MSD

Louisville and Jefferson County
Metropolitan Sewer District

Sewer Overflow Response Protocol

(Revised) November 5, 2008

SORP 2008

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SECTION 1: INTRODUCTION AND OVERVIEW

1.1 Purpose

The Consent Decree requires that Louisville and Jefferson County Metropolitan Sewer District (MSD) develop a Sewer Overflow Response Protocol (SORP), which complies with 401 KAR 5:015, for review and approval by U.S. Environmental Protection Agency (EPA) and Kentucky Department for Environmental Protection (KDEP). The purpose of this SORP is to provide guidance to MSD personnel regarding response, mitigation, public notification and reporting of overflows, including unauthorized discharges. The SORP defines the processes and actions that MSD employs to accomplish that purpose.

Specifically, the SORP details how MSD will accomplish the following:

- Respond to, clean up, and/or minimize the impacts of overflows, including unauthorized discharges;
- Document and report the location, volume, cause and impact of overflows, including unauthorized discharges to KDEP and EPA; and
- Provide notification to potentially impacted members of the public.

1.2 Definitions

This section defines the commonly used terms in the SORP.

Bypass - the intentional diversion of waste streams from any portion of a treatment facility as set forth at 40 C.F.R. § 122.41(m)(1) and 401 KAR 5:002, Section 1(36). The practice of bypassing Secondary Treatment units and recombining the bypass flow with the secondary effluent prior to discharge, known commonly as blending, recombination, or diversion, constitutes a "Bypass." The term Bypass shall specifically exclude (1) practices at MSD's MFWTP that are in accordance with the KPDES permit and the CSO Control Policy and (2) any flow that exceeds the design capacity of a tertiary process at any WWTP in accordance with a KDPES permit.

Combined Sewer Overflow (CSO) - an outfall identified as a combined sewer overflow (CSO) in MSD's Kentucky Pollutant Discharge Elimination System (KPDES) permit for the Morris Forman WWTP from which MSD is authorized to discharge during wet weather.

- **Dry Weather CSO** - an overflow from a permitted outfall identified as a combined sewer overflow or CSO in MSD's Morris Forman WWTP KPDES permit that is not the result of a wet weather event.
- **Wet Weather CSO** - an overflow from a permitted outfall identified as a combined sewer overflow or CSO in MSD's Morris Forman WWTP KPDES permit that is the result of a wet weather event.

Combined Sewer System (CSS) - the portion of MSD's Sewer System designed to convey municipal sewage (domestic, commercial and industrial wastewaters) and stormwater runoff through a single-pipe system to MSD's Morris Forman WWTP or CSOs.

Geographic Information System (GIS) - a computer based system that is capable of storing, managing and analyzing geographic spatial data. This capability includes producing maps, displaying the results of data queries and conducting spatial analysis.

Kentucky Department for Environmental Protection (KDEP) - agency responsible for administering KPDES permits and receiving permit-related reports.

Kentucky Pollutant Discharge Elimination System (KPDES) Permit - any National Pollutant Discharge Elimination System permit issued to MSD by the Cabinet pursuant to the authority of the Act and KRS Chapter 224 and the regulations promulgated thereunder.

Louisville and Jefferson County Metropolitan Sewer District (MSD) - agency responsible for providing wastewater, stormwater, and flood protection services in Jefferson County. MSD is also responsible for response, mitigation, notification and reporting of overflows, including unauthorized discharges.

Property Service Connection (PSC) - the portion of a sewer lateral that is within an easement or right of way and maintained by MSD.

Sanitary Sewer System (SSS) - the portion of MSD's sewer system designed to convey only municipal sewage (domestic, commercial and industrial wastewaters) to MSD's WWTPs.

Sanitary Sewer Overflow (SSO) - any discharge of wastewater to Waters of the United States from MSD's Sewer System through a point source not authorized by a KPDES permit, as well as any release of wastewater from MSD's Sewer System to public or private property that does not reach Waters of the United States, such as a release to a land surface or structure that does not reach Waters of the United States; provided, however, that releases or wastewater backups into buildings that are caused by blockages, flow conditions, or malfunctions in a building lateral, or in other piping or conveyance system that is not owned or operationally controlled by MSD are not SSOs.

Secondary Treatment - a biological wastewater treatment technology required by the Clean Water Act for discharges from Publicly Owned Treatment Works (POTW), as that term is defined at 40 C.F.R. § 403.3(q). The minimum level of effluent quality attainable through the application of secondary treatment is established in 40 C.F.R. § 133.102 in terms of the parameters for 5-day biochemical oxygen demand (BOD) concentration and percent removal, total suspended solids (TSS) concentration and percent removal, and pH.

Sewer System - the wastewater collection, retention, and transmission systems that MSD owns or operates, that are designed to collect, retain and convey municipal sewage (domestic, commercial and industrial wastewaters) to MSD's WWTPs or CSOs which are comprised of the CSS and the SSS.

Unauthorized Discharge - (a) any discharge of wastewater to Waters of the United States from MSD's Sewer System or WWTPs through a point source not authorized by a KPDES permit; and, (b) any Bypass at MSD's WWTPs prohibited pursuant to the provisions of 40 C.F.R. § 122.41(m)(2) and (4) or 401 KAR 5:065, Section 1(13)(a) and (c).

U.S. Environmental Protection Agency (EPA) - the federal agency responsible for enforcing the Clean Water Act, Safe Drinking Water Act and other federal environmental regulations.

Wastewater Treatment Plant (WWTP) - the devices or systems used in the storage, treatment,

recycling, and reclamation of municipal sewage that MSD owns or operates, and for which KPDES permits have been or will be issued to MSD.

Waters of the United States (WUS) - as defined in 40 CFR 122.2:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate "wetlands;"

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds that the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as Waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

** The regulations exclude waste treatment systems, manmade ponds, and prior converted cropland from the definition of "Waters of the US." With respect to prior converted cropland, EPA maintains jurisdiction for purposes of the Clean Water Act.

1.3 Acronyms

This section list the commonly used acronyms in the SORP

Biochemical Oxygen Demand (BOD)

Beargrass Interceptor (BGI)

Capacity, Management, Operation and Maintenance (CMOM)

Customer Relations Call Center (CRCC)

Customer Relations Department (CRD)

Customer Service Requests (CSR)

Emergency GIS Dashboard (EGIS)

Emergency Management Services (EMS)

Global Positioning System (GPS)

Human Resources (HR)

Industrial Waste Department (IWD)

Infrastructure and Flood Protection (I&FP)

Information Technology (IT)

Initial Discharge Report (IDR)

Integrated Overflow Abatement Plan (IOAP)

Laboratory Information Management System (LIMS)

Long Term Control Plan (LTCP)

Louisville/Jefferson County Information Consortium (LOJIC)

Louisville Water Company (LWC)

Metro Operations (MO)

Microsoft Office SharePoint Services (MOSS)

National Pollution Discharge Elimination System (NPDES)

Programmable Logic Controller (PLC)

Plant Information System (PI)

Process Control Center (PCC)

Physical Assets (PA)

Publicly Owned Treatment Works (POTW)

Property Valuation Administrator (PVA)

Regulatory Services (RS)

Real Time Control (RTC)

Sewer Overflow Response Protocol (SORP)

Significant Industrial Users (SIU)

Southwestern Outfall (SWO)

Southwestern Pumping Station (SWPS)

Supervisory Control and Data Acquisition (SCADA)

Total Suspended Solids (TSS)

United States Geological Survey (USGS)

Waterway Improvements Now (WIN)

Wet Weather Discharge Reconnaissance Team (WWDRT)

SECTION 2: SYSTEM AND ORGANIZATIONAL FRAMEWORK

2.1 MSD Wastewater Collection, Transmission and Treatment System

Currently, MSD's collection, transmission and treatment system serves a population of approximately 693,000 in a 385-square mile service area. MSD's collection and treatment system is composed of approximately:

- 3,140 miles of sewer lines (gravity and force main)
- 72,000 manholes
- 62,600 catch basins
- 300 pump stations
- 6 regional wastewater treatment plants
- 15 small wastewater treatment plants

2.1.1 Collection System

MSD owns and operates a system that transports wastewater by both gravity and pumped systems. The gravity system collects wastewater at the property service connection (PSC) from the point of discharge from homes and businesses, and by using the natural force of gravity conveys it through a series of manholes, lateral sewers and interceptors to a point of ultimate treatment in a permitted Publicly Owned Treatment Works (POTW) before being discharged to the Waters of the United States (WUS). The collection and transmission system includes over 300 pump and lift stations.

2.1.2 Transmission and Treatment System

Wastewater is conveyed to MSD's network of treatment facilities, which are permitted by KDEP under the Kentucky Pollutant Discharge Elimination System (KPDES) system. The treatment process provides the means to achieve beneficial reuse of wastewater biosolids, while treating the wastewater to a level that provides for sustained recreational and commercial uses, as well as natural habitats for aquatic wildlife. The MSD network includes both Combined Sewer System (CSS) and Sanitary Sewer System (SSS) treatment, employing a variety of activated sludge treatment processes that have received national awards for operational excellence.

Refer to **Appendix A** for a list of MSD Permitted WWTPs and a map illustrating MSD's collection and treatment system.

2.2 MSD Functional Structure and Resources for SORP Implementation

MSD is structured to provide the best service possible to our customers. There are ten divisions within MSD, each playing an integral role in our mission to build, maintain and operate quality wastewater and stormwater facilities. These areas are Legal, Finance, Engineering, Watershed Area Teams, Operations, Infrastructure and Flood Protection (I&FP), Regulatory Services (RS), Information Technology (IT), Physical Assets (PA), and Human Resources (HR). Figures of MSD's most recent organization charts for each division are provided in **Appendix B**. The organization charts illustrate the extent and complexity of the organization.

The RS Director is responsible for the overall implementation of these procedures. As such, responsibility is delegated to specific divisions for day-to-day implementation. Managers in these areas oversee proper implementation by their staff.

2.2.1 Resources for Customer Inquiries and Notifications

The Customer Relations Department (CRD) is responsible for handling customer inquiries related to overflows. MSD's CRD is staffed 7 days per week, 24 hours per day to receive customer inquiries which are designated as customer service requests (CSR). Customers may call MSD's Customer Relations Call Center (CRCC) directly or submit inquiries online using the Internet or by e-mail. Customers can also track the status and progress of their request online.

2.2.2 Resources for Dispatching Work

Both I&FP and Operations maintain personnel that dispatch work for activities within their respective areas of responsibility. The I&FP Dispatch Center includes personnel responsible for routing work during the week Monday through Sunday, 7:30 am to 5:00 pm. CRD personnel perform the dispatch function Monday through Sunday, 5:00 pm to 7:30 am. Operations personnel monitor the wastewater treatment plants and pump stations remotely from the Morris Forman WWTP Process Computer Center (PCC) 7 days per week, 24 hours per day. Both Supervisory Control and Data Acquisition (SCADA) and telemetry are used for remote data transmission monitoring and control. Personnel are dispatched to a facility when telemetry data indicates a problem condition.

2.2.3 Resources for Response to Overflows

There are three areas primarily responsible for investigating and mitigating overflows; I&FP, the Metro Operations (MO) department of the Operations Division, and RS. Generally, collection system and flood pumping station assets are addressed by I&FP, treatment plant and sanitary pumping station assets are monitored by MO and established wet weather routes are handled by RS. In addition, personnel are available from other divisions to support the response and mitigation efforts.

MSD employs technologies, systems, equipment, facilities and trained personnel that are capable of achieving the most effective methods of overflow abatement possible. The MSD budget provides for regular investment in equipment, training, facilities and personnel.

2.2.4 Resources for Public Notification and Awareness

MSD dedicates personnel to ensure that the infrastructure and mechanisms are in place for public notification and general awareness of issues pertaining to overflows. As a first point of contact for MSD, CRCC personnel are trained to answer questions from the public concerning overflows. MSD's Executive Office interfaces with customers asking about overflows as well, and provides coordination with the media when necessary. IT Division personnel coordinate updates to MSD's website and ensure that it remains available for public access and notification. Also, MSD will apply resources to prepare and disseminate materials aimed at providing the public with information concerning overflows.

MSD is currently investigating additional methods of notifying the public concerning overflows through a public awareness ad campaign.

MSD developed radio spots from the key values defined by the WWT Stakeholders Group. These radio spots will start running in September 2008 and will continue to run through November 2008. The messages focus on the five key messages of Project WIN. The thirty second radio commercials on WHAS Radio (840 AM) highlight MSD tips and/or initiatives. The radio spots are scheduled to air three times per week Monday - Friday from 6:00 am - 7:00 pm and one time per week on Saturdays from 9:00 am - 11:00 am. MSD will also broadcast information with online web streaming on WHAS Radio (www.whas.com). These streaming messages will air 10 times per week Monday - Friday from 7:00 am - 6:00 pm.

The radio station WFPL (89.3 FM) will broadcast fifteen second live messages two weeks in each month. These messages will air 4 times each week from 6:00 am -10:00 am, 4 times each week from 10:00 am - 3:00 pm, 5 times each week from 3:00 pm - 8:00 pm and 4 times each week from 8:00 pm - 12:00 am, for a total of 17 spots per week. The five key messages of Project WIN are as follows:

1. Value clean water.
2. Your investment is paying dividends and our water is getting cleaner.
3. Protecting public health is critically important.
4. MSD and many community partners are working hard to improve water quality.
5. You can make a difference.

MSD is making arrangements for this public awareness ad campaign to continue in 2009.

MSD currently provides a notification that overflows are occurring with a message posted on MSD's web page and on the Project WIN web page. In addition, customers can sign up to receive an email notification. This system will notify anyone that signs up of the following events:

- when there is the potential for the release of untreated sanitary sewage into the Ohio River or the Louisville Metro creek system due to actual recorded rainfall amounts that may cause combined or sanitary sewers to overflow; or
- when there is a dry weather overflow of untreated sanitary sewage in an amount over 1,000 gallons that occurs anywhere in the MSD collection or treatment system; or
- when conditions have returned to normal (minimum of 48 hours) and the impact of a release or overflow has dissipated; or
- when there is a significant issue news that may be of interest to those members of the Project WIN e-mail notification system

2.2.5 Resources for Overflow Documentation and Regulatory Reporting

RS, I&FP and MO personnel are tasked with documenting information associated with overflows in the Hansen Information Management System (Hansen). RS staff will ensure that pertinent information regarding unauthorized discharges is reported to KDEP and EPA. When feasible, technologies are utilized to optimize the reporting process.

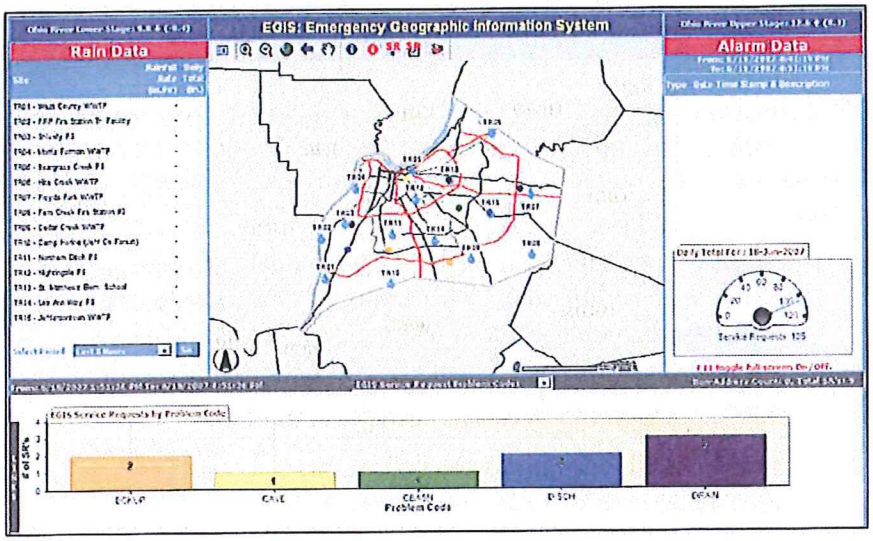
2.3 Information Management Systems

MSD utilizes a wide variety of hardware and software to operate the day-to-day business activities associated with wastewater and stormwater collection, conveyance and treatment. Hardware runs the spectrum from desk top computers to wireless laptops for field usage and software ranges from simple desktop applications to complex integrated systems. MSD electronically documents asset data for tracking overflows and reporting to the appropriate local, state and federal agency in the event of an unauthorized discharge.

2.3.1 Hansen Information Management System (Hansen)

Hansen is information management software. This is the system used by MSD to record, track and report information concerning MSD assets. Hansen is also used to enter service requests for customer inquiries that record pertinent information regarding the location, customer's name, and nature of the problem; to initiate work orders (WO) against specific assets so that the history of the asset can be updated, tracked and reported; to document response to overflows in the collection system; to track permit applications. It is integrated with the LOJIC (Louisville/Jefferson County Information Consortium) Geographic Information System (GIS) to allow users to access a graphical view of assets. MSD shares the usage of this software with the Louisville Metro government.

2.3.2 Emergency GIS Dashboard (EGIS)



The Emergency GIS Dashboard (EGIS) provides users an overview of real time data collected by various departments at MSD. This dashboard was developed to streamline the access of data from multiple software systems. This application puts information at your fingertips at anytime. It can be used on a daily basis, during a rain event or anytime a system overview is needed. The application currently includes rainfall data, MSD facility alarms and Hansen service requests. This data is shown both in a tabular format and on a map for the timeframe selected by the user.

2.3.3 Louisville/Jefferson County Information Consortium (LOJIC)

LOJIC is a multi-agency partnership begun in 1988 with the mission of building and maintaining a comprehensive GIS to serve Louisville and Jefferson County, Kentucky. Present LOJIC partners include Louisville Metro Government, MSD, the Jefferson County Property Valuation Administrator (PVA) and the Louisville Water Company (LWC). Participants share the cost and effort involved in the full development and ongoing implementation of LOJIC.

The LOJIC GIS contains over 600+ spatial data layers that include detailed land surface mapping, property mapping, street centerlines/address ranges, site addresses, floodplains, zoning, sewer networks, water networks, soils, aerial photos and a host of political/administrative service districts. More than 300+ users across the partner agencies have been trained in the use of the LOJIC GIS and depend on it for a wide range of mission-critical applications such as land records management, property valuation, community planning, emergency response/911, maintenance of sewer and water networks, flood insurance determination, customer service requests, stormwater modeling, asset workflow management, address assignment, and numerous public access applications via the Internet. An eleven-person technical staff supports overall GIS activities across the LOJIC user agencies. LOJIC staff, housed at MSD offices, provides database management, applications development, products/services, training and system network support for all users. For more information on LOJIC visit www.lojic.org.

2.3.4 SAP

SAP is an enterprise resource planning product used by MSD for day-to-day financial, human resources and inventory activities. In addition, MSD MO staff currently uses SAP to initiate work requests of an emergency, corrective or preventive nature at pumping stations and treatment plants. MSD is currently working on a project to transfer all work order tasks for all pumping stations and WWTP's (except for Morris Forman WWTP) to Hansen. The system schedules work orders and achieves workload balancing, asset management, inventory control, parts procurement and expendable commodity reorders. Information concerning overflows, including unauthorized discharges, is stored in and reported from Hansen.

2.3.5 Rain Gauge Network

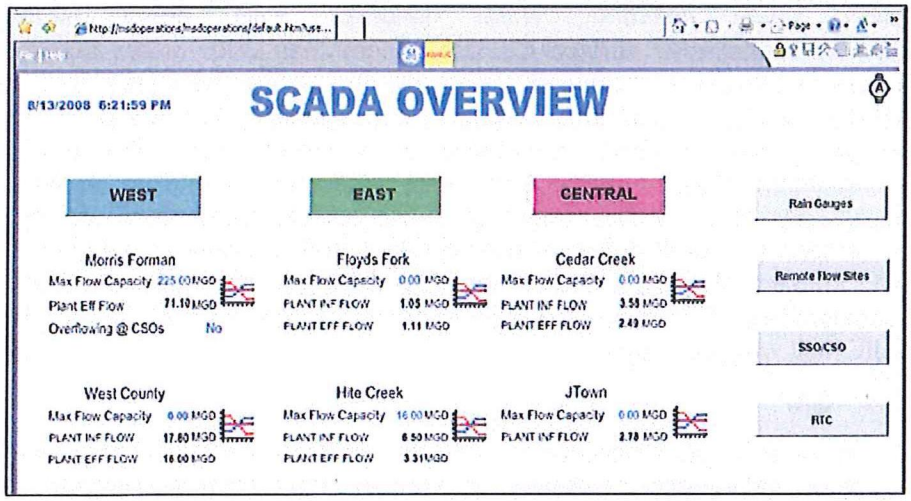
MSD personnel utilize the rain gauge network to record rainfall amounts for storms and to plan for required resources. The system was initiated in 1991 as a joint effort between MSD and the United States Geological Survey (USGS). The rain gauge network provides geographical coverage of Louisville Metro and Southern Indiana.

The rain gauge system serves two primary functions. First, it is used to calibrate MSD's OneRain rainfall prediction application along with NEXRAIN rainfall data to provide rainfall predictions at least two hours in advance. Second, it allows real time reporting on the amount of rainfall in a geographic area. This information is utilized for flash flood emergency response preparation.

Rainfall conditions are continuously telemetered to MSD's process control center from each of the gauging stations. Information regarding rainfall in the service area can be obtained from MSD's website at http://www.msdlouky.org/aboutmsd/rainfall.cfm. The data is refreshed every 5 minutes. The rainfall rate is displayed in inches per hour for each gauge during the previous 5 minute period. A "Daily Total" column displays the total inches of rain recorded at a particular gauge since midnight of the current day. Reports from the database can be run from the web page for any or all of the gauging stations.

This network provides real time rainfall and prediction tools from 5 minute to 24 hour intervals, and allows the most efficient staging, scheduling and utilization of personnel, equipment and other resources. It is an effective tool in reducing the frequency, duration and volume of overflows.

2.3.6 Supervisory Control and Data Acquisition (SCADA), Plant Information System (PI) and iHistorian



MSD's SCADA system is used for the remote monitoring of pumping stations and treatment plants. This system allows MSD to monitor pumping stations for alarms such as pump problems, station power failures, high wet wells, and communication failures. It also monitors the number of pump starts and run times in a 24 hour period. The system also allows MSD to monitor the wastewater treatment plants for alarms such as power failure, communication failure, and possible blower faults. It can monitor WWTP instantaneous flow values and the daily flow.

MSD's SCADA system is connected to two data collection systems, Plant Information System (PI) and iHistorian. These two systems pull data from the SCADA system and store the data from the date of the attribute tag is created until the attribute tag is disabled.

2.3.7 eB Document Management Software

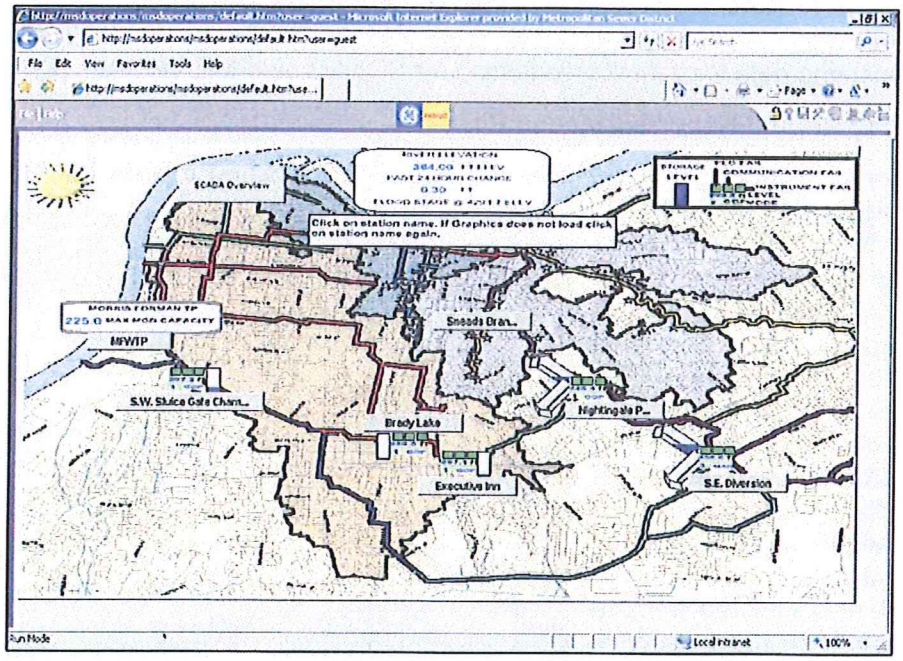
In 1992, MSD implemented its first electronic document imaging system. The eB Document Management System is used to access MSD facility sewer, drainage and flood protection drawings, MSD contracts, easements, service request documents, records storage requests, the Compliance Library, vehicle damage claims, work order documents, property damage claim documents, and much more. eB is also the repository of photographs of our major construction projects, signs, manholes and drainage problems. The system now has over 300,000 images and 600 users including MSD employees, MSD consultants and Louisville Metro staff. Many of the documents stored in eB can be accessed from our GIS System and Hansen asset management system with direct links to the associated records.

2.3.8 SharePoint

A new tool that is being implemented at MSD is Microsoft Office SharePoint Services (MOSS). The SharePoint system will be primarily used for the sharing of information related to Project WIN activities among MSD employees and contractors. The system will display data from the Performance Monitoring System, Water Quality Monitoring Programs, Project Controls and other Project WIN related activities. It will also be the hub used to access the MSD's electronic document repository through an available interface to MSD's eB document management system.

2.3.9 Real Time Control (RTC)

Real Time Control (RTC) is a technology that allows proactive control of wet weather sewer flows through the collection system. There are combined sewer pipes, ranging from 5 to 27 feet in diameter, which have capacity to store additional flow during certain rain events. The RTC system performs the following essential wet weather management functions:



- Optimizes conveyance of the "first flush" flows to Morris Forman WWTP through the large pipe network;
- Optimizes storage within the CSS until the rain event ceases and capacity resumes at the WWTP;
- Minimizes wet weather CSOs; and,
- Allows for maximization of treatment at the WWTP throughout the duration of the rain event.

2.3.10 Alliance Data Systems ECIS

Alliance Data Systems ECIS (formerly known as ORCOM) is a Customer Information System, which is the core of MSD & LWC's billing and accounts receivable functions. It includes, integrated modules such as: Service Orders (used to distribute work orders, repairs, placing customers on charge, etc.), Utility Contacts (recording & tracking customer question/problems), Meter Reading, Cash Processing, Rate Schedules, Letter Processing, Collections Processing and others.

