	Fishy	Sulfur Fra	agrant			01 F 14120
Turbidity: None	e							
Color: None	е					0201110111420)04.JP	'G
Gross Solids:	None	Litter	Debris	Sediment C	Other	- Sampling Results]
Vegetation:	None	Inhibited] Excessive	9		Sample Location:		
Benthic Growth:	None	Green	Brown			Sample ID:		
Stains:	None	Flow Line] Oil	Rust Stains		Time Collected		
		Corrosion	Paint	Other		Total Chlorine (field):		ррт
Non-illicit:	None	Natural Sheen	Natura	al Suds/Foam		Free Chlorine (field):		ррт
– Physical Cond	lition Assessment] —				Total Copper (field):		ppm
	Ness					Ammonia (field):		ppm
Graffiti:	None					pH (field):		units
Erosion:	None None					Temperature:		°F
Deposition:	None Depth (in):	U				Conductivity:		µS/cm
Damage:	None Displac	ement 🗌 Undercu	t 🗌 C	rushed		Detergents:		mg/L
	Corrosi	on Cracks/S	Structural Da	amage		Phenol:		mg/L

Outfall ID: 01-520

Inspection	Date:	8/25/2010 12:43:2	21 PM Ir	spector:	JCW	Inspectio	on Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Desci Submerged	r iption: : Fully	Submerged (not Depth (ir	located)	Notes:	Outfall f located. 520 US	fully submer . Outfall scr 1.	ged and r eened up	not physically stream at 01-		l al	
Illicit Disch	arge Po	otential: Potentia	I		Field Fo	ollow-up	Off	fice Follow-up			
Floatables:	None		Petrol.	Sheen	Suds	Sewag	e 🗌 Alg	gae 🗌 Oth	er 💦		
Odor:	None		Petrole	um 🗌	Musty	Sewag	e 🗌 Ch	lorine 🗌 Oth	er 2002	te	
				olvent	Fishy	Sulfur	Fra	agrant		0	
Turbidity:	None								A COST	08.2	2.2010 12 3/
Color:	None								020100825123	724.JF	°G
Gross Solid	s: No	ne	Litter		Debris	Sedime	ent 🗌 C	Other	-Sampling Results		
Vegetation:	No	ne	🗌 Inhibite	ed 🗌	Excessive	e			Sample Location:		
Benthic Gro	wth: No	ne	Green		Brown				Sample ID:		
Stains:	No	ne	E Flow L	ne 🗌	Oil	Rust S	tains		Time Collected		
			Corros	ion 🗌	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	No	ne	Natura	Sheen	Natur	al Suds/Foa	ım		Free Chlorine (field):		ррт
- Physical	Conditio	n Assessment —							Total Copper (field):		ррт
Onefficie	N								Ammonia (field):		ppm
Graffiti:	INO	ne							pH (field):		units
Erosion:	No	ne							Temperature:		°F
Depositio	on: No	ne Depth (in):	0						Conductivity:		µS/cm
Damage:	No	ne 🗌 Displac	ement 🗌 l	Indercut	🗌 C	Crushed			Detergents:		mg/L
		Corrosi	on 🗌 🤇	racks/St	ructural D	amage			Phenol:		mg/L

Inspection Date: 9/9/2009	Inspector: J	ICW Inspect	ion Type: Initial		Previous Rainfall (hrs):	72+	
Flow Description: Submerged (not located Submerged: Fully Depth (in): 56	Notes: C	Dutfall fully subme ocated. Outfall so	erged and not phy creened upstream	vsically n at 01-	A South	al	ñ .
Illicit Discharge Potential: Potential	F	Field Follow-up	Office Fo	ollow-up			
Floatables: None	trol. Sheen 🗌 S	Suds 🗌 Sewa	ge 🗌 Algae	Other			
Odor: None Pe	troleum 🗌 M C/Solvent 🗌 F	∕lusty	ge Chlorine	Other	Loca	<mark>[()</mark>	
Turbidity: None						09.05	2,2009 11191
Color: None					Osh09_DSCN6	715.JF	PG
Gross Solids: None Lit	er 🗌 De	ebris 🗌 Sedin	nent 🗌 Other	⁽	Sampling Results		
Vegetation: None Inf	ibited Exe	cessive			Sample Location:		
Benthic Growth: None	een 🗌 Bro	own			Sample ID:		
Stains: None Grad	w Line 🗌 Oil	Rust	Stains		Time Collected		
	rrosion 🗌 Pa	int 🗌 Other			Total Chlorine (field):		ppm
Non-illicit: None 🗌 Na	tural Sheen	Natural Suds/Fo	bam		Free Chlorine (field):		ppm
Physical Condition Assessment		-			Total Copper (field):		ppm
Croffiti: Nono					Ammonia (field):		ррт
Fresion: None					pH (field):		units
Deposition: None Dopth (in): 0					Temperature:		°F
Deposition. None Deptit (iii). 0					Conductivity:		µS/cm
	Undercut	Crushed			Detergents:		mg/L
	Cracks/Struc	tural Damage			Phenol:		mg/L

Outfall ID: 01-520 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 01-520

Drainage Basin: Division St

- Dimensions -

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120927085854.JPG

Outfall Notes:

Upstream manhole located approx 25 ft N of outfall 01-520. Intermediate area consists of rip-rap shoreline. (OSH-9424 US1 in early reports.)

County Co	oordinates:	State
Northing:	472,419	Northin
Easting:	791,742	Eastin

State Plane Coordinates:Northing:737,948Easting:2,351,831



Inspection	Date: 9/27	/2012 9:57:25 AM	Inspector:	JCW	Inspec	ction Type:	Ongoing	Previous Rainfall (h	nrs): 72-	F
Flow Descr	iption: Sub	merged, indeterminate	Notes:	2011 g	ross solids	s follow-up.			184	
Submerged:	: Fully	Depth (in): 69						1.1.00	Torra .	1
Illicit Discha	arge Potentia	al: Potential		Field F	ollow-up	Of	fice Follow-up	- ADA		F
Floatables:	None	Petro	I. Sheen	Suds	Sew	age 🗌 Al	gae 🗌 Othe	r Carlo		
Odor:	None	Petro	leum	☐ Musty ☐ Fishy	Sew Sulfu	age 🗌 Cł ur 🗌 Fr	nlorine 🗌 Othe agrant	r		
Turbidity:	None							the addition	der ra	
Color:	None							02012092	?7085918.J	PG
Gross Solids	s: Severe	✓ Litter		Debris	🗌 Sedi	ment 🗌 (Other	- Sampling Results		
Vegetation:	None	Inhib	ted	Excessiv	e			Sample Location:	Pool	
Benthic Grov	wth: None	Gree	n 🗌	Brown				Sample ID:	120927-9	91
Stains:	Slight	Flow	Line 🗌	Oil	🗌 Rust	Stains		Time Collected	09:50	
	<u></u>		sion 🗌	Paint	Other	er		Total Chlorine (field): 0	ppm
Non-illicit:	None	Natur	al Sheen	🗌 Natu	ral Suds/F	oam		Free Chlorine (field)	: 0	ррт
- Physical (Condition Acc					_		Total Copper (field):	0	ррт
Flysical	Condition Ass	essment						Ammonia (field):	0.5	ррт
Graffiti:	None							pH (field):	7.77	units
Erosion:	None							Temperature:	60	°F
Depositio	n: None	Depth (in):						Conductivity:	542	µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/St	tructural D	Damage			Phenol:		mg/L

Outfall ID: 01-520 US1

Inspection	Date: 6/21/	2012 10:34:01 AM	Inspector:	JCW	Inspec	tion Type:	Other	Previous Rainfall (hrs):	0-24	4
Flow Descr	iption: Subr	nerged, indeterminate	Notes:	Gross s	solids pre-	screening.		1	ALC: N	A.
Submerged:	Fully	Depth (in): 70						1 Long to a	R-	10 the
Illicit Disch	arge Potentia	I: Potential] Field Fo	ollow-up	0	ffice Follow-up	120		Z . J
Floatables:	None	Petro	ol. Sheen	Suds	Sewa	age 🗌 A	lgae 🗌 Oth	er		
Odor:	None	Petro	leum	Musty	Sewa	age 🗌 C	hlorine 🗌 Oth	er		
			/Solvent	Fishy	Sulfu	ır 🗌 F	ragrant	A. C. A.	RE/21/	2012 10:24
Turbidity:	None									2012 10.24
Color:	None							020120621092	2424.JF	°G
Gross Solids	s: Severe	✓ Litter	· 🗌	Debris	Sedi	ment	Other	Sampling Results]
Vegetation:	None	🗌 Inhib	ited	Excessive	e			Sample Location:		
Benthic Grov	wth: None	Gree	n 🗌	Brown				Sample ID:		
Stains:	Moderate	✓ Flow	Line	Oil	Rust	Stains		Time Collected		
			osion	Paint	Othe	r		Total Chlorine (field):		ppm
Non-illicit:	None	Natu	ral Sheen	Natur	ral Suds/F	oam		Free Chlorine (field):		ррт
– Physical I	Condition Ass	essment						Total Copper (field):		ppm
Onefficie	News	33mont						Ammonia (field):		ppm
Graffiti:	None							pH (field):		units
Erosion:	None							Temperature:		°F
Deposition	n: None	Depth (in):						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut	🗌 C	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Str	ructural D	amage			Phenol:		mg/L

Inspection Date	e: 10/11/2011 2:24:	37 PM Inspector:	JCW Insp	ection Type:	Ongoing	Previous Rainfall (hrs): 72+	
Flow Description	on: Submerged, inde	eterminate Notes:	2010 screening	follow-up. Fl	loatable debris		and the second sec	a port
Submerged: F	ully Depth (ii	n): 64	still present.			16	100	- Color
Illicit Discharge	e Potential: Potentia		Field Follow-up	Off	fice Follow-up		201	
Floatables: No	ne	Petrol. Sheen] Suds 🗌 Se	wage 🗌 Alg	gae 🗌 Other			
Odor: No	ne	Petroleum VOC/Solvent] Musty Se ∃ Fishy Su	wage 🗌 Ch	llorine 🗌 Other	· UT	n -	1
Turbidity: No	ne				agrant		10/ 10/	2011 14:21
Color: No	ne					0201110111	42110.JI	PG
Gross Solids:	Severe	Litter	Debris 🗌 Se	diment 🗌 C	Other	Sampling Results]
Vegetation:	None		Excessive			Sample Location: P	loc	
Benthic Growth:	None	Green	Brown			Sample ID: 1	1011-9	2
Stains:	None	Flow Line	Oil 🗌 Ru	st Stains		Time Collected 14	1:20	
			Paint Oth	ner		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natural Sheen	Natural Suds	/Foam		Free Chlorine (field):	0	ppm
- Physical Con	dition Assessment —			_		Total Copper (field):	0	ppm
Craffiti	Nege					Ammonia (field):	0	ррт
Graniti:	None					pH (field):	8.49	units
Erosion:	None Douth (in)	. 0				Temperature:	71	°F
Deposition:	None Depth (in)	: 0				Conductivity:		µS/cm
Damage:	None Displac	cement 🗌 Undercut	Crushed			Detergents:		mg/L
		ion Cracks/St	ructural Damage			Phenol:		mg/L

Outfall ID: 01-520 US1

Inspection Date: 5/26/2011 11	:13:00 AM Inspector: JCW	Inspection Type: Other	Previous Rainfall (hrs): 72+	
Flow Description: Submerged,	indeterminate Notes: Limited	I screening conducted to check for	A A A A	Collins of
Submerged: Fully Dep	th (in):		1 AS Per A	
Illicit Discharge Potential: Pote	ential Eield Fo	ollow-up Office Follow-up		
Floatables: None	Petrol. Sheen Suds	Sewage Algae Othe		
Odor:	Petroleum Musty	🗌 Sewage 🔲 Chlorine 🗌 Othe		
	VOC/Solvent Fishy	Sulfur Fragrant	a set	
Turbidity:			06/26/2011 11:14	12
Color:			o20110526111400.JPG	
Gross Solids: Severe	Litter Debris	Sediment Other	- Sampling Results	٦
Vegetation:	Inhibited Excessive	e	Sample Location:	
Benthic Growth:	Green Brown		Sample ID:	
Stains:	Flow Line Oil	Rust Stains	Time Collected	
	Corrosion Paint	Other	Total Chlorine (field): ppm	
Non-illicit: None	Natural Sheen Natu	ral Suds/Foam	Free Chlorine (field): ppm	
- Physical Condition Assessment			Total Copper (field): ppm	
			Ammonia (field): ppm	
Graffiti: None			pH (field): units	
Erosion: None			Temperature: °F	
Deposition: None Depth	(in): 0		Conductivity: µS/cm	
Damage: None 🗌 Dis	placement 🗌 Undercut 📃 🤇	Crushed	Detergents: mg/L	
Co	rrosion Cracks/Structural D	Damage	Phenol: mg/L	

Inspection Date: 8/2	25/2010 12:53:35 PM	nspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description: Su	bmerged, indeterminate	Notes: Signif	icant floatable debris i	n manhole.		T	
Submerged: Fully	Depth (in): 72					-	- Alex
Illicit Discharge Potent	tial: Potential	Field I	Follow-up	ffice Follow-up	1 60		
Floatables: None	Petrol.	Sheen 🗌 Suds	🗌 Sewage 🗌 A	lgae 🗌 Other			
Odor: None		eum 🗌 Musty Solvent 🗌 Fishy	Sewage C	hlorine 🗌 Other ragrant	1 23	é	
Turbidity: None				5	and and	08.2	5.2010 12.47
Color: Faint in bot	tle Brown				020100825124	1708.JF	PG
Gross Solids: Severe	Litter	Debris	Sediment	Other –	Sampling Results ——		
Vegetation: None	Inhibit	ed 🗌 Excessi	ve		Sample Location: Poo	ol	
Benthic Growth: None	Green	Brown			Sample ID: 100	825-9	0
Stains: None	Flow L	ine 🗌 Oil	Rust Stains		Time Collected 12:5	55	
		sion 🗌 Paint	Other		Total Chlorine (field):	0	ppm
Non-illicit: None	Natura	al Sheen 🗌 Nat	ural Suds/Foam		Free Chlorine (field):	0	ppm
- Physical Condition As	ssessment				Total Copper (field):	0	ррт
					Ammonia (field):	0	ррт
Gramiti: None					pH (field):	8.18	units
Erosion: None	Depth (in): 0				Temperature:	73	°F
Deposition: None		_			Conductivity:		µS/cm
Damage: None	Displacement	Undercut	Crushed		Detergents:	0	mg/L
		Cracks/Structural	Damage		Phenol:		mg/L

Inspection Date: 9/9/2009	Inspector: JCW	Inspection Type: Initial	Previous Rainfall (hrs): 72+	
Flow Description: Submerged, indetermine Submerged: Fully Depth (in): 61	ate Notes: Abnorm (bubble manhol	nal detergent analysis result s). Significant floatables in e. Brown color.		W.
Illicit Discharge Potential: Potential	Field Fo	ollow-up	o de la compañía de la	14
Floatables: None	etrol. Sheen 🗌 Suds	Sewage Algae O	ther	4
Odor: None G	etroleum 🗌 Musty	Sewage Chlorine O	ther	No.
	OC/Solvent 🗌 Fishy	Sulfur Fragrant		1.5
Turbidity: None			Curion Scon	11:25
Color: Clearly visible in bottle Brow	'n		Osh09_DSCN6718.JPG	
Gross Solids: Severe	tter Debris	Sediment Other	Sampling Results	
Vegetation: None	hibited Excessive	e	Sample Location: Pool	
Benthic Growth: None	reen 🗌 Brown		Sample ID: 090909-57	
Stains: None G	ow Line 🗌 Oil	Rust Stains	Time Collected 11:30	
	orrosion 🗌 Paint	Other	Total Chlorine (field): 0 ppr	n
Non-illicit: None	atural Sheen 🗌 Natu	ral Suds/Foam	Free Chlorine (field): 0 ppr	n
Physical Condition Assessment			Total Copper (field): 0 ppr	п
			Ammonia (field): ppr	п
Gramiti: None			pH (field): 8.6 unit	ts
Erosion: None			Temperature: 78 °F	×
Deposition: None Depth (in): 0			Conductivity: $\mu S/$	/cm
Damage: None Displacement	Undercut 0	Crushed	Detergents: 0 mg	/L
	Cracks/Structural D	amage	Phenol: 0 mg	/L

Outfall ID: 02-322

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: Vitrified Clay

City ID: N/A

Drainage Basin: Rahr Ave

- Dimensions

Diameter (in): 15 Height/Depth (in): Width (in):

Mapping Precision:Desktop mapping estimate✓Not Physically Located



o20120927074346.JPG

Outfall Notes:

Storm sewer from Rahr Ave discharges to lake from west. Outfall not located - pipe info from MS4 map.

County Co	oordinates:	State
Northing:	472,376	North
Easting:	798,866	Eastir

te Plane Coordinates: thing: 738,034 sting: 2,358,954





Outfall ID: 02-322

Inspection	Date:	6/20/2012 8:34:40	AM In:	spector:	JCW	Inspec	tion Type:	Other	Previous Rainfall (hrs):	24-	48
Flow Descr	ription:	Submerged (not	located)	Notes:	Gross	solids pre-s	creening.			25	
Submerged	: Fully	Depth (ir	ı):								
Illicit Disch	arge Po	tential: Potentia	I		Field Fo	ollow-up	0 O	ffice Follow-up	Ne	H.	1 st
Floatables:	None		Petrol.	Sheen	Suds	Sewa	ge 🗌 Al	gae 🗌 Oth	er and a second s	2 La	
Odor:	None		Petrole	um 🗌	Musty	Sewa	ge 🗌 Cl	hlorine 🗌 Oth	er		<mark>O</mark> la a l
Turbidity:	None			olvent	Fishy	Sulfu	r 🗌 Fr	agrant	12 1/2 8	991201	2012 08:34
Color:	None]						020120620073	3654.JI	PG
Gross Solid	s: No	ne	Litter		Debris	Sedir	nent	Other	Sampling Results		
Vegetation:	No	ne	Inhibite	d 🗌	Excessiv	е			Sample Location:		
Benthic Gro	wth: No	ne	Green		Brown				Sample ID:		
Stains:	No	ne	Flow Li	ne 🗌	Oil	Rust	Stains		Time Collected		
			Corrosi	on 🗌	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	No	ne	Natural	Sheen	🗌 Natu	ral Suds/Fe	bam		Free Chlorine (field):		ppm
– Physical	Conditio	n Assessment —							Total Copper (field):		ppm
Groffiti	No								Ammonia (field):		ррт
Graniu.	No								pH (field):		units
		ne Dantk ('a)							Temperature:		°F
Depositio	INO	ne Depth (in)							Conductivity:		µS/cm
Damage:	No	ne 🗌 Displac	ement 🗌 U	ndercut		Crushed			Detergents:		mg/L
		Corrosi	on 🗌 C	racks/St	ructural D	Damage			Phenol:		mg/L

Inspection D	ate: 10/3/2	2011 10:09:27 AM	Inspector:	JCW	Inspecti	on Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descrip	otion: Subm	nerged (not located)	Notes:	Outfall located	fully submer I. Outfall sci	ged and i eened up	not physically ostream at 02-	M Lat	A State	
Submerged:	Fully	Depth (In):		322 US	61.				đ	
Illicit Dischar	rge Potential	: Potential		Field Fo	ollow-up	Of	fice Follow-up			
Floatables: N	None	Petr	ol. Sheen	Suds	Sewag	e 🗌 Alç	gae 🗌 Othe	r 🛛		
Odor: N	None	Petr	oleum	Musty	Sewag	e 🗌 Ch	nlorine 🗌 Othe	r LOCA		
_			Solvent	Fishy	Sulfur	Fra	agrant	and the second second	10/03/	2011 10:10
Turbidity:	None									
Color:	None							020111003101	1004.JF	PG
Gross Solids:	None	Litte	r 🗌	Debris	Sedim	ent 🗌 C	Other	- Sampling Results		
Vegetation:	None	🗌 Inhit	bited	Excessiv	е			Sample Location:		
Benthic Grow	th: None	Gree	en 🗌	Brown				Sample ID:		
Stains:	None	Elow	/ Line	Oil	🗌 Rust S	tains		Time Collected		
		Corr	osion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	🗌 Natu	ıral Sheen	🗌 Natu	ral Suds/Fo	am		Free Chlorine (field):		ррт
– Physical C	ondition Asse	ssment						Total Copper (field):		ppm
Croffiti	Nono							Ammonia (field):		ррт
Graniu.	None							pH (field):		units
Erosion:	None							Temperature:		°F
Deposition:	: None	Deptn (in): 0						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion] Cracks/Sti	ructural D	Damage			Phenol:		mg/L

Outfall ID: 02-322

Inspection Date: 5/1	0/2011 8:43:00 AM In:	spector: JCW	Inspection Type:	Other	Previous Rainfall (hrs):	0-24
Flow Description: Sul Submerged: Fully	bmerged (not located) Depth (in):	Notes: Outfall located 322 US	fully submerged and n . Outfall screened up: 1.	ot physically stream at 02-	Out	
Illicit Discharge Potent	tial: Unlikely	Field Fo	ollow-up Off	ice Follow-up	No	
Floatables:	Petrol.	Sheen 🗌 Suds	Sewage Alg	ae 🗌 Other		
Odor:	Petrole	um 🗌 Musty olvent 🗌 Fishy	Sewage Chl	orine 🗌 Other grant		req
Turbidity:						15/ 10/ 25/ 10 43
Color:					0201105100843	330.JPG
Gross Solids:	Litter	Debris	Sediment O	other	Sampling Results	
Vegetation:	Inhibite	d 🗌 Excessive	e		Sample Location:	
Benthic Growth:	Green	Brown			Sample ID:	
Stains:	🗌 Flow Li	ne 🗌 Oil	Rust Stains		Time Collected	
	Corrosi	on 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit: None	Natural	Sheen 🗌 Natu	al Suds/Foam		Free Chlorine (field):	ppm
Physical Condition As	ssessment				Total Copper (field):	ppm
Graffiti: None					Ammonia (field):	ppm .,
Frosion: None					pH (field):	units
Deposition: None	Depth (in): 0				Conductivity:	°F
Damage: None			rushed		Detergente:	μ5/cm
			amane		Phenol:	mg/L mg/l
		nacita, otructural D	anage			iiig/L

Outfall ID: 02-322 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 02-322

Drainage Basin: Rahr Ave

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS Not Physically Located

o20120927074428.JPG

Outfall Notes:

Upstream manhole located approx 93 ft W of outfall 13-100. Intermediate area consists of street right-ofway and open space.

County Co	ordinates:	State Pla
Northing:	472,384	Northing:
Easting:	798.773	Easting:

ane Coordinates: 738,040 2,358,862

Inspection Date: Inspection Type: Ongoing 9/27/2012 8:42:27 AM Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: 2011 gross solids / pH follow-up. Submerged: Partially Depth (in): 3 Illicit Discharge Potential: Potential Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: Easily detected Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: Opaque o20120927074434.JPG Color: Clearly visible in bottle Dark/Black Gross Solids: Moderate Litter ✓ Debris Sediment Other Sampling Results Vegetation: None Inhibited Excessive Sample Location: Pool Benthic Growth: None Green Brown Sample ID: 120927-20 Stains: None Rust Stains **Time Collected** 08:42 Flow Line Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: Moderate Natural Sheen 🖌 Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 3 ppm Graffiti: None pH (field): 7.07 units Erosion: None Temperature: 60 °F Deposition: None Depth (in): Conductivity: 747 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol:

Location Map



Corrosion

Cracks/Structural Damage

-mg/L

Outfall ID:	02-322	US1
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Inspection Date: 6/20/20	2 8:40:34 AM Inspector: JC	W Inspection Type: Other	Previous Rainfall (hrs): 24-	48
Flow Description: Submer	ged, indeterminate Notes:		1 States	
Submerged: Partially	Depth (in): 10		6	a tay
Illicit Discharge Potential:	Potential	eld Follow-up	- Contraction	
Floatables: Slight	🗌 Petrol. Sheen 🗸 Su	ids 🗌 Sewage 🗌 Algae 🗌 Othe	er et al a a a a a a a a a a a a a a a a a a	1.12
Odor: Easily detected	Petroleum Mu	usty 🗹 Sewage 🗌 Chlorine 🗌 Othe	er	
	VOC/Solvent Fis	shy 🗌 Sulfur 🗌 Fragrant	Non- Contraction	
Turbidity: Cloudy				1
Color: None			o20120620073908.JI	PG
Gross Solids: Severe	Litter 🗸 Deb	ris 🔽 Sediment 🗌 Other	-Sampling Results	
Vegetation: None	Inhibited Exce	essive	Sample Location: Pool	
Benthic Growth: None	Green Brow	vn	Sample ID: 120620-8	2
Stains: None	Flow Line Oil	Rust Stains	Time Collected 08:40	
	Corrosion Pain	t 🗌 Other	Total Chlorine (field): 0	ppm
Non-illicit: None	Natural Sheen	Natural Suds/Foam	Free Chlorine (field): 0	ppm
- Physical Condition Assess			Total Copper (field): 0	ppm
	nem		Ammonia (field): 6	ppm
Graffiti: None			pH (field): 6.61	units
Erosion: Noné			Temperature: 78	°F
Deposition: Severe I	Depth (in): 11		Conductivity: 307	µS/cm
Damage: None	Displacement 🗌 Undercut	Crushed	Detergents: 0	mg/L
	Corrosion Cracks/Structu	ural Damage	Phenol:	mg/L

Inspection Date: 10/4/2011 8:21:19 AM Inspector: JCW Inspection Type: Repeat	Previous Rainfall (hrs): 72+
Flow Description: Submerged, indeterminate Notes: Follow-up inspection to re-test pH.	and the second second
Submerged: Partially Depth (in): 4 Significant leaf debris.	
Illicit Discharge Potential: Potential Field Follow-up Office Follow-up	ρ
Floatables: None	ther
Odor: None Petroleum Musty Sewage Chlorine O VOC/Solvent Fishy Sulfur Fragrant	ther
Turbidity: None	
Color: None	o20111004082134.JPG
Gross Solids: None Litter Debris Sediment Other	Sampling Results
Vegetation: None Inhibited Excessive	Sample Location: Pool
Benthic Growth: None Green Brown	Sample ID:
Stains: None Flow Line Oil Rust Stains	Time Collected 08:20
Corrosion Paint Other	Total Chlorine (field): ppm
Non-illicit: None 🗌 Natural Sheen 🗌 Natural Suds/Foam	Free Chlorine (field): ppm
Physical Condition Assessment	Total Copper (field): ppm
Graffiti: None	Ammonia (field): ppm
Frosion: None	pH (field): 5.24 units
Deposition: None Depth (in): 0	Conductivity
Damage: None Displacement Linderout Cruched	Detergents: $ma^{\prime\prime}$
	Phenol: ma/l

Outfall ID: 02-322 US1

Inspection	Date: 10/3/2	2011 10:16:21 AM	nspector:	JCW Inspe	ction Type: On	igoing	Previous Rainfall (h	ırs): 72+	
Flow Descr Submerged	r iption: Subn : Partially	Depth (in): 8	Notes:	Significant buildu measured pH.	up of leaves in p	ool. High			R
Illicit Disch	arge Potentia	: Potential] Field Follow-up	Office	Follow-up			A.
Floatables:	None	Petrol.	Sheen] Suds 🛛 🗌 Sew	vage 🗌 Algae	Other	A 806 M	10	S The
Odor:	Faint	Petrol	eum 🗸	Musty 🗌 Sew	vage 🗌 Chlorii	ne 🗌 Other		The days	
			Solvent] Fishy 🗌 Sulf	ur 🗌 Fragra	Int		Caller !	
Turbidity:	None							TRACK	and a second
Color:	Faint in bottle	Brown					02011100	3101336.JF	₽G
Gross Solid	s: None	Litter		Debris 🗌 Sed	iment 🗌 Othe	er	Sampling Results —		
Vegetation:	None	🗌 Inhibit	ed 🗌	Excessive			Sample Location:	Pool	
Benthic Gro	wth: None	Green		Brown			Sample ID:	111003-2	:1
Stains:	None	🗌 Flow L	ine	Oil 🗌 Rus	t Stains		Time Collected	10:15	
			ion 🗌	Paint 🗌 Othe	ər		Total Chlorine (field)): 0	ppm
Non-illicit:	None	Natura	l Sheen	Natural Suds/I	-oam		Free Chlorine (field)	: 0	ppm
– Physical	Condition Asse	essment			_		Total Copper (field):	0	ррт
Oneffilie	News						Ammonia (field):	0	ррт
Gramiti:	None						pH (field):	5.21	units
Erosion:	None						Temperature:	61	°F
Depositio	n: None	Depth (in): 0					Conductivity:		µS/cm
Damage:	None	Displacement	Jndercut	Crushed			Detergents:	0	mg/L
			Cracks/Sti	ructural Damage			Phenol:		mg/L



Outfall ID: 02-357

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Arch

Material: CMP

City ID: N/A

Drainage Basin: Winnebago Ave

- Dimensions

Diameter (in): Height/Depth (in): 24 Width (in): 35

Mapping Precision:Desktop mapping estimate✓Not Physically Located

o20120927073322.JPG

Outfall Notes:

Storm sewer from Winnebago Ave discharges to lake from northwest. Outfall not located - pipe info from MS4 map.

County Co	ordinates:	State Plane Coordinates				
Northing:	472,832	Northing:	738,490			
Easting:	798,869	Easting:	2,358,949			

Inspection Type: Ongoing Inspection Date: 9/27/2012 8:29:10 AM Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: Submerged (not located) Notes: Outfall fully submerged; screened upstream at 02-357 US1. Submerged: Fully Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927073330 JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results Inhibited Vegetation: None Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains Time Collected Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L





Outfall ID: 02-357

Inspection	Date:	6/20/2012 8:05:53	AM In	spector:	JCW	Inspecti	on Type:	Other		Previous Rainfall (hrs):	24-4	48
Flow Descr Submerged	r iption: : Fully	Submerged (not Depth (ir	located)	Notes:	Gross subme US1.	solids pre-so rged; screer	creening. ned upstre	Outfall fully eam at 02-357	7	Out	fal	A.
Illicit Disch	arge Po	tential: Unlikely			Field F	ollow-up	Of	ffice Follow-u	D	Ne	1	ALL AL
Floatables:	None		Petrol.	Sheen	Suds	Sewag	ge 🗌 Al	gae 🗌 O	her		1	14.15
Odor:	None		Petrole	um 🗌	Musty	Sewaą	ge 🗌 Cl	hlorine 🗌 O	her	Loca		ですうここ
			VOC/S	olvent	Fishy	Sulfur	🗌 Fr	agrant		1000	15	ALL C
Turbidity:	None									A IN AST	195 C	- 12 C
Color:	None									020120620070	9830.JF	°G
Gross Solid	s: No	ne	Litter		Debris	Sedim	ent 🗌 (Other	_5	Sampling Results		
Vegetation:	No	ne	🗌 Inhibite	d 🗌	Excessiv	e			:	Sample Location:		
Benthic Gro	wth: No	ne	Green		Brown				:	Sample ID:		
Stains:	No	ne	🗌 Flow Li	ne 🗌	Oil	Rust S	Stains		-	Time Collected		
			Corros	on 🗌	Paint	Other			-	Total Chlorine (field):		ppm
Non-illicit:	No	ne	Natura	Sheen	🗌 Natu	ral Suds/Fo	am			Free Chlorine (field):		ppm
- Physical	Conditio	n Assessment —							-	Total Copper (field):		ppm
Cueffiti.	Natio								4	Ammonia (field):		ррт
Gramti:	INO	ne								pH (field):		units
Erosion:	No	ne							-	Temperature:		°F
Depositio	on: No	ne Depth (in):								Conductivity:		µS/cm
Damage:	No	ne 🗌 Displac	ement 🗌 L	ndercut		Crushed				Detergents:		mg/L
		Corrosi	on 🗌 C	racks/S	tructural D	Damage				Phenol:		mg/L

Inspection Date: 10/3/	2011 10:26:14 AM In	spector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description: Subr	nerged (not located)	Notes: Outfall located	fully submerged and d. Outfall screened up	not physically ostream at 02-	Quit		
Submerged. Fully	Depth (in).	357 US	S1.		Oution of the second se	all	A A A A
Illicit Discharge Potentia	I: Potential	Field F	ollow-up 🗌 Of	fice Follow-up	No		Lin-
Floatables: None	Petrol.	Sheen Suds	🗌 Sewage 🗌 Alg	gae 🗌 Other			S.F.
Odor: None	Petrole	eum 🗌 Musty	🗌 Sewage 🔲 Ch	nlorine 🗌 Other	LOCA		
Turkiditur News		olvent 🔝 Fishy	Sulfur Fra	agrant	the second	10/03/	115
Turbidity: None					0201110031027	71/ 1	PG
Color: None					0201110031027	14.01	G
Gross Solids: None	Litter	Debris	Sediment 0	Other	Sampling Results		
Vegetation: None	Inhibite	ed 🗌 Excessiv	/e		Sample Location:		
Benthic Growth: None	Green	Brown			Sample ID:		
Stains: None	Flow Li	ine 🗌 Oil	Rust Stains		Time Collected		
	Corros	ion 🗌 Paint	Other		Total Chlorine (field):		ppm
Non-illicit: None	Natura	l Sheen 🗌 Natu	ural Suds/Foam		Free Chlorine (field):		ррт
- Physical Condition Ass	essment				Total Copper (field):		ppm
	sooment				Ammonia (field):		ррт
Gramiti: None					pH (field):		units
Erosion: Ivone	Death (in): 0				Temperature:		°F
Deposition: None	Depth (in): 0				Conductivity:		µS/cm
Damage: None	Displacement L	Jndercut	Crushed		Detergents:		mg/L
	Corrosion C	Cracks/Structural [Damage		Phenol:		mg/L

Outfall ID: 02-357

Inspection Date: 5/10/20	011 8:51:00 AM Ins	pector: JCW	Inspection Type:	Other	Previous Rainfall (hrs):	0-24
Flow Description: Subme Submerged: Fully	erged (not located) Depth (in):	Notes: Outfall located 357 US	fully submerged and . Outfall screened up 1.	not physically ostream at 02-	Out	
Illicit Discharge Potential:	Potential	Field Fo	ollow-up 🗌 Of	fice Follow-up	No	
Floatables:	Petrol. S	heen 🗌 Suds	🗌 Sewage 🗌 Alg	gae 🗌 Other		
Odor:	Petroleu	m 🗌 Musty Ivent 🗌 Fishy	Sewage Cr	nlorine 🗌 Other agrant	Loca	lec.
Turbidity:					the second	
Color:					0201105100851	116.JPG
Gross Solids:	Litter	Debris	Sediment 0	Other	Sampling Results	
Vegetation:	Inhibited	Excessive	e		Sample Location:	
Benthic Growth:	Green	Brown			Sample ID:	
Stains:	🗌 Flow Lin	e 🗌 Oil	Rust Stains		Time Collected	
	Corrosio	n 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit: None	Natural S	Sheen 🗌 Natu	ral Suds/Foam		Free Chlorine (field):	ppm
- Physical Condition Asses	sment				Total Copper (field):	ppm
Graffiti: Nono					Ammonia (field):	ppm
Frosion: None					pH (field):	units
Deposition: None	Depth (in): 0				Temperature:	°F
Deposition. None					Conductivity:	μS/cm
Danaye. None		idercut	Crushed		Detergents:	mg/L
		acks/Structural D	amage		Phenol:	mg/L

Outfall ID: 02-357 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 02-357

Drainage Basin: Winnebago Ave

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120927073344.JPG

Outfall Notes:

Upstream manhole located approx 34 ft NW of outfall 02-357. Intermediate area consists of open space.

County Co	ordinates:
Northing:	472,861
Easting:	798,850

State Plane Coordinates: Northing: 738,518 Easting: 2,358,930

Inspection	Date:	9/27/2012 8:31:15	5AM Ins	pector:	JCW	Inspection Typ	e: Ongo	oing	Previous Rainfall (r	nrs): 7	2+
Flow Descr	ription:	Submerged, inde	eterminate	Notes:	2011 g	ross solids follow-u	ıp.				N.
Submerged	: Fully	Depth (ir	n): 36						Contraction of the		
Illicit Disch	arge Po	otential: Unlikely	,] Field Fo	ollow-up	Office F	ollow-up		13.22	
Floatables:	None		Petrol. S	heen	Suds	Sewage	Algae	Other	Same and		THE
Odor:	None		Petroleu	m [Musty	Sewage	Chlorine	Other			1 marsh
Turbidity:	None			vent [] Fishy	Sulfur	Fragrant	:	02012092	7073352	JPG
Color:	None								02012032	.7070002	or a
Gross Solid	s: Sli	ght	✓ Litter		Debris	Sediment	Other		Sampling Results —		
Vegetation:	No	ne	Inhibited		Excessiv	e			Sample Location:	Pool	
Benthic Gro	wth: No	ne	Green		Brown				Sample ID:	120927	-53
Stains:	No	ne	Flow Lin	e 🗌	Oil	Rust Stains			Time Collected	08:25	
			Corrosio	n 🗌	Paint	Other			Total Chlorine (field)):	0 ppm
Non-illicit:	No	ne	Natural S	Sheen	🗌 Natu	ral Suds/Foam			Free Chlorine (field)	:	0 ppm
– Physical	Conditic	n Assessment —							Total Copper (field):		0 <i>ppm</i>
Oreffiti	NIa								Ammonia (field):		0 ppm
Gramu:	INO	ne							pH (field):	7.7	3 <i>units</i>
Erosion:	INO	ne Danth (in):							Temperature:	6	0 ° <i>F</i>
Depositio	NI. NO								Conductivity:	51	8 μ <i>S/cm</i>
Damage:	NO	ne Displac	ement 🗌 Un	dercut		Crushed			Detergents:		0 <i>mg/L</i>
		Corrosi	ion 🗌 Cr	acks/Str	ructural D	Damage			Phenol:		<i>mg/L</i>



Outfall ID: 02-357 US1

Inspection	Date: 6/20	/ 2012 8:08:37 AM Ir	nspector: JCW	Inspection Type:	Other	Previous Rainfall (hrs):	24-48
Flow Desci	ription: Sub	merged, indeterminate	Notes: Gross	solids pre-screening.		Public	
Submerged	: Fully	Depth (in): 43				a constant	-6
Illicit Disch	arge Potentia	al: Unlikely	Field Follow-up				
Floatables:	None	Petrol.	Sheen Suds	Sewage Al	gae 🗌 Other		
Odor:	None	Petrole	eum 🗌 Musty	Sewage Cl	hlorine 🗌 Other	T market	
			Solvent 🗌 Fishy	Sulfur Fr	agrant	1	
Turbidity:	None					CALL COLOR	
Color:	None					020120620070	1908.JPG
Gross Solid	s: Moderate	e ✓ Litter	✓ Debris	Sediment	Other	Sampling Results	
Vegetation:	None	Inhibite	ed 🗌 Excessiv	ve		Sample Location:	
Benthic Gro	wth: Slight	✓ Green	Brown			Sample ID:	
Stains:	None	Elow L	ine 🗌 Oil	Rust Stains		Time Collected	
			ion 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit:	None	Natura	l Sheen 🗌 Natı	ural Suds/Foam		Free Chlorine (field):	ppm
– Physical	Condition Ass	essment				Total Copper (field):	ppm
Oneffilie	News	cooment				Ammonia (field):	ppm
Gramiti:	None					pH (field):	units
Erosion:	None					Temperature:	°F
Depositio	on: None	Depth (in):				Conductivity:	μS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut	Crushed		Detergents:	mg/L
		Corrosion	Cracks/Structural I	Damage		Phenol:	mg/L



Outfall ID: 02-357 US1

Inspection Date: 5/10/2011 8:51:00 AM Inspector: JCW I	nspection Type: Other	Previous Rainfall (hrs): ()-24
Flow Description: Submerged, indeterminate Notes: Limited scremanhole pressure Submerged: Fully Depth (in): Mathematical screen science scien	ening conducted for upstream escreening.		
Illicit Discharge Potential: Potential	-up Office Follow-up		13
Floatables: None Petrol. Sheen Suds	Sewage Algae Othe	r 💦 🥵 🖓	
Odor: Petroleum Musty	Sewage Chlorine Othe	r	
UOC/Solvent Fishy	Sulfur 🗌 Fragrant		10/2011 08:01
Turbidity:			- Aller
Color:		02011051008515	4.JPG
Gross Solids: Severe Litter Debris	Sediment Other	-Sampling Results	
Vegetation:		Sample Location:	
Benthic Growth: Green Brown		Sample ID:	
Stains:	Rust Stains	Time Collected	
Corrosion Paint	Other	Total Chlorine (field):	ppm
Non-illicit: None 🗌 Natural Sheen 🗌 Natural S	uds/Foam	Free Chlorine (field):	ppm
Physical Condition Assessment		Total Copper (field):	ppm
		Ammonia (field):	ppm
Graniti. None		pH (field):	units
Erosion. None Denseitien: Nene Denste (in): 0		Temperature:	°F
		Conductivity:	μS/cm
Damage: None Displacement Undercut Crus	ned	Detergents:	mg/L
Corrosion Cracks/Structural Dama	ge	Phenol:	mg/L

Outfall ID: 03-22

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Elliptical

Material: CMP

City ID: N/A

Drainage Basin: Nebraska St

-Dimensions

Diameter (in): Height/Depth (in): 36 Width (in): 58

Mapping Precision:Desktop mapping estimate✓Not Physically Located



o20120927082842.JPG

Outfall Notes:

Storm sewer from Nebraska St discharges to river from south. Outfall not located - pipe info from MS4 map.

County Co	ordinates:	State Plai	ne Coordinates:
Northing:	471,751	Northing:	737,292
Easting:	792,375	Easting:	2,352,476

JCW Inspection Date: Previous Rainfall (hrs): 9/27/2012 9:26:54 AM Inspector: Inspection Type: Ongoing 72+ Flow Description: Submerged (not located) Outfall fully submerged; screened upstream Notes: at 03-22 US1. Submerged: Fully Depth (in): Illicit Discharge Potential: Potential Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927082846 JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Stains: None Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 03-22

Inspection	Date:	6/20/2012 9:22:09	AM Insp	ector:	JCW	Inspec	tion Type:	Other		Previous Rainfall (hrs):	24-4	48
Flow Descr	ription:	Submerged (not l	ocated)	Notes:	Gross	solids pre-	screening.					
Submerged	: Fully	Depth (in)	:									Martin -
Illicit Disch	arge Po	tential: Potential			Field Fo	ollow-up	Of	fice Follow-	up			
Floatables:	None		Petrol. Sh	neen 🗌	Suds	Sewa	age 🗌 Ale	gae 🗌 (Other		Contra Table	
Odor:	None		Petroleun	n 🗌	Musty	Sewa	age 🗌 Cł	nlorine	Other	1.0Ca	<mark>Te</mark>	
Turbidity:	None		VOC/Solv	/ent	Fishy	Sulfu	r 🗌 Fra	agrant		020120620082	00/200 2248.JF	PG
	None		—	— -			. —	.		o "		
Gross Solid	s: Nor	ie	Litter		Debris	Sedir	nent 🗌 (Other		Sampling Results		
Vegetation:	Nor	ie	Inhibited	E	Excessiv	е				Sample Location:		
Benthic Gro	wth: Nor	ie	Green	<u> </u>	Brown					Sample ID:		
Stains:	Nor	ıe	E Flow Line	e 🗌 (Dil	Rust	Stains			Time Collected		
			Corrosion	n 🗌 F	Paint	Othe	r			Total Chlorine (field):		ppm
Non-illicit:	Nor	le	Natural S	heen	🗌 Natu	ral Suds/F	oam			Free Chlorine (field):		ррт
- Physical	Conditio	n Assessment								Total Copper (field):		ррт
n nysicai	Contantion	TASSESSMENT								Ammonia (field):		ppm
Graffiti:	Nor	ie								pH (field):		units
Erosion:	Nor									Temperature:		°F
Depositio	on: Nor	ne Depth (in):								Conductivity:		µS/cm
Damage:	Nor	ne 🗌 Displace	ement 🗌 Und	dercut		Crushed				Detergents:		mg/L
		Corrosic	on 🗌 Cra	cks/Str	uctural D)amage				Phenol:		mg/L

Inspection Date	e: 10/11/2011 9:03:	10 AM Inspec	ctor: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descriptio	on: Submerged (not	located) No	otes: 2010 so submer	creening follow-up. Ou ged and not physical	utfall fully ly located.			N.
Submerged. 10			Outfall	screened upstream a	t 03-22 US1.		<mark>CI</mark> I	and the second
Illicit Discharge	Potential: Potentia	al	Field Fo	ollow-up Of	fice Follow-up			
Floatables: Non	ie	Petrol. She	en 🗌 Suds	Sewage Alg	gae 🗌 Other			Trans.
Odor: Non	le	Petroleum	Musty	Sewage Ch	lorine Other	Loca	le	0
Turbidity: Non		UVOC/Solve	nt 📋 Fishy	Sulfur Fra	agrant			2011 09+02
Color: Non]				0201110110902	250.JF	PG
Gross Solids:	None	Litter	Debris	Sediment C	Dther –	Sampling Results		
Vegetation:	None	Inhibited	Excessive	e		Sample Location:		
Benthic Growth:	None	Green	Brown			Sample ID:		
Stains:	None	Flow Line	🗌 Oil	Rust Stains		Time Collected		
		Corrosion	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natural She	een 🗌 Natu	ral Suds/Foam		Free Chlorine (field):		ррт
- Physical Cond	dition Assessment —					Total Copper (field):		ррт
Croffitie	Nono					Ammonia (field):		ppm
Graniti.	None					pH (field):		units
Erosion:	None Death (in)					Temperature:		°F
Deposition:	None Depth (In)	. 0	_			Conductivity:		µS/cm
Damage:	None Displac	cement 🗌 Unde	ercut 🗌 C	Crushed		Detergents:		mg/L
		ion 🗌 Cracl	ks/Structural D	amage		Phenol:		mg/L

Inspection Da	ate: 8/18/2010 10:2	6:01 AM Inspect	tor: JCW Insp	ection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descript Submerged:	tion: Submerged (r Fully Depth	ot located) Not	es: Outfall fully sub located. Outfa US1.	omerged and r I screened up	not physically stream at 03-22	-Out		
Illicit Discharg	ge Potential: Poter	ntial	Field Follow-up	Off	fice Follow-up		A	i i
Floatables: No	one	Petrol. Shee	en 🗌 Suds 🔄 Se	wage 🗌 Alg	gae 🗌 Other		K	
Odor: No	one	Petroleum	Musty Se	wage 🗌 Ch	llorine 🗌 Other	Loca	tet	
Turbidity: No	one	U VOC/Solven	nt 📋 Fishy 🔝 Su	lfur 📋 Fra	agrant	020100818101	06 15 918 ./P	2421 19 19
Color: No	one					020100010101	510.01	u
Gross Solids:	None	Litter	Debris Se	diment 🗌 C	Other	Sampling Results		
Vegetation:	None	Inhibited	Excessive			Sample Location:		
Benthic Growth	h: None	Green	Brown			Sample ID:		
Stains:	None	Flow Line	🗌 Oil 🛛 🗌 Ru	st Stains		Time Collected		
		Corrosion	Paint Ot	her		Total Chlorine (field):		ррт
Non-illicit:	None	Natural Shee	en 🗌 Natural Suds	/Foam		Free Chlorine (field):		ppm
- Physical Co	ondition Assessment					Total Copper (field):		ppm
Croffitio	Nege					Ammonia (field):		ррт
Gramu:	None					pH (field):		units
Erosion:	None					Temperature:		°F
Deposition:	None Depth	in): U				Conductivity:		µS/cm
Damage:	None 🗌 Disp	lacement 🗌 Under	cut Crushec			Detergents:		mg/L
	Cor	osion 🗌 Cracks	s/Structural Damage			Phenol:		mg/L

Inspection Date: 9/10/	2009 Inspecto	or: JCW Inspe	ction Type: Initial	Previous Rainfall (hrs):	72+
Flow Description: Subr	nerged, indeterminate Note	es:			The sea
Submerged: Fully	Depth (in):				a state of
Illicit Discharge Potentia	I: Potential	Field Follow-up	Office Follow-up		
Floatables: None	Petrol. Sheer	n 🗌 Suds 🔄 Sew	age 🗌 Algae 🗌 Othe	r	
Odor: None	Petroleum	☐ Musty ☐ Sew t ☐ Fishy ☐ Sulfi	rage 🗌 Chlorine 🗌 Othe ur 🔲 Fragrant	r	S
Turbidity: None				1/1/1/1	09.10.2008/09:11
Color: None				Osh09_DSCN6	765.JPG
Gross Solids: None	Litter	Debris 🗌 Sedi	iment 🗌 Other	-Sampling Results	
Vegetation: None	Inhibited [Excessive		Sample Location:	
Benthic Growth: None	Green	Brown		Sample ID:	
Stains: None	Flow Line	Oil Rust	t Stains	Time Collected	
		Paint Othe	er	Total Chlorine (field):	ppm
Non-illicit: None	Natural Shee	en 🗌 Natural Suds/F	oam	Free Chlorine (field):	ppm
- Physical Condition Asse				Total Copper (field):	ppm
	-comon			Ammonia (field):	ppm
Graffiti: None				pH (field):	units
Erosion: INONE	Death (in), 0			Temperature:	°F
Deposition: None				Conductivity:	μS/cm
Damage: None	Displacement Underc	cut Crushed		Detergents:	mg/L
	Corrosion Cracks	/Structural Damage		Phenol:	mg/L

Outfall ID: 03-22 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 03-22

Drainage Basin: Nebraska St

- Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120927082914.JPG

Outfall Notes:

Upstream catchbasin located approx 55 ft S of outfall 03-22. Intermediate area consists of open space.

County C	oordinates:	Sta
Northing:	471,694	Nor
Easting:	792.376	Fas

ate Plane Coordinates:rthing:737,235sting:2,352,478



Inspection	Date: 9/27/	/2012 9:27:45 AM In	nspector: JC	W Inspe	ction Type:	Ongoing	Previous Rainfall (hr	s): 72+	
Flow Desci	ription: Sub	merged, indeterminate	Notes: 20	11 gross solid	s follow-up.		an		
Submerged	Submerged: Fully Depth (in): 39								
Illicit Discharge Potential: Potential Field Follow-up Office Follow-up									
Floatables:	None	Petrol.	Sheen 🗌 Su	ids 🗌 Sew	vage 🗌 Al	gae 🗌 Othe	er and a start start	54 2401	1113
Odor:	None	Petrole	ອບm 🗌 Mເ	usty 🗌 Sev	vage 🗌 Cl	hlorine 🗌 Othe	er 🔰	1	
			Solvent 🗌 Fis	shy 🗌 Sulf	ur 🗌 Fr	agrant	3 6 1 6 6	3.40	
Turbidity:	None						Carl Carl	a fre	AN STREET
Color:	None						0201209270)82922.JI	G
Gross Solid	s: Severe	✓ Litter	🗌 Deb	ris 🗌 Sed	iment 🗌	Other	-Sampling Results		
Vegetation:	None	🗌 Inhibite	əd 🗌 Exce	essive			Sample Location: P	ool	
Benthic Gro	wth: None	Green	Brov	vn			Sample ID: 1	20927-4	0
Stains:	None	Flow L	ine 🗌 Oil	🗌 Rus	t Stains		Time Collected 0	9:26	
	L		ion 🗌 Pain	nt 🗌 Oth	er		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natura	l Sheen	Natural Suds/	Foam		Free Chlorine (field):	0	ppm
- Physical	Condition Ass	essment			_		Total Copper (field):	0	ppm
Onefficie	Name	essment					Ammonia (field):	0	ppm
Gramiti:	None						pH (field):	8.32	units
Erosion:	None	Develle (he)					Temperature:	59	°F
Depositio	n: None	Deptn (In):					Conductivity:	398	µS/cm
Damage:	None	🗌 Displacement 🗌 I	Jndercut	Crushed			Detergents:	0	mg/L
			Dracks/Structu	ural Damage			Phenol:		mg/L

Outfall ID: 03-22 US1

Inspection	Date: 6/20	0/2012 9:24:19 AM Ir	spector: JCW	Inspection T	Type: Other	Previous Rainfall (hrs):	24-48
Flow Descr	ription: Sub	omerged, indeterminate	Notes: Gross	solids pre-screer	ning.	- Carton	
Submerged	: Fully	Depth (in): 46				1/2- ATTE	Par and
Illicit Disch	arge Potenti	al: Potential	Field F	Follow-up	Office Follow-up		
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage	Algae Othe	er 🔰	
Odor:	None	Petrole	eum 🗌 Musty	Sewage	Chlorine Oth	er	
			olvent 🗌 Fishy	Sulfur	Fragrant		
Turbidity:	None						
Color:	None					020120620082	2508.JPG
Gross Solid	s: Severe	✓ Litter	Debris	Sediment	Other	Sampling Results	
Vegetation:	None	🗌 Inhibite	ed 🗌 Excessiv	ve		Sample Location:	
Benthic Gro	wth: None	Green	Brown			Sample ID:	
Stains:	None	Flow L	ine 🗌 Oil	Rust Stains	IS	Time Collected	
			ion 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit:	None	Natura	I Sheen 🗌 Nati	ural Suds/Foam		Free Chlorine (field):	ppm
- Physical	Condition As					Total Copper (field):	ppm
Thysical		56351116111				Ammonia (field):	ppm
Graffiti:	None					pH (field):	units
Erosion:	None					Temperature:	°F
Depositio	n: None	Depth (in):				Conductivity:	μS/cm
Damage:	None	🗌 Displacement 🗌 L	Jndercut	Crushed		Detergents:	mg/L
		Corrosion	Cracks/Structural I	Damage		Phenol:	mg/L

Inspection Dat	e: 10/11/2011	9:05:50 AM In	spector:	JCW	Inspection Ty	/pe: Ongo	ing	Previous Rainfall (h	nrs): 72-	+
Flow Descripti	on: Submerge	d, indeterminate	Notes:	2010 scr	eening follow-u	p. No signi	ficant		*	The state
Submerged: F	ully De	epth (in): 37		change i	n volume of floa	atable debri	S.	1 States		CAL
Illicit Discharg	e Potential: Po	otential		Field Fol	low-up	Office Fo	llow-up		the second second	5.11
Floatables: No	ne	Petrol.	Sheen 🗌	Suds	Sewage	Algae	Other			
Odor: No	ne	Petrole	um	Musty Fishy	Sewage Sulfur	Chlorine	Other			
Turbidity: No	ne							St. State	the state of the s	
Color: No	ne							02011101	1090446.J	IPG
Gross Solids:	Moderate	✓ Litter		Debris	Sediment	Other	Г	Sampling Results —		
Vegetation:	None	🗌 🗌 Inhibite	d 🗌 E	Excessive				Sample Location:	Pool	
Benthic Growth	: None	Green	E	Brown				Sample ID:	111011-(09
Stains:	None	Flow L	ne 🗌 (Dil	Rust Stains	;		Time Collected	09:05	
		Corros	on 🗌 F	Paint	Other			Total Chlorine (field)): 0	ppm
Non-illicit:	None	Natura	Sheen	Natura	al Suds/Foam			Free Chlorine (field)	: 0	ppm
- Physical Cor	dition Assessme	ont						Total Copper (field):	0	ррт
One filling	News							Ammonia (field):	0	ppm
Gramiti:	None							pH (field):	8.13	units
Erosion:	None Day							Temperature:	70	°F
Deposition:	None Dep	otn (in): U		_				Conductivity:		μS/cm
Damage:		Displacement 🗌 l	Indercut	Cr	rushed			Detergents:		mg/L
		Corrosion	racks/Str	uctural Da	image			Phenol:		mg/L

Outfall ID: 03-22 US1

Inspection Date: 5/26/2011 11:19:0	OOAM Inspector: JCV	N Inspection Type: Other	Previous Rainfall (hrs): 72+
Flow Description:Submerged, independentSubmerged:FullyDepth (in	n): Notes: Lim	ited screening conducted to check for table debris.	
Illicit Discharge Potential: Potentia		d Follow-up	
Floatables: None	Petrol. Sheen Sud	ls 🗌 Sewage 🗌 Algae 🗌 Oth	er 🔰
Odor:	Petroleum Mus	sty 🗌 Sewage 🗌 Chlorine 🗌 Oth	er Contraction
	VOC/Solvent Fish	ny 🗌 Sulfur 🗌 Fragrant	
Turbidity:			
Color:]		o20110526111930.JPG
Gross Solids: Moderate	Litter Debri	s 🗌 Sediment 🗌 Other	Sampling Results
Vegetation:	Inhibited Exces	ssive	Sample Location:
Benthic Growth:	Green Brow	n	Sample ID:
Stains:	🗌 Flow Line 🗌 Oil	Rust Stains	Time Collected
	Corrosion Paint	Other	Total Chlorine (field): ppm
Non-illicit: None	Natural Sheen N	latural Suds/Foam	Free Chlorine (field): ppm
- Physical Condition Assessment			Total Copper (field): ppm
Croffition None			Ammonia (field): ppm
Gramu: None			pH (field): units
Erosion: None			Temperature: °F
Deposition: None Depth (in):	: U		Conductivity: μS/cm
Damage: None 🗌 Displac	ement 🗌 Undercut	Crushed	Detergents: mg/L
Corrosi	on Cracks/Structur	al Damage	Phenol: mg/L

Inspection Dat	te: 8/18/2010 10:29:	59 AM Inspector:	JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs	: 72+	
Flow Descript	ion: Submerged, ind	eterminate Notes:	Severe flo	patable debris in ca	tchbasin.		Sec. 1	a core
Submerged: F	-ully Depth (i	n): 44				1 1 A BA		
Illicit Discharg	ge Potential: Potentia	al [Field Follo	ow-up 🗌 Of	fice Follow-up			
Floatables: No	one	Petrol. Sheen	Suds	🗌 Sewage 🗌 Alg	gae 🗌 Othe	r	A BAN	and the
Odor: No	one	Petroleum VOC/Solvent	_ Musty []Fishy [Sewage Cr	nlorine 🗌 Othe agrant	r		
Turbidity: No	one						p he	6.2010 10:24
Color: Fa	aint in bottle	Brown				0201008181	02410.JF	PG
Gross Solids:	Severe	Litter	Debris [Sediment	Dther	- Sampling Results ——		
Vegetation:	None	Inhibited	Excessive			Sample Location: Po	ol	
Benthic Growth	n: None	Green	Brown			Sample ID: 10	0818-8	3
Stains:	None	Flow Line	Oil [Rust Stains		Time Collected 10	:32	
			Paint [Other		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natural Sheen	Natural	Suds/Foam		Free Chlorine (field):	0	ppm
– Physical Cor	ndition Assessment —					Total Copper (field):	0	ppm
Croffiti	Nana					Ammonia (field):	0	ррт
Graniu.	None					pH (field):	7.38	units
Erosion:	None Dooth (in)					Temperature:	76	°F
Deposition:	None Depth (in)	. U	_			Conductivity:		µS/cm
Damage:	Displace	cement 🗌 Undercut	Cru	ushed		Detergents:	0	mg/L
	Corros	ion Cracks/St	tructural Dar	nage		Phenol:	0	mg/L

Outfall ID: 03-22 US1

Inspection Date: 9/1	0/2009 Ir	nspector: JCW	Inspec	tion Type: Init	ial	Previous Rainfall (hr	s): 72+	
Flow Description: Sul Submerged: Fully	Depth (in): 44	Notes: Abno (bubl	ormal deterge bles). Signifi	ent analysis res cant floatables	ult in manhole.			
Illicit Discharge Potent	ial: Potential	Field	Follow-up	Office	Follow-up			
Floatables: None	Petrol.	Sheen Suds	Sewa	age 🗌 Algae	Other	Pri Sta		
Odor: None	Petrole	eum 🗌 Must	y 🗌 Sewa	age 🗌 Chlorir	ne 🗌 Other	S. F.C.S.	DE	101
		Solvent 🗌 Fishy	/ 🗌 Sulfu	ır 🗌 Fragra	nt			6 9000 00-40
Turbidity: None								
Color: None						Osh09_DS0	N6768.J	PG
Gross Solids: Severe	✓ Litter	Debris	Sedir	ment 🗌 Othe	r 🗆	Sampling Results —		
Vegetation: None		ed 🗌 Excess	sive			Sample Location: F	ool	
Benthic Growth: None	Green	Brown				Sample ID: 0	90910-0	9
Stains: None	Flow L	ine 🗌 Oil	Rust	Stains		Time Collected 0	9:52	
		ion 🗌 Paint	Othe	r		Total Chlorine (field):	0	ppm
Non-illicit: None	Natura	I Sheen 🗌 Na	tural Suds/F	oam		Free Chlorine (field):	0	ppm
- Physical Condition As				1		Total Copper (field):	0	ppm
Groffiti: Nono	beboment					Ammonia (field):		ppm
Erosion: None						pH (field):	8.3	units
Deposition: None	Depth (in): 0					Temperature:	75	°F
Deposition. None						Conductivity:		µS/cm
Damaye. None	Displacement L l	Jndercut				Detergents:	0	mg/L
		Cracks/Structura	I Damage			Phenol:	0	mg/L

Outfall ID: 03-35

Major Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: South Main St

Dimensions

Diameter (in): 30 Height/Depth (in): Width (in):

Mapping Precison: Desktop mapping estimate ✓ Not Physically Located



o20120927081500.JPG

Outfall Notes:

Storm sewer from S Main St discharges to river from south. Outfall not located - pipe info from MS4 map.

County Co	ordinates:	State Pla	ne Coor
Northing:	471,413	Northing:	736,9
Easting:	793,066	Easting:	2,353,

dinates: 966 173

JCW Inspection Date: 9/27/2012 9:13:17 AM Inspector: Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Outfall fully submerged; screened upstream Flow Description: Submerged (not located) Notes: at 03-35 US1. Submerged: Fully Depth (in): Illicit Discharge Potential: Potential Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927081506.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 03-35

Inspection	Date:	6/20/2012 9:06:10	AM In	spector:	JCW	Inspec	tion Type:	Other		Previous Rainfall (hrs):	24-	48
Flow Descr	ription:	Submerged (not	located)	Notes:	Gross	solids pre-	creening.			- The second second		
Submerged	: Fully	Depth (in):							NO DI	al	
Illicit Disch	arge Pot	tential: Potentia	I		Field F	ollow-up	Of	ffice Follo	w-up	N/)†	
Floatables:	None		Petrol.	Sheen	Suds	Sewa	ige 🗌 Al	gae	Other			_
Odor:	None		Petrole	um 🗌	Musty	Sewa	ige 🗌 Cł	hlorine	Other	Loca	lle	a
			VOC/S	olvent	Fishy	Sulfu	r 🗌 Fr	agrant		A Street	06/20/	2012 08:08
Turbidity:	None									The second second	A	
Color:	None									020120620080)844.JI	PG
Gross Solid	s: Nor	ie	Litter		Debris	Sedir	nent 🗌 (Other		Sampling Results		
Vegetation:	Nor	ie	Inhibite	d 🗌	Excessiv	/e				Sample Location:		
Benthic Gro	wth: Nor	ie	Green		Brown					Sample ID:		
Stains:	Nor	10	🗌 Flow Li	ne 🗌	Oil	Rust	Stains			Time Collected		
			Corrosi	on 🗌	Paint	Othe	·			Total Chlorine (field):		ррт
Non-illicit:	Nor	10	Natural	Sheen	🗌 Natu	Iral Suds/F	oam			Free Chlorine (field):		ррт
– Physical	Condition	n Assessment —								Total Copper (field):		ррт
Cueffiti.	Nam									Ammonia (field):		ppm
Gramiti:	INOP	ie								pH (field):		units
Erosion:	Nor	10								Temperature:		°F
Depositio	on: Nor	ne Depth (in):								Conductivity:		µS/cm
Damage:	Nor	ne 🗌 Displac	ement 🗌 U	ndercut		Crushed				Detergents:		mg/L
		Corrosi	on 🗌 C	racks/Si	tructural [Damage				Phenol:		mg/L

Inspection Date: 10/	/11/2011 9:36:03 AM Ir	spector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description: Su	bmerged (not located)	Notes: 2010 s	creening follow-up. Or graed and not physical	utfall fully lv located.			Jan La
Submerged: Fully	Depth (in):	Outfall	screened upstream a	t 03-35 US1.	Out	al	
Illicit Discharge Potent	tial: Potential	Field F	ollow-up 🗌 Of	fice Follow-up	Ne		
Floatables: None	Petrol.	Sheen 🗌 Suds	🗌 Sewage 🗌 Alg	gae 🗌 Other		-	
Odor: None	Petrole	eum 🗌 Musty olvent 🗌 Fishy	Sewage Cr	nlorine 🗌 Other agrant	Loca	No. of the	
Turbidity: None					- 18-18	1	C THE
Color: None					020111011093	254.JI	°G
Gross Solids: None	Litter	Debris	Sediment 0	Dther	Sampling Results		
Vegetation: None		ed 🗌 Excessiv	/e		Sample Location:		
Benthic Growth: None	Green	Brown			Sample ID:		
Stains: None	Flow L	ine 🗌 Oil	Rust Stains		Time Collected		
	Corros	ion 🗌 Paint	Other		Total Chlorine (field):		ррт
Non-illicit: None	Natura	l Sheen 🗌 Natu	ural Suds/Foam		Free Chlorine (field):		ррт
- Physical Condition As	ssessment				Total Copper (field):		ррт
Graffiti: Nono					Ammonia (field):		ррт
Erosion: None					pH (field):		units
Deposition: None	Depth (in): 0				Temperature:		°F
Damage: None			a		Conductivity:		μS/cm ″
Damage. None	Displacement	Jndercut	Crushed		Detergents:		mg/L
		Fracks/Structural I	Jamage		Phenol:		mg/L

Outfall ID: 03-35

Inspection Date:	: 8/18/2010 9:27:46	AM Inspecto	or: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description Submerged: Ful	n: Submerged (not lly Depth (in	located) Note	s: Outfall full located. C US1.	y submerged and r Dutfall screened up	not physically stream at 03-35	Out	fall	
Illicit Discharge	Potential: Potentia	1	E Field Follo	w-up 🗌 Off	fice Follow-up	No	ot	
Floatables: None	e	Petrol. Sheen	Suds	Sewage 🗌 Alg	gae 🗌 Other	r		at a
Odor: None	e	Petroleum	Musty	🗌 Sewage 🔲 Ch	lorine 🗌 Other	r LOCa	100	23
		VOC/Solvent	Fishy	Sulfur Fra	agrant	a traine		
Turbidity: None	e						00.10	
Color: None	9]				020100818092	204.JPG?	í.
Gross Solids:	None	Litter	Debris	Sediment 🗌 C	Dther	-Sampling Results		
Vegetation:	None	Inhibited	Excessive			Sample Location:		
Benthic Growth:	None	Green	Brown			Sample ID:		
Stains:	None	Flow Line	Oil	Rust Stains		Time Collected		
		Corrosion	Paint	Other		Total Chlorine (field):	¢	эрт
Non-illicit:	None	Natural Sheer	n 🗌 Natural	Suds/Foam		Free Chlorine (field):	¢	орт
- Physical Cond	lition Assessment —					Total Copper (field):	F	эрт
Groffiti	Nono					Ammonia (field):	F	эрт
Graniti.	None					pH (field):	L	units
Erosion:						Temperature:	0	°F
Deposition:	None Depth (in):	U				Conductivity:	J	ג/cm
Damage:	None 🗌 Displac	ement 🗌 Underci	ut 🗌 Cru	shed		Detergents:	r	ng/L
	Corrosi	on 🗌 Cracks/	Structural Dam	nage		Phenol:	r	ng/L

Inspection Date	e: 9/10/2009	Inspector	: JCW	Inspection Type:	Initial	Previous Rainfall (hrs):	72+	
Flow Description	on: Submerged (n ully Depth	(in): Notes	: Outfall fi located. US1.	ully submerged and Outfall screened up	not physically ostream at 03-35	Outf	al	
Illicit Discharge	e Potential: Poten	tial	Field Fo	llow-up 🗌 Of	fice Follow-up	No	t	100
Floatables: Nor	ne	Petrol. Sheen	Suds	🗌 Sewage 🗌 Alg	gae 🗌 Other			Contraction of
Odor: Nor	ne	Petroleum [_ Musty _ Fishy	Sewage Cr	nlorine 🗌 Other agrant	Loca		
Turbidity: Nor	ne						16 19 1	0 9354 74 15
Color: Nor	ne					Osh09_DSCN6	761.JI	PG
Gross Solids:	None	Litter	Debris	Sediment 0	Other	Sampling Results		
Vegetation:	None	Inhibited	Excessive	•		Sample Location:		
Benthic Growth:	None	Green	Brown			Sample ID:		
Stains:	None	Flow Line	Oil	Rust Stains		Time Collected		
		Corrosion	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natural Sheen	Natura	al Suds/Foam		Free Chlorine (field):		ppm
- Physical Cond	dition Assessment					Total Copper (field):		ррт
Graffiti	None					Ammonia (field):		ppm
Frosion:	None					pH (field):		units
Deposition:	None Depth (i	n): 0				remperature:		°F uS/om
Damage:	None Dice	, j		rushod		Detergente:		μ3/CIII ma/l
	Corr	osion Cracks/S	itructural Da	amage		Phenol:		mg/L

Outfall ID: 03-35 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 03-35

Drainage Basin: South Main St

-Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120927081516.JPG

Outfall Notes:

Upstream manhole located approx 20 ft WSW of outfall 03-35. Intermediate area consists of open space.