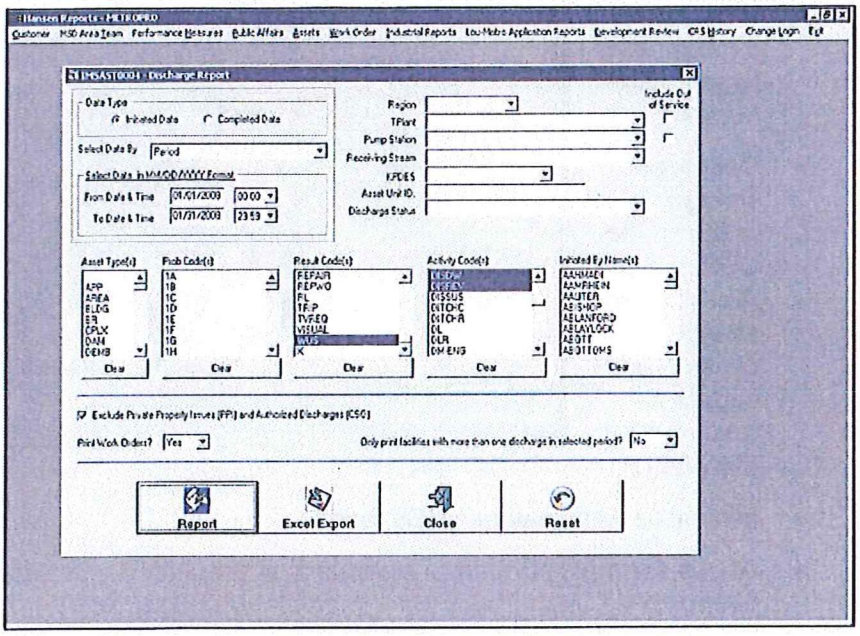
MSD's main uses of this system include: placing customers on Drainage and/or Sewer Charges; monitoring/analyzing consumption by customer type & treatment plant, monitoring/analyzing revenue by customer type and treatment plant, monitoring specific employee productivity, general ledger processing, researching customer issues and more. Billing detail is provided to the customer for Sewer Volume charges, Sewer Service Charges, Fixed Charges, Adjustments, EPA Charges, Drainage Charges, State Taxes (if applicable) and Senior Citizen Discounts (if applicable).

2.3.11 Laboratory Information Management System (LIMS)

MSD is currently using a LIMS manufactured by Perkin Elmer Precisely® USA called LabWorks. MSD currently utilizes the Labworks Enterprise, LabWorks Explorer and Industrial Pretreatment Program modules. The LIMS is the central repository for laboratory data as well as field data associated with Compliance and Pretreatment Programs and Discharge Monitoring Reports for National Pollution Discharge Elimination System (NPDES) testing. Also, the LIMS is utilized to store data produced by contract laboratories that provide us with SSO/CSO data and self monitoring data for compliance testing for Significant Industrial Users (SIUs).

2.3.12 Crystal Reports (Hansen Reports)

In order to ensure reliable, accurate and well formatted reports from the Hansen system on Project Win activities, MSD IT staff developed and implemented a Visual Basic application called Hansen Reports. This reporting tool allows any user to produce standard reports from the Hansen system using user-driven multiple criteria. For example, one user may want all discharge work orders completed within a treatment plant service area, while another user (using the same application report) may want only those work orders initiated by a particular individual.



SECTION 3: SEWER OVERFLOW RESPONSE PROTOCOL (SORP) PROCEDURES

These procedures outline the process for preparing for, responding to, mitigating and reporting overflows in a consistent and effective manner. They are intended to reduce environmental and human health impacts that may result from sewer overflows. MSD will use its discretion and best professional judgment to evaluate each event and choose the appropriate actions. The SORP details the processes MSD will employ from the time of notification of a possible overflow through site mitigation and cleanup if feasible. Procedures for public notification and regulatory reporting are also detailed.

Potential overflows are communicated through notification by others, via system alarms, and field reconnaissance reports. MSD field personnel are trained to look for and report overflows observed during day-to-day activities. MSD also utilizes a SCADA system to identify possible overflows in the system. Some locations are located in extremely remote areas that are very difficult to access. In some cases, considerations for employee safety prevent regular, frequent or continuous monitoring by personnel. MSD response personnel are provided portable laptop computers with wireless modems that allow access to SCADA data to observe conditions at pumping stations and other facilities virtually anywhere a cellular signal is available.

MSD Customer Relations Call Center (CRCC) personnel are trained to answer questions from the public wanting to report an overflow or request additional information about the overflow abatement program. Calls received from customers are entered into Hansen as Customer Service Requests (CSR). CRCC personnel are trained to provide prompt, accurate and current information regarding overflows, and to quickly dispatch service personnel to investigate and address situations. Calls are processed and routed to the appropriate department based on the nature and severity of the problem conveyed by the customer. Procedures describing the process used to enter CSRs into Hansen can be accessed by staff through the internal online Hansen application. Customers may also enter CSRs online and may check on their status by clicking on MSD's Online Customer service link at www.msdlouky.org.

The procedures that follow pertain to both dry and wet weather overflow scenarios. Dry weather overflows require more of a reactive approach, whereas wet weather overflows place a premium on being ready to respond.

3.1 Prepare

MSD proactively prepares for wet weather events to ensure optimal response.

3.1.1 Monitoring for Wet Weather

MSD has developed and implemented a strategy to provide early warning, preparation, execution, and response to inclement weather events that may result in overflows. Local and regional weather forecasts and trends are monitored on a regular and ongoing basis. The Senior Metro Operations Manager (or his/her designee) regularly distributes an early warning to response personnel, support personnel, and all levels of management of impending inclement weather. A variety of technologies are utilized to forecast when adverse conditions may affect MSD facilities and systems, thereby allowing appropriate personnel to prepare accordingly.

MSD monitors weather conditions that could lead to potential overflows via media (television or radio broadcast), NOAA internet radar link, and an internally maintained rain gauge system. MSD is networked with several local media and governmental weather services. A local

weather service system sends early warning messages via cellular phone, text pager and/or email address. This forecast is updated four times per day, and includes live, local Doppler radar and a seven day forecast, as well as breaking weather alerts anytime severe weather is in the forecast, and threatens Louisville Metro.

MSD also utilizes weather predictions from a rainfall prediction tool which is capable of making weather predictions for rainfall accumulation at the neighborhood level in 30, 60 and 120 minute advance increments.

When severe inclement weather approaches the Louisville area, a management response protocol is activated which ensures a total system response for MSD. Weather information is correlated and when appropriate, an internal weather alert is distributed via email to a predetermined distribution list of approximately 50 MSD employees. The information is also distributed on a more frequent, critical basis to digital devices (pagers, cell phones, etc.) using a group paging system. These continued alerts, and updates are issued in advance of, during and following inclement weather.

3.1.2 Staging Resources

MSD does not wait to mobilize resources until after an overflow occurs but rather proactively stages equipment and staff prior to actual rain events to minimize response time to overflows, and to reduce overflow impacts. When inclement weather is forecasted, staff members are placed on standby, ready to determine the impact on treatment and conveyance systems, to supervise the regulatory notification process, conduct field inspection and observations, support response activities, and to ensure regulatory requirements are met, including those commitments in this document. Staff schedules are routinely reviewed to determine if additional coverage may be needed.

Using SCADA and telemetry information along with rainfall prediction capability, MSD is able to efficiently stage resources where analysis has determined that overflows are most likely to occur. MSD stages tanker trucks with various capacities to haul wastewater from predetermined wet wells and manholes where overflows could occur for transportation to points in the collection system where capacity exists. MSD augments in-house hauling capability by employing local contractors that have similar equipment.

3.1.3 Performing Wet Weather Reconnaissance

Staff members monitor locations which are known, suspected, or reported to overflow during wet weather events according to asset type. Pumping stations and treatment plants are monitored by MO staff based on information obtained via telemetry or notification from the MSD Process Control Center. Manholes or other sites within the collection system are normally monitored by the Wet Weather Discharge Reconnaissance Team (WWDRT) along routes established and activated by the Engineering Field Supervisor, or his/her designee. MSD has added telemetry at several sites that are monitored by the WWDRT to enhance this reconnaissance.

The routes are activated based on the wet weather event and the general historical behavior of the known overflows. The following types of information are included in the activation process: actual rainfall, predicted rainfall, antecedent moisture conditions, system flow rates, relationship to other known overflows, and other available information.

Once a route is activated, the assigned WWRDT team member proceeds directly to his/her designated route and performs reconnaissance activities. The reconnaissance continues from the beginning of the route and proceeds in this manner until the rainfall event has abated and/or overflows are no longer evident. See **Appendix C** for detailed information on the WWRDT routes.

One major change to the WWRDT route reconnaissance will be the enhanced inspection tracking process. Currently MSD only documents when an active overflow, or evidence of a past overflow, is observed. Starting in September 2008, MSD will also document the inspection of these WWRDT routes. This will be performed using group projects in the Hansen system. The manholes within the routes will be prioritized using information from our sewer model. Inspections will occur along the routes until no discharges are observed.

MSD has expanded the database of overflow information and enhanced the process utilized to establish and review the routes. Enhanced SSO Fact Sheets have been developed and more data, such as information related to the historical event(s) that caused the overflow(s) are now tracked in Hansen. The SSO Fact Sheets, previously submitted in the Updated Sanitary Sewer Overflow Plan (February 2006), have been updated to include additional information regarding the tributary sewer area and the potential impact area. These updated SSO Fact Sheets will be resubmitted with the Integrated Overflow Abatement Plan (IOAP) in December 2008. Additionally, information from the SORP and Capacity, Management, Operation and Maintenance (CMOM) activities will be utilized to review the routes on an annual basis to determine if they should be modified. If it is determined that additions or deletions are required, the revised routes will be incorporated into the SORP and submitted to EPA and KDEP for approval in the annual update.

3.2 Respond

Once the wet weather response system is activated, or a dry weather overflow is identified, managers direct the activities of their field staff based on procedures in this section, **Appendix D**, Overflow Response Matrix and the guidance contained in the SORP Procedures Manual.

3.2.1 Mobilizing for Response to Overflow

Once MSD receives notification that an overflow may be occurring, personnel are dispatched to the location to assess the situation, set up a control zone, notify the public, mitigate the discharge, and clean the area. After the site is evaluated, additional resources are deployed as necessary.

Discharge work orders are initiated in Hansen to document overflow response activities. Additional work orders are initiated in Hansen and SAP to document and perform necessary repairs or clean up actions resulting from the overflow. I&FP Dispatch, MO office staff, CRD and Morris Forman WWTP Process Control Center (PCC) personnel serve as communication resources to field personnel during a response situation. Occasionally, field personnel will still relay information to the respective areas concerning the status of discharges, as well as requests for additional resources to mitigate the overflow. Over the past year, MSD has moved toward the use of remote wireless laptops in the field to provide real time access to the data.

MSD can use global positioning system (GPS) technology to coordinate the dispatch of critical equipment to locations where a response is required. MSD vactors, flushers and jet rodders, along with many other critical components are connected to a centralized satellite tracking

system, and the closest asset with the capacity to address the situation is promptly dispatched to affect a solution.

3.2.2 Overflow Assessment

In order to properly initiate control zone setup, public notification, overflow mitigation and cleanup activities, it is first necessary to determine the cause and the limits of the area impacted by the overflow. Responding personnel identify the extent of the impacted area by tracing the discharge from its origin to its destination. The impacted area is defined as the location where sewage has collected or areas that have been affected as a result of the discharge. The options for destination are: onto the soil/pavement (EXT), into Waters of the United States (WUS), or into a building/basement (INT). Indicators of an impacted area include standing water with sewage characteristics, water marks along trees or vegetation extending from a sewer structure and solids, paper or other debris consistent with sewage

When appropriate, response personnel may take photographs of the overflow area in order to thoroughly document the nature and extent of its impact. Photographs would be taken to show abnormal or extraordinary overflows. Examples include overflows rising more than two feet above the manhole, first time overflows at a location and other events that are difficult to explain or difficult to estimate overflow volume. Photos will be entered into eB and linked to Hansen work orders.

3.2.2.1 Overflow Cause (DISCAU)

MSD employs various measures and resources to identify the causes of overflows, which can include pipe obstructions, structural failures, power failures, mechanical/electrical failures, lack of system capacity or private property issues. The cause and severity of the overflow will dictate the type of mitigation that is most appropriate.

If the cause cannot be determined by the initial responder, additional resources will be requested. If the cause is not obvious, MSD will utilize radio detection or tele-inspection to locate possible obstructions or structural problems in the sewer. If the cause of an overflow is determined to be grease, the Industrial Waste Department (IWD) Pretreatment Emergency Response Inspector is contacted through Dispatch/CRD to come to the site and investigate to attempt to determine the origin of the grease/obstruction.

3.2.2.2 Overflow Impact (DISIMP)

Along with determining the cause, it is necessary to also determine the impacts of the overflow through visual observation. Examples of these impacts are the presence of sewer solids/debris, property damage or fish kill. This information is to be included in field documentation and will be used to properly decide on additional response activities.

The primary potential hazard to the general public in the event of a sewer overflow is biological in nature. However, MSD field personnel are also trained, at a minimum, to Level I (Awareness Level) relative to dealing with possible hazardous materials. Additionally, field front line supervisory personnel, who are anticipated to be involved with overflow response, are required to be trained to Level II (Operations) or Level III (Technician).

If response personnel suspect the presence or release of hazardous materials, they will immediately notify the Louisville Metro Fire Service by calling 911. Louisville Metro Fire &

Emergency Management Services (EMS) and Metro Health Department personnel will respond to the incident and dictate the protocol to be followed.

If an oily sheen, hydrocarbon odor or strange color is found in an overflow, the responder will immediately contact I&FP Dispatch/CRD/Morris Forman WWTP PCC and ask that an IWD responder be dispatched to the location to determine if a hazardous or other substance is present in the discharge. The IWD Emergency Response Pretreatment Inspector will provide guidance on the appropriate measures to be taken and sampling/cleanup to be performed.

3.2.2.3 Overflow Amount (DISAMT)

Estimating volume of overflows is a critical component of reporting, system assessment, and planning/design of overflow abatement projects. MSD has developed the "Overflow Volume Estimation Guide" to standardize tracking and reporting of overflow volumes. This guide is located in **Appendix E** and will be updated as needed based on new information or changes in overflow conditions.

3.2.3 Establishing a Control Zone (DISCZ)

MSD personnel will establish the control zone around the perimeter of the impacted area to limit public access. The limits, duration and most appropriate control zone mechanisms will be site-specific. Typical situations requiring control zone setup include high pedestrian/vehicular traffic areas, residential areas, as well as areas near public buildings, schools and parks. Methods of establishing a control zone include placement of barricades, signs, cones and/or caution tape around the impacted area. The control zone will remain in place through the completion of clean-up activities.

MSD has adopted a standard sign to be used for both permanent overflow advisory warnings and temporary control zone delineation. The sign requests that the public avoid contact with the area, and provides contact information for the public for any comments or questions. See **Appendix F** for a sample sign.

3.2.4 Mitigating the Overflow

The decision making process employed by MSD response personnel to mitigate an event is dynamic and often unfolds during the course of the overflow event. In most cases, the situation follows a consistent overall pattern. In the case of wet weather impacts, for example, inclement weather is forecast, resources are staged, the weather continues to be monitored, and as the initial impact of the storm is realized, resources are deployed in a tactical manner based on specific conditions that exist in the field. Based on real time system performance from the SCADA and RTC systems, process performance, limits of available resources, the magnitude of the impact is continuously assessed to revise the response accordingly. In the event of a dry weather impact, such as an obstruction or equipment failure, the issue is much more acute in nature, and requires a much more targeted, site specific response. There are greater resources available during a dry weather incident, as the situation is often very localized, as opposed to a wide spread rain event that impacts the entire service area.

3.2.4.1 Minimizing the Overflow Impacts

After the control zone has been established, the responder determines the most effective method or combination of methods to minimize overflow impacts. The type of mitigation required is site-specific depending on the cause of the overflow and the extent of the impact.

MSD utilizes a variety of mitigation methods, including containment, filtration, flow diversion, portable generator use as well as pump and haul activities. The method used will be influenced by site accessibility, location of service disruption, size of impacted area, and the need to minimize the impact on the environment or the risk of hazards to the public.

Containment methods are used to prevent the further spreading of the overflow into the environment. MSD will attempt to contain the overflow to the extent reasonably practicable. The decision will be determined on a case-by-case basis. Two factors that influence this decision are probability of successfully containing the overflow and how much time would be required to implement containment versus resolving the problem. Whereas no standard or uniform containment plan is applicable in all situations, MSD personnel will use standard principles in conjunction with field conditions and site characteristics to develop the most effective containment plan. Some examples of containment techniques that MSD may employ include: sand bags, inflatable plugs to block the overflow from reaching any nearby storm water pipes, berms created from existing topography of the site or those constructed from other available materials, as well as commercially available spill prevention equipment that specializes in containing various types of overflows.

Filtration establishes a physical strainer to reduce the impact of solids, paper, etc., from the flow. MSD will attempt to filter the overflow to the extent reasonably practicable. The decision will be determined on a case-by-case basis. Two factors influence this decision. The first is the probability of successfully filtering the overflow. The second is how much time would be required to implement filtration versus the amount of time required to remove the cause of the disruption. Typically, the type of overflow event or the size of the overflow is the criteria for deciding if filtration or containment is a feasible approach. For example, during wet weather events, the overflow volume exceeds the ability of the field crews to successfully contain the overflow. Therefore, containment will not be practical during an intense rain event with a high volume of overflow. Filtration may be the only option until the flow subsides. A filtration plan may also be the quickest option for reducing the downstream impact during dry weather flows with very large volumes. However, even filtration might not be practical for a high volume overflow.

Flow diversion methods can provide an effective means of collecting wastewater at the point of overflow and conveying it back into the collection system at a downstream location. This method reduces the potential additional impact on the immediate area, as well as downstream areas. Examples of flow diversion methods that may be useful during dry weather events or small wet weather events include the use of portable pumps to convey wastewater to a downstream manhole and the use of a tanker truck to haul to another point in the collection system.

Portable generators are utilized in the event of a power failure at pumping stations to minimize and/or prevent overflows.

3.2.4.2 Correcting the Overflow Cause (DISREP)

Another type of mitigation is to correct the "rudimentary cause" of the overflow. Examples of "rudimentary causes" include roots, grease or debris in the sewer system, a structural problem with a sewer line or force main, and mechanical or electrical problems with pumping station or treatment plant equipment. These types of occurrences are corrected by MSD personnel. For example, the sewer can be flushed, vactored and/or root cut to remove debris, grease and roots

from the line; and a sewer line or force main can be repaired and mechanical or electrical problems at a pumping station or treatment plant can be corrected.

Containment of overflows is always the first priority. If the cause of an overflow is found to be a private property issue, MSD personnel will notify the appropriate parties after containing the overflow. In these circumstances, MSD is not responsible for reporting, mitigation or cleanup.

3.2.5 Cleaning the Affected Areas (DISCLN)

Upon mitigation of the overflow, the site must be thoroughly cleaned. No visual residue should remain, including solids, papers, rags, etc. Cleanup actions by MSD personnel vary with the situation. When feasible, MSD's cleanup of the impacted area is thorough and comprehensive. The immediate area around the overflow site is inspected and cleaned of residual material in order to minimize the risk/impact to public health and the environment.

MSD uses two basic types of cleaning methods. Manual practices entail removing sewer solids and other debris by using hand tools such as rakes, shovels, and brooms. Examples of the mechanical equipment that can be used in overflow clean-up are combination cleaners and excavators. Scenarios where this type of equipment could be employed are cleaning streets and removing contaminated soil. After the standing water and other debris have been removed, the area is disinfected with lime to kill any remaining bacteria.

MSD recognizes that an overflow during a rain event may appear to be limited in scope and residual impact, due to the magnitude of flow in streams, creeks and drainage channels. However, the bacterial loading during these periods increase, and human contact is a prime concern both during and after the overflow. In addition to efforts to physically limit human contact during an overflow as described previously, MSD responds immediately with a site inspection, with follow-up efforts directed at returning the affected area to pre-release condition as quickly and efficiently as possible.

3.2.6 Notifying the Public (DISPUB)

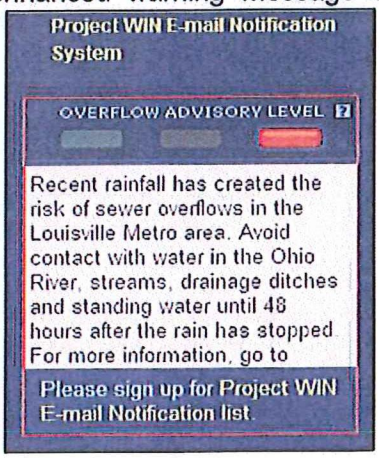
MSD makes a concerted effort to ensure that the public is made aware of potential or actual overflows through both event-based public notification activities and programmatic (on-going) outreach and educational activities. Event-based activities are designed to limit public access to areas impacted by overflows. The programmatic educational outreach activities focus on providing the public with a heightened level of awareness concerning overflows, including the causes, potential health hazards, environmental impacts, MSD abatement activities and the public's role in helping to alleviate these conditions.

MSD continually seeks to enhance the public notification and awareness program. MSD has evaluated several additional options for enhanced public notification over the past year. MSD has created informational videos on Project WIN and these have been aired on Metro TV. MSD will also post a link to these videos our webpage for continuous access. MSD has developed a public radio campaign that will start airing in September 2008. MSD has updated our rain garden brochure during the past year. MSD will issue press releases on large volume overflows that have the potential to impact a significant portion of the community. MSD investigated the use of an E911 system to notify the public. This avenue of notification was not pursued due to the inability to obtain valid cell phone numbers, keeping land line numbers current and concerns related to the public receiving a notification during the night.

3.2.6.1 Event-based Notification Activities

When an overflow occurs, MSD utilizes both a localized field-based approach to warn the potentially impacted public, along with public notification announcements coordinated and disseminated by MSD's designated Communication Team. Localized field-based notification mechanisms include the use of temporary and permanent signage, establishment of control zones and placement of door-hangers if applicable.

Permanent warning signs are installed at permitted CSO locations and other fixed-asset locations known to overflow on a recurring basis within the separate sanitary sewer system. The signs include a phone number for customer inquiries. All permanent signs have an enhanced warning message written in English, as well as in Spanish. These signs are inspected annually and replaced or cleaned, if defaced.



Temporary signs are used by response personnel to provide immediate notification of a potential health threat. They are bilingual (English/Spanish) and also include a telephone number to call for additional information. These signs are used in conjunction with control zones, traffic control signs, electronic flashers and other public safety equipment to protect the public.

MSD may also distribute door hangers if temporary signage will not adequately warn members of the public that may come into contact with the overflow. Information on door hangers will include a message stating that an overflow may have occurred in the neighborhood, that areas to avoid are being delineated, and that overflows may pose a public health hazard.

Jeffersontown Wastewater Treatment Plant
Blended Flow Data

As of 2/12/08, MSD is providing near real time flow information on blended flow from this plant. Up to 60 days of historical data is presented below. You may also view all historical data.

Start Date/Time	End Date/Time	Amount (Gal.)
03/18/2008 1:18 PM	03/21/2008 4:23 AM	10,457,690
03/10/2008 5:56 PM	03/10/2008 11:34 PM	101,460
03/06/2008 3:50 PM	03/06/2008 4:22 PM	21,340
03/04/2008 12:51 AM	03/06/2008 6:25 AM	10,712,305
02/22/2008 1:18 PM	02/23/2008 5:57 AM	1,066,923
02/12/2008 11:43 AM	02/13/2008 8:40 PM	2,894,355

MSD also updates the Project WIN web page with a message informing the public when overflows may be impacting the streams during a rain event. A second message is displayed when conditions return to normal. The public may elect to receive this notification via email by signing up on the MSD Project WIN web page. This notification is automated based on the rainfall amounts collected by the rain gauges.

MSD has also enhanced the Project WIN web page with a message informing the public when the Jeffersontown WWTP has a Bypass (Blending) event.

Additional Notification for Dry Weather Overflows

Information will be posted to the MSD Project WIN web site for public notification and voluntary email notification within two hours of verifying that either of the following scenarios has occurred:

- A dry weather overflow of more than 1000 gallons has occurred, is occurring or will likely occur, OR
- A dry weather overflow at a Flood Pump Station has occurred, regardless of the volume.

When a dry weather event meets the above criteria, the website is manually updated to meet the two hour requirement for notification. During wet weather overflows, the web site is updated automatically as described above.

The MSD employee who made the verification must immediately notify Customer Relations at **587-0603** that a Dry weather discharge of more than 1000 gallons has occurred or that a dry weather overflow at a Flood Pump Station has occurred, regardless of the volume. Customer Relations staff will update the MSD Project WIN web site as needed. The MSD employee who found the discharge will get the information into Hansen to initiate a Discharge Work Order according to normal department procedures.

Phone Notification to MSD Executive Management

In extreme cases, the MSD employee who made the verification of an overflow must immediately notify their supervisors. Then the responding supervisor/manager is responsible for immediately notifying both the Office of the Executive Director and the Regulatory Services Division Director (or his/her designee) by the fastest means available if either of the following conditions are present:

- A dry weather overflow has or may have the potential to have a substantial negative impact on the environment and/or public health; OR,
- A dry weather overflow is approaching 50,000 gallons or more.

The Executive Director or his/her designee will direct the preparation and distribution of a press release as deemed necessary. The Regulatory Services Division Director or his/her designee will determine if additional regulatory notifications are required, such as with KRS 224 01:400. This requires immediate notification to the state and EPA. These procedures are to occur in addition to the Internet Notification Procedures above for a 1000 gallon or more dry weather release.

3.2.6.2 Programmatic Educational Activities

A comprehensive approach to enhancing the public's knowledge and general awareness of overflows includes the proactive use of such mechanisms as mailings to residents, public information forums and website utilization. MSD continually enhances public educational programs and materials through the regularly scheduled reviews and revisions to the materials.

Newsletters, billing inserts and other pamphlets have been enhanced to include such information as the potential public health issues associated with overflows, information on how to minimize the risks of human contact, the current programmatic abatement initiatives aimed at

reducing overflows and the role individual customers can assume to help minimize overflows. Target audiences, the frequency of the communications and the various messages to be conveyed have been formalized.

MSD distributes educational materials to residential and commercial customers in areas with grease-related overflows. These materials include letters, brochures and a video which provide information on the proper disposal of grease and maintenance of grease traps. This program has been enhanced per the schedule of activities submitted in the CMOM Self Assessment dated May 12, 2006. MSD will periodically review these materials to ensure maximum effectiveness in reducing overflows due to grease.

The MSD and the Project WIN websites are another resource to help the public gain information regarding the community's overflow abatement program. The websites have been enhanced to provide both general and area-specific details. MSD will post a map on the Project WIN website, showing the CSO locations and the documented SSOs that reached the Waters of the United States, by January 30, 2009.

To provide additional information in sensitive areas around the community, MSD performed an analysis of re-occurring overflows that exist in relatively close proximity to recreational or public gathering areas such as schools, parks, water recreation areas and other locations where the public may gather in large numbers. MSD identified all locations that have had two or more overflows that reached the Waters of the United States. MSD mapped these locations against the locations of parks and schools to identify where these are in close proximity to each other. The data identified four parks (and no schools) that are within 100' of a re-occurring overflows that reached the Waters of the United States.

The intent is to develop educational signage for permanent placement at these critical locations that are within 100' of a re-occurring overflow if the public response is positive. As a first step, MSD will work with the Parks Department to place an educational sign near Big Rock in Cherokee Park prior to May 1, 2009. Based on feedback from the public and approval from the Parks Department, the remaining three locations may also receive an educational sign by December 31, 2009.

3.3 Reporting

The collection and reporting of information required to meet regulatory reporting requirements under 401 KAR 5:015 is an essential component of the overflow response process. It is imperative that information relayed by response personnel from the field is complete and accurate. In addition to its use for regulatory reporting, this information is crucial to tracking the overflow history of assets such as manholes, sewer lines, and pumping stations. MSD utilizes this data to make decisions about response and abatement strategies.

3.3.1 Field Documentation

Field verification is required to document that an overflow has occurred. Personnel within the respective departments responsible for responding to overflows, including unauthorized discharges, are responsible for gathering the necessary data pertaining to the overflow. Work orders must be initiated in Hansen within 10 hours of verification that an overflow has occurred. This protocol is necessary to ensure transmission of data pertaining to unauthorized discharges to KDEP within the required timeframe. See **Appendix G** for the Overflow Form used to assist with data collection in the field.

3.3.2 Regulatory Reporting

The sections below detail the means and methods by which MSD will report unauthorized discharges and submit overflow information to the KDEP and EPA.

3.3.2.1 Initial Discharge Report (IDR)

Within 24 hours of verification that an unauthorized discharge has occurred, MSD will electronically transmit an Initial Discharge Report (IDR) to the KDEP and EPA. The IDR will contain information as required by 401 KAR 5:015. The IDR currently is sent to the following email addresses: eppc.ert@ky.gov, ireland.sean@epa.gov, LisaA.Jeffries@ky.gov

KDEP and EPA can request changes to this recipient list and MSD will make the programming changes as requested.

The following information will be provided in the IDR:

- Work Order number
- Type of event(wet or dry)
- Problem type
- Start date and time
- Location of unauthorized discharge (Asset ID and address)
- Estimated volume, if known
- Impact, if known
- Clean up information, if known
- Receiving Stream
- Receiving Wastewater Treatment Plant

If the Discharge Work Order is not completed when it is transmitted to KDEP and EPA, a supplemental notification with additional information will be sent once the work order is completed.

If after initial reporting it is determined that the overflow was not required to be reported, MSD will provide reconciliation in the monthly discharge report.

Bypass (Blending) events at the Jeffersontown WWTP and Bypass events at any treatment plant are also reported through the IDR. These occurrences are also followed up with a 5 day letter.

A sample of the IDR email transmitted is shown below:

> Louisville and Jefferson County Metropolitan Sewer District
> Initial Discharge Report
> This Report created as of 7/5/2008 1:00:03 PM
>
> Notification of Possible Unauthorized Discharge
> Work Order: 803786
> Type of Event: DISREV - RAIN EVENT DISCHARGE
> Date and Time Discharge Began: 7/4/2008 9:00:00 PM
> Asset ID: SMH 92061
> Asset Address: 11804 CHIPPEWA RIDGE LN, LOUISVILLE, KY 40299-0000
> Work Order Problem: CAP - LACK OF SYSTEM CAPACITY

At the time of this transmittal the following additional data is provided, (if the field is not blank).

Completed Date/Time: Info Not Available At This Time
Discharged Amount: On Going
Impact: Info Not Available At This Time
Clean Up: Info Not Available At This Time
Receiving Stream: CHENOWETH RUN
Receiving Treatment Plant: MSD0255 - JEFFERSONTOWN

This e-mail is for notification purposes only. DO NOT REPLY.

Contact information if MSD needs to be contacted regarding this report:
Brian Bingham, Regulatory Services Director
bingham@msdlouky.org

3.3.2.2 Monthly Discharge Reporting (IMSAST0004)

MSD includes a summary of unauthorized discharges occurring within a given sewershed in the respective WWTP Discharge Monitoring Report (DMR) packet. The monthly discharge report covers the same timeframe as the respective DMR packet. See **Appendix H** for a sample of the Discharge Report form.

The following information is stored within Hansen and reported to KDEP using the report IMSAST0004 – Discharge Report:

- Sewershed name and specific location of the unauthorized discharge
- Start date and time of the unauthorized discharge
- Stop date and time of the unauthorized discharge
- Description of the cause of the unauthorized discharge
- Impact of the unauthorized discharge
- Description of actions taken to mitigate the unauthorized discharge
- Estimated volume of the unauthorized discharge
- Description of cleanup actions taken
- Description of the type of notifications

Bypass (Blending) events at the Jeffersontown WWTP and Bypass events at any treatment plant are incorporated into and will be reported within the Monthly Discharge Report. Blending events will include some additional information on the discharge record:

- Total Plant Flow during the event (volume)
- Peak plant flow during the event (rate)

3.3.2.3 Quarterly and Annual Consent Decree Project WIN Reports

MSD will submit a summary of unauthorized discharges (WUS) to EPA and KDEP in the Consent Decree quarterly report and in the Consent Decree Annual Report.

In addition, overflow information (EXT and INT) will be provided to EPA and KDEP in the Consent Decree Annual Report. These reports are sent to:

Two copies to:
Mr. Douglas F. Mundrick, P.E.
Chief, Water Programs Enforcement Branch
Attn: Mr. Cesar Zapata, Environmental Engineer/Senior Enforcement Officer
Water Management Division
U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Two copies to:
Jeff Cummins, Director
Division of Enforcement
Department of Environmental Protection
14 Reilly Road
Frankfort, KY 40601

One copy to:
Chief, Environmental Enforcement Section
Environmental and Natural Resources Division
U.S. Department of Justice
Post Office Box 7611
Washington, DC 20044-7611

3.3.2.4 - WWTP Reporting

MSD will report, monitor and maintain records of all WWTP bypasses, including the bypass (blending) events at the Jeffersontown WWTP. These records will be included in the Quarterly and Annual Reports submitted to EPA and KDEP.

MSD will comply with the advance notice requirements, per 401 KAR 5:065 Section 1(13)(b)1 and identified in the KPDES Permit for each WWTP, for an anticipated bypass necessary to perform scheduled maintenance. This includes a minimum of 10-days advance written notification and justification to KDEP.

MSD will also comply with the notice requirements, per 401 KAR 5:065, Section 1(13)(b)2 and identified in the KPDES Permit for each WWTP, for unanticipated bypasses. These occurrences will be reported within 24 hours of becoming aware of the situation through the IDR process. In addition, 5-day follow up letters will also be sent to KDEP as described below.

5-day Follow Up Letter

A 5-day follow up letter for bypasses of secondary treatment at any WWTP and Bypass (Blending) events at the Jeffersontown WWTP will be sent to the KDEP Louisville Field Office. MSD has created a template for staff to use for each type of 5-day letter (See **Appendix I**)

Bypass letters will include the following components:

- Beginning/ending date and time
- Volume of wastewater bypass

- Cause of the bypass
- Mitigation activities performed

Bypass (Blending) letters for the Jeffersontown WWTP will include the following components for each event broken down by calendar days:

- Beginning/ending date and time
- Volume of wastewater blended
- Total Plant flow during the event
- Peak Plant flow during the event

These letters are sent to:

Mr. Charlie Roth
District Supervisor, Kentucky Division of Water
Louisville Regional Office
9116 Leesgate Road
Louisville, KY 40222-5084

Monthly DMR Packets

A monthly DMR packet is created for each treatment plant. This report is postmarked by the 28th day of the month for the preceding month. The monthly DMR packets will be posted on the Project WIN webpage at http://www.msdlouky.org/projectwin/wtp_reports.htm.

These packets are sent to:

Ms. Kathy Thurman
Kentucky Division of Water
14 Reilly Road
Frankfort, KY 40601

Mr. Charlie Roth
District Supervisor, Kentucky Division of Water
Louisville Regional Office
9116 Leesgate Road
Louisville, KY 40222-5084

The packet will contain several items:

- Discharge Monitoring Report (DMR)
- Monthly Operating Report (MOR)
- Discharge Report (IMSAST0004) see Section 3.3.2.2
- Bypass 5-day notification letters (if applicable)
- Bypass (Blending) 5-day notification letters (if applicable for Jeffersontown WWTP only)
- Biomonitoring Report (as applicable)

Jeffersontown WWTP Siphon and Overflow Monitoring

Beginning July 1, 2008, MSD will electronically monitor the water surface elevation in the siphon head box upstream of the Jeffersontown WWTP. The siphon overflows when the water level in the box reaches 6.4 feet (elevation 604.14). When the level monitor indicates a level of 4 feet,

the first warning notification is sent to key staff. When the water level reaches 6 feet a second electronic notification will be sent out and MSD will begin to inspect the siphon and manholes on the gravity interceptor within 2,000 feet of the headworks of the Jeffersontown WWTP that may overflow. See **Appendix J** for a location map and plan profile of the manholes to be inspected.

The inspections will be executed using a group work order. The manholes will be inspected in order of elevation until two manholes in a row show no sign of overflowing. The inspection routes will be run periodically until the rain event is over. Each time a route is reviewed, an inspection group work order will be created.

When these inspections identify an overflow, the occurrence will be documented and reported in accordance with the approved SORP for the IDR 24-hour notification. In addition the Discharge reports on these overflows shall include the items listed below. Items d, h, i and j are data that are not captured on other overflows within MSD's collection system. These are specific to the Jeffersontown siphon and the manholes with 2,000' of the Jeffersontown WWTP headworks.

a. Specific location of any discharge from the siphon or manhole;
b. Estimated volume of any discharge from the siphon or manhole;
c. Estimated start and ending time of day of any discharge from the siphon or manhole;
d. Time at which any alarm may have been activated or text message received to indicate the water level of the siphon box;
e. Time of day MSD personnel arrived at the location of any discharge from the siphon or manhole;
f. Description of the cause and impact of any discharge from the siphon or manhole;
g. Description of MSD's activities to minimize, respond to and clean up any overflow from a siphon or manhole;
h. Jeffersontown WWTP flow (rate) at the documented start time of any overflow event;
i. Total daily flow (volume) at the Jeffersontown WWTP for the day of any inspection; and
j. Rainfall records for the event that includes the day of the inspection, obtained from the automatic, telemetered rain gauge at the Jeffersontown WWTP.

The order that the manholes will be inspected is:

MH#	Rim Elevation
IS028-SI	604.14
42275	604.27
42272	604.39
42270	604.39
42273-X	604.82
42274	604.88
28169	605.16
28171-SM	605.18
28172	605.23
28180	605.27
28182	605.32
28173	605.81
28141	606.83
42267	607.31
42268	607.41
28112	609.67
64099	609.87
42265	610.36
28174	610.83
31491	612.75
28113	613.09
28111-SM	613.73
28114	614.5
42266	614.98
31177	619.57
28145	622.7

Jeffersontown Siphon

MSD will include the above-mentioned overflow documentation, created as a result of a discharge, in the Consent Decree Quarterly and Annual Reports.

3.3.3 Status and Monitoring of Overflows

MSD tracks the status of overflow occurrences on assets such as manholes, sewer lines, and pumping stations in Hansen and utilizes the information to make decisions about response and abatement strategies. MSD reviews all discharge work orders on a monthly basis and adjusts the asset status code as needed.

The status is used to document within Hansen the current condition of a particular asset relative to whether an overflow has occurred. The different categories and definitions of each status and associated monitoring frequencies are:

- **N - No Report:** no overflows have occurred on the particular asset and no routine monitoring is performed;
- **S - Suspected:** an overflow was reported to MSD by the public, but was not witnessed by MSD staff, or, evidence of a past overflow was witnessed by MSD. If capacity related, and not in the interior, then the locations will be monitored for 3 years; if no overflows occur during that time or additional evidence is not discovered, it will be reclassified as No Report (N);
- **D – Documented:** an overflow was observed by MSD staff on one or more occasions and is capacity related. Monitoring will be established for documented SSO's that have a Result of EXT or WUS and will continue until the status dictates otherwise. For example, capacity related overflows will be monitored in accordance with the Wet Weather Reconnaissance activities outlined in this document;
- **R – Repaired:** the cause of the overflow event has been repaired and was due to situations such as structural defects, any obstruction (including roots, grease, rags etc.) and accidents or damage beyond MSD's control. Analysis (or monitoring) of these incidents will be performed annually to assess possible inclusion in future capital projects or preventative maintenance programs;
- **E – Eliminated:** the cause of the overflow has been corrected by capital project initiatives such as building relief sewers or storage basins; treatment plant or pumping station elimination; sewer replacement projects; treatment plant expansion; or providing alternative power solutions. These locations will be monitored for recurrence for three years by MSD;
- **F – Force Majeure:** the cause of the overflow was beyond the control of MSD; and
- **M – Modeled Overflow**: the sewer model indicates sites that may have an overflow.

3.3.4 Data Retention and Trending

MSD tracks the information related to overflow locations in Hansen. Information is tracked on individual assets such as manholes, sewer mains, sewer service lines, and pumping stations. The type of information tracked includes but is not limited to, the cause, status, and volume of the overflow. Information pertaining to each overflow is stored in Hansen in the form of discharge work orders. MSD will utilize this and additional information to conduct a periodic review of system-wide discharge data to document trends in frequency and volume as part of the CMOM program. The information from the CMOM program will be used to update the SORP on an as-needed basis.

SECTION 4: UPDATES, AVAILABILITY AND TRAINING

4.1 Review and Updates to the SORP

In accordance with the Consent Decree, MSD will conduct an annual review of the SORP each year on the anniversary of the final approval date by EPA and KDEP (August 22, 2006). Proposed changes, if any, will be submitted to EPA and KDEP for review and approval. Once approval is received, MSD will update the SORP training modules and conduct training for pertinent employees.

4.1.1 Responsibility

The manager in each of the MSD functional areas listed below is responsible for executing an annual, comprehensive review in their respective area(s) of responsibility.

- Infrastructure and Flood Protection (I&FP)
- Regulatory Services (RS)
- Operations (MO and MFWTP)

4.1.2 Scope

RS is responsible for leading and scheduling an annual review with appropriate personnel. Proposed modifications to the SORP and associated procedures will be coordinated, reviewed, approved and distributed by the RS Director or designated staff. This review is inclusive of the required personnel necessary for a full evaluation of the documents regarding changes in procedure, efficiency and technology improvements and regulatory changes.

4.2 Distribution and Availability of SORP

When changes are made to the SORP a new master copy of the SORP will be scanned into MSD's eB system and made available to MSD personnel. Historical documents will be archived and only the most current version will remain available to MSD personnel.

A copy of the latest version of the SORP will also be posted on the Project WIN website and available to the public. This site can be accessed at www.msdlouky.org/projectwin/docs.htm.

4.3 Training

MSD training department personnel supervise and administer the overall training program, with support from appropriate managers and supervisors. MSD has developed a comprehensive SORP training program that progresses in complexity from SORP Overview, an awareness level module, to Field Training, which includes instruction and practice with specific response protocol duties.

SORP Overview training occurs on an annual basis for all MSD employees, as well as during new employee orientation, which is conducted approximately every 8 weeks. Personnel who are directly involved with overflow response activities receive training that ensures that they have the essential skills and knowledge required to support effective overflow response practices.

Field response training now occurs on a quarterly basis, rather than the original annual schedule. This allows for more frequent feedback regarding the quality of field response

performance. Corrective training occurs more quickly when performance gaps are identified. Documentation of all training activities is tracked by MSD's training department.

4.3.1 Schedule for Training

Employees involved in execution of SORP elements will receive refresher training annually. In addition, as the SORP is updated, and changes are approved by EPA and KDEP, content and activities will be updated accordingly and personnel trained on any changes. Awareness level training will be provided to all MSD employees as part of annual Consent Decree training.

4.3.2 Training Modules

Training modules and participants are described below. Not all staff members within MSD will receive training on each module (except for the annual SORP Overview).

Training Module	Infrastructure and Flood Protection	Wastewater Operations	Regulatory Services	Customer Relations	Information Technology	Area Teams	Legal	Executive Management	MSD Contractors	Community Groups
SORP Overview	x	x	x	x	x	x	x	x	x	x
SORP Field Response	x	x	x			x			x	
Data Entry	x	x	x	x						

4.3.3 Trainer's Guide

As the SORP training materials and methods are modified, the "Trainer's Guide" will also be updated. The purpose of the guide is to provide guidance for developing and conducting training modules for activities associated with execution of the SORP. It will include a list of required materials and equipment necessary for each module, and notes to assist the trainer with leading the participants through each activity.

4.3.4 Description of Training Modules

1. SORP Overview

Objective: To summarize the policies and procedures governing MSD's SORP and provide an update on MSD's overflow response performance over the past year.

This module discusses:

- The SORP's role in protecting the public and environment and the regulatory requirements relative to response, cleanup/mitigation and reporting of overflows, including unauthorized discharges;
- SORP's role in the District's compliance with conditions of the Wet Weather Consent Decree;
- Review of key definitions (SSO, CSO, unauthorized discharge, overflow, etc.);
- An overview of the regulations requiring reporting of unauthorized discharges; and
- A review of any key components changed in the SORP.

2. SORP Field Response

How MSD Becomes Aware of a Possible Overflow

Objective: To detail methods by which MSD will become aware of potential overflows and the specific communications that will be required by personnel to initiate field responses.

This module discusses:

- Identification of potential non-MSD individuals, system alarms, and MSD field reconnaissance personnel who are likely to report a potential overflow;
- Establishing and maintaining channels of communication from sources;
- Actions to follow when a potential overflow is discovered by non-MSD individuals or agencies; and
- Procedures to follow when an overflow is discovered by MSD personnel.

Mobilization of Resources

Objective: To ready MSD personnel to respond to a potential overflow,

This module discusses:

- Channels of communication, once notification is made;
- First responder actions; and
- Evaluation of needed resources for comprehensive response.

Public Notification

Objective: To train MSD personnel of the specific methods by which they will inform the public of potential or actual overflows.

This module discusses:

- The different methods MSD may employ to notify the public of potential or actual overflows;
- Communication with the public regarding overflows; and
- Examples of notification methods/materials.

Initial Response

Objective: To ready MSD first responders to investigate, verify, assess an overflow and to set up a control zone.

This module discusses:

- How response personnel confirm that an overflow has occurred and the different types of overflows (wet weather, dry weather);
- What to do if/when a possible hazardous material is encountered;
- How to determine the cause and location of an overflow;
- How to determine the extent of the impacted area;
- How to estimate the volume;
- The process for investigating basement/building backups; determining whether the backup was caused by a private property issue or if it was caused by MSD;
- The definition of a Control Zone and the basic components of a proper control zone, when to set a control zone, who sets it, how long it remains in place and proper placement of control zones;
- Different types of control zones (barricades, cones, vehicles, caution tape, signage); and
- How to determine resources required for mitigation and clean-up of the discharge location.

Mitigation

Objective: To prepare MSD personnel to initiate and complete measures required to stop and contain overflows of varying types.

This module discusses:

- The definition and purpose of containment (of overflows), when and how to contain an overflow and containment methods (sand bags, inflatable plugs, constructed or earthen berms, manufactured spill prevention equipment);
- The definition and purpose of filtration practices, when and how to properly filtrate wastewater from overflows, when to use filtration vs. containment;
- The definition and purpose of mitigation, when and how to mitigate overflows, types of mitigation techniques MSD may employ;
- A summary of abatement resolution activities and repairs that can be used independently or in combination depending upon field conditions; and
- Resources required for containment, filtration and mitigation techniques.

Field Documentation

Objective: To provide instruction and practice for MSD personnel to collect, format and report appropriate data to both MSD and KDEP.

This module discusses:

- Data collection techniques, such as photography, interview, and observations;
- A review of regulatory reporting requirements;

- The difference between an overflow and an unauthorized discharge and what information is reported on the initial discharge report, monthly discharge report to KDEP and the quarterly and annual Project WIN reports to EPA and KDEP; and
- The importance of accurate and timely submittal of information to MSD personnel responsible for work order entry into Hansen.

Clean-up of Affected Areas

Objective: To prepare MSD personnel to disinfect and deodorize the area affected by an overflow during either wet or dry weather.

This module discusses:

- Clean-up and disinfection of overflow locations;
- Desired end result of clean-up/disinfection, minimum levels of clean-up required;
- Types of cleanup and disinfection practices MSD may employ (manual and mechanical) and proper disposal techniques/procedures; and
- How to deal with odors, and safety concerns.

3. Data Entry

Objective: Enable relevant staff to accurately enter field response information into MSD's database within required time constraints.

This module includes:

- Review of all types of data collected during a field overflow response;
- Practice with using database application and simulation of entering SORP overflow data; and
- Quality Assurance protocol for ensuring accurate and timely data entry and reporting requirements.

SECTION 5: APPENDICES: SUPPORTING INFORMATION

A. MSD Collection, Transmission and Treatment System
   1. MSD KPDES Permitted Wastewater Treatment Plants
   2. Map of Collection and Transmission System Components
B. MSD Organizational Chart
C. Wet Weather Discharge Reconnaissance Team SSO Inspection Routes
D. Response to Overflows Matrix
E. Volume Estimation Guide
F. Overflow Advisory Warning Sign
G. Overflow Report Form
H. Discharge Report – IMSAST0004
I. 5-Day Letter Templates
J. Jeffersontown Siphon and Manhole Inspection Routes and Plans

APPENDIX A

MSD COLLECTION, TRANSMISSION AND TREATMENT SYSTEM

Appendix A
Treatment Plants

Report Selections: Service Status: I, Owner: MSD, Sorted By: Owner, Treatment Plant Name

Treatment Plant	Address	Zip	Facility No	Regional or Small	KPDES	Map No	Capacity (MGD)	Secondary Treatment	Disinfection	Pretreatment Program
BANCROFT	7610 OLD ORCHARD CIR	40222	MSD0290	STP	KY0039021	MAK22-E	0.080	Package Plant	Chlorine	No
BERRYTOWN	1203 HEAFER RD	40223	MSD0209	STP	KY0036501	MAK24-H	0.075	Package Plant	Chlorine	No
CEDAR CREEK	8605 CEDAR CREEK RD	40291	MSD0289	Regional	KY0098540	MAO22-B	7.500	Oxidation Ditch	Ultraviolet	No
CHENOWETH HILLS	4305 ST RENE CT	40299	MSD0263	STP	KY0029459	MAM23-H	0.200	Package Plant	Chlorine	No
FLOYDS FORK	1100 BLUE HERON RD	40245	MSD0294	Regional	KY0102784	MAL25-H	3.250	Oxidation Ditch	Ultraviolet	No
GLENVIEW BLUFF	3714 GLEN BLUFF RD	40222	MSD0207	STP	KY0044261	MAJ21-H	0.010	Package Plant	Chlorine	No
HITE CREEK	5500 HITT RD	40241	MSD0202	Regional	KY0022420	MAJ23-F	6.000	Extended Areation	Ultraviolet	Yes
HUNTING CREEK NORTH	7300 SHADWELL LN	40059	MSD0291	STP	KY0029106	MAJ22-A	0.358	Extended Areation	Chlorine	No
HUNTING CREEK SOUTH	6530 MONTERO DR	40059	MSD0292	STP	KY0029114	MAJ22-B	0.251	Lagoon	Chlorine	No
JEFFERSONTOWN	10725 OLD TAYLORSVILLE RD	40299	MSD0255	Regional	KY0025194	MAM23-F	4.000	Extended Areation	Ultraviolet	Yes
KEN CARLA	8701 LYNNHALL CT	40059	MSD0208	STP	KY0022497	MAJ22-C	0.010	Package Plant	Chlorine	No
LAKE FOREST/BECKLEY WOODS	14000 BECKLEY TRCE	40245	MSD0403	STP	KY0042226	MAL25-C	0.470	Package Plant	Chlorine	No
LAKE OF THE WOODS	11006 WALBRIDGE CT	40299	MSD0251	STP	KY0044342	MAN23-D	0.044	Lagoon	Chlorine	No
MCNEELY LAKE	10300 ROD N REEL RD	40229	MSD0228	STP	KY0029416	MAO21-F	0.205	Package Plant	Chlorine	No
MORRIS FORMAN	4522 ALGONQUIN PKY	40211	MSD0278	Regional	KY0022411	MAL17-E	120.000	Pure Oxygen	Hypochorite	Yes
SHADOW WOOD	5489 FOREST LAKE DR	40059	MSD0707	STP	KY0031810	MAJ22-C	0.085	Package Plant	Chlorine	No
SILVER HEIGHTS	9412 SLAYTON CT	40229	MSD0258	STP	KY0028801	MAO20-C	0.500	Package Plant	Chlorine	No
STARVIEW	423 BERMUDA WAY	40243	MSD0247	STP	KY0031712	MAL24-C	0.100	Package Plant	Chlorine	No
TIMBERLAKE	5504 TIMBER RIDGE DR	40059	MSD0293	STP	KY0043087	MAJ22-C	0.200	Package Plant	Chlorine	No
WEST COUNTY	11621 LOWER RIVER RD	40272	MSD0277	Regional	KY0078956	MAO15-H	30.000	Contact Stabilization	Hypochorite	Yes
YORKTOWN	7418 YORKTOWN RD	40214	MSD0271	STP	KY0036323	MAN18-H	0.150	Package Plant	Chlorine	No

Treatment Plant List.xls
November 5, 2008

PROJECT WIN
Waterway Improvements Now

N

HENRY

OLDHAM

SPENCER

BULLITT

HARDIN

MSD COLLECTION AND TREATMENT SYSTEM

Legend

MSD Facilities

- Regional WTPs
- Small WTPs
- Pump Stations
- Flood Pump Stations
- Major Collection System
- Creeks
- Roads
- Combined Sewer Area
- Main Diversion Structure
- Southeastern Diversion
- Wheeler Basin

LOJIC
Louisville/Jefferson County Information Consortium

MSD

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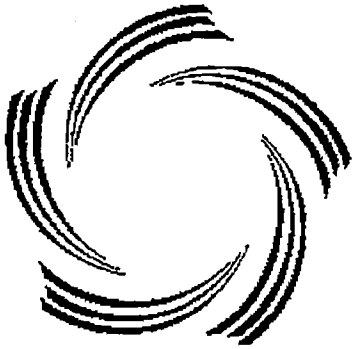
Map Revision - August 2008

J:\msd\SharedMaps\SORP\MXD\SORP_Version_2.mxd

This document was developed in color. Reproduction in black & white may not represent the data as intended.