County Co	ordinates:	State Plar
Northing:	471,408	Northing:
Easting:	793.047	Easting:

ate Plane Coordinates:rthing:736,962sting:2,353,154



Inspection	Date: 9/27/	/2012 9:13:54 AM	nspector:	JCW	Inspection Type:	Ongoing	Previous Rainfall (h	rs): 72+	-
Flow Descr	ription: Subi	merged, indeterminate	Notes:	2011 g	ross solids follow-up.		1. A. de	a very a	
Submerged	: Fully	Depth (in): 31					6.65	AT -	
Illicit Disch	arge Potentia	al: Potential		Field F	ollow-up 🗌 O	ffice Follow-up			
Floatables:	None	Petrol.	Sheen	Suds	🗌 Sewage 🗌 A	lgae 🗌 Other		2-2	
Odor:	None	Petrol	eum 🗌	Musty	🗌 Sewage 🗌 C	hlorine 🗌 Other	r 👗	1. Saint	11 1 3
			Solvent	Fishy	Sulfur F	ragrant			
Turbidity:	None								AND NOT
Color:	None						02012092	7081522.JI	PG
Gross Solid	s: Severe	✓ Litter		Debris	Sediment	Other	-Sampling Results —		
Vegetation:	None	🗌 Inhibit	ed 🗌	Excessiv	e		Sample Location:	Pool	
Benthic Gro	wth: None	Green		Brown			Sample ID:	120927-2	2
Stains:	Slight	✓ Flow L	ine	Oil	Rust Stains		Time Collected	09:12	
			ion 🗌	Paint	Other		Total Chlorine (field)	: 0	ppm
Non-illicit:	None	Natura	l Sheen	Natu	ral Suds/Foam		Free Chlorine (field):	0	ррт
- Physical	Condition Ass	essment					Total Copper (field):	0	ррт
Oreffiti	Nama	cosment					Ammonia (field):	0	ppm
Gramiti:	None						pH (field):	8.42	units
Erosion:	None						Temperature:	59	°F
Depositio	n: Minor	Depth (in): 3					Conductivity:	723	µS/cm
Damage:	None	Displacement	Jndercut		Crushed		Detergents:	0	mg/L
		Corrosion	Cracks/St	ructural E	Damage		Phenol:		mg/L

Outfall ID: 03-35 US1

Inspection D	ate: 6/20/2	012 9:08:12	AM In	spector:	JCW	Inspec	ction Type:	Other	Previous Rainfall (hrs):	24-4	48
Flow Description: Submerged, inde			erminate Notes: Gross solids pre-screening.					1 Barris	13		
Submerged:	Fully	Depth (in): 39								
Illicit Dischar	Field Follow-up						The second				
Floatables: N	lone		Petrol.	Sheen	Suds	Sewa	age 🗌 A	lgae 🗌 Othe	er Alexand		
Odor:	lone		Petrole	um 🗌	Musty	Sewa	age 🗌 C	hlorine 🗌 Othe	er 💦	A A	
			VOC/S	olvent	Fishy	Sulfu	ur 🗌 F	ragrant		60	2.17
Turbidity: N	lone									and the second	**
Color:	lone								020120620080)918.JF	°G
Gross Solids:	Severe		✓ Litter		Debris	🗌 Sedi	ment	Other	-Sampling Results		
Vegetation:	None		Inhibite	d 🗌	Excessiv	е			Sample Location:		
Benthic Grow	th: None		Green		Brown				Sample ID:		
Stains:	None		E Flow Li	ne 🗌	Oil	🗌 Rust	Stains		Time Collected		
			Corros	on 🗌	Paint	Othe	r		Total Chlorine (field):		ppm
Non-illicit: None			Natural Sheen Natural Suds/Foam					Free Chlorine (field):		ppm	
– Physical C	Total Copper (field):							ppm			
									Ammonia (field):		ppm
Gramti:	None								pH (field):		units
Erosion:	None								Temperature:		°F
Deposition: None Depth (in):								Conductivity:		µS/cm	
Damage: None 🗌 Displa			ement Undercut Crushed						Detergents:		mg/L
	on Cracks/Structural Damage						Phenol:		mg/L		

Inspection Date:	10/11/2011 9:29:50	DAM Inspecto	or: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs)	: 72+	
Flow Description:	Submerged, indet	erminate Note	s: 2010 sc	creening follow-up. F	loatable debris		-Ch	Star Ve
Submerged: Fully	Depth (in)	: 19	still pres	sent. Slight petroleui	1/200	1	XX	
Illicit Discharge Po	otential: Potential		Field Fo	ollow-up 🗌 Of				
Floatables: Severe	9	✓ Petrol. Sheer	n 🗌 Suds	Sewage Al	gae 🗌 Othe	r		
Odor: None		PetroleumVOC/Solvent	☐ Musty ☐ Fishy	Sewage Ct	hlorine 🗌 Othe agrant	r		
Turbidity: None								A14 08338
Color: None						0201110110	92832.JI	°G
Gross Solids: Se	evere	✓ Litter	Debris	Sediment 0	Other	-Sampling Results		
Vegetation: No	one	Inhibited	Excessive	e		Sample Location: Po	lool	
Benthic Growth: No	one	Green	Brown			Sample ID: 11	1011-5	5
Stains: No	one	Flow Line	Oil	Rust Stains		Time Collected 09	:30	
		Corrosion	Paint	Other		Total Chlorine (field):	0	ppm
Non-illicit: No	one	Natural Shee	n 🗌 Natur	al Suds/Foam		Free Chlorine (field):	0	ppm
						Total Copper (field):	0	ррт
						Ammonia (field):	0	ррт
Graffiti: No	one					pH (field):	8.01	units
Erosion: No	Denth (in):	0				Temperature:	71	°F
Deposition: No		0	_			Conductivity:		µS/cm
Damage: No		ement 🗌 Underc	ut 🗌 C	Crushed		Detergents:		mg/L
	Corrosio	n Cracks/	Structural D	amage		Phenol:		mg/L
Outfall ID: 03-35 US1

Inspection Date: 5/26/2011 11:23:	00 AM Inspector: JCW Inspection	on Type: Other	Previous Rainfall (hrs):	72+
Flow Description:Submerged, indSubmerged:FullyDepth (i	n): Notes: Limited screening c	conducted to check for		
Illicit Discharge Potential: Potentia	al 🗌 Field Follow-up	Office Follow-up	10/01	
Floatables: None	Petrol. Sheen Suds Sewag	je 🗌 Algae 🗌 Other	-C-S	
Odor:] Petroleum Musty Sewag	je Chlorine Other		
Turbidity:	UVOC/Solvent Fishy Sulfur	Fragrant	02011052611240	00.JPG
Gross Solids: Severe	」 】✔ Litter Debris Sedim [,]	ent 🗌 Other 🗖	Sampling Results]
Vegetation:	Inhibited Excessive		Sample Location:	
Benthic Growth:	Green Brown		Sample ID:	
Stains:] _ Flow Line _ Oil _ Rust S	Stains	Time Collected	
	Corrosion Paint Other		Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen Natural Suds/Foa	am	Free Chlorine (field):	ppm
Physical Condition Assessment	-		Total Copper (field):	ppm
Graffiti: None			Ammonia (field):	ppm
Erosion: None			pH (field):	units
Deposition: None Dopth (in)	· 0		I emperature:	°F
			Conductivity:	μS/cm
	cement Undercut Crushed		Detergents:	mg/L
Corros	ion Cracks/Structural Damage		Phenol:	mg/L

Inspection Date: 8/18/2010 9:32:06 A	M Inspector: JCW I	spection Type: Ongoing	g Previous Rainfa	ıll (hrs): 72+	
Flow Description: Submerged, indete	rminate Notes: Severe float	able debris in catchbasin.			A A
Submerged: Fully Depth (in):	34		Stor 1/2	2000	Z
Illicit Discharge Potential: Potential	Field Follow	up Office Follo	w-up	R	
Floatables: None [Petrol. Sheen Suds	Sewage 🗌 Algae] Other	11200	
Odor: Faint [☐ Petroleum	Sewage 🗌 Chlorine 🗌 Sulfur 🗌 Fragrant] Other		
Turbidity: None			Stand Street	- Alto	Sector of State
Color: Faint in bottle	Brown		02010)0818092304.JF	PG
Gross Solids: Severe	✓ Litter 🗌 Debris 🗌	Sediment 🗌 Other	Sampling Results	;	
Vegetation: None [Inhibited Excessive		Sample Location	ı: Pool	
Benthic Growth: None [Green Brown		Sample ID:	100818-7	7
Stains: None [_ Flow Line _ Oil	Rust Stains	Time Collected	09:30	
[Corrosion Paint	Other	Total Chlorine (fi	eld): 0	ppm
Non-illicit: None	Natural Sheen Natural S	uds/Foam	Free Chlorine (fi	eld): 0	ppm
- Physical Condition Assessment			Total Copper (fie	eld): 0	ppm
			Ammonia (field):	0.5	ppm
Gramu: None			pH (field):	7.46	units
Erosion: None Depentition: None Depth (in):	9		Temperature:	73	°F
Deposition: None Depth (In):	J		Conductivity:		μS/cm
Damage: None Displacen	ient 📋 Undercut 🗌 Crus	ed	Detergents:	0	mg/L
Corrosion	Cracks/Structural Dama	ge	Phenol:	0	mg/L

Outfall ID: 03-35 US1

Inspection Date: 9/10/2009	Inspector: JCW	Inspection Type: Initial	Previous Rainfall (hrs):	72+
Flow Description: Submerged, ind	eterminate Notes: Abnorn (bubble	nal detergent analysis result es). Significant floatables in manhole	126 3	Care 1
Illicit Discharge Potential: Potentia	al Field Fi	ollow-up	- Harris	
Floatables: None	Petrol. Sheen Suds	Sewage Algae Othe	er	Call
Odor: None	Petroleum Musty	Sewage Chlorine Othe	er	AN A
	VOC/Solvent Fishy	Sulfur Fragrant		10 2008 08:24
Turbidity: None				
Color: None			Osh09_DSCN6	763.JPG
Gross Solids: Severe	Litter Debris	Sediment Other	-Sampling Results	
Vegetation: None	Inhibited Excessiv	е	Sample Location: Pool	
Benthic Growth: None	Green Brown		Sample ID: 0909	910-68
Stains: None	🗌 Flow Line 🗌 Oil	Rust Stains	Time Collected 09:2	5
	Corrosion Paint	Other	Total Chlorine (field):	0 ppm
Non-illicit: None	Natural Sheen Natu	ral Suds/Foam	Free Chlorine (field):	0 ppm
- Physical Condition Assessment			Total Copper (field):	0 ppm
			Ammonia (field):	ppm
Graffiti: None			pH (field):	8.23 <i>units</i>
Erosion: None			Temperature:	73 ° <i>F</i>
Deposition: None Depth (in)	: 0		Conductivity:	μS/cm
Damage: None 🗌 Displac	cement 🗌 Undercut	Crushed	Detergents:	0 <i>mg/L</i>
	ion Cracks/Structural E	Damage	Phenol:	0 <i>mg/L</i>

Outfall ID: 06-1028

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precision:Desktop mapping estimate✓Not Physically Located



o20120620092742.JPG

Outfall Notes:

Storm sewer from Campbell Rd discharges to stream from south. Outfall not located - pipe info from MS4 map.

County Co	ordinates:	State Plai	ne Coordinates:
Northing:	474,544	Northing:	740,004
Easting:	787,874	Easting:	2,347,926

JCW Inspection Type: Ongoing **Inspection Date:** 6/20/2012 10:25:32 AM Inspector: Previous Rainfall (hrs): 24-48 the N Flow Description: Submerged (not located) Notes: Outfall fully submerged; screened upstream at 06-1028 US1. Submerged: Fully Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120620092748.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 06-1028

Inspection Date: 8/18/20	010 3:02:40 PM In:	spector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description: Submo	erged (not located) Depth (in):	Notes: Outfall located 1028 L	fully submerged and i d. Outfall screened up JS1.	not physically ostream at 06-	Outf	2	
Illicit Discharge Potential:	Unlikely	Field F	ollow-up Of	fice Follow-up	No		
Floatables: None	Petrol.	Sheen 🗌 Suds	🗌 Sewage 🗌 Alç	gae 🗌 Other			
Odor: None	Petrole	um 🗌 Musty	🗌 Sewage 🗌 Ch	nlorine 🗌 Other		<mark>te(</mark>	
		olvent 🗌 Fishy	Sulfur Fra	agrant		F	
Turbidity: None						19 19	1-10 18 45
Color: None					0201008181455	512.JP	'G
Gross Solids: None	Litter	Debris	Sediment 0	Other	Sampling Results]
Vegetation: None	Inhibite	d 🗌 Excessiv	/e		Sample Location:		
Benthic Growth: None	Green	Brown			Sample ID:		
Stains: None	🗌 Flow Li	ne 🗌 Oil	Rust Stains		Time Collected		
	Corrosi	on 🗌 Paint	Other		Total Chlorine (field):		ррт
Non-illicit: None	Natural	Sheen 🗌 Natu	ıral Suds/Foam		Free Chlorine (field):		ррт
- Physical Condition Asses	sment				Total Copper (field):		ррт
Croffitiu Nono	omon				Ammonia (field):		ррт
Gramu: None					pH (field):		units
Erosion: None					Temperature:		°F
Deposition: None	Depth (in): 0				Conductivity:		µS/cm
Damage: None	Displacement U	Indercut	Crushed		Detergents:		mg/L
	Corrosion C	racks/Structural I	Damage		Phenol:		mg/L

Inspection Dat	ite: 9/10/2009	Inspector:	JCW	Inspection Type:	Initial	Previous Rainfall (hrs):	72+	
Flow Descript	tion: Submerged, ind	eterminate Notes:						
Submerged: F	Fully Depth (i	n):					-	
Illicit Discharg	ge Potential: Unlikely	/ [Field Follo	ow-up 🗌 O	fice Follow-up			
Floatables:		Petrol. Sheen	Suds	Sewage Al	gae 🗌 Other			1
Odor: No	one	Petroleum	_ Musty _ _ Fishy _	Sewage Cl	nlorine 🗌 Other agrant		00.1	0 9009 13:12
Turbidity: No	one					1. 1.2		
Color: No	one					Osh09_DSCN6	793.JI	°G
Gross Solids:		Litter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	Inhibited	Excessive			Sample Location:		
Benthic Growth	h: None	Green	Brown			Sample ID:		
Stains:		Flow Line	Oil [Rust Stains		Time Collected		
			Paint [Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natural Sheen	Natural	Suds/Foam		Free Chlorine (field):		ppm
- Physical Co	ndition Assessment					Total Copper (field):		ppm
	News					Ammonia (field):		ppm
Graffiti:	None					pH (field):		units
Erosion:	None					Temperature:		°F
Deposition:	None Depth (in)	: 0				Conductivity:		µS/cm
Damage:	None 🗌 Displa	cement 🗌 Undercut	🗌 Crı	ushed		Detergents:		mg/L
		ion Cracks/S	tructural Dar	nage		Phenol:		mg/L

Outfall ID: 06-1028 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 06-1028

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120620092940.JPG

Outfall Notes:

Upstream curb inlet located approx 122 ft SSE of outfall 06-1028. Intermediate area consists of open area and paved parking lot.

County Co	ordinates:	State Plar	ne Coordinates:
Northing:	474,434	Northing:	739,894
Easting:	787,926	Easting:	2,347,979



Inspection	Date: 6/20/2	2012 10:29:02 AM	nspector: JC	W Inspe	ection Type:	Ongoing	Previous Rainfall (hrs):	24-4	48
Flow Desci	ription: Subr	nerged, indeterminate	Notes: 20	11 gross solic	ds follow-up.		and an out of the second	20	195
Submerged	: Fully	Depth (in): 21					A Strift The		
Illicit Disch	arge Potentia	I: Unlikely	🗌 Fie	eld Follow-up	0	ffice Follow-up		1	PAN -
Floatables:	None	Petrol	Sheen 🗌 Su	ids 🗌 Sev	vage 🗌 Al	gae 🗌 Other			
Odor:	None	Petrol	eum 🗌 Mu	usty 🗌 Sev	wage 🗌 C	hlorine 🗌 Other			
			Solvent 🗌 Fis	shy 🗌 Sul	fur 🗌 Fr	ragrant		05/25/	2012 10:24
Turbidity:	None						1000 March 1		
Color:	None						0201206200929	948.JI	G
Gross Solid	ls: Moderate	✓ Litter	🖌 Deb	ris 🗌 Sec	diment	Other	Sampling Results		
Vegetation:	None	🗌 Inhibit	ed 🗌 Exce	essive			Sample Location:		
Benthic Gro	wth: Slight	✓ Green	Brow	vn			Sample ID:		
Stains:	None	Flow L	ine 🗌 Oil	🗌 Rus	st Stains		Time Collected		
			sion 🗌 Pain	nt 🗌 Oth	er		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	al Sheen	Natural Suds/	Foam		Free Chlorine (field):		ppm
- Physical	Condition Asse	essment			_		Total Copper (field):		ppm
Groffiti	Nono						Ammonia (field):		ppm
Graniti.	None						pH (field):		units
Erosion.	None						Temperature:		°F
Depositio	on: inone	Depth (in):					Conductivity:		µS/cm
Damage:	None	Displacement	Undercut	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Structu	ural Damage			Phenol:		mg/L

Outfall ID: 06-1028 US1

Inspection D	ate: 8/18/2	2010 3:07:00	PM In	spector:	JCW	Inspec	ction Type:	Ongoing	1	Previous Rainfall (hrs	s): 72+	-
Flow Descrip	ption: Subm	nerged, inde	terminate	Notes:							a main s	and the second
Submerged:	Fully	Depth (in): 18							A CONTRACTOR	A	
Illicit Discha	rge Potential	: Unlikely			Field Fo	ollow-up	0 []	ffice Follow	w-up		Age	
Floatables: S	Slight		Petrol.	Sheen	Suds	Sewa	age 🗌 A	lgae	Other	PAR Sec		
Odor:	None		Petrole	um 🗌	Musty	Sew	age 🗌 C	hlorine	Other		(AL	
			VOC/S	olvent	Fishy	Sulfu	ur 🗌 Fi	ragrant			2019 - 2019	
Turbidity:	None										08.1	8.2010 14:58
Color:	None									020100818	45848.JI	PG
Gross Solids:	: Slight		✓ Litter	\checkmark	Debris	🗌 Sedi	ment	Other		Sampling Results		
Vegetation:	None		Inhibite	d 🗌	Excessiv	е				Sample Location: P	ool	
Benthic Grow	/th: Slight		✓ Green		Brown					Sample ID: 1	00818-8	7
Stains:	None		🗌 Flow Li	ne 🗌	Oil	🗌 Rust	Stains			Time Collected 1	5:05	
			Corros	on 🗌	Paint	Othe	er			Total Chlorine (field):	0	ppm
Non-illicit:	Slight		✓ Natural	Sheen	🗌 Natu	ral Suds/F	oam			Free Chlorine (field):	0	ppm
– Physical C	Condition Asse	ssment					-			Total Copper (field):	0	ррт
Croffitio	Name	Somern								Ammonia (field):	0	ррт
Gramti:	None									pH (field):	7.46	units
Erosion:	inone									Temperature:	76	°F
Deposition	: None	Depth (in):	0							Conductivity:		µS/cm
Damage:	None	Displac	ement 🗌 L	Indercut		Crushed				Detergents:	0	mg/L
		Corrosi	on 🗌 C	racks/St	tructural D	Damage				Phenol:	0	mg/L



Outfall ID: 06-1083

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120611080824.JPG

Outfall Notes:

Storm sewer from Westhaven Dr discharges to stream from north.

County Coordinates						
Northing:	472,418					
Easting:	778,180					

State Plane Coordinates: Northing: 737,703 Easting: 2,338,272

Inspection Date: 6/11/2012 9:05:58 AM Inspection Type: Ongoing Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: None Notes: Damp flowline, but no flow leaving pipe. Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120611080832.JPG Color: None ✓ Litter Gross Solids: Slight ✓ Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Flow Line Stains: Slight Rust Stains Time Collected Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): -ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Minor Deposition: Depth (in): 1 Conductivity: µS/cm --Damage: Minor Displacement Undercut Crushed Detergents: -mg/L Cracks/Structural Damage Phenol: Corrosion -mg/L



Outfall ID: 06-1090

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120530111500.JPG

Outfall Notes:

Storm sewer from Nicole Ct discharges to stream from west.

County Co	ordinates
Northing:	473,000
Fasting:	778 562

State Plane Coordinates: Northing: 738,293 Easting: 2,338,644

Inspection Date: 5/30/2012 12:13:49 PM Inspection Type: Ongoing Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: None Notes: Apron damp but no flow at time of inspection. Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120530111508.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Flow Line Stains: Slight Rust Stains Time Collected Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): -ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 06-1132

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 42 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120611092516.JPG

Outfall Notes:

Storm sewer from 9th Ave discharges to stream from west.

County Coordinates:						
Northing:	470,790					
Easting:	776,481					

State Plane Coordinates: Northing: 736,045 Easting: 2,336,603



Inspection Da	ate: 6/11/2012 10:22:	55 AM Inspector: J	ICW Inspec	tion Type: Ongoing	Previous Rainfall (hrs):	72+
Flow Descrip	otion: None	Notes: C	Gravel deposit at	end of apron.		
Submerged:	None Depth (n):				and the second sec
Illicit Dischar	rge Potential: Unlike	∦ □ F	ield Follow-up	Office Follow-u	q	
Floatables: N	lone	Petrol. Sheen S	Suds 🗌 Sewa	age 🗌 Algae 🗌 C	Dther	
Odor: N	lone	Petroleum N VOC/Solvent F	∕lusty Sewa Fishy Sulfu	age 🗌 Chlorine 🗌 C r 🗌 Fragrant	Dther	
Turbidity: N	lone					007117203010-28
Color: N	lone				o2012061109.	2654.JPG
Gross Solids:	None	Litter De	bris 🗌 Sedir	nent 🗌 Other	Sampling Results	
Vegetation:	None	Inhibited Ex	cessive		Sample Location:	
Benthic Growt	th: None	 Green Bro	own		Sample ID:	
Stains:	Slight	_ ☐ ✔ Flow Line □ Oil	Rust	Stains	Time Collected	
		Corrosion Pa	int 🗌 Other	r	Total Chlorine (field):	ppm
Non-illicit:	None	Natural Sheen	Natural Suds/Fo	oam	Free Chlorine (field):	ppm
– Physical Co	ondition Assessment –		-		Total Copper (field):	ppm
Groffiti	Nono				Ammonia (field):	ppm
Graniu.	None				pH (field):	units
Dependition:	Minor Dooth (in	N- 0			Temperature:	°F
Deposition.	Minor Deptri (in	μ. ο 	_		Conductivity:	μS/cm
Damage:	Displa	cement 📋 Undercut	Crushed		Detergents:	mg/L
	Corros	ion Cracks/Struc	tural Damage		Phenol:	mg/L

Inspection Date: 9/3/2009	Inspector: JCW	Inspection Type: Initial	Previous Rainfall (hrs):	72+
Flow Description: None	Notes:		A CONTRACTOR	11
Submerged: None Depth (n): 0		State State	a start
Illicit Discharge Potential: Unlikel	Field Follow	w-up Office Follow-up		1.1
Floatables:	Petrol. Sheen Suds	Sewage Algae Othe	r	
Odor:	Petroleum Musty	Sewage Chlorine Othe	r	
	VOC/Solvent Fishy	Sulfur Fragrant	Carry .	
Turbidity:				09.00.2008 14.00
Color:			Osh09_DSCN645	57.JPG
Gross Solids:	Litter Debris	Sediment Other	-Sampling Results	
Vegetation:	Inhibited Excessive		Sample Location:	
Benthic Growth:	Green Brown		Sample ID:	
Stains:	Flow Line Oil	Rust Stains	Time Collected	
	Corrosion Paint	Other	Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen Natural Sheen	Suds/Foam	Free Chlorine (field):	ppm
- Physical Condition Assessment			Total Copper (field):	ppm
			Ammonia (field):	ррт
Graffiti: None			pH (field):	units
Erosion: None			Temperature:	°F
Deposition: None Depth (in	j: 0		Conductivity:	μS/cm
Damage: None 🗌 Displa	cement 🗌 Undercut 🗌 Crus	shed	Detergents:	mg/L
	sion 🗌 Cracks/Structural Dam	nage	Phenol:	mg/L

Outfall ID: 06-1136

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 42 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120611093044.JPG

Outfall Notes:

Storm sewer from 9th Ave discharges to stream from east.

County Co	ordinates:
Northing:	470,793
Easting:	776.523

State Plane Coordinates: Northing: 736,049 Easting: 2,336,644



Inspection	Date: 6/11/2012 10:29:34	AM Inspector:	JCW Insp	ection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	Flow Description: Submerged, slight flow Notes: Gravel deposition on apron. Outfall partially submerged. Outfall screened upstream at							
Submerged:	Submerged: Partially Depth (in): 10 06-1136 US1.							
Illicit Disch	Illicit Discharge Potential: Unlikely 🗌 Field Follow-up 🗌 Office Follow-up							
Floatables:	None	Petrol. Sheen	Suds Se	wage 🗌 Al	gae 🗌 Other		4.24	
Odor:	None	Petroleum] Musty 🗌 Se	wage 🗌 C	hlorine 🗌 Other			
	VOC/Solvent Fishy Sulfur Fragrant							
Turbidity:	Slight cloudiness							
Color:	None					0201206110930	052.JPG	
Gross Solids	s: None	Litter	Debris 🗌 Se	diment	Other	-Sampling Results		
Vegetation:	None	Inhibited	Excessive			Sample Location:		
Benthic Gro	wth: None	Green	Brown			Sample ID:		
Stains:	Moderate	Flow Line	Oil 🗌 Ru	st Stains		Time Collected		
		Corrosion	Paint Ot	her		Total Chlorine (field):	ppm	
Non-illicit:	None	Natural Sheen	Natural Suds	/Foam		Free Chlorine (field):	ppm	
- Physical	Condition Assessment			_		Total Copper (field):	ppm	
Creffit	Nege					Ammonia (field):	ppm	
Gramiti:	None					pH (field):	units	
Erosion:						Temperature:	°F	
Depositio	n: Moderate Depth (in):	4				Conductivity:	μS/cm	
Damage:	None Displace	ment 🗌 Undercut	Crushed			Detergents:	mg/L	
		n Cracks/Str	ructural Damage			Phenol:	mg/L	

Outfall	ID:	06-1136

Inspection	Date: 9/3/2	009	Inspector:	JCW Inspe	ction Type:	Initial	Previous Rainfall (hrs):	72+	
Flow Desci	ription: Subr	nerged, slight flow	Notes:				ALL	*	
Submerged	: Partially	Depth (in): 11						11.5	
Illicit Disch	arge Potentia	I: Unlikely	F	Field Follow-up	Of	ffice Follow-up			
Floatables:	None	Petro	ol. Sheen 🗌 S	Suds 🗌 Sew	vage 🗌 Al	gae 🗌 Othe	r		
Odor:	Faint	Petro	oleum 🗌 N	Musty 🗌 Sew	vage 🗌 Cl	hlorine 🗌 Othe	r A		
			/Solvent 🗌 F	Fishy 🗹 Sulf	ur 🗌 Fr	agrant	la granting		
Turbidity:	Cloudy							08.03.200	N 14.10
Color:	None						Osh09_DSCN6	460.JPG	
Gross Solid	ls: None	Litter	De	ebris 🗌 Sed	iment 🗌	Other	-Sampling Results		
Vegetation:		🗌 Inhib	ited 🗌 Ex	cessive			Sample Location:		
Benthic Gro	wth: Slight	✓ Gree	n 🗌 Br	own			Sample ID:		
Stains:		✓ Flow	Line 🗌 Oi	I 🗌 Rus	t Stains		Time Collected		
			osion 🗌 Pa	int 🗌 Oth	ər		Total Chlorine (field):	pj	рт
Non-illicit:	None	☐ Natu	ral Sheen	Natural Suds/	- oam		Free Chlorine (field):	pj	pm
- Physical	Condition Ass				_		Total Copper (field):	pj	рт
FIIySical	Condition Asse	-551110111					Ammonia (field):	p	рт
Graffiti:	None						pH (field):	ui	nits
Erosion:	None						Temperature:	°	F
Depositio	on:	Depth (in): 1					Conductivity:	μ	S/cm
Damage:	None	Displacement	Undercut	Crushed			Detergents:	m	ng/L
		Corrosion	Cracks/Struc	tural Damage			Phenol:	m	ng/L

Outfall ID: 06-1136 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 06-1136

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120611093602.JPG

Outfall Notes:

Upstream manhole located approx 19 ft ESE of outfall 06-1136. Intermediate area consists of rip-rap embankment.

County Co	ordinates:	State Plai	ane Coor		
Northing:	470,789	Northing:	736,		
Easting:	776,543	Easting:	2,336,		

dinates: 045 665

Inspection Date: JCW 6/11/2012 10:33:33 AM Inspector: Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: Submerged: Partially Depth (in): 12 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Faint Odor: Petroleum Musty Sewage Chlorine Other VOC/Solvent V Fishy Sulfur Fragrant 012 10:36 Turbidity: Slight cloudiness o20120611093616.JPG Color: None Gross Solids: Slight Litter ✓ Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: None Green Brown Sample ID: 120611-43 Flow Line Stains: Slight Rust Stains **Time Collected** 10:35 Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 7.59 units Erosion: None Temperature: 73 °F Deposition: None Depth (in): Conductivity: 1490 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: Corrosion Cracks/Structural Damage 0 mg/L



Outfall ID:	06-1136	US1
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Inspection Date: 9/3/2009 Inspector: JCW Inspection Type: Initial	Previous Rainfall (hrs): 72+						
Flow Description: Submerged, slight flow Notes:	and the second se						
Submerged: Partially Depth (in): 10							
Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up							
Floatables: None Petrol. Sheen Suds Sewage Algae	Other						
Odor: None Petroleum Musty Sewage Chlorine	Other						
VOC/Solvent Fishy Sulfur Fragrant							
Turbidity: None	Cartos, cure jaixa						
Color: None	Osh09_DSCN6463.JPG						
Gross Solids: None Litter Debris Sediment Other	- Sampling Results						
Vegetation:	Sample Location: Pool						
Benthic Growth: Green Brown	Sample ID: 090903-20						
Stains:	Time Collected 15:22						
Corrosion Paint Other	Total Chlorine (field): 0 ppm						
Non-illicit: None Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm						
- Physical Condition Assessment	Total Copper (field): 0 ppm						
	Ammonia (field): ppm						
Grattiti: None	pH (field): 8.12 units						
Erosion: None	Temperature: 71 °F						
Deposition: None Depth (in): 0	Conductivity: µS/cm						
Damage: None Displacement Undercut Crushed	Detergents: 0 mg/L						
Corrosion Cracks/Structural Damage	Phenol: 0 mg/L						

Outfall ID: 06-1149

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: PVC

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 15 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120530074712.JPG

Outfall Notes:

Storm sewer from Lake Pointe Dr discharges to stream from west.

County Co	oordinates:	Stat
Northing:	473,959	Nort
Easting:	779,287	East

 ate Plane Coordinates:

 rthing:
 739,264

 sting:
 2,339,351



Inspection	Date: 5/30	/2012 8:46:17 AM Ir	nspector: JC	V Inspec	tion Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description: Submerged, indeterminate Notes: Outfall partially sub Submerged: Partially Depth (in): 3						Outfall screened	EVANT -		
Submergeu									
Illicit Disch	arge Potenti	al: Unlikely	E Fiel	d Follow-up	Of	fice Follow-up			5 1-2h
Floatables:	None	Petrol.	Sheen 🗌 Suc	ls 🗌 Sewa	ige 🗌 Alç	gae 🗌 Other			200
Odor:	None	Petrole	eum 🗌 Mus	sty 🗌 Sewa	ige 🗌 Ch	nlorine 🗌 Other		Y	CE AS
	r		Solvent 🗌 Fish	ny 🗌 Sulfu	r 🗌 Fra	agrant		4130/	201
Turbidity:	None							1	
Color:	None						020120530074	728.JF	²G
Gross Solid	s: None	Litter	🗌 Debri	s 🗌 Sedin	nent 🗌 C	Other	Sampling Results]
Vegetation:	None		ed 🗌 Exces	ssive			Sample Location:		
Benthic Gro	wth: Slight	✓ Green	Srow	n			Sample ID:		
Stains:	Slight	✓ Flow L	ine 🗌 Oil	Rust	Stains		Time Collected		
			ion 🗌 Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	Natura	I Sheen	latural Suds/Fo	oam		Free Chlorine (field):		ррт
- Physical	Condition Ass	sessment		1			Total Copper (field):		ppm
Oreffiti	Name						Ammonia (field):		ppm
Gramti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut [Crushed			Detergents:		mg/L
			Cracks/Structur	al Damage			Phenol:		mg/L

Outfall ID: 06-1149 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 06-1149

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS D5/30/2012 09:53

o20120530085310.JPG

Outfall Notes:

Upstream manhole located approx 193 ft W of outfall 06-1149. Intermediate area consists of multifamily residential property.

County Co	ordinates:	State Plai	ane Coordinates:			
Northing:	473,942	Northing:	739,243			
Easting:	779,095	Easting:	2,339,159			



Inspection	Date: 5/30/2	2012 9:49:57 AM	nspector:	JCW	Inspection Typ	e: Ongoing	Previous Rainfall (hr	s): 72+	
Flow Descr	ription: Trick	le	Notes:	All flow a	appears to be infi	tration around		-	and the
Submerged	: None	Depth (in):		outiot pip				-1	
Illicit Disch	arge Potentia	l: Unlikely		Field Fol	low-up	Office Follow-up			14
Floatables:	None	Petro	. Sheen 🗌	Suds	Sewage	Algae Oth	er 💦		AN
Odor:	None	Petro	eum	Musty	Sewage	Chlorine Oth	ler	1	and by
			Solvent	Fishy	Sulfur	Fragrant		05/30/	2012 08:53
Turbidity:	None								
Color:	None						020120530	085320.JI	PG
Gross Solid	s: None	Litter	🗌 D	ebris	Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inhibi	ied 🗌 E	xcessive			Sample Location: F	low	
Benthic Gro	wth: None	Greer	n 🗌 B	rown			Sample ID: 1	20530-5	1
Stains:	None	Elow Flow	_ine 🗌 O	Dil	Rust Stains		Time Collected 0	9:55	
		Corro	sion 🗌 P	aint	Other		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natur	al Sheen 🛛	Natura	al Suds/Foam		Free Chlorine (field):	0	ppm
- Physical	Condition Asse						Total Copper (field):	0	ррт
i nysicai	Condition Asse	55111C11					Ammonia (field):	0	ррт
Graffiti:	None						pH (field):	7.22	units
Erosion:	None						Temperature:	62	°F
Depositio	n: None	Depth (in):					Conductivity:	1389	µS/cm
Damage:	Minor	Displacement	Undercut	🗌 Cı	rushed		Detergents:	0	mg/L
		Corrosion	Cracks/Stru	ictural Da	image		Phenol:		mg/L

Outfall ID: 06-1477

Major Outfall

Structure Type: Open Channel Outfall

Discharge Location: MS4 Stormwater Facility

Shape: Channel - Trapezoidal

Material: Channel - riprap

City ID: N/A

Drainage Basin: Sawyer Creek

Diameter (in):

Height/Depth (in): 36 Width (in): 420

Mapping Precison: Mapping GPS



o20120611085930.JPG

Outfall Notes:

Rip-rap channel from Oakwood Rd discharges into detention basin. Upstream dimensions recoded.

County Co	ordinates:	State Pla	ne
Northing:	472,044	Northing:	
Easting:	776,934	Easting:	1

ate Plane Coordinates: orthing: 737,307 asting: 2,337,033





Outfall ID: 06	6-1477
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Inspection Date: 9/3/2009	Inspector: JCW Inspe	ction Type: Initial	Previous Rainfall (hrs):	72+
Flow Description: None	Notes:			
Submerged: None Depth (in):	0		W State	5745
Illicit Discharge Potential: Unlikely	Field Follow-up	Office Follow-up		
Floatables:	Petrol. Sheen Suds Sew	vage 🗌 Algae 🗌 Other		
Odor:	Petroleum Musty Sew	vage 🗌 Chlorine 🗌 Other	A MARCE	1 CAR
Turbidity:	VOC/Solvent Fishy Sulf	ur 🗌 Fragrant	Osh09_DSCN6	4470.JPG
Gross Solids:	Litter Debris Sed	iment 🗌 Other	Sampling Results	
Vegetation:	Inhibited Excessive		Sample Location:	
Benthic Growth:	Green Brown		Sample ID:	
Stains:	Flow Line Oil Rus	t Stains	Time Collected	
	Corrosion Paint Othe	er	Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen Natural Suds/	-oam	Free Chlorine (field):	ppm
Physical Condition Assessment		٦	Total Copper (field):	ppm
Graffiti: None			Ammonia (field):	ppm
Erosion: None			pH (field):	units
Deposition: None Depth (in):	0		I emperature:	°F
			Conductivity:	μS/cm
	ment Undercut Urushed		Detergents:	mg/L
	n Cracks/Structural Damage		Phenol:	mg/L

Outfall ID: 06-1495

Minor Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: HDPE

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 30 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120612070608.JPG

Outfall Notes:

Storm sewer from Wyldewood Dr discharges to detention basin from west.

County Co	ordinates:	State
Northing:	474,122	North
Easting:	776,823	Easti

te Plane Coordinates: thing: 739,383 ting: 2,336,885

Inspection	Date:	6/12/2012 8:05:30	AM I	nspector:	JCW	Inspection	on Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption:	Submerged, slig	nt flow	Notes:	Outfall	partially sub	merged;	screened		4	1
Submerged	: Partia	ally Depth (in): 8		upstrea	am at 06-149	5 US1.		A AM		
Illicit Discharge Potential: Unlikely				Field Follow-up Office Follow-up							
Floatables:	None		Petrol	Sheen	Suds	Sewag	e 🗌 Al	gae 🗌 Othe	r		
Odor:	None		Petrol	eum 🗌	Musty	Sewag	e 🗌 Cł	nlorine 🗌 Othe	r a la l		
Turbidity:	None			Solvent	Fishy	Sulfur	🗌 Fr	agrant			en 12: an ion
Color:	None								020120612070	614.JF	PG
Gross Solids	s: No	ne	Litter		Debris	Sedim	ent 🗌 (Other	-Sampling Results		
Vegetation:	No	ne	🗌 Inhibit	ed 🗌	Excessiv	e			Sample Location:		
Benthic Gro	wth: Mc	oderate	🖌 Green	\checkmark	Brown				Sample ID:		
Stains:	Sli	ght	✓ Flow L	ine	Oil	🗌 Rust S	tains		Time Collected		
			Corros	sion	Paint	Other			Total Chlorine (field):		ррт
Non-illicit:	No	ne	Natura	al Sheen	🗌 Natu	ral Suds/Foa	am		Free Chlorine (field):		ppm
Physical	Conditic	on Assessment —							Total Copper (field):		ppm
Graffiti:	No	ne							nH (field):		ppm unite
Erosion:	No	ne							Temperature:		°F
Depositio	n: No	ne Depth (in):							Conductivity:		μS/cm
Damage:	No	ne 🗌 Displac	ement	Undercut		Crushed			Detergents:		mg/L
		Corrosi	on 🗌	Cracks/St	ructural D	Damage			Phenol:		mg/L



Outfall ID: 06-1495 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: Sawyer Creek

-Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120612071210.JPG

Outfall Notes:

Upstream catchbasin located approx 116 ft W of outfall 06-1495. Intermediate area consists of multifamily residential property.

County Co	ordinates:	State Plane Coordii				
Northing:	474,139	Northing:	739,398			
Easting:	776,709	Easting:	2,336,770			



Inspection D	Date: 6/12/2	2012 8:07:54	4 AM Ir	spector:	JCW	Inspec	tion Type:	Ongoing	Previous Rainfall (h	ırs): 72+	
Flow Descri	ption: Subn	nerged, inde	eterminate	Notes:						A.	A Constant
Submerged:	Partially	Depth (in	n): 2							1	T
Illicit Discha	arge Potentia	I: Unlikely	Field Follow-up							-Tile	
Floatables:	None		Petrol.	Sheen	Suds	Sewa	age 🗌 Ale	gae 🗌 Oth	er H		
Odor:	Faint			eum	Musty	Sewa	age 🗌 Ch r 🗌 Er	nlorine 🗌 Oth	er 🔰		
Turbidity:	None]					ayranı		08/12/	2012 08:12
Color:	None]						02012061	2071218.JI	PG
Gross Solids	: None		Litter		Debris	🗌 Sedir	ment 🗌 (Other	- Sampling Results		
Vegetation:	None		🗌 Inhibite	ed 🗌	Excessiv	/e			Sample Location:	Pool	
Benthic Grow	vth: None		Green		Brown				Sample ID:	120612-2	4
Stains:	Slight		Flow L	ine 🗌	Oil	🗌 Rust	Stains		Time Collected	08:13	
			Corros	ion 🗌	Paint	Othe	r		Total Chlorine (field)	: 0	ppm
Non-illicit:	Slight		V Natura	l Sheen	🗌 Natu	ural Suds/F	oam		Free Chlorine (field)	: 0	ppm
– Physical C	Condition Asse	essment —							Total Copper (field):	0	ррт
Groffiti:	Nono								Ammonia (field):	0	ррт
Graniu. Erosion:	None								pH (field):	7.32	units
Deposition	None	Depth (ip):							Temperature:	68	°F
Deposition	Nono				_				Conductivity:	1263	μS/cm
Damage.	none	Displac	cement 📋 l	Indercut		Crushed			Detergents:	0	mg/L
		Corrosi	ion 🗌 (Cracks/S	tructural [Damage			Phenol:		mg/L

Outfall ID: 06-1694

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material:

City ID: N/A

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in): 21 Height/Depth (in): Width (in):

Mapping Precision:Desktop mapping estimate✓Not Physically Located



o20120620084116.JPG

Outfall Notes:

Storm sewer from Dempsey Trail and wastewater treatment plant discharges to stream from south. Outfall not located - pipe info from MS4 map.

County Co	ordinates:	State Plai	ne Coordinates:
Northing:	473,980	Northing:	739,419
Easting:	786,742	Easting:	2,346,804

Inspection Type: Ongoing **Inspection Date:** 6/20/2012 9:38:57 AM Inspector: JCW Previous Rainfall (hrs): 24-48 Flow Description: Submerged (not located) Notes: Outfall fully submerged; screened upstream at 06-1694 US1. Submerged: Fully Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120620084124.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 06-1694

Inspection	Date: 10/	11/2011 11:22:06 AM Ir	spector: JCW	Inspection Ty	vpe: Ongo	ing	Previous Rainfall (hrs):	72+	
Flow Desci Submerged	r iption: Su l : Fully	bmerged (not located) Depth (in):	Notes: 2010 submo	screening follow-up erged and not physic	p. Outfall fu sically locat	ully ted.	Out	fal	
Illicit Disch	arge Potent	ial: Potential		Follow-up] Office Fo	ollow-up	No		
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage	Algae	Other	1 Thomas		Sage -
Odor:	None	Petrole	eum 🗌 Musty folvent 🗌 Fishy	Sewage Sulfur	Chlorine	Other	Loca	te	
Turbidity:	None						100	1024122	D1111112213
Color:	None						020111011112	'242.JF	Ъ
Gross Solid	s: None	Litter	Debris	Sediment	Other		Sampling Results		
Vegetation:	None	Inhibite	ed 🗌 Excessi	ve			Sample Location:		
Benthic Gro	wth: None	Green	Brown				Sample ID:		
Stains:	None	Flow L	ine 🗌 Oil		Time Collected				
			ion 🗌 Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	Natura	I Sheen 🗌 Nat	ural Suds/Foam			Free Chlorine (field):		ррт
- Physical	Condition As	sessment					Total Copper (field):		ppm
Graffiti	None						Ammonia (field):		ppm
Graniti.	None						pH (field):		units
	None	Death (in): 0					Temperature:		°F
Depositio	INONE	Deptn (in): 0					Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Structural	Damage			Phenol:		mg/L

Inspection Da	ate: 8/25/	2010 10:41:35 AM	nspector:	JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descrip	tion: Sub	merged (not located)	Notes:	Outfall f located.	ully submerged and Outfall screened up	not physically ostream at 06-			
Submerged:	Fully	Depth (in):		1694 US	S1.		Out	ah	
Illicit Dischar	ge Potentia	al: Potential		Field Fo	llow-up Of	fice Follow-up	No		
Floatables: N	lone	Petrol	.Sheen 🗌	Suds	Sewage Al	gae 🗌 Other			
Odor: N	lone	Petrol	eum	Musty Fishy	Sewage Cl Sulfur Fr	nlorine 🗌 Othei agrant			
Turbidity: N	lone							\$ 19	A SHARE SHARE
Color: N	lone						0201008251034	400.JF	PG
Gross Solids:	None	Litter		Debris	Sediment	Other	-Sampling Results		
Vegetation:	None	🗌 Inhibit	ed 🗌 E	Excessive)		Sample Location:		
Benthic Growt	th: None	Green	1 🗌 E	Brown			Sample ID:		
Stains:	None	Elow L	_ine 🗌 C	Dil	Rust Stains		Time Collected		
			sion 🗌 F	Paint	Other		Total Chlorine (field):		ррт
Non-illicit:	None	Natura	al Sheen	Natur	al Suds/Foam		Free Chlorine (field):		ppm
– Physical Co	ondition Ass	essment					Total Copper (field):		ppm
Croffiti	Nono						Ammonia (field):		ppm
Gramu:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Deposition:	None	Deptn (in): 0					Conductivity:		µS/cm
Damage:	None	Displacement	Undercut	C	rushed		Detergents:		mg/L
		Corrosion	Cracks/Str	uctural D	amage		Phenol:		mg/L

Outfall ID: 06-1694

Inspection Date	e: 9/10/2009	Inspector: JCW Inspection Type: Initial	Previous Rainfall (hrs): 72+
Flow Description	on: Submerged, inde	erminate Notes:	
Submerged: F	ully Depth (in		
Illicit Discharge	e Potential: Unlikely	Field Follow-up	
Floatables: Nor	ne	Petrol. Sheen Suds Sewage Algae Other	
Odor: Nor	ne	Petroleum Musty Sewage Chlorine Other	A STATE OF A
		VOC/Solvent Fishy Sulfur Fragrant	
Turbidity: Nor	ne		
Color: Nor	ne		Osh09_DSCN6811.JPG
Gross Solids:	None	Litter Debris Sediment Other	Sampling Results
Vegetation:	None	Inhibited Excessive	Sample Location:
Benthic Growth:	: None	Green Brown	Sample ID:
Stains:	None	Flow Line Oil Rust Stains	Time Collected
		Corrosion Paint Other	Total Chlorine (field): ppm
Non-illicit:	None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): ppm
- Physical Con	ndition Assessment —		Total Copper (field): ppm
Croffiti	Nene		Ammonia (field): ppm
Gramu:	None		pH (field): units
Erosion:	None Death (a)		Temperature: °F
Deposition:	None Depth (in):	U	Conductivity: µS/cm
Damage:	None Displac	ment 🗌 Undercut 📄 Crushed	Detergents: mg/L
	Corrosi	n Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 06-1694 US1

Major Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 06-1694

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120620084234.JPG

Outfall Notes:

Upstream curb inlet located approx 109 ft S of outfall 06-1694. Intermediate area consists of open area north of wastewater treatment plant.

County Co	ordinates:	State Plai	ne Coordinates:
Northing:	473,884	Northing:	739,324
Easting:	786,792	Easting:	2,346,856

Inspection Date: JCW 6/20/2012 9:42:17 AM Inspector: Inspection Type: Ongoing Previous Rainfall (hrs): 24-48 Flow Description: Submerged, indeterminate Notes: Submerged: Fully Depth (in): 39 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120620084252.JPG Color: None ✓ Litter Gross Solids: Slight Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: Slight Green Brown Sample ID: 120620-95 Stains: None Rust Stains **Time Collected** Flow Line Oil 09:44 Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 6.91 units Erosion: None Temperature: 79 °F Deposition: None Depth (in): Conductivity: 170 µS/cm Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 06-1694 US1

Inspection	Date: 10/11	/2011 11:25:47 AM Ir	nspector: JC	W Inspec	ction Type:	Ongoing	Previous Rainfall (r	ırs): 72+	
Flow Descr Submerged	ription: Subn : Fully	Depth (in): 34	Notes: 20 de	10 screening fo bris. Slight pe	ollow-up. Moo troleum shee	derate solid en.	1 Kon	and the	
Illicit Disch	arge Potentia	: Potential	E Fie	eld Follow-up	Offic	ce Follow-up	1 State		1.
Floatables:	Moderate	✓ Petrol.	Sheen 🗌 Su	ds 🗌 Sewa	age 🗌 Alga	ae 🗌 Othe	r Consis		
Odor:	None	Petrole	eum 🗌 Mu	isty 🗌 Sewa	age 🗌 Chlo	orine 🗌 Othe	r 💦	-	
			Solvent 🗌 Fis	shy 🗌 Sulfu	ur 🗌 Fraç	grant		- And	SAC
Turbidity:	None						St. Stand Street	J.	
Color:	None						02011101	1112518.JF	PG
Gross Solid	s: Moderate	Litter	Deb	ris 🗌 Sedi	ment 🗌 Ot	ther	-Sampling Results —]
Vegetation:	None	🗌 Inhibite	ed 🗌 Exce	essive			Sample Location:	Pool	
Benthic Gro	wth: Slight	✓ Green	Brov	vn			Sample ID:	111011-6	6
Stains:	Slight	✓ Flow L	ine 🗌 Oil	🗌 Rust	Stains		Time Collected	11:25	
			ion 🗌 Pain	t 🗌 Othe	r		Total Chlorine (field)): 0	ppm
Non-illicit:	None	Natura	I Sheen	Natural Suds/F	oam		Free Chlorine (field)	: 0	ppm
– Physical	Condition Asse	essment			-		Total Copper (field):	0	ррт
Oneffitie	Nere	Somerne					Ammonia (field):	0	ррт
Gramti:	None						pH (field):	7.46	units
Erosion:	None						Temperature:	71	°F
Depositio	n: None	Depth (in): 0					Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Structu	ıral Damage			Phenol:		mg/L



Outfall ID: 06-1694 US1

Inspection Dat	te: 8/25/2010 10:50:3	4 AM Inspector: JCW Inspection Type: Ongoing Previous Rain	ıfall (hrs): 72+
Flow Descripti	ion: Submerged, inde	terminate Notes: Floatable solid waste in curb inlet.	K
Submerged: F	-ully Depth (in): 40	State Providence
Illicit Discharg	e Potential: Potentia	Field Follow-up	
Floatables: No	one	Petrol. Sheen Suds Sewage Algae Other	
Odor: No	one	Petroleum Musty Sewage Chlorine Other	Carlo Tra
		🗌 VOC/Solvent 🗌 Fishy 🗌 Sulfur 📄 Fragrant	-the Ar
Turbidity: No	one		
Color: No	one	020	100825104154.JPG
Gross Solids:	Moderate	Litter Debris Sediment Other Sampling Result	lts
Vegetation:	None	Inhibited Excessive Sample Location	on: Flow
Benthic Growth	: Slight	Green Brown Sample ID:	100825-98
Stains:	Slight	✓ Flow Line □ Oil □ Rust Stains Time Collected	10:56
		Corrosion Paint Other Total Chlorine	(field): 0 ppm
Non-illicit:	None	Natural Sheen Natural Suds/Foam Free Chlorine ((field): 0 ppm
– Physical Cor	ndition Assessment	Total Copper (1	field): 0 ppm
Creffitie	Nere	Ammonia (field	i): 0 ppm
Graffiti:	None	pH (field):	7.5 units
Erosion:	None	Temperature:	72 ° <i>F</i>
Deposition:	Minor Depth (in):	2 Conductivity:	μS/cm
Damage:	None 🔄 Displac	ement Undercut Crushed Detergents:	0 <i>mg/L</i>
	Corrosi	on Cracks/Structural Damage Phenol:	0 <i>mg/L</i>

Inspection Date: 9/10/2009	Inspector: JCW Inspection Type: Initial	Previous Rainfall (hrs): 72+
Flow Description: Submerged, indetermina	e Notes:	
Submerged: Fully Depth (in): 36		
Illicit Discharge Potential: Unlikely	Field Follow-up	
Floatables: None	ol. Sheen 🗌 Suds 🔄 Sewage 🗌 Algae 🔄 Other	
Odor: None Pe	oleum I Musty I Sewage I Chlorine I Other C/Solvent Fishy I Sulfur I Fragrant	
Turbidity: None		00 10 00 00 00 00 00 00 00 00 00 00 00 0
Color: None		Osh09_DSCN6814.JPG
Gross Solids: None Litt	r 🗌 Debris 🗌 Sediment 🗌 Other	Sampling Results
Vegetation: None Inh	bited Excessive	Sample Location: Pool
Benthic Growth: None	en 🗌 Brown	Sample ID: 090910-25
Stains: None Group	/ Line 🗌 Oil 🔄 Rust Stains	Time Collected 15:03
Co	osion 🗌 Paint 🗌 Other	Total Chlorine (field): 0 ppm
Non-illicit: None 🗌 🕅 Na	ural Sheen 🗍 Natural Suds/Foam	Free Chlorine (field): 0 ppm
- Physical Condition Assessment		Total Copper (field): 0 ppm
		Ammonia (field): ppm
Graffiti: None		pH (field): 7.57 units
Erosion: None Dependition: None Dependition: None		Temperature: 79 ° <i>F</i>
Deposition: None Depth (In): 0		Conductivity: $\mu S/cm$
Damage: None Displacement	Undercut Crushed	Detergents: 0 mg/L
	Cracks/Structural Damage	Phenol: 0 mg/L

Outfall ID: 06-1746

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Downstream Outfall

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 54 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120530081504.JPG

Outfall Notes:

Storm sewer from Witzel Ave discharges to stream from west via riprap channel.

County Co	ordinates:	State Plane Coordinates:		
Northing:	473,464	Northing:	738,769	
Easting:	779,259	Easting:	2,339,332	



Inspection	Date: 5	/30/2012 9:14:05 AM	Inspector:	JCW Insp	ection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	ription: S	ubmerged, slight flow	Notes: 0	Outfall partially	submerged.	Outfall screened	in the		Contraction of the second
Submerged	: Partially	Depth (in): 5	l	upstream at 06-	1746 US1.				A
Illicit Disch	arge Pote	ntial: Unlikely	F	Field Follow-up	Of	fice Follow-up		11	
Floatables:	None	Pe	trol. Sheen 🗌 S	Suds 🗌 Sev	wage 🗌 Alg	gae 🗌 Other	A Date		
Odor:	None	Pe VO	troleum	Musty 🗌 Ser Fishy 🗌 Sul	wage 🗌 Ch fur 🗌 Fra	nlorine 🗌 Other agrant			14.5
Turbidity:	None							08/30/	
Color:	None						020120530081	528.JF	PG
Gross Solid	s: Slight	Litt	ter 🗸 De	ebris 🗌 See	diment 🗌 0	Other	Sampling Results		
Vegetation:	None	🗌 Inh	nibited 🗌 Ex	cessive			Sample Location:		
Benthic Gro	wth: None	Gre	een 🗌 Br	own			Sample ID:		
Stains:	Slight	Flo	w Line 🗌 Oi	I 🗌 Ru	st Stains		Time Collected		
		🗌 Co	rrosion 🗌 Pa	aint 🗌 Oth	er		Total Chlorine (field):		ррт
Non-illicit:	None	🗌 Na	tural Sheen 🗌	Natural Suds	'Foam		Free Chlorine (field):		ррт
- Physical	Condition /	Assessment					Total Copper (field):		ррт
Graffiti	None						Ammonia (field):		ppm .,
Erosion:	None						pH (field):		units ∘ ⊑
Depositio	n: None	Depth (in):					Conductivity:		г uS/cm
Damage:	None						Detergents:		ma/l
		Corrosion	Cracks/Struc	ctural Damage			Phenol:		mg/L

Inspection Date: 9/3/2009	Inspector: JCW Inspe	ction Type: Initial	Previous Rainfall (hrs):	72+
Flow Description: None	Notes: Wet, no flow.		4 31	1
Submerged: None Depth (ir	ı): O			
Illicit Discharge Potential: Unlikely	Field Follow-up	Office Follow-up		
Floatables:	Petrol. Sheen Suds Sew	vage Algae Othe	r	
Odor:	Petroleum 🗌 Musty 🗌 Sev	vage 🗌 Chlorine 🗌 Othe	r	
	VOC/Solvent Fishy Sulf	ur 🗌 Fragrant		2000 18:32
Turbidity:			Contract State	10.00
Color:			Osh09_DSCN6	473.JPG
Gross Solids:	Litter Debris Sed	iment 🗌 Other	-Sampling Results	
Vegetation:	Inhibited Excessive		Sample Location:	
Benthic Growth:	Green Brown		Sample ID:	
Stains:	Flow Line Oil Rus	t Stains	Time Collected	
	Corrosion Paint Oth	er	Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen Natural Suds/	Foam	Free Chlorine (field):	ppm
— Physical Condition Assessment —		_	Total Copper (field):	ppm
			Ammonia (field):	ppm
Graffiti: None			pH (field):	units
Erosion: None			Temperature:	°F
Deposition: None Depth (in):	0		Conductivity:	μS/cm
Damage: None 🗌 Displac	ement Undercut Crushed		Detergents:	mg/L
Corrosi	on Cracks/Structural Damage		Phenol:	mg/L

Outfall ID: 06-1746 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 06-1746

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120530102818.JPG

Outfall Notes:

Upstream manhole located approx 237 ft W of outfall 16-1746. Intermediate area consists of street right-of-way.

County Co	ordinates:	State Pla	ne Coord
Northing:	473,439	Northing:	738,7
Easting:	779,023	Easting:	2,339,0

dinates: '39 97



Inspection Date: 5/30/2012 9:35:08	AM Inspector: JCW Inspection Type: Ongoing	Previous Rainfall (hrs): 72+						
Flow Description: Submerged, inde	Iow Description: Submerged, indeterminate Notes:							
Submerged: Partially Depth (ir	ı): 3							
Illicit Discharge Potential: Unlikely	Field Follow-up							
Floatables: None	Petrol. Sheen Suds Sewage Algae Othe	er						
Odor: None	Petroleum Musty Sewage Ohlorine Othe	er V						
Turkiditur	UVOC/Solvent Fishy Sulfur Fragrant	11.05/30/2012 11-30						
		020120530102826 JPG						
Color: None		02012030102020.01 G						
Gross Solids: Slight	Litter 🖌 Debris 🗌 Sediment 🗌 Other	Sampling Results						
Vegetation: None	Inhibited Excessive	Sample Location: Pool						
Benthic Growth: None	Green Brown	Sample ID: 120530-28						
Stains: None	Flow Line Oil Rust Stains	Time Collected 09:35						
	Corrosion Paint Other	Total Chlorine (field): 0 ppm						
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm						
- Physical Condition Assocsment		Total Copper (field): 0 ppm						
Physical Condition Assessment		Ammonia (field): 0 ppm						
Graffiti: None		pH (field): 7.76 units						
Erosion: None		Temperature: 64 °F						
Deposition: None Depth (in)		Conductivity: 707 μ S/cm						
Damage: None 🗌 Displac	ement 🗌 Undercut 📄 Crushed	Detergents: 0 mg/L						
Corrosi	on Cracks/Structural Damage	Phenol: 0 mg/L						

Outfall ID: 06-1814

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located

o20120530080852.JPG

Outfall Notes:

Curb inlets from Witzel Ave bridge discharge to stream from east via 25 ft riprap swale.

County C	oordinates:	State Plane Coordin			
Northing:	473,466	Northing:	738,773		
Easting:	779,414	Easting:	2,339,487		

ates:

Inspection I	Date: 5/30/2	012 9:06:11	AM Ins	pector:	JCW	Inspect	on Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descri	iption: None			Notes:	Minor c	oncrete spa	alling. Gar	bage in swale		-	Card and
Submerged:	None	Depth (in):		not likel	ly from stor	m sewer.			S	AME
Illicit Discha	arge Potential	: Unlikely	L] Field Fo	ollow-up	Of	fice Follow-up		1	
Floatables:	None		Petrol. S	Sheen 🗌	Suds	Sewag	ge 🗌 Alç	gae 🗌 Oth	er 💦		
Odor:	None		Petroleu	m 🗌	Musty	Sewag	ge 🗌 Ch	nlorine 🗌 Oth	er Call	A	The second
-			VOC/So	lvent	Fishy	Sulfur	Fra	agrant		in the	
Turbidity:	None										110
Color:	None								020120530080	858.JF	°G
Gross Solids	s:		Litter		Debris	Sedim	ent 🗌 C	Other	Sampling Results		
Vegetation:	None		Inhibited		Excessive	Э			Sample Location:		
Benthic Grow	wth: None		Green		Brown				Sample ID:		
Stains:	None		Elow Lin	e 🗌	Oil	Rust S	Stains		Time Collected		
			Corrosic	n 🗌	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None		Natural :	Sheen	□ Natur	ral Suds/Fo	am		Free Chlorine (field):		ррт
- Physical (Condition Acco	sement —							Total Copper (field):		ppm
Oneffilie	News	SSITTETIL							Ammonia (field):		ppm
Gramiti:	None								pH (field):		units
Erosion:	None								Temperature:		°F
Deposition	n: None	Depth (in):							Conductivity:		µS/cm
Damage:	Minor	Displace	ement 🗌 Ur	ndercut		Crushed			Detergents:		mg/L
		Corrosic	on 🔽 Cr	acks/Sti	ructural D	amage			Phenol:		mg/L



Outfall ID: 06-1816

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120530082204.JPG

Outfall Notes:

Storm sewer from Witzel Ave discharges to stream from east via riprap channel.

County Co	oordinates:	State
Northing:	473,462	North
Easting:	779,491	Easti

ate Plane Coordinates:rthing:738,771sting:2,339,564

Inspection	Date: 5/30/	2012 9:22:04 AM	Inspector:	JCW	Inspect	ion Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	ription: None	•	Notes:	Minor g	arbage in c	lownstrear	n channel -			
Submerged	: None	Depth (in):		potentia	ally from sto	orm sewer		Provide State	3.00	
Illicit Disch	arge Potentia	I: Unlikely] Field Fo	ollow-up	Of	fice Follow-up			
Floatables:	None	Pet	trol. Sheen	Suds	Sewa	ge 🗌 Alg	gae 🗌 Othe	r		4
Odor:	None	Pei	troleum] Musty] Fishy	Sewa	ge 🗌 Ch ·	nlorine 🗌 Othe agrant	r		
Turbidity:	None						Ū.			2012 08:22
Color:	None							020120530082	212.JF	°G
Gross Solid	s: Slight	✓ Litt	er 🗌	Debris	Sedim	nent 🗌 (Other	- Sampling Results		
Vegetation:	None	Inh	ibited	Excessiv	e			Sample Location:		
Benthic Gro	wth: None	Gre	een	Brown				Sample ID:		
Stains:	Slight	V Flo	w Line 🗌	Oil	Rust S	Stains		Time Collected		
			rrosion	Paint	Other			Total Chlorine (field):		ррт
Non-illicit:	None	Na [®]	tural Sheen	Natu	ral Suds/Fo	am		Free Chlorine (field):		ррт
– Physical	Condition Asse	essment						Total Copper (field):		ррт
Graffiti	None							Ammonia (field):		ppm
Erosion:	None							pH (field):		units
Depositio	n: None	Denth (in):						Temperature:		°F
Damage:	None							Conductivity:		μS/cm
Damaye.	NOTE	Displacement			Crushed			Detergents:		mg/L
		Corrosion	_ Cracks/Str	ructural D)amage			Phenol:		mg/L



Outfall ID: 06-2241

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Box

Material: RCP

City ID: N/A

Drainage Basin: Campbell Creek

- Dimensions ----

Diameter (in): Height/Depth (in): 45 Width (in): 10

Mapping Precison: Mapping GPS



o20120620085336.JPG

Outfall Notes:

Storm sewer from Knapp St discharges to stream from south. Replaces outfalls 06-15 and 06-560 (2011).