APPENDIX B

MSD ORGANIZATIONAL CHART



MSD

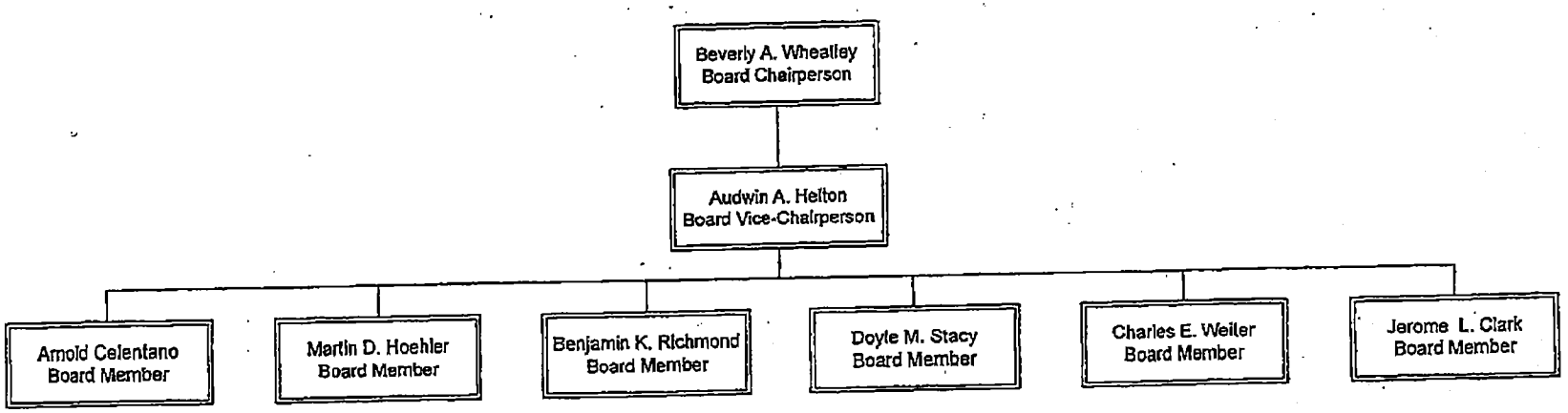
Louisville and Jefferson County Metropolitan Sewer District

Organizational Chart
October 6, 2008

Organizational Summary

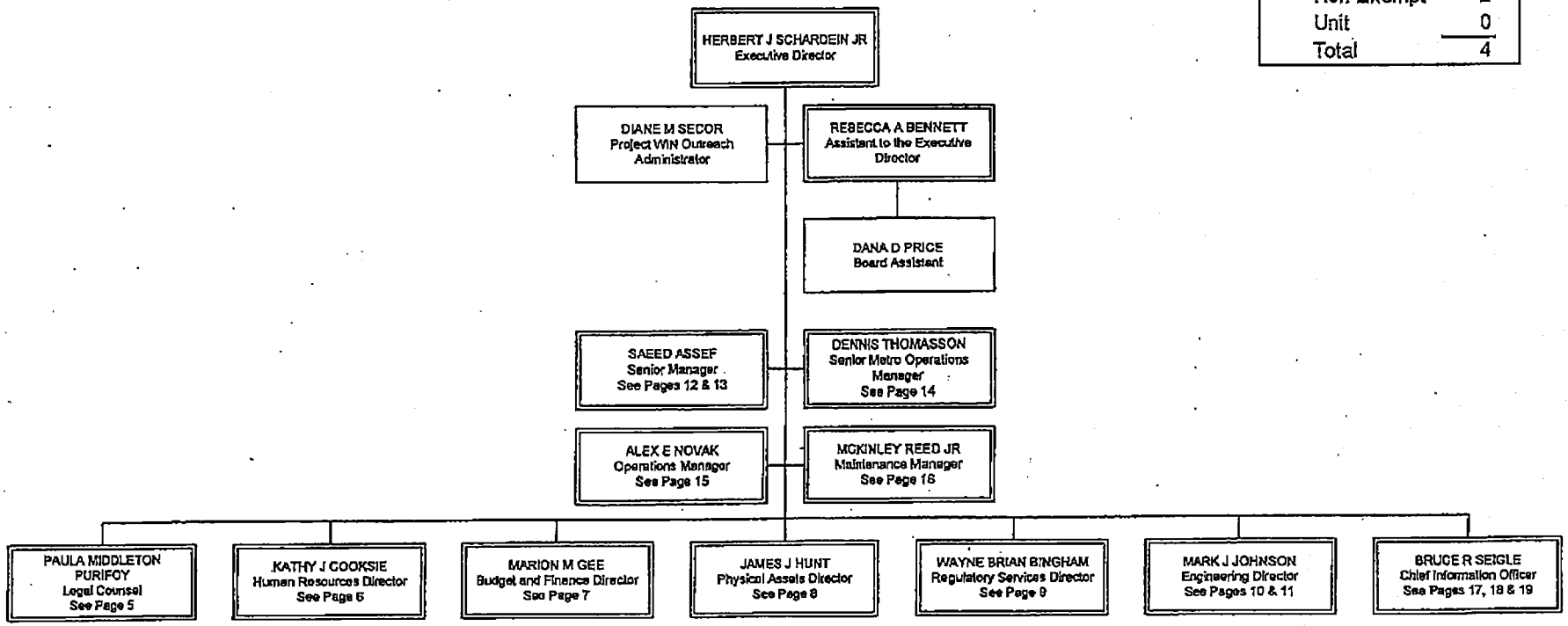
	Total	Filled	Vacant	Exempt	Non-Exempt	Unit
Executive Offices Division	4	4	0	2	2	0
Legal Division	7	6	1	5	2	0
Human Resources Division	18	17	1	11	7	0
Finance Division	17	16	1	9	8	0
Physical Assets Division	39	36	3	8	13	18
Regulatory Services Division	56	53	3	23	32	1
Engineering Division						
Development/Plan Review	23	21	2	11	12	0
Design/Construction	22	18	4	14	8	0
Infrastructure & Flood Protection Division						
Administration & Support Services	60	58	2	12	15	33
Sewer/Flood Protection & Stormwater Drainage	156	150	6	13	3	140
Operations Division						
Metro Operations & Maintenance	65	58	7	11	6	48
MFWTP Operations	55.5	52.5	3	11	8.5	36
MFWTP Maintenance	38	37	1	5	6	27
Information Technology Division						
Information Technology	32	28	4	20	12	0
Customer Relations	20	19	1	1	19	0
LOJIC	11	11	0	10	1	0
DISTRICT TOTAL	**623.5**	**584.5**	**39**	**166**	**154.5**	**303**

Board Members



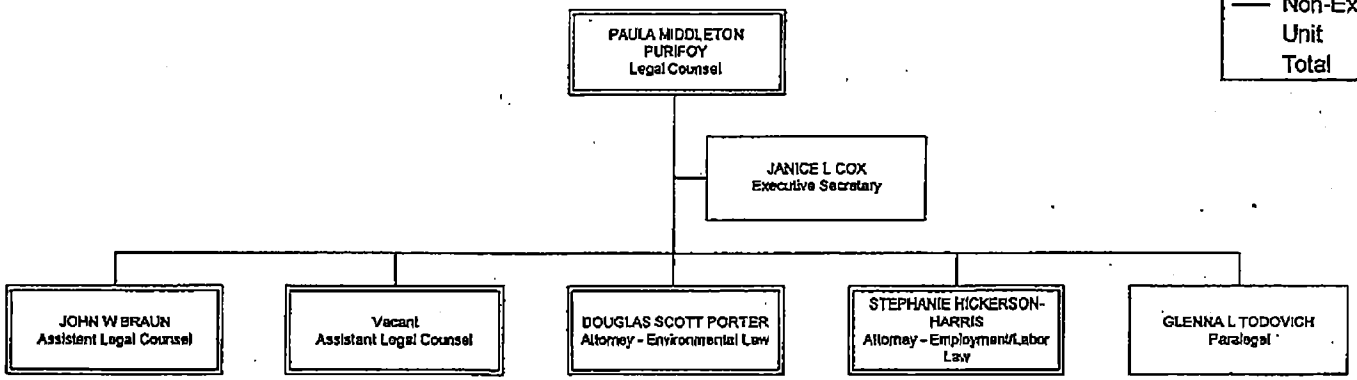
Executive Offices Division

BUDGET STATUS	
Filled	4
Vacant	0
Total	4
Exempt	2
Non-Exempt	2
Unit	0
Total	4



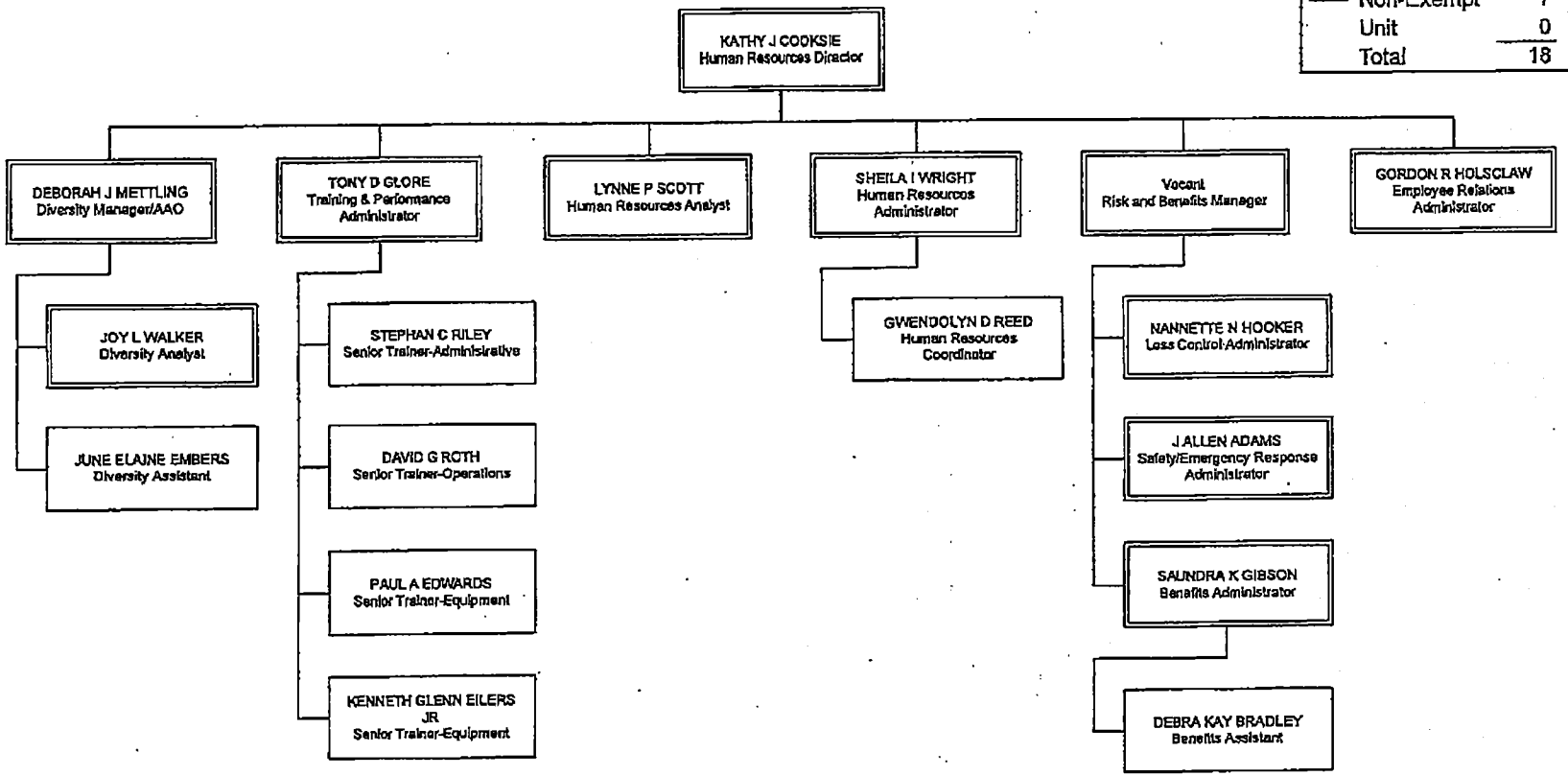
Legal Division

BUDGET STATUS	
Filled	6
Vacant	1
Total	7
Exempt	5
Non-Exempt	2
Unit	0
Total	7



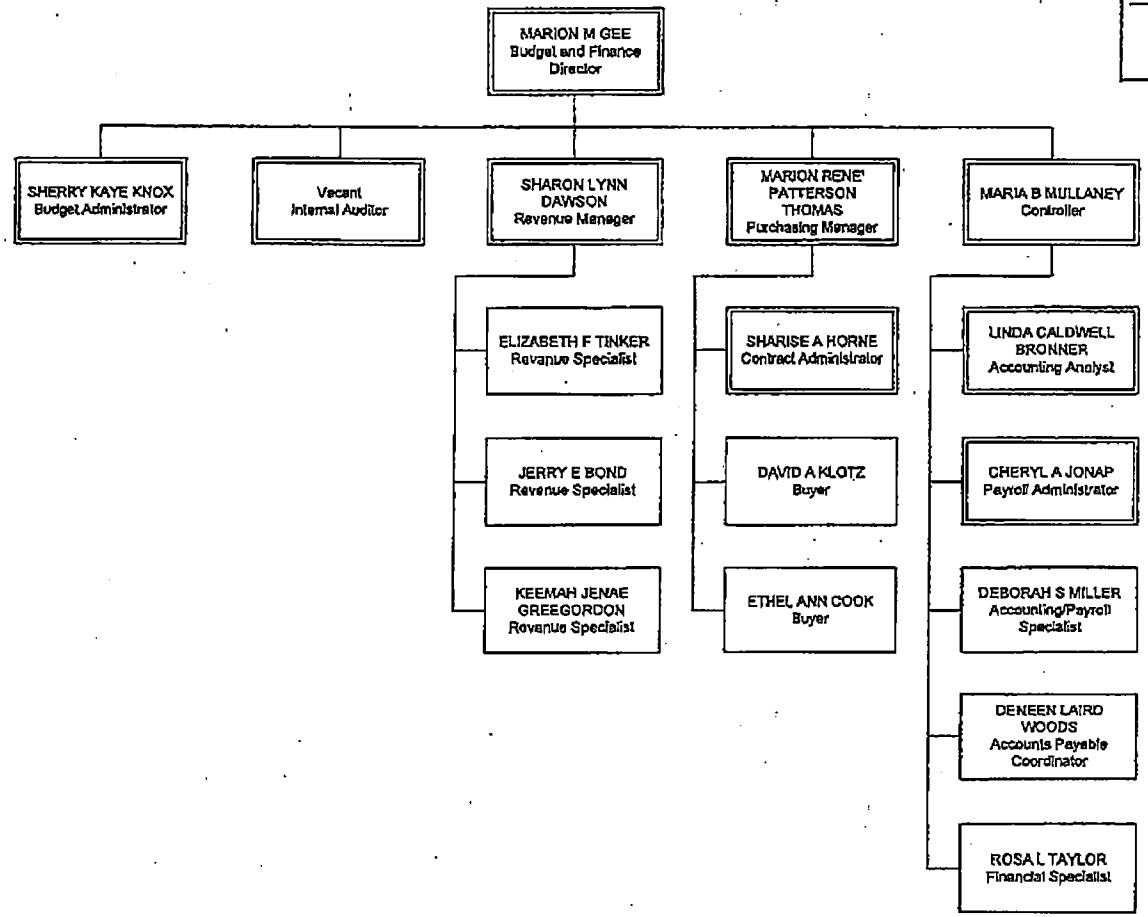
Human Resources Division

BUDGET STATUS	
Filled	17
Vacant	1
Total	18
Exempt	11
Non-Exempt	7
Unit	0
Total	18



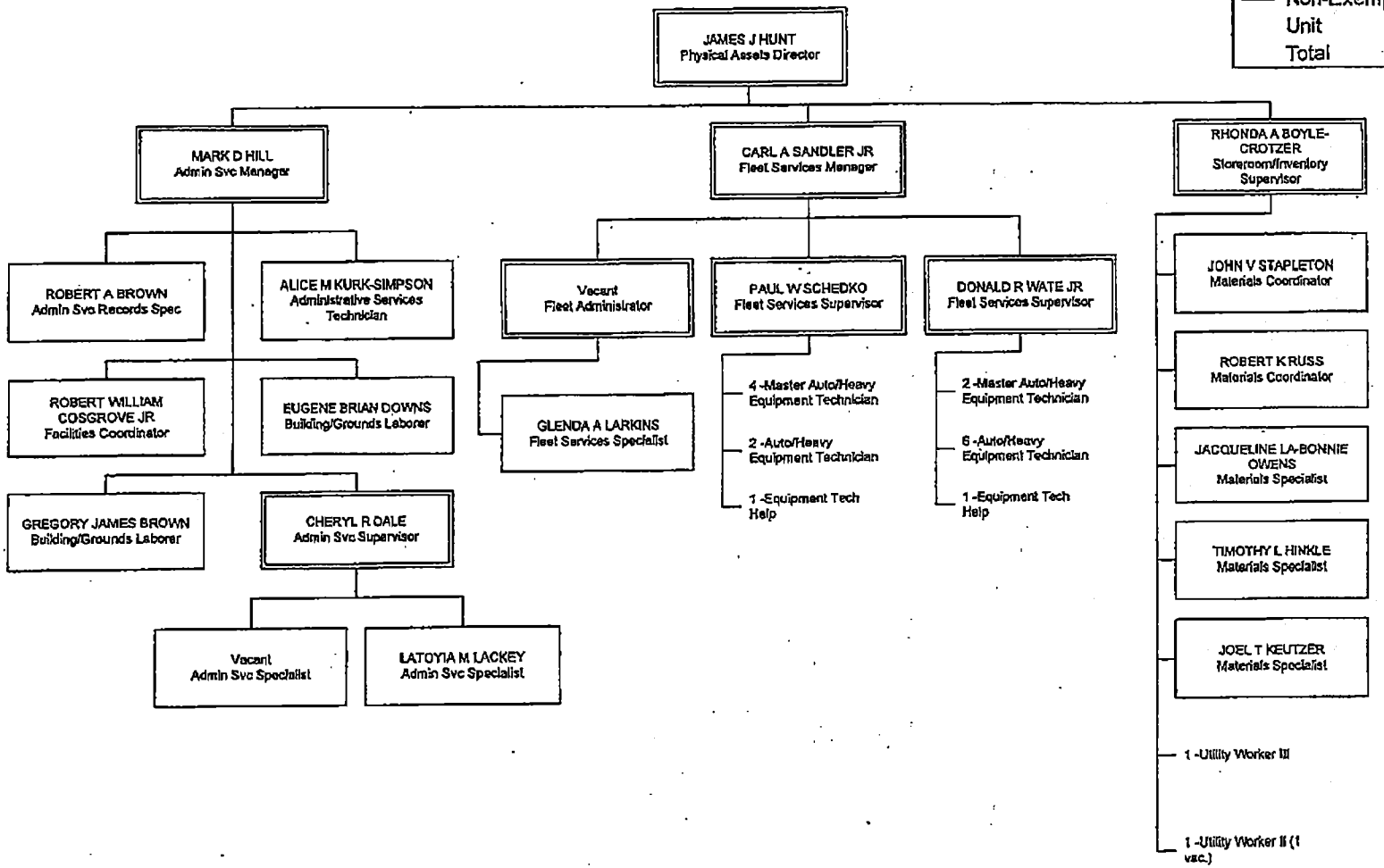
Finance Division

BUDGET STATUS	
Filled	16
Vacant	1
Total	17
Exempt	9
Non-Exempt	8
Unit	0
Total	17



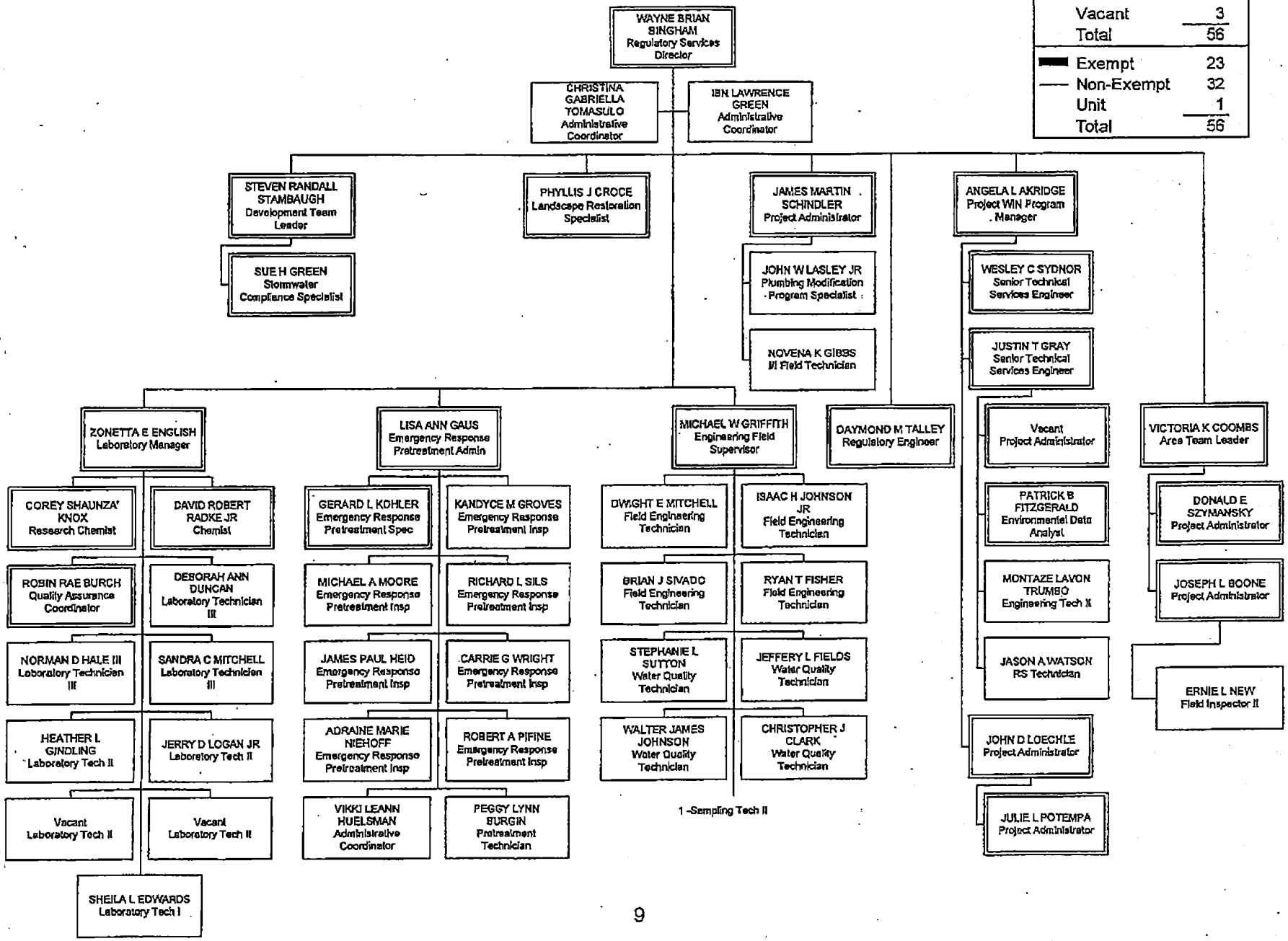
Physical Assets Division

BUDGET STATUS	
Filled	36
Vacant	3
Total	39
Exempt	8
Non-Exempt	13
Unit	18
Total	39



Regulatory Services Division

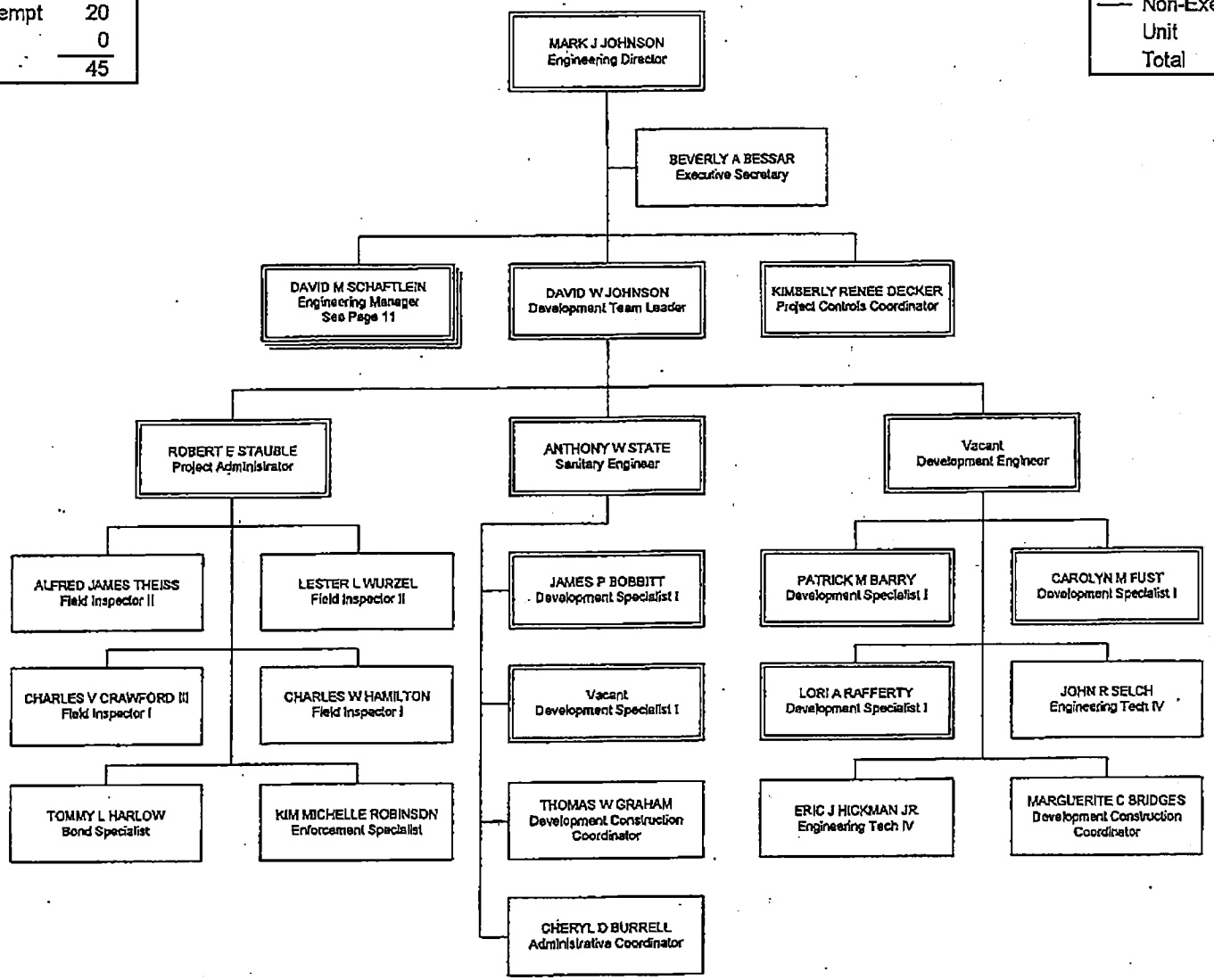
BUDGET STATUS	
Filled	53
Vacant	3
Total	56
Exempt	23
Non-Exempt	32
Unit	1
Total	56



Engineering Division
Development/Plan Review

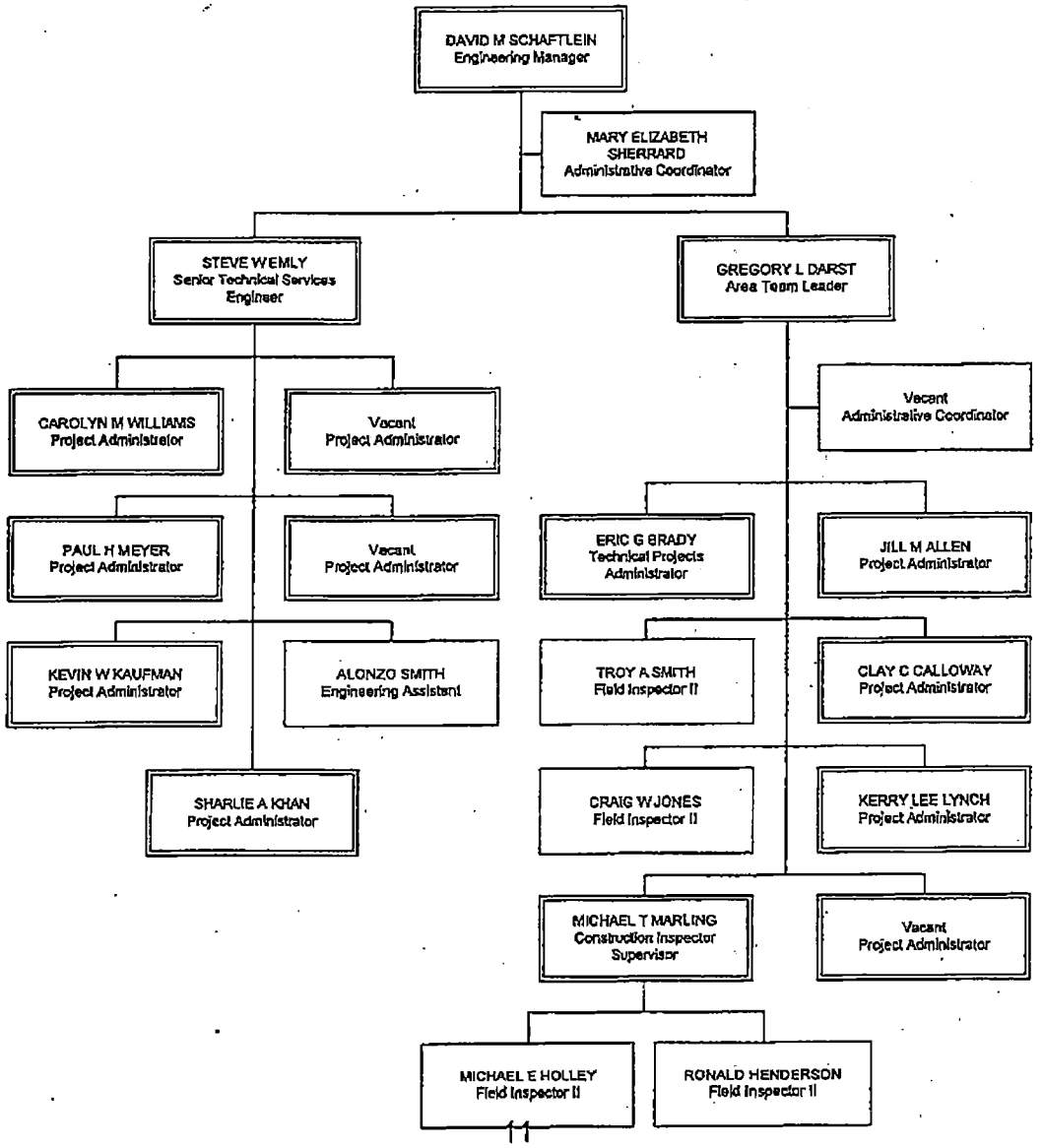
DIVISION BUDGET STATUS	
Filled	39
Vacant	6
Total	45
Exempt	25
Non-Exempt	20
Unit	0
Total	45

BUDGET STATUS	
Filled	21
Vacant	2
Total	23
Exempt	11
Non-Exempt	12
Unit	0
Total	23



Engineering Division
Design/Construction

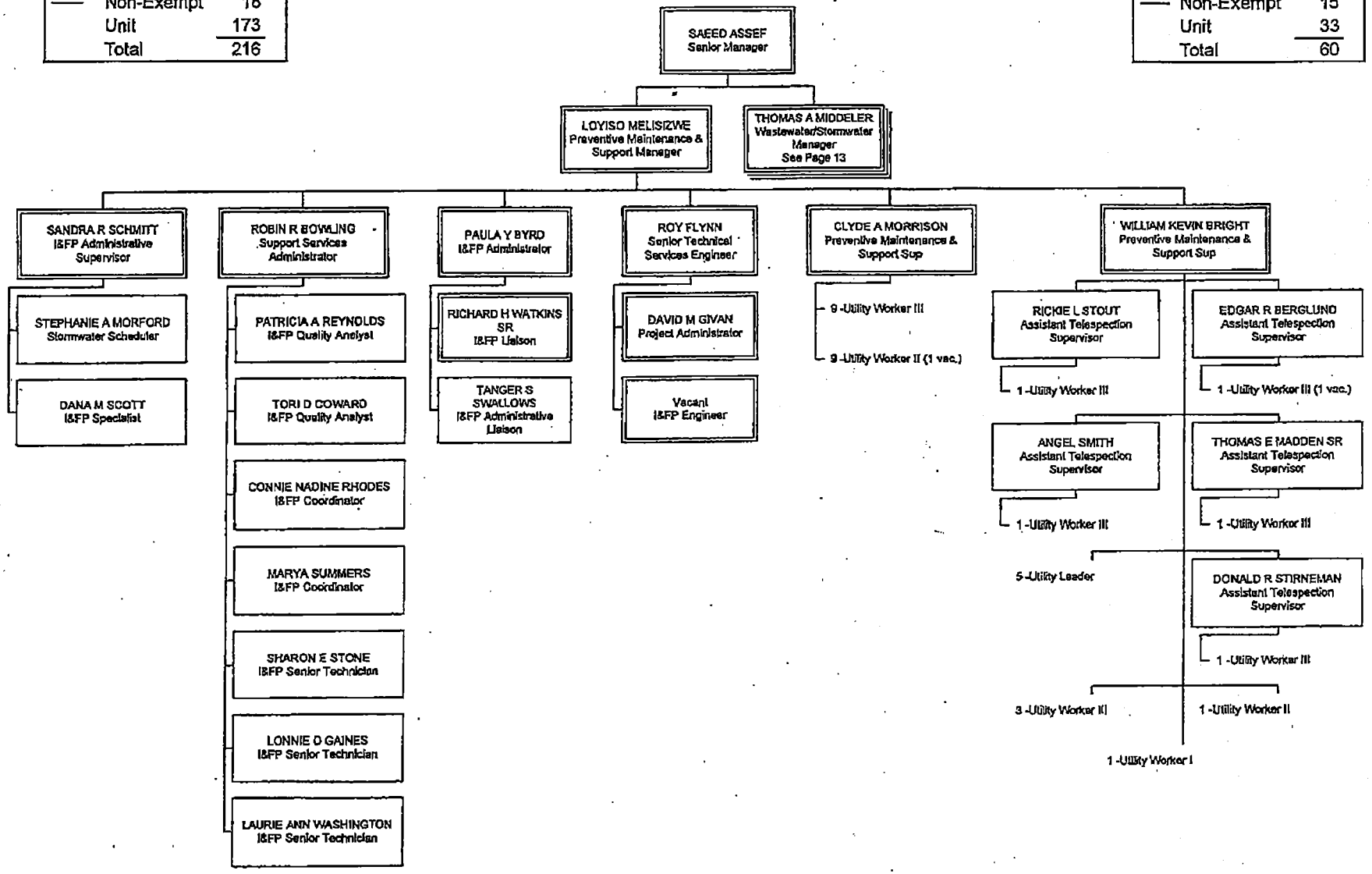
BUDGET STATUS	
Filled	18
Vacant	4
Total	22
Exempt	14
Non-Exempt	8
Unit	0
Total	22



Infrastructure & Flood Protection Division
Administration & Support Services

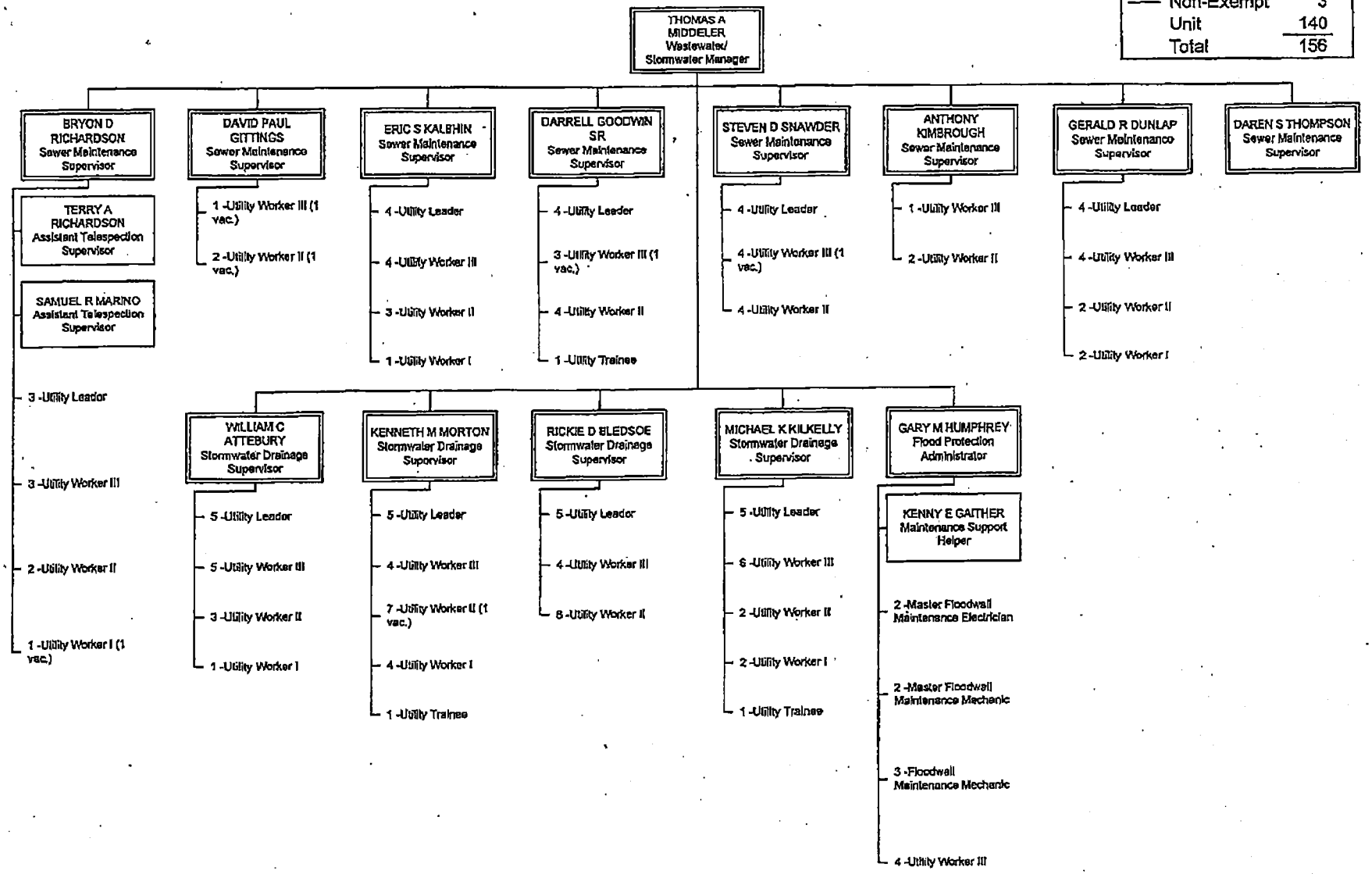
DIVISION BUDGET STATUS	
Filled	208
Vacant	8
Total	216
Exempt	25
Non-Exempt	18
Unit	173
Total	216

BUDGET STATUS	
Filled	58
Vacant	2
Total	60
Exempt	12
Non-Exempt	15
Unit	33
Total	60



Infrastructure & Flood Protection Division
Sewer/Flood Protection & Stormwater Drainage

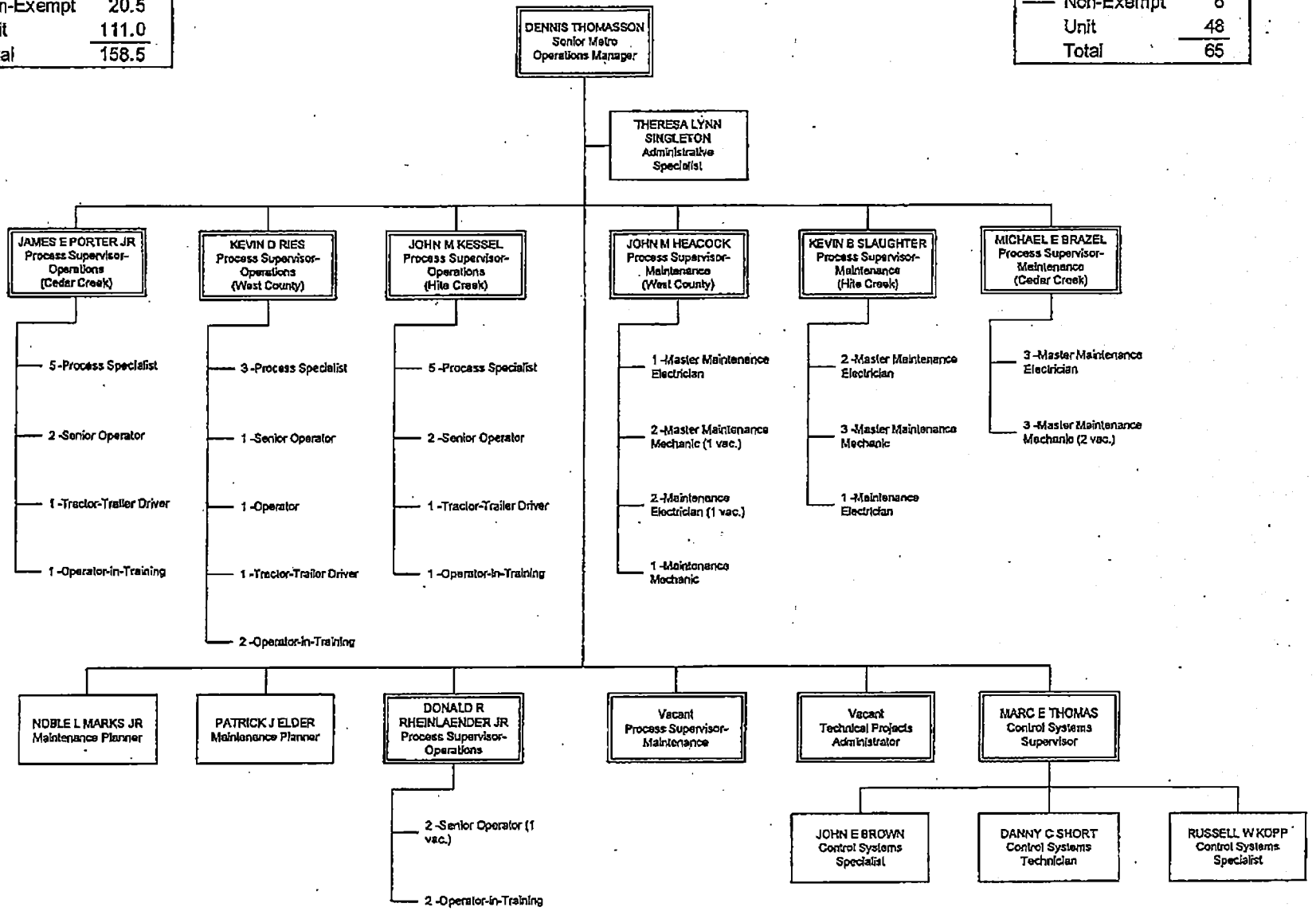
BUDGET STATUS	
Filled	150
Vacant	6
Total	156
Exempt	13
Non-Exempt	3
Unit	140
Total	156



Operations Division
Metro Operations & Maintenance

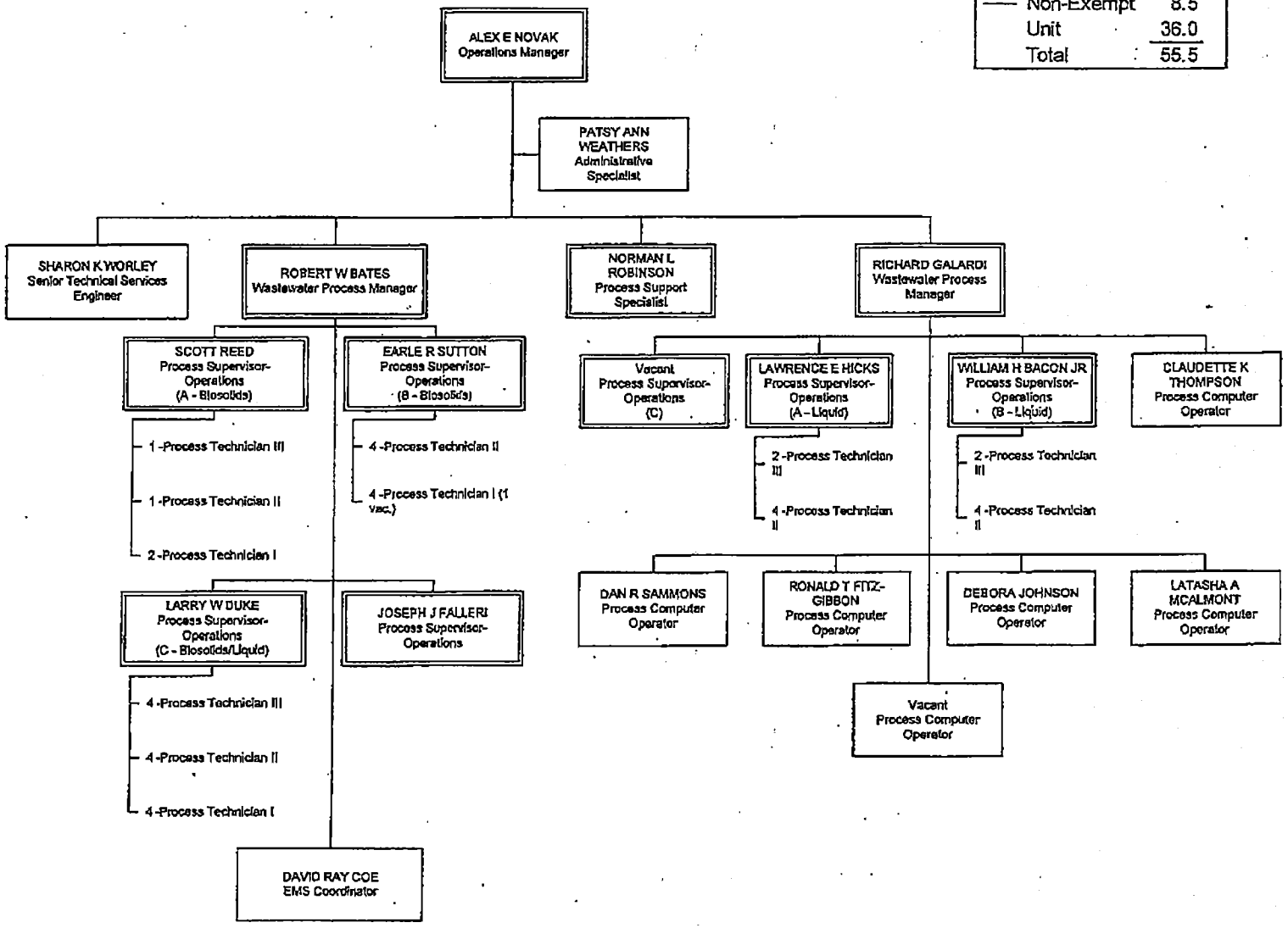
DIVISION BUDGET STATUS	
Filled	147.5
Vacant	11.0
Total	158.5
Exempt	27.0
Non-Exempt	20.5
Unit	111.0
Total	158.5

BUDGET STATUS	
Filled	58
Vacant	7
Total	65
Exempt	11
Non-Exempt	6
Unit	48
Total	65



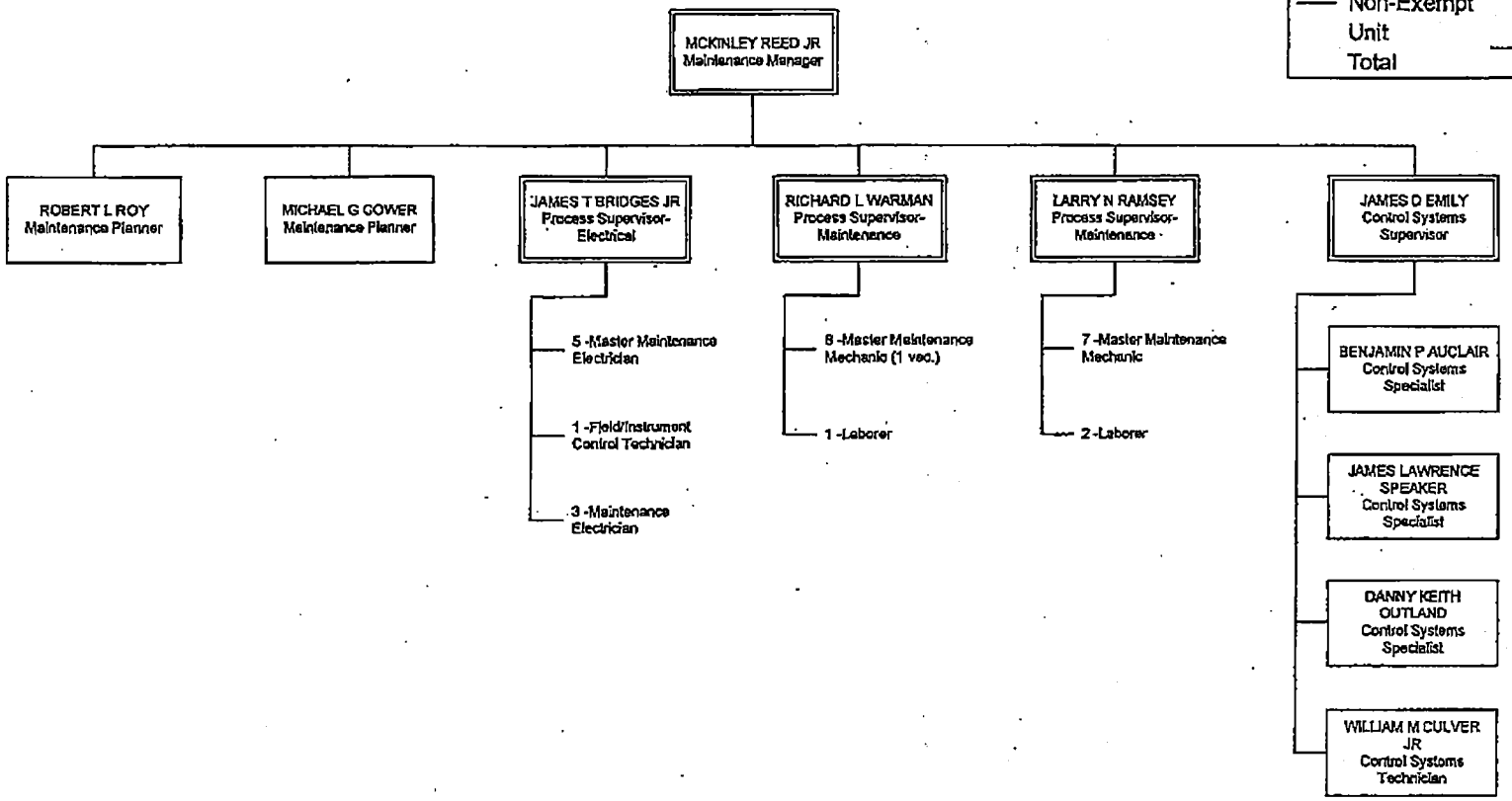
Operations Division
MFWTP Operations

BUDGET STATUS	
Filled	52.5
Vacant	3.0
Total	55.5
Exempt	11.0
Non-Exempt	8.5
Unit	36.0
Total	55.5



Operations Division
MFWTP Maintenance

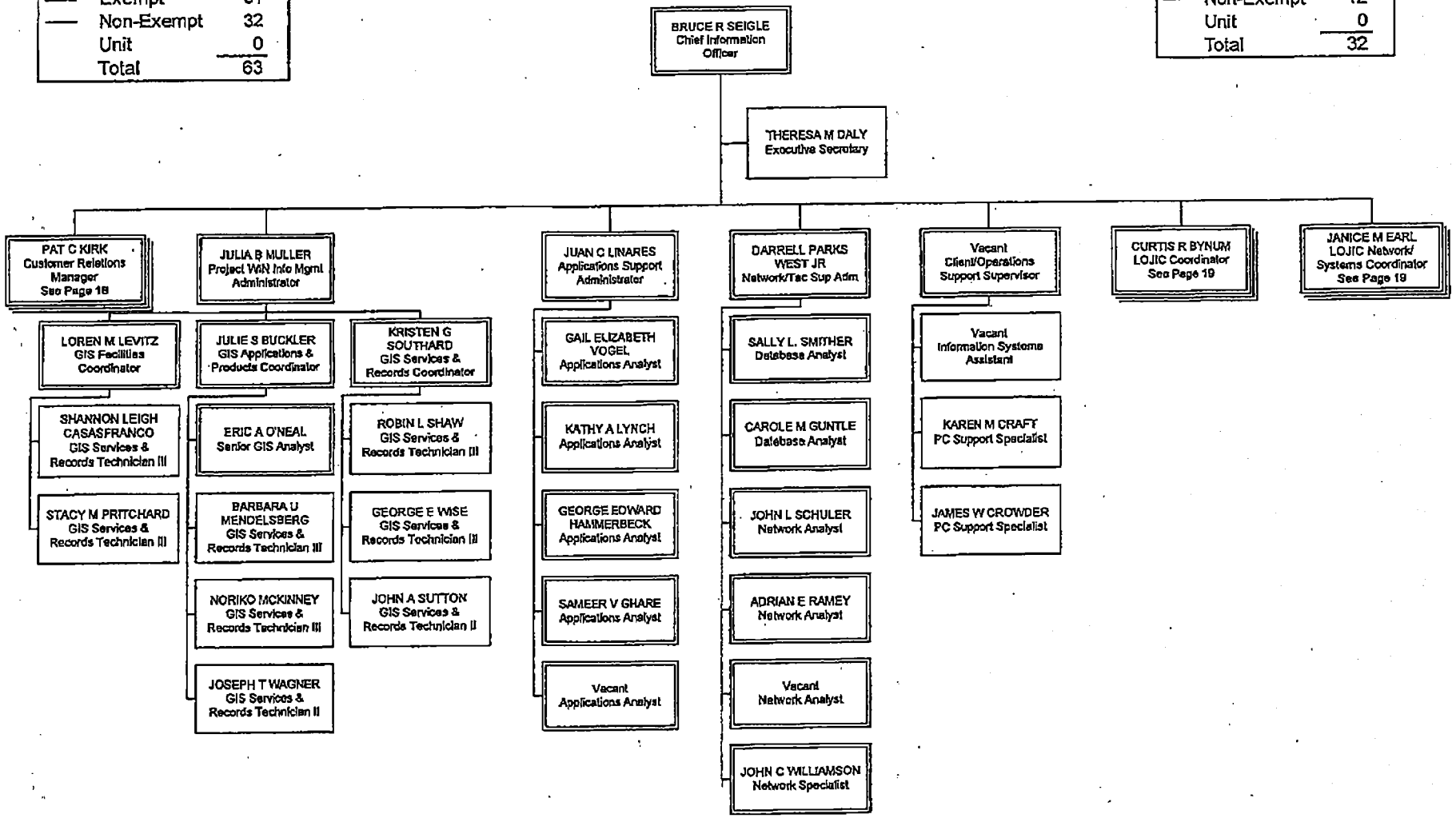
BUDGET STATUS	
Filled	37
Vacant	1
Total	38
Exempt	5
Non-Exempt	6
Unit	27
Total	38