County Co	ordinates:	State Plane C			
Northing:	473,965	Northing:	7		
Easting:	786,582	Easting:	2,3		

 te Plane Coordinates:

 rthing:
 739,401

 sting:
 2,346,645



Inspection	Date: 9/2	7/2012 12:15:16 PM Ir	spector: J	CW Inspec	ction Type:	Repeat	Previous Rainfall (hrs):	72+	
Flow Desci	ription: Sul	bmerged, indeterminate	Notes: O	utfall partially s	ubmerged;	screened	SANK.	Files	and al
Submerged	: Partially	Depth (in): 36	u	ostream at 06-2	241.				ANY.
Illicit Disch	arge Potent	ial: Unlikely	Fi	eld Follow-up	Of	fice Follow-up			o- 5.
Floatables:	None	Petrol.	Sheen 🗌 Si	uds 🗌 Sew	age 🗌 Alç	gae 🗌 Other	A STATE		A CONTRACT
Odor:	None	Petrole	um 🗌 M	usty 🗌 Sew	age 🗌 Ch	lorine 🗌 Other			AR LAN
			olvent 🗌 Fi	shy 🗌 Sulfi	ur 🗌 Fra	agrant			2012 1210
Turbidity:	None								
Color:	None						0201209271119	938.JI	G
Gross Solid	ls: None	Litter	Deb	oris 🗌 Sedi	ment 🗌 C	Dther	Sampling Results		
Vegetation:	None	🗌 Inhibite	ed 🗌 Exc	essive			Sample Location:		
Benthic Gro	wth: None	Green	🗌 Bro	wn			Sample ID:		
Stains:	None	Flow L	ne 🗌 Oil	Rust	Stains		Time Collected		
			ion 🗌 Pai	nt 🗌 Othe	er		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	Sheen	Natural Suds/F	oam		Free Chlorine (field):		ppm
- Physical	Condition As	sessment			7		Total Copper (field):		ppm
Groffiti	Nono						Ammonia (field):		ррт
Graniu.	None						pH (field):		units
	None	Donth (in):					Temperature:		°F
Depositio	None			_			Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 L	Indercut	Crushed			Detergents:		mg/L
		Corrosion C	Cracks/Struct	ural Damage			Phenol:		mg/L

Outfall ID: 06-2241

Inspection Da	ate: 6/20/20	12 9:50:33 AM	Inspector:	JCW	Inspecti	on Type:	Ongoing	Previous Rainfall (hrs):	24-4	48
Flow Descrip	tion: Subme Fully	erged, indetermina Depth (in): 45	te Notes:	Outfall upstrea	partially sub am at 06-224	omerged; s 41 US1.	creened			# 4
Illicit Dischar	ge Potential:	Potential		Field Fo	ollow-up	Off	ice Follow-up		1	101
Floatables: N	lone	🗌 Pet	rol. Sheen	Suds	Sewag	je 🗌 Alg	ae 🗌 Oth	er in the second se		
Odor: N	lone	Pet	roleum	Musty	Sewag	ge 🗌 Ch	lorine 🗌 Oth	er	18:37	N. S.
		VO	C/Solvent	Fishy	Sulfur	🗌 Fra	igrant			
Turbidity: N	lone								681391	1012-09:53
Color: N	lone							020120620085	346.JF	ЪG
Gross Solids:	None	Litte	er 🗌	Debris	Sedim	ent 🗌 C	Other	Sampling Results		
Vegetation:	None	🗌 Inh	ibited	Excessiv	e			Sample Location:		
Benthic Growt	th: Moderate	🖌 Gre	en	Brown				Sample ID:		
Stains:	None		w Line	Oil	Rust S	Stains		Time Collected		
		Cor	rosion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	Nat	ural Sheen	🗌 Natu	ral Suds/Fo	am		Free Chlorine (field):		ppm
- Physical Co	ondition Asses	sment						Total Copper (field):		ppm
One fills	Name	Smem						Ammonia (field):		ppm
Gramiti:	None							pH (field):		units
Erosion:	None							Temperature:		°F
Deposition:	None	Depth (in):						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion	Cracks/St	ructural D	Damage			Phenol:		mg/L

Inspection Dat	te: 6/13/2012 2:1	3:03 PM Inspecto	or: JCW	Inspection T	/pe: Other	Previous Rainfall (hrs):	72+	
Flow Descripti	on: Submerged,	indeterminate Note	es: Gross s	olids pre-screen	ing.		in a	
Submerged: F	ully Dept	th (in): 45						1
Illicit Discharg	e Potential: Pote	ential	Field Fo	ollow-up] Office Follow-u	ıp		1
Floatables: No	ne	Petrol. Sheer	n 🗌 Suds	Sewage	Algae 🗌 C	Other	1	
Odor: No	ne	Petroleum	☐ Musty ☐ Fishy	Sewage Sulfur] Chlorine 🔲 C] Fragrant	Dther		
Turbidity: No	ne					101	06/13/20	12 14:18
Color: No	ne					020120613131	1558.JP0	G
Gross Solids:	None	Litter [Debris	Sediment	Other	Sampling Results		
Vegetation:	None	Inhibited [Excessive	e		Sample Location:		
Benthic Growth	: None	Green	Brown			Sample ID:		
Stains:	None	Flow Line	Oil	Rust Stains		Time Collected		
		Corrosion	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natural Shee	n 🗌 Natur	ral Suds/Foam		Free Chlorine (field):		ррт
– Physical Con	dition Assessment					Total Copper (field):		ррт
Groffiti	Nono					Ammonia (field):		ррт
Graniu.	None					pH (field):		units
Deposition:	None Donth	(in):				Temperature:		°F
Deposition.	Nono —	(11).	_			Conductivity:		μS/cm
Damage:		placement 📋 Underc	ut 🗌 C	Crushed		Detergents:		mg/L
	Co	rrosion Cracks	/Structural D	amage		Phenol:		mg/L

Outfall ID: 06-2241 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: N/A

Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120927112304.JPG

Outfall Notes:

Upstream manhole located approx 80 ft S of outfall 06-2241. Intermediate area consists of street right-

County C	oordinates:	State
Northing:	473,884	North
Easting:	786.580	East

e Plane Coordinates: 739,321 hing: 2,346,643 sting:

of-way.



Inspection Dat	te: 9/27/2012 12:18:	PM Inspector: JCW Inspection	on Type: Repeat	Previous Rainfall (hrs):	72+
Flow Descripti	ion: Submerged, ind	erminate Notes: Ammonia follow-up	. Duckweed in manhole.		and the
Submerged: F	Fully Depth (i	: 54		A	
Illicit Discharg	e Potential: Unlikely	Field Follow-up	Office Follow-up		
Floatables: No	one	Petrol. Sheen Suds Sewag	e 🗌 Algae 🗌 Other		Seatting:
Odor: No	one	Petroleum Musty Sewag	e 🗌 Chlorine 🗌 Other	A store	and the
		VOC/Solvent Fishy Sulfur	Fragrant	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	2012 12:23
Turbidity: No	one			and the second se	and the second
Color: No	one			020120927112	2310.JPG
Gross Solids:	None	Litter Debris Sedime	ent 🗌 Other	Sampling Results	
Vegetation:	None	✓ Inhibited □ Excessive		Sample Location: Poo	I
Benthic Growth	: None	Green Brown		Sample ID: 120	927-78
Stains:	None	Flow Line Oil Rust S	tains	Time Collected 12:1	2
		Corrosion Paint Other		Total Chlorine (field):	0 ppm
Non-illicit:	Slight	▼ Natural Sheen	am	Free Chlorine (field):	0 <i>ppm</i>
- Physical Cor	ndition Assessment —			Total Copper (field):	0 <i>ppm</i>
T Trysical Col	Idition Assessment			Ammonia (field):	0 <i>ppm</i>
Graffiti:	None			pH (field):	7.85 <i>units</i>
Erosion:	None			Temperature:	63 ° <i>F</i>
Deposition:	None Depth (in)			Conductivity:	497 μ <i>S/cm</i>
Damage:	None 🗌 Displac	ment Undercut Crushed		Detergents:	0 <i>mg/L</i>
	Corros	n Cracks/Structural Damage		Phenol:	mg/L

Outfall ID: 06-2241 US1

Inspection	Date: 6/2	0/2012 9:54:44 AM In	spector: JCW	Inspect	ion Type:	Ongoing	Previous Rainfall (r	nrs): 24-	48
Flow Descr	ription: Su	bmerged, indeterminate	Notes:				and the second s	and the second	1. 4.M.
Submerged	: Fully	Depth (in): 60					1 1000		and the second
Illicit Disch	arge Potent	ial: Potential	Field F	ollow-up	Off	ice Follow-up	- Galas	State of the state	
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewag	ge 🗌 Alg	jae 🗌 Othe	r 🔬 🐴	-	-
Odor:	None	Petrole	um 🗌 Musty	Sewa	ge 🗌 Ch	lorine 🗌 Othe	r		1
			olvent 🗌 Fishy	Sulfur	Fra	agrant		08/284	
Turbidity:	None						1544	ALL COMPANY	
Color:	None						02012062	0085526.J	PG
Gross Solid	s: None	Litter	Debris	Sedim	nent 🗌 C	Other	-Sampling Results —		
Vegetation:	None	Inhibite	d Excessiv	ve			Sample Location:	Pool	
Benthic Gro	wth: Slight	Green	Brown				Sample ID:	120620-8	6
Stains:	None	Flow Li	ne 🗌 Oil	Rust S	Stains		Time Collected	09:55	
	<u>.</u>		on 🗌 Paint	Other			Total Chlorine (field): 0	ppm
Non-illicit:	None	Natura	Sheen 🗌 Nati	ural Suds/Fo	am		Free Chlorine (field)	: 0	ррт
Physical	Condition Ac						Total Copper (field):	0	ppm
Filysical	Condition As	sessment					Ammonia (field):	0.5	ррт
Graffiti:	None						pH (field):	7.77	units
Erosion:	None						Temperature:	81	°F
Depositio	n: None	Depth (in):					Conductivity:	632	µS/cm
Damage:	None	🗌 Displacement 🗌 L	Indercut	Crushed			Detergents:	0	mg/L
		Corrosion	racks/Structural	Damage			Phenol:	0	mg/L



Outfall ID: 06-3

Minor Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in): 36 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located

o20120611080226.JPG

Outfall Notes:

Storm sewer from Westhaven Dr discharges to stream from south via riprap channel.

County Co	ordinates:	State Pla	ne (
Northing:	472,195	Northing:	
Easting:	778,097	Easting:	2,

Coordinates:

737,479 338,193

Inspection Date: JCW Inspection Type: Ongoing 6/11/2012 9:00:17 AM Inspector: Previous Rainfall (hrs): 72+ Flow Description: None Notes: Water in corrugations, but no flow at time of inspection. Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120611080232.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: Slight Green Brown Sample ID: Flow Line Stains: Slight Rust Stains **Time Collected** Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): -ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): --Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: Minor Displacement Undercut Crushed Detergents: -mg/L Phenol: ✓ Corrosion Cracks/Structural Damage -mg/L


Outfall ID: 06-65

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120611091256.JPG

Outfall Notes:

Detention basin discharges to stream from north.

County Coordinates:Northing:471,583Easting:777,427

State Plane Coordinates: Northing: 736,855 Easting: 2,337,534



Inspection	Date: 6/11/	2012 10:12:21 AM	Inspector:	JCW	Inspectio	n Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption: None	•	Notes:	Outfall	dry at time o	f inspecti	on.	STANK -	5	
Submerged:	None	Depth (in):						11-27-1-	É	
Illicit Disch	arge Potentia	I: Unlikely		Field Fo	ollow-up	Off	fice Follow-up		\square	
Floatables:	None	F	Petrol. Sheen	Suds	Sewage	e 🗌 Alg	gae 🗌 Othe	er		
Odor:	None	F	Petroleum	Musty	Sewage	e 🗌 Ch	lorine 🗌 Othe	er		THE
	[V	OC/Solvent	Fishy	Sulfur	Fra	agrant	BREAK		
Turbidity:	None									
Color:	None							020120611091	302.JI	G
Gross Solids	s: None	L	.itter	Debris	Sedime	nt 🗌 C	Other	- Sampling Results		
Vegetation:	None		nhibited	Excessive	e			Sample Location:		
Benthic Grov	wth: None		Green	Brown				Sample ID:		
Stains:	Slight	✓ F	low Line	Oil	Rust St	ains		Time Collected		
			Corrosion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None		latural Sheen	Natu	ral Suds/Foa	m		Free Chlorine (field):		ppm
- Physical I	Condition Ass	essment						Total Copper (field):		ppm
Flysical	Condition Asse	essment						Ammonia (field):		ррт
Graffiti:	None							pH (field):		units
Erosion:	None							Temperature:		°F
Depositio	n: None	Depth (in):						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion	Cracks/St	tructural D	amage			Phenol:		mg/L

Outfall ID: 06-478

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120613122410.JPG

Outfall Notes:

Storm sewer from Eagle St discharges to stream from north.

County Coordinates:							
Northing:	470,926						
Fasting:	783 989						

State Plane Coordinates: Northing: 736,316 Easting: 2,344,107

Inspection Date: Inspection Type: Ongoing 6/13/2012 1:23:15 PM Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: None Notes: Pipe and downstream channel dry. Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120613122416.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Moderate Flow Line Stains: Rust Stains Time Collected Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): -ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 06-489

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Box

Material: RCP

City ID: N/A

Drainage Basin: N/A

Diameter (in): Height/Depth (in): 44 Width (in): 220

Mapping Precison: Mapping GPS



o20120621123032.JPG

Outfall Notes:

Box culvert under Witzel Ave discharges to stream on north side of road.

County C	County Coordinates:					
Northing:	473,341	No				
Easting:	786,102	Ea				

ate Plane Coordinates: orthing: 738,769 asting: 2,346,176



Inspection	Date: 9/27	2012 12:42:00 PM	Inspector: JCW	Inspection Type:	Repeat	Previous Rainfall (hrs):	72+
Flow Descr	iption: Sub	merged, indeterminate	Notes: Outfa	Il partially submerged;	screened		
Submerged	: Partially	Depth (in): 28	upstre	eam at 06-489 US1.			
Illicit Disch	arge Potentia	al: Unlikely	Field	Follow-up	ffice Follow-up		
Floatables:	None	Petro	I. Sheen 🗌 Suds	🗌 Sewage 🔲 A	lgae 🗌 Other		
Odor:	None	Petro	leum 🗌 Musty	/ 🗌 Sewage 🗌 C	hlorine 🗌 Other		
			Solvent 🗌 Fishy	Sulfur F	ragrant	Dhata Nat A	wailable
Turbidity:	None					Photo Not A	valiable
Color:	None						
Gross Solid	s: None	Litter	Debris	Sediment	Other	Sampling Results	
Vegetation:	None	🗌 Inhibi	ted 🗌 Excess	ive		Sample Location:	
Benthic Gro	wth: Slight	Greer	n 🗌 Brown			Sample ID:	
Stains:	Slight	Flow	Line 🗌 Oil	Rust Stains		Time Collected	
	L		sion 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit:	None	Natur	al Sheen 🗌 Nat	tural Suds/Foam		Free Chlorine (field):	ppm
- Physical	Condition Ass	essment				Total Copper (field):	ppm
Onefficie	Name	cosment				Ammonia (field):	ppm
Graffiti:	None					pH (field):	units
Erosion:	None					Temperature:	°F
Depositio	n: None	Depth (in):				Conductivity:	μS/cm
Damage:	None	Displacement	Undercut	Crushed		Detergents:	mg/L
		Corrosion	Cracks/Structural	Damage		Phenol:	mg/L

Outfall ID: 06-489

Inspection Da	ate: 6/21/2012 1:27:5	1 PM Inspector:	: JCW Insp	ection Type:	Ongoing	Previous Rainfall (hrs):	0-24	4
Flow Descript Submerged:	tion: Submerged, ind Partially Depth (i	eterminate Notes: n): 28	: Outfall partially upstream at 06	submerged; s -489 US1.	screened		The state	
Illicit Discharg	ge Potential: Unlikely	/	Field Follow-up	Of	fice Follow-up			
Floatables: No	lone	Petrol. Sheen	Suds Se	wage 🗌 Alą	gae Other			
Odor: No	lone	Petroleum	Musty 🗌 Se	wage 🗌 Ch	nlorine 🗌 Other			
		VOC/Solvent	🗌 Fishy 🗌 Su	lfur 🗌 Fra	agrant			2012 11:10
Turbidity: No	lone					And a start	400	
Color: No	lone					020120621123	1038.JF	2G
Gross Solids:	None	Litter	Debris 🗌 Se	diment 🗌 C	Dther	-Sampling Results		
Vegetation:	None	Inhibited	Excessive			Sample Location:		
Benthic Growth	h: Slight	Green	Brown			Sample ID:		
Stains:	Slight	✓ Flow Line	Oil 🗌 Ru	st Stains		Time Collected		
			Paint 🗌 Ot	ner		Total Chlorine (field):		ppm
Non-illicit:	None	Natural Sheen	Natural Suds	/Foam		Free Chlorine (field):		ppm
- Physical Co	ondition Assessment —					Total Copper (field):		ppm
Croffiti	Nene					Ammonia (field):		ppm
Graniu.	None					pH (field):		units
Erosion.	None Dorth (in)					Temperature:		°F
Deposition:	None Depth (In)	·				Conductivity:		µS/cm
Damage:	None Displa	cement 🗌 Undercut	Crushed			Detergents:		mg/L
		ion Cracks/S	tructural Damage			Phenol:		mg/L

Outfall ID: 06-489 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 06-489

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120927114128.JPG

Outfall Notes:

Upstream manhole located approx 258 ft SW of outfall 06-489. Intermediate area consists of residential and commercial property.

County Co	ordinates:	State Plane Coordinates				
Northing:	473,135	Northing:	738,560			
Easting:	785,947	Easting:	2,346,025			

The state



Location Map

5.1

Inspection	Date: 9/27/	2012 12:40:02 PM	nspector: JCW	Inspectio	on Type: R	epeat	Previous Rainfall (h	rs): 72+	
Flow Desci	ription: Subr	merged, indeterminate	Notes: Surfa	ce covered wi	th duckwee	d.	1 million		121
Submerged	: Partially	Depth (in): 14							the second
Illicit Disch	arge Potentia	l: Unlikely	Field	Follow-up	Office	e Follow-up			
Floatables:	None	Petrol	. Sheen 🗌 Suds	Sewag	e 🗌 Algae	e 🗌 Other			
Odor:	None	Petrol	eum 🗌 Musty Solvent 🗌 Fishy	/ 🗌 Sewag	ie 🗌 Chloi	rine 🗌 Other rant			12
Turbidity:	None						+ 1 1286 / 201	697377	2012 12:41
Color:	None						02012092	7114158.JF	PG
Gross Solid	s: None	Litter	Debris	Sedime	ent 🗌 Oth	ner	Sampling Results —		
Vegetation:	None	🗌 Inhibit	ed 🗌 Excess	ive			Sample Location:	Pool	
Benthic Gro	wth: None	Green	Brown				Sample ID:	120927-9	0
Stains:	Slight	✓ Flow L	ine 🗌 Oil	🗌 Rust S	tains		Time Collected	12:40	
			sion 🗌 Paint	Other			Total Chlorine (field)	: 0	ppm
Non-illicit:	None	☐ Natura	al Sheen 🗌 Nat	tural Suds/Foa	am		Free Chlorine (field)	0	ррт
- Physical	Condition Ass	essment					Total Copper (field):	0	ppm
Oneffitie	Name	cosment					Ammonia (field):	0	ppm
Graffiti:	None						pH (field):	7.71	units
Erosion:	None						Temperature:	62	°F
Depositio	on: None	Depth (in):					Conductivity:	641	µS/cm
Damage:	None	Displacement	Undercut	Crushed			Detergents:	0	mg/L
			Cracks/Structural	Damage			Phenol:		mg/L

Outfall ID: 06-489 US1

Inspection	Date: 6/13/2	2012 2:36:39 PM Ir	nspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hr	s): 72+	
Flow Descr	ription: Subn	nerged, indeterminate	Notes:			-		
Submerged	: Partially	Depth (in): 20						
Illicit Disch	arge Potentia	: Potential	Field F	ollow-up 🗌 C	Office Follow-up			-
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage A	lgae 🗌 Other	Call I		
Odor:	Faint	Petrole	eum 🔽 Musty	🗌 Sewage 🗌 C	hlorine 🗌 Other			The start
			Solvent 🗌 Fishy	Sulfur F	ragrant	1 Contraction	06/13/	2012 14:40
Turbidity:	None					5 1 m	3.	
Color:	None					020120613	134034.JF	²G
Gross Solid	s: None	Litter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inhibite	ed 🗌 Excessiv	e		Sample Location: F	ool	
Benthic Gro	wth: Moderate	✓ Green	Brown			Sample ID: 1	20613-1	5
Stains:	None	🗌 Flow L	ine 🗌 Oil	Rust Stains		Time Collected 1	4:37	
			ion 🗌 Paint	Other		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natura	l Sheen 🗌 Natu	Iral Suds/Foam		Free Chlorine (field):	0	ррт
- Physical	Condition Asse	essment				Total Copper (field):	0	ррт
i nysicai	Condition Asse	5511011				Ammonia (field):	0	ppm
Graffiti:	None					pH (field):	7.93	units
Erosion:	None					Temperature:	73	°F
Depositio	n: None	Depth (in):				Conductivity:	1415	µS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut	Crushed		Detergents:	0.25	mg/L
			Cracks/Structural E	Damage		Phenol:	0	mg/L

Inspection Date	e: 9/11/2	009	Inspector:	JCW	Inspect	ion Type:	Initial	Previous Rainfall (h	rs): 72+	
Flow Description	on: Subm	erged, indeterminate	e Notes:	Sample	collected	from pool i	near west pipe.			2
Submerged: Pa	artially	Depth (in): 15								
Illicit Discharge	e Potential:	Unlikely	[Field Fo	ollow-up	Of	fice Follow-up			
Floatables:		Petr	ol. Sheen [Suds	Sewa	ge 🗌 Al	gae 🗌 Othe	er		Childer 1
Odor:		Petr	oleum [C/Solvent [Musty Fishy	Sewa	ge 🗌 Ch · 🗌 Fra	nlorine 🗌 Othe agrant	er	Part P	-
Turbidity:				-			-	21111		is soos os jas
Color:								Osh09_DS	CN6840.J	PG
Gross Solids:		Litte	r 🗌	Debris	Sedin	nent 🗌 (Other	- Sampling Results		
Vegetation:		Inhit	oited	Excessive	Э			Sample Location:	Pool	
Benthic Growth:		Gree	ən 🗌	Brown				Sample ID:	090911-6	3
Stains:		Flow	/ Line 🗌	Oil	Rust	Stains		Time Collected	08:15	
		Corr	osion	Paint	Other			Total Chlorine (field)	: 0	ppm
Non-illicit:	None	🗌 Natu	Iral Sheen	🗌 Natur	ral Suds/Fo	am		Free Chlorine (field):	0	ppm
– Physical Cond	dition Asses	ssment						Total Copper (field):	0	ppm
Croffitis	Nese							Ammonia (field):		ppm
	None							pH (field):	8.52	units
	None	Dooth (in): 0						Temperature:	69	°F
Deposition:	None		_	_				Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/S	tructural D	amage			Phenol:	0	mg/L

Outfall ID: 06-622a

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: HDPE

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120530065520.JPG

Outfall Notes:

Outlet pipe for detention basin discharges to stream from north. Additional pipe located west of outfall pipe.

County Co	ordinates:	State Plane Coordinates				
Northing:	475,564	Northing:	740,876			
Easting:	779,698	Easting:	2,339,733			



Inspection	Date: 5/30/	/2012 7:51:12 AM In	spector: JCW	Inspection	Туре: С	Ongoing	Previous Rainfall (h	rs): 72+	
Flow Descr	ription: Mod	erate	Notes: Smal	I pockets of suds	/foam or	n rocks below	A CARLER OF	Martin States	24 M
Submerged	: None	Depth (in):	disch	arge.				Also -	
Illicit Disch	arge Potentia	al: Unlikely	Field	Follow-up	Offic	ce Follow-up		M.	
Floatables:	Slight	Petrol.	Sheen 🖌 Suds	Sewage	🗌 Alga	ae 🗌 Other		100	
Odor:	None	Petrole	eum 🗌 Musty	/ 🗌 Sewage	Chlo	orine 🗌 Other	and and a	11 13	S/Lan
Turbidity:	None	VOC/S	olvent 🗌 Fishy	Sulfur	Frag	grant	R. A.		
Color:	None						02012053	0065530.JF	PG
Gross Solid	s: None	Litter	Debris	Sediment	t 🗌 Otl	her	Sampling Results —		
Vegetation:	None	🗌 Inhibite	ed 🗌 Excess	ive			Sample Location:	Flow	
Benthic Gro	wth: None	Green	Brown				Sample ID:	120530-0	2
Stains:	None	🗌 Flow Li	ine 🗌 Oil	🗌 Rust Stair	ns		Time Collected	07:55	
		Corrosi	ion 🗌 Paint	Other			Total Chlorine (field)	: 0	ррт
Non-illicit:	None	Natura ¹	I Sheen 🗌 Na	tural Suds/Foam			Free Chlorine (field)	0	ррт
- Physical	Condition Ass	essment					Total Copper (field):	0	ррт
n nysicar	Condition Ass	cosment					Ammonia (field):	0	ppm
Graffiti:	None						pH (field):	8.11	units
Erosion:	None						Temperature:	66	°F
Depositio	n: None	Depth (in):					Conductivity:	734	µS/cm
Damage:	None	🗌 Displacement 🗌 L	Indercut	Crushed			Detergents:	0	mg/L
		Corrosion C	Cracks/Structural	Damage			Phenol:	0	mg/L

Outfall ID: 06-829

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precision:Desktop mapping estimate✓Not Physically Located



o20120927113650.JPG

Outfall Notes:

Storm sewer from Josslyn St discharges to stream from west. Outfall not located - pipe info from MS4 map.

County Co	ordinates:	State Plane C			
Northing:	473,738	Northing:	7		
Easting:	786,266	Easting:	2,3		

 te Plane Coordinates:

 rthing:
 739,169

 sting:
 2,346,333



Inspection	Date: 9/27	/2012 12:33:16 PM	Inspector:	JCW	Inspectior	Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Desci	ription: Sub	merged (not located)	Notes:	Outfall	fully submerg	ed; scre	ened upstream			A PAR
Submerged	: Fully	Depth (in):		at 06-8	29 US1.			Obti	al	
Illicit Disch	arge Potenti	al: Potential		Field Fo	ollow-up	Off	ice Follow-up	NIA		
Floatables:	None	Petr	ol. Sheen] Suds	Sewage		jae 🗌 Othe	r		
Odor:	None	Petr	oleum	Musty	Sewage	Ch	lorine 🗌 Othe	r 1002	le	
Turbidity:	None		Solvent	Fishy	Sulfur	Fra	agrant	84 S	-	2011 12136
Color:	None							o20120927113	654.JI	PG
Gross Solid	None		-	Dobrio)thor	Sompling Populto		
Gross Solid	s. none			Debris			Juner	- Sampling Results		
Vegetation:	None		bited	Excessiv	e			Sample Location:		
Benthic Gro	wth: None	Gree	en 🗌	Brown				Sample ID:		
Stains:	None	Elow	Line	Oil	Rust Sta	ins		Time Collected		
	L	Corr	osion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	Natu	ral Sheen	Natu	ral Suds/Foan	า		Free Chlorine (field):		ррт
– Physical	Condition As	sessment						Total Copper (field):		ppm
Oneffilie	News	Jessment						Ammonia (field):		ррт
Gramiti:	None							pH (field):		units
Erosion:	None							Temperature:		°F
Depositio	on: None	Depth (in):						Conductivity:		µS/cm
Damage:	None	Displacement] Undercut		Crushed			Detergents:		mg/L
		Corrosion	Cracks/Str	uctural D	Damage			Phenol:		mg/L

Outfall ID: 06-829

Inspection Date: 6/13/2	2012 2:26:38 PM In	spector: JCW	Inspection Type:	Other	Previous Rainfall (hrs):	72+	
Flow Description: Subm	nerged (not located)	Notes: Gross	solids pre-screening.			6.7	
Submerged: Fully	Depth (in):				Anger 🚱 🚮		
Illicit Discharge Potential	: Potential	Field Fo	ollow-up 🗌 Of	fice Follow-up	NO	7	1
Floatables: None	Petrol.	Sheen 🗌 Suds	🗌 Sewage 🗌 Alg	gae 🗌 Other			
Odor: None	Petrole	um 🗌 Musty	🗌 Sewage 🗌 Ch	nlorine 🗌 Other	LOCZ	<mark>le(</mark>	
		olvent 🗌 Fishy	Sulfur Fra	agrant			
Turbidity: None					and the second s	1	EBAN
Color: None					0201206131323	730.JP	°G
Gross Solids: None	Litter	Debris	Sediment 0	Other	Sampling Results		
Vegetation: None	Inhibite	ed 🗌 Excessiv	e		Sample Location:		
Benthic Growth: None	Green	Brown			Sample ID:		
Stains: None	🗌 Flow Li	ne 🗌 Oil	Rust Stains		Time Collected		
	Corrosi	on 🗌 Paint	Other		Total Chlorine (field):		ppm
Non-illicit: None	Natural	Sheen 🗌 Natu	ral Suds/Foam		Free Chlorine (field):		ppm
- Physical Condition Asse	essment				Total Copper (field):		ppm
Croffitiu	Samon				Ammonia (field):		ppm
Graniti. None					pH (field):		units
Deposition: None	Dopth (in):				Temperature:		°F
Deposition: None					Conductivity:		µS/cm
Damage: None	Displacement U	Indercut 🗌 🤇	Crushed		Detergents:		mg/L
	Corrosion C	Cracks/Structural D	Damage		Phenol:		mg/L

Outfall ID: 06-829 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 06-831

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120927113038.JPG

Outfall Notes:

Upstream manhole located approx 360 ft W of outfall 06-829. Intermediate area consists of multifamily residential and commercial properties. Two downstream manholes not located.

County Co	ordinates:	State Plane Coordinates				
Northing:	473,756	Northing:	739,180			
Easting:	785,906	Easting:	2,345,972			



Inspection	Date: 9/27/2	012 12:28:37 PM	Inspector	: JCW	Inspec	tion Type:	Ongoing	Previous Rainfall (h	nrs): 72+	
Flow Descr	iption: Subm	erged, indetermina	ate Notes	:					The second second	
Submerged:	: Fully	Depth (in): 30						Ele A	Nor	1000
Illicit Disch	arge Potential	: Potential	[Field F	ollow-up	0	ffice Follow-up			
Floatables:	None	🗌 Pe	trol. Sheen [Suds	Sewa	ge 🗌 Al	gae 🗌 Othe	er 🛛	100	
Odor:	None	Pe	etroleum [DC/Solvent [Musty Fishy	Sewa	ige 🗌 Cl r 🗌 Fr	hlorine 🗌 Othe agrant	er	5	
Turbidity:	None								N. Conten	A CAR
Color:	None							02012092	7113044.JI	PG
Gross Solids	s: Moderate	✓ Lit	ter	Debris	Sedin	nent 🗌	Other	-Sampling Results		
Vegetation:	None	Inf	nibited] Excessiv	е			Sample Location:	Pool	
Benthic Gro	wth: None	Gr	een 🗌	Brown				Sample ID:	120927-8	9
Stains:	Slight	✓ Fic	ow Line] Oil	Rust	Stains		Time Collected	12:26	
			orrosion	Paint	Other			Total Chlorine (field)): 0	ppm
Non-illicit:	None		itural Sheen	🗌 Natu	ral Suds/Fo	oam		Free Chlorine (field)	: 0	ppm
- Physical	Condition Acco							Total Copper (field):	0	ppm
FliySical	Contaition Asses	SSITIETIL						Ammonia (field):	0	ppm
Graffiti:	None							pH (field):	7.72	units
Erosion:	None							Temperature:	64	°F
Depositio	n: None	Depth (in):						Conductivity:	1583	µS/cm
Damage:	None	Displacement	Undercut	t 🗌 (Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/S	Structural E	Damage			Phenol:		mg/L

Outfall ID: 06-829 US1

Inspection I	Date: 6/13/2	2012 2:30:25 PM	nspector: J	CW Inspe	ction Type:	Other	Previous Rainfall (hr	s): 72+	
Flow Descri Submerged:	ption: Subn Fully	nerged, indeterminate Depth (in): 37	Notes: G m	ross solids pre- anhole.	-screening.	Bottles in	100		
Illicit Discha	arge Potentia	I: Potential	Fi	eld Follow-up	Off	fice Follow-up		-	
Floatables:	None	Petrol	. Sheen 🗌 Si	uds 🗌 Sew	age 🗌 Alg	gae 🗌 Othe	r 🛛 🥁	A.B	1 he
Odor:	None	Petrol	eum 🗌 M	usty 🗌 Sew	age 🗌 Ch	lorine 🗌 Othe	r	STY.	1 34
			Solvent 🗌 Fi	shy 🗌 Sulf	ur 🗌 Fra	agrant			2012 14721
Turbidity:	None						-00100010		
Color:	None						020120613	133100.JF	G
Gross Solids	: Severe	✓ Litter	Deb	oris 🗌 Sedi	iment 🗌 C	Other	- Sampling Results —		
Vegetation:	None	Inhibit	ed 🗌 Exc	essive			Sample Location:	ool	
Benthic Grov	wth: Slight	✓ Green	n 🗌 Bro	wn			Sample ID:	20613-1	1
Stains:	None	🗌 Flow L	_ine 🗌 Oil	Rus	t Stains		Time Collected	4:30	
			sion 🗌 Pai	nt 🗌 Othe	er		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natura	al Sheen 🗌	Natural Suds/F	oam		Free Chlorine (field):	0	ppm
– Physical (Condition Asse	essment			7		Total Copper (field):	0	ppm
Groffiti	Nono	Johnen					Ammonia (field):	0	ppm
Graniu.	None						pH (field):	7.58	units
	None	Donth (in):					Temperature:	70	°F
Deposition	None			_			Conductivity:	1765	µS/cm
Damage:	ivone	Displacement	Undercut	Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/Struct	ural Damage			Phenol:	0	mg/L

Outfall ID: 06-880

Minor Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located

Flow Description: Trickle

Illicit Discharge Potential:

None

None

None

None

None

None

None

Physical Condition Assessment

None

None

None

None

5/30/2012 8:41:07 AM

Depth (in):

Unlikely

Depth (in):

Corrosion

Inspection Date:

Submerged: None

Floatables: None

Odor:

Color:

Stains:

Non-illicit:

Graffiti:

Erosion:

Deposition:

Damage:

Turbidity:

Gross Solids:

Benthic Growth: Slight

Vegetation:



o20120530074102.JPG

Outfall Notes:

Storm sewer from Westbrook Dr discharges to stream from east.

JCW

Musty

Debris

Brown

Oil

Paint

Natural Sheen Natural Suds/Foam

Cracks/Structural Damage

Excessive

Field Follow-up

County Coordinates:							
Northing:	473,974						
Fasting:	779.375						

Inspector:

Petrol. Sheen Suds

VOC/Solvent Fishy

Petroleum

Litter

Inhibited

Flow Line

Corrosion

Green

Displacement Undercut

Notes:

State Plane Coordinates: Northing: 739,281 2,339,439 Easting:

Sewage Algae

Sediment Other

Sewage

Sulfur

Rust Stains

Other

Inspection Type: Ongoing

Office Follow-up

Fragrant



- Sampling Results -		
Sample Location:	Flow	
Sample ID:	120530-7	77
Time Collected	08:41	
Total Chlorine (field	d): 0	ppm
Free Chlorine (field): 0	ррт
Total Copper (field)	: 0	ррт
Ammonia (field):	0	ppm
pH (field):	8.17	units
Temperature:	62	°F
Conductivity:	986	μS/cm
Detergents:	0	mg/L
Phenol:		mg/L

Location Map



Crushed

Outfall ID: 06-961

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Downstream Outfall

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 15 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120530114512.JPG

Outfall Notes:

Storm sewer from Greenfield Trail discharges to flat wetland area east of stream.

County Co	oordinates:	State P
Northing:	473,019	Northing
Easting:	779,133	Easting

 te Plane Coordinates:

 thing:
 738,322

 sting:
 2,339,214



Inspection	Date: 5/30/	2012 12:44:53 PM	Inspector:	JCW	Inspection Type	e: Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption: Non	e	Notes:	Small po	ool at end of pipe.	No flow at time of	of //	ALC: N	A State
Submerged	: None	Depth (in):		inspection	on.		19 11 12		6/22
Illicit Disch	arge Potentia	l: Unlikely		Field Fo	llow-up	Office Follow-up		and and	
Floatables:	None	Pet	rol. Sheen	Suds		Algae 🗌 Oth	er	(Calledon)	
Odor:	None	Pet	roleum	Musty	Sewage	Chlorine 🗌 Oth	er	T	
		VO	C/Solvent	Fishy	Sulfur	Fragrant	A Carl Shares	100	
Turbidity:	None							a the said	
Color:	None						020120530114	522.JI	PG
Gross Solid	s: None	Litt	er 🗌	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inh	ibited 🗌 I	Excessive			Sample Location:		
Benthic Gro	wth: None	🗌 Gre	en 🗌	Brown			Sample ID:		
Stains:	None	🗌 Flo	w Line 🗌 🤇	Dil	Rust Stains		Time Collected		
			rrosion 🗌 I	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Nat	ural Sheen	Natura	al Suds/Foam		Free Chlorine (field):		ppm
- Physical	Condition Ass	essment					Total Copper (field):		ppm
n nysicai	00110111011 A33	cosment					Ammonia (field):		ppm
Graffiti:	None						pH (field):		units
Erosion:	Minor						Temperature:		°F
Depositio	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	Minor	Displacement	Undercut	🗌 C	rushed		Detergents:		mg/L
		Corrosion	Cracks/Str	uctural Da	amage		Phenol:		mg/L

Outfall ID: 06-968

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Downstream Outfall

Shape: Pipe - Circular

Material: PVC

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120530113710.JPG

Outfall Notes:

Storm sewer from Katy Ct discharges to flat wetland area east of stream.

County Coordinates:							
Northing:	472,820						
Easting:	778,724						

State Plane Coordinates: Northing: 738,115 Easting: 2,338,808



Inspection	Date: 5/30	/2012 12:36:36 PM	Inspector:	JCW	Inspection Typ	e: Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption: Non	е	Notes:	Outfall	dry at time of inspe	ction.			
Submerged:	None	Depth (in):						2	
Illicit Discha	arge Potentia	al: Unlikely		Field Fo	ollow-up	Office Follow-up		100	
Floatables:	None	Petro	l. Sheen 🗌	Suds	Sewage	Algae 🗌 Othe	er	1	and the
Odor:	None		leum	Musty Fishy	Sewage	Chlorine 🗌 Othe	er	ALC: NO	
Turbidity:	None			1 lony		lagiant	1 and the second		VI AN
Color:	None						020120530113	720.JF	PG
Gross Solids	s: None	Litter		Debris	Sediment	Other	Sampling Results]
Vegetation:	None	Inhib	ited 🗌 E	Excessive	е		Sample Location:		
Benthic Grov	wth: None	Gree	n 🗌 E	Brown			Sample ID:		
Stains:	None	Flow	Line 🗌 C	Dil	Rust Stains		Time Collected		
			osion 🗌 P	Paint	Other		Total Chlorine (field):		ррт
Non-illicit:	None	Natu	ral Sheen [Natur	ral Suds/Foam		Free Chlorine (field):		ppm
– Physical (Condition Ass	essment					Total Copper (field):		ppm
Croffit	Nono						Ammonia (field):		ppm
Graniti:	None						pH (field):		units
Erosion:	inone	Develle (in)					Temperature:		°F
Deposition	n: None	Deptn (in):					Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed		Detergents:		mg/L
		Corrosion	Cracks/Stru	uctural D	amage		Phenol:		mg/L

Outfall ID: 06-977

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 42 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120530112504.JPG

Outfall Notes:

Storm sewer from Golden Ave discharges to stream from east.

County Co	County Coordinates:							
Northing:	472,446							
Easting:	778.578							

State Plane Coordinates:Northing:737,739Easting:2,338,670



Inspection Da	ate: 5/30/20	12 12:25:25 PM	Inspector:	JCW	Inspecti	on Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descript	tion: None		Notes:	Apron o	displaced 5"	from pipe	e. Dry at time of	a financial and a second	N.Y.	J.X.
Submerged:	None	Depth (in):		inspect	ion.					1:4
Illicit Discharç	ge Potential:	Unlikely] Field Fo	ollow-up	Of	fice Follow-up			1
Floatables: No	one	Pei	trol. Sheen	Suds	Sewag	ie 🗌 Alę	gae 🗌 Othe	r		1
Odor: No	one	□ Pe □ VO	troleum] Musty] Fishy	Sewag	je 🗌 Ch	nlorine 🗌 Othe agrant	r		
Turbidity: No	one							Service Relation	05/30/	2012 12:25
Color: No	one							020120530112	522.JF	PG
Gross Solids:	None	Litt	er 🗌	Debris	Sedim	ent 🗌 0	Other	-Sampling Results		
Vegetation:	None	🗌 Inh	ibited	Excessiv	e			Sample Location:		
Benthic Growth	h: None	Gre	een	Brown				Sample ID:		
Stains:	None	🗌 Flo	w Line	Oil	Rust S	tains		Time Collected		
		Co	rrosion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	🗌 Na	tural Sheen	🗌 Natu	ral Suds/Fo	am		Free Chlorine (field):		ррт
- Physical Co	ondition Assess	sment						Total Copper (field):		ррт
Graffiti	None							Ammonia (field):		ppm .,
Erosion:	Minor							pH (field):		units
Deposition:	None	Depth (in):						Temperature:		°F
Damage:	Minor		A I landowayah		During has al					μ5/cm
go.		Corrosion	Cracks/Str	ructural D)amage			Phenol:		mg/L mg/L

Outfall ID: 09-101c

Major Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Box

Material: RCP

City ID: N/A

Drainage Basin: Stringham Creek

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Desktop mapping estimate ✓ Not Physically Located



Osh09_DSCN6774.JPG

Outfall Notes:

Outfall not physically screened - behind fence. May consist of three outfalls within one concrete box culvert.

County Co	ordinates:	State Plane Coo			
Northing:	471,883	Northing:	737,39		
Easting:	790,649	Easting:	2,350,74		

linates: 93 48

Inspection Date: JCW Previous Rainfall (hrs): 72+ 9/27/2012 10:19:00 AM Inspector: Inspection Type: Ongoing Flow Description: Submerged (not located) Notes: Outfall behind locked gate and not accessible. Screened upstream at 09-101c Outfall Submerged: Depth (in): US1. Illicit Discharge Potential: Unlikely Not Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Located Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Photo Not Available Turbidity: None Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results Inhibited Vegetation: None Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Stains: None Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 09-101c

Inspection Date: 6/21/2012 1	0:47:00 AM Inspector:	JCW Inspe	ction Type: Other	l	Previous Rainfall (hrs):	0-24
Flow Description: Submerged: De	t (not located) Notes:	Gross solids pre- not screened - so 101c US1.	screening. Actual creened upstream a	outfall at 09-	Outf	all
Illicit Discharge Potential: Po	otential	Field Follow-up	Office Foll	low-up	No	t
Floatables: None	Petrol. Sheen	Suds Sew	age 🗌 Algae	Other		tod
Odor: None	Petroleum	Musty Sew	age 🗌 Chlorine	Other	Loca	lea
Turbidity: None	VOC/Solvent	_ Fishy _ Sulfi	ur 🔄 Fragrant		Photo Not A	vailable
Color: None						
Gross Solids: None	Litter	Debris 🗌 Sedi	iment 🗌 Other	-Sa	ampling Results	
Vegetation: None	Inhibited	Excessive		S	ample Location:	
Benthic Growth: None	Green	Brown		S	ample ID:	
Stains: None	Flow Line	Oil 🗌 Rust	t Stains	Т	ime Collected	
	Corrosion	Paint Othe	er	Т	otal Chlorine (field):	ppm
Non-illicit: None	Natural Sheen	Natural Suds/F	oam	F	ree Chlorine (field):	ppm
Physical Condition Assessmer	nt		٦	T	otal Copper (field):	ppm
Graffiti: None				A	mmonia (field):	ppm .,
Frosion: None				р		units
Deposition: None Dep	th (in):				emperature:	°F
Damage: None)icplacement 🗌 Linderout					μ5/cm
					bonol:	IIIg/L ma/l
		iluciulai Dalliaye	J	Г	nenoi.	111g/L

Inspection	Date: 10/1	1/2011 9:16:00 AM	nspector:	JCW	Inspection	Type:	Ongoing	Ρ	revious Rainfall (hrs):	72+	
Flow Desci Submerged	r iption: Sub : Fully	merged (not located) Depth (in):	Notes:	2010 sc manhol screene	creening follov e rescreened. ed.	v-up. U Actual	pstream I outfall not		Outf	al	
Illicit Disch	arge Potentia	al: Potential		Field Fo	ollow-up	Off	fice Follow-up		No	t	
Floatables:	None	Petrol	Sheen	Suds	Sewage		gae Othe	r	1000	ta	4
Odor:	None	Petrol	eum	Musty	Sewage	Ch	lorine 🗌 Othe	r	Loca	le	a
Turbidity:	None		Solvent	Fishy	Sulfur	🗌 Fra	agrant		Photo Not A	va	ilable
Color:	None										
Gross Solid	s: None	Litter		Debris	Sedimer	nt 🗌 C	Other	-Sa	mpling Results		
Vegetation:	None	🗌 Inhibit	ed 🗌 E	xcessive	е			Sa	mple Location:		
Benthic Gro	wth: None	Green	E	Brown				Sa	ample ID:		
Stains:	None	Flow L	.ine 🗌 C	Dil	Rust Sta	ins		Tir	me Collected		
			sion 🗌 F	Paint	Other			То	tal Chlorine (field):		ppm
Non-illicit:	None	Natura	al Sheen [Natur	ral Suds/Foan	า		Fr	ee Chlorine (field):		ppm
– Physical	Condition Ass	essment	-					То	tal Copper (field):		ppm
Creffitie	Nege							Ar	nmonia (field):		ррт
Gramti:	None							p⊦	f (field):		units
Erosion:	None	Death (in): 0						Te	emperature:		°F
Depositio	on: None	Deptn (in): 0						Сс	onductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			De	etergents:		mg/L
			Cracks/Stru	uctural D	amage			Pł	ienol:		mg/L

Outfall ID: 09-101c

Inspection	Date: 8/18	/2010 11:01:01 AM Ir	nspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+
Flow Desci Submerged	r iption: Sub : Partially	merged (not located) Depth (in):	Notes: Outfall located 101c L	fully submerged and r d. Outfall screened up JS1.	not physically ostream at 09-	Out	all 🏌
Illicit Disch	arge Potenti	al: Potential	Field F	ollow-up Of	fice Follow-up	- Nie	
Floatables:	None	Petrol.	Sheen 🗌 Suds	🗌 Sewage 🗌 Alg	gae 🗌 Other	ALL TO COMPANY	A CAR
Odor:	None	Petrole	eum 🗌 Musty Solvent 🗌 Fishy	Sewage Ch	nlorine 🗌 Other agrant	Loca	Ied .
Turbidity:	None						08.18.2010 10:47
Color:	None					020100818104	726.JPG
Gross Solid	s: None	Litter	Debris	Sediment C	Dther	Sampling Results	
Vegetation:	None	Inhibite	ed 🗌 Excessiv	/e		Sample Location:	
Benthic Gro	wth: None	Green	Brown			Sample ID:	
Stains:	None	Flow L	ine 🗌 Oil	Rust Stains		Time Collected	
			sion 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit:	None	Natura	ıl Sheen 🗌 Natı	ural Suds/Foam		Free Chlorine (field):	ppm
Physical	Condition Ass	essment				Total Copper (field):	ppm
Graffiti:	None					Ammonia (field):	ppm
Frosion:	None						units
Depositio	n: None	Depth (in): 0				Conductivity	°F
Damage:	None			Crushad			μS/cm
Bunago.	110110			Crushed		Detergents:	mg/L
			Jracks/Structural I	Jamage		Phenol:	mg/L

Inspection D	ate: 9/10/2	009	Insp	ector:	JCW	Inspect	ion Type:	Initial	Previous Rainfall (hrs)	: 72+	
Flow Descrip	otion:		N	lotes:							
Submerged:	Partially	Depth (in)	:							1997 - 19	
Illicit Discha	rge Potential:	Potential		✓	Field Fo	ollow-up		ffice Follow-up			
Floatables: N	None		Petrol. Sh	een 🗌	Suds	Sewa	ge 🗌 Al	lgae 🗌 Ot	her	1.	1.14
Odor:	None		Petroleum	n 🗌 ent 🗌	Musty Fishy	Sewa	ge 🗌 C	hlorine 🗌 Otl ragrant	her		
Turbidity:	None										0 2009 10/44
Color:	None								Osh09_DSCN	16774.J	PG
Gross Solids:	None		Litter		Debris	Sedim	nent	Other	Sampling Results		
Vegetation:	None		Inhibited	E	Excessive	e			Sample Location:		
Benthic Grow	th: None		Green	E	Brown				Sample ID:		
Stains:	None		Flow Line		Dil	Rust S	Stains		Time Collected		
			Corrosion	F	Paint	Other			Total Chlorine (field):		ррт
Non-illicit:	None		Natural SI	neen	Natu	ral Suds/Fo	am		Free Chlorine (field):		ррт
Physical C	ondition Asses	ssment —							Total Copper (field):		ррт
Graffiti	None								Ammonia (field):		ppm
Erosion:	None								pH (field):		units
Deposition	· None	Depth (in):	0						lemperature:		°F
Deposition	None								Conductivity:		µS/cm
Damaye.	NULLE		ement 📋 Und	ercut		Crushed			Detergents:		mg/L
		Corrosio	n 🗌 Crae	cks/Stru	uctural D	amage			Phenol:		mg/L

Outfall ID: 09-101c US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 09-47

Drainage Basin: Stringham Creek

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120927091946.JPG

Outfall Notes:

Upstream manhole located approx 605 ft SSW of outfall 09-101c. Intermediate area consists of gravel parking area for industrial property.

County Co	ordinates:	State Plane C		
Northing:	471,296	Northing:	7	
Easting:	790,525	Easting:	2,3	

oordinates: 736,804 850,634



Inspection Date: 9/27/2012 10:18:51 AM Inspector: JCW Inspection Type: Ongoing	Previous Rainfall (hrs): 72+
Flow Description: Submerged, indeterminate Notes: 2011 gross solids follow-up.	
Submerged: Fully Depth (in): 21	
Illicit Discharge Potential: Unlikely	v-up
Floatables: None] Other
Odor: None Petroleum Musty Sewage Chlorine VOC/Solvent Fishy Sulfur Fragrant] Other
Turbidity: None	09/27/2012 10:18
Color: None	o20120927091956.JPG
Gross Solids: Slight 🗹 Litter 🗌 Debris 🗌 Sediment 🗌 Other	Sampling Results
Vegetation: None Inhibited Excessive	Sample Location: Pool
Benthic Growth: None Green Brown	Sample ID: 120927-03
Stains: None Flow Line Oil Rust Stains	Time Collected 10:15
Corrosion Paint Other	Total Chlorine (field): 0 ppm
Non-illicit: None 🗌 🗌 Natural Sheen 🗍 Natural Suds/Foam	Free Chlorine (field): 0 ppm
- Physical Condition Assessment	Total Copper (field): 0 ppm
	Ammonia (field): 0 ppm
Grainu. None	pH (field): 8 units
Erosion. None Dependition: None Donth (in):	Temperature: 64 ° <i>F</i>
Deposition. None Depth (III).	Conductivity: 1187 μ S/cm
Damage. None Displacement Undercut Crushed	Detergents: 0 mg/L
Corrosion Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 09-101c US1

Inspection Da	ate: 6/21/2012 10:47:0	OAM Inspector: JCW Insp	ection Type: Other	Previous Rainfall (hrs):	0-24
Flow Descript	tion: Submerged, inde	terminate Notes: Gross solids pr	re-screening.	and and a	
Submerged:	Partially Depth (ir): 24			
Illicit Discharg	ge Potential: Potentia	Field Follow-up	Office Follow-up		A.
Floatables: No	one	Petrol. Sheen Suds Se	ewage 🗌 Algae 🗌 Othe	r 🔰 🍊	allen 1 1
Odor: No	one	Petroleum Musty Se	ewage 🗌 Chlorine 🗌 Othe	r 🧉 🦉 🦓	
		VOC/Solvent Fishy Su	Ilfur 🗌 Fragrant		06/23/2712 35:36
Turbidity: No	one			a series	0072172012110.48
Color: No	one			020120621094	646.JPG
Gross Solids:	Moderate	✓ Litter Debris Se	ediment 🗌 Other	-Sampling Results	
Vegetation:	None	Inhibited Excessive		Sample Location:	
Benthic Growth	h: None	Green Brown		Sample ID:	
Stains:	None	Flow Line Oil Ru	ust Stains	Time Collected	
		Corrosion Paint Ot	her	Total Chlorine (field):	ppm
Non-illicit:	None	Natural Sheen Natural Suds	s/Foam	Free Chlorine (field):	ppm
– Physical Col	ndition Assessment —			Total Copper (field):	ppm
Croffitiu	Nene			Ammonia (field):	ppm
Gramu:	None			pH (field):	units
Erosion:	None			Temperature:	°F
Deposition:	None Depth (in):			Conductivity:	μS/cm
Damage:	None 🗌 Displac	ement 🗌 Undercut 🛛 🗌 Crushec		Detergents:	mg/L
	Corrosi	on 🗌 Cracks/Structural Damage		Phenol:	mg/L



Outfall ID: 09-101c US1

Inspection	Date: 10	/ 20/2010 9:35:37 AM Ir	nspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (h	rs): 72+	
Flow Descr	ription: Su	ıbmerged, indeterminate	Notes: Floatable	e debris in manhole.		1/2018	120	
Submerged	: Fully	Depth (in): 16						
Illicit Disch	arge Poten	tial: Potential	Field Foll	ow-up 🗌 Of	fice Follow-up			
Floatables:	None	Petrol.	Sheen Suds	🗌 Sewage 🗌 Alg	gae 🗌 Othe	1 4 11	-	
Odor:	None	Petrole	eum 🗌 Musty	🗌 Sewage 🗌 Ch	nlorine 🗌 Othe		- 1	
			Solvent 🗌 Fishy	Sulfur Fra	agrant			4
Turbidity:	None							20.2010 09.35
Color:	None					02010102	20093518.jp)g
Gross Solid	s: Moder	ate 🖌 Litter	Debris	Sediment C	Dther	-Sampling Results —		
Vegetation:	None		ed Excessive			Sample Location:	Pool	
Benthic Gro	wth: Slight	✓ Green	Brown			Sample ID:	101020-5	3
Stains:	None	Flow L	ine 🗌 Oil 🛛	Rust Stains		Time Collected	09:35	
			ion 🗌 Paint	Other		Total Chlorine (field)	: 0	ррт
Non-illicit:	None	Natura	I Sheen 🗌 Natura	I Suds/Foam		Free Chlorine (field):	0	ррт
- Physical	Condition A	ssessment				Total Copper (field):	0	ррт
T Thysical		3363311611				Ammonia (field):	0	ррт
Graffiti:	None					pH (field):	7.88	units
Erosion:	None					Temperature:	55	°F
Depositio	n: None	Depth (in): 0				Conductivity:		μS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut 🗌 Cr	ushed		Detergents:	0	mg/L
		Corrosion	Cracks/Structural Da	mage		Phenol:	0	mg/L



Outfall ID: 11-512

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Arch

Material: CMP

City ID: N/A

Drainage Basin: Washington Ave

- Dimensions -

Diameter (in): Height/Depth (in): 24 Width (in): 35

Mapping Precison:Desktop mapping estimate✓Not Physically Located



o20120927072318.JPG

Outfall Notes:

Storm sewer from Washington Ave discharges to lake from west. Outfall not located - pipe info from MS4 map.

County Co	ordinates:	State Plane Coordinates			
Northing:	473,370	Northing:	739,026		
Easting:	798,806	Easting:	2,358,876		

Inspection Date: 9/27/2012 8:21:03 AM Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged (not located) Notes: Outfall fully submerged; screened upstream at 11-512 US1. Submerged: Fully Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927072324 JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results Inhibited Vegetation: None Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 11-512

Inspection	Date: 6	5/20/2012 8:23:31 AM	nspector: JCW	Inspection Type:	Other	Previous Rainfall (hrs):	24-48
Flow Descr	ription: S	Submerged (not located)	Notes: Gross	solids pre-screening		*	and the second
Submerged	: Fully	Depth (in):				Out	
Illicit Disch	arge Pote	ential: Potential	Field F	ollow-up 🗌 O	ffice Follow-up	Ne	PRO
Floatables:	None	Petrol.	. Sheen 🗌 Suds	Sewage Al	lgae 🗌 Other		1 dentes
Odor:	None	Petrol	eum 🗌 Musty	🗌 Sewage 🗌 C	hlorine 🗌 Other	<u> </u>	tea
			Solvent 🗌 Fishy	Sulfur Fi	ragrant		States a
Turbidity:	None						100000012 V8.125
Color:	None					020120620072	350.JPG
Gross Solid	s: None	E Litter	Debris	Sediment	Other	Sampling Results	
Vegetation:	None	e 🗌 Inhibit	ted 🗌 Excessiv	ve		Sample Location:	
Benthic Gro	wth: None	e Green	n 🗌 Brown			Sample ID:	
Stains:	None	e 🗌 Flow L	Line 🗌 Oil	Rust Stains		Time Collected	
			sion 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit:	None	e Natura	al Sheen 🗌 Natu	iral Suds/Foam		Free Chlorine (field):	ppm
- Physical	Condition	Assessment				Total Copper (field):	ppm
Filysical	Condition	Assessment				Ammonia (field):	ppm
Graffiti:	None					pH (field):	units
Erosion:	None					Temperature:	°F
Depositio	on: None	e Depth (in):				Conductivity:	μS/cm
Damage:	None	Displacement	Undercut	Crushed		Detergents:	mg/L
			Cracks/Structural [Damage		Phenol:	mg/L



Outfall ID: 11-512

Inspection Date: 5/	/ 10/2011 9:08:00 AM In	spector: JCW	Inspection Type:	Other	Previous Rainfall (hrs):	0-24
Flow Description: Southergod: Fully	ubmerged (not located) Depth (in):	Notes: Outfall located 512 US	fully submerged and r . Outfall screened up 1.	not physically stream at 11-	Outf	all
Illicit Discharge Poter	ntial: Potential	Field Fo	ollow-up Off	fice Follow-up	No.	the state
Floatables:	Petrol.	Sheen 🗌 Suds	Sewage Alg	jae 🗌 Other	a free of the second se	and the second
Odor:	Petrole	um 🗌 Musty olvent 🗌 Fishy	Sewage Ch	lorine 🗌 Other agrant	Loca	tea
Turbidity:					A State	05/10/2011 08:08
Color:					0201105100908	310.JPG
Gross Solids:	Litter	Debris	Sediment C	Other	Sampling Results	
Vegetation:	🗌 Inhibite	d 🗌 Excessive	e		Sample Location:	
Benthic Growth:	Green	Brown			Sample ID:	
Stains:	🗌 Flow Li	ne 🗌 Oil	Rust Stains		Time Collected	
	Corrosi	on 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit: None	Natural	Sheen 🗌 Natu	al Suds/Foam		Free Chlorine (field):	ppm
- Physical Condition A	Assessment				Total Copper (field):	ppm
Graffiti: None					Ammonia (field):	ppm
Erosion: None					pH (field):	units
Deposition: None	Depth (in): 0				Temperature:	°F
Deposition. None		_			Conductivity:	μS/cm
Damage. None	Displacement U	Indercut C	Crushed		Detergents:	mg/L
		racks/Structural D	amage		Phenol:	mg/L

Outfall ID: 11-512 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 11-512

Drainage Basin: Washington Ave

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120927072432.JPG

Outfall Notes:

Upstream manhole located approx 34 ft SW of outfall 11-512. Intermediate area consists of open space.

County Coordinates:				
Northing:	473,351			
Easting:	798,773			

State Plane Coordinates: Northing: 739,007 Easting: 2,358,844

Inspection Date: Inspection Type: Ongoing 9/27/2012 8:22:20 AM Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: 2011 gross solids follow-up. Submerged: Fully Depth (in): 34 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927072438.JPG Color: None ✓ Litter Gross Solids: Slight ✓ Debris Sediment Other Sampling Results Inhibited Vegetation: None Excessive Sample Location: Pool Benthic Growth: Slight Green Brown Sample ID: 120927-06 Flow Line Stains: Slight Rust Stains **Time Collected** Oil 08:20 Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 8.73 units Erosion: None Temperature: 59 °F Deposition: None Depth (in): Conductivity: 416 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 11-512 US1

Inspection Dat	te: 6/20/2012 8:24:06	AM Inspector: JCW	Inspection Type: Other	Previous Rainfall (hrs): 24-48
Flow Description	ion: Submerged, inde	terminate Notes: Gros	ss solids pre-screening.	
Submerged: F	Fully Depth (in): 40		H Contraction (
Illicit Discharg	e Potential: Potentia	Field	I Follow-up	
Floatables: No	one	Petrol. Sheen Suds	s 🗌 Sewage 🗌 Algae 🗌 Oth	ner
Odor: No	one	Petroleum Mus	ty 🗌 Sewage 🗌 Chlorine 🗌 Oth	ner
		VOC/Solvent Fish	y 🗌 Sulfur 🗌 Fragrant	
Turbidity: No	one			decorate of the
Color: No	one			o20120620072408.JPG
Gross Solids:	Severe	✓ Litter ✓ Debris	Sediment Other	Sampling Results
Vegetation:	None	Inhibited Exces	sive	Sample Location:
Benthic Growth	: None	Green Brown		Sample ID:
Stains:	None	🗌 Flow Line 🗌 Oil	Rust Stains	Time Collected
		Corrosion Paint	Other	Total Chlorine (field): ppm
Non-illicit:	None	Natural Sheen Natural Sheen	atural Suds/Foam	Free Chlorine (field): ppm
- Physical Con	ndition Assessment —			Total Copper (field): ppm
Craffilia	News			Ammonia (field): ppm
Gramiti:	None			pH (field): units
Erosion:	None			Temperature: °F
Deposition:	None Depth (in):			Conductivity: µS/cm
Damage:	None 🗌 Displac	ement 🗌 Undercut	Crushed	Detergents: mg/L
	Corrosi	on Cracks/Structura	al Damage	Phenol: mg/L

Inspection Date: 10/3/2011 12:13:00 PM Inspector: JCW Inspection Type: Ongoing	Previous Rainfall (hrs): 72+
Flow Description: Submerged, indeterminate Notes: Significant floatable debris in manhole.	
Submerged: Fully Depth (in): 36	100-51
Illicit Discharge Potential: Potential Field Follow-up Office Follow-up	
Floatables: None Petrol. Sheen Suds Sewage Algae Oth	er
Odor: None Petroleum Musty Sewage Chlorine Oth VOC/Solvent Fishy Sulfur Fragrant	er
Turbidity: None	12213
Color: None	o20111003121302.JPG
Gross Solids: Severe 🗹 Litter 🗌 Debris 🗌 Sediment 🗌 Other	Sampling Results
Vegetation: None Inhibited Excessive	Sample Location: Pool
Benthic Growth: None Green Brown	Sample ID: 111003-73
Stains: None I Flow Line Oil Rust Stains	Time Collected 12:15
Corrosion Paint Other	Total Chlorine (field): 0 ppm
Non-illicit: None Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm
Physical Condition Assessment	Total Copper (field): 0 ppm
	Ammonia (field): 0 ppm
Gramin: None	pH (field): 7.39 units
Erosion: None	Temperature: 67 ° <i>F</i>
Deposition: None Depth (in): U	Conductivity: µS/cm
Damage: None Displacement Undercut Crushed	Detergents: 0 mg/L
Corrosion Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 11-512 US1

Inspection Date: 5/10/2011 9:08:00	0 AM Inspector: JCW	Inspection Type: Other	Previous Rainfall (hrs):	0-24
Flow Description: Submerged, inde Submerged: Fully Depth (in	n):	ed screening conducted for upstream tole prescreening.	1	A STATE
Illicit Discharge Potential: Potentia	al 🗌 Field	Follow-up Office Follow-up		
Floatables: None	Petrol. Sheen Suds	Sewage Algae Othe	er in the second se	
Odor:	Petroleum Musty	y Sewage Chlorine Oth	er	
Turbidity:	UVOC/Solvent I Fishy	r _ Sulfur _ Fragrant	020110510090	D830.JPG
Gross Solids: Severe	Litter Debris	Sediment Other	- Sampling Results	
Vegetation:	Inhibited Excess	ive	Sample Location:	
Benthic Growth:	Green Brown		Sample ID:	
Stains:	Flow Line Oil	Rust Stains	Time Collected	
	Corrosion Paint	Other	Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen Na	tural Suds/Foam	Free Chlorine (field):	ppm
Physical Condition Assessment —			Total Copper (field):	ppm
Graffiti: None			Ammonia (field):	ppm
Erosion: None			Temperature	units °F
Deposition: None Depth (in)	: 0		Conductivity:	uS/cm
Damage: None 🗌 Displac	cement 🗌 Undercut	Crushed	Detergents:	ma/L
	ion Cracks/Structural	Damage	Phenol:	mg/L

Outfall ID: 11-803

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Parkway Ave

- Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120927070832.JPG

Outfall Notes:

Curb inlets on Pratt Tr discharge to lake from west.

County Co	County Coordinates:			
Northing:	475,327	٢		
Easting:	797,618	E		

State Plane Coordinates:Northing:740,961Easting:2,357,654



Inspection	Date: 9	27/2012 8:05:18 AM	Inspector:	JCW	Inspection T	ype: On	ngoing	Previous Rainfall (hrs):	72+	
Flow Descr	ription: S	ubmerged, indeterminate	Notes:	2011 ar submer	mmonia follow-u ged; screened u	p. Outfa Ipstream	ll partially at 11-803		NY.	E.
Submerged	: Partially	Depth (in): 7		US1.	.	•			-	a subs
Illicit Disch	arge Pote	ntial: Unlikely] Field Fo	ollow-up	Office	Follow-up	10119	-10	S AS
Floatables:	None	Petro	l. Sheen	Suds	Sewage	Algae	Other			1 Part
Odor:	None		leum] Musty] Fishy	Sewage	Chlori	ne 🗌 Other		4	1 a a
Turbidity:	None			JIISHY		_ rrayra	111		11211	2012 08:08
Color:	None							0201209270708	846.JI	PG
Gross Solid	s: None			Debris	Sediment	Othe	er 🗌	Sampling Results		
Vegetation:	None	🗌 Inhib	ited 🗌 I	Excessive	е			Sample Location:		
Benthic Gro	wth: Slight	✓ Gree	n 🗌 I	Brown				Sample ID:		
Stains:	Slight	Flow	Line	Oil	Rust Stain	S		Time Collected		
		✓ Corr	osion 🔄 I	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	🗌 Natu	ral Sheen	🗌 Natu	ral Suds/Foam			Free Chlorine (field):		ppm
- Physical	Condition A	Assessment						Total Copper (field):		ppm
Graffiti	None							Ammonia (field):		ppm
Erosion:	None							pH (field):		units
Depositio	n: None	Depth (in):						Temperature:		°F
Depusitio	None							Conductivity:		μS/cm "
Damaye.	None	Displacement	Undercut		Crushed			Detergents:		mg/L "
		Corrosion	Cracks/Str	ructural D	amage			Phenol:		mg/L

Outfall	ID:	11-803
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Inspection Date: 6/20/2012 7:26:3	2 AM Inspector: JCW	Inspection Type: Other	Previous Rainfall (hrs):	24-48
Flow Description: Submerged, inde Submerged: Fully Depth (in	eterminate Notes: Gross so submerg US1.	blids pre-screen. Outfall fully jed; screened upstream at 11-803	1-1	
Illicit Discharge Potential: Unlikely	/ Field Fol	low-up Office Follow-up		
Floatables: None	Petrol. Sheen Suds	Sewage Algae Othe	r 💦	
Odor: None	Petroleum Musty	Sewage Chlorine Othe	r 💦	
	VOC/Solvent Fishy	Sulfur Fragrant	and the second sec	
Turbidity: None				
Color: None]		020120620062	936.JPG
Gross Solids: None	Litter Debris	Sediment Other	-Sampling Results	
Vegetation: None	Inhibited Excessive		Sample Location:	
Benthic Growth: None	Green Brown		Sample ID:	
Stains: None	Flow Line Oil	Rust Stains	Time Collected	
	Corrosion Paint	Other	Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen 🗌 Natura	al Suds/Foam	Free Chlorine (field):	ppm
- Physical Condition Assessment			Total Copper (field):	ppm
Craffiti: Nono			Ammonia (field):	ppm
Graniti. None			pH (field):	units
Erosion: None Dependition: Name Depth (in)			Temperature:	°F
Deposition: None Depth (In)	•		Conductivity:	μS/cm
Damage: None Displac	cement 🗌 Undercut 🗌 Cr	rushed	Detergents:	mg/L
	ion Cracks/Structural Da	amage	Phenol:	mg/L



Outfall ID: 11-803

Inspection Date: 5/10/2011 9:39:00 AM Inspector: JCW Inspection	n Type: Other Previous Rainfall (hrs): 0-24
Flow Description:Submerged, indeterminateNotes:Outfall fully submergedSubmerged:FullyDepth (in):MS4 map.	ged. Outfall screened US2. Pipe info from
Illicit Discharge Potential: Unlikely	Office Follow-up
Floatables: Petrol. Sheen Suds Sewage	a 🗌 Algae 🗌 Other
Odor:	e Chlorine Other
UVOC/Solvent Fishy Sulfur	Pragrant
Gross Solids:	ent Other Sampling Results
Vegetation:	Sample Location:
Benthic Growth:	Sample ID:
Stains:	ains Time Collected
Corrosion Paint Other	Total Chlorine (field): ppm
Non-illicit: None Natural Sheen Natural Suds/Foam	m Free Chlorine (field): ppm
- Physical Condition Assessment	Total Copper (field): ppm
	Ammonia (field): ppm
Grafiti: None	pH (field): units
Erosion: None	Temperature: °F
Deposition: None Depth (in): 0	Conductivity: µS/cm
Damage: None Displacement Undercut Crushed	Detergents: mg/L
Corrosion Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 11-803 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - brick

City ID: 11-803

Drainage Basin: Parkway Ave

Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120927071218.JPG

Outfall Notes:

Upstream curb inlet located approx 48 ft W of outfall 11-803. Intermediate area consists of open space in park.