Information Technology Division
Information Technology

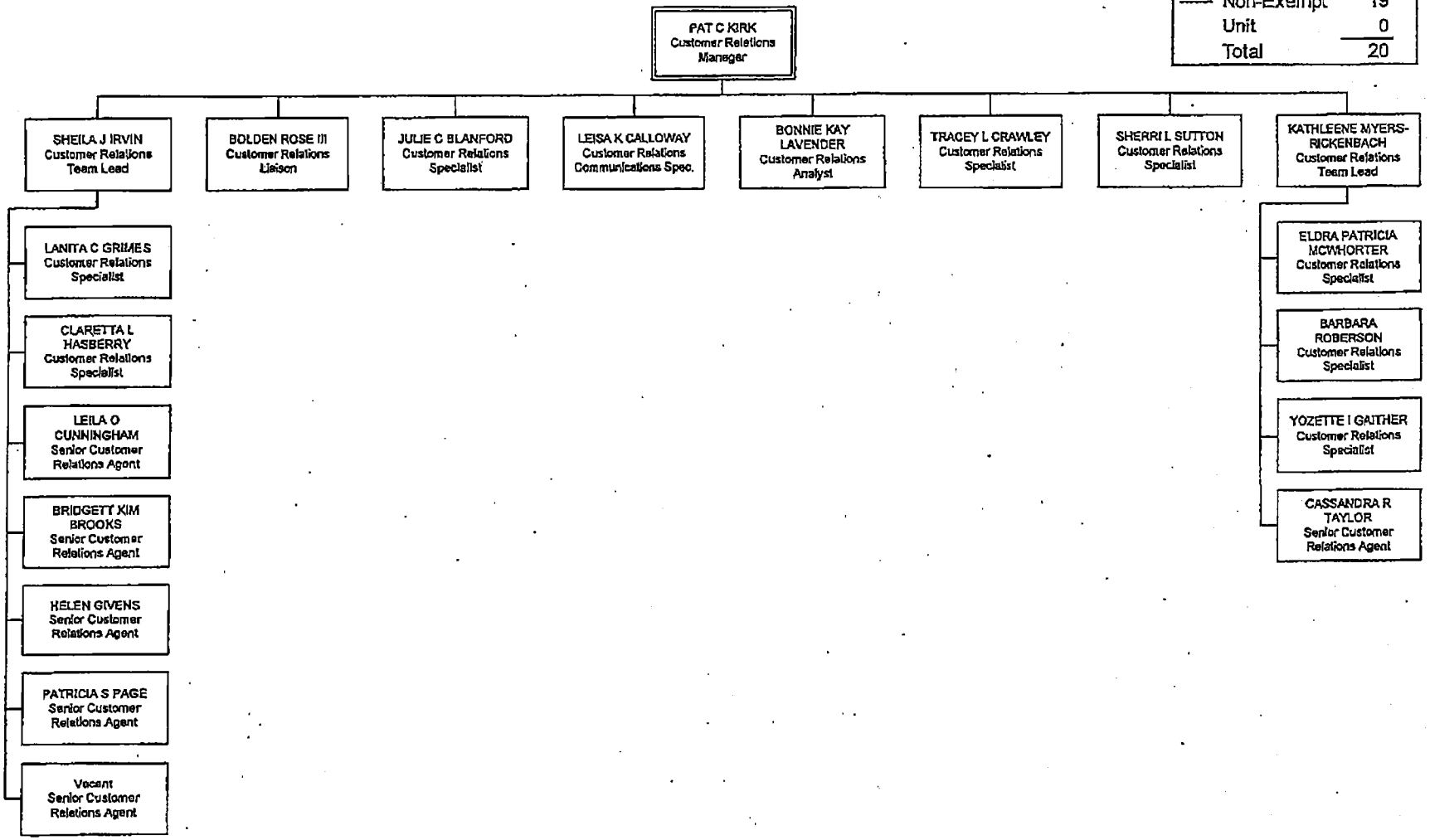
DIVISION BUDGET STATUS	
Filled	58
Vacant	5
Total	63
Exempt	31
Non-Exempt	32
Unit	0
Total	63

BUDGET STATUS	
Filled	28
Vacant	4
Total	32
Exempt	20
Non-Exempt	12
Unit	0
Total	32



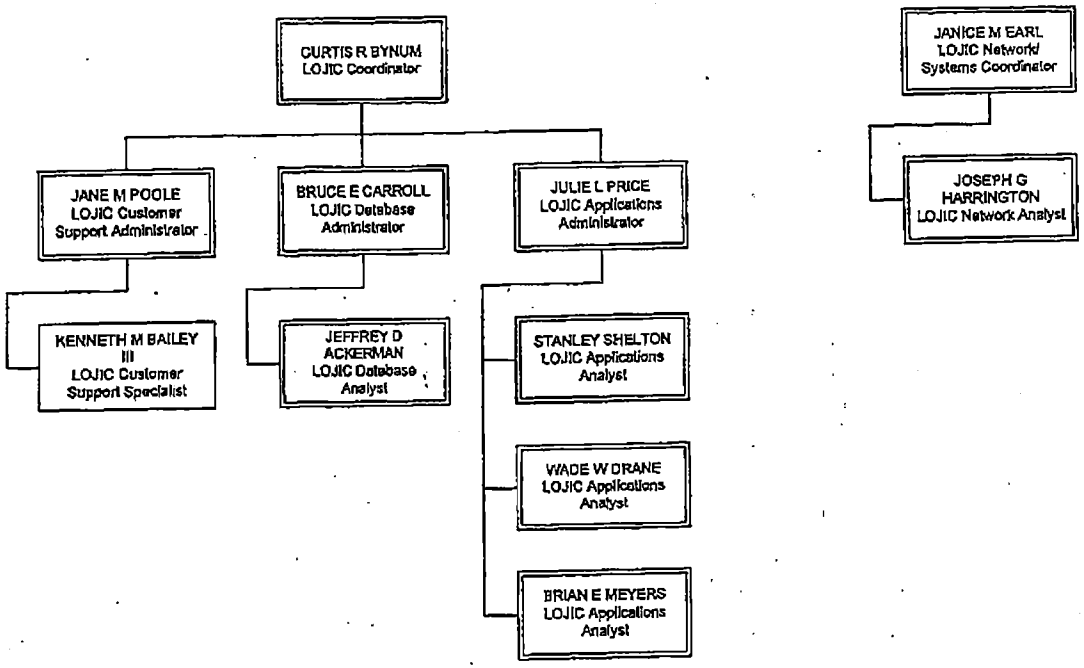
Information Technology Division
Customer Relations

BUDGET STATUS	
Filled	19
Vacant	1
Total	20
Exempt	1
Non-Exempt	19
Unit	0
Total	20



Information Technology Division
LOJIC

BUDGET STATUS	
Filled	11
Vacant	0
Total	11
Exempt	10
Non-Exempt	1
Unit	0
Total	11



APPENDIX C

Wet Weather Discharge Reconnaissance Team SSO Inspection Routes

Monitoring of Overflows

Route Stop	UNITID	Asset	Overflow Status	Initial Event Date	Responsibility	Monitoring
Engineering						
1	65531	SMH	S	3/20/2008	Engineering	Hot Spot
2	33003	SMH	S	3/20/2008	Engineering	Hot Spot
3	28998	SMH	D	1/24/2002	Engineering	Hot Spot
4	28984	SMH	D	1/24/2002	Engineering	Hot Spot
5	63094	SMH	D	4/4/2008	Engineering	Hot Spot
6	63095	SMH	D	4/4/2008	Engineering	Hot Spot
7	70158	SMH	D	1/24/2002	Engineering	Hot Spot
8	67997	SMH	S	4/4/2008	Engineering	Hot Spot
9	67999	SMH	S	4/4/2008	Engineering	Hot Spot
10	31083	SMH	S	4/4/2008	Engineering	Hot Spot
11	29933	SMH	S	4/4/2008	Engineering	Hot Spot
12	31084	SMH	S	4/4/2008	Engineering	Hot Spot
13	29943	SMH	S	3/20/2008	Engineering	Hot Spot
14	29948	SMH	D	3/4/2008	Engineering	Hot Spot
15	79076	SMH	S	3/19/2008	Engineering	Hot Spot
16	19360	SMH	S	3/20/2008	Engineering	Hot Spot
17	19369	SMH	S	3/20/2008	Engineering	Hot Spot
18	17724	SMH	D	9/27/2003	Engineering	Hot Spot
19	70212	SMH	S	5/12/2008	Engineering	Hot Spot
20	36409	SMH	S	4/7/2008	Engineering	Hot Spot
Regulatory Services						
Route 1						
1	IS028-SI	SMH	D	3/20/2002	Regulatory Services	ROUTE 1
2	64505	SMH	S	10/9/2006	Regulatory Services	ROUTE 1
3	28395	SMH	D	12/15/2007	Regulatory Services	ROUTE 1
5	28392	SMH	D	11/29/2001	Regulatory Services	ROUTE 1
4	28391	SMH	D	5/30/2004	Regulatory Services	ROUTE 1
6	31733	SMH	S	5/9/2008	Regulatory Services	ROUTE 1
7	28711	SMH	S	3/21/2008	Regulatory Services	ROUTE 1
8	28417	SMH	D	4/4/2008	Regulatory Services	ROUTE 1
9	28416	SMH	D	4/4/2008	Regulatory Services	ROUTE 1
10	28415	SMH	D	12/19/2002	Regulatory Services	ROUTE 1
11	28414	SMH	D	1/3/2005	Regulatory Services	ROUTE 1
12	28413	SMH	D	3/20/2002	Regulatory Services	ROUTE 1
13	28451	SMH	S	4/8/2008	Regulatory Services	ROUTE 1
14	28250	SMH	D	1/3/2005	Regulatory Services	ROUTE 1
15	28249	SMH	D	3/12/2006	Regulatory Services	ROUTE 1
16	28340	SMH	D	1/3/2005	Regulatory Services	ROUTE 1
17	104289	SMH	S	10/4/2006	Regulatory Services	ROUTE 1
18	28336	SMH	D	8/30/2005	Regulatory Services	ROUTE 1
Route 2						
1	72571-X	SMH	D	11/29/2001	Regulatory Services	Route 2/Telemetry
2	30681	SMH	D	10/18/2004	Regulatory Services	Route 2
3	30680	SMH	D	5/30/2004	Regulatory Services	Route 2
4	63779	SMH	D	2/17/2000	Regulatory Services	Route 2
5	08426	SMH	D	9/3/2003	Regulatory Services	Route 2
6	49647	SMH	D	11/29/2001	Regulatory Services	Route 2
7	08427	SMH	D	3/19/2008	Regulatory Services	Route 2

Monitoring of Overflows

Route Stop	UNITID	Asset	Overflow Status	Initial Event Date	Responsibility	Monitoring
8	08431	SMH	D	9/2/2003	Regulatory Services	Route 2
9	30701	SMH	D	4/4/2008	Regulatory Services	Route 2
10	30702	SMH	D	4/4/2008	Regulatory Services	Route 2
11	08430	SMH	D	2/17/2000	Regulatory Services	Route 2
12	30704	SMH	S	9/30/2006	Regulatory Services	Route 2
13	49673	SMH	D	4/4/2008	Regulatory Services	Route 2
14	49672	SMH	D	12/15/2007	Regulatory Services	Route 2
15	18298	SMH	D	5/28/2004	Regulatory Services	Route 2
16	18302	SMH	S	6/28/2007	Regulatory Services	Route 2
17	18134	SMH	D	4/4/2008	Regulatory Services	Route 2
18	49236	SMH	D	4/4/2008	Regulatory Services	Route 2
19	49513	SMH	S	4/7/2008	Regulatory Services	Route 2
20	25676	SMH	D	2/18/2000	Regulatory Services	Route 2
21	26651	SMH	D	4/4/2008	Regulatory Services	Route 2
22	26650	SMH	D	3/19/2008	Regulatory Services	Route 2
23	18434	SMH	D	4/4/2008	Regulatory Services	Route 2
24	49224	SMH	D	3/19/2008	Regulatory Services	Route 2
25	18370	SMH	S	3/20/2008	Regulatory Services	Route 2
26	47960A	SMH	D	12/6/2007	Regulatory Services	Route 2
27	51160	SMH	D	4/4/2008	Regulatory Services	Route 2
28	51161	SMH	D	4/4/2008	Regulatory Services	Route 2
29	23212	SMH	D	4/4/2008	Regulatory Services	Route 2
30	23211	SMH	D	2/22/2000	Regulatory Services	Route 2
31	51221	SMH	D	3/4/2008	Regulatory Services	Route 2
32	16556	SMH	D	4/4/2008	Regulatory Services	Route 2
33	16649	SMH	D	1/24/2002	Regulatory Services	Route 2
34	51594	SMH	D	9/12/2006	Regulatory Services	Route 2
35	36763	SMH	S	12/17/2007	Regulatory Services	Route 2
36	08717	SMH	D	12/15/2007	Regulatory Services	Route 2
37	66349	SMH	D	3/4/2008	Regulatory Services	Route 2
38	44397	SMH	D	5/27/2004	Regulatory Services	Route 2
39	44396	SMH	D	4/4/2008	Regulatory Services	Route 2
40	104231	SMH	D	10/23/2007	Regulatory Services	Route 2
41	104223	SMH	D	5/20/2005	Regulatory Services	Route 2
42	13931	SMH	D	3/4/2008	Regulatory Services	Route 2
43	13943	SMH	D	3/19/2008	Regulatory Services	Route 2
44	79076	SMH	S	3/19/2008	Regulatory Services	Route 2
45	08537	SMH	D	9/27/2002	Regulatory Services	Route 2/Telemetry
Route 3						
1	08935-SM	SMH	D	11/29/2001	Regulatory Services	Route 3/Telemetry
2	43726	SMH	S	4/4/2008	Regulatory Services	Route 3
3	24507	SMH	S	4/4/2008	Regulatory Services	Route 3
4	24448	SMH	S	3/19/2008	Regulatory Services	Route 3
5	96020	SMH	D	3/12/2006	Regulatory Services	Route 3
6	63319	SMH	D	10/23/2007	Regulatory Services	Route 3
7	01793	SMH	D	3/4/2008	Regulatory Services	Route 3
8	47603	SMH	D	3/4/2008	Regulatory Services	Route 3
9	47604	SMH	D	3/19/2008	Regulatory Services	Route 3
10	47593	SMH	D	3/19/2008	Regulatory Services	Route 3
11	90700	SMH	D	3/19/2008	Regulatory Services	Route 3

Monitoring of Overflows

Route Stop	UNITID	Asset	Overflow Status	Initial Event Date	Responsibility	Monitoring
12	02932	SMH	D	3/19/2008	Regulatory Services	Route 3
13	02933	SMH	D	3/4/2008	Regulatory Services	Route 3
14	47596	SMH	S	1/28/2008	Regulatory Services	Route 3
15	47583	SMH	D	2/6/2008	Regulatory Services	Route 3
16	02935	SMH	D	3/19/2008	Regulatory Services	Route 3
17	25012	SMH	D	5/28/2004	Regulatory Services	Route 3
18	21103	SMH	D	3/19/2008	Regulatory Services	Route 3
19	41416	SMH	S	3/21/2008	Regulatory Services	Route 3
20	41374	SMH	D	3/27/2008	Regulatory Services	Route 3
21	26752	SMH	S	4/4/2008	Regulatory Services	Route 3
22	45835	SMH	D	9/2/2003	Regulatory Services	Route 3
23	27005	SMH	D	9/2/2003	Regulatory Services	Route 3
24	IS021A-SI	SMH	D	8/1/1969	Regulatory Services	Route 3
1	59169	SMH	D	3/12/2006	Regulatory Services	Telemetry
2	22385	SMH	D	3/12/2006	Regulatory Services	Telemetry
3	22370	SMH	D	12/19/2002	Regulatory Services	Telemetry
4	32682	SMH	D	3/12/2006	Regulatory Services	Telemetry
5	32688	SMH	D	12/17/2001	Regulatory Services	Telemetry

Metro Operations

1	MSD0006-PS	SLS	D	09/15/02	Operations	Telemetry
2	MSD0007-PS	SLS	D	03/20/02	Operations	Telemetry
3	MSD0010-PS	SLS	D	05/05/03	Operations	Telemetry
4	MSD0012-PS	SLS	D	12/16/00	Operations	Telemetry
5	MSD0023-PS	SLS	D	01/02/04	Operations	Telemetry
6	MSD0024-PS	SLS	D	12/16/00	Operations	Telemetry
7	MSD0039-PS	SLS	D	01/03/05	Operations	Telemetry
8	MSD0042-PS	SLS	D	12/16/00	Operations	Telemetry
9	MSD0047-PS	SLS	D	12/16/00	Operations	Telemetry
10	MSD0050-PS	SLS	D	12/16/00	Operations	Telemetry
11	MSD0057-LS	SLS	D	12/16/00	Operations	Telemetry
12	MSD0082-PS	SLS	D	02/08/08	Operations	Telemetry
13	MSD0087-PS	SLS	D	02/07/08	Operations	Telemetry
14	MSD0095-PS	SLS	D	01/01/03	Operations	Telemetry
15	MSD0101-PS	SLS	D	12/16/00	Operations	Telemetry
16	MSD0111-LS	SLS	D	03/19/08	Operations	Telemetry
17	MSD0123-PS	SLS	D	09/28/02	Operations	Telemetry
18	MSD0130-PS	SLS	D	08/30/05	Operations	Telemetry
19	MSD0133-PS	SLS	D	04/04/08	Operations	Telemetry
20	MSD0149-PS	SLS	D	07/17/78	Operations	Telemetry
21	MSD0151-PS	SLS	D	03/19/08	Operations	Telemetry
22	MSD0165-PS	SLS	D	12/16/00	Operations	Telemetry
23	MSD0166-PS	SLS	D	05/13/02	Operations	Telemetry
24	MSD0180-PS	SLS	D	12/16/00	Operations	Telemetry
25	MSD0183-PS	SLS	D	03/20/02	Operations	Telemetry
26	MSD0191-PS	SLS	D	09/27/02	Operations	Telemetry
27	MSD0192-PS	SLS	D	12/16/00	Operations	Telemetry
28	MSD0193-PS	SLS	D	01/06/05	Operations	Telemetry

Monitoring of Overflows

Route Stop	UNITID	Asset	Overflow Status	Initial Event Date	Responsibility	Monitoring
29	MSD0196-PS	SLS	D	03/19/08	Operations	Telemetry
30	MSD0199-LS	SLS	D	03/12/06	Operations	Telemetry
31	MSD0209A-PS	SLS	D	12/17/01	Operations	Telemetry
32	MSD0255	STP	D	01/14/07	Operations	Telemetry
33	MSD0263	STP	D	09/27/02	Operations	Telemetry
34	MSD0263A-PS	SLS	D	10/24/07	Operations	Telemetry
35	MSD0271	STP	D	04/04/08	Operations	Telemetry
36	MSD0277	STP	D	10/17/06	Operations	Telemetry
37	MSD0292	STP	D	03/20/08	Operations	Telemetry
38	MSD0294	STP	D	04/04/08	Operations	Telemetry
39	MSD0403	STP	D	05/20/05	Operations	Telemetry
40	MSD1010-PS	SLS	D	12/15/07	Operations	Telemetry
41	MSD1013-PS	SLS	D	11/29/01	Operations	Telemetry
42	MSD1044-PS	SLS	D	03/20/02	Operations	Telemetry
43	MSD1048-PS	SLS	D	03/04/08	Operations	Telemetry
44	MSD1055-LS	SLS	D	01/24/02	Operations	Telemetry
45	MSD1060-LS	SLS	D	12/16/00	Operations	Telemetry
46	MSD1063-PS	SLS	D	12/16/00	Operations	Telemetry
47	MSD1065-PS	SLS	D	10/14/02	Operations	Telemetry
48	MSD1080-LS	SLS	D	03/19/08	Operations	Telemetry
49	MSD1082-PS	SLS	D	01/03/05	Operations	Telemetry
50	MSD1085-PS	SLS	D	05/11/03	Operations	Telemetry
51	MSD1086-PS	SLS	D	08/30/05	Operations	Telemetry
52	MSD1099-LS	SLS	D	12/16/00	Operations	Telemetry
53	MSD1105-PS	SLS	D	03/18/06	Operations	Telemetry
54	00746	SMH	D	12/16/2000	Operations	Telemetry
55	04498	SMH	S	5/9/2008	Operations	Telemetry
56	04542	SMH	D	12/15/2007	Operations	Telemetry
57	11877	SMH	D	7/18/2001	Operations	Telemetry
58	22436	SMH	D	7/14/2004	Operations	Telemetry
59	25477	SMH	S	3/20/2008	Operations	Telemetry
60	25478	SMH	S	7/15/2006	Operations	Telemetry
61	25480	SMH	D	12/16/2000	Operations	Telemetry
62	25484	SMH	D	10/23/2007	Operations	Telemetry
63	27116	SMH	S	3/20/2008	Operations	Telemetry
64	27969	SMH	S	5/9/2008	Operations	Telemetry
65	30520	SMH	D	5/27/2004	Operations	Telemetry
66	35309	SMH	D	10/23/2007	Operations	Telemetry
67	36419	SMH	S	4/7/2008	Operations	Telemetry
68	40870	SMH	D	9/27/2002	Operations	Telemetry
69	40871	SMH	D	3/4/2008	Operations	Telemetry
70	40872	SMH	D	12/15/2007	Operations	Telemetry
71	42680	SMH	D	3/19/2008	Operations	Telemetry
72	43472	SMH	D	3/4/2008	Operations	Telemetry
73	46891	SMH	D	6/15/2003	Operations	Telemetry
74	55665	SMH	D	3/19/2008	Operations	Telemetry
75	60679	SMH	D	12/15/2007	Operations	Telemetry
76	61683	SMH	D	4/4/2008	Operations	Telemetry
77	62418	SMH	D	4/4/2008	Operations	Telemetry
78	64096	SMH	D	3/19/2008	Operations	Telemetry

Monitoring of Overflows

Route Stop	UNITID	Asset	Overflow Status	Initial Event Date	Responsibility	Monitoring
79	65633	SMH	D	4/4/2008	Operations	Telemetry
80	65635	SMH	D	4/4/2008	Operations	Telemetry
81	86052	SMH	S	5/9/2008	Operations	Telemetry
82	88545	SMH	S	5/12/2008	Operations	Telemetry
83	90776	SMH	D	1/3/2005	Operations	Telemetry
84	91087	SMH	D	3/18/2008	Operations	Telemetry
85	91629	SMH	D	3/19/2008	Operations	Telemetry
86	91630	SMH	D	3/19/2008	Operations	Telemetry
87	92061	SMH	D	2/15/2001	Operations	Telemetry
88	92098	SMH	D	5/16/2008	Operations	Telemetry
89	93719	SMH	D	10/23/2007	Operations	Telemetry
90	94187	SMH	D	3/19/2008	Operations	Telemetry
91	97362	SMH	D	4/23/2004	Operations	Telemetry
92	97806	SMH	D	4/4/2008	Operations	Telemetry
93	100830	SMH	S	4/8/2008	Operations	Telemetry
94	105936	SMH	D	3/4/2008	Operations	Telemetry
95	108956	SMH	D	12/12/2007	Operations	Telemetry
96	108957	SMH	D	4/4/2008	Operations	Telemetry
97	81316	SMH	D	4/23/2004	Operations	Telemetry
Infrastructure and Flood Pumping						
1	17571	SMH	D	02/17/00	I&FP	Pumped
2	18471	SMH	D	02/17/00	I&FP	Pumped
3	18483	SMH	D	02/17/00	I&FP	Pumped
4	18505	SMH	D	02/17/00	I&FP	Pumped
5	18595	SMH	D	02/17/00	I&FP	Pumped
6	21061	SMH	D	02/17/00	I&FP	Pumped
7	21089	SMH	D	02/17/00	I&FP	Pumped
8	21101	SMH	D	02/17/00	I&FP	Pumped
9	21153	SMH	D	02/17/00	I&FP	Pumped
10	21156	SMH	D	02/17/00	I&FP	Pumped
11	21506	SMH	D	02/17/00	I&FP	Pumped
12	CSO015	SMH	D	12/19/07	I&FP	Telemetry
13	CSO191	SMH	D	03/23/08	I&FP	Telemetry
14	MSD0310-FP	STLS	D	11/22/03	I&FP	Telemetry
15	MSD0308-FP	STLS	D	11/24/03	I&FP	Telemetry
16	MSD0306-FP	STLS	D	01/04/04	I&FP	Telemetry
17	MSD0303-FP	STLS	D	03/11/04	I&FP	Telemetry

Wet Weather Discharge Reconnaissance Team - SSO Inspection Engineering Route

Legend

- Stops
- Routes
- Interstate
- Major Arterial
- Minor Arterial
- Major Streams

N

PROJECT WIN Waterway Improvements Now

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MSD

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1 inch equals 5,280 feet

Map Revision - November 2008

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Wet Weather Discharge Reconnaissance Team - SSO Inspection Route 1

Legend

- Stops
- Routes
- Interstate
- Major Arterial
- Minor Arterial
- Major Streams

N

PROJECT WIN Waterway Improvements Now

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MSD

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1 inch equals 600 feet

Map Revision - November 2008

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Wet Weather Discharge Reconnaissance Team - SSO Inspection Route 2

Legend

- Stops
- Routes
- Interstate
- Major Arterial
- Minor Arterial
- Major Streams

N

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1 inch equals 2,500 feet

Map Revision - November 2008

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Wet Weather Discharge Reconnaissance Team - SSO Inspection Route 3

Legend

- Stops
- Routes
- Interstate
- Major Arterial
- Minor Arterial
- Major Streams

N

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1 inch equals 2,850 feet

Map Revision - November 2008

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Appendix D - Response To Overflows Matrix

Overflow Locations	Discharge Work Order Activity	Potential Overflow Causes (Problem Code) and (DISCAU)	Extent of Overflow Impact Possibilities (Result Code)	Type of Overflow Impact (DISIMP)	Control Zone Options (DISCZ)	Event-Based Public Notification (DISPUB)	Overflow Repair/Mitigation Options (DISREP)	Potential Cleanup Options (DISCLN)
Manhole (SMH)	Dry Weather **(DISDW)** Wet Weather **(DISREV)** Suspected **(DISSUS)**	**CAP** - Lack of System Capacity **ELEC** - Electrical Problems (MSD) **FLOOD** – COE FPS Operations **GB** - Grease Blockage **MECH** – Mechanical Failure **OBST** - Obstruction **POWER** - Power Outage (LG&E) **PUMP** – Pumped location **R** - Roots **STRUC** - Structural Failure **UD** - Utility Damage	**EXT** - External - Soil/Pavement **WUS** - Waters of the U.S.	Sewer solids/debris Fish kill Stream Discoloration	Barricades/cones Caution tape Flags Traffic control from Metro/Police	Permanent signage Advised customer Temporary signage Door hangers Radio public service announcement	Containment Filtration Flow Diversion Pump and Haul Repair	MSD Personnel clean and sanitize the Area MSD Contractors clean and sanitize the area Rake and bag debris Vactor removal
Pump Station (SLS)	Dry Weather **(DISDW)** Wet Weather **(DISREV)** Suspected **(DISSUS)**	**CAP** - Lack of System Capacity **ELEC** - Electrical Problems (MSD) **GB** - Grease Blockage **MECH** – Mechanical Failure **OBST** - Obstruction **POWER** - Power Outage (LG&E) **PUMP** – Pumped location **STRUC** - Structural Failure **UD** - Utility Damage	**EXT** - External - Soil/Pavement **WUS** - Waters of the U.S.	Sewer solids/debris Fish kill Stream Discoloration	Barricades/cones Caution tape Flags Traffic control from Metro/Police	Permanent signage Advised customer Temporary signage Door hangers Radio public service announcement	Containment Filtration Flow Diversion Pump and Haul Portable Generator Repair	MSD Personnel clean and sanitize the Area MSD Contractors clean and sanitize the area Rake and bag debris Vactor removal