County Co	ordinates:	State Plane C			
Northing:	475,322	Northing:	740,		
Easting:	797,566	Easting:	2,357,		

dinates: 955 602

Inspection Date: 9/27/2012 8:07:19 AM Inspection Type: Ongoing Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: 2011 ammonia follow-up. Submerged: Partially Depth (in): 3 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927071234.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: None Green Brown Sample ID: 120927-44 Stains: Slight Rust Stains **Time Collected** Flow Line Oil 08:00 Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 8.25 units Erosion: None Temperature: 58 °F Deposition: None Depth (in): Conductivity: 655 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L

Location Map



Corrosion

Cracks/Structural Damage

mg/L

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Phenol:

Outfall ID: 11-803 US1

Inspection Date: 6/20/20	012 7:30:27 AM Inspector: JCW Inspection Type: Other	Previous Rainfall (hrs): 24-48
Flow Description: Subme	erged, indeterminate Notes: Gross solids pre-screening.	
Submerged: Partially	Depth (in): 9	A CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER OWNE
Illicit Discharge Potential:	Potential Field Follow-up Office Follow-up	
Floatables: None	Petrol. Sheen Suds Sewage Algae Ot	her
Odor: None	Petroleum Musty Sewage Chlorine Ot	her
	VOC/Solvent Fishy Sulfur Fragrant	
Turbidity: None		deriver at
Color: None		o20120620063110.JPG
Gross Solids: Moderate	Litter 🗹 Debris 🗌 Sediment 🗌 Other	Sampling Results
Vegetation: None	Inhibited Excessive	Sample Location: Pool
Benthic Growth: None	Green Brown	Sample ID: 120620-41
Stains: None	Flow Line Oil Rust Stains	Time Collected 07:31
	Corrosion Paint Other	Total Chlorine (field): 0 ppm
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm
- Physical Condition Asses		Total Copper (field): 0 ppm
	Sment	Ammonia (field): 0.5 ppm
Graffiti: None		pH (field): 7.46 units
Erosion: None		Temperature: 78 °F
Deposition: None	Depth (in):	Conductivity: 548 μ S/cm
Damage: None	Displacement Undercut Crushed	Detergents: 0 mg/L
	Corrosion Cracks/Structural Damage	Phenol: mg/L

Inspection Date	e: 10/4/2011 8:	:39:36 AM Inspe	ector: JCW	Inspection Type:	Repeat	Previous Rainfall (hrs):	72+	
Flow Description	on: Submerged	I, indeterminate	lotes: Follow-	up inspection to re-te	est ammonia.	J Starten St	-	1. 1. A. A.
Submerged: P	artially Dep	pth (in):						1 Mar
Illicit Discharge	e Potential: Pot	tential	E Field Fo	ollow-up 🗌 O	ffice Follow-up			
Floatables: No	ne	Petrol. Sh	een 🗌 Suds	Sewage 🗌 Al	gae 🗌 Other	2-1-1-1	3	A T
Odor: No	ne	Petroleum	n 🗌 Musty rent 🗌 Fishy	Sewage Cl	hlorine 🗌 Other agrant			
Turbidity: No	ne		-		-		10/04/:	2014 99 99/1
Color: No	ne					0201110040839	900.JF	PG
Gross Solids:	None	Litter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	Inhibited	Excessiv	е		Sample Location: Pool		
Benthic Growth:	None	Green	Brown			Sample ID:		
Stains:	Slight	Flow Line	🗌 Oil	Rust Stains		Time Collected 08:3	5	
			Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natural Sł	heen 🗌 Natu	ral Suds/Foam		Free Chlorine (field):		ррт
– Physical Con	dition Assessmen	 nt				Total Copper (field):		ppm
Graffiti	None					Ammonia (field):	3	ppm
Erosion:	None					pH (field):		units
Deposition:	None Dent	th (in): 0				remperature:		°F ₩C(am
Damage:	None);;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;		Cruchad				μ5/cm ma/l
		isplacement 0nd	cks/Structural E)amage		Phenol:		mg/L mg/L

Outfall ID: 11-803 US1

Inspection I	Date: 10/3/2	2011 3:04:34 PM	Inspector: JCV	V Inspec	ction Type: O	ngoing	Previous Rainfall (h	rs): 72+	-
Flow Descri	iption: Subn	nerged, indeterminate	Notes: Elev	ated ammon	ia concentratio	on in sample.	EX Star		
Submerged:	Partially	Depth (in): 4					7.5		and the second
Illicit Discha	Illicit Discharge Potential: Potential Field Follow-up Office Follow-up						Alle I	-	
Floatables:	None	Petrol	I. Sheen 🗌 Sud	s 🗌 Sew	age 🗌 Algae	e 🗌 Othe	r 🚽 💦		
Odor:	Faint	Petrol	leum 🗌 Mus	ty 🗌 Sew	age 🗌 Chlor	ine 🗌 Othe	r Martine -		2.01
			Solvent 🗹 Fish	y 🗌 Sulfi	ur 🗌 Fragr	ant			and as
Turbidity:	Cloudy								
Color:	Clearly visible	in bottle Dark/Blac	ck				020111003	3150602.JI	PG
Gross Solids	s: None	Litter	Debri:	s 🗌 Sedi	ment 🗌 Oth	er	- Sampling Results —		
Vegetation:	None	Inhibit	ted Exces	sive			Sample Location:	Pool	
Benthic Grow	wth: None	Greer	n 🗌 Browr	ı			Sample ID:	111003-6	57
Stains:	Slight	✓ Flow I	Line 🗌 Oil	🗌 Rust	Stains		Time Collected	15:05	
	L		sion 🗌 Paint	Othe	er		Total Chlorine (field)	: 0	ppm
Non-illicit:	None	Natur:	al Sheen 🗌 N	atural Suds/F	oam		Free Chlorine (field):	0	ppm
Physical (Condition Acor				00		Total Copper (field):	0	ppm
Filysical	Jonumon Asse	ssment					Ammonia (field):	3	ррт
Graffiti:	None						pH (field):	7.35	units
Erosion:	None						Temperature:	70	°F
Deposition	n: None	Depth (in): 0					Conductivity:		µS/cm
Damage:	None	Displacement	Undercut [Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/Structura	al Damage			Phenol:		mg/L



Outfall ID: 13-95

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Stringham Creek

- Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120613092746.JPG

Outfall Notes:

Storm sewer from South Park Drive discharges to detention basin through twin pipes from south.

County Co	ordinates:	State Plane Coordinates:			
Northing:	469,363	Northing:	734,844		
Easting:	789,000	Easting:	2,349,145		



Inspection	Date: 6/13/2	2012 10:24:40 AM	Inspector:	JCW	Inspecti	on Type:	Ongoing	Previous Rainfall (hrs):	72+	-
Flow Descr	ription: Subn	nerged, indeterminate	Notes:	Tops of	f pipes miss	ing or cut	off. Outfall		12	All and a
Submerged	: Fully	Depth (in):		at 13-95	ully submer 5 US1.	ged; scree	ened upstream	Aug.		
Illicit Disch	arge Potentia	: Unlikely		Field Fo	ollow-up	Of	fice Follow-up			1.00
Floatables:	None	Petro	ol. Sheen	Suds	Sewag	ge 🗌 Alg	gae 🗌 Othe	r	1-a	in the
Odor:	None	Petro	leum	Musty Fishy	Sewaq	ge 🗌 Ch	nlorine 🗌 Othe agrant	r	F.	
Turbidity:	None									
Color:	None							020120613092	2740.J	PG
Gross Solid	s: None	Litter		Debris	Sedim	ent 🗌 C	Other	-Sampling Results		
Vegetation:	None	🗌 Inhib	ited 🗌 🛙	Excessive	e			Sample Location:		
Benthic Gro	wth: None	Gree	n 🗌 i	Brown				Sample ID:		
Stains:	None	Flow	Line	Dil	Rust S	Stains		Time Collected		
			osion 🗌 F	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	Natu	ral Sheen	🗌 Natur	ral Suds/Fo	am		Free Chlorine (field):		ppm
- Physical	Condition Asse	essment						Total Copper (field):		ррт
Graffiti	None							Ammonia (field):		ppm
Granni. Eropion:	None							pH (field):		units
	None	Dooth (in):						Temperature:		°F
Depositio				_				Conductivity:		µS/cm
Damage:	woderate	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion	Cracks/Str	uctural D	amage			Phenol:		mg/L

Outfall ID: 13-95 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-95

Drainage Basin: Stringham Creek

- Dimensions -

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120613093326.JPG

Outfall Notes:

Upstream manhole located approx 25 ft S of outfall 13-95. Intermediate area consists of open space in park.

County Co	oordinates:	S
Northing:	469,338	Ν
Fasting:	789 004	F

State Plane Coordinates: Northing: 734,819 Easting: 2,349,149

Inspection Date: Inspection Type: Ongoing 6/13/2012 10:28:59 AM Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: Submerged: Fully Depth (in): 20 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120613093332.JPG Color: None Gross Solids: Moderate Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: None Green Brown Sample ID: 120613-32 Flow Line Stains: Slight Rust Stains **Time Collected** 10:32 Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 8.07 units Erosion: None Temperature: 77 °F Deposition: Moderate Depth (in): 8 Conductivity: 1340 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: mg/L Corrosion Cracks/Structural Damage --



Outfall ID: 13-101

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Elliptical

Material: CMP

City ID: N/A

Drainage Basin: Stringham Creek

- **Dimensions** Diameter (in): Height/Depth (in): 36 Width (in): 58

Mapping Precision:Desktop mapping estimate✓Not Physically Located



o20120612121308.JPG

Outfall Notes:

Storm sewer from Georgia St discharges to detention basin from west. Outfall not located. Pipe info from MS4 map.

County Coordinates: State Plane Coordinates: e Northing: 469,063 Northing: 734,526 g Easting: 788,001 Easting: 2,348,151 2012 1:11:02 PM Inspector: JCW Inspection Type: Ongoing F aerged (not located) Notes: Outfall fully submerged: screened upstream



Inspection	Date: 6/12/	2012 1:11:02 PM	Inspector:	JCW	Inspection Type: Ongoing	Previous Rainfall (hrs):	: 72+	
Flow Descr	iption: Subr	merged (not located)	Notes:	Outfall at 13-1	fully submerged; screened upstre	eam	C - 1	
Submerged:	Fully	Depth (in):				out Out		
Illicit Discha	arge Potentia	al: Unlikely	Field Follow-up			^{up} No		
Floatables:	None	Petro	I. Sheen	Suds	Sewage Algae	Other		_
Odor:	None	Petro	leum	Musty	Sewage Chlorine	Other		
			Solvent	Fishy	Sulfur Fragrant	The second		2012 13:13
Turbidity:	None					the second second		
Color:	None					02012061212	1314.JF	PG
Gross Solids	s: None	Litter		Debris	Sediment Other	Sampling Results		
Vegetation:	None	🗌 Inhibi	ted 🗌 I	Excessiv	е	Sample Location:		
Benthic Grow	wth: None	Gree	n 🗌 I	Brown		Sample ID:		
Stains:	None	Flow	Line 🗌 🤅	Oil	Rust Stains	Time Collected		
			sion 🗌 I	Paint	Other	Total Chlorine (field):		ppm
Non-illicit:	None	Natur	al Sheen	Natu	ral Suds/Foam	Free Chlorine (field):		ppm
- Physical (Condition Ass	essment				Total Copper (field):		ppm
Onefficie	News	cosment				Ammonia (field):		ppm
Gramiti:	None					pH (field):		units
Erosion:	None					Temperature:		°F
Deposition	n: None	Depth (in):				Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed	Detergents:		mg/L
		Corrosion	Cracks/Str	uctural E	Damage	Phenol:		mg/L
Outfall	ID:	13-101						
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Inspection Date: 9/4/2009	Inspector: JCW I	nspection Type: Initial	Previous Rainfall (hrs): 72+
Flow Description: Submerg	ed, indeterminate Notes:		
Submerged: Fully	Depth (in):		
Illicit Discharge Potential:	Unlikely Field Follow	up Office Follow-up	
Floatables:	Petrol. Sheen Suds	Sewage Algae Other	
Odor:	Petroleum Musty	Sewage Chlorine Other	
	VOC/Solvent Fishy	Sulfur Fragrant	Dhate Nat Available
Turbidity:			Photo Not Available
Color:			
Gross Solids:	Litter Debris	Sediment Other	Sampling Results
Vegetation:	Inhibited Excessive		Sample Location:
Benthic Growth:	Green Brown		Sample ID:
Stains:	Flow Line Oil	Rust Stains	Time Collected
	Corrosion Paint	Other	Total Chlorine (field): ppm
Non-illicit: None	Natural Sheen 🗌 Natural S	uds/Foam	Free Chlorine (field): ppm
- Physical Condition Assess			Total Copper (field): ppm
			Ammonia (field): ppm
Graffiti: None			pH (field): units
Erosion: None			Temperature: °F
Deposition: D	epth (in):		Conductivity: µS/cm
Damage: None] Displacement 🗌 Undercut 🗌 Crush	led	Detergents: mg/L
	Corrosion Cracks/Structural Dama	ge	Phenol: mg/L

Outfall ID: 13-101 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-101

Drainage Basin: Stringham Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120612125152.JPG

Outfall Notes:

Upstream manhole located approx 43 ft NW of outfall 13-101. Intermediate area consists of open space in park.

County Co	oordinates:	St
Northing:	469,082	No
Easting:	787.962	Ea

tate Plane Coordinates: orthing: 734,544 asting: 2,348,111





Outfall ID:	13-101	US1
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Inspection D	Date: 9/4/20	009	Inspector:	JCW	Inspec	tion Type:	Initial	Previous Rainfall (hrs): 72-	÷
Flow Descri	ption: Subn	nerged, slight flow	Notes:						and the second	a fre
Submerged:	Fully	Depth (in): 45						and the second		1.
Illicit Discha	arge Potentia	I: Unlikely		Field F	ollow-up	Of	fice Follow-up			
Floatables:	None	Petr	ol. Sheen	Suds	Sewa	age 🗌 Alg	gae 🗌 Oth	er		
Odor:	None	Peti	oleum	Musty	Sewa	age 🗌 Ch	nlorine 🗌 Oth	er j 7		
			C/Solvent	Fishy	Sulfu	r 🗌 Fra	agrant		-de	
Turbidity:	None							1	09	N 2003 05 33
Color:	None							Osh09_E	SCN6490.J	PG
Gross Solids	: None	Litte	er 🗌	Debris	Sedir	ment 🗌 0	Other	Sampling Results		
Vegetation:		🗌 Inhi	oited	Excessiv	e			Sample Location:	Pool	
Benthic Grov	vth:	Gre	en 🗌	Brown				Sample ID:	090904-0	8
Stains:		Flow	v Line	Oil	Rust	Stains		Time Collected	08:35	
		Cor	rosion	Paint	Other	r		Total Chlorine (field	d): 0	ppm
Non-illicit:	None	□ Nat	ural Sheen	Natu	ral Suds/F	oam		Free Chlorine (field): 0	ррт
- Physical (Condition Asso	esment						Total Copper (field)	: 0	ррт
Filysical C	Jonulion Asse	-551110111						Ammonia (field):		ppm
Graffiti:	None							pH (field):	8.24	units
Erosion:	None							Temperature:	67	°F
Deposition	n: None	Depth (in): 0						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/St	tructural D	Damage			Phenol:	0	mg/L

Outfall ID: 13-337

Major Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Elliptical

Material: CMP

City ID: N/A

Drainage Basin: Stringham Creek

Dimensions Diameter (in): Height/Depth (in): 40 Width (in): 65

Mapping Precison: Survey GPS Not Physically Located



o20120612121950.JPG

Outfall Notes:

Storm sewer from Georgia Street south of STH 44 discharges to detention basin from south.

County Co	ordinates:	State Plane Coo				
Northing:	468,965	Northing:	734			
Easting:	788,054	Easting:	2,348			

rdinates: ,429 ,206



Inspection	Date: 6/12/2	2012 1:20:10 PM	Inspector:	JCW	Inspectio	n Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption: Subn	nerged, indeterminate	e Notes:	Outfall	partially subr	nerged;	screened			and the second s
Submerged:	Partially	Depth (in): 19		upstrea	am at 13-337	US1.				
Illicit Disch	arge Potential	: Unlikely		Field Fo	ollow-up	Of	fice Follow-up			
Floatables:	None	Petr	ol. Sheen	Suds	Sewage	e 🗌 Alç	gae 🗌 Othe	er		
Odor:	None		oleum] Musty	Sewage	e 🗌 Ch	llorine 🗌 Othe	r		
Turbidity:	None						agram			2012 13:20
Color:	None							020120612122	2034.JI	PG
Gross Solids	s: None	Litte	r 🗌	Debris	Sedime	ent 🗌 C	Other	- Sampling Results		
Vegetation:	None	🗌 Inhit	oited	Excessive	e			Sample Location:		
Benthic Gro	wth: Slight	✓ Gree	en 🗸	Brown				Sample ID:		
Stains:	Moderate	✓ Flow	Line	Oil	Rust St	ains		Time Collected		
		✓ Corr	osion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	🗌 Natı	ıral Sheen	Natu	ral Suds/Foa	m		Free Chlorine (field):		ppm
- Physical	Condition Asse	ssment						Total Copper (field):		ррт
Groffiti	Nono							Ammonia (field):		ppm
Granni.	None							pH (field):		units
Erosion.	None							Temperature:		°F
Depositio	n: None	Deptn (in):						Conductivity:		µS/cm
Damage:	Moderate	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion] Cracks/Sti	ructural D	amage			Phenol:		mg/L

Outfall II	D: 13-337
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Inspection	Date: 9/4/20	009	Inspector: J	CW Inspe	ction Type:	Initial	Previous Rainfall (hrs):	72+	
Flow Descr	ription: Subn	nerged, slight flow	Notes:						
Submerged	: Partially	Depth (in): 21						-	
Illicit Discharge Potential: Unlikely									
Floatables:	None	Petro	ol. Sheen 🗌 S	uds 🗌 Sew	age 🗌 Ale	gae 🗌 Othe	er	R.	
Odor:	None	Petro	oleum 🗌 N	lusty 🗌 Sew	age 🗌 Ch	nlorine	er 🚽		
			/Solvent 🗌 F	ishy 🗌 Sulfi	ur 🗌 Fra	agrant			1 2000 04-30
Turbidity:	None								
Color:	None						Osh09_DSCN	6493.JF	°G
Gross Solid	s: None		Del	bris 🗌 Sedi	ment 🗌 0	Other	-Sampling Results		
Vegetation:		🗌 Inhib	ited 🗌 Exc	cessive			Sample Location:		
Benthic Gro	wth: Slight	✓ Gree	n 🗌 Bro	wn			Sample ID:		
Stains:	Moderate	✓ Flow	Line 🗌 Oil	Rust	Stains		Time Collected		
		Corr	osion 🗌 Pai	nt 🗌 Othe	er		Total Chlorine (field):		ppm
Non-illicit:	None	Natu	ral Sheen 🗌	Natural Suds/F	oam		Free Chlorine (field):		ppm
– Physical	Condition Asse	essment			-		Total Copper (field):		ppm
n nysicai	Condition Asse	.3311011					Ammonia (field):		ppm
Graffiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: None	Depth (in): 0					Conductivity:		µS/cm
Damage:	Minor	Displacement	Undercut	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Struct	ural Damage			Phenol:		mg/L

Outfall ID: 13-337 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-337

Drainage Basin: Stringham Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120612122540.JPG

Outfall Notes:

Upstream manhole located approx 20 ft SW of outfall 13-337. Intermediate area consists of open space in park.

County C	nty Coordinates:					
Northing:	468,944	Nor				
Easting:	788.042	Eas				

ate Plane Coordinates: orthing: 734,408 asting: 2,348,195





Inspection	Date: 9/4/2	009	nspector:	JCW In	spection Type:	: Initial	Previous Rainfall (hrs): 72+	-
Flow Desci	ription: Subr	nerged, slight flow	Notes:					1.19	
Submerged	: Partially	Depth (in): 28							
Illicit Discharge Potential: Unlikely									
Floatables:	None	Petro	. Sheen 🗌 🤅	Suds 🗌 S	Sewage 🗌 A	llgae 🗌 Oth	er		ST.
Odor:	None	Petro	eum 🗌 I	Musty 🗌 S	Sewage 🗌 C	hlorine 🗌 Oth	er		The state
			Solvent 🗌 I	Fishy 🗌 S	Sulfur 🗌 F	ragrant			
Turbidity:	None							09.0	94 2009 08 41
Color:	None						Osh09_DSC	N6497.J	PG
Gross Solid	s: None	Litter	De	ebris 🗌 S	Sediment	Other	- Sampling Results		
Vegetation:		Inhibi	ed 🗌 E>	cessive			Sample Location: P	ool	
Benthic Gro	wth:	Greer	ו 🗌 Br	own			Sample ID: 09	90904-0	4
Stains:		Flow	_ine 🗌 Oi	I 🗌 F	Rust Stains		Time Collected 08	3:45	
	L		sion 🗌 Pa	aint 🗌 (Other		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natur	al Sheen 🗌	Natural Su	ds/Foam		Free Chlorine (field):	0	ррт
- Physical	Condition Ass	essment					Total Copper (field):	0	ppm
Onefficial	Name	55111011					Ammonia (field):		ppm
Graffiti:	None						pH (field):	8.01	units
Erosion:	None						Temperature:	66	°F
Depositio	on: None	Depth (in): 0					Conductivity:		µS/cm
Damage:	None	Displacement	Undercut	Crushe	ed		Detergents:	0	mg/L
		Corrosion	Cracks/Struc	ctural Damag	е		Phenol:	0	mg/L

Outfall ID: 13-409

Minor Outfall

Structure Type: Other

Discharge Location: Downstream Outfall

Shape: Other

Material: RCP

City ID: N/A

Drainage Basin: Stringham Creek

Dimensions	
Diameter (in):	
Height/Depth (in):	3.5
Width (in):	18

Mapping Precison: Mapping GPS



o20120613103900.JPG

Outfall Notes:

Pond discharge enters box culvert under Ohio St.

County Coordinates:Northing:469,649Easting:789,164

State Plane Coordinates: Northing: 735,132 Easting: 2,349,303



Inspection	Date: 6/13/2	2012 10:41:39 AM	Inspector:	JCW	Inspect	ion Type:	Ongoing	Previous Rainfall (h	rs): 72+	-
Flow Descr	iption: Subs	tantial	Notes:					A A A A A A A A A A A A A A A A A A A	-	in the second second
Submerged:	None	Depth (in):						and the second		
Illicit Disch	arge Potentia	: Unlikely		Field Fo	ollow-up	Of	ffice Follow-up			
Floatables:	None	Pe	etrol. Sheen	Suds	Sewa	ge 🗌 Al	gae 🗌 Othe	er	the state	H
Odor:	None	Pe	etroleum] Musty] Fishy	Sewa	ge 🗌 Cl · 🗌 Fr	hlorine 🗌 Othe agrant	er		
Turbidity:	None								067.190	S.C.
Color:	None							020120613	3103906.J	PG
Gross Solids	s: None	Li*	tter	Debris	Sedim	nent 🗌 (Other	- Sampling Results		
Vegetation:	None	In	hibited	Excessiv	e			Sample Location:	Flow	
Benthic Gro	wth: None	G	reen	Brown				Sample ID:	120613-1	4
Stains:	None	FI	low Line	Oil	Rust S	Stains		Time Collected	10:42	
			orrosion	Paint	Other			Total Chlorine (field)	: 0	ppm
Non-illicit:	None	N;	atural Sheen	🗌 Natu	ral Suds/Fo	am		Free Chlorine (field):	0	ppm
– Physical	Condition Asse	essment						Total Copper (field):	0	ppm
Groffiti	Nono	comon						Ammonia (field):	0.5	ppm
Erosion:	None							pH (field):	8.12	units
Depositio	n: None	Depth (in):						Temperature:	76	°F
Depositio	None		—					Conductivity:	1340	µS/cm
Damage.	None	Displacement			Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/St	ructural D	Damage			Phenol:		mg/L

Outfall ID: 13-471

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Downstream Outfall

Shape: Pipe - Elliptical

Material: RCP

City ID: N/A

Drainage Basin: Campbell Creek

Dimensions —

Diameter (in): Height/Depth (in): 48 Width (in): 76

Mapping Precison: Mapping GPS

o20120613115400.JPG

Outfall Notes:

Storm sewer from 9th Ave discharges to stream north of road. Upstream manhole not accessible.

Co	unty Co	ordinates:	State Plane Coordinates:				
No	rthing:	470,709	Northing:	736,094			
Ea	sting:	783,680	Easting:	2,343,802			

Inspection Date: JCW Inspection Type: Ongoing 6/13/2012 12:53:24 PM Inspector: Previous Rainfall (hrs): 72+ Flow Description: Submerged, no flow Notes: No flow leaving pool on apron. Downstream cannel dry. Sample collected from apron Submerged: Partially Depth (in): 19 pool. Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: Slight cloudiness o20120613115412.JPG Color: None ✓ Litter Gross Solids: Slight Debris Sediment Other Sampling Results Inhibited Vegetation: None Excessive Sample Location: Pool Benthic Growth: Slight Green Brown Sample ID: 120613-16 Stains: Rust Stains **Time Collected** 12:54 None Flow Line Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 7.91 units Erosion: None Temperature: 74 °F Deposition: None Depth (in): 1579 Conductivity: µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: mg/L Corrosion Cracks/Structural Damage --



Outfall ID: 13-471	utfall ID: 13-4	71
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Inspection	Date: 9/4/20	009	Inspector:	JCW	Inspectio	n Type: Initia	al	Previous Rainfall (h	rs): 72+	
Flow Descr	iption: Subn	nerged, slight flow	Notes:							
Submerged:	Partially	Depth (in): 38								
Illicit Discha	arge Potentia	I: Unlikely	V	Field Fo	ollow-up	Office F	ollow-up			
Floatables:	None	Pet	rol. Sheen	Suds	Sewage	e 🗌 Algae	Other	- Mar		- 10 e e
Odor:	None	Pet	roleum	Musty	Sewage	e 🗌 Chlorine	e 🗌 Other			
			C/Solvent	Fishy	Sulfur	Fragran	t	Synce K 1500		4.2009 08:22
Turbidity:	Slight cloudine	əss							01/0500 /	80
Color:	None							Osh09_DS	CN6503.JI	PG
Gross Solids	s: None		er 🗌	Debris	Sedime	nt 🗌 Other	Γ	Sampling Results —		
Vegetation:		🗌 Inhi	ibited	Excessiv	e			Sample Location:	Pool	
Benthic Grow	wth: Slight	✓ Gre	en	Brown				Sample ID:	090904-0	5
Stains:			w Line	Oil	Rust St	ains		Time Collected	10:00	
		Cor	rosion	Paint	Other			Total Chlorine (field)	0	ppm
Non-illicit:	None	Nat	ural Sheen	🗌 Natu	ral Suds/Foa	m		Free Chlorine (field):	0	ppm
- Physical (Condition Asse	essment]			Total Copper (field):	0	ppm
a nysical C	Solution Asso	.3311011						Ammonia (field):		ppm
Graffiti:	None							pH (field):	8.38	units
Erosion:	None							Temperature:	66	°F
Deposition	n: None	Depth (in): 0						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/St	ructural D	Damage			Phenol:	0	mg/L

Outfall ID: 13-819

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Stringham Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Vidth (in):

Mapping Precison: Mapping GPS



o20120613091300.JPG

Outfall Notes:

Storm sewer from South Park Dr discharges to detention pond through twin pipes from south.

County C	State Pla	
Northing:	469,124	Northing
Easting:	788,600	Easting:

te Plane Coordinates: thing: 734,597 ting: 2,348,749



Inspection	Date: 6/13/	2012 10:10:31 AM	nspector: JCV	V Inspec	ction Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Desci Submerged	ription: None	Depth (in):	Notes: Out ups	fall pipes fully tream at 13-8	submergec 19 US1.	l; screened	Maria Maria		
Illicit Disch	arge Potentia	l: Unlikely	Field	d Follow-up	Off	fice Follow-up			-
Floatables:	None	Petrol.	Sheen Sud	s 🗌 Sew	age 🗌 Alg	jae 🗌 Othe	·		
Odor:	None	Petrole	eum 🗌 Mus Solvent 🗌 Fish	ty 🗌 Sew y 🗌 Sulfu	age 🗌 Ch ur 🗌 Fra	lorine 🗌 Othe agrant		3. S.	
Turbidity:	None						1	00/13/2	012 00.113
Color:	None						020120613091	306.JF	'G
Gross Solid	ls: None	Litter	Debris	s 🗌 Sedi	ment 🗌 C	Other	-Sampling Results]
Vegetation:	None	Inhibit	ed 🗌 Exces	sive			Sample Location:		
Benthic Gro	wth: None	Green	Brown	ı			Sample ID:		
Stains:	None	Flow L	ine 🗌 Oil	🗌 Rust	Stains		Time Collected		
		Corros	sion 🗌 Paint	Other	er		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	al Sheen 🗌 N	atural Suds/F	oam		Free Chlorine (field):		ррт
- Physical	Condition Ass	essment			7		Total Copper (field):		ррт
Graffiti	None						Ammonia (field):		ppm
Frosion	None						pH (field):		units
Denositio	n. None	Depth (in):					l'emperature:		°⊢
Depositio	None			- · ·			Conductivity:		µS/cm
Damage.	NULLE	Displacement	Undercut	Crushed			Detergents:		mg/L
			Cracks/Structura	al Damage			Phenol:		mg/L

Outfall ID: 13-819 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-819

Drainage Basin: Stringham Creek

- Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120613091452.JPG

Outfall Notes:

Upstream manhole located approx 124 ft S of outfall 13-819. Intermediate area consists of open space in park.

County (Coordinates:	Stat
Northing:	469,005	Nor
Fasting:	788 595	Fas

ate Plane Coordinates: orthing: 734,479 asting: 2,348,747







Outfall ID: 13-875

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Elliptical

Material: CMP

City ID: N/A

Drainage Basin: Campbell Creek

- Dimensions -

Diameter (in): Height/Depth (in): 36 Width (in): 58

Mapping Precison: Mapping GPS

o20120612091004.JPG

Outfall Notes:

Storm sewer from Maricopa Dr discharges to stream from west.

County Co	ordinates:
Northing:	468,079
Easting:	780,758

State Plane Coordinates: Northing: 733,411 Easting: 2,340,927





Inspection	Date: 9/3/2	009	Inspector:	JCW	Inspec	tion Type:	Initial	Previous Rainfall (hrs):	72+	
Flow Descr Submerged:	iption: Subn : Partially	nerged, slight flow Depth (in): 14	Notes:							
Illicit Disch	arge Potentia	i: Unlikely		Field Fo	ollow-up	Of	ffice Follow-up			A. W.
Floatables:	None	Petro	ol. Sheen	Suds	Sewa	age 🗌 Al	gae 🗌 Oth	er in the second se		
Odor:	None	Petro	oleum	Musty	Sewa	age 🗌 Cl	hlorine 🗌 Oth	er and a second		
			/Solvent	Fishy	Sulfu	r 🗌 Fr	agrant	1	09.0	a 2000 an -06
Turbidity:	Slight cloudine	ess								ALC: N
Color:	None							Osh09_DSCN	3477.JI	PG
Gross Solids	s: None	Litter	r 🗌	Debris	Sedir	ment 🗌 (Other	Sampling Results		
Vegetation:		🗌 Inhit	ited	Excessive	e			Sample Location:		
Benthic Gro	wth: Slight	✓ Gree	en 🗌	Brown				Sample ID:		
Stains:		Elow	Line	Oil	Rust	Stains		Time Collected		
		Corr	osion	Paint	Othe	r		Total Chlorine (field):		ppm
Non-illicit:	None	Natu	ral Sheen	Natu	ral Suds/F	oam		Free Chlorine (field):		ppm
- Physical	Condition Ass							Total Copper (field):		ррт
T Trysical		Somen						Ammonia (field):		ppm
Graffiti:	None							pH (field):		units
Erosion:	None							Temperature:		°F
Depositio	n:	Depth (in): 4						Conductivity:		µS/cm
Damage:	Minor	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion	Cracks/S	tructural D	Damage			Phenol:		mg/L

Outfall ID: 13-875 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: MS4 Stormwater Facility

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-875

Drainage Basin: Campbell Creek

Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120612091402.JPG

Outfall Notes:

Upstream manhole located approx 10 ft S of outfall 13-875. Intermediate area consists of open space.

County Co	ordinates:	State Plane Co			
Northing:	468,069	Northing:	73		
Easting:	780,757	Easting:	2,34		

ordinates: 3,402 0,927

Inspection Date: JCW 6/12/2012 10:14:13 AM Inspector: Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: Submerged: Partially Depth (in): 17 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant 116 Turbidity: None o20120612091410.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: Slight Green Brown Sample ID: 120612-23 Stains: None Rust Stains **Time Collected** 10:12 Flow Line Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 8.51 units Erosion: None Temperature: 67 °F Deposition: None Depth (in): Conductivity: 1110 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: Corrosion Cracks/Structural Damage 0 mg/L



	Outfall	ID:	13-875	US1
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Inspection Date: 9/3/2009	Inspector: JCW Inspection Type: Initial	Previous Rainfall (hrs): 72+
Flow Description: Submerged, slight	flow Notes:	the state of the s
Submerged: Partially Depth (in):	25	1.
Illicit Discharge Potential: Unlikely	Field Follow-up	
Floatables: None	Petrol. Sheen Suds Sewage Algae Othe	er /
Odor: None	Petroleum Musty Sewage Chlorine Othe	r
	VOC/Solvent Fishy Sulfur Fragrant	
Turbidity: Slight cloudiness		99 03 2009 16 01
Color: None		Osh09_DSCN6480.JPG
Gross Solids: None	Litter Debris Sediment Other	-Sampling Results
Vegetation:	Inhibited Excessive	Sample Location: Pool
Benthic Growth:	Green Brown	Sample ID: 090903-24
Stains:	Flow Line Oil Rust Stains	Time Collected 16:00
	Corrosion Paint Other	Total Chlorine (field): 0 ppm
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm
Physical Condition Accomment		Total Copper (field): 0 ppm
		Ammonia (field): ppm
Graffiti: None		pH (field): 8.2 units
Erosion: None		Temperature: 73 °F
Deposition: None Depth (in):	0	Conductivity: µS/cm
Damage: None 🗌 Displacer	ment 🗌 Undercut 🗌 Crushed	Detergents: 0 mg/L
	Cracks/Structural Damage	Phenol: 0 mg/L

Outfall ID: 13-948

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 36 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120611103004.JPG

Outfall Notes:

Storm sewer from Oakwood Rd discharges to stream from south.

County Co	County Coordinates:								
Northing:	468,968								
Easting:	775,909								

State Plane Coordinates:Northing:734,213Easting:2,336,064



Inspection	Date: 6/11/2	2012 11:33:2	1 AM	Inspector	: JCW	Inspectio	n Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption: Subn	nerged, sligh	nt flow	Notes	: Outfall upstrea	partially subn am at 13-948	nerged. US1.	Outfall screened	d		
Submerged	: Partially	Depth (in): 2		- [-	
Illicit Disch	arge Potentia	I: Unlikely		[Field F	ollow-up	Of	fice Follow-up		-	
Floatables:	None		Petr	ol. Sheen [Suds	Sewage	Al	gae 🗌 Othe	er	11 A.	
Odor:	None		Petr	oleum [Musty	Sewage	e 🗌 Cl	nlorine 🗌 Othe	er	ALC: NOT	
Turbidity:	None			Solvent [Fishy	Sulfur	🗌 Fr	agrant			
Color:	None								020120611103	322.JI	PG
Gross Solid	s: None		Litte	r 🗌	Debris	Sedime	nt 🗌 (Other	-Sampling Results		
Vegetation:	None		🗌 Inhit	pited	Excessiv	e			Sample Location:		
Benthic Gro	wth: Moderate		Gree	en 🗸	Brown				Sample ID:		
Stains:	Slight		Flow	/ Line	Oil	Rust Sta	ains		Time Collected		
			Corr	osion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None		🗌 Natu	ıral Sheen	🗌 Natu	ıral Suds/Foai	n		Free Chlorine (field):		ppm
- Physical	Condition Asse	essment —							Total Copper (field):		ppm
Oreffiti	Name								Ammonia (field):		ppm
Gramti:	None								pH (field):		units
Erosion:	None								Temperature:		°F
Depositio	n: None	Depth (in):							Conductivity:		µS/cm
Damage:	None	Displac	ement] Undercut	: 🗌 (Crushed			Detergents:		mg/L
		Corrosi	on 🗌] Cracks/S	tructural E	Damage			Phenol:		mg/L

Outfall ID: 13-948

Inspection Date: 9/3/2009	Inspector: JCW Inspection Type: Ini	tial Previous Rainfall (hrs): 72+
Flow Description: Submerged, sig	nificant flow Notes:	
Submerged: Partially Depth (i	n): 2	
Illicit Discharge Potential: Unlikely	/ Field Follow-up Office	Follow-up
Floatables: None] Petrol. Sheen Suds Sewage Algae	Other
Odor: None	Petroleum Musty Sewage Chlori	ne 🗌 Other
	VOC/Solvent Fishy Sulfur Fragra	ant
Turbidity: None		
Color: None]	Osh09_DSCN6443.JPG
Gross Solids: None	Litter Debris Sediment Othe	er Sampling Results
Vegetation:	Inhibited Excessive	Sample Location:
Benthic Growth: Slight	Green Brown	Sample ID:
Stains:	Flow Line Oil Rust Stains	Time Collected
	Corrosion Paint Other	Total Chlorine (field): ppm
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): ppm
- Physical Condition Assocsment		Total Copper (field): ppm
		Ammonia (field): ppm
Graniti: None		pH (field): units
Erosion: None Dependition: None Depth (in)		Temperature: °F
Deposition: None Depth (In)	.: U	Conductivity: µS/cm
Damage: None Displa	cement Undercut Crushed	Detergents: mg/L
	ion Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 13-948 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Water of the State

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-948

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison:

Not Physically Located



o20120611104724.JPG

Outfall Notes:

Upstream manhole located approx 66 ft SSW of outfall 13-948. Intermediate area consists of street, sidewalk and rip-rap.

County Co	ordinates:	State Pla
Northing:	468,903	Northing:
Easting:	775,893	Easting:

tate Plane Coordinates: orthing: 734,148 asting: 2,336,049

Inspection	Date:	6/11/2012 11:47:2	2 7 AM Ir	spector:	JCW	Inspec	tion Type:	Ongoing	Previous Rainfall (hrs): 72	2+
Flow Description: Submerged, indeterminate Notes: Gravel/stone at bottom of manhole below											
Submerged	: Partia	lly Depth (ir	n): 6		flowline	Э.				- 18	
Illicit Disch	arge Po	tential: Unlikely] Field Fo	ollow-up	Of	fice Follow-up		-	
Floatables:	None		Petrol.	Sheen	Suds	Sewa	age 🗌 Ale	gae 🗌 Othe	r的武士	120	
Odor:	None			um 🗌	Musty	Sewa	age 🗌 Cł	nlorine 🗌 Othe	r V		
Turbidity:	None		VOC/S	olvent] Fishy	Sulfu	ır 🗌 Fra	agrant			1/2012 11:47
Color:	None								0201206	11104732	.JPG
Gross Solid	s: Nor	ne	Litter		Debris	🗌 Sedi	ment 🗌 (Other	-Sampling Results -		
Vegetation:	Nor	ne	🗌 Inhibite	ed 🗌	Excessiv	е			Sample Location:	Pool	
Benthic Gro	wth: Nor	ne	Green		Brown				Sample ID:	120611	-02
Stains:	Nor	ne	Flow L	ne 🗌	Oil	🗌 Rust	Stains		Time Collected	11:45	
			Corros	ion 🗌	Paint	Othe	r		Total Chlorine (field	d):	0 ppm
Non-illicit:	Nor	ne	🗌 Natura	l Sheen	🗌 Natu	ral Suds/F	oam		Free Chlorine (field):	0 ppm
– Physical	Conditio	n Assessment —	1				1		Total Copper (field)	:	0 ppm
Groffiti	Nor								Ammonia (field):		0 ppm
Graniu. Erosion:	Nor								pH (field):	7.3	3 units
Dopositio	INUI Inui Min	or Dooth (in):							Temperature:	6	7 °F
Depositio	n. IVIIII Nor				_				Conductivity:	101	6 μ <i>S/cm</i>
Damage:	Nor	Displac	ement 🗌 l	Indercut		Crushed			Detergents:		0 <i>mg/L</i>
		Corrosi	on 🗌 🤇	Cracks/St	ructural D	Damage			Phenol:		0 <i>mg/L</i>



Outfall ID: 1	3-948 US1
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Inspection Date: 9/3/2009	Inspector: JCW Ins	pection Type: Initial	Previous Rainfall (hrs):	72+
Flow Description: Substantial	Notes:			
Submerged: None Depth (i	n): 0			
Illicit Discharge Potential: Unlikely	Field Follow-u	p Office Follow-up		T
Floatables: None	Petrol. Sheen Suds	ewage 🗌 Algae 🗌 Othe	er	HEF
Odor: None	Petroleum Musty S	ewage 🗌 Chlorine 🗌 Othe	er	
	VOC/Solvent Fishy	Sulfur 🗌 Fragrant		NO 03 2009 13-17
Turbidity: None				
Color: None]		Osh09_DSCN6	3446.JPG
Gross Solids: None] 🗌 Litter 🗌 Debris 🗌 S	ediment 🗌 Other	- Sampling Results	
Vegetation:	Inhibited Excessive		Sample Location: Flov	v
Benthic Growth:	Green Brown		Sample ID: 0909	903-37L
Stains:	Flow Line Oil F	lust Stains	Time Collected 13:1	5
	Corrosion Paint C	Other	Total Chlorine (field):	0 ppm
Non-illicit: None	Natural Sheen Natural Suc	ls/Foam	Free Chlorine (field):	0 <i>ppm</i>
- Physical Condition Assessment			Total Copper (field):	0 <i>ppm</i>
			Ammonia (field):	ppm
Graffiti: None			pH (field):	7.65 <i>units</i>
Erosion: None			Temperature:	73 ° <i>F</i>
Deposition: None Depth (in)	: 0		Conductivity:	μS/cm
Damage: None 🗌 Displac	cement 🗌 Undercut 🛛 🗌 Crushe	d	Detergents:	0 <i>mg/L</i>
	ion Cracks/Structural Damage	e	Phenol:	0 <i>mg/L</i>

Outfall ID: 13-1109

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: PVC

City ID: N/A

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120613121040.JPG

Outfall Notes:

Storm sewer from Moreland St discharges to grassy wetland area west of stream.

County Co	ordinates:	Sta
Northing:	469,135	Nor
Easting:	782,585	Eas

 ate Plane Coordinates:

 rthing:
 734,501

 sting:
 2,342,735

Inspection	Date:	6/13/2012 1:08:33	B PM Inspe	ector: JCW	Inspec	tion Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption:	None	Ν	otes: Pipe	dry at time c	f inspectior	n. Minor damage			NOT S
Submerged:	None	Depth (ir	ו):	to to	o of pipe.					
Illicit Disch	arge Pot	ential: Unlikely	,	E Field	Follow-up	Of	fice Follow-up			
Floatables:	None		Petrol. She	een 🗌 Suds	Sewa	age 🗌 Alç	gae 🗌 Other			No.
Odor:	None		Petroleum	Must	y 🗌 Sewa	age 🗌 Ch	lorine		- (K	NAC A
				ent 🗌 Fishy	/ 🗌 Sulfu	ir 🗌 Fra	agrant	THE REAL OF	- Ann	
Turbidity:	None									
Color:	None							020120613121	044.JF	G
Gross Solids	s: Non	e	Litter	Debris	🗌 Sedii	ment 🗌 C	Other	Sampling Results		
Vegetation:	Non	e	Inhibited	Excess	sive			Sample Location:		
Benthic Grov	wth: Non	e	Green	Brown				Sample ID:		
Stains:	Non	е	Flow Line	🗌 Oil	Rust	Stains		Time Collected		
			Corrosion	Paint	Othe	r		Total Chlorine (field):		ррт
Non-illicit:	Non	е	Natural Sh	neen 🗌 Na	tural Suds/F	oam		Free Chlorine (field):		ррт
– Physical I	Condition	Assessment —						Total Copper (field):		ppm
Oneffitie	Nie	-						Ammonia (field):		ррт
Gramiti:	Non	e						pH (field):		units
Erosion:	Non	e						Temperature:		°F
Deposition	n: Non	e Depth (in):	:					Conductivity:		µS/cm
Damage:	Mine	or 🗌 Displac	ement 🗌 Und	ercut	Crushed			Detergents:		mg/L
		Corrosi	ion 🔽 Crac	cks/Structura	l Damage			Phenol:		mg/L



Outfall ID: 13-1219

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Campbell Creek

- Dimensions

Diameter (in): 48 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120612101120.JPG

Outfall Notes:

Storm sewer from Menard Dr discharges to stream from west.

County Coordinates								
Northing:	468,930							
Easting:	782,246							

State Plane Coordinates: Northing: 734,289 Easting: 2,342,399



Inspection	Date: 6/12/2	2012 11:10:21 AM	nspector: JCW	Inspection Type	: Ongoing	Previous Rainfall (hrs):	72+	
Flow Desci	ription: Subn	nerged, indeterminate	Notes: Outfa	Il partially submerged	; screened	/		
Submerged	: Partially	Depth (in): 2	upstre	eam at 13-1219 US1.		Z	1	
Illicit Disch	arge Potentia	I: Unlikely	Field	Follow-up	Office Follow-up		A Start	振
Floatables:	None	Petrol	. Sheen 🗌 Suds	Sewage	Algae 🗌 Other	- Hit		A STATE
Odor:	None	Petrol	eum 🗌 Musty Solvent 🗌 Fishy	/ Sewage (Sulfur F	Chlorine 🗌 Other Fragrant	Kar -		and a
Turbidity:	None						A CHARTER AND	1
Color:	None					0201206121012	234.JPG	
Gross Solid	ls: Slight	✓ Litter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inhibit	ed 🗌 Excess	ive		Sample Location:		
Benthic Gro	wth: Slight	✓ Green	n 🖌 Brown			Sample ID:		
Stains:	Slight	V Flow L	_ine 🗌 Oil	Rust Stains		Time Collected		
			sion 🗌 Paint	Other		Total Chlorine (field):	ppm	
Non-illicit:	None	Natura	al Sheen 🗌 Nat	tural Suds/Foam		Free Chlorine (field):	ppm	
- Physical	Condition Asse	essment				Total Copper (field):	ppm	
Graffiti	None					Ammonia (field):	ppm	
Erosion:	None					pH (field):	units ° r	
Depositio	on: None	Depth (in):				Conductivity:	·r	
Damage:	None			Crushed		Detergents:	μ3/cm	
			Cracks/Structural	Damage		Phenol:	mg/L	

|--|

Inspection Date: 9/4/2009	Inspector: JCW Ir	spection Type: Initial	Previous Rainfall (hrs):	72+
Flow Description: Submerged, no	flow Notes:			
Submerged: Partially Depth	in): 7			
Illicit Discharge Potential: Unlike	y Field Follow-	up Office Follow-up		
Floatables:	Petrol. Sheen Suds	Sewage 🗌 Algae 🗌 Othe	er	
Odor:	Petroleum Musty	Sewage 🗌 Chlorine 🗌 Othe	er in the second se	- and a little
	VOC/Solvent Fishy	Sulfur 🗌 Fragrant		00 01 0000 10 10
Turbidity:				00.01 2000 10.02
Color:			Osh09_DSCN6	508.JPG
Gross Solids:	Litter Debris	Sediment 🗌 Other	-Sampling Results	
Vegetation:	Inhibited Excessive		Sample Location:	
Benthic Growth: Slight	Green Brown		Sample ID:	
Stains:	Flow Line Oil	Rust Stains	Time Collected	
	Corrosion Paint	Other	Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen Natural Si	ids/Foam	Free Chlorine (field):	ppm
- Physical Condition Assessment			Total Copper (field):	ppm
			Ammonia (field):	ppm
Graffiti: None			pH (field):	units
Erosion: None			Temperature:	°F
Deposition: None Depth (ir	ı): O		Conductivity:	μS/cm
Damage: None 🗌 Displa	acement 🗌 Undercut 🛛 🗌 Crush	ed	Detergents:	mg/L
Corro	sion Cracks/Structural Dama	je	Phenol:	mg/L

Outfall ID: 13-1219 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: Campbell Creek

-Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120612101640.JPG

Outfall Notes:

Upstream manhole located approx 139 ft SW of outfall 13-1219. Intermediate area consists of paved commercial parking lot.

County Co	ordinates:	State Plan
Northing:	468,827	Northing:
Easting:	782,149	Easting:

ate Plane Coordinates: orthing: 734,185 asting: 2,342,304





Inspection [Date: 9/4/2	009	Inspector:	JCW	Inspec	tion Type:	Initial	Previous Rainfall (hrs	s): 72+	
Flow Descri	ption: Subr	nerged, slight flow	Notes:							12. T
Submerged:	None	Depth (in): 0								
Illicit Discha	arge Potentia	l: Unlikely		Field Fo	ollow-up	Of	ffice Follow-up			
Floatables:	None	Pet	rol. Sheen	Suds	Sewa	age 🗌 Alg	gae 🗌 Othe	er i Die	ANC -	
Odor:	None	Pet	roleum	Musty	Sewa	age 🗌 Ch	hlorine 🗌 Othe	er		
		🗌 VO	C/Solvent	Fishy	Sulfu	r 🗌 Fra	agrant			
Turbidity:	None							100	a c	4 2009 10 53
Color:	None							Osh09_DS0	N6511.J	PG
Gross Solids	: None	Litt	er 🗌	Debris	Sedir	ment 🗌 (Other	-Sampling Results		
Vegetation:		🗌 Inh	ibited	Excessiv	е			Sample Location: P	ool	
Benthic Grov	wth:	Gre	en 🗌	Brown				Sample ID: 0	90904-2	?7
Stains:		🗌 Flo	w Line	Oil	Rust	Stains		Time Collected 1	0:55	
			rrosion	Paint	Other	r		Total Chlorine (field):	0	ppm
Non-illicit:	None	Nat	ural Sheen	🗌 Natu	ral Suds/F	oam		Free Chlorine (field):	0	ppm
– Physical (Condition Asse	essment						Total Copper (field):	0	ppm
Constitution	News							Ammonia (field):		ppm
Gramiti:	None							pH (field):	8.26	units
Erosion:	None							Temperature:	67	°F
Deposition	n: None	Depth (in): 0						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/St	ructural D	Damage			Phenol:	0	mg/L

Outfall ID: 13-1673

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 30 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120611131258.JPG

Outfall Notes:

Storm sewer from Ruschfield Dr discharges to wetland area west of stream.

County Co	ordinates:
Northing:	468,178
Easting:	775.003

State Plane Coordinates: Northing: 733,407 Easting: 2,335,171



Inspection Date:	6/11/2012 2:12:41 PM	I Inspector:	JCW Inspec	ction Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description:	Submerged, indetern	ninate Notes:	Outfall partially s	ubmerged; s	screened			
Submerged: Partia	ally Depth (in): 3	3	upstream at 13-1	673 051.			De AN	esta-
Illicit Discharge Po	otential: Unlikely		Field Follow-up	Off	fice Follow-up		-	
Floatables: None		Petrol. Sheen	Suds 🗌 Sew	age 🗌 Alç	gae 🗌 Other			
Odor: None		Petroleum VOC/Solvent	Musty Sew Fishy Sulf	age 🗌 Ch ur 🗌 Fra	Ilorine 🗌 Othei agrant		4	
Turbidity: None								C. S. S.
Color: None						0201206111313	320.JI	°G
Gross Solids: No	one	Litter 🗌 🛛	Debris 🗌 Sedi	ment 🗌 C	Other	-Sampling Results		
Vegetation: No	one	Inhibited 🗌 E	Excessive			Sample Location:		
Benthic Growth: Mo	oderate	Green 🗌 E	Brown			Sample ID:		
Stains: Mo	oderate	Flow Line	Dil 🗌 Rust	(Stains		Time Collected		
		Corrosion 🗌 F	Paint 🗌 Othe	er		Total Chlorine (field):		ррт
Non-illicit: No	one	Natural Sheen	Natural Suds/F	oam		Free Chlorine (field):		ррт
- Physical Conditio	on Assessment			٦		Total Copper (field):		ррт
Graffiti: No						Ammonia (field):		ppm
Frosion: No	ne					pH (field):		units
Deposition: No	one Depth (in):					remperature:		°F ∵C/arra
Damage: No		at 🖂 the demonst				Conductivity:		μ5/cm
Damago. No						Detergents:		mg/L
		Uracks/Stru	uctural Damage			Phenol:		mg/L

Outfall ID: 13-1673 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: N/A

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120611132004.JPG

Outfall Notes:

Upstream manhole located approx 66 ft W of outfall 13-1673. Intermediate area consists of residential property.

County C	oordinates:	State
Northing:	468,185	Northi
Easting:	774,936	Fastin

ate Plane Coordinates:rthing:733,413sting:2,335,105



Inspection	Date: 6/11/2	2012 2:17:56 PM	Inspector:	JCW	Inspectio	on Type:	Ongoing	Previous Rainfall (I	ırs): 72-	F
Flow Descr	ription: Trick	e	Notes:					Mag	4	115
Submerged	: None	Depth (in):						PILIA		111-2
Illicit Disch	arge Potential	: Unlikely		Field Fo	ollow-up	Of	fice Follow-up			
Floatables:	None	🗌 Pe	trol. Sheen	Suds	Sewag	e 🗌 Alg	gae 🗌 Othe	A CALLER		1
Odor:	None		troleum] Musty] Fishv	Sewag	e 🗌 Ch	nlorine 🗌 Othe agrant		T.	
Turbidity:	Slight cloudine	ess		. .,				S. S. C.	05/11/	2012 14:20
Color:	None							02012061	1132014.J	PG
Gross Solid	s: None	Litt	ter	Debris	Sedime	ent 🗌 (Other	-Sampling Results —		
Vegetation:	None	Inf	nibited	Excessiv	е			Sample Location:	Flow	
Benthic Gro	wth: None	Gr	een	Brown				Sample ID:	120611-0)4
Stains:	Slight	V Flo	w Line	Oil	🗌 Rust S	tains		Time Collected	14:20	
		Co	rrosion	Paint	Other			Total Chlorine (field): 0	ppm
Non-illicit:	None	🗌 Na	tural Sheen	🗌 Natu	ral Suds/Foa	am		Free Chlorine (field)	: 0	ppm
– Physical	Condition Asse	ssment		_				Total Copper (field)	0	ррт
Oneffilie	Name	Somerie						Ammonia (field):	0	ррт
Gramiti:	None							pH (field):	8.41	units
Erosion:	None							Temperature:	71	°F
Depositio	on: None	Depth (in):						Conductivity:	1044	µS/cm
Damage:	None	Displacement [Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/St	ructural D	Damage			Phenol:	0	mg/L

Outfall ID: 13-1715

Minor Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: PVC

City ID: N/A

Drainage Basin: Stringham Creek

- Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120612103404.JPG

Outfall Notes:

Storm sewer from Capital Dr discharges to south end of detention basin.

County Co	County Coordinates:				
Northing:	465,804	Northing			
Easting:	783,298	Easting			

 te Plane Coordinates:

 thing:
 731,183

 sting:
 2,343,508



Inspection	Date: 6/12/2012 11:33	:36 AM Inspector:	JCW Inspe	ction Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr Submerged:	iption: None : None Depth (in):	Dry. End of pipe and corroded.	e cracked. A	pron undercut			
Illicit Disch	arge Potential: Unlikel	у [Field Follow-up	Of	fice Follow-up		9	
Floatables:	None	Petrol. Sheen	Suds Sew	vage 🗌 Alg	gae 🗌 Other		a de	
Odor:	None	Petroleum	Musty Sev	vage 🗌 Ch	nlorine 🗌 Other	Later and	-	
-		VOC/Solvent	Fishy Sulf	ur 🗌 Fra	agrant	A YAY	and a	Total
Turbidity:	None					00100010100		
Color:	None					020120612103	414.JF	G
Gross Solids	s: Slight	✓ Litter	Debris Sed	iment 🗌 0	Dther	Sampling Results		
Vegetation:	None	Inhibited	Excessive			Sample Location:		
Benthic Gro	wth: None	Green	Brown			Sample ID:		
Stains:	Moderate	Flow Line	Oil 🗌 Rus	t Stains		Time Collected		
		Corrosion	Paint Oth	er		Total Chlorine (field):		ррт
Non-illicit:	None	Natural Sheen	Natural Suds/	Foam		Free Chlorine (field):		ррт
- Physical	Condition Accoccmont			_		Total Copper (field):		ррт
Fliysical	Condition Assessment					Ammonia (field):		ррт
Graffiti:	None					pH (field):		units
Erosion:	None					Temperature:		°F
Depositio	n: None Depth (in):				Conductivity:		µS/cm
Damage:	Moderate 🗌 Displa	cement 🖌 Undercut	Crushed			Detergents:		mg/L
	Corros	sion 🗸 Cracks/St	tructural Damage			Phenol:		mg/L

Outfall ID: 13-1716

Minor Outfall

Structure Type: Pond Inlet

Discharge Location: Downstream Outfall

Shape: Pipe - Circular

Material: PVC

City ID: N/A

Drainage Basin: Stringham Creek

Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located



o20120612104114.JPG

Outfall Notes:

Discharge pipe from south end of detention basin. Originally believed to be additional pond inlet.

County Co	ordinates:	State Plane Coord			
Northing:	465,806	Northing:	731,1		
Easting:	783,302	Easting:	2,343,5		

dinates: 85 512



Inspection	Date: 9/27/	2012 10:55:26 AM	Inspector:	JCW	Inspection Type:	Repeat	Previous Rainfall (hrs):	72+	
Flow Descr Submerged:	iption: Subr	nerged, no flow Depth (in): 0.5	Notes:	Ammon partially	ia/detergent follow-up submerged; screene	p. Outfall ed at 13-1716		Y.	
Illicit Disch	arge Potentia	Potential				6 .		T.	A Store
	urge i otentiu			Field Fo	llow-up	fice Follow-up		4	JEL S
Floatables:	None	Pet	rol. Sheen	Suds	Sewage Alg	gae 🗌 Other		X	
Odor:	None	Pet	roleum	Musty	🗌 Sewage 🗌 Ch	nlorine 🗌 Other	ALL AND		
		VO	C/Solvent	Fishy	Sulfur Fra	agrant		in the second	C B
Turbidity:	None						11/1 P	1	
Color:	None						0201209270957	708.JF	'G
Gross Solids	s: None		er 🗌 I	Debris	Sediment C	Other	Sampling Results		
Vegetation:	None	🗌 Inh	ibited 🗌 I	Excessive	9		Sample Location:		
Benthic Gro	wth: Slight	🖌 Gre	en 🗌 I	Brown			Sample ID:		
Stains:	Slight	✓ Flor	w Line 🗌 🤇	Dil	Rust Stains		Time Collected		
		Cor	rosion 🗌 I	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Nat	ural Sheen	Natur	al Suds/Foam		Free Chlorine (field):		ppm
– Physical	Condition Ass						Total Copper (field):		ppm
Groffiti	Nono	Johnen					Ammonia (field):		ppm
Granni. Erocion:	None						pH (field):		units
Dopositio	n: Nono	Dooth (in):					Temperature:		°F
Depositio	Nono		-	_			Conductivity:		μS/cm
Damage.	None	Displacement	Undercut		Crushed		Detergents:		mg/L
		Corrosion	Cracks/Str	uctural D	amage		Phenol:		mg/L

Outfall ID: 13-1716

Inspection Date: 6/12/2012 11:38:	57 AM Inspector: J	JCW Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+
Flow Description: Submerged, ind Submerged: Partially Depth (i	eterminate Notes: S n): 2	Sediment and vegetation buil blocking flow. Screened upst (downstream) at 13-1716 US	ldup on apron tream 1.		
Illicit Discharge Potential: Potentia	al 🗌 F	Field Follow-up	ice Follow-up		
Floatables: None	Petrol. Sheen S	Suds 🗌 Sewage 🗌 Alg	jae Other		
Odor: None	Petroleum N	Musty 🗌 Sewage 🗌 Chl	lorine 🗌 Other		
Turbidity: None	VOC/Solvent F	Fishy 🗌 Sulfur 🗌 Fra	agrant	201206121043	
Color: None				0201200121041	20.01 G
Gross Solids: Slight	✓ Litter ✓ De	ebris 🔽 Sediment 🗌 O	Other	Sampling Results	
Vegetation: None	Inhibited Ex	cessive		Sample Location:	
Benthic Growth: Moderate	Green 🖌 Bro	own		Sample ID:	
Stains: Slight	Flow Line Oil	I Rust Stains		Time Collected	
	Corrosion Pa	aint 🗌 Other		Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen	Natural Suds/Foam		Free Chlorine (field):	ppm
- Physical Condition Assessment		_		Total Copper (field):	ppm
Croffiti: Nono				Ammonia (field):	ppm
Granini. None				pH (field):	units
Deposition: Moderate Depth (in)	. 0			Temperature:	°F
Deposition. Moderate Depth (In)	. 0			Conductivity:	μS/cm
Damage. None Displa	cement 🔄 Undercut	Crushed		Detergents:	mg/L
	ion Cracks/Struc	ctural Damage		Phenol:	mg/L

Outfall ID: 13-1716 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: N/A

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120927100106.JPG

Outfall Notes:

Manhole located approx 17 ft S of outfall 13-1716. Determined to be located downstream of outfall. Pipe from car wash enters from east.

County Co	ordinates:	State Plane				
Northing:	465,789	Northing:				
Easting:	783,305	Easting:	2			

tate Plane Coordinates: orthing: 731,168 asting: 2,343,515



Inspection	Date: 9/27/	2012 10:59:11 AM	nspector: J	CW	Inspection Type:	Repeat	Previous Rainfall (hrs	: 72+	
Flow Descr	Flow Description: Submerged, indeterminate Notes: Ammonia/detergent follow-up.								1 2 4
Submerged: Partially Depth (in): 2									
Illicit Disch	Illicit Discharge Potential: Potential Field Follow-up Office Follow-up								
Floatables:	None	Petrol.	Sheen 🗌 S	Suds	Sewage Al	gae 🗌 Othe	r	21	No.
Odor:	None	Petrole	eum 🗌 N Solvent 🗌 F	/lusty ishv	Sewage CH	nlorine 🗌 Othe agrant	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Turbidity:	Slight cloudin	ess		- ,			C. A. T. R.	68/27/	
Color:	Faint in bottle	Dark/Blac	k				0201209271	00116.JI	PG
Gross Solid	s: None	Litter	🗌 De	bris	Sediment 0	Other	- Sampling Results ——		
Vegetation:	None	Inhibit	ed 🗌 Ex	cessive			Sample Location: Po	lool	
Benthic Gro	wth: Slight	Green	🖌 Bro	own			Sample ID: 12	0927-9	7
Stains:	Slight	✓ Flow L	ine 🗌 Oil		Rust Stains		Time Collected 11	:00	
			ion 🗌 Pa	int	Other		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natura	l Sheen] Natura	al Suds/Foam		Free Chlorine (field):	0	ppm
- Physical	Condition Asse	essment					Total Copper (field):	0	ppm
Graffiti	None						Ammonia (field):	0	ppm
Erosion:	None						pH (field):	7.88	units
Denositio	n: None	Denth (in):					Temperature:	64	°F
Depositio	None			<u> </u>			Conductivity:	686	µS/cm
Damaye.	NONE	Displacement U	Jndercut	∐ Cr	rushed		Detergents:	0	mg/L
			Cracks/Struc	tural Da	image		Phenol:		mg/L

Outfall ID: 13-1716 US1

Inspection Date:	6/12/2012 11:42:38 AM	Inspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs): 72+	
Flow Description:	Submerged, indeterminat	e Notes: Black po	ool on flowline with pe	etroleum odor.	1 Low	- AN	1.22/ 1
Submerged: Partial	lly Depth (in): 2				A. A.		24/2
Illicit Discharge Pot	tential: Potential	Field Fol	llow-up Of	fice Follow-up			TRA I
Floatables: None	Petr	ol. Sheen 🗌 Suds		gae 🗌 Other	Concession of the		
Odor: Faint	✓ Petr	oleum 🗌 Musty	Sewage Ch	nlorine 🗌 Other		SP	1980
		C/Solvent 🗌 Fishy	Sulfur Fra	agrant	1 and	M.	
Turbidity: Cloudy						SN	1.97
Color: Clearly v	visible in bottle Dark/Bl	ack			0201206121)4548.JF	PG
Gross Solids: Slig	ht 🗌 Litte	r 🗹 Debris	Sediment C	Other	Sampling Results		
Vegetation: Non	ne 🗌 Inhil	bited Decessive			Sample Location: Po	ol	
Benthic Growth: Non	ne Gree	en 🗌 Brown			Sample ID: 12	0612-2	7
Stains: Mod	derate V Flow	/ Line 🗌 Oil	Rust Stains		Time Collected 11	:45	
		osion 🗌 Paint	Other		Total Chlorine (field):	0	ppm
Non-illicit: Moc	derate 🗸 Natu	ıral Sheen 🗌 Natura	al Suds/Foam		Free Chlorine (field):	0	ppm
- Physical Condition	n Assessment				Total Copper (field):	0	ppm
					Ammonia (field):	3	ppm
Graffiti: Non	16				pH (field):	7.89	units
Erosion: Non					Temperature:	64	°F
Deposition: Non	ne Depth (in):				Conductivity:	1011	µS/cm
Damage: Non	Displacement] Undercut 🛛 C	rushed		Detergents:	1.3	mg/L
	Corrosion] Cracks/Structural Da	amage		Phenol:	0	mg/L

Outfall ID: 13-2135

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Downstream Outfall

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120611133604.JPG

Outfall Notes:

Storm sewer from Sawyer Creek Dr discharges to grassy wetland area north of stream.

County Coordinat						
Northing:	467,547					
Fasting:	774 517					

State Plane Coordinates: Northing: 732,768 Easting: 2,334,698

Inspection Date: 6/11/2012 2:35:41 PM Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: None Notes: Outfall dry at time of inspection. Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120611133610.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Stains: None Rust Stains Time Collected Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): --Graffiti: None pH (field): units ---Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 13-2332

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Elliptical

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions					
Diameter (in):					
Height/Depth (in):	33				
Width (in):	60				

Mapping Precison: Mapping GPS



o20120612083842.JPG

Outfall Notes:

Storm sewer from Fox Tail Ln discharges to stream north of trail.

County Coordinates						
Northing:	467,262					
Easting:	774,586					

State Plane Coordinates: Northing: 732,484 Easting: 2,334,771



Inspection	Date: 6/12/	/2012 9:35:59 AM In	spector:	JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr Submerged	ription: Subr : Partially	merged, slight flow Depth (in): 14	Notes:	Outfall pa upstream	artially submerged; 1 at 13-2332 US1.	screened			
Illicit Disch	arge Potentia	al: Unlikely		Field Foll	ow-up 🗌 O	ffice Follow-up		Nº AL	
Floatables:	None	Petrol.	Sheen	Suds [Sewage A	lgae 🗌 Othe	er		
Odor:	None	Petrole	eum	Musty [Fishy [Sewage C Sulfur Fi	hlorine 🗌 Othe ragrant	er 🔰		
Turbidity:	None								1012 09:38
Color:	None						020120612083	850.JF	°G
Gross Solid	s: Slight	Litter		Debris [Sediment	Other	-Sampling Results		
Vegetation:	None	🗌 Inhibite	ed 🗌 E	Excessive			Sample Location:		
Benthic Gro	wth: Moderate	e 🖌 Green	🗌 E	Brown			Sample ID:		
Stains:	None	Flow L	ine 🗌 C	Dil [Rust Stains		Time Collected		
			ion 🗌 F	Paint [Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	Sheen [Natura	l Suds/Foam		Free Chlorine (field):		ppm
Physical	Condition Ass	essment					Total Copper (field):		ppm
Graffiti:	None						Ammonia (field):		ppm upite
Erosion:	None						Temperature		° F
Depositio	on: None	Depth (in):					Conductivity:		μS/cm
Damage:	None	🗌 Displacement 🗌 l	Indercut	Cr	ushed		Detergents:		mg/L
			Cracks/Stru	uctural Dai	mage		Phenol:		mg/L

Outfall ID:	13-2332
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Inspection Date: 9/3/2009	Inspector: JCW Inspection Type: Initial	Previous Rainfall (hrs): 72+
Flow Description: Submerged, slig	nt flow Notes:	
Submerged: Partially Depth (in	ı): 15	1 Para
Illicit Discharge Potential: Unlikely	Field Follow-up Office Follow-up	p
Floatables: None	Petrol. Sheen Suds Sewage Algae Of	ther
Odor: Faint	Petroleum Musty Sewage Chlorine O	ther
	VOC/Solvent Fishy 🖌 Sulfur Fragrant	
Turbidity: None		00-00-2000 12:47
Color: None		Osh09_DSCN6437.JPG
Gross Solids: None	Litter Debris Sediment Other	Sampling Results
Vegetation:	Inhibited Excessive	Sample Location:
Benthic Growth: Slight	Green Brown	Sample ID:
Stains:	Flow Line Oil Rust Stains	Time Collected
	Corrosion Paint Other	Total Chlorine (field): ppm
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): ppm
- Physical Condition Assessment		Total Copper (field): ppm
Filysical Condition Assessment		Ammonia (field): ppm
Graffiti: None		pH (field): units
Erosion: None		Temperature: °F
Deposition: Depth (in):	8	Conductivity: µS/cm
Damage: None 🗌 Displac	ement 🗌 Undercut 🗌 Crushed	Detergents: mg/L
Corrosi	on Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 13-2332 US1

Major Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Water of the State

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-2331

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120612084448.JPG

Outfall Notes:

Upstream catchbasin located approx 30 ft S of outfall 13-2332. Intermediate area consists of open space.