Appendix D - Response To Overflows Matrix

Overflow Locations	Discharge Work Order Activity	Potential Overflow Causes (Problem Code) and (DISCAU)	Extent of Overflow Impact Possibilities (Result Code)	Type of Overflow Impact (DISIMP)	Control Zone Options (DISCZ)	Event-Based Public Notification (DISPUB)	Overflow Repair/Mitigation Options (DISREP)	Potential Cleanup Options (DISCLN)
Wastewater Treatment Plant (STP)	Dry Weather **(DISDW)** Wet Weather **(DISREV)** Suspected **(DISSUS)**	**BLEND** - Blending (JTWTP Only) **BYPAS** – Bypass at WWTP) **CAP** - Lack of System Capacity **ELEC** - Electrical Problems (MSD) **GB** - Grease Blockage **MECH** – Mechanical Failure **STRUC** - Structural Failure **UPSET** – WWTP Process upset	**EXT** - External - Soil/Pavement **WUS** - Waters of the U.S.	Sewer solids/debris Fish kill Stream Discoloration	Barricades/cones Caution tape Flags Traffic control from Metro/Police	Permanent signage Temporary signage Advised customer Door hangers Radio public service announcement	Containment Filtration Pump and Haul Portable Generator Repair	MSD Personnel clean and sanitize the Area MSD Contractors clean and sanitize the area Rake and bag debris Vactor removal
Sewer Main (SMN)	Dry Weather **(DISDW)** Wet Weather **(DISREV)** Suspected **(DISSUS)**	**STRUC** - Structural Failure **UD** - Utility Damage	**EXT** - External - Soil/Pavement **WUS** - Waters of the U.S.	Sewer solids/debris Fish kill Stream Discoloration	Barricades/cones Caution tape Flags Traffic control from Metro/Police	Advised customer Temporary signage Door hangers	Containment Filtration Flow Diversion Repair	MSD Personnel clean and sanitize the Area MSD Contractors clean and sanitize the area Rake and bag debris Vactor removal
Property Service Connection (SSL)	Dry Weather **(DISDW)** Wet Weather **(DISREV)** Suspected **(DISSUS)**	**CAP** - Lack of System Capacity **ELEC** - Electrical Problems (MSD) **GB** - Grease Blockage **MECH** – Mechanical Failure **OBST** - Obstruction **POWER** - Power Outage (LG&E) **PPI** – Private Property Issue **R** - Roots **STRUC** - Structural Failure **UD** - Utility Damage	**INT** - Internal - Basement backup **EXT** - External - Soil/Pavement **WUS** - Waters of the U.S.	Sewer solids/debris Property damage	Barricades/cones Caution tape Flags	Advised customer Temporary signage Door hangers	Containment Filtration Flow Diversion Repair If Private Property issue, advise property owner to contact licensed plumber	MSD Personnel clean and sanitize the Area MSD Contractors removes contaminated materials, cleans and sanitize area If Private Property issue, advise Property Owner to clean up the area

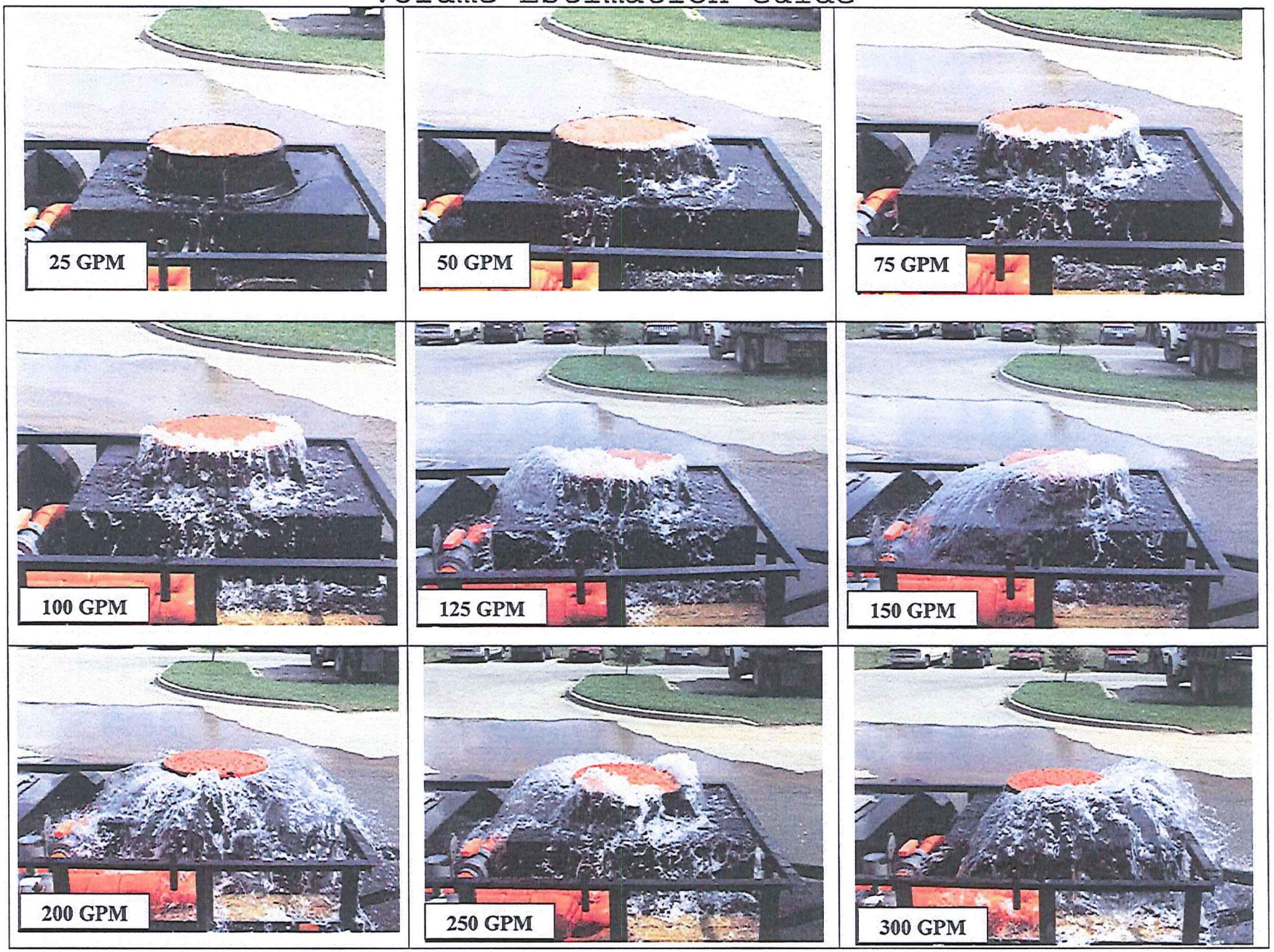
Appendix D - Response To Overflows Matrix

Overflow Locations	Discharge Work Order Activity	Potential Overflow Causes (Problem Code) and (DISCAU)	Extent of Overflow Impact Possibilities (Result Code)	Type of Overflow Impact (DISIMP)	Control Zone Options (DISCZ)	Event-Based Public Notification (DISPUB)	Overflow Repair/Mitigation Options (DISREP)	Potential Cleanup Options (DISCLN)
Storm Pump Station (STLS)	Dry Weather **(DISDW)**	**FLOOD** - COE FPS Operations	**WUS** - Waters of the U.S.	Sewer solids/debris Stream Discoloration None observed - underwater	Barricades/cones Caution tape Flags Traffic control from Metro/Police No control zone required - underwater	Permanent signage Temporary signage	Operate Station In Accordance with COE manual	MSD Personnel clean and sanitize the Area MSD Contractors clean and sanitize the area Rake and bag debris Vactor removal
Catch Basin (STIN)	Dry Weather **(DISDW)** Wet Weather **(DISREV)** Suspected **(DISSUS)**	**CAP** - Wet weather surcharge	**EXT** - External - Soil/Pavement **WUS** - Waters of the U.S.	Sewer solids/debris Stream Discoloration	Barricades/cones Caution tape Flags Traffic control from Metro/Police	Advised customer Temporary signage Door hangers	Containment Filtration Flow Diversion Repair	MSD Personnel clean and sanitize the Area MSD Contractors clean and sanitize the area Rake and bag debris Vactor removal
Sewer Valve (SV)	Dry Weather **(DISDW)** Wet Weather **(DISREV)** Suspected **(DISSUS)**	**MECH** - Mechanical **STRUC** - Structural Failure **UD** - Utility Damage	**EXT** - External - Soil/Pavement **WUS** - Waters of the U.S.	Sewer solids/debris Stream Discoloration	Barricades/cones Caution tape Flags Traffic control from Metro/Police	Advised customer Temporary signage Door hangers	Containment Filtration Flow Diversion Repair	MSD Personnel clean and sanitize the Area MSD Contractors clean and sanitize the area Rake and bag debris Vactor removal
Sewer Node (SND)	Dry Weather **(DISDW)** Wet Weather **(DISREV)** Suspected **(DISSUS)**	**CAP** - Wet weather surcharge **STRUC** - Structural Failure	**EXT** - External - Soil/Pavement **WUS** - Waters of the U.S.	Sewer solids/debris Stream Discoloration	Barricades/cones Caution tape Flags Traffic control from Metro/Police	Advised customer Temporary signage Door hangers	Containment Filtration Flow Diversion Repair	MSD Personnel clean and sanitize the Area MSD Contractors clean and sanitize the area Rake and bag debris Vactor removal

APPENDIX E

Volume Estimation Guide

Volume Estimation Guide



August 2008

Appendix

E SSO Field Volume Estimate Guide

Manhole Overflow Condition [1,3]

Rim/Casting On

	1 Hour	3 Hours	6 Hours	12 Hours	24 Hours	36 Hours	48 Hours
Water Seeping Out	2300	6,800	14,000	27,000	54,000	81,000	110,000
Water Pouring Out	11,000	34,000	68,000	140,000	270,000	410,000	540,000

Rim/Casting 1/4 Off

Avg. Depth of Water Above Rim/Casting (Ft)	1 Hour	3 Hours	6 Hours	12 Hours	24 Hours	36 Hours	48 Hours
0.5	27,000	81,000	160,000	320,000	650,000	970,000	1,300,000
1	81,000	240,000	490,000	970,000	1,900,000	2,900,000	3,900,000
2	180,000	540,000	1,100,000	2,200,000	4,300,000	6,500,000	8,600,000
3	220,000	660,000	1,300,000	2,600,000	5,300,000	7,900,000	11,000,000
4	280,000	770,000	1,600,000	3,100,000	6,200,000	9,200,000	12,000,000
5	280,000	850,000	1,700,000	3,400,000	6,800,000	10,000,000	14,000,000

Rim/Casting 1/2 Off

Avg. Depth of Water Above Rim/Casting (Ft)	1 Hour	3 Hours	6 Hours	12 Hours	24 Hours	36 Hours	48 Hours
0.5	54,000	160,000	320,000	650,000	1,300,000	1,900,000	2,600,000
1	160,000	470,000	950,000	1,900,000	3,800,000	5,700,000	7,600,000
2	360,000	1,100,000	2,200,000	4,300,000	8,600,000	13,000,000	17,000,000
3	440,000	1,300,000	2,600,000	5,300,000	11,000,000	16,000,000	21,000,000
4	510,000	1,500,000	3,100,000	6,100,000	12,000,000	18,000,000	24,000,000
5	570,000	1,700,000	3,400,000	6,900,000	14,000,000	21,000,000	27,000,000

Rim/Casting Completely Off

Avg. Depth of Water Above Rim/Casting (Ft)	1 Hour	3 Hours	6 Hours	12 Hours	24 Hours	36 Hours	48 Hours
0.5	110,000	340,000	680,000	1,400,000	2,700,000	4,100,000	5,400,000
1	320,000	960,000	1,900,000	3,800,000	7,700,000	12,000,000	15,000,000
2	720,000	2,200,000	4,300,000	8,600,000	17,000,000	26,000,000	35,000,000
3	890,000	2,700,000	5,300,000	11,000,000	21,000,000	32,000,000	43,000,000
4	1,000,000	3,100,000	6,100,000	12,000,000	25,000,000	37,000,000	49,000,000
5	1,100,000	3,400,000	6,900,000	14,000,000	27,000,000	41,000,000	55,000,000

Pumps

Portable Pumps	1 Hour	3 Hours	6 Hours	12 Hours	24 Hours	36 Hours	48 Hours
6" Silent Knight Pumps @ Idle (1,100 GPM)	66,000	200,000	400,000	790,000	1,580,000	2,380,000	3,170,000
4" Pumps @ full throttle (600 GPM)	36,000	110,000	220,000	430,000	860,000	1,300,000	1,730,000
3" Pumps @ full throttle (300 GPM)	18,000	50,000	110,000	220,000	430,000	650,000	860,000
2" Pumps @ full throttle (150 GPM)	9,000	30,000	50,000	110,000	220,000	320,000	430,000

Highgate Springs Pump Station	1 Hour	3 Hours	6 Hours	12 Hours	24 Hours	36 Hours	48 Hours
1 Pump Bypassing (3,100 GPM)	190,000	560,000	1,120,000	2,230,000	4,460,000	6,700,000	8,930,000
2 Pump Bypassing (6,200 GPM)	370,000	1,120,000	2,230,000	4,460,000	8,930,000	13,390,000	17,860,000
3 Pump Bypassing (9,300 GPM)	560,000	1,670,000	3,350,000	6,700,000	13,390,000	20,090,000	26,780,000

Siphon

J-Town WWTP Siphon	500,000	1,500,000	3,000,000	5,900,000	12,000,000	18,000,000	24,000,000

Central / East / WWWQ

Bypass Structures [2,3]	1 Hour	3 Hours	6 Hours	12 Hours	24 Hours	36 Hours	48 Hours
Woodland Hills	9,000	27,000	54,000	110,000	220,000	320,000	430,000
Holly Oaks PS	9,000	27,000	54,000	110,000	220,000	320,000	430,000
Cooper Chapel	9,000	27,000	54,000	110,000	220,000	320,000	430,000
Pope Lick Rd PS	9,000	27,000	54,000	110,000	220,000	320,000	430,000
Shobe	9,000	27,000	54,000	110,000	220,000	320,000	430,000
Avanti	9,000	27,000	54,000	110,000	220,000	320,000	430,000
Marion Ct.	9,000	27,000	54,000	110,000	220,000	320,000	430,000
Raintree	9,000	27,000	54,000	110,000	220,000	320,000	430,000
Mockingbird Valley PS	72,000	220,000	430,000	860,000	1,700,000	2,600,000	3,500,000
Lanfair	1,000	3,000	6,000	12,000	24,000	36,000	48,000
Winton Ave	4,500	14,000	27,000	54,000	110,000	160,000	220,000
Middle Fork @ Breckinridge	72,000	220,000	430,000	860,000	1,700,000	2,600,000	3,500,000
ND Blow Off	1,500,000	4,500,000	8,900,000	18,000,000	36,000,000	53,000,000	71,000,000
Peabody Lane	110,000	340,000	680,000	1,400,000	2,700,000	4,100,000	5,400,000
SE Diversion	250,000	740,000	1,500,000	3,000,000	5,900,000	8,900,000	12,000,000
Sutherland	23,000	68,000	140,000	270,000	540,000	810,000	1,100,000

[1] $Q = A_e \times (2gh)^{0.5}$

[2] $Q = 1.49 / 0.013 \times A_o \times R^{2/3} \times S_o^{0.5}$

[3] 75% of Calculated Potential Flow

All volumes should be estimated per site.

APPENDIX F

Overflow Advisory Warning Sign

WARNING
ADVERTENCIA

DURING AND AFTER RAIN EVENTS

The surface water in this area contains runoff contaminants and is subject to sewage overflows. Avoid contact with water, due to increased health risks, during these times. For more information, visit our website or call the telephone number below.

DURANTE Y DESPUES DE LLUVIA

El agua en esta área contiene contaminantes recogidos por la lluvia en el suelo y las calles, y está sujeto a desbordamientos de las alcantarillas sanitarias. Evite contacto con el agua durante y después de la lluvia debido a riesgos de salud. Para más información, visite nuestra página del internet o llame al teléfono que aparece a continuación.

MSD

www.msdlouky.org

(502) 587-0603

SIGN/SEÑAL S0025

APPENDIX G

Overflow Report Form

OVERFLOW REPORT FORM

Work Order Tab

Work Order # _____

Activity ☐ Wet Weather Discharge (DISREV) ☐ Dry Weather Discharge (DISDW) ☐ Suspected Discharge (DISSUS)

Asset _____ (SLS, SPL, SMH, SSL, SMN, SND, STIN, SV) _____ (Hansen Unit ID Number)

Overflow Began (Initiated) _____ (Date) _____ (Military Time)

SLS – Sewer Lift Station *SMH – Sewer Manhole* *SMN – Sewer Main* *STIN – Storm Inlet*

SPL – Sewer Treatment Plant *SSL – Sewer Service Line* *SND – Sewer Node* *SV – Sewer Valve*

Name _____ (Name, Address or Location)

Overflow Stopped (Completed) _____ (Date) _____ (Military Time)

Initiated By _____

Assigned To _____

Problem

- ☐ GB Grease Blockage
- ☐ R Roots
- ☐ OBST Sewer Main Obstruction
- ☐ STRUC Structural Failure
- ☐ CAP Lack of System Capacity
- ☐ PUMP Pumped Overflow
- ☐ ELEC Electrical Problems at MSD
- ☐ POWER Power Outage (LG&E)
- ☐ MECH Mechanical Failure
- ☐ FLOOD Corps Pump Station Operation
- ☐ BYPASS (At WTP's only)
- ☐ UPSET (WTP Process Upset)
- ☐ BLEND (At Jeffersontown WTP only)
- ☐ PPI Private Property Issue (for SSLs only)
- ☐ UD Utility Damaged MSD Asset
- ☐ FOMAJ Force Majeure Event

Condition

- ☐ LAT Lateral Line
- ☐ MAIN Main Line
- ☐ CSO Authorized Discharge (Rain Event on a # CSO only)

Result

- ☐ INT Interior (In the building)
- ☐ EXT Exterior (On the ground)
- ☐ WUS Reached waters of the US

Comments Tab

Spot Inspections Tab (see Spot Inspection Sample Text Guide for additional options)

Discharge Amount (DISAMT) Est. Volume Released _____

Cause of Discharge (DISCAU) Additional Cause Info _____

(EX: Shaft broke in pump; Grease blockage in line)

Clean up Activity (DISCLN) Check all that apply

- ☐ No Debris
- ☐ Customer cleaned area
- ☐ Pipe discharge submerged - no cleanup
- ☐ MSD cleaned & sanitized area
- ☐ Contractor cleaned & sanitized area

Control Zone Setup (DISCZ) Check all that apply

- ☐ Flags
- ☐ Cones
- ☐ Barricades
- ☐ Road Closed
- ☐ Tape
- ☐ Temp Signs
- ☐ Advised property owner/ customer to avoid direct contact with sewage
- ☐ Pipe discharge submerged - no control zone

Visual Impact Observed (DISIMP) Check all that apply

- ☐ Personal Hygiene Products
- ☐ Debris
- ☐ ____at pumped site
- ☐ ____around (floor drain, basement, cleanout, ground, stream, drainage sys)
- ☐ Sewage
- ☐ Solids
- ☐ Discoloration in Stream
- ☐ Fish Kill
- ☐ No Impact observed (customer reported backup / pipe discharge submerged)

Repair / Remedial Action (DISREP) _____

(EX: Compressor repaired: WO #12345 flushed area, WO#23456 root cut line, informed PO to repair problem)

Log Tab

Notified the Public (DISPUB) Check all that apply

- ☐ MSD advised customer on site
- ☐ MSD advised customer by door card
- ☐ MSD advised customer by phone
- ☐ MSD advised customer by letter

Generator Placement (GENPL)						
Type/Size Generator	Asset ID	Problem	Date Initiated	Time Initiated	Date Completed	Time Completed

Hauling Sewage – Operations (HAULOP)					
Asset ID	Problem	Initiated / Completed Date	Initiated Time	Completed Time	Quantity (Volume Hauled in gallons)

APPENDIX H

Discharge Report – IMSAST0004

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
000000	MSD0000	NO PLANT-GOES TO STREAM/RIVER	NONE	

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SLS Sewer Lift Station	MSD0247A-PS	423 BERMUDA WAY	STARVIEW ESTATES - EFFLUENT	CHENOWETH RUN	STREAM

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISDW: DRY WEATHER DISCHARGE	737982	01/24/08 09:00 PM	SINGLETON	PORTER JR	REPAIRED - ISSUE RESOLVED	01/24/08	BYPASS AT TREATMENT PLANT	DISCHARGE TO WATERS OF THE US	01/25/08 01:15 PM

Spot Inspections:

Discharge Amount:	1,950 GAL
Cause:	FORCE MAIN BREAK
Clean Up:	CLEAN UP NOT NEEDED. DISCHARGED CLEAN, TREATED WATER TO THE CREEK.
Control Zone:	TEMPORARY SIGNS WERE POSTED.
Impact:	NO VISUAL IMPACT. CLEAN, TREATED WATER FROM THE EFFLUENT WAS DISCHARGED.
Repair:	SAP EMERGENCY WO#4012271 & 5180399 USED FOR REPAIRS. HAULING WO#738502

Notifications:

01/25/08 12:58 AM	DISSNO	Supplemental Email notification of unauthorized discharge has been sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov
01/25/08 11:07 AM	DISPUB	Temporary signs were posted
01/25/08 12:58 AM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0078956	MSD0277	WEST COUNTY	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SLS Sewer Lift Station	MSD0133-PS	10212 CAVEN AVE	CAVEN AVE	MUD CREEK	GROUND

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISDW: DRY WEATHER DISCHARGE	736110	01/11/08 12:35 PM	ELDER	PATTERSON	DOCUMENTED	04/04/08	STRUCTURAL FAILURE	DISCHARGE TO WATERS OF THE US	01/11/08 12:45 PM

Spot Inspections:

Discharge Amount:	5,000 GAL
Cause:	STRUCTURAL PIPE FAILURE
Clean Up:	AREA RAKED & DEBRIS HAULED,AREA SCRUBBED & SANITIZED
Control Zone:	TEMPORARY SIGNS POSTED AROUND AFFECTED AREA.
Impact:	DEBRIS,SOLIDS, PERSONAL HYGIENE PRODUCTS
Repair:	FAILED PIPE REPLACED WITH NEW

Notifications:

01/11/08 02:17 PM	DISPUB	Temporary signs around affected area. Knocked on doors to speak with neighbors,Placed door hangers on homes,10212,10210,10208,10206 Caven Ave.
01/11/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	08935-SM	1001 BRECKENRIDGE LN		MIDDLE FORK BEARGRASS CREEK	STREAM

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735798	01/10/08 04:32 PM	GRIFFITH	GRIFFITH	DOCUMENTED	11/29/01	LACK OF SYSTEM CAPACITY	DISCHARGE TO WATERS OF THE US	01/11/08 03:40 AM

Spot Inspections:

Discharge Amount:	110,880 GAL
Cause:	LACK OF SYSTEM CAPACITY - HEAVY RAIN
Clean Up:	NONE POSSIBLE DUE TO THE MAGNITUDE OF THE STORM
Control Zone:	PERMANENT SIGNS ARE POSTED
Impact:	NO IMPACT OBSERVED
Repair:	THIS LOCATION WILL BE IN THE SANITARY SEWER DISCHARGE PLAN TO BE SUBMITTED BY DEC. 31, 2008

Notifications:

01/10/08 12:59 PM	DISSNO	Supplemental Email notification of unauthorized discharge has been sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov
01/10/08 04:32 PM	DISPUB	ADVISED CUSTOMERS WITH PERMANENT SIGNS
01/10/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	17571	3035 CARSON WAY		SOUTH FORK BEARGRASS CREEK	CATCH BASIN

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735844	01/10/08 07:22 PM	BRIGHT	BRIGHT	DOCUMENTED	02/17/00	PUMPED OVERFLOW	DISCHARGE TO WATERS OF THE US	01/10/08 09:59 PM

Spot Inspections:

Discharge Amount:	204,100 GAL
Cause:	SET PUMPS TO ALLEVIATE PROPERTY DAMAGE AND FLOODING DURING A SIGNIFICANT RAIN EVENT
Clean Up:	MSD PERSONNEL CLEANED AND SANITIZED THE OVERFLOW SITE ONCE THE RAIN SUBSIDED
Control Zone:	MSD PERSONNEL SET OUT BARRICADES AND TEMPORARY SIGNS ON THE PUMPS
Impact:	SEWAGE VISIBLE AROUND PUMPED DISCHARGE SITE
Repair:	THIS LOCATION IS IN THE INTERIM SANITARY SEWER DISCHARGE PLAN

Notifications:

01/10/08 07:22 PM	DISPUB	MSD PERSONNEL PLACED SIGNS
01/10/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	18471	3107 DELL BROOKE AVE		SOUTH FORK BEARGRASS CREEK	CATCH BASIN

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735845	01/10/08 07:40 PM	BRIGHT	BRIGHT	DOCUMENTED	02/17/00	PUMPED OVERFLOW	DISCHARGE TO WATERS OF THE US	01/11/08 01:30 AM

Spot Inspections:

Discharge Amount:	420,000 GAL
Cause:	SET PUMPS TO ALLEVIATE PROPERTY DAMAGE AND FLOODING DURING A SIGNIFICANT RAIN EVENT
Clean Up:	MSD PERSONNEL CLEANED AND SANITIZED THE OVERFLOW SITE ONCE THE RAIN SUBSIDED
Control Zone:	MSD PERSONNEL SET OUT BARRICADES AND TEMPORARY SIGNS ON THE PUMPS
Impact:	SEWAGE VISIBLE AROUND PUMPED DISCHARGE SITE
Repair:	THIS LOCATION IS IN THE INTERIM SANITARY SEWER DISCHARGE PLAN

Notifications:

01/10/08 12:59 PM	DISSNO	Supplemental Email notification of unauthorized discharge has been sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov
01/10/08 07:40 PM	DISPUB	MSD PERSONNEL PLACED SIGNS
01/10/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	18483	3015 BOAIRES LN		SOUTH FORK BEARGRASS CREEK	CATCH BASIN

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735847	01/10/08 06:21 PM	BRIGHT	BRIGHT	DOCUMENTED	02/17/00	PUMPED OVERFLOW	DISCHARGE TO WATERS OF THE US	01/10/08 10:11 PM

Spot Inspections:

Discharge Amount:	299,000 GAL
Cause:	SET PUMPS TO ALLEVIATE PROPERTY DAMAGE AND FLOODING DURING A SIGNIFICANT RAIN EVENT
Clean Up:	MSD PERSONNEL CLEANED AND SANITIZED THE OVERFLOW SITE ONCE THE RAIN SUBSIDED
Control Zone:	MSD PERSONNEL SET OUT BARRICADES AND TEMPORARY SIGNS ON THE PUMPS
Impact:	SEWAGE VISIBLE AROUND PUMPED DISCHARGE SITE
Repair:	THIS LOCATION IS IN THE INTERIM SANITARY SEWER DISCHARGE PLAN

Notifications:

01/10/08 04:21 PM	DISPUB	MSD PERSONNEL PLACED SIGNS
01/10/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	18595	3101 WEDGEWOOD WAY		WEDGEWOOD DITCH	DITCH

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735848	01/10/08 07:35 PM	BRIGHT	BRIGHT	DOCUMENTED	02/17/00	PUMPED OVERFLOW	DISCHARGE TO WATERS OF THE US	01/10/08 10:07 PM

Spot Inspections:

Discharge Amount:	197,600 GAL
Cause:	SET PUMPS TO ALLEVIATE PROPERTY DAMAGE AND FLOODING DURING A SIGNIFICANT RAIN EVENT
Clean Up:	MSD PERSONNEL CLEANED AND SANITIZED THE OVERFLOW SITE ONCE THE RAIN SUBSIDED
Control Zone:	MSD PERSONNEL SET OUT BARRICADES AND TEMPORARY SIGNS ON THE PUMPS
Impact:	SEWAGE VISIBLE AROUND PUMPED DISCHARGE SITE
Repair:	THIS LOCATION IS IN THE INTERIM SANITARY SEWER DISCHARGE PLAN

Notifications:

01/10/08 07:35 PM	DISPUB	MSD PERSONNEL PLACED SIGNS
01/10/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	21061	4432 CORDOVA RD		UPPER SINKING FORK	CATCH BASIN

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735850	01/10/08 06:55 PM	BRIGHT	BRIGHT	DOCUMENTED	02/17/00	PUMPED OVERFLOW	DISCHARGE TO WATERS OF THE US	01/10/08 10:15 PM

Spot Inspections:

Discharge Amount:	240,000 GAL
Cause:	SET PUMPS TO ALLEVIATE PROPERTY DAMAGE AND FLOODING DURING A SIGNIFICANT RAIN EVENT
Clean Up:	MSD PERSONNEL CLEANED AND SANITIZED THE OVERFLOW SITE ONCE THE RAIN SUBSIDED
Control Zone:	MSD PERSONNEL SET OUT BARRICADES AND TEMPORARY SIGNS ON THE PUMPS
Impact:	SEWAGE VISIBLE AROUND PUMPED DISCHARGE SITE
Repair:	THIS LOCATION IS IN THE INTERIM SANITARY SEWER DISCHARGE PLAN

Notifications:

01/10/08 06:55 PM	DISPUB	MSD PERSONNEL PLACED SIGNS
01/10/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	21153	4522 CORDOVA RD		UPPER SINKING FORK	CATCH BASIN

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735853	01/10/08 07:09 PM	BRIGHT	BRIGHT	DOCUMENTED	02/17/00	PUMPED OVERFLOW	DISCHARGE TO WATERS OF THE US	01/11/08 01:11 AM

Spot Inspections:

Discharge Amount:	470,600 GAL
Cause:	SET PUMPS TO ALLEVIATE PROPERTY DAMAGE AND FLOODING DURING A SIGNIFICANT RAIN EVENT
Clean Up:	MSD PERSONNEL CLEANED AND SANITIZED THE OVERFLOW SITE ONCE THE RAIN SUBSIDED
Control Zone:	MSD PERSONNEL SET OUT BARRICADES AND TEMPORARY SIGNS ON THE PUMPS
Impact:	SEWAGE VISIBLE AROUND PUMPED DISCHARGE SITE
Repair:	THIS LOCATION IS IN THE INTERIM SANITARY SEWER DISCHARGE PLAN

Notifications:

01/10/08 12:59 PM	DISSNO	Supplemental Email notification of unauthorized discharge has been sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov
01/10/08 07:09 PM	DISPUB	MSD PERSONNEL PLACED SIGNS
01/10/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	21156	4601 STONEHENGE DR		UPPER SINKING FORK	CATCH BASIN

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735852	01/10/08 06:37 PM	BRIGHT	BRIGHT	DOCUMENTED	02/17/00	PUMPED OVERFLOW	DISCHARGE TO WATERS OF THE US	01/11/08 01:16 AM

Spot Inspections:

Discharge Amount:	518,700 GAL
Cause:	SET PUMPS TO ALLEVIATE PROPERTY DAMAGE AND FLOODING DURING A SIGNIFICANT RAIN EVENT
Clean Up:	MSD PERSONNEL CLEANED AND SANITIZED THE OVERFLOW SITE ONCE THE RAIN SUBSIDED
Control Zone:	MSD PERSONNEL SET OUT BARRICADES AND TEMPORARY SIGNS ON THE PUMPS
Impact:	SEWAGE VISIBLE AROUND PUMPED DISCHARGE SITE
Repair:	THIS LOCATION IS IN THE INTERIM SANITARY SEWER DISCHARGE PLAN

Notifications:

01/10/08 12:59 PM	DISSNO	Supplemental Email notification of unauthorized discharge has been sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov
01/10/08 06:37 PM	DISPUB	MSD PERSONNEL PLACED SIGNS
01/10/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	27005	1012 ALTA CIR		MIDDLE FORK BEARGRASS CREEK	GROUND

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735876	01/10/08 06:00 PM	MITCHELL	GRIFFITH	DOCUMENTED	09/02/03	LACK OF SYSTEM CAPACITY	DISCHARGE TO WATERS OF THE US	01/10/08 07:15 PM

Spot Inspections:

Discharge Amount:	31,050 GAL
Cause:	LACK OF SYSTEM CAPACITY - HEAVY RAIN
Clean Up:	REFERRED TO IFP FOR CLEAN UP AFTER RAIN EVENT
Control Zone:	POSTED TAPE, CONES, BARRICADES AND TEMPORARY SIGNS
Impact:	PERMANENT SIGNS ARE POSTED, SETUP BARRICADES WITH TEMPORARY SIGNS, CONES AND CAUTION TAPE
Repair:	THIS LOCATION WILL BE IN THE SANITARY SEWER DISCHARGE PLAN TO BE SUBMITTED BY DEC. 31, 2008

Notifications:

01/11/08 12:59 AM	DISSNO	Supplemental Email notification of unauthorized discharge has been sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov
01/10/08 06:00 PM	DISPUB	ADVISED CUSTOMERS WITH CONE, TAPE, BARRICADES AND TEMPORARY SIGNS
01/11/08 12:59 AM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMH Sewer Manhole	72571-X	4600 CHAMPIONS TRACE LN		SOUTH FORK BEARGRASS CREEK	STREAM

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735941	01/10/08 07:40 PM	GRIFFITH	GRIFFITH	DOCUMENTED	11/29/01	LACK OF SYSTEM CAPACITY	DISCHARGE TO WATERS OF THE US	01/11/08 12:21 PM

Spot Inspections:

Discharge Amount:	140,940 GAL
Cause:	LACK OF SYSTEM CAPACITY - HEAVY RAIN
Clean Up:	NONE POSSIBLE DUE TO THE MAGNITUDE OF STORM
Control Zone:	PERMANENT SIGNS ARE POSTED
Impact:	NO IMPACT OBSERVED
Repair:	THIS LOCATION IS IN THE INTERIM SANITARY SEWER DISCHARGE PLAN

Notifications:

01/11/08 12:59 AM	DISSNO	Supplemental Email notification of unauthorized discharge has been sent to ireland.sean@epa.gov, eppc.ert@ky.gov and LisaA.Jeffries@ky.gov
01/10/08 07:40 PM	DISPUB	ADVISED CUSTOMERS WITH PERMANENT SIGNS
01/11/08 12:59 AM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SLS Sewer Lift Station	MSD0012-PS	3246 RADIANCE RD	HIGHGATE SPRINGS	SOUTH FORK BEARGRASS CREEK	STREAM

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	735863	01/10/08 04:40 PM	ELDER	PORTER JR	DOCUMENTED	12/16/00	LACK OF SYSTEM CAPACITY	DISCHARGE TO WATERS OF THE US	01/11/08 03:00 PM

Spot Inspections:

Discharge Amount:	1,134,600 GAL
Cause:	LACK OF CAPACITY
Clean Up:	CLEANUP NOT POSSIBLE DUE TO ELEVATED CREEK LEVEL
Control Zone:	PERMANENT SIGN, NO ADDITIONAL CONTROL ZONE SET UP
Impact:	NONE OBSERVED BY MSD PERSONNEL, ELEVATED CREEK LEVEL
Repair:	THIS LOCATION IS IN THE INTERIM SANITARY SEWER DISCHARGE PLAN

Notifications:

01/10/08 12:59 PM	DISSNO	Supplemental Email notification of unauthorized discharge has been sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov
01/10/08 12:59 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0022411 (Cont'd)	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SLS Sewer Lift Station	MSD1044-PS	2630 PHOENIX HILL DR	PHOENIX HILL	MUDDY FORK BEARGRASS CREEK	GROUND

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISREV: RAIN EVENT DISCHARGE	738931	01/30/08 04:30 PM	MARKS JR	HOWARD	DOCUMENTED	03/20/02	GREASE BLOCKAGE	DISCHARGE TO WATERS OF THE US	01/30/08 05:30 PM

Spot Inspections:

Discharge Amount:	3,000 GAL
Cause:	GREASE BLOCKAGE OF CONTROL TILT BULBS
Clean Up:	AREA RAKED AND DEBRI HAULED AREA WAS SCRUBBED AND SANITIZED BY MSD PERSONNEL
Control Zone:	TEMPORARY SIGNS POSTED AND AREA TAPED OFF
Impact:	PERSONAL HYGIENE PRODUCTS FOUND IN STREAM AND REMOVED
Repair:	GREASE BLOCKAGE REMOVED AND STATION CONTROLS BACK IN SERVICE . REINFORCE PUBLIC KNOWLEDGE OF MSD FOG PROGRAM

Notifications:

01/30/08 06:52 PM	DISPUB	
01/30/08 12:58 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov

Report Selections: Excluding PPI, CSO, Result: WUS, Act Code: DISDW, DISREV

KPDES #	Facility ID	Treatment Plant Name	Receiving Stream of Treatment Plant	Region
KY0098540	MSD0289	CEDAR CREEK	CEDAR CREEK	CENT

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SPL Sewer Treatment Plant	MSD0289	8605 CEDAR CREEK RD		CEDAR CREEK	GROUND

Activity Code / Description	WO #	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed
DISDW: DRY WEATHER DISCHARGE	737051	01/18/08 09:45 AM	ELDER	VIERLING	REPAIRED - ISSUE RESOLVED	01/18/08	BYPASS AT TREATMENT PLANT	DISCHARGE TO WATERS OF THE US	01/18/08 10:00 AM

Spot Inspections:

Discharge Amount:	100 GAL
Cause:	DRAIN LINES OVERWHELMED
Clean Up:	MSD'S CONTRACTOR CLEANED AREA
Control Zone:	TEMPORARY SIGNS & TAPED OFF AREA
Impact:	SOLIDS ON THE GROUND
Repair:	STOPPED DRAINING PROCESS

Notifications:

01/18/08 12:58 PM	DISNOT	Email notification of unauthorized discharge sent to ireland.sean@epa.gov, eppc.ert@ky.gov and bradley.kouns@ky.gov
01/18/09 09:45 AM	DISPUB	Temporary signs & taped off area.

Total Facilities Printed: 15
Total Work Orders Printed: 15

APPENDIX I

5-Day Letter Templates

MSD

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
www.msdlouky.org

[redacted]

Mr. Charlie Roth, District Supervisor
KY Division of Water
Louisville Regional Office
9116 Leesgate Road
Louisville, KY 40222-5084

Re: Bypass (Blending) Report for the Jeffersontown WTP – KPDES Permit KY0025194

Dear Mr. Roth:

In accordance with 401 KAR 5:065, MSD is providing this letter as a written report of the bypass (blending) event that occurred at the Jeffersontown Wastewater Treatment Plant (WTP). The bypass started at [redacted] on [redacted], 20[redacted] and stopped at [redacted] on [redacted], 20[redacted].

Mitigation activities to minimize the extent and impact of the discharge included maximization of plant peak flow through secondary treatment to minimize the total amount of wastewater that did not receive full secondary treatment prior to blending with secondary effluent before receiving UV disinfection, and then being discharged through the permitted outfall. The cause of the bypass (blending) event was due to significant precipitation in the service area. The bypassed (blended) effluent entered Chenoweth Run at mile point 5.3.

In the table listed below is the total number of gallons of wastewater by calendar day that was bypassed (blended) around the secondary treatment of the Jeffersontown WTP.

Date	Start Time	Stop Time	Total Plant Flow (Vol)	Peak Plant Rate	Total Blended flow (Vol)
[redacted], 20[redacted]	[redacted]	[redacted]	[redacted] MG	[redacted] MGD	[redacted] MG
[redacted], 20[redacted]	[redacted]	[redacted]	[redacted] MG	[redacted] MGD	[redacted] MG

Please advise if you have any questions concerning this information. You can contact me on my office telephone at ([redacted])-[redacted]-[redacted], my cell phone at ([redacted])-[redacted]-[redacted] or via email at [redacted]@msdlouky.org.

Sincerely,

[redacted]
Process Supervisor-Operations

cc: Gary Levy, KDEP
eB File
Paula Purifoy, MSD

Beneficial Use of Louisville's Biosolids
www.louisvillegreen.com

MSD

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
www.msdlouky.org

[redacted]

Mr. Charlie Roth, District Supervisor
KY Division of Water
Louisville Regional Office
9116 Leesgate Road
Louisville, KY 40222-5084

Re: Bypass Report for the [redacted] – KPDES Permit [redacted]

Dear Mr. Roth:

This plant experienced a bypass event and has been reported through our electronic notification system at approximately [redacted] on [redacted], 20[redacted], referencing Work Order [redacted] as a [redacted]. This letter serves as a written report of the bypass as required by 401 KAR 5:065.

Provided below are the details of the bypass event:

- Description of the noncompliance and its cause: [redacted]
- Period of noncompliance: Starting [redacted] on [redacted], 20[redacted] and stopping [redacted] on [redacted], 20[redacted].
- Steps taken or planned to reduce, eliminate and prevent recurrence: [redacted].

Please advise if you have any questions concerning this information. You can contact me on my office telephone at ([redacted])-[redacted]-[redacted], my cell phone at ([redacted])-[redacted]-[redacted] or via email at [redacted]@msdlouky.org.

Sincerely,

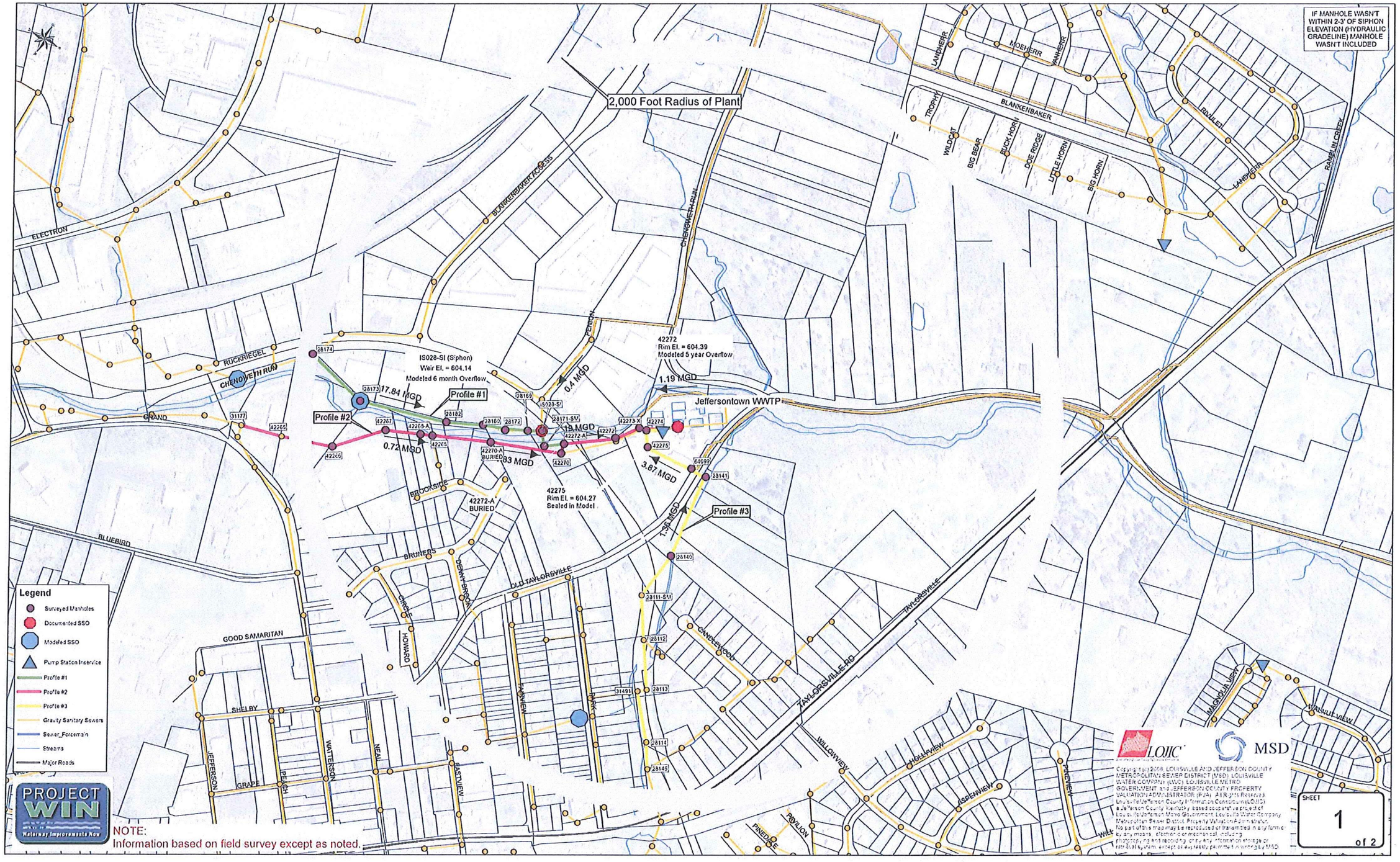
[redacted]
Process Supervisor-Operations

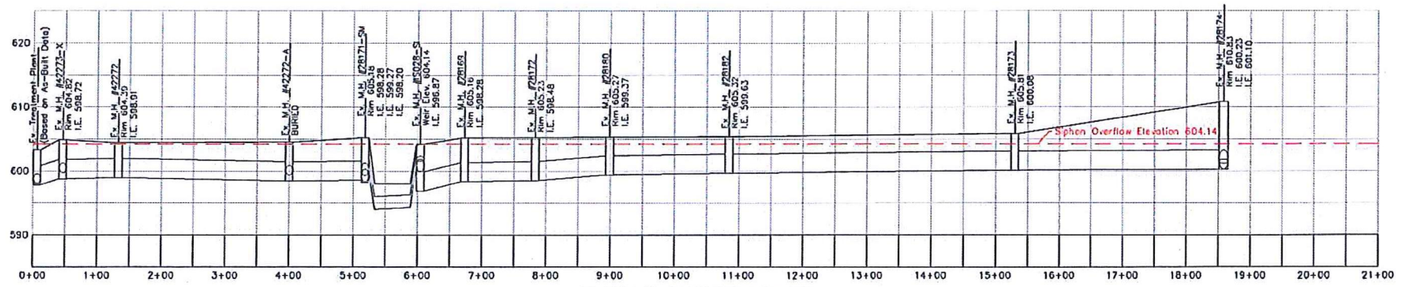
cc: Gary Levy, KDEP
eB File
Paula Purifoy, MSD

APPENDIX J

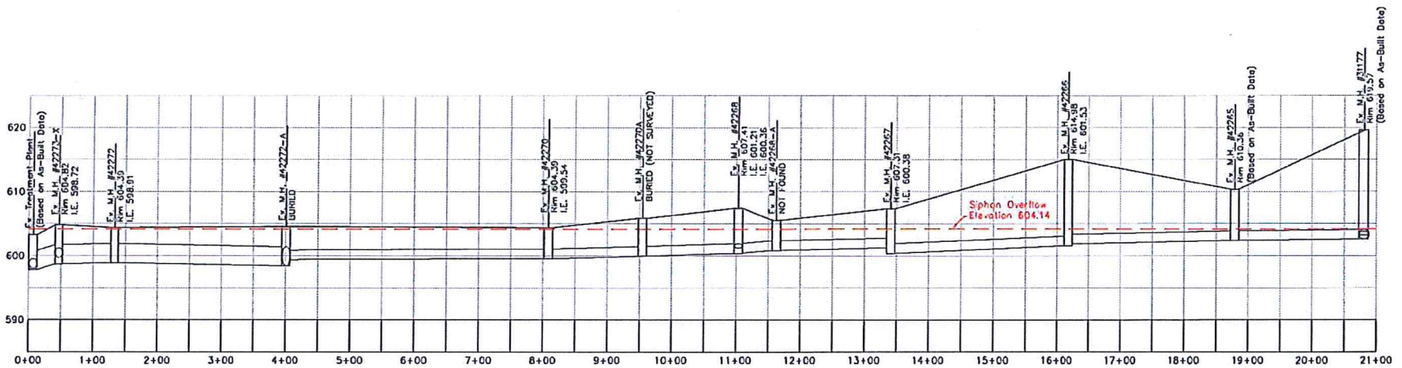
Jeffersontown Siphon and Manhole Inspection Routes and Plans

Surveyed Manholes within 2,000 LF of Jeffersontown WWTP - PLAN (9-25-08)

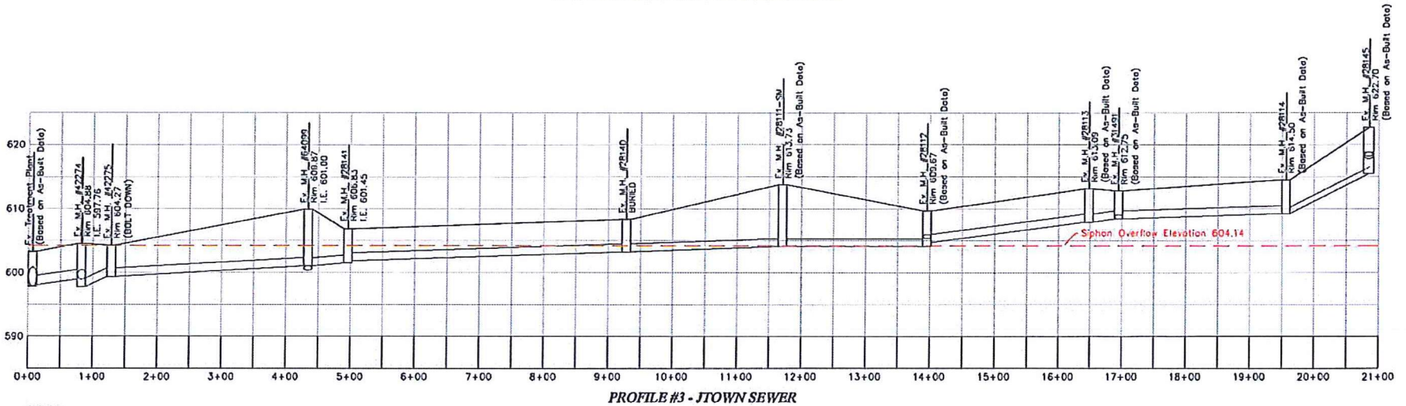




PROFILE #1 - JTOWN INTERCEPTOR



PROFILE #2 - JTOWN RELIEF INTERCEPTOR



PROFILE #3 - JTOWN SEWER

NOTE:
Information based on field survey except as noted.

NOTE:
IF MANHOLE WASN'T WITHIN 2–3' OF SIPHON ELEVATION (HYDRAULIC GRADELINE) MANHOLE WASN'T INCLUDED

Vertical 10 0 10 Feet

Horizontal 100 0 100 Feet

ENGINEER: MSD

OWNER/DEVELOPER: PROJECT WIN Wastewater Improvements Now

PROJECT: Manholes within 2,000 LF of Jeffersontown WWTP

JOB NO:	07089
HORIZ. SCALE:	1"=100'
VERTICAL SCALE:	1"=10'
DESIGNED BY:	WHS
DETAILED BY:	JLW
CHECKED BY:	WHS
DATE:	JUNE 9th, 2008

SHEET 2 OF 2

X:\AA-Projects-2007\07089_JTown_SSS_ModelingPhII\Misc\JTown Sewer Profiles (11-5-08).dwg PLOT DATE: November 06, 2008 - 10:39am

Appendix A
Treatment Plants

Report Selections: Service Status: I, Owner: MSD, Sorted By: Owner, Treatment Plant Name

Treatment Plant	Address	Zip	Facility No	Regional or Small	KPDES	Map No	Capacity (MGD)	Secondary Treatment	Disinfection	Pretreatment Program
BANCROFT	7610 OLD ORCHARD CIR	40222	MSD0290	STP	KY0039021	MAK22-E	0.080	Package Plant	Chlorine	No
BERRYTOWN	1203 HEAFER RD	40223	MSD0209	STP	KY0036501	MAK24-H	0.075	Package Plant	Chlorine	No
CEDAR CREEK	8605 CEDAR CREEK RD	40291	MSD0289	Regional	KY0098540	MAO22-B	7.500	Oxidation Ditch	Ultraviolet	No
CHENOWETH HILLS	4305 ST RENE CT	40299	MSD0263	STP	KY0029459	MAM23-H	0.200	Package Plant	Chlorine	No
FLOYDS FORK	1100 BLUE HERON RD	40245	MSD0294	Regional	KY0102784	MAL25-H	3.250	Oxidation Ditch	Ultraviolet	No
GLENVIEW BLUFF	3714 GLEN BLUFF RD	40222	MSD0207	STP	KY0044261	MAJ21-H	0.010	Package Plant	Chlorine	No
HITE CREEK	5500 HITT RD	40241	MSD0202	Regional	KY0022420	MAJ23-F	6.000	Extended Areation	Ultraviolet	Yes
HUNTING CREEK NORTH	7300 SHADWELL LN	40059	MSD0291	STP	KY0029106	MAJ22-A	0.358	Extended Areation	Chlorine	No
HUNTING CREEK SOUTH	6530 MONTERO DR	40059	MSD0292	STP	KY0029114	MAJ22-B	0.251	Lagoon	Chlorine	No
JEFFERSONTOWN	10725 OLD TAYLORSVILLE RD	40299	MSD0255	Regional	KY0025194	MAM23-F	4.000	Extended Areation	Ultraviolet	Yes
KEN CARLA	8701 LYNNHALL CT	40059	MSD0208	STP	KY0022497	MAJ22-C	0.010	Package Plant	Chlorine	No
LAKE FOREST/BECKLEY WOODS	14000 BECKLEY TRCE	40245	MSD0403	STP	KY0042226	MAL25-C	0.470	Package Plant	Chlorine	No
LAKE OF THE WOODS	11006 WALBRIDGE CT	40299	MSD0251	STP	KY0044342	MAN23-D	0.044	Lagoon	Chlorine	No
MCNEELY LAKE	10300 ROD N REEL RD	40229	MSD0228	STP	KY0029416	MAO21-F	0.205	Package Plant	Chlorine	No
MORRIS FORMAN	4522 ALGONQUIN PKY	40211	MSD0278	Regional	KY0022411	MAL17-E	120.000	Pure Oxygen	Hypochorite	Yes
SHADOW WOOD	5489 FOREST LAKE DR	40059	MSD0707	STP	KY0031810	MAJ22-C	0.085	Package Plant	Chlorine	No
SILVER HEIGHTS	9412 SLAYTON CT	40229	MSD0258	STP	KY0028801	MAO20-C	0.500	Package Plant	Chlorine	No
STARVIEW	423 BERMUDA WAY	40243	MSD0247	STP	KY0031712	MAL24-C	0.100	Package Plant	Chlorine	No
TIMBERLAKE	5504 TIMBER RIDGE DR	40059	MSD0293	STP	KY0043087	MAJ22-C	0.200	Package Plant	Chlorine	No
WEST COUNTY	11621 LOWER RIVER RD	40272	MSD0277	Regional	KY0078956	MAO15-H	30.000	Contact Stabilization	Hypochorite	Yes
YORKTOWN	7418 YORKTOWN RD	40214	MSD0271	STP	KY0036323	MAN18-H	0.150	Package Plant	Chlorine	No