County Coordinates:	
Northing:	467,230
Easting:	774,589

State Plane Coordinates: Northing: 732,452 Easting: 2,334,775




Outfall ID:	13-2332	US1
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Inspection [Date: 9/3/2	009	Inspecto	or: JCW	Inspect	ion Type:	Initial	Previous Rainfall (hrs): 72+	
Flow Descri	ption: Subr	nerged, slight flow	Note	s:						
Submerged:	Partially	Depth (in): 9						12570		
Illicit Discha	arge Potentia	I: Unlikely		Field F	ollow-up	Of	fice Follow-up		77	
Floatables:	None	P	etrol. Sheer	Suds	🗌 Sewa	ge 🗌 Al	gae 🗌 Othe	er		
Odor:	None	P	etroleum	Musty	Sewa	ge 🗌 Cł	nlorine 🗌 Othe	er in the second s		
		v	OC/Solvent	Fishy	Sulfui	r 🗌 Fr	agrant			
Turbidity:	None								0.00	3 2009 12 31
Color:	None							Osh09_DSC	N6440.JI	PG
Gross Solids	: None		itter [Debris	Sedin	nent 🗌 (Other	-Sampling Results]
Vegetation:			nhibited	Excessiv	/e			Sample Location: P	ool	
Benthic Grov	wth:		Green [Brown				Sample ID: 09	90903-2	:5
Stains:		🗌 F	low Line	Oil	Rust :	Stains		Time Collected 12	2:50	
		C	Corrosion [Paint	Other			Total Chlorine (field):	0	ppm
Non-illicit:	None		latural Shee	n 🗌 Natu	ural Suds/Fo	bam		Free Chlorine (field):	0	ррт
- Physical (Condition Asso							Total Copper (field):	0	ррт
Thysical C		551110111						Ammonia (field):		ppm
Graffiti:	None							pH (field):	8.04	units
Erosion:	None							Temperature:	71	°F
Deposition	n: None	Depth (in): 0						Conductivity:		µS/cm
Damage:	None	Displacement	Underc	ut 🗌	Crushed			Detergents:	0	mg/L
		Corrosion	Cracks	Structural I	Damage			Phenol:	0	mg/L

Outfall ID: 13-2666

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Downstream Outfall

Shape: Pipe - Circular

Material: PVC

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120612073216.JPG

Outfall Notes:

Storm sewer from Wellington Dr discharges to stream from north via 25-ft riprap channel.

County Co	oordinates:	State
Northing:	467,482	Northi
Easting:	773,369	Eastin

 te Plane Coordinates:

 thing:
 732,682

 sting:
 2,333,551



Inspection D	ate: 6/12/2012 8	8:33:10 AM	nspector:	JCW	Inspectio	n Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description: None Notes: Flowline damp. Riprap blocking end of pipe.										
Submerged:	Submerged: None Depth (in):									
Illicit Dischar	rge Potential: U	nlikely		Field Fo	ollow-up	Of	fice Follow-up	- An Asta		260
Floatables: N	None	Petrol	Sheen	Suds	Sewage	e 🗌 Alç	gae 🗌 Other	Alles Martin		
Odor:	None	Petrol	eum	Musty	Sewage	e 🗌 Ch	lorine 🗌 Other	C Act of	1	S119 2
			Solvent	Fishy	Sulfur	Fra	agrant			
Turbidity:	None								R	Sar 1
Color: N	None							0201206120732	224.JF	G
Gross Solids:	Slight	Litter	\checkmark	Debris	Sedime	nt 🗌 C	Other	Sampling Results		
Vegetation:	None	🗌 Inhibit	ed 🗌	Excessive	е			Sample Location:		
Benthic Grow	th: None	Green		Brown				Sample ID:		
Stains:	None	Flow L	ine	Oil	Rust St	ains		Time Collected		
		Corros	sion	Paint	Other			Total Chlorine (field):		ррт
Non-illicit:	None	Natura	al Sheen	Natu	ral Suds/Foa	m		Free Chlorine (field):		ррт
- Physical C	ondition Assessme	ont						Total Copper (field):		ррт
T Hysical O		7/10						Ammonia (field):		ррт
Graffiti:	None							pH (field):		units
Erosion:	None							Temperature:		°F
Deposition	: Moderate Dep	pth (in): 6						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion	Cracks/St	ructural D	amage			Phenol:		mg/L

Outfall ID: 13-2736

Major Outfall

Structure Type: Open Channel Outfall

Discharge Location: Water of the State

Shape: Channel - Parabolic

Material: Channel - earthen

City ID: N/A

Drainage Basin: Sawyer Creek

Diameter (in):

Diameter (iii).	
Height/Depth (in):	18
Width (in):	60

Mapping Precison:

Not Physically Located



o20120611094716.JPG

Outfall Notes:

Storm sewer from Oakwood Rd discharges to stream from west via riprap swale.

County C	oordinates:	State I
Northing:	470,540	Northir
Easting:	776,276	Eastin

ate Plane Coordinates: orthing: 735,792 asting: 2,336,402



Inspection D	Date: 6/11/2	2012 10:45:04	M Inspector:	JCW	Inspection	Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descri	Flow Description: None Notes:									
Submerged:	Submerged: None Depth (in):									
Illicit Discha	arge Potential	: Unlikely	[Field F	ollow-up	Off	ice Follow-up	DAL	Non	AND
Floatables:	None		Petrol. Sheen	Suds	Sewage	Alg	jae 🗌 Othe	r Andrew	AB.	13
Odor:	None		Petroleum	Musty	Sewage	Ch	lorine 🗌 Othe		-	March
Turbidity:	None		_ VOC/Solvent _	_ Fishy	Sulfur	∐ Fra	agrant	A se		
Color:	None							020120611094	722.JI	PG
Gross Solids	: Slight		Litter	Debris	Sedimen	nt 🗌 C	Other	- Sampling Results ———		
Vegetation:	None		Inhibited	Excessiv	е			Sample Location:		
Benthic Grow	vth: Slight		Green	Brown				Sample ID:		
Stains:	Slight		Flow Line	Oil	Rust Sta	ins		Time Collected		
			Corrosion	Paint	Other			Total Chlorine (field):		ррт
Non-illicit:	None] Natural Sheen	🗌 Natu	ral Suds/Foarr	า		Free Chlorine (field):		ppm
– Physical C	Condition Asse	ssment						Total Copper (field):		ppm
Graffiti	None							Ammonia (field):		ppm
Erosion [.]	None							pH (field):		units ° T
Deposition	: None	Depth (in):						remperature:		°F ∵C(arra
Damage:	None		ant 🗖 Underset		Orrestand					μ5/cm
Damago.) (Crushed			Detergents:		mg/L
			Cracks/S	tructural L	Jamage			Phenoi:		mg/L

Outfall ID: 1	3-2736
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Inspection Date: 9/3/2009	Inspector: JCW Inspection Type: Init	ial Previous Rainfall (hrs): 72+
Flow Description: None	Notes:	
Submerged: None Depth (in): 0	
Illicit Discharge Potential: Unlikely	Field Follow-up	Follow-up
Floatables:	Petrol. Sheen Suds Sewage Algae	Other
Odor:	🗌 Petroleum 🗌 Musty 🗌 Sewage 🗌 Chlorir	ne 🗌 Other
	VOC/Solvent Fishy Sulfur Fragra	nt
Turbidity:		
Color:		Osh09_DSCN6467.JPG
Gross Solids:	Litter Debris Sediment Othe	r Sampling Results
Vegetation:	Inhibited Excessive	Sample Location:
Benthic Growth:	Green Brown	Sample ID:
Stains:	Flow Line Oil Rust Stains	Time Collected
	Corrosion Paint Other	Total Chlorine (field): ppm
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): ppm
- Physical Condition Assessment		Total Copper (field): ppm
		Ammonia (field): ppm
Graffiti: None		pH (field): units
Erosion: None		Temperature: °F
Deposition: None Depth (in):	U	Conductivity: µS/cm
Damage: None 🗌 Displac	ement Undercut Crushed	Detergents: mg/L
Corrosi	on Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 13-2768

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Downstream Outfall

Shape: Pipe - Circular

Material: HDPE

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120611125356.JPG

Outfall Notes:

Storm sewer from Norman Ct discharges to wetland area from south.

County Co	ordinates:
Northing:	468,532
Easting:	773,790

State Plane Coordinates: Northing: 733,739 Easting: 2,333,953

Inspection Date: Inspector: Inspection Type: Ongoing 6/11/2012 1:51:43 PM JCW Previous Rainfall (hrs): 72+ Pool formed by blockage at end if apron. Flow Description: Submerged, indeterminate Notes: Outfall screened upstream at 13-2768 US1. Submerged: Partially Depth (in): 4 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120611125404.JPG Color: None ✓ Litter Gross Solids: Slight ✓ Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: Slight Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Minor Deposition: Depth (in): 3 Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 13-2768 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-2768

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120611125848.JPG

Outfall Notes:

Upstream curb inlet located approx 13 ft S of outfall 13-2768. Intermediate area consists of street right-of-way.

County Co	ordinates:	State Plane Coordinates:				
Northing:	468,519	Northing:	733,726			
Easting:	773,789	Easting:	2,333,952			

Inspection Date: JCW Previous Rainfall (hrs): 6/11/2012 1:57:20 PM Inspector: Inspection Type: Ongoing 72+ Flow Description: Submerged, indeterminate Notes: Submerged: Partially Depth (in): 8 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120611125854.JPG Color: None ✓ Litter Gross Solids: Moderate ✓ Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: Slight Green Brown Sample ID: 120611-07 Flow Line Stains: Slight Rust Stains **Time Collected** 13:58 Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 8.12 units Erosion: None Temperature: 75 °F Minor Deposition: Depth (in): 1 Conductivity: 1144 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: Corrosion Cracks/Structural Damage 0 mg/L



Outfall ID: 13-2886

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: HDPE

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): 24 Width (in):

Mapping Precison: Mapping GPS

o20120611123346.JPG

Outfall Notes:

Storm sewer from Fairfax St discharges to stream from south.

County Co	ordinates:
Northing:	469,967
Easting:	774,444

State Plane Coordinates: Northing: 735,186 Easting: 2,334,581





Outfall ID: 13-2886 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: N/A

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120611123838.JPG

Outfall Notes:

Upstream manhole located approx 172 ft SSW of outfall 13-2886. Intermediate area consists of residential property.

County Coordinates:State Plane Coordinates:Northing:469,804Northing:735,022atedEasting:774,390Easting:2,334,530





Outfall ID: 13-2957

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Box

Material: RCP

City ID: N/A

Drainage Basin: Stringham Creek



Mapping Precison: Mapping GPS



o20120612123136.JPG

Outfall Notes:

Storm sewer from South Park Ave discharges to detention basin from west.

County Co	oordinates:	State
Northing:	469,054	North
Easting:	787,980	Easti

tate Plane Coordinates: orthing: 734,517 asting: 2,348,131



Inspection Date: 6/12/2012 1:30:43	PM Inspector:	JCW Inspec	tion Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description: Submerged, indet	erminate Notes: 0	Outfall partially su	ibmerged; so	creened		-	>
Submerged: Partially Depth (in)	: 21	upstream at 13-2	957 US1.				
Illicit Discharge Potential: Unlikely	F	Field Follow-up	Offic	ce Follow-up			
Floatables: None	Petrol. Sheen	Suds 🗌 Sewa	age 🗌 Alga	ae 🗌 Other	a second		
Odor: None		Musty 🗌 Sewa	age 🗌 Chlo	orine 🗌 Other	-M		
Turbidity: None	VOC/Solvent F	-ishy ∐ Sulfu	r 📋 Fraq	grant	1.		2012 13:32
Color: None					0201206121232	258.JF	PG
Gross Solids: None	Litter De	ebris 🗌 Sedii	ment 🗌 Ot	ther	Sampling Results		
Vegetation: None	Inhibited Ex	cessive			Sample Location:		
Benthic Growth: Moderate	Green Sreen	own			Sample ID:		
Stains: Moderate	Flow Line Oil	I 🗌 Rust	Stains		Time Collected		
	Corrosion Pa	aint 🗌 Othe	r		Total Chlorine (field):		ррт
Non-illicit: None	Natural Sheen] Natural Suds/F	oam		Free Chlorine (field):		ppm
Physical Condition Assessment					Total Copper (field):		ppm
Graffiti: Minor					Ammonia (field):		ppm .,
Frosion: None					pH (field):		units
Deposition: None Depth (in):					Temperature:		°F
Damage: None Deput (iii).	waant 🖂 Unalawa st						μ5/cm
	ment 📋 Undercut	tural Damage			Detergents: Phenol:		mg/L ma/l
		and Burnago					

Outfall ID: 1	3-2957
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Inspection Date: 9/4/2009	Inspector: JCW Inspection Type: Initial	Previous Rainfall (hrs): 72+
Flow Description: Submerged, slig	ht flow Notes:	
Submerged: None Depth (ir	n): 16	
Illicit Discharge Potential: Unlikely	Field Follow-up	
Floatables: None	Petrol. Sheen Suds Sewage Algae Othe	er
Odor: None	Petroleum 🗌 Musty 🗌 Sewage 🗌 Chlorine 🗌 Othe	er
	VOC/Solvent Fishy Sulfur Fragrant	1
Turbidity: None		cal or action of the
Color: None		Osh09_DSCN6483.JPG
Gross Solids: None	Litter Debris Sediment Other	-Sampling Results
Vegetation:	Inhibited Excessive	Sample Location:
Benthic Growth: Slight	Green 🖌 Brown	Sample ID:
Stains:	✓ Flow Line	Time Collected
	Corrosion Paint Other	Total Chlorine (field): ppm
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): ppm
- Physical Condition Assessment		Total Copper (field): ppm
		Ammonia (field): ppm
Graffiti: None		pH (field): units
Erosion: None		Temperature: °F
Deposition: None Depth (in):	. 0	Conductivity: µS/cm
Damage: None 🗌 Displac	ement 🗌 Undercut 🗌 Crushed	Detergents: mg/L
Corrosi	on Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 13-2957 US1

Major Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-2957

Drainage Basin: Stringham Creek

- Dimensions -

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120612123718.JPG

Outfall Notes:

Upstream manhole located approx 57 ft W of outfall 13-2957. Intermediate area consists of open space in park.

County Co	ordinates:	State Pla	ne
Northing:	469,054	Northing:	
Easting:	787.925	Easting:	2

ate Plane Coordinates: orthing: 734,515 usting: 2,348,075



Inspection	Date: 6/12/	2012 1:36:29 PM Ir	spector: JCW	Inspection Type	: Ongoing	Previous Rainfall (hrs): 72+	
Flow Descr	ription: Subr	nerged, indeterminate	Notes:				- aller	
Submerged	: Partially	Depth (in): 23				1		100
Illicit Disch	arge Potentia	l: Unlikely	Field F	Follow-up	Office Follow-up			
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage	Algae 🗌 Othe	er		-9
Odor:	None	Petrole	eum 🗌 Musty	Sewage	Chlorine 🗌 Othe	er 👘 🦂		
			olvent 🗌 Fishy	Sulfur F	Fragrant		06/12/	2012 13.00
Turbidity:	Slight cloudin	ess						18
Color:	None					0201206121	23728.JI	PG
Gross Solid	s: None	Litter	Debris	Sediment	Other	-Sampling Results		
Vegetation:	None	🗌 Inhibite	ed 🗌 Excessiv	ve		Sample Location: Po	loc	
Benthic Gro	wth: None	Green	Brown			Sample ID: 12	20612-0	8
Stains:	None	Elow L	ine 🗌 Oil	Rust Stains		Time Collected 13	8:38	
			ion 🗌 Paint	Other		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natura	I Sheen 🗌 Nati	ural Suds/Foam		Free Chlorine (field):	0	ppm
- Physical	Condition Ass	essment				Total Copper (field):	0	ppm
Filysical	Condition Ass	essment				Ammonia (field):	0	ppm
Graffiti:	None					pH (field):	8.35	units
Erosion:	None					Temperature:	71	°F
Depositio	on: None	Depth (in):				Conductivity:	1336	µS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut	Crushed		Detergents:	0	mg/L
			Cracks/Structural	Damage		Phenol:		mg/L

Inspection Date: 9/4/2009	Inspector: JCW Inspection Type: Initial	Previous Rainfall (hrs): 72+
Flow Description: Submerged, slig	ht flow Notes:	
Submerged: Fully Depth (ir	n):	
Illicit Discharge Potential: Unlikely	Field Follow-up	
Floatables: None	Petrol. Sheen Suds Sewage Algae Othe	r
Odor: None	Petroleum Musty Sewage Chlorine Othe	r
	VOC/Solvent Fishy Sulfur Fragrant	
Turbidity: None		08.03.2000 08:20
Color: None		Osh09_DSCN6486.JPG
Gross Solids: None	Litter Debris Sediment Other	- Sampling Results
Vegetation:	Inhibited Excessive	Sample Location: Pool
Benthic Growth:	Green Brown	Sample ID: 090904-21
Stains:	Flow Line Oil Rust Stains	Time Collected 08:20
	Corrosion Paint Other	Total Chlorine (field): 0 ppm
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm
- Physical Condition Assessment		Total Copper (field): 0 ppm
		Ammonia (field): ppm
Graffiti: None		pH (field): 8.1 units
Erosion: None		Temperature: 66 ° <i>F</i>
Deposition: None Depth (in):	0	Conductivity: µS/cm
Damage: None 🗌 Displac	ement 🗌 Undercut 🗌 Crushed	Detergents: 0 mg/L
Corrosi	on Cracks/Structural Damage	Phenol: 0 mg/L

Outfall ID: 13-3097

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 36 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120611115500.JPG

Outfall Notes:

Storm sewer from Bailey Ct discharges to stream on east side of road.

County Co	ordinates:
Northing:	470,163
Easting:	774,087

State Plane Coordinates: Northing: 735,375 Easting: 2,334,220



Inspection	Date: 6/11/20	012 12:52:47 PM Ir	spector:	JCW Inspe	ction Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption: Subme	erged, indeterminate	Notes:	Stones and catta	ils on apror	n. Outfall			Star Be
Submerged	: Partially	Depth (in): 6		13-3097 US1.	jed; screene	ed upstream at			1000
Illicit Disch	arge Potential:	Unlikely		Field Follow-up	Of	fice Follow-up			
Floatables:	None	Petrol.	Sheen	Suds 🗌 Sew	age 🗌 Al	gae 🗌 Othe	r 🚱 🖉		attain 2
Odor:	None	Petrole	um	Musty 🗌 Sew	vage 🗌 Cł	nlorine 🗌 Othe	r	17	
			olvent	Fishy 🗌 Sulf	ur 🗌 Fr	agrant	The the	an and	
Turbidity:	None								
Color:	None						020120611115	508.JI	G
Gross Solid	s: None	Litter	🗌 D	ebris 🗌 Sed	iment 🗌 (Other	- Sampling Results		
Vegetation:	None		ed 🗌 E	xcessive			Sample Location:		
Benthic Gro	wth: Moderate	✓ Green	🗌 B	rown			Sample ID:		
Stains:	Slight	✓ Flow L	ine 🗌 O	il 🗌 Rus	t Stains		Time Collected		
			ion 🗌 Pa	aint 🗌 Othe	er		Total Chlorine (field):		ррт
Non-illicit:	None	Natura	I Sheen	Natural Suds/	oam		Free Chlorine (field):		ррт
- Physical	Condition Asses	sement			_		Total Copper (field):		ppm
n nysicai		Sinem					Ammonia (field):		ppm
Graffiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: Minor	Depth (in): 2					Conductivity:		µS/cm
Damage:	None	Displacement U	Indercut	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Stru	ctural Damage			Phenol:		mg/L

Outfall ID: 13-3097 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-3095

Drainage Basin: Sawyer Creek

-Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120611120538.JPG

Outfall Notes:

Upstream manhole/inlet located approx 85 ft W of outfall 13-3097. Intermediate area consists of street right-of-way.

County Co	ordinates:	State Plai	ne C
Northing:	470,158	Northing:	7
Easting:	774.002	Easting:	2.3

thing: 735,368 sting: 2,334,135

Inspection Date: 6/11/2012 1:04:40 PM Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: Submerged: Partially Depth (in): 10 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120611120550.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results Inhibited Vegetation: None Excessive Sample Location: Pool Benthic Growth: Moderate Green Brown Sample ID: 120611-44 Flow Line Stains: Slight Rust Stains **Time Collected** Oil 13:05 Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 7.66 units Erosion: None Temperature: 72 °F Deposition: None Depth (in): Conductivity: 1334 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: Corrosion Cracks/Structural Damage 0 mg/L



Outfall ID: 13-3099

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Elliptical

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

Diameter (in): Height/Depth (in): 38 Width (in): 60

Mapping Precison: Mapping GPS

Not Physically Located



o20120611115046.JPG

Outfall Notes:

Storm sewer from Pheasant Creek Dr discharges to stream on east side of road.

County Co	ordinates:	State Pla	ne
Northing:	470,152	Northing:	
Easting:	774,092	Easting:	2

te Plane Coordinates: thing: 735,364 ting: 2,334,226

Inspection Da	ate: 6/11/2012 12:50	:19 PM Inspect	tor: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+
Flow Descrip	otion: Submerged, ind	leterminate Not	es: Rocks and	cattails at end of	apron. Outfall	The state of the state	
Submerged:	Partially Depth	in): 6	partially su 13-3099 U	omerged; screen S1.	ed upstream at	1 Aller	
Illicit Dischar	rge Potential: Unlike	у	Field Follow	v-up 🗌 Of	fice Follow-up		
Floatables: N	lone	Petrol. Shee	n 🗌 Suds 🗌	Sewage 🗌 Al	gae 🗌 Other		
Odor: N	lone	Petroleum	Musty] Sewage 🗌 Cl	nlorine 🗌 Other	Part of the second s	
Turbidity:	lone				agrant		Contraction of the second
Color: N	lone					0201206111150	054.JPG
Gross Solids:	Slight	Litter	✔ Debris] Sediment	Other	Sampling Results	
Vegetation:	None	Inhibited	Excessive			Sample Location:	
Benthic Growt	th: None	Green	Brown			Sample ID:	
Stains:	Slight	✓ Flow Line	🗌 Oil 🗌	Rust Stains		Time Collected	
		Corrosion	Paint] Other		Total Chlorine (field):	ррт
Non-illicit:	None	Natural She	en 🗌 Natural S	Suds/Foam		Free Chlorine (field):	ррт
– Physical Co	ondition Assessment –					Total Copper (field):	ppm
Graffiti	None					Ammonia (field):	ppm
Erosion:	None					pH (field):	units
Doposition:	Moderate Dopth (ir). 6				Temperature:	°F
Deposition.). U				Conductivity:	μS/cm
Damaye.		cement 📋 Under	cut 📋 Crus	hed		Detergents:	mg/L
		sion 🗌 Cracks	s/Structural Dam	age		Phenol:	mg/L



Outfall ID: 13-3099

Inspection Date: 8/26/2010 2:00:5	7 PM Inspector: JCW Ins	pection Type: Ongoing	Previous Rainfall (hrs):	72+
Flow Description: Submerged, slig Submerged: Partially Depth (i	ht flow Notes: Outfall partial upstream at 1	y submerged. Outfall screened 3-3099 US1.		
Illicit Discharge Potential: Unlikely	/ Field Follow-u	p Office Follow-up	A	
Floatables: None	Petrol. Sheen Suds	ewage 🗌 Algae 🗌 Other	A.	-the
Odor: None	Petroleum 🗌 Musty 🗌 S	ewage 🗌 Chlorine 🗌 Other	1 1 - 1 - 1 - 1	31
	_ VOC/Solvent _ Fishy _ S	ulfur 🗌 Fragrant		
Turbidity: None			W.	
Color: None			0201008261350	010.JPG
Gross Solids: None	Litter Debris S	ediment 🗌 Other	Sampling Results	
Vegetation: None	Inhibited Excessive		Sample Location:	
Benthic Growth: Moderate	Green Srown		Sample ID:	
Stains: Moderate	Flow Line Oil F	ust Stains	Time Collected	
	Corrosion Paint C	other	Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen Natural Su	ls/Foam	Free Chlorine (field):	ppm
- Physical Condition Assessment			Total Copper (field):	ppm
			Ammonia (field):	ppm
Gramit: None			pH (field):	units
Erosion: None			Temperature:	°F
Deposition: None Depth (in)	: 0		Conductivity:	μS/cm
Damage: None 🗌 Displac	cement 🗌 Undercut 🛛 🗌 Crushe	d	Detergents:	mg/L
	ion Cracks/Structural Damag	9	Phenol:	mg/L

Inspection Date:	9/3/2009	Inspector: JCW	V Inspec	tion Type:	Initial	Previous Rainfall (hrs):	72+	
Flow Description:	Submerged, indeterminate	Notes: Sulfi	ide odor, sligh	nt oil sheen	in pool.		10	4
Submerged: Partia	ally Depth (in): 11						1	
Illicit Discharge Po	otential: Potential	Field	follow-up	Of	fice Follow-up			No.
Floatables: Slight	✓ Petro	ol. Sheen 🗌 Suda	s 🗌 Sewa	age 🗌 Alç	gae 🗌 Other	and the state of the		and the second
Odor: Faint		oleum 🗌 Mus /Solvent 🗌 Fish	ty 🗌 Sewa	age 🗌 Ch ur 🗌 Fra	nlorine 🗌 Other			
Turbidity: None			,			A State State State		3 2009 33 44
Color: None						Osh09_DSCN64	451.JI	PG
Gross Solids: No	one 🗌 Litter	Debris	s 🗌 Sedii	ment 🗌 C	Other	Sampling Results		
Vegetation: No	one 🗌 Inhib	ited 🗌 Exces	sive			Sample Location:		
Benthic Growth: Slig	ght 🖌 🖌 Gree	n 🗌 Brown	ı			Sample ID:		
Stains: Slig	ght 🖌 🖌 Flow	Line 🗌 Oil	Rust	Stains		Time Collected		
		osion 🗌 Paint	Othe	r		Total Chlorine (field):		ppm
Non-illicit: No	one 🗌 Natu	ral Sheen 🗌 Na	atural Suds/F	oam		Free Chlorine (field):		ppm
- Physical Conditio	on Assessment			1		Total Copper (field):		ppm
						Ammonia (field):		ррт
Graniti: No	one					pH (field):		units
Erosion: No	Denth (in)					Temperature:		°F
Deposition: No		_	_			Conductivity:		µS/cm
Damage: No	Displacement	Undercut	Crushed			Detergents:		mg/L
	Corrosion	Cracks/Structura	al Damage	J		Phenol:		mg/L

Outfall ID: 13-3099 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-3099

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120611121136.JPG

Outfall Notes:

Upstream manhole located approx 54 ft W of outfall 13-3099. Intermediate area consists of street rightof-way and pond embankment.

County Co	ordinates:	State Plane Coordinates:					
Northing:	470,144	Northing:	735,356				
Easting:	774,036	Easting:	2,334,170				

Inspection Date: JCW 6/11/2012 1:09:20 PM Inspector: Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: Submerged: Partially Depth (in): 3 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120611121148.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: Slight Green Brown Sample ID: 120611-03 Stains: None Rust Stains **Time Collected** 13:12 Flow Line Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 7.39 units Erosion: None Temperature: 69 °F Deposition: None Depth (in): Conductivity: 1120 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: Corrosion Cracks/Structural Damage 0 mg/L



Outfall ID: 13-3099 US1

Inspection Date: 8/26/2010 1:46:46	PM Inspector: JCW Inspection Type: Ongoing	Previous Rainfall (hrs): 72+
Flow Description: Submerged, inde	terminate Notes:	
Submerged: Partially Depth (ir	ı): 2	
Illicit Discharge Potential: Unlikely	Field Follow-up	
Floatables: None	Petrol. Sheen Suds Sewage Algae Othe	ər
Odor: Faint	Petroleum 🖌 Musty 🗌 Sewage 🗌 Chlorine 🗌 Othe	er
	VOC/Solvent Fishy Sulfur Fragrant	
Turbidity: None		05.26.2010 13/61
Color: None		o20100826133132.JPG
Gross Solids: None	Litter Debris Sediment Other	Sampling Results
Vegetation: None	Inhibited Excessive	Sample Location: Pool
Benthic Growth: None	Green Brown	Sample ID: 100826-56
Stains: None	Flow Line Oil Rust Stains	Time Collected 13:40
	Corrosion Paint Other	Total Chlorine (field): 0 ppm
Non-illicit: None	Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm
- Physical Condition Assessment		Total Copper (field): 0 ppm
		Ammonia (field): 0 ppm
Graffiti: None		pH (field): 7.29 units
Erosion: None		Temperature: 83 °F
Deposition: None Depth (in):	0	Conductivity: µS/cm
Damage: None 🗌 Displac	ement 🗌 Undercut 🗌 Crushed	Detergents: 0 mg/L
Corrosi	on Cracks/Structural Damage	Phenol: 0 mg/L



Outfall ID: 13-3119

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: HDPE

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120612080042.JPG

Outfall Notes:

Storm sewer from Casey Trail discharges to southwest corner of detention basin.

County Coordinates:						
Northing:	467,592					
Easting:	772,973					

State Plane Coordinates: Northing: 732,785 Easting: 2,333,153



Inspection	Date: 6/12/2	2012 8:58:32 AM	Inspector:	JCW	Inspection	Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption: None	•	Notes:	Dry. Fl	owline sedime	nt				
Submerged	None	Depth (in):								
Illicit Disch	arge Potentia	I: Unlikely		Field F	ollow-up	Off	ice Follow-up			A
Floatables:	None	Pet	rol. Sheen	Suds	Sewage	🗌 Alg	jae 🗌 Oth	er	Chi	
Odor:	None	Pet	roleum	Musty	Sewage	🗌 Ch	lorine 🗌 Oth	er		
Turbidity:	Nono		C/Solvent	Fishy	Sulfur	🗌 Fra	agrant		99 - 24	in part -
rubluity.	None							020120612080	0046	PG
Color:	None							020120012000	040.01	u
Gross Solids	s: Slight	Litte	er 🗌	Debris	 Sediment 	nt 🗌 C	Other	Sampling Results		
Vegetation:	None	🗌 Inhi	bited	Excessiv	'e			Sample Location:		
Benthic Gro	wth: Slight	✓ Gre	en 🗌	Brown				Sample ID:		
Stains:	None		v Line	Oil	Rust Sta	ins		Time Collected		
		Cor	rosion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	□ Nat	ural Sheen	🗌 Natu	Iral Suds/Foam	า		Free Chlorine (field):		ppm
- Physical	Condition Acc							Total Copper (field):		ррт
Fliysical	Condition Asse	essment						Ammonia (field):		ррт
Graffiti:	None							pH (field):		units
Erosion:	None							Temperature:		°F
Depositio	n: None	Depth (in):						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion	Cracks/St	ructural D	Damage			Phenol:		mg/L

Outfall ID: 13-3127

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: HDPE

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 15 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120612081250.JPG

Outfall Notes:

Storm sewer from Mockingbird Way discharges to northeast corner of detention basin.

County Co	ordinates:	Sta
Northing:	467,861	Nor
Easting:	772,637	Eas

ate Plane Coordinates: rthing: 733,048 sting: 2.332.812



Location Map



Corrosion

Cracks/Structural Damage

-- mg/L

Phenol:

Outfall ID: 13-3127a

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located

Inspection Date: 6/12/2012 9:15:18 AM



o20120612081732.JPG

Outfall Notes:

Storm sewer from Mockingbird Way discharges to northwest corner of detention basin.

County Co	ordinates:	State Plane Co				
Northing:	467,863	Northing:	733,0			
Easting:	772,398	Easting:	2,332,5			

dinates:)45 573



Inspection	Date: 6/12/	2012 9:15:18 AM	Inspector:	JCW	Inspection	Type: Ong	joing	Previous Rainfall (hrs):	72-	F
Flow Description: None Notes: Pipe dry at time of				/ at time of ins	spection. Ap	oron slightly	A STREET, STRE			
Submerged	: None	Depth (in):		displace	ed from pipe.			A BERT		Net S
Illicit Disch	arge Potentia	l: Unlikely] Field Fo	ollow-up	✓ Office F	ollow-up			C. Con
Floatables:	None	Petr	ol. Sheen	Suds	Sewage	Algae	Other	1		
Odor:	None	Petr	oleum	Musty	Sewage	Chlorin	e 🗌 Other	artist .		and a little
			/Solvent	Fishy	Sulfur	Fragrar	it	72 3		
Turbidity:	None							and the second sec		
Color:	None							02012061208	1748.J	PG
Gross Solid	s: None	Litte	· 🗌	Debris	Sedimen	t 🗌 Other	Г	Sampling Results		
Vegetation:	None	🗌 Inhit	ited	Excessive	9			Sample Location:		
Benthic Gro	wth: None	Gree	n 🗌	Brown				Sample ID:		
Stains:	None	E Flow	Line	Oil	Rust Sta	ins		Time Collected		
		Corr	osion	Paint	Other			Total Chlorine (field):		ррт
Non-illicit:	None	Natu	ral Sheen	Natur	al Suds/Foam	ı		Free Chlorine (field):		ррт
– Physical	Condition Ass	essment						Total Copper (field):		ррт
Groffiti	Nono	cooment						Ammonia (field):		ррт
Graniu.	None							pH (field):		units
Erosion.	None	Denth (in):						Temperature:		°F
Depositio	n. None	Deptn (in):						Conductivity:		μS/cm
Damage:	Minor	Displacement	Undercut	C	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Str	ructural D	amage			Phenol:		mg/L

Outfall ID: 13-3130

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: HDPE

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120612075046.JPG

Outfall Notes:

Outlet pipe from detention basin discharges to stream from north via riprap channel.

County Coordinates:						
Northing:	467,543					
Easting:	773.205					

State Plane Coordinates: Northing: 732,739 Easting: 2,333,385

Inspection Date: 6/12/2012 8:47:59 AM Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: None Notes: Dry Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120612075054.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Flow Line Stains: Slight Rust Stains **Time Collected** Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): -ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): --Graffiti: None pH (field): units ---Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 13-3224

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120611100528.JPG

Outfall Notes:

Storm sewer from Oakwood Rd discharges to stream from south.

County Co	County Coordinates:						
Northing:	469,762						
Easting:	775.919						

State Plane Coordinates:Northing:735,007Easting:2,336,059



Inspection	Date: 6/11/2	2012 11:04:58 AM	nspector:	JCW	Inspection	Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	ription: Subm	nerged, indeterminate	Notes:	Outfall	partially subm	erged.	Outfall screened			No and A
Submerged	: Partially	Depth (in): 12		upstrea	m at 13-3224	US1.			N 10	
Illicit Disch	arge Potential	: Unlikely		Field Fo	ollow-up	Of	fice Follow-up		ENG.	
Floatables:	Slight	Petrol	. Sheen 🗌	Suds	Sewage	🖌 Alç	gae 🗌 Other			Stor .
Odor:	None			Musty			nlorine 🗌 Other		and an	
Turbidity:	None			FISHY			agrant	MA I	067117	A Sec
Color:	None							0201206111005	546.JF	PG
Gross Solid	s: Slight	✓ Litter		Debris	Sedimen	t 🗌 C	Other	-Sampling Results		
Vegetation:	None	🗌 Inhibit	ed 🗌 E	Excessive	е			Sample Location:		
Benthic Gro	wth: Moderate	✓ Green	. E	Brown				Sample ID:		
Stains:	Moderate	✓ Flow I	_ine 🗌 C	Dil	Rust Sta	ins		Time Collected		
			sion 🗌 F	Paint	Other			Total Chlorine (field):		ррт
Non-illicit:	Slight	✓ Natura	al Sheen	🗌 Natur	ral Suds/Foarr	า		Free Chlorine (field):		ppm
- Physical	Condition Asse	essment						Total Copper (field):		ррт
Oreffiti	Name							Ammonia (field):		ppm
Graniti.	None							pH (field):		units
Erosion:	None	Develop (inc)						Temperature:		°F
Depositio	n: None	Deptn (in):						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion	Cracks/Str	uctural D	amage			Phenol:		mg/L

Outfall ID: 13-3224 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-3224

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120611101250.JPG

Outfall Notes:

Upstream curb inlet located approx 35 ft SW of outfall 13-3224. Intermediate area consists of street right-of-way.

County Co	ordinates:	State Plane
Northing:	469,738	Northing:
Easting:	775.895	Easting:

tate Plane Coordinates: orthing: 734,983 asting: 2,336,036





Outfall ID: 13-3243

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120611103656.JPG

Outfall Notes:

Storm sewer from Oakwood Rd discharges to stream from north.

County Coordinates:				
Northing:	468,996			
Easting:	775.909			

State Plane Coordinates: Northing: 734,241 Easting: 2,336,063



Inspection	Date: 6/11/2012	2 11:40:07 AM	Inspector:	JCW	Inspection Type	: Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption: None		Notes:	Damp fl	owline but no flow.	Rocks and			
Submerged	: None	Depth (in):		sedimer	nt on apron.			>	No.
Illicit Disch	arge Potential:	Unlikely] Field Fo	llow-up	Office Follow-up		$\langle \rangle$	
Floatables:	None		trol. Sheen	Suds		Algae 🗌 Othe	er 🚺		
Odor:	None	🗌 Pe	troleum	Musty	Sewage	Chlorine 🗌 Othe	er 💽	A.N.	$X \land$
			C/Solvent	Fishy	Sulfur F	Fragrant			
Turbidity:	None								
Color:	None						0201206111042	222.JI	G
Gross Solid	s: Moderate	🖌 Litt	ter 🗌	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inh	ibited	Excessive	9		Sample Location:		
Benthic Gro	wth: None	Gre	een	Brown			Sample ID:		
Stains:	Slight	V Flo	w Line	Oil	Rust Stains		Time Collected		
		Co	rrosion	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	🗌 Na	tural Sheen	Natur	al Suds/Foam		Free Chlorine (field):		ррт
- Physical	Condition Assess	ment					Total Copper (field):		ppm
Croffiti	Nono						Ammonia (field):		ррт
Gramu:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: Moderate D	eptn (in): 6					Conductivity:		μS/cm
Damage:	None] Displacement [Undercut		rushed		Detergents:		mg/L
		Corrosion [Cracks/Str	ructural D	amage		Phenol:		mg/L

Outfall ID: 13-3427

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Stringham Creek

- Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120613090218.JPG

Outfall Notes:

Storm sewer from South Park road discharges to detention pond from north.

County Co	oordinates:	Stat
Northing:	469,134	Nort
Easting:	788,484	East

 te Plane Coordinates:

 thing:
 734,606

 sting:
 2,348,633



Inspection	Date: 9/27/	2012 10:39:10 AM Ir	nspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+
Flow Descr Submerged	iption: Subr Partially	merged, indeterminate Depth (in): 10	Notes: Outfall upstrea	partially submerged; am at 13-3427 US1.	screened		
Illicit Disch	arge Potentia	al: Unlikely	Field F	ollow-up 🗌 Of	fice Follow-up	1	
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage Al	gae 🗌 Other		
Odor:	None	Petrole	eum 🗌 Musty Solvent 🗌 Fishy	Sewage CH	nlorine 🗌 Other agrant		
Turbidity:	None					Photo Not A	vailable
Color:	None						
Gross Solid	s: None	Litter	Debris	Sediment	Other	Sampling Results	
Vegetation:	None	🗌 Inhibite	ed 🗌 Excessiv	re		Sample Location:	
Benthic Gro	wth: None	Green	Brown			Sample ID:	
Stains:	None	Flow L	ine 🗌 Oil	Rust Stains		Time Collected	
			ion 🗌 Paint	Other		Total Chlorine (field):	<i>ppm</i>
Non-illicit:	None	Natura	I Sheen 🗌 Natu	ral Suds/Foam		Free Chlorine (field):	<i>ppm</i>
- Physical	Condition Ass	essment				Total Copper (field):	ppm
Graffiti	None					Ammonia (field):	ppm
Frosion:	None					pH (field):	units
Denositio	n: None	Denth (in):				remperature:	° <i>F</i>
Damage.	None					Conductivity:	μS/cm
Damaye.	INCHE		Jndercut	Crushed		Detergents:	mg/L
			Jracks/Structural [Jamage		Phenol:	mg/L

Outfall ID: 13-3427	Outfall	ID:	13-3427
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Inspection Date: 6/13/2012 9:5	9:36 AM Inspector: JCW	Inspection Type: Other	Previous Rainfall (hrs):	72+
Flow Description: Submerged, i Submerged: Fully Dept	h (in): 14 Notes: Gross Subme US1.	solids pre-screen. Outfall fully erged; screened upstream at 13-3427		
Illicit Discharge Potential: Pote	ntial 🗌 Field F	Follow-up Office Follow-up	19X	
Floatables: None	Petrol. Sheen Suds	Sewage Algae Othe	er	
Odor: None	Petroleum Musty	Sewage Chlorine Othe	er	
Turbidity: None	VOC/Solvent Fishy	Sulfur Fragrant	States of the	
Color: None			0201206130902	224.JPG
Gross Solids: None	Litter Debris	Sediment Other	- Sampling Results	
Vegetation: None	Inhibited Excession	ve	Sample Location:	
Benthic Growth: None	Green Brown		Sample ID:	
Stains: None	Flow Line Oil	Rust Stains	Time Collected	
	Corrosion Paint	Other	Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen Nat	ural Suds/Foam	Free Chlorine (field):	ppm
- Physical Condition Assessment] 		Total Copper (field):	ppm
Graffiti: None			Ammonia (field):	ppm
Frosion: None			pH (field):	units
Deposition: None Depth	(in):		l'emperature:	°F
Damage: None Deptil			Conductivity:	μS/cm
	placement Undercut	Crushed	Detergents:	mg/L
	rosion Cracks/Structural	Damage	Phenol:	mg/L

Outfall ID: 13-3427 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-3427

Drainage Basin: Stringham Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120927094512.JPG

Outfall Notes:

Upstream curb inlet located approx 60 ft NW of outfall 13-3427. Intermediate area consists of open space in park.

County Co	ordinates:	S
Northing:	469,165	Ν
Fasting:	788 433	F

State Plane Coordinates: Northing: 734,636 Easting: 2,348,581

Inspection Date: 9/27/2012 10:41:20 AM Inspection Type: Ongoing Inspector: JCW Previous Rainfall (hrs): 72+ Flow Description: None Notes: Inlet dry at time of inspection. Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927094518.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm Free Chlorine (field): ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 13-3427 US1

Inspection Date: 6/13/2012 10:02:18 AM Inspector: JCW	Inspection Type: Other	Previous Rainfall (hrs):	72+
Flow Description: Submerged, indeterminate Notes: Gross s	olids pre-screen.		
Submerged: Partially Depth (in): 5		A AND AND AND AND AND AND AND AND AND AN	
Illicit Discharge Potential: Potential Field Fo	llow-up Office Follow-up		A THE N
Floatables: None Petrol. Sheen Suds	Sewage Algae Other	A BE	Ser La
Odor: None Detroleum Musty	Sewage Chlorine Other		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
VOC/Solvent Fishy	Sulfur Fragrant	A life View	/ 13/2012 10:04
Turbidity: Cloudy			
Color: None		0201206130904	36.JPG
Gross Solids: Moderate 🖌 Litter 🖌 Debris	Sediment Other	Sampling Results	
Vegetation: None Inhibited Excessive	9	Sample Location: Pool	
Benthic Growth: None		Sample ID: 1206	13-17
Stains: None I Flow Line Oil	Rust Stains	Time Collected 10:03	3
Corrosion Paint	Other	Total Chlorine (field):	0 ppm
Non-illicit: None Natural Sheen Natur	al Suds/Foam	Free Chlorine (field):	0 ppm
- Physical Condition Assessment		Total Copper (field):	0 <i>ppm</i>
		Ammonia (field):	1 <i>ppm</i>
		pH (field):	7.3 units
Erosion: None		Temperature:	74 ° <i>F</i>
Deposition: Moderate Depth (in): 2		Conductivity: 1	429 μ <i>S/cm</i>
Damage: None Displacement Undercut C	rushed	Detergents:	0 <i>mg/L</i>
Corrosion Cracks/Structural D	amage	Phenol:	mg/L

Outfall ID: 13-3431

Minor Outfall

Structure Type: Inlet/Catchbasin

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Stringham Creek

- Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120927093536.JPG

Outfall Notes:

Storm sewer from South Park road discharges to detention basin from north.

County Co	ordinates:	State P
Northing:	469,085	Northin
Easting:	788,049	Easting

ate Plane Coordinates: orthing: 734,549 asting: 2,348,199

Inspection Date: JCW 9/27/2012 10:31:48 AM Inspector: Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: Submerged: Partially Depth (in): 11 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927093556.JPG Color: None Sampling Results Gross Solids: None Litter Debris Sediment Other None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Stains: None Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Inspection Date: 6/12/2012	2 1:04:23 PM Inspector:	JCW Inspection Type: Other	Previous Rainfall (hrs): 72+
Flow Description: Submerg Submerged: Fully	Jed, indeterminateNotes:Depth (in):13	Gross solids pre-screening. Outfall fully submerged; screened upstream at 13-3431 US1.	
Illicit Discharge Potential:	Unlikely	Field Follow-up	
Floatables: None	Petrol. Sheen] Suds 🗌 Sewage 🗌 Algae 🗌 Othe	r
Odor: None	Petroleum	Musty 🗌 Sewage 🗌 Chlorine 🗌 Othe	r
	VOC/Solvent] Fishy 🗌 Sulfur 🗌 Fragrant	04/12/2012 10:04
Turbidity: None			and the second second
Color: None			o20120612120442.JPG
Gross Solids: None	Litter 🗌 🛙	Debris 🗌 Sediment 🗌 Other	- Sampling Results
Vegetation: None	Inhibited E	Excessive	Sample Location:
Benthic Growth: None	Green E	Brown	Sample ID:
Stains: None	Flow Line	Oil 🔄 Rust Stains	Time Collected
		Paint 🗌 Other	Total Chlorine (field): ppm
Non-illicit: None	Natural Sheen	Natural Suds/Foam	Free Chlorine (field): ppm
- Physical Condition Assessm			Total Copper (field): ppm
	icin		Ammonia (field): ppm
Gramti: None			pH (field): units
Erosion: None			Temperature: °F
Deposition: None De	eptn (in):		Conductivity: µS/cm
Damage: None] Displacement 🗌 Undercut	Crushed	Detergents: mg/L
	Corrosion Cracks/Stru	uctural Damage	Phenol: mg/L

Outfall ID: 13-3431 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 13-3431

Drainage Basin: Stringham Creek

- Dimensions -

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120927093142.JPG

Outfall Notes:

Upstream curb inlet located approx 61 ft N of outfall 13-3431. Intermediate area consists of open space in park.

County Co	ordinates:	State PI
Northing:	469,145	Northing
Easting:	788.043	Easting:

ate Plane Coordinates: rthing: 734,609 sting: 2,348,192

Inspection [Date: 9/27/2	2012 10:29:26 AM	Inspector: JO	CW Inspe	ction Type: On	going	Previous Rainfall (hrs):	72+	
Flow Descri	iption: None		Notes: D	ry. Old concre	te washout at pi	pe outlet.	7.5.	a n	R
Submerged:	None	Depth (in):					18 mm	÷n.	
Illicit Discha	arge Potential	: Unlikely	Fi	eld Follow-up	Office	Follow-up		1 C	Nel .
Floatables:	None	Petro	ol. Sheen 🗌 Si	uds 🗌 Sew	vage 🗌 Algae	Other	- Barret	-	
Odor:	None	Petro	oleum 🗌 M	usty 🗌 Sew	vage 🗌 Chlorir	ne 🗌 Other	A PROV		
Г			/Solvent 🗌 Fi	shy 🗌 Sulf	ur 🗌 Fragra	int	AND	08/27/	2012-10-2-0
Turbidity:	None						and the second second		
Color:	None						020120927093	152.JF	'G
Gross Solids	: None	Litter	Deb	oris 🗌 Sed	iment 🗌 Othe	er 🗌	Sampling Results		
Vegetation:	None	🗌 Inhib	ited 🗌 Exc	essive			Sample Location:		
Benthic Grov	wth: None	Gree	n 🗌 Bro	wn			Sample ID:		
Stains:	None	Flow	Line 🗌 Oil	🗌 Rus	t Stains		Time Collected		
			osion 🗌 Pair	nt 🗌 Othe	er		Total Chlorine (field):		ррт
Non-illicit:	None	Natu	ral Sheen	Natural Suds/	- oam		Free Chlorine (field):		ррт
- Physical (Condition Asso	esement			_		Total Copper (field):		ррт
Filysical	Jonullion Asse	SSITIETIL					Ammonia (field):		ррт
Graffiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Deposition	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	None	Displacement	Undercut	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Struct	ural Damage			Phenol:		mg/L



Outfall ID: 13-3431 US1

Inspection Date: 6/12/2012 12:56:45 PM Inspector: JCW Inspection Type: Other	Previous Rainfall (hrs): 72+
Flow Description: Submerged, indeterminate Notes: Pre-screening for gross solids.	A second second second second
Submerged: Partially Depth (in): 2	Anather and the
Illicit Discharge Potential: Potential Field Follow-up Office Follow-up	
Floatables: None	her
Odor: Easily detected Detroleum Musty Sewage Chlorine Ott	her
□ VOC/Solvent □ Fishy VoC/Solvent □ Fishy	V12/2012 - 23.8
Turbidity: None	
Color: None	020120612115904.JPG
Gross Solids: Moderate □ Litter ✓ Debris □ Sediment □ Other	- Sampling Results
Vegetation: None Inhibited Excessive	Sample Location: Pool
Benthic Growth: None Green Brown	Sample ID: 120612-26
Stains: None Flow Line Oil Rust Stains	Time Collected 12:57
Corrosion Paint Other	Total Chlorine (field): 0 ppm
Non-illicit: None Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm
	Total Copper (field): 0 ppm
	Ammonia (field): 0 ppm
Graftiti: None	pH (field): 7.86 units
Erosion: None	Temperature: 72 °F
Deposition: Minor Depth (in): 2	Conductivity: 1372 μ S/cm
Damage: None Displacement Undercut Crushed	Detergents: 0 mg/L
Corrosion Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 14-582

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Gallups/Merritts Creek

- Dimensions Diameter (in): 27 Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120620110108.JPG

Outfall Notes:

W. 28th Street storm sewer discharges to stream from west.

County Co	ordinates:	
Northing:	462,013	
Easting:	793,247	

State Plane Coordinates: Northing: 727,572 Easting: 2,353,523

Inspection	Date: 9/27/2	2012 11:43:23	AM Ins	pector:	JCW	Inspec	tion Type:	Repeat	Previous Rainfall (hi	rs): 72-	-
Flow Description	iption: Subn Partially	nerged, slight Depth (in):	flow 6	Notes:	Gel-like partially	e sheen or y submerg	surface of ed; addition	f stream. Outfal nal screening			
Illicit Discha	arge Potential	: Potential] Field Fe	ollow-up	0	ffice Follow-up			
Floatables:	None	[Petrol.	Sheen	Suds	Sewa	age 🗌 Al	lgae 🗌 Othe	r Mille	A COLOR	12.15
Odor:	None	[Petrole	ım] Musty] Fishy	Sewa	age 🗌 Cl Ir 🗌 Fr	hlorine 🗌 Othe ragrant	r		
Turbidity:	None								A ATTA	09/27/	2012 11:39
Color:	None								020120927	7103918.J	PG
Gross Solids	s: None	[Litter		Debris	Sedi	ment	Other	-Sampling Results		
Vegetation:	None	[Inhibite	t k	Excessiv	е			Sample Location:	Pool	
Benthic Grov	wth: Moderate		🖌 Green		Brown				Sample ID:	120927-5	i9
Stains:	Severe		Flow Line	ne 🗌	Oil	🗌 Rust	Stains		Time Collected	11:40	
		[Corrosi	on 🗌	Paint	Othe	r		Total Chlorine (field):	. 0	ррт
Non-illicit:	None	[Natural	Sheen	🗌 Natu	ral Suds/F	oam		Free Chlorine (field):	0	ррт
– Physical (Condition Asse	essment					1		Total Copper (field):	0	ррт
Graffiti:	None								Ammonia (field):	0	ppm
Erosion	None								pH (field):	1.11	or
Depositio	n: None	Depth (in):							Temperature:	64	°F
Damage:	None			adaraut		Cruchad				1077	μ5/cm ma/l
2 4		Corrosion		acks/Str	ructural E	Damage			Phenol:		mg/L mg/L



Outfall ID: 14-582

Inspection	Date: 9/5/20	012 11:52:00 AM li	nspector: JC	W Inspe	ction Type: 0	Complaint	Previous Rainfall (h	rs): 72+	
Flow Description: Submerged, indeterminate Notes: Dark bla and brid Submerged: Partially Depth (in): 12 Depth dial					rk black substance in water around outfall bridge. Sample collected from stream.			n	and the second
Illicit Discha	arge Potentia	I: Potential	Fie	Field Follow-up Office Follow-up					
Floatables:	None	Petrol.	Sheen 🗌 Su	ds 🗌 Sew	age 🗌 Alga	ae 🗌 Othe	r 💦 🖓		·
Odor:	Noticeable fro	m a distanc 🗌 Petrole	eum 🗌 Mu	isty 🔽 Sew	age 🗌 Chlo	orine 🗌 Othe	r	and and	
			Solvent 🗌 Fis	shy 🔽 Sulfi	ur 🗌 Frag	grant	1 Here		×. 118
Turbidity:	Cloudy								
Color:	Clearly visible	in flow Dark/Blac	:k				020120903	5105212.JI	PG
Gross Solids	s: None	Litter	Debi	ris 🗌 Sedi	ment 🗌 Ot	her	-Sampling Results —		
Vegetation:	None	Inhibite	ed 🗌 Exce	essive			Sample Location:	Pool	
Benthic Grov	wth: Moderate	✓ Green	Srow	vn			Sample ID:	120905-4	7
Stains:	None	Flow L	ine 🗌 Oil	Rust	Stains		Time Collected	12:01	
		Corros	sion 🗌 Pain	t 🗌 Othe	er		Total Chlorine (field)	: 0	ppm
Non-illicit:	None	Natura	al Sheen 🗌 I	Natural Suds/F	oam		Free Chlorine (field):	0	ppm
– Physical (Condition Asse	ssment			7		Total Copper (field):		ppm
Graffiti	Nono						Ammonia (field):	0	ррт
Erosion:	None						pH (field):	75	units
Deposition	n: None	Depth (in):					Temperature:		°F
Depusition	None			— • · ·			Conductivity:	1419	μS/cm
Damaye.	NULLE	Displacement U	Undercut				Detergents:	0	mg/L
			Cracks/Structu	iral Damage			Phenol:		mg/L

Inspection	Date: 6/20/	2012 12:02:16 PM	nspector:	JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	24-4	48
Flow Descr Submerged:	iption: Subr Partially	Depth (in): 12	Notes:	Outfall upstrea	partially submerged; am at 14-582 US1.	screened			1
Illicit Disch	arge Potentia	l: Unlikely		Field Fo	ollow-up 🗌 Of	fice Follow-up			
Floatables:	None	Petrol	Sheen	Suds	Sewage Al	gae 🗌 Other			
Odor:	None	Petrol	eum] Musty] Fishy	Sewage Cł	nlorine 🗌 Othei agrant			1012 12:01
Turbidity:	None								2012 12101
Color:	None						020120620110	152.JF	PG
Gross Solids	s: None	Litter		Debris	Sediment 0	Other	-Sampling Results		
Vegetation:	None	🗌 Inhibit	ed 🗌	Excessiv	e		Sample Location:		
Benthic Gro	wth: Moderate	e 🖌 Green		Brown			Sample ID:		
Stains:	None	Flow L	ine	Oil	Rust Stains		Time Collected		
			sion 🗌	Paint	Other		Total Chlorine (field):		ррт
Non-illicit:	None	Natura	l Sheen	🗌 Natu	ral Suds/Foam		Free Chlorine (field):		ppm
- Physical	Condition Ass	essment		_			Total Copper (field):		ppm
Croffiti	Nono						Ammonia (field):		ррт
Graniti:	None						pH (field):		units
Dopositio	n: Nono	Dopth (in):					Temperature:		°F
Depositio	None			_			Conductivity:		µS/cm
Damaye.	NONE	Displacement	Jndercut		Crushed		Detergents:		mg/L
			Cracks/Sti	ructural D	Damage		Phenol:		mg/L

Outfall ID: 14-582

Inspection Date: 10/5/2011 12:26	:00 PM Inspector:	JCW Inspec	ction Type: Repe	eat	Previous Rainfall (hrs):	72+
Flow Description:Submerged, indSubmerged:PartiallyDepth	leterminate Notes:	Complaint follow- submerged. Outf 585 US1. Limited	up. Outfall partial all screened upstr I screening condu	ly ream at 14- icted.		
Illicit Discharge Potential: Obviou	IS 🗌	Field Follow-up	Office Fo	ollow-up	1	- Providence
Floatables:	Petrol. Sheen	Suds 🗌 Sewa	age 🗌 Algae	Other	and a state of the	1
Odor:	Petroleum	Musty 🗌 Sew	age 🗌 Chlorine	Other		
Turbidity:	VOC/Solvent	Fishy 🗌 Sulfu	ur 🗌 Fragrant		-00111005100	
Color:					0201110051220	620.JPG
Gross Solids:	Litter [Debris 🗌 Sedi	ment 🗌 Other		Sampling Results	
Vegetation:	Inhibited E	Excessive			Sample Location:	
Benthic Growth:	Green E	Brown			Sample ID:	
Stains:	Flow Line	Oil 🗌 Rust	Stains		Time Collected	
	Corrosion F	Paint 🗌 Othe	r		Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen	Natural Suds/F	oam		Free Chlorine (field):	ppm
- Physical Condition Assessment -			7		Total Copper (field):	ppm
Croffiti					Ammonia (field):	ppm
Granni:					pH (field):	units
Doposition: Dopth (ir					Temperature:	°F
	<i>.</i>	_			Conductivity:	μS/cm
Damage. Displa	acement Undercut	Crushed			Detergents:	mg/L
Corro	sion Cracks/Str	uctural Damage			Phenol:	mg/L


Inspection Date: 5/12/2011 1:03:0	DPM Inspector:	JCW Inspe	ction Type: Com	plaint	Previous Rainfall (hrs)	: 72+	
Flow Description: Submerged, inde Submerged: Partially Depth (in	n):	Responded to co from pipe. Outfa Yellow pool at er	mplaint about dis Il partially subme Id of pipe. Chemi	charge rged. ical smell			
Illicit Discharge Potential: Obvious	s	Field Follow-up	Office F	ollow-up		7	
Floatables:	Petrol. Sheen] Suds 🛛 🗌 Sew	age 🗌 Algae	Other	Sale in the	Ser.	
Odor: Noticeable from a distanc	Petroleum] Musty Sew] Fishy	age 🔽 Chlorine	e ✔ Other	a total		
Turbidity:				·	Contraction of the second		
Color: Clearly visible in flow	Yellow				02011051213	33142.jµ)g
Gross Solids:	Litter I	Debris 🗌 Sedi	ment 🗌 Other	Г	Sampling Results		
Vegetation:	Inhibited I	Excessive			Sample Location: Po	ol	
Benthic Growth:	Green I	Brown			Sample ID: 110)512-x	1
Stains:	Flow Line	Oil 🗌 Rust	t Stains		Time Collected 13:	00	
		Paint 🗌 Othe	er		Total Chlorine (field):	2	ррт
Non-illicit: None	Natural Sheen	Natural Suds/F	oam		Free Chlorine (field):	2	ppm
Physical Condition Assessment			7		Total Copper (field):	0	ррт
Graffiti					Ammonia (field):	2	ppm
Erosion:					pH (field):		units
Deposition: Depth (in)					Temperature:		°F
	•				Conductivity:		µS/cm
	cement Undercut	Crushed			Detergents:		mg/L
Corros	ion 🔄 Cracks/Str	uctural Damage			Phenol:		mg/L

Outfall ID: 14-582 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 14-656

Drainage Basin: Gallups/Merritts Creek

- Dimensions -

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120927110124.JPG

Outfall Notes:

Upstream catchbasin located approx 1255 ft WSW of outfall 14-582. Intermediate area consists of industrial properties.

County Co	ordinates:	State Plane Coordina			
Northing:	461,845	Northing:	727,382		
Easting:	792,024	Easting:	2,352,303		



Inspection	Date: 9/27/2	2012 11:59:39 AM	Inspector:	JCW	Inspection Type	Repeat	Previous Rainfall (hrs):	72+	
Flow Descr Submerged:	iption: None None	Depth (in):	Notes:	Inlet dry of recer	v at time of inspection time of inspection to a time of inspection to a time of the time of time of time of the time of time of the time of the time of the time of time of the time of ti	n. No indication	5		
Illicit Disch	arge Potentia	I: Potential] Field Fo	ollow-up	office Follow-up			
Floatables:	None	Petr	ol. Sheen	Suds	Sewage A	lgae 🗌 Oth	er		19
Odor:	None	Petr	oleum	Musty	Sewage C	hlorine 🗌 Oth	er	Aler.	6 1
-			Solvent	Fishy	Sulfur F	ragrant	. and the	09/27/	2012 32:01
l urbidity:	None						-20120027110	140 11	20
Color:	None						020120927110	142.JI	-6
Gross Solids	s: None	Litte	r 🗌	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inhit	oited	Excessive	e		Sample Location:		
Benthic Gro	wth: None	Gree	en 🗌	Brown			Sample ID:		
Stains:	Slight	✓ Flow	Line	Oil	Rust Stains		Time Collected		
		Corr	osion	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natu	ıral Sheen	Natur	al Suds/Foam		Free Chlorine (field):		ррт
– Physical	Condition Asse	essment		_			Total Copper (field):		ppm
Creffit	Nere	Jooment					Ammonia (field):		ppm
Gramti:	None						pH (field):		units
Erosion:	None	Denth (in)					Temperature:		°F
Depositio	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	None	Displacement] Undercut		Crushed		Detergents:		mg/L
		Corrosion] Cracks/Str	ructural D	amage		Phenol:		mg/L

Outfall ID: 14-582 US1

Inspection Date: 6/20/2012 1	2:06:59 PM Inspector: JCW	Inspection Type: Ongoing	Previous Rainfall (hrs): 24-48
Flow Description: Trickle Submerged: None De	pth (in): Notes: 2011 a from F	ammonia/chlorine follow-up. No flow łydrite lateral. Manhole seemed mally cold.	
Illicit Discharge Potential: Un	Ilikely Field F	Follow-up Office Follow-up	
Floatables: None	Petrol. Sheen Suds	Sewage Algae Othe	er
Odor: None	Petroleum Musty	Sewage Chlorine Othe	er
	VOC/Solvent Fishy	Sulfur Fragrant	
Turbidity: None			
Color: None			o20120620110724.JPG
Gross Solids: None	Litter Debris	Sediment Other	- Sampling Results
Vegetation: None	Inhibited Excession	ve	Sample Location: Pool
Benthic Growth: None	Green Brown		Sample ID: 120620-10
Stains: None	Flow Line Oil	Rust Stains	Time Collected 12:13
	Corrosion Paint	Other	Total Chlorine (field): 0 ppm
Non-illicit: None	Natural Sheen Nat	ural Suds/Foam	Free Chlorine (field): 0 ppm
- Physical Condition Assessmer			Total Copper (field): 0 ppm
			Ammonia (field): 0 ppm
Granini. None			pH (field): units
Erosion: None			Temperature: °F
Deposition: None Depi	tn (in):		Conductivity: $\mu S/cm$
Damage: None 🗌 D	isplacement 🗌 Undercut 🗌	Crushed	Detergents: mg/L
	Corrosion Cracks/Structural	Damage	Phenol: mg/L

Flow Description: Trickle Notes: No evidence of chemical discharge. Not enough flow to collect a sample. Submerged: None Depth (in): Illicit Discharge Potential: Obvious Fleatables: None Odor: None Odor: None Petroleum Musty Sewage Algae Other Ovices Odor: None Petroleum Musty Sewage Chlorine Color: None Color: None Gross Solids: None Inhibited Excessive Benthic Growth: None Green Brown Stains: Non-illicit: None Physical Condition Assessment Other Graffiti: None Deposition: None Deposition: None Displacement Onder (forester Level) Opensition: None Deposition: None Deposition: None Deposition: None Displacement Onderut (f	Inspection Da	ate: 10/5/2	011 12:26:00 PM	Inspector:	JCW	Inspection Type:	Repeat	Previous Rainfall (hrs):	72+
Illicit Discharge Potential: Obvious Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Algae Other Odor: None Petroleum Musty Sewage Other Other Odor: None Petroleum Musty Sewage Othorine Other Color: None Petroleum Musty Sewage Chlorine Other Color: None Petroleum Musty Sewage Chlorine Other Color: None Litter Debris Sediment Other Sampling Results Vegetation: None Green Brown Sample Location: Sample ID: Stains: None Flow Line Oil Rust Stains Time Collected Non-illicit: None Natural Sheen Natural Suds/Foam Ammonia (field): ppm Physical Condition Assessment Odnet	Flow Descrip Submerged:	otion: Trickl None	e Depth (in):	Notes:	No evic enough	dence of chemical dis n flow to collect a sam	charge. Not ple.	1	T
Floatables: None Petrol. Sheen Suds Sewage Algae Other Odor: None Petroleum Musty Sewage Chlorine Other Turbidity: None VOC/Solvent Fishy Sulfur Fragrant Turbidity: None	Illicit Dischar	rge Potential	: Obvious		Field Fo	ollow-up 🗌 Of	fice Follow-up		
Odor: None Petroleum Musty Sewage Chlorine Other Turbidity: None VOC/Solvent Fishy Sulfur Fragrant Definition Color: None Itter Debris Sediment Other Definition Gross Solids: None Inhibited Excessive Sampling Results Sample Location: Benthic Growth: None Green Brown Sample ID: Sample ID: Stains: None Flow Line Oil Rust Stains Time Collected Non-illicit: None Natural Sheen Natural Suds/Foam Free Chlorine (field):	Floatables: N	lone	F	Petrol. Sheen	Suds	Sewage Ale	gae 🗌 Othe	r	
Turbidity: None Debris Sediment Other Color: None Litter Debris Sediment Other Gross Solids: None Inhibited Excessive Sampling Results Benthic Growth: None Green Brown Sample Location: Stains: None Green Brown Sample ID: Stains: None Flow Line Other Time Collected Non-illicit: None Natural Sheen Natural Suds/Foam Free Chlorine (field): ppm Physical Condition Assessment Graffiti: None Deposition: None Depth (in): 0 Damage: None Displacement Undercut Crushed Detergents:	Odor: N	lone	F	Petroleum] Musty] Fishy	Sewage Ch	nlorine 🗌 Othe agrant	r	
Color: None 020111005123246.JPG Gross Solids: None Litter Debris Sediment Other Vegetation: None Inhibited Excessive Sampling Results Benthic Growth: None Green Brown Sample Location: Sample ID: Stains: None Flow Line Oil Rust Stains Time Collected Non-illicit: None Paint Other Total Chlorine (field): ppm Physical Condition Assessment Natural Sheen Natural Suds/Foam Free Chlorine (field): ppm Graffiti: None Erosion: None	Turbidity: N	lone						1 - and the	1071372D11 12:32
Gross Solids: None Litter Debris Sediment Other Sampling Results Vegetation: None Inhibited Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Stains: None Flow Line Oil Rust Stains Time Collected Non-illicit: None Other Total Chlorine (field): ppm Non-illicit: None Natural Sheen Natural Suds/Foam Free Chlorine (field): ppm Physical Condition Assessment Graffiti: None ppm Ammonia (field): ppm Graffiti: None Deposition: None Depth (in): 0 ppm Damage: None Displacement Undercut Crushed Detergents: mg/L	Color: N	lone						020111005123	246.JPG
Vegetation: None Inhibited Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Stains: None Flow Line Oil Rust Stains Time Collected Corrosion Paint Other Total Chlorine (field): ppm Non-illicit: None Natural Sheen Natural Suds/Foam Free Chlorine (field): ppm Physical Condition Assessment None Sample ID: ppm Graffiti: None None Ppm Erosion: None Depth (in): 0 ppm Deposition: None Depth (in): 0 ppm Damage: None Displacement Crushed Detergents: mg/L	Gross Solids:	None	L	.itter 🗌 I	Debris	Sediment 0	Other	-Sampling Results	
Benthic Growth: None Green Brown Sample ID: Stains: None Flow Line Oil Rust Stains Time Collected Corrosion Paint Other Total Chlorine (field): ppm Non-illicit: None Natural Sheen Natural Suds/Foam Free Chlorine (field): ppm Physical Condition Assessment Graffiti: None	Vegetation:	None	🗌 li	nhibited 🗌 I	Excessiv	е		Sample Location:	
Stains: None Flow Line Oil Rust Stains Time Collected Corrosion Paint Other Total Chlorine (field): ppm Non-illicit: None Natural Sheen Natural Suds/Foam Free Chlorine (field): ppm Physical Condition Assessment Graffiti: None ppm Total Copper (field): ppm Graffiti: None ppm ppm ppm Deposition: None ppm ppm Deposition: None ppm ppm Damage: None Displacement Undercut Crushed w/f. Ourmaine Ourmaine Ourmaine Densetul mg/L	Benthic Growt	th: None		Green 🗌 I	Brown			Sample ID:	
Corrosion Paint Other Total Chlorine (field): ppm Non-illicit: None Natural Sheen Natural Suds/Foam Free Chlorine (field): ppm Physical Condition Assessment	Stains:	None	F	low Line 🗌 🤇	Dil	Rust Stains		Time Collected	
Non-illicit: None Natural Sheen Natural Suds/Foam Physical Condition Assessment Total Copper (field): ppm Graffiti: None ppm Erosion: None ppm Deposition: None ppm Damage: None Displacement Undercut Ourspine Ourspine Ourspine Detergents: mg/L				Corrosion 🗌 I	Paint	Other		Total Chlorine (field):	ppm
Physical Condition Assessment Total Copper (field): ppm Graffiti: None Physical Conduction Assessment Ammonia (field): ppm Graffiti: None PH (field): units Erosion: None Depth (in): 0 Damage: None Displacement Undercut Crushed Detergents: mg/L	Non-illicit:	None	N []	latural Sheen	🗌 Natu	ral Suds/Foam		Free Chlorine (field):	ppm
Graffiti: None Erosion: None Deposition: None Damage: None Displacement Undercut Crushed Detergents:	– Physical Co	ondition Asse	ssment					Total Copper (field):	ppm
GrandPH (field): unitsErosion:NoneTemperature: $^{\circ}F$ Deposition:NoneDepth (in): 0Conductivity: $\mu S/cm$ Damage:NoneDisplacement \Box UndercutCrushedDetergents: mg/L	Graffiti	Nono						Ammonia (field):	ppm
Lioson: None Depth (in): 0 Image: Temperature: $^{\circ}F$ Deposition: None Depth (in): 0 Image: Conductivity: $\mu S/cm$ Damage: None Displacement Undercut Crushed Detergents: mg/L	Erosion:	None						pH (field):	units
Dependent None Displacement Undercut Crushed Detergents: mg/L Damage: None Displacement Undercut Crushed Detergents: mg/L	Deposition:	None	Depth (in): 0					Temperature:	°F
Displacement Undercut Urushed Detergents: mg/L	Damage:	None				Durahad		Conductivity:	μS/cm
I Gorrosion I Gracks/Structural Damage Phenol: ma/l	Damage.	None	Corrosion	Cracks/Str	uctural D	Jrusned Damage		Detergents: Phenol:	mg/L ma/L

Outfall ID: 14-582 US1

Inspection Date: 5/26/2011 11:27:0	0 AM Inspector: JCW Inspection 7	Гуре: Repeat	Previous Rainfall (hrs)	: 72+	
Flow Description: Trickle Submerged: None Depth (in): Notes: Strong chlorine odor in downstream pipe.	catchbasin and	14		
Illicit Discharge Potential: Obvious	Field Follow-up	Office Follow-up			
Floatables: None	Petrol. Sheen Suds Sewage	Algae Other		-	
Odor: Noticeable from a distanc	Petroleum Musty Sewage	✓ Chlorine ☐ Other			1
	VOC/Solvent Fishy Sulfur	Fragrant	A COM	20/20/201	11 12:28
Turbidity: None					
Color: None			0201105261	12806.jpg	
Gross Solids: None	Litter Debris Sediment	Other	Sampling Results		
Vegetation: None	Inhibited Excessive		Sample Location: Flo	w	
Benthic Growth: None	Green Brown		Sample ID: 110	0526-x2	
Stains: None	Flow Line Oil Rust Stain	IS	Time Collected 12:	:28	
	Corrosion Paint Other		Total Chlorine (field):	10	ррт
Non-illicit: None	Natural Sheen Natural Suds/Foam		Free Chlorine (field):	10	ррт
- Physical Condition Assessment			Total Copper (field):	/	ррт
Croffiti: Nono			Ammonia (field):	0	ррт
Eracion: None			pH (field):		units
Dependition: None Depth (in):	0		Temperature:		°F
Deposition: None Deptn (in):	0		Conductivity:		µS/cm
Damage: None Displace	ement Undercut Crushed		Detergents:		mg/L
	on Cracks/Structural Damage		Phenol:	1	mg/L

Inspection	Date: 5/12	2011 1:00:00 PM	Inspector:	JCW Insp	ection Type:	Complaint	Previous Rainfall (hrs):	72+	
Flow Descr	iption: Mod	erate Depth (in):	Notes:	Visible chemic catchbasin. St	al fumes rising rong chemica	g from I odor in area.	11	X	XI
	.			Chemical Inter	erence with c	niorine test.			196
Illicit Disch	arge Potentia	al: Obvious		Field Follow-up	Of Of	fice Follow-up	1 A Star	F	*
Floatables:	None	Pet	rol. Sheen	Suds 🗌 Se	wage 🗌 Al	gae 🗌 Othe	r		
Odor:	Noticeable fro	om a distanc 🗌 Pet	roleum	Musty 🗌 Se	ewage 🖌 Cł	nlorine 🔽 Othe	r	11	
	[C/Solvent] Fishy 🗌 Su	ılfur 🗌 Fr	agrant	and the second		2011 14:11
Turbidity:	None								
Color:	None						02011051213	1110.jp	og
Gross Solids	s: None		er 🗌 I	Debris 🗌 Se	diment 🗌 (Other	-Sampling Results		
Vegetation:	None	🗌 Inhi	bited 🗌 I	Excessive			Sample Location: Flow	N	
Benthic Gro	wth: None	Gre	en 🗌 I	Brown			Sample ID: 110	512-x	2
Stains:	None		w Line 🗌 🤇	Oil 🗌 Ru	ist Stains		Time Collected 14:2	20	
		Cor	rosion 🗌 I	Paint 🗌 Ot	her		Total Chlorine (field):		ppm
Non-illicit:	None	□ Nat	ural Sheen	Natural Sude	/Foam		Free Chlorine (field):		ppm
– Physical I	Condition Ass	essment					Total Copper (field):		ppm
Onefficie	News	cooment					Ammonia (field):	6	ppm
Gramiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Deposition	n: None	Deptn (In): 0	_				Conductivity:		µS/cm
Damage:	inone	Displacement	Undercut	Crushec			Detergents:		mg/L
		Corrosion	Cracks/Str	uctural Damage			Phenol:		mg/L

Outfall ID: 14-676

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Gallups/Merritts Creek

- Dimensions -

Diameter (in): 30 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120620112508.JPG

Outfall Notes:

Waukau Ave storm sewer discharges into west culvert.

County Co	oordinates:					
Northing:	459,937					
Easting:	791.621					

State Plane Coordinates: Northing: 725,467 Easting: 2,351,935





Inspection	Date: 6/20/	2012 12:29:02 PM	Inspector:	JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	24-4	48
Flow Descr	iption: None	•	Notes:	2011 suds	(natural) follow-up	o. Pipe wet but		1. 9	SY.
Submerged	: None	Depth (in):		no now at o	outrall.			In	1 1
Illicit Disch	arge Potentia	I: Unlikely		Field Follov	w-up 🗌 Of	fice Follow-up		1	
Floatables:	None	Petro	I. Sheen	Suds] Sewage 🗌 Alg	gae 🗌 Other		1	
Odor:	None	Petro	leum	Musty] Sewage 🗌 Ch	nlorine 🗌 Other	LAKEN S	E	
			Solvent	Fishy] Sulfur 🛛 Fra	agrant	ASTR RAN	05/20/	2012 12:27
Turbidity:	None								1
Color:	None						020120620112	732.JI	G
Gross Solid	s: None	Litter		Debris] Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inhibi	ted 🗌 I	Excessive			Sample Location:		
Benthic Gro	wth: None	Gree	n 🗌 I	Brown			Sample ID:		
Stains:	Slight	Flow	Line 🗌 (Dil 🗌] Rust Stains		Time Collected		
		Corro	sion 🗌 I	Paint	Other		Total Chlorine (field):		ррт
Non-illicit:	None	Natur	al Sheen	Natural S	Suds/Foam		Free Chlorine (field):		ppm
- Physical	Condition Ass	esment					Total Copper (field):		ppm
1 Trysical							Ammonia (field):		ppm
Graffiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	Minor	Displacement	Undercut	Crus	shed		Detergents:		mg/L
		Corrosion	Cracks/Str	uctural Dam	age		Phenol:		mg/L

Inspection	Date: 10/6/2	011 3:04:00 PM Ir	nspector: JCW	Inspection Type	e: Ongoing	Previous Rainfall (hrs):	72+	
Flow Desci	ription: Mode	rate	Notes: Persis	stent suds still preser	nt in mixing zone			
Submerged	: None	Depth (in):	and d	ownstream.		DUM LE		
Illicit Disch	arge Potential	Potential	Field	Follow-up	Office Follow-up	40000		internet of
Floatables:	Moderate	Petrol.	Sheen 🖌 Suds	Sewage	Algae 🗌 Othe	r State Co	- A	and the second s
Odor:	None	Petrole	eum 🗌 Musty	Sewage	Chlorine 🗌 Othe	r 🖌 🖁		
			olvent 🗌 Fishy	Sulfur	Fragrant			011 15:07
Turbidity:	None							1
Color:	None					020111006150)702.JP	G
Gross Solid	s: None	Litter	Debris	Sediment	Other	-Sampling Results]
Vegetation:	None	Inhibite	ed 🗌 Excess	ve		Sample Location:		
Benthic Gro	wth: None	Green	Brown			Sample ID:		
Stains:	Moderate	Elow L	ine 🗌 Oil	Rust Stains		Time Collected		
		✓ Corros	ion 🗌 Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	I Sheen 🗌 Nat	ural Suds/Foam		Free Chlorine (field):		ррт
– Physical	Condition Asse	ssment				Total Copper (field):		ррт
Creffitie	Name	ooment				Ammonia (field):		ррт
Gramiti:	None					pH (field):		units
Erosion:	None					Temperature:		°F
Depositio	n: None	Depth (in): 0				Conductivity:		µS/cm
Damage:	Moderate	🗌 Displacement 🗌 l	Jndercut	Crushed		Detergents:		mg/L
		Corrosion	Cracks/Structural	Damage		Phenol:		mg/L



Inspection	Date: 8/26/2010 1:	00:18 PM Inspector:	JCW Inspec	ction Type: Other		Previous Rainfall (hr	s): 72+	
Flow Descr	iption: Moderate	Notes	Sample consists	of sheen skimmed	from			
Submerged:	None Dep	oth (in):	surface of downs	tream pool.				
Illicit Discha	arge Potential: Pot	tential	Field Follow-up	Office Foll	ow-up			
Floatables:	Moderate	Petrol. Sheen	Suds Sew	age 🗌 Algae	✓ Other	ARTIN		1.
Odor:	None	Petroleum	Musty Sew	age 🗌 Chlorine [Other	A Marga		
	[VOC/Solvent	🗌 Fishy 📃 Sulfu	ur 🗌 Fragrant		the second second		8.2010 12:87
Turbidity:	None					An All Cash in the		
Color:	None					020100826	123758.JF	PG
Gross Solids	s: None	Litter	Debris 🗌 Sedi	ment 🗌 Other		Sampling Results —		
Vegetation:	None	Inhibited	Excessive			Sample Location: F	Pool	
Benthic Grov	wth: None	Green	Brown			Sample ID: 1	00826-8	5
Stains:	Moderate	Flow Line	Oil 🗌 Rust	Stains		Time Collected 1	2:40	
		Corrosion	Paint 🗌 Othe	er		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natural Sheen	Natural Suds/F	oam		Free Chlorine (field):	0	ррт
- Physical (Condition Assessmen			_		Total Copper (field):	0	ррт
Thysical		L				Ammonia (field):	0	ррт
Graffiti:	None					pH (field):	8.52	units
Erosion:	None					Temperature:	76	°F
Depositio	n: None Depti	h (in): 0				Conductivity:		µS/cm
Damage:	None 🗌 Di	isplacement 🗌 Undercut	Crushed			Detergents:	0	mg/L
		orrosion 🗌 Cracks/S	tructural Damage			Phenol:	0	mg/L

Inspection D	Date: 8/26/	2010 12:58:18 PM	Inspector:	JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs): 72+	
Flow Descri	ption: Mode	erate	Notes:	Persist	ent suds and gel-like	sheen	and the second second	1	111
Submerged:	None	Depth (in):		downst	ream				
Illicit Discha	arge Potentia	I: Potential		Field Fo	ollow-up 🗌 Of	fice Follow-up			a per
Floatables:	Moderate	Petro	ol. Sheen 🗸	Suds	Sewage Ale	gae 🗸 Other		15	1-1.4 ·
Odor:	None	Petro	oleum] Musty] Fishy	Sewage Ch	nlorine 🗌 Othei agrant	may	i i	A
Turbidity:	None								0.2010 12:40-1
Color:	None						0201008261	23658.JI	°G
Gross Solids	: None	Litter	· 🗌	Debris	Sediment 🗌 0	Other	Sampling Results		
Vegetation:	None	🗌 Inhib	ited	Excessiv	е		Sample Location: Flo	w	
Benthic Grov	vth: None	Gree	n 🗌	Brown			Sample ID: 10	0826-5	2
Stains:	Moderate	Flow	Line	Oil	Rust Stains		Time Collected 12	2:40	
		Corre	osion	Paint	Other		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natu	ral Sheen	🗌 Natu	ral Suds/Foam		Free Chlorine (field):	0	ppm
– Physical (Condition Asse	essment					Total Copper (field):	0	ррт
Creffitie	Nama						Ammonia (field):	0	ррт
Gramu:	None						pH (field):	8.3	units
Erosion:	None	Denth (in): 0					Temperature:	78	°F
Deposition	1: INONE	Depth (in): 0		_			Conductivity:		µS/cm
Damage:	inone	Displacement	Undercut		Crushed		Detergents:	0	mg/L
		Corrosion	Cracks/Sti	ructural D	Damage		Phenol:	0	mg/L

Inspection Date: 9/4/2009	Inspector: JCW	Inspection Type: Initial	Previous Rainfall (hrs):	72+
Flow Description: Moderate Submerged: None Depth (in	n): 0	le 09090411 collected from pool). No detergent detected.		
Illicit Discharge Potential: Potentia	I Field I	Follow-up Office Follow-up		
Floatables: Moderate	Petrol. Sheen 🗸 Suds	Sewage Algae Othe	er internet	
Odor: None	Petroleum Musty	Sewage Chlorine Othe	er	and y
	VOC/Solvent Fishy	Sulfur Fragrant	P AR ALS	00 04 2000 13-30
Turbidity: None	_			
Color: None			Osh09_DSCN65	38.JPG
Gross Solids: None	Litter Debris	Sediment Other	-Sampling Results	
Vegetation: None	Inhibited Excessi	ve	Sample Location: Flow	
Benthic Growth: None	Green Brown		Sample ID: 09090	04-10
Stains: Moderate	Flow Line Oil	Rust Stains	Time Collected 13:40	
	Corrosion Daint	Other	Total Chlorine (field):	0 ppm
Non-illicit: None	Natural Sheen Nat	ural Suds/Foam	Free Chlorine (field):	0 ppm
- Physical Condition Assessment			Total Copper (field):	0 <i>ppm</i>
Craffiti: Nono			Ammonia (field):	ppm
Eropion: None			pH (field): 8	.32 units
Dependition: None Depth (in)	• •		Temperature:	78 ° <i>F</i>
Deposition. None Depth (in)			Conductivity:	μS/cm
Damage: Minor Displac	cement Undercut	Crushed	Detergents:	0 <i>mg/L</i>
✓ Corros	ion Cracks/Structural	Damage	Phenol:	0 <i>mg/L</i>

Outfall ID: 16-93

Minor Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in): 15 Height/Depth (in): Width (in):

Mapping Precison: Desktop mapping estimate ✓ Not Physically Located



o20120606084158.JPG

Outfall Notes:

Storm sewer from Buchanan Ave discharges to stream from east. Pipe info from MS4 map.

County Co	ordinates:	State Plar	ne Coor
Northing:	478,398	Northing:	743,
Easting:	784,845	Easting:	2,344,

dinates: 802 828

JCW **Inspection Date:** 6/6/2012 9:39:18 AM Inspector: Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged (not located) Notes: Outfall fully submerged and not physically located. Outfall screened upstream at 16-93 Submerged: Fully Depth (in): US2. Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120606084204.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results -None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 16-93 US2

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-424

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120606084540.JPG

Outfall Notes:

Upstream manhole located approx 155 ft E of outfall 16-93. Intermediate area consists of residential property. First upstream manhole not located.

County Co	ordinates:	State Plane Coordinates				
Northing:	478,391	Northing:	743,798			
Easting:	784,999	Easting:	2,344,982			



Inspection	Date: 6/6/2012 9:42:45	AM Inspector: JCW	Inspection Type: Ongoing	Previous Rainfall (hrs):	72+
Flow Descr	iption: Submerged, inc	eterminate Notes:		5 A	- HE
Submerged	: Fully Depth (in): 23			
Illicit Disch	arge Potential: Unlikel	y Field F	Follow-up Office Follow-up		
Floatables:	None	Petrol. Sheen Suds	Sewage Algae Othe	er	
Odor:	None	Petroleum Musty VOC/Solvent Fishy	Sewage Chlorine Othe	er	
Turbidity:	None			A A A A A A A A A A A A A A A A A A A	06/06/2012 00/45
Color:	None			o20120606084	4550.JPG
Gross Solid	s: Moderate	Litter Debris	Sediment Other	Sampling Results	
Vegetation:	None	Inhibited Excession	ve	Sample Location: Poo	bl
Benthic Gro	wth: Slight	Green Brown		Sample ID: 120	606-57
Stains:	None	Flow Line Oil	Rust Stains	Time Collected 09:4	48
		Corrosion Paint	Other	Total Chlorine (field):	0 ppm
Non-illicit:	None	Natural Sheen Nat	ural Suds/Foam	Free Chlorine (field):	0 ppm
– Physical	Condition Assessment –			Total Copper (field):	0 ppm
Oreffiti	Nees			Ammonia (field):	0 ppm
Gramu:	None			pH (field):	8.1 <i>units</i>
Erosion:	NOME Nederate Depth (in). 0		Temperature:	72 ° <i>F</i>
Depositio	II. Moderate Depth (In). o		Conductivity:	749 μ <i>S/cm</i>
Damage:		cement Undercut	Crushed	Detergents:	0 <i>mg/L</i>
	Corro	sion Cracks/Structural	Damage	Phenol:	0 <i>mg/L</i>

Outfall ID: 16-142

Minor Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Rainbow Park

Dimensions

Diameter (in): 12 Height/Depth (in): Width (in):

Mapping Precison: Desktop mapping estimate ✓ Not Physically Located

o20120620094554.JPG

Outfall Notes:

Curb inlets from Veterans Trail discharge to river from west. Outfall not located - pipe info from MS4 map.

County Co	County Coordinates:		
Northing:	480,225	Northing:	74
Easting:	785,463	Easting:	2,34

ordinates: 5,640 5,413





Inspection	Date: 10/11	ا <mark>/2011 12:41:17 PM</mark>	nspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+
Flow Descr Submerged	r iption: Subr : Fully	nerged (not located) Depth (in):	Notes: 2010 subme	screening follow-up. Our of the screening follow-up. Our of the screen o	utfall fully ly located.		fall
Illicit Disch	arge Potentia	I: Potential	Field F	Follow-up	fice Follow-up		
Floatables:	None	Petrol	. Sheen 🗌 Suds	🗌 Sewage 🗌 Ale	gae 🗌 Other		
Odor:	None	Petrol	eum 🗌 Musty Solvent 🗌 Fishy	Sewage Cr	nlorine 🗌 Other agrant	Loca	ted
Turbidity:	None						
Color:	None					020111011124	1048.JPG
Gross Solid	s: None	Litter	Debris	Sediment 0	Dther	Sampling Results	
Vegetation:	None	🗌 Inhibit	ed 🗌 Excessiv	ve		Sample Location:	
Benthic Gro	wth: None	Green	Brown			Sample ID:	
Stains:	None	🗌 Flow I	_ine 🗌 Oil	Rust Stains		Time Collected	
			sion 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit:	None	Natura	al Sheen 🗌 Nati	ural Suds/Foam		Free Chlorine (field):	ppm
- Physical	Condition Asse	essment				Total Copper (field):	ppm
Graffiti:	None					Ammonia (field):	ppm
Erosion:	None					pri (ileia):	UNITS ° E
Depositio	on: None	Depth (in): 0				Conductivity:	· F
Damage:	None	□ Displacement □		Crushed		Detergents:	- μο/cili ma/l
			Cracks/Structural	Damage		Phenol:	mg/L



Outfall ID: 16-142 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-142

Drainage Basin: Rainbow Park

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120620094652.JPG

Outfall Notes:

Upstream curb inlet located approx 36 ft WSW of outfall 16-142. Intermediate area consists of open space between parking lot and shoreline.

County Co	ordinates:	State Plane Coordinates:				
Northing:	480,207	Northing:	745,621			
Easting:	785,433	Easting:	2,345,383			



Inspection	Date: 6/20/	2012 10:46:43 AM	Inspector:	JCW	Inspec	ction Type:	Ongoing	Previous Rainfall (hrs):	24-	48
Flow Descr	ription: Subr	nerged, indetermi	nate Notes:	2011 g	ross solids	s follow-up.	Visual	No. of Concession, Name	100	
Submerged	: Fully	Depth (in): 23	;	screen	ing only.			1	7	
Illicit Disch	arge Potentia	I: Unlikely		Field F	ollow-up	Of	fice Follow-up	7. 0	- E	
Floatables:	None	F	Petrol. Sheen	Suds	Sewa	age 🗌 Alg	gae 🗌 Othe	er	1	
Odor:	None	F	Petroleum	_ Musty _ Fishy	Sewa Sulfu	age 🗌 Ch ur 🗌 Fra	nlorine 🗌 Othe agrant	er		
Turbidity:	None							1.7.9		212 10:46
Color:	None							020120620094	1656.JI	PG
Gross Solid	s: Slight	V L	_itter	Debris	🗌 Sedi	ment 🗌 0	Other	-Sampling Results		
Vegetation:	None	II	nhibited	Excessiv	е			Sample Location:		
Benthic Gro	wth: Moderate		Green	Brown				Sample ID:		
Stains:	Slight	✓ F	low Line	Oil	🗌 Rust	Stains		Time Collected		
			Corrosion	Paint	Othe	r		Total Chlorine (field):		ppm
Non-illicit:	None		Vatural Sheen	Natu	ral Suds/F	oam		Free Chlorine (field):		ppm
- Physical	Condition Ass	essment				1		Total Copper (field):		ppm
Croffiti	Nono							Ammonia (field):		ppm
Graniti.	None							pH (field):		units
Erosion:	None	Denstle (line)						Temperature:		°F
Depositio	n: None	Deptn (in):						Conductivity:		µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:		mg/L
		Corrosion	Cracks/S	tructural E	Damage	J		Phenol:		mg/L

Outfall ID: 16-142 US1

Inspection	Date: 10/1	11/2011 12:44:57 PM	spector: JCW	Inspectio	n Type: Ong	oing	Previous Rainfall (h	rs): 72+	F
Flow Descr Submerged	ription: Sub	Depth (in): 16	Notes: 2010 still pr	screening follo esent.	w-up. Floatat	ble debris			NG N
Illicit Disch	arge Potenti	al: Potential	Field	=ollow-up	Office F	ollow-up			
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage	e 🗌 Algae	Other	1 Areas	1	
Odor:	None	Petrole	eum 🗌 Musty	Sewage	e 🗌 Chlorine	e 🗌 Other			
	Г		olvent 🗌 Fishy	Sulfur	Fragran	t	Contraction of the State		
Turbidity:	None						and the state	and the first	A
Color:	None						02011101	1124148.JI	PG
Gross Solid	s: Slight	Litter	Debris	Sedime	nt 🗌 Other	Г	Sampling Results —		
Vegetation:	None	🗌 Inhibite	ed 🗌 Excessi	ve			Sample Location:	Pool	
Benthic Gro	wth: None	Green	Brown				Sample ID:	111011-6	51
Stains:	None	🗌 Flow Li	ine 🗌 Oil	Rust St	ains		Time Collected	12:42	
			ion 🗌 Paint	Other			Total Chlorine (field)	: 0	ppm
Non-illicit:	None	Natura	I Sheen 🗌 Nat	ural Suds/Foa	m		Free Chlorine (field):	0	ppm
– Physical	Condition As	sessment					Total Copper (field):	0	ppm
Oneffitie	Nama	Jessment					Ammonia (field):	0	ррт
Graffiti:	None						pH (field):	8.15	units
Erosion:	None						Temperature:	71	°F
Depositio	n: None	Depth (in): 0					Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 L	Jndercut	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Structural	Damage			Phenol:		mg/L



Outfall ID: 16-142 US1

Inspection Date: 8/19/2010 8:30:49 AM Inspector: JCW Inspection Type: Ongoing	Previous Rainfall (hrs): 72+
Flow Description: Submerged, indeterminate Notes: Floatable debris in catchbasin.	
Submerged: Fully Depth (in): 22	A second s
Illicit Discharge Potential: Potential Field Follow-up Office Follow-u	ıp
Floatables: None Petrol. Sheen Suds Sewage Algae C	Dther
Odor: None Petroleum Musty Sewage Chlorine C	Dther Dther
VOC/Solvent Fishy Sulfur Fragrant	VIRCORR. B. B.
Turbidity: Slight cloudiness	
Color: Faint in bottle Green	o20100819082134.JPG
Gross Solids: Moderate Litter Debris Sediment Other	- Sampling Results
Vegetation: None Inhibited Excessive	Sample Location: Pool
Benthic Growth: Slight Green Brown	Sample ID: 100819-29
Stains: None Store Oil Rust Stains	Time Collected 08:30
Corrosion Paint Other	Total Chlorine (field): 0 ppm
Non-illicit: None Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm
- Physical Condition Assessment	Total Copper (field): 0 ppm
	Ammonia (field): 0 ppm
Graffiti: None	pH (field): 7.84 units
Erosion: None	Temperature: 73 °F
Deposition: None Depth (in): 0	Conductivity: µS/cm
Damage: None Displacement Undercut Crushed	Detergents: 0 mg/L
Corrosion Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 16-201

Minor Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: HDPE

City ID: N/A

Drainage Basin: Rainbow Park

Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located

o20120620095654.JPG

Outfall Notes:

Sthorm sewer from Graham Ave discharges to river from west. Pipe info from MS4 map.

County C	County Coordinates:				
Northing:	479,844	Nort			
Easting:	785,654	East			

e Plane Coordinates: 745,262 hing: 2,345,611 ting:







Inspection	Date: 10/1	1/2011 12:51:01 PM	nspector: JCW	Inspection Ty	/pe: Ongoing	Previous Rainfall (hrs):	72+
Flow Desci Submerged	r iption: Sub i : Partially	merged, indeterminate Depth (in):	Notes: 2010 subn 2011	screening follow-u nerged. Outfall scre JS1.	p. Outfall partially ened upstream at 1	5-	
Illicit Disch	arge Potentia	al: Potential	E Field	Follow-up	Office Follow-up		
Floatables:	None	Petrol.	Sheen Suds	Sewage	Algae 🗌 Othe	er and a second	-
Odor:	None	Petrole	eum 🗌 Must	y 🗌 Sewage 🗌	Chlorine Othe	er 🚽	
			Solvent 🗌 Fishy	/ Sulfur	Fragrant		The states
Turbidity:	None						
Color:	None					020111011125	i132.JPG
Gross Solid	s: None	Litter	Debris	Sediment	Other	-Sampling Results]
Vegetation:	None	Inhibite	ed 🗌 Excess	sive		Sample Location:	
Benthic Gro	wth: None	Green	Brown			Sample ID:	
Stains:	None	Elow L	ine 🗌 Oil	Rust Stains		Time Collected	
			ion 🗌 Paint	Other		Total Chlorine (field):	ppm
Non-illicit:	None	Natura	ll Sheen 🗌 Na	tural Suds/Foam		Free Chlorine (field):	ppm
- Physical	Condition Ass	essment				Total Copper (field):	ppm
Filysical	Condition Ass	essment				Ammonia (field):	ppm
Graffiti:	None					pH (field):	units
Erosion:	None					Temperature:	°F
Depositio	n: None	Depth (in): 0				Conductivity:	μS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut	Crushed		Detergents:	mg/L
			Cracks/Structura	l Damage		Phenol:	mg/L

Inspection Date: 8/19	9/2010 7:49:43 AM Ir	nspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+
Flow Description: Sub	Depth (in):	Notes: Outfall	fully submerged and i d. Outfall screened up	not physically ostream at 16-	Out	all
Illicit Discharge Potenti	ial: Potential	Field F	Follow-up Of	fice Follow-up	No	dir a
Floatables: None Odor: None	Petrol. Petrol. Petrol. VOC/S	Sheen Suds eum Musty Solvent Fishy	Sewage Alg Sewage Cr Sulfur Fra	gae Other Norine Other agrant	Loca	ted
Turbidity: None Color: None					o20100819074	346.JPG
Gross Solids: None	Litter	Debris	Sediment 0	Other	Sampling Results	
Vegetation: None	Inhibite	ed 🗌 Excessiv	/e		Sample Location:	
Benthic Growth: None	Green	Brown			Sample ID:	
Stains: None	Flow L	ine 🗌 Oil ion 🗌 Paint	Rust Stains		Time Collected Total Chlorine (field):	ppm
Non-illicit: None	Natura	l Sheen 🗌 Nati	ural Suds/Foam		Free Chlorine (field): Total Copper (field):	ppm ppm
Physical Condition As	sessment				Ammonia (field):	ppm
Graffiti: None					pH (field):	units
Erosion: None	Death (in):				Temperature:	°F
Deposition: None					Conductivity:	μS/cm
Damage: None	Displacement L	Jndercut	Crushed		Detergents:	mg/L
		Jracks/Structural I	Damage		Phenol:	mg/L

Outfall ID: 16-201 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-201

Drainage Basin: Rainbow Park

-Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120620095816.JPG

Outfall Notes:

Upstream catchbasin located approx 74 ft SW of outfall 16-201. Intermediate area consists of paved parking area and shoreline.

County Co	ordinates:	State Plane Coordinates:				
Northing:	479,821	Northing:	745,239			
Easting:	785,583	Easting:	2,345,541			



Inspection	Date: 6/20	/2012 10:56:06 AM Ir	spector:	JCW	Inspection Ty	vpe: On	igoing	Previous Rainfall (hrs):	24-4	48
Flow Descr	iption: Sub	merged, indeterminate	Notes:	2011 g	ross solids follow	-up. Vis	ual		-	100
Submerged:	Fully	Depth (in): 29		Scieerii	screening only.			1		
Illicit Disch	arge Potenti	al: Unlikely		Field Fo	ollow-up	Office	Follow-up	Har		
Floatables:	None	Petrol.	Sheen	Suds	Sewage	Algae	Other		1	
Odor:	None	Petrole	um	Musty	Sewage	Chlori	ne 🗌 Other			1 17
			olvent	Fishy	Sulfur	Fragra	Int		05/20/	
Turbidity:	None									53
Color:	None							020120620095	824.JF	G
Gross Solids	s: Slight	✓ Litter		Debris	Sediment	Other	er 🗌	Sampling Results		
Vegetation:	None	🗌 Inhibite	ed 🗌	Excessiv	e			Sample Location:		
Benthic Gro	wth: Slight	✓ Green		Brown				Sample ID:		
Stains:	None	Flow L	ine 🗌	Oil	Rust Stains			Time Collected		
			ion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	Natura	l Sheen	🗌 Natu	ral Suds/Foam			Free Chlorine (field):		ppm
- Physical (Condition Ass	sessment						Total Copper (field):		ррт
Graffiti	None							Ammonia (field):		ppm
Granni.	None							pH (field):		units
Erosion.	None							Temperature:		°F
Depositio	n. None	Deptn (in):						Conductivity:		μS/cm
Damage:	None	🗌 Displacement 🗌 l	Indercut		Crushed			Detergents:		mg/L
			Cracks/Str	uctural D	Damage			Phenol:		mg/L

Outfall ID: 16-201 US1

Inspection	Date: 10	/11/2011 12:54:49 PM In	spector: JCW	Inspectio	n Type: Or	ngoing	Previous Rainfall (I	nrs): 72+	
Flow Descr	ription: Su	Ibmerged, indeterminate	Notes: 2010 s	creening follo	w-up. Float	able debris			
Submerged	: Fully	Depth (in): 22	still pre	esent. Siight p	betroleum sr	neen.		Circleson.	
Illicit Disch	arge Poten	tial: Potential	Field F	ollow-up	Office	Follow-up		- ANDER	
Floatables:	Slight	✓ Petrol.	Sheen 🗌 Suds	Sewage	e 🗌 Algae	Other			
Odor:	None	Petrole	um 🗌 Musty	Sewage	e 🗌 Chlori	ne 🗌 Other			S
			olvent 🗌 Fishy	Sulfur	Fragra	ant		300	201 / 12:54
Turbidity:	None								
Color:	None						02011101	1125430.JI	G
Gross Solid	s: Slight	Litter	Debris	Sedime	nt 🗌 Othe	er 🗌	Sampling Results —		
Vegetation:	None	Inhibite	d 🗌 Excessiv	/e			Sample Location:	Pool	
Benthic Gro	wth: None	Green	Brown				Sample ID:	111011-2	8
Stains:	None	🗌 Flow Li	ne 🗌 Oil	Rust St	ains		Time Collected	12:55	
			on 🗌 Paint	Other			Total Chlorine (field): 0	ррт
Non-illicit:	None	Natura	Sheen 🗌 Natı	ural Suds/Foa	m		Free Chlorine (field)	: 0	ррт
- Physical	Condition A	ssessment					Total Copper (field):	0	ppm
Croffiti	Nono						Ammonia (field):	0	ррт
Graniu.	None						pH (field):	8.44	units
Erosion:	None						Temperature:	71	°F
Depositio	n: None	Deptn (in): 0					Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 L	Indercut	Crushed			Detergents:		mg/L
			racks/Structural [Damage			Phenol:		mg/L

Inspection Date: 5	5/26/2011 2:48:00 PM In	spector: JCW	Inspection Type:	Other	Previous Rainfall (hrs):	72+	
Flow Description: S	Submerged, indeterminate	Notes: Limited	screening conducted	to check for			and State
Submerged: Fully	Depth (in):	floatab	le debris.		11	-	
Illicit Discharge Pote	ential: Unlikely	Field F	ollow-up 🗌 Of	fice Follow-up			
Floatables: Slight	Petrol.	Sheen 🖌 Suds	🗌 Sewage 🗌 Alg	gae 🗌 Other		×	All
Odor:	Petrole	um 🗌 Musty olvent 🗌 Fishy	Sewage Ch	nlorine 🗌 Other agrant			
Turbidity:						Charles and Charles	
Color:					0201105261448	348.JF	PG
Gross Solids: Sligh	t 🗹 Litter	Debris	Sediment 0	Other	Sampling Results		
Vegetation:	Inhibite	d 🗌 Excessiv	e		Sample Location:		
Benthic Growth:	Green	Brown			Sample ID:		
Stains:	🗌 Flow Li	ne 🗌 Oil	Rust Stains		Time Collected		
	Corrosi	on 🗌 Paint	Other		Total Chlorine (field):		ррт
Non-illicit: None	e 🗌 Natural	Sheen 🗌 Natu	ral Suds/Foam		Free Chlorine (field):		ррт
- Physical Condition	Assessment				Total Copper (field):		ррт
Croffitiu None					Ammonia (field):		ppm
Graniti. None					pH (field):		units
Erosion: None					Temperature:		°F
Deposition: None					Conductivity:		µS/cm
Damage: None	Displacement 🗌 U	Indercut	Crushed		Detergents:		mg/L
	Corrosion C	racks/Structural E	Damage		Phenol:		mg/L

Outfall ID: 16-201 US1

Inspection Date: 8/19/2010 7:54:51 AM Inspector: JCW Inspection Type: Ongoing	Previous Rainfall (hrs): 72+
Flow Description: Submerged, indeterminate Notes: Moderate floatable debris in catchbasin.	
Submerged: Fully Depth (in): 29	
Illicit Discharge Potential: Potential Field Follow-up Office Follow-up	
Floatables: None	er
Odor: None Petroleum Musty Sewage Chlorine Othe	er 🔄
VOC/Solvent Fishy Sulfur Fragrant	2010 07 48
Turbidity: Slight cloudiness	
Color: Faint in bottle Brown	o20100819074612.JPG
Gross Solids: Moderate Litter Debris Sediment Other	Sampling Results
Vegetation: None Inhibited Excessive	Sample Location: Pool
Benthic Growth: Slight 🗹 Green 🗌 Brown	Sample ID: 100819-24
Stains: None I Flow Line Oil Rust Stains	Time Collected 07:55
Corrosion Paint Other	Total Chlorine (field): 0 ppm
Non-illicit: None Natural Sheen Natural Suds/Foam	Free Chlorine (field): 0 ppm
Physical Condition Assessment	Total Copper (field): 0 ppm
	Ammonia (field): 0 ppm
Graniti: None	pH (field): 7.57 units
Erosion: None	Temperature: 74 °F
Deposition: None Depth (in): 0	Conductivity: µS/cm
Damage: None Displacement Undercut Crushed	Detergents: 0 mg/L
Corrosion Cracks/Structural Damage	Phenol: mg/L

Outfall ID: 16-328

Minor Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Elliptical

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

Dimensions Diameter (in): Height/Depth (in): 29 Width (in): 45

Mapping Precison: Mapping GPS Not Physically Located

o20120530130940.JPG

Outfall Notes:

Storm sewer from Eagle St discharges to stream from south. Pipe specs updated in 2011.

County Co	ordinates:	State Plar	ne Coo
Northing:	476,821	Northing:	742
Easting:	783,978	Easting:	2,343

ordinates: 2,210 3.990

Inspection Date: Inspection Type: Ongoing 5/30/2012 2:06:18 PM Inspector: JCW Previous Rainfall (hrs): 72+ Outfall fully submerged. Outfall screened Flow Description: Submerged, indeterminate Notes: upstream at 16-328 US1. Submerged: Fully Depth (in): 29 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120530130946.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: Moderate Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 16-328 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-328

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120530131200.JPG

Outfall Notes:

Upstream manhole located approx 75 ft S of outfall 16-328. Intermediate area consists of open space.

County Co	ordinates:	State Plar	ne
Northing:	476,747	Northing:	
Easting:	783,984	Easting:	

 te Plane Coordinates:

 rthing:
 742,136

 sting:
 2,343,997



Inspection D	ate: 5/30/201	12 2:14:39 PM	Inspector:	JCW	Inspection Ty	pe: Ongoing	Previous Rainfall (h	rs): 72+	
Flow Descrip	ption: Submer	rged, indetermir	nate Notes:					- CARLA	
Submerged:	Partially	Depth (in): 20							and the
Illicit Discha	rge Potential:	Unlikely] Field Fo	ollow-up	Office Follow-up			
Floatables:	None	P	etrol. Sheen	Suds	Sewage] Algae 🛛 Oth	er 🖕		
Odor: F	Faint	P	Petroleum] Musty] Fishy	Sewage Sulfur] Chlorine 🗌 Oth] Fragrant	er	3	
Turbidity:	None								14/12
Color:	None						020120530)131208.JF	PG
Gross Solids:	: None	L	itter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	Ir	nhibited	Excessive	e		Sample Location:	Pool	
Benthic Grow	<i>r</i> th: Slight	V G	Green	Brown			Sample ID:	120530-9	4
Stains:	None	F	low Line	Oil	Rust Stains		Time Collected	14:15	
			Corrosion	Paint	Other		Total Chlorine (field)	: 0	ррт
Non-illicit:	Slight	🗸 N	latural Sheen	🗌 Natur	ral Suds/Foam		Free Chlorine (field):	0	ppm
– Physical C	Condition Assess	ment					Total Copper (field):	0	ppm
Graffiti	None						Ammonia (field):	0	ppm
Erosion:	None						pH (field):	7.69	units
Deposition	· None [Depth (in):					Temperature:	66	°F Ω(ana
Damage:	None r		—				Conductivity:	/48	μS/cm
Damage.		Uisplacement			rushed		Detergents:	0	mg/L
		Corrosion	Cracks/St	ructural D	amage		Phenol:	0	mg/L

Outfall ID: 16-334

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Arch

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

Diameter (in):

Height/Depth (in): 40 Width (in): 65

Mapping Precison: Mapping GPS TRUTTS / 2012 DB14D

o20120606074016.JPG

Outfall Notes:

Storm sewer from Coolidge Ave discharges to stream from east. Pipe dimensions from MS4 map

County C	oordinates:	State Pla
Northing:	477,047	Northing:
Easting:	784,021	Easting:

te Plane Coordinates: thing: 742,437 ting: 2,344,028



Inspection	Date: 0	6/6/2012 8:40:30	AM In	spector:	JCW	Inspectio	on Type:	Ongoing	Previous Rainfall (hrs): 72+	÷ .
Flow Descr Submerged:	iption:	Submerged, inde	e terminate n): 25	Notes:	Outfall upstrea MS4 m	partially subi am at 16-334 ap.	merged. US2. Pij	Outfall scree pe info from	ned		
Illicit Disch	arge Pote	ential: Unlikely			Field F	ollow-up	Of	fice Follow-u	p q	1	
Floatables:	None		Petrol.	Sheen	Suds	Sewage	e 🗌 Alg	gae 🗌 O	ther		
Odor:	None		Petrole	um 🗌	Musty	Sewage	e 🗌 Cł	nlorine 🗌 O	ther		
Turbidity:	None		VOC/S]	olvent	Fishy	Sulfur	E Fra	agrant	0201206060	08/08/ 74026	2012 D8:40
Color:	None								0201200000	4020.01	u
Gross Solids	s: None	Э	Litter		Debris	Sedime	ent 🗌 🤇	Other	Sampling Results		
Vegetation:	None	Э	🗌 Inhibite	d 🗌	Excessiv	е			Sample Location:		
Benthic Gro	wth: Mod	erate	Green	\checkmark	Brown				Sample ID:		
Stains:	Sligh	nt	Flow Li	ne 🗌	Oil	Rust St	ains		Time Collected		
			Corros	on 🗌	Paint	Other			Total Chlorine (field):		ррт
Non-illicit:	None	Э	Natura	Sheen	🗌 Natu	ral Suds/Foa	ım		Free Chlorine (field):		ррт
- Physical	Condition	Assessment —							Total Copper (field):		ppm
Creffit	New	-							Ammonia (field):		ррт
Gramti:	None	9							pH (field):		units
Erosion:	None	e Desette (inc)e							Temperature:		°F
Depositio	II. INONE								Conductivity:		µS/cm
Damage:	None	e 🗌 Displac	ement 🗌 L	Indercut		Crushed			Detergents:		mg/L
		Corrosi	on 🗌 C	racks/St	ructural D	Damage			Phenol:		mg/L

Outfall ID: 16-334 US2

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-506

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120606074740.JPG

Outfall Notes:

Upstream catchbasin located approx 165 ft E of outfall 16-334. Intermediate area consists of residential property. First upstream manhole not located.

County Co	ordinates:	State Plai	ne Coordinates:
Northing:	477,032	Northing:	742,425
Easting:	784,185	Easting:	2,344,193



Inspection	Date: 6/6/2	012 8:44:22 AM	Inspector:	JCW	Inspec	tion Type:	Ongoing	Previous Rainfall (h	rs): 72+	
Flow Descr	ription: Subr	merged, indeterminat	te Notes:							
Submerged: Fully Depth (in): 36										
Illicit Discharge Potential: Unlikely										
Floatables:	None	Pet	rol. Sheen	Suds	Sewa	age 🗌 Al	gae 🗌 Othe	er		
Odor:	None	□ Pet □ VO	roleum	☐ Musty ☐ Fishy	Sewa Sulfu	age 🗌 Cl ır 🗌 Fr	nlorine 🗌 Othe agrant	er and a second s		12
Turbidity:	None							States States	L.A.S.	2412 08.48
Color:	None							02012060	6074802.JI	PG
Gross Solid	s: Slight		er 🗸	Debris	🗌 Sedi	ment 🗌 (Other	- Sampling Results		
Vegetation:	None	🗌 Inhi	ibited	Excessiv	e			Sample Location:	Pool	
Benthic Gro	wth: Slight	🖌 Gre	en 🗌	Brown				Sample ID:	120606-8	5
Stains:	None		w Line	Oil	Rust	Stains		Time Collected	08:58	
		Cor	rosion	Paint	Othe	r		Total Chlorine (field)	: 0	ppm
Non-illicit:	None	Nat	ural Sheen	Natu	ral Suds/F	oam		Free Chlorine (field):	0	ppm
– Physical	Condition Ass	essment		_		1		Total Copper (field):	0	ppm
Oneffitie	Name	cooment						Ammonia (field):	0	ррт
Graffiti:	None							pH (field):	8.18	units
Erosion:	INONE	Death (in)						Temperature:	73	°F
Depositio	n: None	Deptn (in):						Conductivity:	974	µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/St	tructural D	Damage			Phenol:	0	mg/L

Outfall ID: 16-351

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Arch

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions -

Diameter (in): Height/Depth (in): 22 Width (in): 36

Mapping Precision:Desktop mapping estimate✓Not Physically Located



o20120606080936.JPG

Outfall Notes:

Storm sewer from Van Buren Ave discharges to stream from east. Pipe information from MS4 map

County Co	ordinates:	State Pla
Northing:	477,598	Northing:
Easting:	784,255	Easting:

te Plane Coordinates: thing: 742,991 ting: 2,344,252

Inspection Da	ate: 6/6/201	12 9:09:18 AI	M Ir	spector:	JCW	Inspect	ion Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descript	tion: Subme	erged (not lo	cated)	Notes:	Outfall	fully subme	rged and	not physically			and the second second
Submerged: I	Fully	Depth (in):	:		located 351 US	. Outfall so 2.	reened up	ostream at 16-	OUT	al	
Illicit Discharg	ge Potential:	Unlikely			Field Fo	ollow-up	Of	fice Follow-up		40	Car of
Floatables: No	one		Petrol.	Sheen	Suds	Sewa	ge 🗌 Al	gae 🗌 Othe	er Alle		Carlos and
Odor: No	one		Petrole	um	Musty Fishy	Sewa	ge 🗌 Cł	nlorine 🗌 Othe agrant	er		0
Turbidity: No	one										2015 09109
Color: No	one								020120606080	948.JI	°G
Gross Solids:	None		Litter		Debris	Sedim	nent 🗌 (Other	-Sampling Results		
Vegetation:	None		🗌 Inhibite	ed 🗌 I	Excessive	e			Sample Location:		
Benthic Growth	h: None		Green		Brown				Sample ID:		
Stains:	None		Flow L	ne 🗌 (Dil	Rust S	Stains		Time Collected		
			Corros	ion 🗌 I	Paint	Other			Total Chlorine (field):		ррт
Non-illicit:	None		Natura	Sheen	🗌 Natu	ral Suds/Fo	am		Free Chlorine (field):		ррт
– Physical Co	ondition Asses	sment —							Total Copper (field):		ррт
Graffiti:	Nono								Ammonia (field):		ppm
Erocion:	None								pH (field):		units
Deposition:	None	Donth (in):							Temperature:		°F
Deposition.	None		_		_				Conductivity:		µS/cm
Damage:	None	Displace	ment 🗌 l	Indercut		Crushed			Detergents:		mg/L
		Corrosior	n 🗌 (Cracks/Str	uctural D	amage			Phenol:		mg/L



Outfall ID: 16-351 US2

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-1251

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located

o20120606081352.JPG

Outfall Notes:

Upstream manhole located approx 132 ft E of outfall 16-351. Intermediate area consists of open space. First upstream manhole not located.

County Co	ordinates:	State Plane Co		
Northing:	477,585	Northing:	742	
Easting:	784,386	Easting:	2,344	

rdinates: .981 384





Outfall ID: 16-358

Minor Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Arch

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

Dimensions Diameter (in)

Diameter (iii).	
Height/Depth (in):	18
Width (in):	24

Mapping Precison: Desktop mapping estimate ✓ Not Physically Located



o20120606082338.JPG

Outfall Notes:

Storm sewer from Arthur Ave discharges to stream from east. Pipe info from MS4 map

County Co	ordinates:	State Plane Co			
Northing:	478,030	Northing:	743,4		
Easting:	784,665	Easting:	2,344,6		

County Co	ordinates:	State Plane Coordinates:				
Northing:	478,030	Northing:	743,431			
Easting:	784,665	Easting:	2,344,654			



Inspection	Date: 6/6/2	2012 9:22:50 AM	Inspector:	JCW	Inspection Ty	rpe: Ongo	ing	Previous Rainfall (hrs):	72+	
Flow Descr	Flow Description: Submerged (not located) Notes: Outfall fully					and not phy	sically			VMA
Submerged	: Fully	Depth (in):		358 US	1. Outrall screene	o upstream	n at 16-		al	
Illicit Disch	arge Potentia	al: Unlikely		Field Fo	ollow-up	Office Fo	llow-up			
Floatables:	None		trol. Sheen 🗌	Suds	Sewage	Algae	Other		11-N.	
Odor:	None	🗌 Pe	troleum	Musty	Sewage	Chlorine	Other		<mark>le</mark>	
-			C/Solvent	Fishy	Sulfur] Fragrant		AN AN A		ANT MARCINE
l urbidity:	None							-20120606082	240 15	
Color:	None							020120606082	342.JF	G
Gross Solid	s: None	Litt	er 🗌 [Debris	Sediment	Other	Γ.	Sampling Results		
Vegetation:	None	🗌 Inh	ibited 🗌 E	Excessiv	e			Sample Location:		
Benthic Gro	wth: None	Gre	een 🗌 E	Brown				Sample ID:		
Stains:	None	🗌 Flo	w Line 🗌 🕻	Dil	Rust Stains			Time Collected		
		🗌 Co	rrosion 🗌 F	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	□ Na	tural Sheen	Natu	ral Suds/Foam			Free Chlorine (field):		ррт
- Physical	Condition Ass	essment					Total Copper (field):		ррт	
i nysicai	Condition Ass	essment						Ammonia (field):		ррт
Graffiti:	None							pH (field):		units
Erosion:	None							Temperature:		°F
Depositio	on: None	Depth (in):						Conductivity:		µS/cm
Damage:	None	Displacement [Undercut		Crushed			Detergents:		mg/L
		Corrosion [Cracks/Str	uctural D	amage			Phenol:		mg/L

Outfall ID: 16-358 US1

Minor Outfall - Alternate Location

Structure Type: Closed Pipe Outfall

Discharge Location: Downstream Outfall

Shape: Pipe - Arch

Material: CMP

City ID: 16-358

Drainage Basin: Sawyer Creek

Diameter (in): Height/Depth (in): 18 Width (in): 24

Mapping Precison: Mapping GPS



o20120606083226.JPG

Outfall Notes:

Upstream manhole located approx 45 ft E of outfall 16-358. Intermediate area consists of open space.

County C	oordinates:	State PI
Northing:	478,030	Northing
Easting:	784,710	Easting:

 te Plane Coordinates:

 rthing:
 743,432

 sting:
 2,344,700



Inspection	Date: 6/6/	2012 9:28:00 AM	Inspector	: JCW	Inspec	tion Type:	Ongoing		Previous Rainfall (h	rs): 72-	÷
Flow Desc	Flow Description: Submerged, indeterminate Notes:										
Submerged	Submerged: Fully Depth (in): 34										
Illicit Discharge Potential: Unlikely											
Floatables:	None	Petro	I. Sheen	Suds	Sewa	age 🗌 Al	gae	Other		21	
Odor:	None	Petro	leum [/Solvent [Musty Fishy	Sewa	age 🗌 C Ir 🗌 Fr	hlorine 🗌 ragrant	Other			
Turbidity:	None								and the second second	06706	110
Color:	None								02012060	6083232.J	PG
Gross Solid	ls: Slight	✓ Litter	\checkmark	Debris	🗌 Sedii	ment	Other		Sampling Results —		
Vegetation:	None	🗌 Inhib	ited] Excessiv	e				Sample Location:	Pool	
Benthic Gro	wth: Slight	✓ Gree	n 🗌	Brown					Sample ID:	120606-9	91
Stains:	None	Flow	Line 🗌] Oil	🗌 Rust	Stains			Time Collected	09:30	
	L		osion	Paint	Othe	r			Total Chlorine (field)	: 0	ppm
Non-illicit:	None	☐ Natu	ral Sheen	🗌 Natu	ral Suds/F	oam			Free Chlorine (field):	0	ррт
- Physical	Condition As	secoment							Total Copper (field):	0	ррт
FilySical	Conulion As	Sessinent							Ammonia (field):	0	ррт
Graffiti:	None								pH (field):	7.72	units
Erosion:	None								Temperature:	73	°F
Depositio	on: None	Depth (in):							Conductivity:	753	µS/cm
Damage:	None	Displacement	Undercut	t 🗌 (Crushed				Detergents:	0	mg/L
		Corrosion	Cracks/S	Structural E	Damage				Phenol:	0	mg/L

Outfall ID: 16-381

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Arch

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions -

Diameter (in): Height/Depth (in): 16 Width (in): 25

Mapping Precision:Desktop mapping estimate✓Not Physically Located



o20120927121238.JPG

Outfall Notes:

Storm sewer from Buchanan Ave discharges to stream from west. Outfall fully submerged and not physically located. Pipe info from MS4 map

County Co	ordinates:	State Plane Coordinates:				
Northing:	478,375	Northing:	743,777			
Easting:	784,739	Easting:	2,344,723			





Inspection Da	ate: 6/6/2012 10:0	03:38 AM Inspe	ector: JCW I	nspection Type:	Other	Previous Rainfall (hrs):	72+
Flow Descript Submerged:	tion: Submerged Fully Dep	(not located) No oth (in):	otes: Outfall fully located. Ou 381 US1.	submerged and r tfall screened up	not physically ostream at 16-	Opt	all
Illicit Discharg	ge Potential: Potential: Potential	ential	Field Follow	up 🗌 Off	fice Follow-up		
Floatables: No	one	Petrol. She	een 🗌 Suds 🗌	Sewage 🗌 Alg	gae 🗌 Other		1000
Odor: No	one		Musty	Sewage 🗌 Ch	llorine 🗌 Other	LOCA	
Turbidity: No	one		ent 🔄 Fisny 📋		agrant	The second	areas and
Color: No	one					0201206060904	438.JPG
Gross Solids:	None	Litter	Debris	Sediment 🗌 C	Dther	Sampling Results	
Vegetation:	None	Inhibited	Excessive			Sample Location:	
Benthic Growth	h: None	Green	Brown			Sample ID:	
Stains:	None	Flow Line	🗌 Oil 📃	Rust Stains		Time Collected	
		Corrosion	Paint	Other		Total Chlorine (field):	ppm
Non-illicit:	None	Natural Sh	een 🗌 Natural S	uds/Foam		Free Chlorine (field):	ppm
Physical Co	ondition Assessment					Total Copper (field):	ppm
Graffiti:	None					Ammonia (field):	ppm
Erosion:	None					Temperature:	units °F
Deposition:	None Depth	ו (in):				Conductivity:	uS/cm
Damage:	None 🗌 Di	splacement 🗌 Unde	ercut 🗌 Crusł	ed		Detergents:	ma/L
	Co	prrosion Crac	ks/Structural Dama	ge		Phenol:	mg/L

Outfall ID: 16-381 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - brick

City ID: 16-381

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120927120834.JPG

Outfall Notes:

Upstream manhole located approx 140 ft W of outfall 16-381. Intermediate area consists of street right-of-way and residential property.

County Co	ordinates:	State Plane Coordinates				
Northing:	478,393	Northing:	743,793			
Easting:	784,600	Easting:	2,344,583			

Inspection Date: JCW Inspection Type: Ongoing 9/27/2012 1:06:26 PM Inspector: Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: Submerged: Fully Depth (in): 35 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120927120846.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: None Green Brown Sample ID: 120927-92 None Stains: Rust Stains **Time Collected** Flow Line Oil 13:05 Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 7.89 units Erosion: None Temperature: 66 °F Deposition: None Depth (in): Conductivity: 1176 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: mg/L Corrosion Cracks/Structural Damage --



Outfall ID: 16-381 US1

Inspection Date: 6/6/2012 10:09:2	OAM Inspector: JCW Inspe	ection Type: Other	Previous Rainfall (hrs):	72+	
Flow Description: Submerged, ind Submerged: Fully Depth (i	n): 25 Notes: Manhole pre-sci manhole is clear	eening. Reinspect after ned.			
Illicit Discharge Potential: Potentia	al Field Follow-up	Field Follow-up			
Floatables: None	Petrol. Sheen Suds Sev	vage 🗌 Algae 🗌 Other	NA STATE		
Odor: Faint	Petroleum 🗹 Musty 🗌 Sev	vage 🗌 Chlorine 🗌 Other		and the second	
	VOC/Solvent Fishy Sul	fur 🗌 Fragrant		01/	
Turbidity: None]			10-10-10-10-10-10-10-10-10-10-10-10-10-1	
Color: None]		02012060609	0934.JPG	
Gross Solids: Moderate	Litter Debris Sec	liment 🗌 Other	Sampling Results		
Vegetation: None	Inhibited Excessive		Sample Location: Poo	bl	
Benthic Growth: Slight	Green Brown		Sample ID: 120	606-66	
Stains: None	Flow Line Oil Rus	st Stains	Time Collected 10:	10	
	Corrosion Paint Oth	er	Total Chlorine (field):	0 ppm	
Non-illicit: None	Natural Sheen 🗌 Natural Suds/	Foam	Free Chlorine (field):	0 ppm	
- Physical Condition Assessment		_	Total Copper (field):	0 ppm	
			Ammonia (field):	0 ppm	
Gramit: None			pH (field):	8.01 <i>units</i>	
Erosion: None			Temperature:	70 ° <i>F</i>	
Deposition: None Depth (in)	:		Conductivity:	1225 μ <i>S/cm</i>	
Damage: None 🗌 Displa	cement Undercut Crushed		Detergents:	0 <i>mg/L</i>	
	ion Cracks/Structural Damage		Phenol:	0 <i>mg/L</i>	

Outfall ID: 16-463

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Rainbow Park

-Dimensions

Diameter (in): 15 Height/Depth (in): Width (in):

Mapping Precision:Desktop mapping estimate✓Not Physically Located



o20120620100554.JPG

Outfall Notes:

Storm sewer from Rainbow Dr discharges to river from west. Outfall not located - pipe info from MS4 map.

County Co	ordinates:	State Plane Coordinates:					
Northing:	480,722	Northing:	746,133				
Easting:	785,231	Easting:	2,345,172				

Inspection Date: 6/20/2012 11:03:31 AM Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 24-48 Flow Description: Submerged (not located) Notes: Outfall fully submerged; screened upstream at 16-463 US1. Submerged: Fully Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120620100602.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results Inhibited Vegetation: None Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Inspection	Date:	10/11/2011 12:32	:34 PM Ir	spector:	JCW	Inspect	on Type:	Ongo	ing	Previous Rainfall (hrs):	72+	
Flow Descr Submerged	r iption: : Fully	Submerged (not Depth (ir	located)	Notes:	2010 so submer	creening fol ged and no	low-up. Ou t physical	utfall fu ly locat t 16-46	lly ed. 3 US1	Out	fal	
Illicit Disch	arge Po	tential: Potentia	I] Field Fo	ollow-up	Of	fice Fo	llow-up		te	20
Floatables:	None		Petrol.	Sheen	Suds	Sewag	ge 🗌 Alg	gae	Other		-	a en
Odor:	None		Petrole	eum 🗌	Musty	Sewag	ge 🗌 Ch	lorine	Other	Loca	10	
				olvent	Fishy	Sulfur	🗌 Fra	agrant			5	
Turbidity:	None									1 1	1	199
Color:	None									020111011123	3230.JF	°G
Gross Solid	s: Nor	าย	Litter		Debris	Sedim	ent 🗌 C	Other		Sampling Results]
Vegetation:	Nor	ne	🗌 Inhibite	ed 🗌	Excessive	Э				Sample Location:		
Benthic Gro	wth: Nor	าย	Green		Brown					Sample ID:		
Stains:	Nor	ne	Flow L	ine 🗌	Oil	Rust S	Stains			Time Collected		
			Corros	ion 🗌	Paint	Other				Total Chlorine (field):		ppm
Non-illicit:	Nor	ne	Natura	l Sheen	Natur	ral Suds/Fo	am			Free Chlorine (field):		ppm
– Physical	Conditio	n Assessment —								Total Copper (field):		ррт
Oneffitie	Na									Ammonia (field):		ppm
Graffiti:	INOI	le								pH (field):		units
Erosion:	INOI	1e								Temperature:		°F
Depositio	n: Nor	ne Depth (in):	0							Conductivity:		µS/cm
Damage:	Nor	ne 🗌 Displac	ement 🗌 l	Indercut		Crushed				Detergents:		mg/L
		Corrosi	on 🗌 🤇	Cracks/St	ructural D	amage				Phenol:		mg/L

Inspection Da	te: 8/19/2	2010 8:04:26 AM	Inspector:	JCW In	spection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descript Submerged:	t ion: Subn Fully	nerged (not located) Depth (in):	Notes:	Outfall fully s located. Out 463 US1.	ubmerged and all screened up	not physically ostream at 16-	Min Outf	al	
Illicit Discharç	ge Potentia	I: Potential] Field Follow-u	ip 🗌 O	ffice Follow-up	No.	t	
Floatables: No	one	Petro	I. Sheen] Suds 🗌 S	Sewage 🗌 Al	gae 🗌 Othe			3
Odor: No	one		leum] Musty	Sewage 🗌 Cl Sulfur 🗌 Fr	hlorine 🗌 Othe agrant	Loca	te	
Turbidity: No	one							11.06 1 (11.06	9 8010 07 38
Color: No	one						0201008190758	828.JF	PG
Gross Solids:	None	Litter		Debris 🗌 S	Sediment	Other	-Sampling Results		
Vegetation:	None	🗌 Inhib	ited 🗌 I	Excessive			Sample Location:		
Benthic Growth	h: None	Gree	n 🗌 I	Brown			Sample ID:		
Stains:	None	Flow	Line 🗌 🤇	Dil 🗌 F	Rust Stains		Time Collected		
			osion 🗌 I	Paint 🗌 (Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natu	al Sheen	Natural Su	ds/Foam		Free Chlorine (field):		ррт
– Physical Co	ndition Asse	essment					Total Copper (field):		ррт
Groffiti:	Nono						Ammonia (field):		ppm
Graillu. Frosion:	None						pH (field):		units
Doposition:	None	Dopth (in): 0					Temperature:		°F
Deposition.	None						Conductivity:		µS/cm
Danlaye.	none		Undercut		ed		Detergents:		mg/L
		Corrosion	Cracks/Str	uctural Damag	е		Phenol:		mg/L

Outfall ID: 16-463 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-463

Drainage Basin: Rainbow Park

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120620100612.JPG

Outfall Notes:

Upstream manhole located approx 28 ft WSW of outfall 16-463. Intermediate area consists of open space along shoreline.

County Co	ordinates:	State Plane Coordinates					
Northing:	480,711	Northing:	746,121				
Easting:	785,208	Easting:	2,345,149				

Inspection Date: 6/20/2012 11:06:04 AM Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 24-48 Flow Description: Submerged, indeterminate Notes: 2011 gross solids follow-up. Visual screening only. Submerged: Fully Depth (in): 36 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120620100626.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results Inhibited Vegetation: None Excessive Sample Location: Benthic Growth: Slight Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 16-463 US1

Inspection	Date: 10/1	1/2011 12:35:49 PM In	spector: JC	N Inspe	ction Type: On	igoing	Previous Rainfall (h	ırs): 72+	
Flow Desci Submerged	r iption: Sub : Fully	merged, indeterminate Depth (in): 31	Notes: 20 still	l0 screening f present.	ollow-up. Float	able debris	No de		
Illicit Disch	arge Potentia	al: Potential	Field Follow-up						
Floatables:	None	Petrol.	Sheen 🗌 Suc	ds 🗌 Sew	age 🗌 Algae	Othe			D
Odor:	None	Petrole	um 🗌 Mu	sty 🗌 Sew	age 🗌 Chlorii	ne 🗌 Other		14-1	A MAR
	ц	VOC/S	olvent 🗌 Fis	hy 🗌 Sulfi	ur 🗌 Fragra	ant	Carlo Maria		
Turbidity:	None						and the second		
Color:	None						02011101	1123244.JI	PG
Gross Solid	s: Slight	Litter	Debr	is 🗌 Sedi	ment 🗌 Othe	er 🗌	-Sampling Results —		
Vegetation:	None	Inhibite	ed 🗌 Exce	ssive			Sample Location:	Pool	
Benthic Gro	wth: None	Green	Brow	n			Sample ID:	111011-9	6
Stains:	None	Flow Li	ine 🗌 Oil	Rust	t Stains		Time Collected	12:35	
	L	Corrosi	ion 🗌 Paint	Othe	er		Total Chlorine (field)	: 0	ppm
Non-illicit:	None	Natura	I Sheen 🗌 N	Vatural Suds/F	oam		Free Chlorine (field)	: 0	ррт
- Physical	Condition Ass				_		Total Copper (field):	0	ррт
T Trysical		63311611					Ammonia (field):	0	ррт
Graffiti:	None						pH (field):	8.4	units
Erosion:	None						Temperature:	71	°F
Depositio	n: None	Depth (in): 0					Conductivity:		μS/cm
Damage:	None	🗌 Displacement 🗌 L	Indercut	Crushed			Detergents:		mg/L
		Corrosion C	Cracks/Structu	ral Damage			Phenol:		mg/L


Inspection	Date: 8/19/	2010 8:09:08 AM In	nspector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs): 72+	
Flow Description:Submerged, indeterminateSubmerged:FullyDepth (in):36			Notes: Water in man	s: Water level at manhole rim. Floatable debris in manhole.				
Illicit Disch	arge Potentia	I: Potential	Field F	ollow-up 🗌 O	ffice Follow-up		A REAL	
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage A	lgae 🗌 Other	F.		
Odor:	None	Petrole	eum 🗌 Musty	🗌 Sewage 🗌 C	hlorine 🗌 Other		15	VIAT
			olvent 🗌 Fishy	Sulfur Fr	ragrant	PARA	J.C.	
Turbidity:	Slight cloudin	ess				THE AND	224	
Color:	None					0201008190	80644.JI	PG
Gross Solid	ls: Moderate	Exter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inhibite	ed 🗌 Excessiv	ve		Sample Location: Po	loc	
Benthic Gro	wth: None	Green	Brown			Sample ID: 10	00819-6	7
Stains:	None	🗌 Flow Li	ine 🗌 Oil	Rust Stains		Time Collected 08	3:10	
			ion 🗌 Paint	Other		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natura	I Sheen 🗌 Natu	Iral Suds/Foam		Free Chlorine (field):	0	ppm
– Physical	Condition Ass	essment				Total Copper (field):	0	ppm
Oneffitie	Name	233mem				Ammonia (field):	0	ppm
Gramti:	None					pH (field):	7.56	units
Erosion:	None					Temperature:	73	°F
Depositio	on: None	Depth (in): 0				Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 L	Jndercut	Crushed		Detergents:	0	mg/L
		Corrosion	Cracks/Structural [Damage		Phenol:		mg/L

Outfall ID: 16-488

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 36 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120530120902.JPG

Outfall Notes:

Storm sewer from Westfield St discharges to stream from north.

County Co	ordinates:
Northing:	477,214
Easting:	782,730

State Plane Coordinates: Northing: 742,580 Easting: 2,342,734





Outfall ID: 16-488 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-488

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120530122458.JPG

Outfall Notes:

Upstream manhole located approx 97 ft NW of outfall 16-488. Intermediate area consists of street right-of-way.

County C	County Coordinates:					
Northing:	477,288	Ν				
Fasting:	782 667	E				

State Plane Coordinates: Northing: 742,653 Easting: 2,342,671

Inspection Date: 5/30/2012 1:24:28 PM Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged, indeterminate Notes: Submerged: Partially Depth (in): 14 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant 05/30/2012 13:25 Turbidity: None o20120530122510.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: Slight Green Brown Sample ID: 120530-68 None Stains: Rust Stains **Time Collected** Flow Line Oil 13:27 Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 8 units Erosion: None Temperature: 64 °F Deposition: None Depth (in): Conductivity: 972 μS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: Corrosion Cracks/Structural Damage 0 mg/L



Outfall ID: 16-514

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Arch

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions -

Diameter (in): Height/Depth (in): 31 Width (in): 50

Mapping Precison:Desktop mapping estimate✓Not Physically Located

o20120530124318.JPG

Outfall Notes:

Outfall fully submerged and not physically located. GPS coordinates approximate. Pipe info from MS4 map.

Cour	nty Co	ordinates:	State Plane Coordinates:				
North	ning:	477,303	Northing:	742,676			
Easti	ng:	783,101	Easting:	2,343,104			

Inspection Date: 5/30/2012 1:40:51 PM Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged (not located) Notes: Outfall fully submerged and not physically located. Outfall screened upstream at 16-Submerged: Fully Depth (in): 514 US1. Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120530124324.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results Vegetation: None Inhibited Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 16-514 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-514

Drainage Basin: Sawyer Creek

-Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS



o20120530124758.JPG

Outfall Notes:

Upstream catchbasin located approx 47 ft N of outfall 16-514. Intermediate area consists of open space.

County Co	State Plane			
Northing:	477,350	Northing:		
Easting:	783,100	Easting:	2.	

State Plane Coordinates: Northing: 742,723 Easting: 2,343,102





Outfall ID: 16-532

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Arch

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions -

Diameter (in): Height/Depth (in): 36 Width (in): 58

Mapping Precison: Mapping GPS



o20120606071048.JPG

Outfall Notes:

Storm sewer from Taft Ave and water park discharges to stream from south. Pipe info from MS4 map.

County Co	ordinates:	State Plane Coordinates			
Northing:	476,871	Northing:	742,256		
Easting:	783,733	Easting:	2,343,743		



Inspection	Date: 6	5/6/2012 8:10:09 AN	Inspec	tor: JCW	Inspection T	/pe: Ongoing	Previous Rainfall (hrs):	72+	
Flow Description: Submerged, indeterminate Notes: Outfall partially subm						ged. Outfall screer	ned		R. Aller
Submerged	: Partially	Depth (in):	27	upstrea	am at 16-532 US	1.		4	1. 18
Illicit Disch	arge Pote	ential: Unlikely		Field F	ollow-up	Office Follow-up	o .		N/S
Floatables:	None	[Petrol. Shee	en 🗌 Suds	Sewage	Algae O	ther	30	e - Ja las ci
Odor:	None]	Petroleum	Musty	Sewage	Chlorine Of	ther		
Turbidity:	None	L					a k		2012 08-12
Color:	None						020120606071	258.JI	PG
Gross Solid	s: None	;	Litter	Debris	Sediment	Other	Sampling Results]
Vegetation:	None)	Inhibited	Excessiv	/e		Sample Location:		
Benthic Gro	wth: None	e [Green	Brown			Sample ID:		
Stains:	None)	Flow Line	🗌 Oil	Rust Stains		Time Collected		
		[Corrosion	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	e [Natural She	en 🗌 Natu	ıral Suds/Foam		Free Chlorine (field):		ppm
- Physical	Condition	Assessment					Total Copper (field):		ppm
Graffiti	None						Ammonia (field):		ppm
Erosion:	None						pH (field):		units
	n: None	Depth (ip):					Temperature:		°F
Depositio	None			_			Conductivity:		μS/cm
Damage.	NOTE	[*] Uisplacen	nent 📋 Under	cut	Crushed		Detergents:		mg/L
		Corrosion	Crack	s/Structural [Damage		Phenol:		mg/L

Outfall ID: 16-532 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: N/A

Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120606072524.JPG

Outfall Notes:

Upstream manhole located approx 31 ft SSW of outfall 16-532. Intermediate area consists of open space.

County Co	County Coordinates:				
Northing:	476,843	Northing:			
Easting:	783.719	Easting:	:		

ate Plane Coordinates: orthing: 742,228 asting: 2,343,731



Inspection	Date: 6/6/20	012 8:20:18 AM	Inspector:	JCW	Inspec	tion Type:	Ongoing	Previous Rainfall (hrs): 72+	
Flow Description: Submerged, indeterminate Notes:										Sugar a.
Submerged: Fully Depth (in): 28									Carlow .	
Illicit Disch	arge Potential	l: Unlikely	Field Follow-up Office Follow-up					C.		
Floatables:	None		Petrol. Sheen	Suds	Sewa	ge 🗌 Al	gae 🗌 Othe	er		1 P
Odor:	None		Petroleum	Musty	Sewa	ige 🗌 Cl	hlorine 🗌 Othe	er Aller	1	1.10
		\	VOC/Solvent	Fishy	Sulfu	r 🗌 Fr	agrant		06/06/	2012 08:25
Turbidity:	None									
Color:	None							02012060	06072534.JF	G
Gross Solid	s: None		Litter	Debris	Sedir	nent 🗌	Other	- Sampling Results -		
Vegetation:	None		Inhibited	Excessiv	e			Sample Location:	Pool	
Benthic Gro	wth: Moderate		Green	Brown				Sample ID:	120606-5	3
Stains:	None		Flow Line	Oil	Rust	Stains		Time Collected	08:22	
			Corrosion	Paint	Other			Total Chlorine (field): 0	ppm
Non-illicit:	None		Natural Sheen	🗌 Natu	ral Suds/Fe	bam		Free Chlorine (field)): 0	ppm
- Physical	Condition Asse							Total Copper (field)	: 0	ррт
T Trysical	Condition Asse	55111011						Ammonia (field):	0	ppm
Graffiti:	None							pH (field):	8.06	units
Erosion:	None							Temperature:	72	°F
Depositio	n: None	Depth (in):						Conductivity:	1120	µS/cm
Damage:	None	Displacemen	t 🗌 Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/S	tructural D	Damage			Phenol:	0	mg/L

Outfall ID: 16-622

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120530064602.JPG

Outfall Notes:

Storm sewer from Westbrook Dr discharges to stream from south.

County Coordinates							
Northing:	475,549						
Easting:	779,699						

State Plane Coordinates:Northing:740,861Easting:2,339,734



Inspection	Date: 5/30/2	2012 7:46:42 AM	Inspector:	JCW	Inspection	Туре: С	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	ription: None	1	Notes:	Pipe dry	/ at time of ins	spection.				
Submerged	: None	Depth (in):								12.10
Illicit Disch	arge Potentia	l: Unlikely] Field Fo	ollow-up		ce Follow-up		n))	
Floatables:	None	Pe	etrol. Sheen	Suds	Sewage	🗌 Alga	e Other		41	1 Contractor
Odor:	None	Pe	etroleum	Musty	Sewage	Chlc	orine 🗌 Other		1	Ale
Turkiditur	None	L] VC	OC/Solvent	Fishy	Sulfur	Frag	grant		05/30.	2012 01:44
Turbidity:	None							020120530064	61 <i>8</i> .JI	PG
Color:	None							02072000004	510.01	u
Gross Solid	s: None	🗌 Lit	tter	Debris	Sedimen	nt 🗌 Ot	her	Sampling Results		
Vegetation:	None		hibited	Excessive	e			Sample Location:		
Benthic Gro	wth: None	🗌 🗌 Gi	reen	Brown				Sample ID:		
Stains:	Slight	🗌 Fle	ow Line 🗌	Oil	Rust Sta	ins		Time Collected		
		Co	orrosion	Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	N≀	atural Sheen	☐ Natur	al Suds/Foam	า		Free Chlorine (field):		ppm
- Physical	Condition Ass							Total Copper (field):		ppm
Croffit	News	Soment						Ammonia (field):		ppm
Gramiti:	None							pH (field):		units
Erosion:	Minor	Denth (in)						Temperature:		°F
Depositio	n: None							Conductivity:		µS/cm
Damage:	winor	Displacement	Undercut	✓ C	Crushed			Detergents:		mg/L
		 Corrosion 	Cracks/Str	uctural D	amage			Phenol:		mg/L

Outfall ID: 16-629

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120530070832.JPG

Outfall Notes:

Storm sewer from Brookview Ct discharges to stream from south.

County Co	ordinates:
Northing:	474,931
Easting:	779,495

State Plane Coordinates:Northing:740,240Easting:2,339,541

Inspection	Date: 5/30/2	2012 8:08:34 AM	Inspector:	JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	iption: None		Notes:	Pipe wet	but no flow at time	of inspection.		\mathbf{n}	TARY.
Submerged:	None	Depth (in):					A CONTRACTOR	11	19-2
Illicit Disch	arge Potentia	: Unlikely] Field Fol	low-up O	ffice Follow-up		5	A A
Floatables:	None		Petrol. Sheen	Suds	Sewage Al	gae 🗌 Other			1000
Odor:	None		Petroleum] Musty] Fishy	Sewage Cl	hlorine 🗌 Other agrant	A CARGE		
Turbidity:	None					0		97/201	
Color:	None						0201205300708	842.JI	PG
Gross Solids	s: None		Litter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None		Inhibited	Excessive			Sample Location:		
Benthic Gro	wth: None		Green	Brown			Sample ID:		
Stains:	Slight	\checkmark	Flow Line	Oil	Rust Stains		Time Collected		
			Corrosion	Paint	Other		Total Chlorine (field):		ррт
Non-illicit:	None		Natural Sheen	Natura	al Suds/Foam		Free Chlorine (field):		ррт
– Physical	Condition Asse	essment					Total Copper (field):		ррт
Graffiti	None						Ammonia (field):		ppm
Erosion	Minor						pH (field):		units
Depositio	n: None	Denth (in):					Temperature:		۰F
Damage.	Minor						Conductivity:		μS/cm
Damaye.	WILLOI		ent 🖌 Undercut		rushed		Detergents:		mg/L "
		Corrosion	Cracks/Str	ructural Da	image		Phenol:		mg/L



Outfall ID: 16-646a

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 48 Height/Depth (in): Width (in):

Mapping Precison: Desktop mapping estimate

Not Physically Located



o20120606112906.JPG

Outfall Notes:

Storm sewer from Washburn St discharges to stream from south. No GPS under bridge - location approximate. Replaces 16-646 (2012).

County Co	ordinates:	State Plai	ne Coordinates:
Northing:	476,514	Northing:	741,855
Easting:	781,306	Easting:	2,341,324

JCW Inspection Type: Ongoing **Inspection Date:** 6/6/2012 12:26:31 PM Inspector: Previous Rainfall (hrs): 72+ Flow Description: None Notes: Wet but no flow. Minor litter, likely from construction. Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120606112916.JPG Color: None ✓ Litter Gross Solids: Slight Debris Sediment Other Sampling Results Inhibited Vegetation: None Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: None Stains: Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: mg/L --Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 16-646b

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 60 Height/Depth (in): Width (in):

Mapping Precison: Desktop mapping estimate

Not Physically Located



o20120606113228.JPG

Outfall Notes:

Storm sewer from swale discharges to stream from south. Limited GPS next to bridge - location approximate. Added 2012.

County Co	ordinates:	State Plan	ne Coordinates:
Northing:	476,523	Northing:	741,864
Easting:	781,336	Easting:	2,341,354



Inspection	Date: 6/6/2012 12:	30:06 PM Inspec	tor: JCW	Inspection Type:	Ongoing	Previous Rainfall (hr	s): 72+	-
Flow Desci	ription: Trickle	No	tes:				///	
Submerged	: None Dep	pth (in):					11	
Illicit Disch	arge Potential: Unl	likely	Field Fo	ollow-up 🗌 Of	fice Follow-up		4	
Floatables:	Moderate	Petrol. Shee	en 🖌 Suds	Sewage Al	gae 🗌 Other		22	
Odor:	None	Petroleum	Musty	🗌 Sewage 🗌 Cl	nlorine 🗌 Other		221	112
		VOC/Solver	nt 🗌 Fishy	Sulfur Fr	agrant	Ser Mart		2012 12792
Turbidity:	None							1
Color:	None					020120606	113236.JI	PG
Gross Solid	s: None	Litter	Debris	Sediment	Other	Sampling Results —		
Vegetation:	None	Inhibited	Excessiv	e		Sample Location: F	low	
Benthic Gro	wth: Slight	🖌 Green	Brown			Sample ID: 1	20606-1	0
Stains:	None	Flow Line	🗌 Oil	Rust Stains		Time Collected	2:31	
		Corrosion	Paint	Other		Total Chlorine (field):	0	ppm
Non-illicit:	Moderate	Natural She	en 🗸 Natu	ral Suds/Foam		Free Chlorine (field):	0	ppm
- Physical	Condition Assessmen					Total Copper (field):	0	ррт
	Condition Assessment	l.				Ammonia (field):	0	ррт
Graffiti:	None					pH (field):	8.16	units
Erosion:	None					Temperature:	75	°F
Depositio	on: None Depti	h (in):				Conductivity:	1728	µS/cm
Damage:	None 🗌 Di	isplacement 🗌 Under	rcut 🗌 (Crushed		Detergents:	0	mg/L
		orrosion 🗌 Crack	s/Structural D	Damage		Phenol:	0	mg/L

Outfall ID: 16-660

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 21 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120530100040.JPG

Outfall Notes:

Storm sewer from Fall Creek Ln discharges to south end of detention basin.

County Co	County Coordinates:					
Northing:	475,039	Northing:				
Easting:	779,334	Easting:	2			

State Plane Coordinates:Iorthing:740,345asting:2,339,379



Inspection	Date: 5/30/2	2012 10:59:58 AM	Inspector:	JCW	Inspection Type	: Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	ription: Subr	nerged, indeterminate	Notes:	Outfall p	artially submerged	Outfall screened		3.5	
Submerged	: Partially	Depth (in): 10		upstrear	n at 16-660.				
Illicit Disch	arge Potentia	l: Unlikely		Field Fol	llow-up	Office Follow-up			
Floatables:	None	Petro	I. Sheen	Suds		lgae 🗌 Othe	r		100
Odor:	None	Petro	leum	Musty	Sewage C	hlorine 🗌 Othe	r	19	I
			/Solvent	Fishy	Sulfur F	ragrant		05/10	11-
Turbidity:	None								
Color:	None						0201205301000	048.JF	G
Gross Solid	s: Slight	Litter		Debris	Sediment	Other	-Sampling Results		
Vegetation:	None	🗌 Inhib	ited	Excessive			Sample Location:		
Benthic Gro	wth: Moderate	Gree	n 🗸	Brown			Sample ID:		
Stains:	Slight	✓ Flow	Line	Oil	Rust Stains		Time Collected		
			osion	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natu	ral Sheen	Natura	al Suds/Foam		Free Chlorine (field):		ррт
- Physical	Condition Asse	essment					Total Copper (field):		ppm
Groffiti	Nono						Ammonia (field):		ррт
Granni.	None						pH (field):		units
Erosion.	None	Denth (in), 1					Temperature:		°F
Depositio	Nere						Conductivity:		µS/cm
Damage:	inone	Displacement	Undercut	C	rushed		Detergents:		mg/L
		Corrosion	Cracks/St	ructural Da	amage		Phenol:		mg/L

Outfall ID: 16-660 US1

Supplemental Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-660

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120530100758.JPG

Outfall Notes:

Upstream manhole located approx 257 ft WSW of outfall 16-660. Intermediate area consists of residential property.

County Co	ordinates:	State Plane Coordinate			
Northing:	474,930	Northing:	740,231		
Easting:	779,104	Easting:	2,339,151		



Inspection	Date: 5/30	/2012 11:04:45 AM	Inspector:	JCW	Inspect	ion Type:	Ongoing	Previous Rainfall (hrs): 72-	F
Flow Descr	iption: Tric	kle	Notes:					1 1 150		
Submerged	None	Depth (in):						1- 3000	STATE	
Illicit Disch	arge Potenti	al: Unlikely		Field F	ollow-up	0 Ot	ffice Follow-up			
Floatables:	None	Pet	rol. Sheen	Suds	Sewag	ge 🗌 Al	gae 🗌 Othe	er		
Odor:	None	Pet	roleum	Musty	Sewag	ge 🗌 Cl	hlorine 🗌 Othe	er	- de	TSI
		VO	C/Solvent	Fishy	Sulfur	🗌 Fr	agrant		05/30	2012 11:08
Turbidity:	None								1 1 8 18 m	
Color:	None							0201205	30100806.J	PG
Gross Solids	s: None	Litt	er 🗌	Debris	Sedim	ent	Other	-Sampling Results-		
Vegetation:	None	🗌 Inh	ibited	Excessiv	e			Sample Location:	Flow	
Benthic Gro	wth: None	Gre	en 🗌	Brown				Sample ID:	120530-9	3
Stains:	None	Flo	w Line	Oil	Rust S	Stains		Time Collected	11:08	
			rosion	Paint	Other			Total Chlorine (field	l): 0	ppm
Non-illicit:	None	Nat	ural Sheen	🗌 Natu	iral Suds/Fo	am		Free Chlorine (field): 0	ррт
- Physical	Condition Ass	ecoment						Total Copper (field)	: 0	ppm
T Thysical	N N	dessinent						Ammonia (field):	0	ррт
Graffiti:	None							pH (field):	8.35	units
Erosion:	None							Temperature:	59	°F
Depositio	n: None	Depth (in):						Conductivity:	1148	µS/cm
Damage:	None	Displacement	Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/St	ructural E	Damage			Phenol:	0	mg/L

Outfall ID: 16-663

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS DI SOMERA S. IRINA

o20120530094338.JPG

Outfall Notes:

Storm sewer from Windingbrook Dr discharges to west side of detention basin.

County Co	ordinates:	State Plane Coordinate			
Northing:	475,469	Northing:	740,775		
Easting:	779,377	Easting:	2,339,414		

Inspection Date: JCW 5/30/2012 10:43:21 AM Inspector: Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Outfall partially submerged. Outfall screened Flow Description: Submerged, indeterminate Notes: upstream at 16-663 US1. Submerged: Partially Depth (in): 18 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120530094448.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: Slight Green Brown Sample ID: Flow Line Stains: Slight Rust Stains **Time Collected** Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Checked by:	BDW	12/27/2012
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Outfall ID: 16-663 US1

Supplemental Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-66.3

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

o20120530095212.JPG

Outfall Notes:

Upstream manhole located approx 184 ft WNW of outfall 16-663. Intermediate area consists of residential property.

County Co	ordinates:	State Plane Coordin			
Northing:	475,489	Northing:	740,792		
Easting:	779,195	Easting:	2,339,231		

Inspection Date: Inspector: JCW 5/30/2012 10:47:53 AM Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Moderate Notes: Sample collected from incoming flow (NW pipe). Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120530095222.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Flow Benthic Growth: None Green Brown Sample ID: 120530-11 Stains: None Rust Stains **Time Collected** 10:50 Flow Line Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 7.36 units Erosion: None Temperature: 60 °F Deposition: None Depth (in): Conductivity: 1146 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Cracks/Structural Damage Phenol: Corrosion 0 mg/L



Outfall ID: 16-826

Minor Outfall

Structure Type: **Closed Pipe Outfall**

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Desktop mapping estimate

Not Physically Located



o20120606110422.JPG

Outfall Notes:

Drainage from swale discharges through north abutment. 7 foot drop. No GPS under bridge location approximate.

County Co	County Coordinates:			
Northing:	476,577	Northing:		
Easting:	781,505	Easting:		

ne Coordinates: 741,921 2,341,521





Outfall ID: 16-828

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 36 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120621110732.JPG

Outfall Notes:

Storm sewer from swale discharges to stream from north. Installed 2012.

County Coordinates:					
Northing:	476,583				
Easting:	781.340				

State Plane Coordinates: Northing: 741,925 Easting: 2,341,356

6/21/2012 12:05:20 PM Inspection Date: Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 0-24 Flow Description: None Notes: Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae \square Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120621110738.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Stains: None Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): -ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment Ammonia (field): -ррт Graffiti: None pH (field): units ---Erosion: None Temperature: °F --Minor Deposition: Depth (in): 3 Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L

Location Map



Corrosion

Cracks/Structural Damage

-- mg/L

Phenol:

Outfall ID: 16-830

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: CMP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Desktop mapping estimate Not Physically Located



o20120606105946.JPG

Outfall Notes:

Drainage from swale discharges through south abutment. 6 foot drop. No GPS under bridge - location approximate.

County Co	County Coordinates:			
Northing:	476,528	Northing:		
Easting:	781,508	Easting:	2	

ate Plane Coordinates: orthing: 741,873 asting: 2,341,525





Outfall ID: 16-844

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 18 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120606104910.JPG

Outfall Notes:

Storm sewer from Koeller St discharges to stream from south.

County Co	ordinates:
Northing:	476,529
Fasting:	781 598

State Plane Coordinates:Northing:741,875Easting:2,341,615

Inspection Date: 6/6/2012 11:50:55 AM Inspector: JCW Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Trickle Notes: Submerged: None Depth (in): Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: Slight Petrol. Sheen Suds Sewage 🖌 Algae Other Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120606105408.JPG Color: None ✓ Litter Gross Solids: Slight ✓ Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Flow Benthic Growth: Moderate Green Brown Sample ID: 120606-60 Flow Line Stains: Slight Rust Stains **Time Collected** 11:55 Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ррт Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): 8.1 units Erosion: None Temperature: 78 °F Deposition: None Depth (in): Conductivity: 5050 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: Corrosion Cracks/Structural Damage 0 mg/L



Outfall ID: 16-869

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

Dimensions

Diameter (in): 36 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located

o20120530092736.JPG

Outfall Notes:

Storm sewer from Springmill Dr discharges to northwest corner of detention basin.

County Co	ordinates:	State Plan	ne Coord
Northing:	475,969	Northing:	741,2
Easting:	779,138	Easting:	2,339,1

dinates: 271 66



Inspection	Date: 5/30/	2012 10:27:00 AM	nspector:	JCW I	nspection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Desci Submerged	ription: Subr : Partially	nerged, indeterminate Depth (in): 32	Notes:	Outfall parti accessible upstream a	ally submerged a for full screening. t 16-869 US1.	and not Screened	A CONTRACTOR		
Illicit Disch	arge Potentia	l: Unlikely		Field Follow	-up 🗌 Of	fice Follow-up			
Floatables:	None	Petrol.	Sheen	Suds	Sewage 🗌 Ale	gae 🗌 Other			Any Say
Odor:	None		eum	Musty	Sewage Ch	nlorine 🗌 Other			
Turbidity:	None					agrant		997 107 1	2012 10:27
Color:	None						0201205300927	740.Jł	G
Gross Solid	s: None	Litter		Debris	Sediment 🗌 0	Other	-Sampling Results		
Vegetation:	None	Inhibite	ed 🗌 I	Excessive			Sample Location:		
Benthic Gro	wth: Moderate	e 🖌 Green		Brown			Sample ID:		
Stains:	Slight	✓ Flow L	ine 🗌 (Dil 🗌	Rust Stains		Time Collected		
			ion 🗌 I	Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	l Sheen	Natural S	uds/Foam		Free Chlorine (field):		ppm
- Physical	Condition Asse	essment					Total Copper (field):		ppm
Graffiti							Ammonia (field):		ppm
Erosion:	None						pH (field):		units
Denositio	n. None	Denth (in):					I emperature:		°F
Depositio Damage:	None						Conductivity:		μS/cm
Damaye.	NOTE		Jndercut		ned		Detergents:		mg/L
			Cracks/Str	uctural Dama	ige		Phenol:		mg/L

Outfall ID: 16-869 US1

Supplemental Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-869

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120530093146.JPG

Outfall Notes:

Upstream manhole located in same outlet structure as outfall 16-869.

County Co	oordinates:	S
Northing:	475,976	N
Easting:	779.132	E

tate Plane Coordinates: orthing: 741,278 asting: 2,339,160

Inspection Date: Inspector: JCW 5/30/2012 10:29:11 AM Inspection Type: Ongoing Previous Rainfall (hrs): 72+ Flow Description: Submerged, slight flow Notes: Submerged: Partially Depth (in): 10 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae \square Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120530093158.JPG Color: None Gross Solids: Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Pool Benthic Growth: None Green Brown Sample ID: 120530-96 Flow Line Stains: Slight Rust Stains **Time Collected** 10:32 Oil Corrosion Paint Other Total Chlorine (field): 0 ppm Free Chlorine (field): 0 ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): 0 ppm Physical Condition Assessment Ammonia (field): 0 ppm Graffiti: None pH (field): units 8.12 Erosion: None Temperature: 66 °F Deposition: None Depth (in): Conductivity: 747 µS/cm Damage: None Displacement Undercut Crushed Detergents: 0 mg/L Phenol: Corrosion Cracks/Structural Damage 0 mg/L



Outfall ID: 16-941

Minor Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Omro Rd

Diameter (in): 24 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120606120002.JPG

Outfall Notes:

Storm sewer from Westhaven Dr discharges to Aurora detention basin, which ultimately discharges to STH 21 right-of-way.

County Co	ordinates:	State Plane Coordinates:			
Northing:	477,537	Northing:	742,826		
Easting:	778,424	Easting:	2,338,424		



Inspection Date	e: 6/6/2012 1:03:13	PM Inspector:	JCW Insp	ection Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Description	on: Submerged, inde	eterminate Notes:	Grate detached	from apron.	Outfall partially		10	Const Paris
Submerged: Pa	artially Depth (in	n): 6	submerged. Or 941 US1.	utfall screene	d upstream at 16-		A	
Illicit Discharge	e Potential: Unlikely	/	Field Follow-up	Of	fice Follow-up			
Floatables: Nor	ne	Petrol. Sheen	Suds Se	wage 🗌 Al	gae 🗌 Other			
Odor: Nor	ne	Petroleum	Musty Se	ewage 🗌 Cł	nlorine 🗌 Other		1	
		VOC/Solvent	🗌 Fishy 🗌 Su	ılfur 🗌 Fr	agrant		0000	1.
Turbidity: Nor	ne					00100000100	050 /	
Color: Nor	ne					0201206061200	050.JF	G
Gross Solids:	None	Litter	Debris 🗌 Se	diment 🗌 (Other	Sampling Results		
Vegetation:	None	Inhibited	Excessive			Sample Location:		
Benthic Growth:	Slight	Green V	Brown			Sample ID:		
Stains:	Slight	✓ Flow Line	Oil 🗌 Ru	ist Stains		Time Collected		
		Corrosion	Paint 🗌 Ot	her		Total Chlorine (field):		ррт
Non-illicit:	None	Natural Sheen	Natural Sude	/Foam		Free Chlorine (field):		ррт
- Physical Con	dition Assessment —					Total Copper (field):		ppm
						Ammonia (field):		ppm
Graffiti:	None					pH (field):		units
Erosion:	None					Temperature:		°F
Deposition:	None Depth (in)	:				Conductivity:		µS/cm
Damage:	Minor 🗌 Displac	cement 🗌 Undercut	Crushed			Detergents:		mg/L
		ion Cracks/S	tructural Damage			Phenol:		mg/L

Outfall ID: 16-941 US1

Minor Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: N/A

Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS 06/08/2012 18108

o20120606120846.JPG

Outfall Notes:

Upstream curb inlet located approx 43 ft NE of outfall 16-941. Intermediate area consists of street right-of-way.

County Co	ordinates:
Northing:	477,557
Easting:	778,462

State Plane Coordinates:Northing:742,847Easting:2,338,461

Inspection	Date: 6	6/6/2012 1:06:05 I	PM Inspecto	or: JCW	Inspec	ction Type:	Ongoing	Previous Rainfall (hrs):	72+	
Flow Descr	ription: I	None	Note	s: Wet bu	ut no flow a	at time of ins	spection.	Contraction of the		
Submerged	: None	Depth (in):					Contraction of the		AT C.
Illicit Disch	arge Pote	ential: Unlikely	L	Field F	ollow-up	Of	fice Follow-up			All and
Floatables:	None		Petrol. Sheen	Suds	Sew	age 🗌 Alç	gae 🗌 Other			6
Odor:	None		PetroleumVOC/Solvent	☐ Musty ☐ Fishy	Sew Sulfu	age 🗌 Ch Ir 🗌 Fra	nlorine 🗌 Other agrant			
Turbidity:	None			-			-		007007	2012 13:09
Color:	None							020120606120	914.JI	PG
Gross Solid	s: Sligh	ıt	✓ Litter	Debris	🗌 Sedi	ment 🗌 C	Other	Sampling Results		
Vegetation:	None	9	Inhibited	Excessiv	/e			Sample Location:		
Benthic Gro	wth: None	e	Green	Brown				Sample ID:		
Stains:	Sligh	ıt	✓ Flow Line	Oil	🗌 Rust	Stains		Time Collected		
			Corrosion	Paint	Other	r		Total Chlorine (field):		ррт
Non-illicit:	None	9	Natural Shee	n 🗌 Natu	Iral Suds/F	oam		Free Chlorine (field):		ppm
– Physical	Condition	Assessment				1		Total Copper (field):		ppm
Graffiti:	None	9						Ammonia (field):		ppm unito
Erosion:	None	9						μπ (iieiu). Temperature:		o F
Depositio	n: None	e Depth (in):						Conductivity:		, uS/cm
Damage:	None	Displace	ement 🗌 Underci	ut 🗌	Crushed			Detergents:		mg/L
			on Cracks/	Structural [Damage			Phenol:		mg/L



Outfall ID: 16-995

Minor Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: HDPE

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in): 30 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

o20120606122132.JPG

Outfall Notes:

Storm sewer from Patriot Ln discharges to swale/dry pond that discharges to wet pond.

County Co	County Coordinates:					
Northing:	476,252	Ν				
Easting:	779,836	E				

State Plane Coordinates: Northing: 741,567 Easting: 2,339,858





Outfall ID: 16-995 US1

Minor Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-995

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120606122840.JPG

Outfall Notes:

Upstream manhole located approx 112 ft W of outfall 16-995. Intermediate area consists of open space.

County Co	ordinates:	State Plane Coordinates				
Northing:	476,251	Northing:	741,563			
Easting:	779,723	Easting:	2,339,746			



Inspection	Date:	6/6/2012 1:28:22	PM Inspec	ctor: JCW	Inspecti	on Type:	Ongoing	Previous Rainfall (h	ırs): 72+	
Flow Descr	iption:	Submerged, no f	low No	otes: Sample	e collected f	rom pool i	n manhole. No	Mar 1		
Submerged	: None	Depth (in	ו): 1	flow en	itering eithei	pipe.		1 1 1	D.D.	1000
Illicit Disch	arge Pot	ential: Unlikely	,	Field F	ollow-up	Off	fice Follow-up			
Floatables:	None		Petrol. She	en 🗌 Suds	Sewag	je 🗌 Alg	gae 🗌 Othe	er e		
Odor:	Faint		Petroleum	Musty	Sewa	ge 🗌 Ch	llorine 🗌 Othe	er 💦	-	1
Turbidity:	None						ayranı		08/06/	2012 13:28
Color:	None]					02012060	6122856.JI	PG
Gross Solid	s: Sligi	nt	Litter	 Debris 	Sedim	ent 🗌 C	Other	- Sampling Results]
Vegetation:	Non	e	Inhibited	Excessiv	/e			Sample Location:	Pool	
Benthic Gro	wth: Non	e	Green	Brown				Sample ID:	120606-8	6
Stains:	Sligh	nt	✓ Flow Line	🗌 Oil	Rust S	Stains		Time Collected	13:33	
			Corrosion	Paint	Other			Total Chlorine (field)	: 0	ppm
Non-illicit:	Non	e	Natural She	een 🗌 Natu	ral Suds/Fo	am		Free Chlorine (field)	: 0	ppm
– Physical	Condition	Assessment —						Total Copper (field):	0	ppm
Oreffiti	Nam	-						Ammonia (field):	0	ppm
Gramiti:	Non	e						pH (field):	7.36	units
Erosion:	Non							Temperature:	69	°F
Depositio	n: Non	e Depth (in):						Conductivity:	411	µS/cm
Damage:	Non	e 🔄 Displac	ement 🗌 Unde	ercut	Crushed			Detergents:	0	mg/L
		Corrosi	ion 🗌 Crack	ks/Structural E	Damage			Phenol:	0	mg/L

Outfall ID: 16-1200a

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Elliptical

Material: RCP

City ID: N/A

Drainage Basin: Omro Rd

- **Dimensions** Diameter (in): Height/Depth (in): 19 Width (in): 30

Mapping Precison: Mapping GPS



o20120621115338.JPG

Outfall Notes:

Storm sewer from Washburn St discharges to riprap swale from east.

County Co	County Coordinates:				
Northing:	478,441				
Easting:	779,947				

State Plane Coordinates:Northing:743,758Easting:2,339,930



Inspection	Date: 6/2	1/2012 12:50:51 PM	nspector: JCW	Inspection	Type: Ongo	bing	Previous Rainfall (hrs):	0-24	4
Flow Descr	ription: Su	bmerged, indeterminate	Notes: Outfa	Il partially subme	erged; screer	ned		-	-di-
Submerged	: Partially	Depth (in): 5	upstre	eam at 16-1200a	US1.				
Illicit Disch	arge Poten	tial: Unlikely	Field I	Follow-up	Office Fo	ollow-up	C. LORD		the
Floatables:	None	Petrol	. Sheen 🗌 Suds	Sewage	Algae	Other		-	ast
Odor:	None		eum 🗌 Musty			Other	X	N.	Set
Turbidity:	None		Solvent 📋 Fisny		Fragrant		A		
Color:	None						020120621115	346.JI	PG
Gross Solid	s: None	Litter	Debris	Sediment	Other		Sampling Results		
Vegetation:	None	🗌 Inhibit	ed 🗌 Excessi	ve			Sample Location:		
Benthic Gro	wth: Slight	Green	n 🖌 Brown				Sample ID:		
Stains:	None	Flow L	_ine 🗌 Oil	Rust Stair	ns		Time Collected		
			sion 🗌 Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	Natura	al Sheen 🗌 Nat	ural Suds/Foam			Free Chlorine (field):		ррт
- Physical	Condition A	sessment					Total Copper (field):		ppm
Croffitie	Nama						Ammonia (field):		ppm
Graffiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	None	Displacement	Undercut	Crushed			Detergents:		mg/L
			Cracks/Structural	Damage			Phenol:		mg/L

Outfall ID: 16-1200a US1

Supplemental Outfall - Alternate Location

Structure Type: Other

Discharge Location: Downstream Outfall

Shape: Pipe - Elliptical

Material: RCP

City ID: N/A

Drainage Basin: Omro Rd

Diameter (in): Height/Depth (in): 19 Width (in): 30

Mapping Precison: Mapping GPS

o20120621115622.JPG

Outfall Notes:

Upstream end of pipe located 159 ft E of outfall 16-1200a. Intermediate area consists of street right-ofway.

County Co	ordinates:	State Plane Coordinates:				
Northing:	478,483	Northing:	743,802			
Easting:	780,101	Easting:	2,340,083			



Inspection	Date: 6/2	21/2012 12:54:25 PM	nspector: JCW	Inspection	Type: Or	ngoing	Previous Rainfall (hrs):	0-24	4
Flow Descr	ription: Su	bmerged, indeterminate	Notes: No fl	ow entering pipe	. Stone ba	igs on apron.	AND		
Submerged	: Partially	Depth (in): 1							Re
Illicit Disch	arge Poten	tial: Unlikely	Field	Follow-up	Office	Follow-up		The	
Floatables:	None	Petrol	. Sheen 🗌 Suds	Sewage	Algae	Other			
Odor:	None		eum 🗌 Must Solvent 🗌 Fish	y Sewage	Chlori	ne 🗌 Other			
Turbidity:	None								en a re
Color:	None						020120621115	626.JI	PG
Gross Solid	s: None	Litter	Debris	Sedimen	it 🗌 Othe	er	Sampling Results		
Vegetation:	None		ed Excess	sive			Sample Location:		
Benthic Gro	wth: None	Greer	n 🗌 Brown				Sample ID:		
Stains:	None	Flow I	_ine 🗌 Oil	Rust Stai	ins		Time Collected		
			sion 🗌 Paint	Other			Total Chlorine (field):		ppm
Non-illicit:	None	Natura	al Sheen 🗌 Na	atural Suds/Foam	ı		Free Chlorine (field):		ррт
- Physical	Condition A	ssessment					Total Copper (field):		ррт
Groffiti	Nono						Ammonia (field):		ppm
Graniu.	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	None	Displacement	Undercut	Crushed			Detergents:		mg/L
		Corrosion	Cracks/Structura	l Damage			Phenol:		mg/L

Outfall ID: 16-1204

Supplemental Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Adjacent Municipality

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Omro Rd

Diameter (in): 24

Diameter (m).	24
Height/Depth (in):	
Width (in):	

Mapping Precison:

Not Physically Located



o20120621114144.JPG

Outfall Notes:

Outlet pipe from detention basin discharges to riprap swale.

County Co	ordinates:	:
Northing:	478,412	
Easting:	779,958	

State Plane Coordinates: Northing: 743,728 Easting: 2,339,942



Inspection	Date: 6/21	/2012 12:38:48 PM	nspector: JCV	Inspection Type:	Ongoing	Previous Rainfall (hrs):	0-24
Flow Descr Submerged	ription: Sub	merged, indeterminate Depth (in): 3	Notes: Outf	all partially submerged. acted due to screening c	Sample not of upstream		/7)
Illicit Disch	arge Potentia	al: Unlikely		d Follow-up	ffice Follow-up		HAR
Floatables:	None	Petrol.	Sheen Sud	s 🗌 Sewage 🗌 Al	lgae 🗌 Other		/ Nor-C
Odor:	None	Petrole	eum 🗌 Mus Solvent 🗌 Fish	ty 🗌 Sewage 🗌 C y 🗌 Sulfur 🗌 Fr	hlorine 🗌 Other ragrant		1 Pro-
Turbidity:	None			,	C	Call and a	
Color:	None					020120621114	152.JPG
Gross Solid	s: None	Litter	Debris	Sediment	Other	Sampling Results	
Vegetation:	None	🗌 Inhibite	ed 🗌 Exces	sive		Sample Location:	
Benthic Gro	wth: Slight	Green	V Brown	1		Sample ID:	
Stains:	None	🗌 Flow L	ine 🗌 Oil	Rust Stains		Time Collected	
			ion 🗌 Paint	Other		Total Chlorine (field):	ррт
Non-illicit:	None	Natura	l Sheen	atural Suds/Foam		Free Chlorine (field):	ррт
- Physical	Condition Ass	essment				Total Copper (field):	ppm
Graffiti:	None					Ammonia (field):	ppm
Erosion:	None						units ° F
Depositio	n: None	Depth (in):				Conductivity:	F
Damage:	None			Crushed		Detergents:	μ3/cm
			Cracks/Structura	al Damage		Phenol:	mg/L

Inspection Date: 9/8/2009	Inspector: JCW	Inspection Type: Initial	Previous Rainfall (hrs):	72+
Flow Description: None	Notes:			
Submerged: None Depth (n): 0			
Illicit Discharge Potential: Unlikel	/ Field F	ollow-up Office Follow-up		
Floatables:	Petrol. Sheen Suds	🗌 Sewage 🗌 Algae 🗌 Ot	her	
Odor:	Petroleum Musty	Sewage Chlorine Ot	her	100 C
	VOC/Solvent Fishy	Sulfur Fragrant		00 08 2000 08:32
Turbidity:			1	00.00.2000 00.02
Color:			Osh09_DSCN6	i576.JPG
Gross Solids:	Litter Debris	Sediment Other	Sampling Results	
Vegetation:	Inhibited Excessiv	re	Sample Location:	
Benthic Growth:	Green Brown		Sample ID:	
Stains:	Flow Line 🗌 Oil	Rust Stains	Time Collected	
	Corrosion Paint	Other	Total Chlorine (field):	ppm
Non-illicit: None	Natural Sheen Natu	Iral Suds/Foam	Free Chlorine (field):	ppm
- Physical Condition Assessment			Total Copper (field):	ppm
			Ammonia (field):	ppm
Graffiti: None			pH (field):	units
Erosion: None			Temperature:	°F
Deposition: None Depth (in	: 0		Conductivity:	μS/cm
Damage: None 🗌 Displa	cement 🗌 Undercut 🗌 🛛	Crushed	Detergents:	mg/L
Corros	ion Cracks/Structural E	Damage	Phenol:	mg/L

Outfall ID: 16-1204a

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Omro Rd

- Dimensions -

Diameter (in): 15 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS



o20120621114436.JPG

Outfall Notes:

Curb inlets from Washburn St discharge to riprap swale from east.

County Coordinates:				
Northing:	478,420			
Easting:	779,963			

State Plane Coordinates:Northing:743,736Easting:2,339,946



Inspection	Date: 6/21	/2012 12:41:46 PM	nspector: JCV	N Inspe	ction Type:	Ongoing	Previous Rainfall (hrs):	0-24	4
Flow Descr	ription: Sub	merged, indeterminate	Notes: Out	fall partially s	ubmerged;	screened		4	317
Submerged	: Partially	Depth (in): 3	ups	tream at 16-1	204a US1.		A PART	10	
Illicit Disch	arge Potentia	al: Unlikely	Fiel	d Follow-up	Of	fice Follow-up			
Floatables:	None	Petrol	. Sheen 🗌 Sud	ls 🗌 Sew	age 🗌 Alç	gae 🗌 Other		A	1 have
Odor:	None	Petrol	eum 🗌 Mus Solvent 🗌 Fish	sty 🗌 Sew ny 🦳 Sulfi	age 🗌 Ch ur 🗌 Fra	llorine 🗌 Other agrant	SACH	5	L'SX
Turbidity:	None					0	1561250		
Color:	None						0201206211144	444.JI	PG
Gross Solid	s: None	Litter	🗌 Debri	s 🗌 Sedi	ment 🗌 C	Dther	Sampling Results		
Vegetation:	None	🗌 Inhibit	ed Exces	ssive			Sample Location:		
Benthic Gro	wth: Slight	Greer	Brow	n			Sample ID:		
Stains:	None	Flow I	ine 🗌 Oil	Rust	t Stains		Time Collected		
			sion 🗌 Paint	Othe	er		Total Chlorine (field):		ррт
Non-illicit:	None	Natura	al Sheen 🗌 N	latural Suds/F	oam		Free Chlorine (field):		ррт
- Physical	Condition Ass	essment			7		Total Copper (field):		ppm
Graffiti	None						Ammonia (field):		ppm
Erosion:	None						pH (field):		units
Dopositio	None	Dopth (in):					Temperature:		°F
Depositio	II. NORE						Conductivity:		µS/cm
Damage:	ivone	Displacement	Undercut [Crushed			Detergents:		mg/L
		Corrosion	Cracks/Structur	al Damage			Phenol:		mg/L

Outfall ID: 16-1204a US1

Supplemental Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: Omro Rd

- Dimensions -

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120621114700.JPG

Outfall Notes:

Upstream curb inlet located approx 33 ft ESE of outfall 16-1204a. Intermediate area consists of street right-of-way.

County Co	ordinates:	State Plane Coordinates:			
Northing:	478,408	Northing:	743,725		
Easting:	779,993	Easting:	2,339,977		



Inspection	Date: 6	/21/2012 12:44:56 P	M Inspecto	or: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	0-24	4
Flow Descr	iption: S	Submerged, indeter	minate Note	es: Concre	te washout on grate.	No evidence in		1	Contraction of the
Submerged	: Partially	Depth (in):	7	storm s for sam	sewer. Grate could no	ot be removed	100		NO 1
Illicit Discharge Potential: Unlikely				Field F	ollow-up 🗌 Of	fice Follow-up			
Floatables:	None		Petrol. Sheer	n 🗌 Suds	Sewage Ale	gae 🗌 Other			
Odor:	None		Petroleum	Musty	🗌 Sewage 🗌 Cł	nlorine 🗌 Other			Aller -
			VOC/Solvent	Fishy	Sulfur Fra	agrant	- 14 ACT -	08/21/	2012 12:47
Turbidity:	None							740.0	
Color:	None						020120621114	/18.JF	G
Gross Solids	s: None		Litter	Debris	Sediment 🗌 0	Other	Sampling Results		
Vegetation:	None		Inhibited [Excessiv	e		Sample Location:		
Benthic Gro	wth: None		Green [Brown			Sample ID:		
Stains:	Slight	t] Flow Line [Oil	Rust Stains		Time Collected		
			Corrosion	Paint	✓ Other		Total Chlorine (field):		ppm
Non-illicit:	None		Natural Shee	n 🗌 Natu	ral Suds/Foam		Free Chlorine (field):		ppm
- Physical	Condition	Assessment	_				Total Copper (field):		ppm
T Thysical							Ammonia (field):		ppm
Graffiti:	None	•					pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	None	Displacem	ent 🗌 Underc	ut 🗌 (Crushed		Detergents:		mg/L
		Corrosion	Cracks	/Structural E	Damage		Phenol:		mg/L

Outfall ID: 16-1205

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Omro Rd

Dimensions

Diameter (in): 15 Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS Not Physically Located



o20120621113432.JPG

Outfall Notes:

Curb inlet from Washburn St discharges to northeast corner of detention basin.

County Co	ordinates:	State Plai	ne Coordin
Northing:	478,346	Northing:	743,662
Easting:	779,977	Easting:	2,339,962

oordinates: 43,662

Inspection Date: JCW Inspection Type: Ongoing 6/21/2012 12:32:35 PM Inspector: Previous Rainfall (hrs): 0-24 Flow Description: Submerged, indeterminate Notes: Outfall fully submerged; screened upstream at 16-1205 US1. Submerged: Fully Depth (in): 21 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120621113440.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Stains: None Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): ppm --Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L



Outfall ID: 16-1205 US1

Supplemental Outfall - Alternate Location

Structure Type: Inlet/Catchbasin

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-1205

Drainage Basin: Omro Rd

– Dimensions —

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS D6/21/2012 12:37

o20120621113754.JPG

Outfall Notes:

Upstream curb inlet located approx 36 ft NE of outfall 16-1205. Intermediate area consists of open space.

County Co	ordinates:	State
Northing:	478,371	Northi
Easting:	780.002	Eastin

ate Plane Coordinates:rthing:743,688sting:2,339,986

Inspection Dat	te: 6/21/2012 12:35:	4 PM Inspector: JCW Inspection Type: Ongoing Pre	evious Rainfall (hrs):	0-24
Flow Descripti	ion: Submerged, ind	terminate Notes: Grate could not be removed for sample.	a share a	
Submerged: F	-ully Depth (i	i): 32		
Illicit Discharg	ge Potential: Unlikely	Field Follow-up Office Follow-up		
Floatables: No	one] 🗌 Petrol. Sheen 🗌 Suds 🛛 Sewage 🗌 Algae 🗌 Other		
Odor: No	one	Petroleum Musty Sewage Chlorine Other	Acres and	
Turbidity: No	one			612112012 12 00
Color: No	one		02012062111380	08.JPG
Gross Solids:	None	Litter Debris Sediment Other Sam	pling Results ———	
Vegetation:	None	Inhibited Excessive San	nple Location:	
Benthic Growth	n: None	Green Brown San	n ple ID :	
Stains:	None	Flow Line Oil Rust Stains Tim	e Collected	
		Corrosion Paint Other Tota	al Chlorine (field):	ррт
Non-illicit:	None	Natural Sheen Natural Suds/Foam Free	e Chlorine (field):	ррт
– Physical Cor	ndition Assessment —	Tota	al Copper (field):	ppm
Graffiti	None	Ami	monia (field):	ppm
Erosion:	None		(field):	units
Deposition:	None Depth (in)	len	iperature:	°F
Damage:	None Doptin (in)		auctivity:	μS/cm
Damaye.		ement Undercut Ucrushed Dete	ergents:	mg/L
	Corros	on 📋 Cracks/Structural Damage Phe	nol:	mg/L



Outfall ID: 16-1207

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Elliptical

Material: RCP

City ID: N/A

Drainage Basin: Omro Rd

Diameter (in): Height/Depth (in): 29 Width (in): 45

Mapping Precison: Mapping GPS 05/21/2012 12:28

o20120621112350.JPG

Outfall Notes:

Storm sewer from Westowne Ave discharges to south side of detention basin.

County Co	ordinates:	State Plan	ie
Northing:	478,213	Northing:	
Easting:	779,974	Easting:	ł

te Plane Coordinates: thing: 743,530 sting: 2,339,961



Inspection	Date: 6/	21/2012 12:21:31 PM	nspector: JCW	Inspection Type	: Ongoing	Previous Rainfall (hrs):	0-24	1
Flow Descr	ription: S	ubmerged, indeterminate	Notes: Outfal	Outfall partially submerged; screened				
Submerged	: Partially	Depth (in): 21	upstre	am at 16-1207 US1.			H	
Illicit Disch	arge Poter	ntial: Unlikely	Field I	Follow-up	Office Follow-up	$\forall + \pm \pm$	Ŧ	H.
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage A	lgae Other		1	11
Odor:	None		eum 🗌 Musty	Sewage 🗌	Chlorine 🗌 Other			11
			olvent 🗌 Fishy	Sulfur F	ragrant			4 12 12 12 1
Turbidity:	None						- Andrews	No.
Color:	None					020120621112	356.JF	PG
Gross Solids	s: None	Litter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	Inhibite	ed 🗌 Excessi	ve		Sample Location:		
Benthic Gro	wth: None	Green	Brown			Sample ID:		
Stains:	None	🗌 Flow L	ine 🗌 Oil	Rust Stains		Time Collected		
			ion 🗌 Paint	Other		Total Chlorine (field):		ррт
Non-illicit:	None	Natura	I Sheen 🗌 Nat	ural Suds/Foam		Free Chlorine (field):		ррт
- Physical	Condition /					Total Copper (field):		ррт
Fliysical	Contaition P	1556551116111				Ammonia (field):		ррт
Graffiti:	None					pH (field):		units
Erosion:	None					Temperature:		°F
Depositio	n: None	Depth (in):				Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut	Crushed		Detergents:		mg/L
			Cracks/Structural	Damage		Phenol:		mg/L

Outfall ID: 16-1207 US1

Supplemental Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-1207

Drainage Basin: Omro Rd

Dimensions —

Diameter (in):

Height/Depth (in): Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120621121100.JPG

Outfall Notes:

Upstream manhole located approx 90 ft S of outfall 16-1207. Intermediate area consists of street right-of-way.

County Co	ordinates:	State Plane Coordinates				
Northing:	478,121	Northing:	743,438			
Easting:	779,971	Easting:	2,339,959			



Inspection	Date: 6/21/	2012 1:09:00 PN	l Inspe	ctor: J	CW	Inspec	tion Type:	Ongoing	Previous Rainfall (hrs)	0-2	4
Flow Descr	ription: Subr	nerged, indeterr	ninate No	otes:					Mar and		
Submerged: Partially Depth (in): 13											
Illicit Disch	arge Potentia	I: Unlikely		F	ield Fo	ollow-up	0 O	ffice Follow-up			
Floatables:	None		Petrol. She	en 🗌 S	uds	Sewa	age 🗌 Al	gae 🗌 Oth	er	.1	
Odor:	None] Petroleum] VOC/Solve	nt 🗌 F	/usty ishy	Sewa	age 🗌 Cl Ir 🗌 Fr	hlorine 🗌 Oth agrant	er		171
Turbidity:	None				,			0		00000	20 12 13: 14
Color:	None								02012062112	1110.JI	PG
Gross Solid	s: None		Litter	🗌 De	bris	Sedi	ment 🗌	Other	- Sampling Results		
Vegetation:	None		Inhibited	Exc	cessiv	е			Sample Location:		
Benthic Gro	wth: Slight		Green	🖌 Bro	own				Sample ID:		
Stains:	None		Flow Line	🗌 Oil		🗌 Rust	Stains		Time Collected		
] Corrosion	🗌 Pai	int	Othe	r		Total Chlorine (field):		ppm
Non-illicit:	None		Natural Sh	een 🗌	Natu	ral Suds/F	oam		Free Chlorine (field):		ppm
- Physical	Condition Ass	essment —	-		-		1		Total Copper (field):		ppm
Croffiti	Nono								Ammonia (field):		ррт
Gramti:	None								pH (field):		units
Erosion:	None	D 11 (1)							Temperature:		°F
Depositio	n: None	Depth (in):							Conductivity:		µS/cm
Damage:	None	Displaceme	ent 🗌 Unde	ercut		Crushed			Detergents:		mg/L
		Corrosion	Crac	ks/Struc	tural D	Damage			Phenol:		mg/L

Outfall ID: 16-1213

Supplemental Outfall

Structure Type: Pond Inlet

Discharge Location: MS4 Stormwater Facility

Shape: Pipe - Elliptical

Material: RCP

City ID: N/A

Drainage Basin: Omro Rd

Diameter (in): Height/Depth (in): 24 Width (in): 38

Mapping Precison: Mapping GPS



o20120621112846.JPG

Outfall Notes:

Storm sewer from Washburn St discharges to southeast corner of detention basin.

County Co	oordinates:	Sta
Northing:	478,234	Nor
Easting:	780,001	Eas

 te Plane Coordinates:

 rthing:
 743,551

 sting:
 2,339,988



Inspection	Date: 6/21	/2012 12:26:45 PM	nspector: JC	N Inspec	tion Type:	Ongoing	Previous Rainfall (hrs):	0-24	4
Flow Desci	ription: Sub	merged, indeterminate	Notes: Out	tfall partially su	ubmerged;	screened	all a start	-	
Submerged	: Partially	Depth (in): 21	ups	stream at 16-12	213 081.				
Illicit Disch	arge Potentia	al: Unlikely	E Fie	d Follow-up	Of	fice Follow-up	1000 111		
Floatables:	None	Petrol.	Sheen 🗌 Suc	ds 🗌 Sewa	age 🗌 Alg	gae 🗌 Othe	er a bid blitte	4	
Odor:	None	Petrole	eum 🗌 Mu	sty 🗌 Sewa	age 🗌 Ch	nlorine 🗌 Othe	er Sala and the	N	
			Solvent 🗌 Fis	hy 🗌 Sulfu	ir 🗌 Fra	agrant			1017 17 28
Turbidity:	None								
Color:	None						0201206211128	854.JF	G
Gross Solid	s: None	Litter	Debr	is 🗌 Sedir	ment 🗌 0	Other	- Sampling Results		
Vegetation:	None	🗌 Inhibite	ed 🗌 Exce	ssive			Sample Location:		
Benthic Gro	wth: None	Green	Brow	n			Sample ID:		
Stains:	None	Flow L	ine 🗌 Oil	Rust	Stains		Time Collected		
			ion 🗌 Paint	Othe	r		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	I Sheen 🗌 N	Vatural Suds/F	oam		Free Chlorine (field):		ppm
- Physical	Condition Ass	essment					Total Copper (field):		ppm
T Trysical	Condition Ass	essment					Ammonia (field):		ppm
Graffiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: None	Depth (in):					Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 l	Indercut	Crushed			Detergents:		mg/L
			Cracks/Structu	ral Damage			Phenol:		mg/L
Outfall ID: 16-1213 US1

Supplemental Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: 16-1213

Drainage Basin: Omro Rd

- Dimensions ----

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120621113050.JPG

Outfall Notes:

Upstream manhole located approx 34 ft ESE of outfall 16-1213. Intermediate area consists of open space.

County Co	ordinates:	State Pla
Northing:	478,218	Northing:
Easting:	780.030	Easting:

te Plane Coordinates: thing: 743,536 sting: 2,340.018

Inspection Date: Inspector: JCW 6/21/2012 12:28:52 PM Inspection Type: Ongoing Previous Rainfall (hrs): 0-24 Flow Description: Submerged, indeterminate Notes: Submerged: Partially Depth (in): 21 Illicit Discharge Potential: Unlikely Field Follow-up Office Follow-up Floatables: None Petrol. Sheen Suds Sewage Other Algae Odor: None Petroleum Musty Sewage Chlorine Other VOC/Solvent Fishy Sulfur Fragrant Turbidity: None o20120621113054.JPG Color: None Gross Solids: None Litter Debris Sediment Other Sampling Results None Inhibited Vegetation: Excessive Sample Location: Benthic Growth: None Green Brown Sample ID: Stains: None Rust Stains **Time Collected** Flow Line Oil Corrosion Paint Other Total Chlorine (field): ppm --Free Chlorine (field): -ppm Non-illicit: None Natural Sheen Natural Suds/Foam Total Copper (field): -ррт Physical Condition Assessment ррт Ammonia (field): Graffiti: None pH (field): units --Erosion: None Temperature: °F --Deposition: None Depth (in): Conductivity: µS/cm --Damage: None Displacement Undercut Crushed Detergents: -mg/L Phenol: Corrosion Cracks/Structural Damage -mg/L

Location Map



Outfall ID: 16-1508

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Water of the State

Shape: Pipe - Circular

Material: RCP

City ID: N/A

Drainage Basin: Sawyer Creek

Width (in):

-Dimensions							
Diameter (in):	54						
Height/Depth (in):	44						

72

Mapping Precison: Mapping GPS



o20120927115912.JPG

Outfall Notes:

Replaces outfall 16-487 (2011).

County C	oordinates:	S
Northing:	477,157	Ν
Easting:	782.760	E

tate Plane Coordinates: lorthing: 742,523 asting: 2,342,766

Location Map



Inspection	Date: 9/27/2	012 12:57:15 PM	Inspector:	JCW In:	spection Type:	Repeat	Previous Rainfall (hrs):	72+	
Flow Descr	ription: Subm	erged, indeterminate	Notes:	Construction	around outfall.	Screened	Simon Singer		
Submerged	: Partially	Depth (in): 15		upstream at 7	6-1508 US1.			and y	Ca-star
Illicit Disch	arge Potential	Potential		Field Follow-u	ıp 🗌 O	ffice Follow-up			Ser-
Floatables:	None	Petro	ol. Sheen 🗌	Suds 🗌 S	Sewage 🗌 A	lgae 🗌 Other		\mathbb{Y}	
Odor:	None	Petro	oleum	Musty	Sewage 🗌 C	hlorine 🗌 Other		Nil.	
Turbidity:	Nono		/Solvent	Fishy S	Sulfur 🔄 Fi	ragrant		057277	2012 17:58
Colori	None						020120927115	922.JI	≥G
	None					C .1	o "		
Gross Solid	s: Slight		· 🗸 L	ebris 🗌 S	Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inhib	ited 🗌 E	xcessive			Sample Location:		
Benthic Gro	wth: Slight	✓ Gree	en 🗌 E	Brown			Sample ID:		
Stains:	Slight	✓ Flow	Line 🗌 C	Dil 🗌 F	Rust Stains		Time Collected		
			osion 🗌 P	aint 🗌 (Other		Total Chlorine (field):		ppm
Non-illicit:	None	□ Natu	ral Sheen	Natural Su	ds/Foam		Free Chlorine (field):		ррт
- Physical	Condition Acco	comont	L				Total Copper (field):		ррт
Fliysical	Condition Asses	SSMent					Ammonia (field):		ррт
Graffiti:	None						pH (field):		units
Erosion:	None						Temperature:		°F
Depositio	n: Moderate	Depth (in): 9					Conductivity:		µS/cm
Damage:	None	Displacement	Undercut	Crushe	ed		Detergents:		mg/L
		Corrosion	Cracks/Stru	ictural Damag	е		Phenol:		mg/L

Outfall ID: 16-1508

Inspection Date:	: 5/30/2012 1:02:54	PM Inspecto	or: JCW	Inspection Type	e: Ongoing	Previous Rainfall (hrs):	72+	
Flow Description	n: Submerged, inde	terminate Note	es: Outfall	partially submerged	I. Outfall screened		-	a action
Submerged: Par	rtially Depth (in): 33	upstrea	am at 16-1508 US1.			1 to	
Illicit Discharge	Potential: Potentia	I	Field F	ollow-up	Office Follow-up		X	
Floatables: None	e	Petrol. Sheer	n 🗌 Suds	Sewage A	Algae 🗌 Other			and and
Odor: None	e	Petroleum	Musty	Sewage 🗌 0	Chlorine 🗌 Other		-	
		VOC/Solvent	Fishy	Sulfur F	Fragrant			
Turbidity: None	e					-00100500100		£
Color: None	e					020120530120	256.JPG	
Gross Solids:	Slight	✓ Litter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	Inhibited	Excessiv	e		Sample Location:		
Benthic Growth: I	None	Green	Brown			Sample ID:		
Stains:	None	Elow Line	Oil	Rust Stains		Time Collected		
		Corrosion	Paint	Other		Total Chlorine (field):	ppr	m
Non-illicit:	Slight	✓ Natural Shee	n 🗌 Natu	Iral Suds/Foam		Free Chlorine (field):	ppr	m
– Physical Cond	lition Assessment —					Total Copper (field):	ppr	т
Graffiti	None					Ammonia (field):	ppr	m
Erosion:	None					pH (field):	uni	its
Deposition:	None Denth (in):					Temperature:	°F	
Deposition.			. —			Conductivity:	μS/	/cm
Damaye. I		ement 📋 Underc	ut 📋	Crushed		Detergents:	mg	ı/L
		on 📋 Cracks	/Structural E	Damage		Phenol:	mg	ı/L

Outfall ID: 16-1508 US1

Major Outfall - Alternate Location

Structure Type: Manhole

Discharge Location: Downstream Outfall

Shape: Manhole/Catchbasin

Material: Manhole - concrete

City ID: N/A

Drainage Basin: Sawyer Creek

- Dimensions

Diameter (in):

Height/Depth (in):

Width (in):

Mapping Precison: Mapping GPS

Not Physically Located



o20120927115346.JPG

Outfall Notes:

Upstream manhole located approx 83 ft SW of outfall 16-487. Intermediate area consists of open space. Replaces 16-487 US1 (2011).

County Co	ordinates:	State Pla
Northing:	477,106	Northing
Easting:	782,695	Easting:

ate Plane Coordinates: orthing: 742,472 sting: 2,342,701

Location Map



Inspection D	Date: 9/27	/2012 12:51:46 PM	nspector: JCW	Inspection Type:	Repeat	Previous Rainfall (hr	s): 72+	
Flow Descri	ption: Sub	merged, indeterminate	Notes: Ammo	nia detection follow-u	р.			
Submerged: Partially Depth (in): 9								
Illicit Discha	irge Potentia	al: Potential	Field F	Follow-up O	ffice Follow-up	The state of the s		1201
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage Al	gae 🗌 Other	- CAN		
Odor: I	None	Petrole	eum 🗌 Musty Solvent 🗌 Fishy	Sewage Cl	hlorine 🗌 Other agrant		4	
Turbidity:	None					1. July	09/27/2	2012 12:53
Color:	None					020120927	115358.JF	PG
Gross Solids	: None	Litter	Debris	Sediment	Other	-Sampling Results		
Vegetation:	None	🗌 Inhibite	ed 🗌 Excessiv	ve		Sample Location: P	ool	
Benthic Grow	vth: None	Green	Brown			Sample ID: 1	20927-4	8
Stains:	None	🗌 Flow L	ine 🗌 Oil	Rust Stains		Time Collected 1	2:52	
			ion 🗌 Paint	Other		Total Chlorine (field):	0	ppm
Non-illicit:	None	Natura	I Sheen 🗌 Nati	ural Suds/Foam		Free Chlorine (field):	0	ppm
- Physical C	Condition Ass	essment				Total Copper (field):	0	ppm
One filtin	News					Ammonia (field):	3	ppm
Graffiti:	None					pH (field):	7.8	units
Erosion:	None					Temperature:	65	°F
Deposition	I: None	Depth (in):				Conductivity:	1408	µS/cm
Damage:	None	Displacement	Jndercut	Crushed		Detergents:	0	mg/L
			Cracks/Structural I	Damage		Phenol:		mg/L

Outfall ID: 16-1508 US1

Inspection	Date: 6/6/2	2012 11:27:15 AM Ir	nspector: JCW	Inspecti	on Type: Repe	eat	Previous Rainfall (I	nrs): 72+	
Flow Descr Submerged	r iption: Sub : Partially	merged, indeterminate Depth (in):	Notes: Amm scree	onia detection ning conducte	n follow-up. Lim ed.	iited			
Illicit Disch	arge Potenti	al: Potential	Field	Follow-up	Office Fo	ollow-up			
Floatables:	None	Petrol.	Sheen Suds	Sewag	ge 🗌 Algae	Other		- and	
Odor:	None	Petrole	eum 🗌 Musty	/ 🗌 Sewag	ge 🗌 Chlorine	Other	and the second		1000
			Solvent 🗌 Fishy	Sulfur	Fragrant		1 martin	_	and the
Turbidity:	None						a Charles	DEVDEV	2012 11:27
Color:	None						02012060	6102704.JF	PG
Gross Solid	s: None	Litter	Debris	Sedim	ent 🗌 Other	Г	Sampling Results —		
Vegetation:	None		ed 🗌 Excess	ive			Sample Location:	Pool	
Benthic Gro	wth: None	Green	Brown				Sample ID:	120606-6	5
Stains:	None	🗌 Flow L	ine 🗌 Oil	Rust S	Stains		Time Collected	11:25	
			ion 🗌 Paint	Other			Total Chlorine (field): 0	ppm
Non-illicit:	None	Natura	ll Sheen 🗌 Na	tural Suds/Fo	am		Free Chlorine (field)	: 0	ppm
– Physical	Condition Ass	sessment					Total Copper (field):		ppm
Cueffiti.	News	<i>sessment</i>					Ammonia (field):	0	ppm
Gramiti:	None						pH (field):	8.21	units
Erosion:	None						Temperature:	72	°F
Depositio	n: None	Depth (in):					Conductivity:	1088	µS/cm
Damage:	None	🗌 Displacement 🗌 l	Jndercut	Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/Structural	Damage			Phenol:		mg/L

Inspection	Date: 5/30/2	2012 1:14:06 PM	Inspector:	JCW	Inspec	tion Type:	Ongoing	Previous Rainfall (nrs): 72-	F
Flow Descr	iption: Subm	nerged, indeterminate	Notes:					1118	and the	100 Star
Submerged:	Partially	Depth (in): 29								
Illicit Discharge Potential: Potential Field Follow-up Office Follow-up										
Floatables:	None	Petr	ol. Sheen	Suds	Sewa	age 🗌 Al	gae 🗌 Othe	er	Caller .	
Odor:	None	Petr	bleum	Musty Fishy	Sewa	age 🗌 C Ir 🗌 Fr	hlorine 🗌 Othe ragrant	er Car	The .	7 -
Turbidity:	None		_				-		05/30/	2012 13:14
Color:	None							02012053	30121440.J	PG
Gross Solids	s: None	Litte	r 🗌	Debris	Sedi	ment	Other	- Sampling Results -		
Vegetation:	None	🗌 Inhit	ited	Excessiv	'e			Sample Location:	Pool	
Benthic Gro	wth: None	Gree	en 🗌	Brown				Sample ID:	120530-9	97
Stains:	None	Elow	Line	Oil	🗌 Rust	Stains		Time Collected	13:15	
			osion	Paint	Othe	r		Total Chlorine (field): 0	ppm
Non-illicit:	None	Natu	ral Sheen	🗌 Natu	Iral Suds/F	oam		Free Chlorine (field)): 0	ppm
– Physical (Condition Asse	essment				1		Total Copper (field)	: 0	ppm
Croffit	Nene							Ammonia (field):	1	ppm
Graniti:	None							pH (field):	7.9	units
Erosion:		Dooth (in)						Temperature:	64	°F
Deposition	n. None							Conductivity:	1097	µS/cm
Damage:	inone	Displacement	Undercut		Crushed			Detergents:	0	mg/L
		Corrosion	Cracks/S	tructural E	Damage			Phenol:	0	mg/L

Outfall ID: STH21_Out

Major Outfall

Structure Type: Closed Pipe Outfall

Discharge Location: Adjacent Municipality

Shape: Pipe - Elliptical

Material: RCP

City ID: N/A

Drainage Basin: Omro Rd

Diameter (in): Height/Depth (in): 47 Width (in): 76

Mapping Precison: Mapping GPS



o20120621120234.JPG

Outfall Notes:

Riprap swale discharges to STH 21 storm sewer. Screened at pipe apron.

County Co	oordinates:	Sta
Northing:	478,482	No
Easting:	779,912	Eas

ate Plane Coordinates:rthing:743,798sting:2,339,895

Location Map



Inspection	Date: 6/2	1/2012 12:59:23 PM In	spector: JCW	Inspection Type:	Ongoing	Previous Rainfall (hrs):	0-24	1
Flow Descr	ription: Sub	omerged, no flow	Notes: Apron	submerged, but no up	stream flow	e starter and a	36	
Submerged	: Partially	Depth (in): 12	observ	ed.				
Illicit Disch	arge Potenti	al: Unlikely	Field F	ollow-up 🗌 Of	fice Follow-up			
Floatables:	None	Petrol.	Sheen 🗌 Suds	Sewage Al	gae 🗌 Other			-
Odor:	None	Petrole	eum 🗌 Musty	🗌 Sewage 🗌 Cł	nlorine 🗌 Other	2		1
			olvent 🗌 Fishy	Sulfur Fr	agrant	A. L		E.
Turbidity:	None					Printer .	1	11
Color:	None					0201206211202	240.JF	PG
Gross Solid	s: None	Litter	Debris	Sediment	Other	Sampling Results		
Vegetation:	None	🗌 Inhibite	ed 🗌 Excessiv	e		Sample Location:		
Benthic Gro	wth: None	Green	Brown			Sample ID:		
Stains:	None	Flow Li	ne 🗌 Oil	Rust Stains		Time Collected		
			ion 🗌 Paint	Other		Total Chlorine (field):		ppm
Non-illicit:	None	Natura	Sheen 🗌 Natu	ral Suds/Foam		Free Chlorine (field):		ppm
– Physical	Condition As	sessment				Total Copper (field):		ppm
Oneffilie	Name	beboment				Ammonia (field):		ррт
Gramiti:	None					pH (field):		units
Erosion:	None	Denth (in) 0				Temperature:		°F
Depositio	n: Minor	Depth (in): 3				Conductivity:		µS/cm
Damage:	None	🗌 Displacement 🗌 L	Indercut	Crushed		Detergents:		mg/L
			Cracks/Structural E	Damage		Phenol:		mg/L

Appendix C Outfall Condition Summary Maps

- C-1 Outfalls with Potential Illicit Discharges
- C-2 Outfalls with Damage
- C-3 Outfalls with Deposition
- C-4 Outfalls with Erosion
- C-5 Outfalls with Graffiti



C:\SyncFolders\IDDE_GIS\IDDEpot_Oshkosh.mxd



C:\SyncFolders\IDDE_GIS\Damage_Oshkosh.mxd







- D-1 Upstream Manholes with Significant Floatable Debris
- D-2 02-322 (Rahr Avenue) Investigation
- D-3 06-2241 (Knapp Street) Investigation
- D-4 13-1716 (Victory Car Wash) Investigation
- D-5 16-1508 (N. Westfield Street) Investigation

APPENDIX D-1 Upstream Manholes with Significant Floatable Debris



From: Sent: To: Cc: Subject: Attachments: Jason Weis Monday, October 01, 2012 2:48 PM James Rabe (jrabe@ci.oshkosh.wi.us) Brian Wayner 2012 outfall re-screening results 2012 Prescreen issues2.pdf

James:

On September 27, 2012, Brian and I re-screened the outfalls and manholes that were included on the list of prescreening issues that we sent to you in June. Most of the issues involved gross solids in the manholes.

The first page of the attached list shows the outfalls that were re-screened due to the presence of chemical indicator parameters in the samples. In most cases, the samples collected at these outfalls during the re-screen came back clean. However, two outfalls – 02-322 and 16-487 (16-1508 after reconstruction) had ammonia detections. Maps and summaries of these two outfalls were sent to you via separate emails. Suggested actions, including 2013 follow-up screening, are listed in bold.

12 manholes were re-screened due to gross solids. Based on your correspondence, it sounded like these manholes were cleaned out this summer. In most cases, we noticed a significant reduction in the amount of gross solids in those manholes. Most still had some isolated debris, but not the heavy accumulation that was present in June.

However, the amount of gross solids in four manholes did not appear to change since the June screening (highlighted in orange in the attached table):

- 01-520
- 03-22
- 03-35
- 06-831 (06-829 US1)

In most cases, it appeared that the gross solids in these manholes were the same solids that were observed in June. It is suspected that these manholes were not cleaned out, possibly due to accessibility issues with the vac truck. If this is the case, and if these manholes will not be cleaned out (via vacuum or by hand) in the future, it is probably not cost-effective to continue to inspect these manholes each year if nothing is going to change.

However, if these manholes <u>were</u> cleaned out since June and once again have large amounts of gross solids, then a significant upstream source of solid waste must be present, and should be investigated to try to minimize future gross solids.

If you have any questions about these results, please let us know.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com

Manhole	2010 Ongoing Screening	2011 Manhole	2011 Ongoing Screening	2012 Ongoing Screening	2012 Repeat Screening
01-132 US1 (01-132)		Not screened due to traffic		(June 2012)	(September 2012)
01-520 US1 <i>(01-520)</i>		Krauder + 1 m	EVALUATION INCOMENTATION		Very datas
02-357 US1 <i>(02-357)</i>					
03-22 US1 <i>(03-22)</i>					
03-35 US1 <i>(N/A)</i>					

Manhole	2010 Ongoing Screening	2011 Manhole	2011 Ongoing Screening	2012 Ongoing Screening	2012 Repeat Screening
(City ib) 03-35 US2 (03-35)	(October 2010)	Prescreening (May 2011)	(October 2011)		(September 2012)
06-829 US1 <i>(06-831)</i>					
09-101c US1 <i>(09-47)</i>		Not screened due to traffic			
11-512 US1 <i>(11-512)</i>					
16-381 US1 <i>(16-381)</i>					

Manhole (City ID)	2010 Ongoing Screening	2011 Manhole Brescreening (May 2011)	2011 Ongoing Screening	2012 Ongoing Screening	2012 Repeat Screening
13-3431 US1 (13-3431)					
13-3427 US1 <i>(13-3427)</i>				13/2012 18:06 °	

APPENDIX D-2 02-322 (Rahr Avenue) Investigation

From: Sent: To: Cc: Subject: Attachments: Jason Weis Monday, October 01, 2012 1:36 PM James Rabe (jrabe@ci.oshkosh.wi.us) Brian Wayner Outfall 02-322 (Rahr Ave) 02-322.pdf

James:

During our re-screening last Thursday (9/27), we also checked outfall 02-322, at the east end of Rahr Ave. During the previous screening (6/20/2012), the upstream manhole had significant deposition, a strong sewer odor, and an ammonia concentration over 6 ppm. When we inspected it on Thursday, it appeared that the manhole had been vacuumed out, but there was still quite a bit of vegetative debris (leaves) in the manhole, and the manhole had a strong odor of rotting organics (not necessarily a sanitary sewer odor). The ammonia concentration in the manhole was approximately 3 ppm. No other indicator chemicals (chlorine, detergent, etc.) were detected.

We checked the next upstream manhole, located approximately 36 ft to the west. There was no flow in this manhole, but there was a significant amount of wet sediment in the manhole, which was blocking approximately half of the outgoing pipe.

There was also a sanitary sewer manhole in the area, between the two storm manholes. The flow in this manhole was to the west. A crack was observed along the flowline of the manhole, and it appeared that some of the flow may be escaping through that crack. It is unknown if this crack is related to the increased ammonia levels in the storm sewer.

It appears that the first upstream manhole (02-322) was probably cleaned out as a result of the spring pre-screening inspections, but the upstream manholes were not. Due to the accumulation of sediment and vegetation in the upstream manhole(s), the City may want to flush out the entire branch of the storm sewer on Rahr Ave, both to remove potential ammonia sources, and to improve the current flow capacity of the storm sewer. The City may also want to take a closer look at the crack in the sanitary sewer manhole, and determine if it is possible that the sanitary sewer could be leaking into the clay storm sewer.

We'd be happy to take another ammonia sample after the storm sewer is more thoroughly cleaned out this year. Otherwise, we will simply add this outfall to next year's screening program, and check it next spring.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com



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APPENDIX D-3 06-2241 (Knapp Street) Investigation

From: Sent: To: Cc: Subject: Jason Weis Wednesday, June 13, 2012 3:59 PM James Rabe (jrabe@ci.oshkosh.wi.us) Brian Wayner Additional ammonia detections - 6/13/2012

James:

We finished up the outfalls in the 2012 inspection district today. In addition to the potential issue around Victory Car Wash, we found two more manholes with slightly elevated ammonia:

13-3427 (South Park) – 1 ppm ammonia – The storm sewer consists of two curb inlets that discharge to the pond through a submerged outfall. The sample was collected at the downstream inlet, which was partially submerged and had quite a bit of vegetation in it. Because the storm sewer system consists only of the two inlets, I would strongly suspect that the ammonia is from the decomposition of the organic material in the basin, and no additional tracking is needed. If you'd like, these inlets could be vacuumed out, and we can re-screen them later in the year.

06-15 / 06-560 (Knapp St) – 3 ppm ammonia - It appears that the two storm sewer lines are now combined into one box culvert. A sample was collected at manhole 06-709 (from the old storm sewer map). The sample (and manhole) had a slight "sewage" smell to it, but we originally figured it was due to the proximity to the WWTP. However, the ammonia concentration is higher than we would expect from decaying vegetation in the pooled water, especially water this clear. We can re-sample this outfall when we are back in Oshkosh early next week, to see if the ammonia is still present, and possibly check some other manholes to compare it. Because it appears that the storm sewer was reconstructed, do you have any mapping that shows the new configuration?

Brian will run the detergent tests for all of the samples later this afternoon. If we get hits on anything (especially the Victory Car Wash trench grate), we'll let you know.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com

From:	Jason Weis
Sent:	Thursday, June 14, 2012 10:21 AM
То:	James Rabe (jrabe@ci.oshkosh.wi.us)
Cc:	Brian Wayner
Subject:	Outfall 6-15 (Knapp St)
Attachments:	06-15.pdf

During the 6/13/2012 inspection, a sample was collected from an upstream manhole for the new box culvert installed in Knapp Street. It appears that this box culvert replaced the pipes associated with outfalls 06-15 and 06-560. The sample had a slight "sewage" smell to it, and had an ammonia concentration of 3 ppm, which is higher than we typically see from decaying organic materials in the pools. Because of the elevated ammonia concentration, the City may want to attempt to trace this discharge.

The outfall is close to the wastewater treatment plant. However, since this appears to be a new storm sewer, a cross connection is not likely. In some of our other investigations, we've discovered that WWTP effluent standards for ammonia are often significantly higher than the illicit discharge action levels. Because the WWTP outfall discharges to the same receiving water, perhaps the overall ammonia concentration of the receiving water is elevated, and that is what we were seeing in the sample. On our next trip to the outfall, we could collect a sample of the receiving water near the WWTP outfall to see if the overall level is elevated, or if it appears to be coming from the storm sewer pipe.

Because the storm sewer appears to be newly reconstructed, please send us a map showing the new layout. Also, since it has probably been a few years since we updated the storm sewer mapping in our GIS, please send the updated storm sewer shapefiles for the City at your convenience.

A map is attached showing the general layout along with the inspection photos and results.

We will collect another sample from this manhole (and the manhole that was later located closer to the actual outfall) to determine if the ammonia is still present next week.

If you have any questions, please let us know.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com



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APPENDIX D-4 13-1716 (Victory Car Wash) Investigation

From: Jason Weis Sent: Tuesday, June 12, 2012 9:51 PM Rabe, James E. Subject: RE: Ammonia detection - manhole 13-1716 **Attachments:** 13-1716.pdf

James:

To:

After checking the mapping, you are correct. Based on the mapping that I had with me in the field, it appeared that the two pipes entering the pond from the south were both inlets, since they were less than 10 feet away from each other and at roughly the same elevation. However, after seeing the mapping, I can see that 13-1715 is the inlet, and "13-1716" is the outlet.

So, while we probably didn't need to screen 13-1716, we may have caught something in the process. The water is ponding in the manhole north of Capital Drive and in manhole (catchbasin) 13-1716, so there could be some type of obstruction downstream. Because no water is currently entering the outlet pipe from the pond (the water level is well below the pipe invert), I would start to suspect the other pipe that is entering the manhole north of Capital Drive (from the northeast). This pipe is capped with an orifice cut into it. At the time, I didn't think too much of it with the ammonia detection, but with the additional detergent detection, it becomes a little more suspicious, especially since it appears to come from the direction of the Victory Car Wash. (See attached map with photos.)

It may be worth determining where this pipe is coming from, and finding out if there are any upstream sampling points. However, since it seems to come from private property, we will probably need the help of the City and/or plumbing inspector.

Ben and I will be in Oshkosh Wednesday morning working on the other outfalls. If you would like to meet to investigate this outfall, please call me at 920-585-3061.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com

From: Rabe, James E. [mailto:jrabe@ci.oshkosh.wi.us] Sent: Tue 6/12/2012 5:27 PM To: Brian Wavner Cc: Jason Weis Subject: RE: Ammonia detection - manhole 13-1716

Jason,

I think you're tracking backwards. You were going downstream from the detention basin, not upstream. The upstream system comes out of Capital Drive from the west, not through the Goodwill site.

James

From: Brian Wayner [mailto:Brian.Wayner@omnni.com]
Sent: Tuesday, June 12, 2012 4:40 PM
To: Rabe, James E.
Cc: Jason Weis
Subject: RE: Ammonia detection - manhole 13-1716

James,

We had a detergent detection on the same sample. I ran the test twice. Both times detergent was detected at over 1.3 mg/L. The attached photos show the blue dye transferred to the chloroform, which indicates the presence of anionic detergent. I agree with Jason's suggestion below to clean out the line and we can recheck the area. When I spoke with Jason this afternoon, there were no obvious indications of an illicit discharge. However, he and Ben can check over the area again when they are in Oshkosh tomorrow. Please let us know if you are planning on having the line cleaned out and if so, when it happens so we can follow up with retests.

Thanks,

BRIAN D. Wayner, P.E. Environmental Manager

OMNNI Associates, Inc. One N. Systems Drive, Appleton, WI 54914-1654 800.571.6677, 920.830.6141 (D), 920.830.6100 (F) bwayner@omnni.com

From: Jason Weis Sent: Tuesday, June 12, 2012 3:04 PM To: jrabe@ci.oshkosh.wi.us Cc: Brian Wayner Subject: Ammonia detection - manhole 13-1716

James:

During today's screening, I had an ammonia detection of 3 mg/L in manhole 13-1716 (Capital Dr, just north of Goodwill). The manhole was screened because the outfall (pond inlet) was partially blocked by sediment and debris, causing water to pool in the pipe. The water that was pooled into the manhole was very dark (black) and stagnant – I think this is probably the reason for the ammonia detection.

I checked the upstream manhole/catchbasin (at the end of Goodwill's driveway), and the water was ponded slightly into that manhole as well. The map showed that the next upstream manhole was in a brushy area to the east of the driveway, but I couldn't find it. The next mapped manhole was in the AAA driveway (W South Park Ave), but it appeared that the flow was flowing south toward the storm sewer in South Park Ave, away from manhole 13-1716, so I stopped tracking at this point.

I would suspect that that the elevated ammonia is due to the decaying organic material in the pipe rather than any illicit discharge entering the system. However, you may want to consider cleaning out this branch of the storm sewer to eliminate the stagnation, and then we can re-sample the outfall and/or manhole later this summer, along with any other problematic manholes or outfalls that we identify during this prescreening process.

If you have any questions or other ideas, please let me or Brian know. I should be back in Oshkosh on Wednesday continuing the 2012 screening.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc.



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From: Sent: To: Cc: Subject: Brian Wayner Wednesday, June 13, 2012 6:50 PM jrabe@ci.oshkosh.wi.us Jason Weis FW: Victory Car Wash samples

James,

Jason collected three samples from the Victory Car Wash area today:

- #132 sample from the pond
- #108 sample from manhole
- #46 sample from trench grate at exit of carwash

Sample #46, trench grate didn't exactly test positive for detergent. When I ran the sample the chloroform turned into almost a gel-like substance. First time I have seen this response. I believe there were very tiny bubbles causing the gel-like appearance. Poured out of the test tube almost like wet sand. I ran the test again cutting the sample with 50% distilled water. Same result.

Sample #108 from the manhole Jason also collected a sample from yesterday. Same result. >1.3 mg/L. Very dark blue color in the chloroform.

Sample #132 from the pond tested positive for detergent. Appeared to be in the 0.4-0.6 mg/L range. I'll check with Jason tomorrow morning where he collected the sample in the pond, but it would appear that the source must be fairly concentrated to show up in the pond.

Jason should be in the office in the morning, and I should be in the office most of the day tomorrow if you want to discuss this anymore.

BRIAN D. Wayner, P.E. Environmental Manager

OMNNI Associates, Inc. One N. Systems Drive, Appleton, WI 54914-1654 800.571.6677, 920.830.6141 (D), 920.830.6100 (F) bwayner@omnni.com

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Jason Weis
Thursday, June 14, 2012 10:21 AM
James Rabe (jrabe@ci.oshkosh.wi.us)
Brian Wayner
FW: Victory Car Wash samples
13-1716b.pdf

I have updated the map showing the sampling locations, photos and results.

When we are back in Oshkosh next week, we will collect a few more pond samples to determine how uniform the detergent concentration is. We can also take a look at the private storm sewer pipe that discharges into the northwest side of the pond, to see if there is any way that the detergent could come from that end.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com

From: Brian Wayner Sent: Wednesday, June 13, 2012 6:50 PM To: jrabe@ci.oshkosh.wi.us Cc: Jason Weis Subject: FW: Victory Car Wash samples

James,

Jason collected three samples from the Victory Car Wash area today:

- #132 sample from the pond
- #108 sample from manhole
- #46 sample from trench grate at exit of carwash

Sample #46, trench grate didn't exactly test positive for detergent. When I ran the sample the chloroform turned into almost a gel-like substance. First time I have seen this response. I believe there were very tiny bubbles causing the gel-like appearance. Poured out of the test tube almost like wet sand. I ran the test again cutting the sample with 50% distilled water. Same result.

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Jason should be in the office in the morning, and I should be in the office most of the day tomorrow if you want to discuss this anymore.

BRIAN D. Wayner, P.E. Environmental Manager

OMNNI Associates, Inc. One N. Systems Drive, Appleton, WI 54914-1654 800.571.6677, 920.830.6141 (D), 920.830.6100 (F) bwayner@omnni.com

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APPENDIX D-5 16-1508 (N. Westfield Street) Investigation

From: Sent: To: Cc: Subject: Rabe, James E. <jrabe@ci.oshkosh.wi.us> Thursday, May 31, 2012 3:41 PM Jason Weis Brian Wayner RE: Ammonia detection - outfall 16-487

Jason,

Only the outfall in this location has been recently reconstructed. This outfall was reconstructed with the Westfield Street Bridge project last year. The new storm sewer extends only about 175 feet to the south along Westfield Street. The next upstream manhole now has a new designation (since it was replaced last year). We'll have to get you some new information. We should follow up on this as soon as possible.

James

From: Jason Weis [mailto:Jason.Weis@omnni.com]
Sent: Thursday, May 31, 2012 3:24 PM
To: Rabe, James E.
Cc: Brian Wayner
Subject: Ammonia detection - outfall 16-487

James:

I started screening some of Oshkosh's outfalls on Wednesday. I focused on the outfalls that discharged to Sawyer Creek. Because it had been 72 hours since the previous rainfall, we treated this as a normal outfall screening event, rather than our typical spring "pre-screening." That way, it will not be necessary to revisit these outfalls again in fall, unless manhole cleaning or other maintenance activities are required. We will make sure that all outfalls and upstream manholes are visited before the end of June, in case any manholes need to be cleaned out and rescreened.

One outfall that was inspected on Wednesday had a slightly elevated level of ammonia in the upstream manhole. Outfall 16-487 is located on N Westfield St, and discharges into Sawyer Creek from the south (south of Robin Ave). The outfall pipe was partially submerged, so a sample was collected from the upstream manhole (16-487). The ammonia concentration of this sample was 1 mg/L. No other chemical indicators were out of range, and no physical indicators were observed. (It appeared that the storm sewer had been recently reconstructed, so it appeared fairly clean.)

1 mg/L is what we usually use as the threshold for follow-up investigation, especially if no other indicators are present. Since the sample was collected from a pool sample, natural sources of ammonia (decaying vegetation, etc.) could all cause slightly elevated ammonia levels. However, to be proactive, we will collect an additional sample the next time we are screening in Oshkosh (next week) to determine if the ammonia is still present, and if any additional investigation is warranted.

If you have any questions or concerns about this outfall or the screening program in general, feel free to contact Brian or me.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX
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From:Brian WaynerSent:Wednesday, June 06, 2012 1:00 PMTo:Rabe, James E.Cc:Jason WeisSubject:RE: Ammonia detection - outfall 16-487

Jason rescreened 16-487. No ammonia detections (or any of the other field parameters detected) this time. The initial ammonia detection was likely from a natural source(s), but we will check it again when we are in the area and update you.

BRIAN D. Wayner, P.E. Environmental Manager

OMNNI Associates, Inc. One N. Systems Drive, Appleton, WI 54914-1654 800.571.6677, 920.830.6141 (D), 920.830.6100 (F) bwayner@omnni.com

From: Rabe, James E. [mailto:jrabe@ci.oshkosh.wi.us]
Sent: Thursday, May 31, 2012 3:41 PM
To: Jason Weis
Cc: Brian Wayner
Subject: RE: Ammonia detection - outfall 16-487

Jason,

Only the outfall in this location has been recently reconstructed. This outfall was reconstructed with the Westfield Street Bridge project last year. The new storm sewer extends only about 175 feet to the south along Westfield Street. The next upstream manhole now has a new designation (since it was replaced last year). We'll have to get you some new information. We should follow up on this as soon as possible.

James

From: Jason Weis [mailto:Jason.Weis@omnni.com]
Sent: Thursday, May 31, 2012 3:24 PM
To: Rabe, James E.
Cc: Brian Wayner
Subject: Ammonia detection - outfall 16-487

James:

I started screening some of Oshkosh's outfalls on Wednesday. I focused on the outfalls that discharged to Sawyer Creek. Because it had been 72 hours since the previous rainfall, we treated this as a normal outfall screening event, rather than our typical spring "pre-screening." That way, it will not be necessary to revisit these outfalls again in fall, unless manhole cleaning or other maintenance activities are required. We will make sure that all outfalls and upstream manholes are visited before the end of June, in case any manholes need to be cleaned out and rescreened.

One outfall that was inspected on Wednesday had a slightly elevated level of ammonia in the upstream manhole. Outfall 16-487 is located on N Westfield St, and discharges into Sawyer Creek from the south (south of Robin Ave). The outfall pipe was partially submerged, so a sample was collected from the upstream manhole (16-487). The ammonia concentration of this sample was 1 mg/L. No other chemical indicators were out of range, and no physical

indicators were observed. (It appeared that the storm sewer had been recently reconstructed, so it appeared fairly clean.)

1 mg/L is what we usually use as the threshold for follow-up investigation, especially if no other indicators are present. Since the sample was collected from a pool sample, natural sources of ammonia (decaying vegetation, etc.) could all cause slightly elevated ammonia levels. However, to be proactive, we will collect an additional sample the next time we are screening in Oshkosh (next week) to determine if the ammonia is still present, and if any additional investigation is warranted.

If you have any questions or concerns about this outfall or the screening program in general, feel free to contact Brian or me.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com

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From:	Jason Weis	
Sent:	Friday, September 28, 2012 8:40 AM	
То:	James Rabe (jrabe@ci.oshkosh.wi.us)	
Cc:	Brian Wayner	
Subject:	Ammonia in manholes on N Westfield St (Outfall 16-487 / 16-1508)	
Attachments:	16-487.pdf	

James:

Brian and I finished the outfall inspections in Oshkosh on Thursday. The follow-up inspections consisted mainly of the manholes in which we had previously identified gross solids issues, and outfalls/manholes that had previous chemical indicator parameter detections. One of these was the outfall on N Westfield St, near Red Arrow Park (previously 16-487 before the recent reconstruction).

The upstream manhole (16-1508) had an ammonia detection of 1 ppm during the spring pre-screening. A subsequent inspection showed no ammonia. During Thursday's inspection, the ammonia in this manhole was 3 ppm. Due to construction in the receiving stream and vegetation inside the grate of the outfall pipe, flow was restricted, and the sample was collected from the submerged pool in the upstream manhole.

Because of the elevated ammonia and the previous history of ammonia, we attempted to trace the ammonia upstream. All upstream manholes (up to and including Taft Ave) were partially-submerged, with no free-flowing stormwater. Samples were collected from the pools in several manholes/curb inlets upstream of the outfall. Based on the samples, it appears that the source of the discharge may be between manhole/inlet 16-1504 and 16-430. The ammonia at inlet 16-1504 was approximately 3 ppm, but no ammonia was detected at the next upstream inlet (16-430). It was noted that the restroom facility for Red Arrow Park was located in this stretch of storm sewer, which could be a potential ammonia source.

It should be noted that, since the manholes were partially submerged and the samples were collected from submerged pools, the isolation of the suspect segment is not as precise as in a free-flowing storm sewer, since it is possible for the ammonia to disperse in the pooled stormwater. However, based on the sample results, this would probably be the first segment that should be investigated.

The City may want to televise this segment of storm sewer to determine if there are any cross connections or other sources of ammonia infiltration. If you would like us to conduct any additional testing in the area, please let us know.

I will send you a summary of the gross solids follow-up early next week. Many of the manholes had significantly less gross solids compared to the previous inspection. However, a few appeared to be similar, and may not have been cleaned. I should have the table updated on Monday or Tuesday.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com



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Appendix E Illicit Discharge Responses

- E-1 14-582 (W. 28th Avenue) Response
- E-2 02-184 (Legion Place) Response
- E-3 13-1758 (Washburn Street) Response

APPENDIX E-1 14-582 (W. 28th Avenue) Response

From:	Jason Weis	
Sent:	Wednesday, September 05, 2012 10:19 PM	
То:	James Rabe (jrabe@ci.oshkosh.wi.us); rwood@ci.oshkosh.wi.us	
Cc:	Brian Wayner	
Subject:	Potential illicit discharge at W. 28th Ave.	
Attachments:	28thAveDischarge.pdf; 28thAveDischargeMap.pdf	

I have attached a report and map summarizing the investigation that was conducted today on W. 28th Ave. The contamination plume extended approximatley 100 yards upstream and downstream of the bridge and outfall 14-582, and consisted of a dark black tint in the water and a fairly strong sulfur odor in the water and air.

The odor and color were reminiscent of discharging anaerobic sediment from the stormwater pump stations in Fond du Lac. However, there are no stormwater pump stations in this area. If any of the industrial/commercial properties in the area have pumps that could discharge anaerobic sediment, it may be worth checking them for a potential cross connection.

The sanitary lift station at the end of the road could be another potential source, although the odor, color and chemical characteristics were more consistent with anaerobic sludge than sanitary sewer. However, it would probably be prudent to check the integrity of the incoming and outgoing sanitary sewer lines.

Finally, it would probably be a good idea to check that Hydrite and the other industries on W. 28th Ave did not discharge any anaerobic or sulfur-containing wastewater down the storm sewer line this week. The upstream manholes make this seem rather unlikely, but it is still a possibility. I don't believe that the W. 28th Ave storm sewer was televised last year during the Hydrite investigation, but it might be worth televising this relatively short stretch due to the various complaints that it has been generating.

I should be in the office on Thursday morning if you would like to discuss. Otherwise, Brian may be available if I am out of the office.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com

W. 28th Avenue (Outfall 14-582) Illicit Discharge Investigation

James Rabe (City of Oshkosh) contacted Jason Weis (OMNNI Associates) at 9:58 am on September 5, 2012. Mr. Rabe had responded to a complaint of a potential illicit discharge at outfall 14-582. The outfall is located on W. 28th Avenue, just west of the railroad tracks, near the bridge. The property owner reported a strong odor around the outfall and a black discharge in the stream.

Mr. Weis arrived at the outfall at 11:52. Mr. Rabe and the other City personnel had left the outfall. Upon arriving, a moderately strong sulfur odor was present around the bridge and outfall. The stream near the outfall was 40% covered with duckweed; other areas upstream and downstream were 80-90% covered. The stream exhibited ambiguous flow direction at the time due to wind and downstream wave action. In the areas with no duckweed, the water in the stream appeared to have a black tint.



Figure 1 - Stream at outfall 14-582

The 27-inch RCP outfall pipe was examined for flow. The pipe was partially submerged, but no flow was observed coming from the pipe. A sample was collected from the stream immediately upstream (south) of the bridge. The sample exhibited a black tint, and had a strong sulfur odor. A field analysis of the sample showed no chlorine or ammonia. The pH of the sample was fairly acidic at 6.60. A later bench test showed no detergent was present.

An attempt was made to locate the upstream extent of the black plume and odor. A sample was collected from the southwest corner of the parcel on the east side of the stream. No odor was detected at the stream bed, and the water in the stream appeared fairly clear. A sample was collected at this location. The sample had no odor and no tint. This sample was also field tested, and showed no chlorine or ammonia. The pH of this upstream sample was 7.62, which is fairly typical for stormwater. Using this sample as a control sample, it appeared that the black discharge had reduced the pH of the

stream approximately 1.0 unit lower than the baseline. (The sample locations and upstream and downstream extents of contamination are shown on the attached map.)



Figure 2 - Upstream location (control sample)

The stream was followed downstream until the odor was detected and areas of black water were observed. The upper extent of the contamination was fairly sharp, and located approximately 275 feet upstream of the outfall. A sample was collected from this location, and a faint odor and black tint were observed.



Figure 3 - Upstream extent of contamination

Because of the ambiguous flow in this stream segment, the contamination did not appear to be migrating significantly during the investigation.

Because the outfall pipe was partially submerged, upstream manholes on the storm sewer branch were screened to attempt to identify flow. The manhole immediately west of the intersection of W. 28th Ave and Bradley Street was the first upstream manhole that was located. When this manhole was screened, there was a trickle flow, with no evidence of black tint or staining. The sulfur odor was not apparent, and the sides of the manhole were dry, indicating that a large flow had not occurred in the recent past.



Figure 4 - Upstream manhole at W. 28th Ave and Bradley St (east at top)

During the investigation, the owner of the property immediately west of the outfall came to observe the activities. He indicated that the odor and black tint appeared for the first time this morning, and that he had never seen this before in the seven years that he had been at this location. He confirmed that the odor and black tint were not present on Tuesday, September 4.

An attempt was made to locate the downstream extent of the plume. Samples of the stream water were taken from the Fond du Lac Ave bridge and the railroad bridge. Neither sample had a black tint or sulfur odor, so the plume apparently did not migrate downstream to the railroad bridge.



Figure 5 - Stream upstream of Fond du Lac Ave bridge



Figure 6 - Stream upstream of railroad bridge

The area between the W 28th Ave bridge and the railroad bridge is surrounded by fairly thick brush. The stream was approached from the east bank in several locations until the sulfur odor was barely detectable. Stream samples were collected from several locations to test for odor and tint. It appeared that the downstream extent was approximately 350 feet downstream of the outfall. The downstream extent was not as clearly defined as the upstream extent, partially due to the heavy cover of duckweed.



Figure 7 - Downstream extent of contamination

Outfall 14-582 is the only mapped outfall discharging within the observed contamination. No other outfalls were observed in this area during the investigation.

Because of the fairly distinct upstream and downstream extents of the contamination plume, it is suspected that the source of the contamination is located in the immediate area. If the plume had migrated from an upstream source, the upstream edge would be expected to be less defined.

Prior to starting the investigation, Mr. Weis had contacted Jan Brandenburg at the City's wastewater treatment plant to inquire about the City's capabilities for E. coli testing, should the need arise. Mr. Brandenburg stated that he believed the contamination was likely due to a recent discharge of a dewatering pump near the Melvin Street pump station. However, after investigating the area, it was agreed that this pump station was too far away from the investigation area to be a potential source.

A similar sulfur odor and black discharge is commonly encountered when conducting the IDDE outfall screening in other municipalities with stormwater pump stations. During the screening process for these outfalls, the pump stations are run several times to remove the accumulated stormwater from the sump and the upstream storm sewer(s), in an attempt to obtain fresh flow into the pump stations. Occasionally during this process, the pump stations are run to the point of discharging sediment and debris from the sump. This material is typically anaerobic, and the discharge of this material results in a strong sulfur odor and a black discharge, similar to the conditions observed on W. 28th Ave. However, no stormwater pump stations were observed in the area.

Another potential source of anaerobic material is the streambed itself. If the streambed is significantly disturbed, deeper anaerobic layers can become suspended. If a significant flow was discharged from the outfall, a large scour hole would be expected at the end of the outfall pipe and under the bridge. However, when the sample was collected upstream of the W. 28th Ave bridge, the stream was approximately 12 inches deep, with no evidence of a scour hole. In addition, the upstream manhole showed no evidence of recent heavy discharge.

A third potential source of contamination would be an illicit discharge from one of the neighboring properties in the drainage basin. The illicit discharge could be the discharge of anaerobic sump material, or it could be an anaerobic or sulfur-based wastewater discharge. This possibility could be best investigated by televising the storm sewer line on W. 28th Ave to check for potential cross connections. Also, if any private stormwater pump stations are observed at any of the properties, they could be considered potential sources.

Finally, a sanitary sewer lift station was observed at the far east end of W. 28th Ave, approximately 280 feet east of the outfall. It appears that the sanitary sewer is located in the center of W. 28th Ave, and travels east to the lift station. To do this, it must cross the bridge near the outfall. While the discharge in the stream behaves more like anaerobic sludge than sanitary sewer (no ammonia present, different odor), it may be worth investigating the potential of a sanitary sewer leak coming into the lift station or in the force main downstream of the lift station.



Figure 8 - Sanitary sewer lift station at end of W. 28th Ave

It is recommended that the City continue to monitor this contamination plume and investigate potential sources of the contamination. Due to the lack of chemical indicators, it appears that the most effective method of tracking the contamination is by the presence of the sulfur odor and the black tint in the water. OMNNI would be happy to assist with any additional tracking or sampling that may be required.



C:\SyncFolders\IDDE_GIS_Oshkosh\28thDischarge.mxd

From: Sent: To: Subject: Attachments: Jason Weis Monday, September 10, 2012 10:19 AM Brian Wayner FW: Televising Request 20120910100846675.pdf

FYI

-----Original Message-----From: Rabe, James E. [mailto:jrabe@ci.oshkosh.wi.us] Sent: Monday, September 10, 2012 10:17 AM To: Burns, Todd; Hintz, Andrew Cc: Jason Weis Subject: Televising Request

Todd / Andy,

Per our discussion last week. We are attempting to determine the potential source of the discharge into the creek at 28th Avenue that we met onsite to discussion. I had our Outfall Screening Consultant come out and take some samples for testing. They indicated that the smell reminded them of a storm sewer pump station wet well when it is pumped down for cleaning / inspection. The samples showed a lower than normal pH. The Plumbing Inspectors queried industries in the area to see if any had storm water pumping stations that may have been getting cleaned out. There were no affirmative responses.

Therefore, our next step is to televise the storm sewer and sanitary sewer in the area to see if there are any potential sources we can identify. We would like to televise the storm sewer in 28th Avenue from the creek west to Oregon Street, then south to the terminus (just north of 29th Avenue). We would also like to televise the sanitary sewer in 28th Avenue from the pump station west to the terminus, in Bradley Street from 28th Avenue south to the creek, and in the easement west of the creek from 28th Avenue to the north.

Attached is a pdf with those areas circled.

If you have any questions, please let me know.

Thank you,

James Rabe, P.E., CPESC Civil Engineering Supervisor City of Oshkosh Storm Water Utility (920) 236-5065 (phone) (920) 236-5068 (fax)

⁻⁻⁻⁻⁻Original Message-----From: engp2@ci.oshkosh.wi.us [mailto:engp2@ci.oshkosh.wi.us]

Sent: Monday, September 10, 2012 10:09 AM To: Rabe, James E. Subject:

This E-mail was sent from "ENGP2" (MP 2851/LD528).

Scan Date: 09.10.2012 10:08:46 (-0500) Queries to: <u>engp2@ci.oshkosh.wi.us</u>

From: Sent: To: Subject: Jason Weis Monday, September 10, 2012 10:20 AM Brian Wayner FW: Potential illicit discharge at W. 28th Ave.

FYI

From: Rabe, James E. [mailto:jrabe@ci.oshkosh.wi.us]
Sent: Friday, September 07, 2012 2:29 PM
To: Wood, Rich
Cc: Jason Weis
Subject: RE: Potential illicit discharge at W. 28th Ave.

Rich,

Thank you for following up with that. I will proceed with getting some televising of storm sewer and sanitary sewer done in the area.

James

From: Wood, Rich
Sent: Friday, September 07, 2012 1:31 PM
To: Rabe, James E.
Subject: RE: Potential illicit discharge at W. 28th Ave.

James, we made a survey of the properties adjacent to the creek in the area covered by the map and did not find anything that would indicate a discharge was made. Possibility that the area was a former landfill and may have a buried tank that has broken down or maybe a truck discharge at the bridge (night rider type) will be found to be the source.

Rich

From: Rabe, James E.
Sent: Thursday, September 06, 2012 11:02 AM
To: 'Jason Weis'; Wood, Rich
Cc: Brian Wayner
Subject: RE: Potential illicit discharge at W. 28th Ave.

Rich,

Do you have information on the industries in the 28th Avenue and Bradley Street area to know if any of these industries utilizing storm water pumping?

Thank you,

James Rabe, P.E., CPESC Civil Engineering Supervisor City of Oshkosh Storm Water Utility (920) 236-5065 (phone) From: Jason Weis [mailto:Jason.Weis@omnni.com]
Sent: Wednesday, September 05, 2012 10:19 PM
To: Rabe, James E.; Wood, Rich
Cc: Brian Wayner
Subject: Potential illicit discharge at W. 28th Ave.

I have attached a report and map summarizing the investigation that was conducted today on W. 28th Ave. The contamination plume extended approximatley 100 yards upstream and downstream of the bridge and outfall 14-582, and consisted of a dark black tint in the water and a fairly strong sulfur odor in the water and air.

The odor and color were reminiscent of discharging anaerobic sediment from the stormwater pump stations in Fond du Lac. However, there are no stormwater pump stations in this area. If any of the industrial/commercial properties in the area have pumps that could discharge anaerobic sediment, it may be worth checking them for a potential cross connection.

The sanitary lift station at the end of the road could be another potential source, although the odor, color and chemical characteristics were more consistent with anaerobic sludge than sanitary sewer. However, it would probably be prudent to check the integrity of the incoming and outgoing sanitary sewer lines.

Finally, it would probably be a good idea to check that Hydrite and the other industries on W. 28th Ave did not discharge any anaerobic or sulfur-containing wastewater down the storm sewer line this week. The upstream manholes make this seem rather unlikely, but it is still a possibility. I don't believe that the W. 28th Ave storm sewer was televised last year during the Hydrite investigation, but it might be worth televising this relatively short stretch due to the various complaints that it has been generating.

I should be in the office on Thursday morning if you would like to discuss. Otherwise, Brian may be available if I am out of the office.

Jason Weis, P.E., CPESC GIS Manager / Municipal Project Manager OMNNI Associates, Inc. (920) 735-6900 (920) 830-6100 FAX jason.weis@omnni.com

This email is subject to OMNNI Associates, Inc. Electronic File Disclaimer. For full disclaimer see http://www.omnni.com/legal/OMNNI_Email_Disclaimer.pdf APPENDIX E-2 02-184 (Legion Place) Response

From:	Rabe, James E. <jrabe@ci.oshkosh.wi.us></jrabe@ci.oshkosh.wi.us>	
Sent:	Tuesday, December 04, 2012 9:29 AM	
То:	Jason Weis	
Cc:	Brian Wayner	
Subject:	FW: 336 Legion Pl - Soap Suds	
Attachments:	Legion Pl shoreline.JPG; Legion Pl Soap Suds.JPG; Legion Soap Suds.JPG	

Jason,

Any chance we could look into this at some point in time.

James

From: Gray, Laura E.
Sent: Friday, November 30, 2012 11:18 AM
To: Gulbronson, Peter P.; Sargent, Joseph R; Gierach, Justin; Rabe, James E.
Subject: 336 Legion Pl - Soap Suds

Gentlemen,

I received a phone call from retired Judge Bill Carver who lives at 336 Legion Pl. He stated that on and off he sees soap suds along the shoreline. He said it was quite common last summer, had showed up the day he originally called (11-9-12:see attached photos), and he called again today to state that they showed up again yesterday. There is storm sewer that runs down Legion Pl, and discharges along his northern property line to Lake Winnebago. He did state that he had to do some re-routing of his sanitary discharge, and also connected some of his downspouts to the storm sewer. He is concerned that someone on this block still has their sanitary (maybe floor drain?) connected to the storm system.

I am emailing you all to see if you had any ideas on the plan of attack for checking this. I am not sure where we are at with the I&I program with private properties to see if we would even be able to enter properties to verify their connections. Another problem we have is that the storm sewer itself is under lake level, and discharges underneath the shoreline riprap. Televising would prove to be difficult.

Any guidance/suggestions/ideas would be appreciated. Thank you.

Laura Gray Civil Engineer Storm Water Utility Phone 920-236-5065 Fax: 920-236-5068

From:	Brian Wayner	
Sent:	Thursday, December 06, 2012 12:27 PM	
То:	Rabe, James E.	
Cc:	Jason Weis; Ben Wildenberg	
Subject:	RE: 336 Legion Pl - Soap Suds	
Attachments:	Legion.pdf; IMGP8302.JPG; IMGP8303.JPG; IMGP8304.JPG; IMGP8305.JPG;	
	IMGP8306.JPG; IMGP8307.JPG; IMGP8308.JPG; IMGP8309.JPG; IMGP8310.JPG;	
	IMGP8311.JPG	

Hi James,

Ben went down to Legion Place this morning. The wind was coming out of the south-southeast so the wave action seemed to inhibit any suds from accumulating. He collected samples at several locations (see attached map). The gentleman who reported the suds came out to talk to Ben. The attached photos show the areas around the sampling locations and some of the sample analysis. The ammonia, detergent, and higher conductivity (as compared to the lake water) detections at the upstream manhole 02-184 indicate the potential for an illicit discharge. (The sampling detections may or may not be related to the observed suds. There is still the potential that the suds were formed under natural conditions.)

It might be helpful to televise the stormwater line between manholes 02-185 and 02-183 and from manhole 02-184 to the outfall. There was approximately eight inches of water in manhole 02-184; it was not fully submerged. If your televising equipment cannot be used in that depth of water, it might be worth checking the water levels in the pipes when the lake is drawn down. Otherwise you might consider dye testing. We will put this area on the monitoring list.

Let me know if you have any questions on the attached information.

BRIAN D. Wayner, P.E. Environmental Manager

OMNNI Associates, Inc. One N. Systems Drive, Appleton, WI 54914-1654 800.571.6677, 920.830.6141 (D), 920.830.6100 (F) bwayner@omnni.com

From: Rabe, James E. [mailto:jrabe@ci.oshkosh.wi.us]
Sent: Tuesday, December 04, 2012 5:03 PM
To: Jason Weis; Brian Wayner
Subject: FW: 336 Legion PI - Soap Suds

FYI, here's what I gave to staff.

James

From: Rabe, James E.
Sent: Tuesday, December 04, 2012 9:28 AM
To: Gray, Laura E.; Gulbronson, Peter P.; Sargent, Joseph R; Gierach, Justin
Cc: Burns, Todd; Hintz, Andrew
Subject: RE: 336 Legion PI - Soap Suds

The appearance of suds is not always an indication of an illicit discharge. There are several natural surfactants that can result in the suds effect shown in the pictures.

The watershed for this particular storm sewer is extremely small (one half of one block). Todd and Andy, could you schedule the following storm sewer segments for televising: 0218502184, 0218302184, 0218499. With the Winter drawdown of the lake, we may be able to televise fairly easily. The two storm sewers in Legion Place should be above the water now.

Thank you,

James

From: Gray, Laura E.
Sent: Friday, November 30, 2012 11:18 AM
To: Gulbronson, Peter P.; Sargent, Joseph R; Gierach, Justin; Rabe, James E.
Subject: 336 Legion PI - Soap Suds

Gentlemen,

I received a phone call from retired Judge Bill Carver who lives at 336 Legion Pl. He stated that on and off he sees soap suds along the shoreline. He said it was quite common last summer, had showed up the day he originally called (11-9-12:see attached photos), and he called again today to state that they showed up again yesterday. There is storm sewer that runs down Legion Pl, and discharges along his northern property line to Lake Winnebago. He did state that he had to do some re-routing of his sanitary discharge, and also connected some of his downspouts to the storm sewer. He is concerned that someone on this block still has their sanitary (maybe floor drain?) connected to the storm system.

I am emailing you all to see if you had any ideas on the plan of attack for checking this. I am not sure where we are at with the I&I program with private properties to see if we would even be able to enter properties to verify their connections. Another problem we have is that the storm sewer itself is under lake level, and discharges underneath the shoreline riprap. Televising would prove to be difficult.

Any guidance/suggestions/ideas would be appreciated. Thank you.

Laura Gray Civil Engineer Storm Water Utility Phone 920-236-5065 Fax: 920-236-5068

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APPENDIX E-3 13-1758 (Washburn Street) Response

From:	Rabe, James E. <jrabe@ci.oshkosh.wi.us></jrabe@ci.oshkosh.wi.us>
Sent:	Wednesday, December 12, 2012 5:46 PM
То:	Brian Wayner; Jason Weis
Cc:	Franz, Timothy
Subject:	South Washburn Street Oil Spill

Brain / Jason,

I spent some time onsite this afternoon. After seeing the severity of the situation, I contacted Fire Chief Tim Franz and asked to have the Hazardous Materials Response Team come and deploy oil containment booms. While we were doing that, Chief Franz stopped in and talked with the owner at Quent's. They came out and identified the additional Schedule 40 pipe in the ditch as their sump pump discharge line. They went inside and checked their sump pit, and found oil on the surface of the sump pit. The Fire Department will be following up with them tomorrow.

I wanted to forward on what additional information we have gotten since you were out today.

James Rabe, P.E., CPESC Civil Engineering Supervisor City of Oshkosh Storm Water Utility (920) 236-5065 (phone) (920) 236-5068 (fax)

From:Brian WaynerSent:Thursday, December 13, 2012 8:21 AMTo:jrabe@ci.oshkosh.wi.usCc:Jason WeisSubject:Washburn Street investigation reportAttachments:WashburnReport.pdf; InvestigationMap.pdf

James,

Attached is the summary report Jason prepared based on the field activities yesterday.

Based on the amount of oil Jason observed, and the follow up information from the fire department, the released oil doesn't appear to be a one-time small spill. The oil in the sump could be from:

- Dumping oil directly into the sump
- The sump picking up oil from a leaking above ground tank in the shop or a leaking underground storage tank
- Trench drains that are connected to the sump

Depending on how long this has been going on, the soils in the right-of-ways could be impacted. The WDNR typically requires an investigation of the spill if it cannot be cleaned up immediately. If it doesn't look like the WDNR is requiring the extent of the release defined, you may want to follow up with them. If the City has to do work in the right-of-way in the future and contaminated soil is discovered, the soil needs to be properly handled/disposed. It might be easier to deal with the issue (if there is an issue) now, why the source is known. The WDNR GIS map shows a number of sites in the area with past environmental issues. Dealing with the issue now might avoid finger pointing in the future. If the WDNR is not requiring a soil impact investigation, but the city wants to understand if there is a problem, we can collect the soil samples.

Let Jason or me know if you have any questions on the above items or the attachments.

BRIAN D. Wayner, P.E. Environmental Manager

OMNNI Associates, Inc. One N. Systems Drive, Appleton, WI 54914-1654 800.571.6677, 920.830.6141 (D), 920.830.6100 (F) bwayner@omnni.com

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S. Washburn Street Oil Investigation

December 12, 2012

Background

On December 11, 2012, a survey crew for the City of Oshkosh was working along S. Washburn Street, south of STH 44. While surveying storm sewer manhole 13-1743 on the south side of Washburn Street, they encountered an oily substance in the manhole. The manhole had approximately 0.6 feet of water trapped in it, with the oily substance floating on the water surface. The oil coated the survey rod with an opaque black film (Figure 1).



Figure 1 – Oil on survey rod from storm manhole 13-1743

The survey crew notified the City's Illicit Discharge Coordinator (James Rabe) and continued to trace the discharge downstream toward MS4 outfall 13-1758, where the storm sewer discharges to the USH 41 right-of-way. All of the downstream manholes contained oil, as well as the pool at the end of the outfall.

Mr. Rabe contacted OMNNI Associates, Inc. (OMNNI) on the afternoon of December 11 and requested that OMNNI assist with tracing of the discharge and possible identification of the source. OMNNI conducts the outfall inspections for the City's Illicit Discharge Detection and Elimination (IDDE) program, has traced previous illicit discharges in the City.

Investigation

Jason Weis (OMNNI) met the two surveyors from the city at the site of the discharge at 8:00 am on December 12, 2012. The survey crew provided a brief history of their encounter, as well as the general layout of the storm sewer network in the area.

The drainage basin that discharges to this outfall is relatively small – less than 20 acres. It consists of storm sewer inlets in STH 44 that extend approximately 400 feet in both directions from Washburn Street, as well as the storm sewer inlets in Washburn Street for the first 1200 feet south of STH 44. The Washburn Street storm sewer also collects flow from a drainage swale south of Washburn Street, between Quent's Service Center and the former Chief Equipment property on the south side of Washburn Street, and from a private detention basin located in front of the multi-tenant retail building located on the north side of Washburn Street.

The investigation began by inspecting the various manholes in the storm sewer network to identify the extent of the oil contamination. An oil sheen and petroleum odor was observed at the pipe at the end of the drainage swale south of Quent's Service Center. The flow was traced upstream through the drainage swale for approximately 20 feet, at which point no additional surface flow was observed.



Figure 2 – Oil sheen at the end of the drainage swale

A private storm sewer is located in the west parking lot of Quent's Service Center. This storm sewer discharges to the drainage swale from the north. The outfall pipe was located, and was partially blocked by sediment and vegetation. A shallow pool of water was trapped at the end of the pipe. A sample was collected from this pool, and no sheen or odor was observed.



Figure 3 – Private storm sewer outfall in swale

The upstream manholes in the private storm sewer were opened and inspected. Two manholes and one catchbasin were inspected, and were found to be either dry or have minimal pooling with no sheen. No odors or stains were observed in any of the private manholes or catchbasins south of Quent's Service Center.

The branch of storm sewer along STH 44 south of Washburn Street was inspected. Based on the survey crew's activities on December 11, it was known that this branch entered manhole 13-1724 above the water level in the manhole. Manhole 13-2584 was inspected, and no sheen or stains were observed. A petroleum odor was present, but it was determined that this was likely venting from downstream manholes. Based on the observations in manhole 13-2584, it was determined that the discharge was not coming from this branch of the storm sewer.



Figure 4 – Clean flow in manhole 13-2584

The branch on Washburn Street was investigated next. The manhole on the upstream end (13-1754) was inspected and found to be dry with no petroleum stains or odor. The next manhole (13-1749) was slightly submerged, and the flow appeared to be heading to the west (downstream). The flow entering from the east appeared to have a slight sheen, but did not have the dark, oily appearance that was observed at the end of the drainage swale.



Figure 5 – No flow in manhole 13-1754



Figure 6 – Slight sheen in manhole 13-1749

The pond in front of the multi-tenant retail building on the north side of Washburn Street was inspected next. The building houses three tenants: 2nd Wind Exercise Equipment, Skiers Outlet and Golfers Outlet. The front parking lot for this building sheet flows into the detention pond. One PVC pipe was located on the north side of the pond, which appears to come from inside the building (i.e., roof drains). No catchbasins, inlets, or other private storm sewer were identified on the property.



Figure 7 – Detention pond inlet pipe

An oil sheen was observed on the surface of the detention pond. Near the inlet pipe, the sheen appeared to consist of clear oil droplets. Near the pond's outlet pipe, near manhole/inlet 13-1743, the oil sheen was more opaque. The pond is likely designed to discharge to the storm sewer in Washburn Street. However, due to the partially-submerged condition at the outfall and the backed-up water in the storm sewer, the pond surface was at the same level as the storm sewer flow, and the water was free to flow between the storm sewer and the pond based on wind and other influences on flow.



Figure 8 – Detention pond outlet pipe

The junction of the detention pond and drainage swale with the storm sewer is located at manhole/inlet 13-1743. This inlet was inspected, and the opaque oil sheen observed in the drainage ditch was also observed in this inlet. No obvious source of the oil was identified, but there appeared to be a slight flow to the west (downstream).



Figure 9 – Detention pond outlet pipe connection to manhole 13-1743



Figure 10 – Drainage swale pipe connection to manhole 13-1743

A water sample was collected from this manhole. The water was ten inches deep, with an opaque film on the surface. The oily substance coated the sample pole and sample bottle. A strong petroleum odor was present.



Figure 11 – Sample collected from manhole 13-1743

The remaining manholes between manhole 13-1743 and the outfall were inspected, and the oily substance was observed in each manhole. The inspection at manhole 13-1724 confirmed that the flow entering from the southwest branch did not contain oil.



Figure 12 – Pipe from southwest branch entering manhole 13-1724 above the water level

Outfall 13-1758 was located in the USH 41 right-of-way, south of the southbound on-ramp. The outfall pipe was approximately 90% submerged. The pool at the end of the outfall pipe had a brown-black opaque sheen with a strong petroleum odor, similar to the upstream manholes.



Figure 13 – Pool at end of outfall 13-1758

After leaving the outfall, the flow traveled northeast approximately 50 feet through a grass swale. A sheen was observed on this flow. The flow then entered a concrete culvert that traveled under STH 44 and discharged on the north side of STH 44. A dark sheen was observed on both the upstream and downstream ends of this culvert.



Figure 14 – Sheen on pool in upstream end of STH 44 culvert



Figure 15 – Sheen on pool in downstream end of STH 44 culvert

The stains on the downstream culvert apron showed that the oil level had once been 4 to 5 inches higher than the present level.

After leaving the STH 44 culvert, the flow traveled north along the USH 41 off-ramp ditch. The flow was traced for approximately 45 feet past the end of the culvert, at which point no surface flow was visible. The survey crew placed a pair of lath at the estimated downstream extent of the flow.



Figure 16 – Downstream extent of oil sheen

Based on the observations in the upstream manholes, the most likely source for the oil appeared to be the drainage swale south of Quent's Service Center. Starting at the downstream end of the swale, the surface flow was traced back up through the grass in the swale. Approximately 20 feet upstream from the end of the swale, the surface flow appeared to intensify from the north side of the swale. A metal fence post was located, which sometimes marks the location of a pipe. The area around the fence post was probed with a shovel, and a 4-inch PVC pipe was located. The pipe appeared to come from Quent's Service Center. When the area around the end of the pipe was cleared with the shovel, the pipe appeared to discharge the oily substance, which quickly flooded the area and submerged the pipe. Based on the appearance of the discharge and the strong odor that was present with the new discharge, this 4-inch PVC was identified as a probable source. The location of the pipe was marked with a lath, and the Illicit Discharge Coordinator was informed of the discovery.



Figure 17 – 4-inch PVC pipe from Quent's Service Center (submerged)

OMNNI left the site at approximately 12:15 pm.

Mr. Rabe investigated the site during the afternoon of December 12, 2012. Due to the severity of the contamination, he contacted the Fire Chief and asked to have the Hazardous Materials Response team deploy oil containment booms in the area. The Fire Chief spoke with the owner of Quent's Service Center, who identified the PVC pipe as their sump pump discharge line. After investigating the inside of the building, oil was observed on the surface of the sump pit. The Fire Department will follow up with Quent's Service Center on December 13.


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Jason Weis

From: Sent: To: Subject: Attachments: Brian Wayner Thursday, December 13, 2012 12:24 PM Jason Weis FW: City of Oshkosh - Reported Petroleum Spill WashburnReport.pdf; InvestigationMap.pdf

FYI

BRIAN D. Wayner, P.E. Environmental Manager

OMNNI Associates, Inc. One N. Systems Drive, Appleton, WI 54914-1654 800.571.6677, 920.830.6141 (D), 920.830.6100 (F) bwayner@omnni.com

From: Rabe, James E. [mailto:jrabe@ci.oshkosh.wi.us]
Sent: Thursday, December 13, 2012 12:22 PM
To: Lester, Lawrence J - DNR
Cc: Brian Wayner; Franz, Timothy
Subject: RE: City of Oshkosh - Reported Petroleum Spill

Larry,

Attached is report information from OMNNI Associates. The City consults with OMNNI on our Storm Water Program Illicit Discharge Program. I have copied Brian Wayner (OMNNI) on this email. Brian is the project manager for OMNNI for the City's work.

James

From: Lester, Lawrence J - DNR [mailto:Lawrence.Lester@Wisconsin.gov]
Sent: Thursday, December 13, 2012 8:08 AM
To: Rabe, James E.
Subject: RE: City of Oshkosh - Reported Petroleum Spill

James, let's plan on talking at 9:30 or when you have some time this morning. I'd like to get the contact info for the gas station and other info about the spill. Thanks.

Larry Lester Acting Northeast Regional Spill Coordinator 608-275-3465 920-362-2072 cell

From: Rabe, James E. [mailto:jrabe@ci.oshkosh.wi.us]
Sent: Thursday, December 13, 2012 7:23 AM
To: Lester, Lawrence J - DNR
Subject: RE: City of Oshkosh - Reported Petroleum Spill

Larry,

I apologize for that, I was in the field, and didn't hear the phone ring in my pocket. I'll be in a committee meeting until about 9:30 this morning, and won't be able to answer the phone. After that, I will be able to take calls. Best bet will be to call my cell phone after that, as I will be in other meetings with one of my design consultants.

Thank you,

James

From: Lester, Lawrence J - DNR [mailto:Lawrence.Lester@Wisconsin.gov]
Sent: Wednesday, December 12, 2012 7:11 PM
To: Rabe, James E.
Subject: RE: City of Oshkosh - Reported Petroleum Spill

James, thanks for getting back to me with the additional information. I tried to call earlier but missed you at work and wasn't able to reach you by cell phone. I'll call you tomorrow morning.

Larry Lester Acting Northeast Regional Spill Coordinator 608-275-3465 920-362-2072 cell

From: Rabe, James E. [mailto:jrabe@ci.oshkosh.wi.us]
Sent: Wednesday, December 12, 2012 5:21 PM
To: Lester, Lawrence J - DNR
Cc: Franz, Timothy
Subject: City of Oshkosh - Reported Petroleum Spill

Larry,

I spent some time onsite this afternoon. This spill is more than a sheen on the water surface. There is free product on the water surface, indicating a more severe spill than originally thought. The City of Oshkosh Fire Department Hazardous Materials Response Team was dispatched to the site to install containment booms to help contain the spill and keep it from spreading. As we worked on that, we also further investigated the likely source.

The source appears to be coming from a sump pump discharge pipe from Quent's Service Station at 2167 STH 44. A pipe discharging to a drainage ditch was partially plugged by dirt and cattails. When the end of the pipe was exposed (below water elevation) a rush of water and petroleum came from the pipe. Fire Chief Franz and I further investigated with Quent's Service Station. They checked their sump pump pit, and found oil present in the pit. The owner began working on clearing the oil from the surface.

If you have additional questions, please do not hesitate to contact either myself, or Fire Chief Franz (copied on this email).

Thank you,

James Rabe, P.E., CPESC Civil Engineering Supervisor City of Oshkosh Storm Water Utility (920) 236-5065 (phone) (920) 236-5068 (fax)

Jason Weis

From: Sent: To: Subject: Attachments: Rabe, James E. <jrabe@ci.oshkosh.wi.us> Wednesday, January 02, 2013 10:09 AM Brian Wayner; Jason Weis DNR Letter - STH 44 DNR Letter to Quents 12-27-2012.pdf

Brian / Jason,

Here's a copy of a letter from the DNR to Quents.

James Rabe, P.E., CPESC Civil Engineering Supervisor City of Oshkosh Storm Water Utility (920) 236-5065 (phone) (920) 236-5068 (fax) State of Wisconsin DEPARTMENT OF NATURAL RESOURCES Northeast Region Headquarters 2984 Shawano Avenue Green Bay WI 54313-6727

Scott Walker, Governor Cathy Stepp, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 FAX 920-662-5197 TTY Access via relay - 711



December 27, 2012

RECEIVED

JAN 0 2 2013

Mr. Mark Gerlach Quent's Service Center 2167 State Road 44 Oshkosh, WI 54904

DEPT. OF PUBLIC WORKS OSHKOSH, WISCONSIN

Subject: Reported Contamination at Quent's Service Center 2167 State Road 44, Oshkosh, WI BRRTS Activity # 03-71-559773

Dear Mr. Gerlach:

On December 12, 2012, the Wisconsin Department of Natural Resources (WDNR) was notified via the Spills Electronic Report and Tracking System that a petroleum contamination spill had occurred at the site described above.

2012 EDDE File

Based on the information that has been submitted to the WDNR regarding this site, we believe you are responsible for investigating and restoring the environment at the above-described site under Section 292.11, Wisconsin Statutes, known as the hazardous substances spills law.

This letter describes the legal responsibilities of a person who is responsible under Section 292.11, Wis. Stats., explains what you need to do to investigate and clean up the contamination, and provides you with information about cleanups, environmental consultants, possible financial assistance, and working cooperatively with the WDNR, Department of Safety and Professional Services (DSPS) or the Department of Agriculture, Trade and Consumer Protection (DATCP).

Legal Responsibilities:

Your legal responsibilities are defined both in statute and in administrative codes. The hazardous substances spill law, Section 292.11 (3) Wisconsin Statutes, states:

• RESPONSIBILITY. A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

Wisconsin Administrative Code chapters NR 700 through NR 749 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Wisconsin Administrative Code chapter NR 140 establishes groundwater standards for contaminants that reach groundwater.

<u>Steps to Take</u>:

The longer contamination is left in the environment, the farther it can spread and the more it may cost to clean up. Quick action may lessen damage to your property and neighboring properties and reduce your costs in investigating and cleaning up the contamination. To ensure that your cleanup complies



with Wisconsin's laws and administrative codes, you should hire a professional environmental consultant who understands what needs to be done. These are the <u>first</u> steps to take:

- 1. Within the next **30** days, by January 25, 2013, you should submit <u>written</u> verification (such as a letter from the consultant) that you have hired an environmental consultant. If you do not take action within this time frame, the WDNR may initiate enforcement action against you.
- 2. Within the next **60** days, by February 25, 2013, your consultant should submit a work plan and schedule for the investigation. The consultant must comply with the requirements in the NR 700 Wis. Adm. Code rule series and should adhere to current WDNR technical guidance documents.

In addition, within 30 days of completion of the site investigation, your consultant should submit a Site Investigation Report to the WDNR or other agency with administrative authority.

For sites with petroleum contamination, when your investigation has established the degree and extent of contamination, your consultant will be able to determine whether the Department of Safety and Professional Services or the WDNR has authority over the case. For agrichemicals, your case will be transferred to the Department of Agriculture, Trade and Consumer Protection for oversight.

Sites where discharges to the environment have been reported are entered into the Bureau for Remediation and Redevelopment Tracking System (BRRTS), a version of which appears on the WDNR's internet site. You may view the information related to your site at any time (<u>http://dnr.wi.gov/botw/SetUpBasicSearchForm.do</u>) and use the feedback system to alert us to any errors in the data.

If you want a formal written response from the department on a specific submittal, please be aware that a review fee is required in accordance with ch. NR 749, Wis. Adm. Code. If a fee is not submitted with your reports, you should proceed under the advice of your consultant to complete the site investigation and cleanup to maintain your compliance with the spills law and chapters NR 700 through NR 749. **Do not delay the investigation** of your site by waiting for an agency response. We have provided detailed technical guidance to environmental consultants. Your consultant is expected to know our technical procedures and administrative rules and should be able to answer your questions on meeting cleanup requirements.

All correspondence regarding this site should be sent to:

Kevin McKnight Remediation and Redevelopment Program Wisconsin Department of Natural Resources 625 E County Rd Y, Suite 700 Oshkosh, WI 54901-9731 Kevin.McKnight@Wisconsin.Gov

Unless otherwise requested, please send only one hard copy of plans and reports. In addition to the paper copy, an electronic copy may also be submitted to assist the WDNR with site evaluation and discussions. <u>A hard copy of any attachments sent electronically must be submitted for the information to be included in the site file</u>, regardless of size. To speed processing, correspondence should reference the BRRTS number shown at the top of this letter.

Site Investigation and Vapor Pathway Analysis

As you develop the site investigation workplan, we want to remind you to include an assessment of the vapor intrusion pathway. Chapter NR 716, Wisconsin Administrative Code outlines the requirements for investigation of contamination in the environment. Specifically, s. NR 716.11(3)(a) requires that the field investigation determine the "nature, degree and extent, both areal and vertical, of the hazardous substances or environmental pollution in all affected media". In addition, section NR 716.11(5) specifies that the field investigation include an evaluation of the "pathways for migration of the contamination, including drainage improvements, utility corridors, bedrock and permeable material or soil along which vapors, free product or contaminated water may flow".

You will need to include documentation with the Site Investigation Report that explains how the assessment was done. If the pathway is being ruled out, then the report needs to provide the appropriate justification for reaching this conclusion. If the pathway cannot be ruled out, then investigation and, if appropriate, remedial action must be taken to address the risk presented prior to submitting the site for closure. The WDNR has developed guidance to help responsible parties and their consultants comply with the requirements described above. The guidance includes a detailed explanation of how to assess the vapor intrusion pathway and provides criteria which identify when an investigation is necessary. The guidance is available at: http://dnr.wi.gov/files/pdf/pubs/rr/RR800.pdf.

Additional Information for Site Owners:

We encourage you to visit our website at http://dnr.wi.gov/topic/Brownfields/, where you can find information on selecting a consultant, financial assistance and understanding the cleanup process. You will also find information there about liability clarification letters, post-cleanup liability and more.

Information to help you select a consultant, materials on controlling costs, understanding the cleanup process, and choosing a site cleanup method are enclosed. In addition, Fact Sheet 2-Voluntary Party Remediation and Exemption from Liability is enclosed and provides information on obtaining protection of limited liability under s. 292.15, Wis. Stats.

If you have questions, call Kevin McKnight (920) 424-7890 for more information or visit the RR web site at the address above.

Thank you for your cooperation.

Sincerely,

Vane E. Hansen

Diane E. Hansen Remediation & Redevelopment Program

- Enclosures: 1.
 - **Remediation & Redevelopment Program**
 - 2. Environmental Contamination - The Basics
 - 3. Selecting an Environmental Consultant
 - 4. **Environmental Services Contractor List**
 - 5. Fact Sheet 2, VPLE
 - 6. CLEAN - Pub-RR-788
 - 7. Information about PECFA
- James Rabe, City of Oshkosh, 215 Church St, Oshkosh, WI 54902-1130 CC: Kevin McKnight - DNR, Oshkosh