

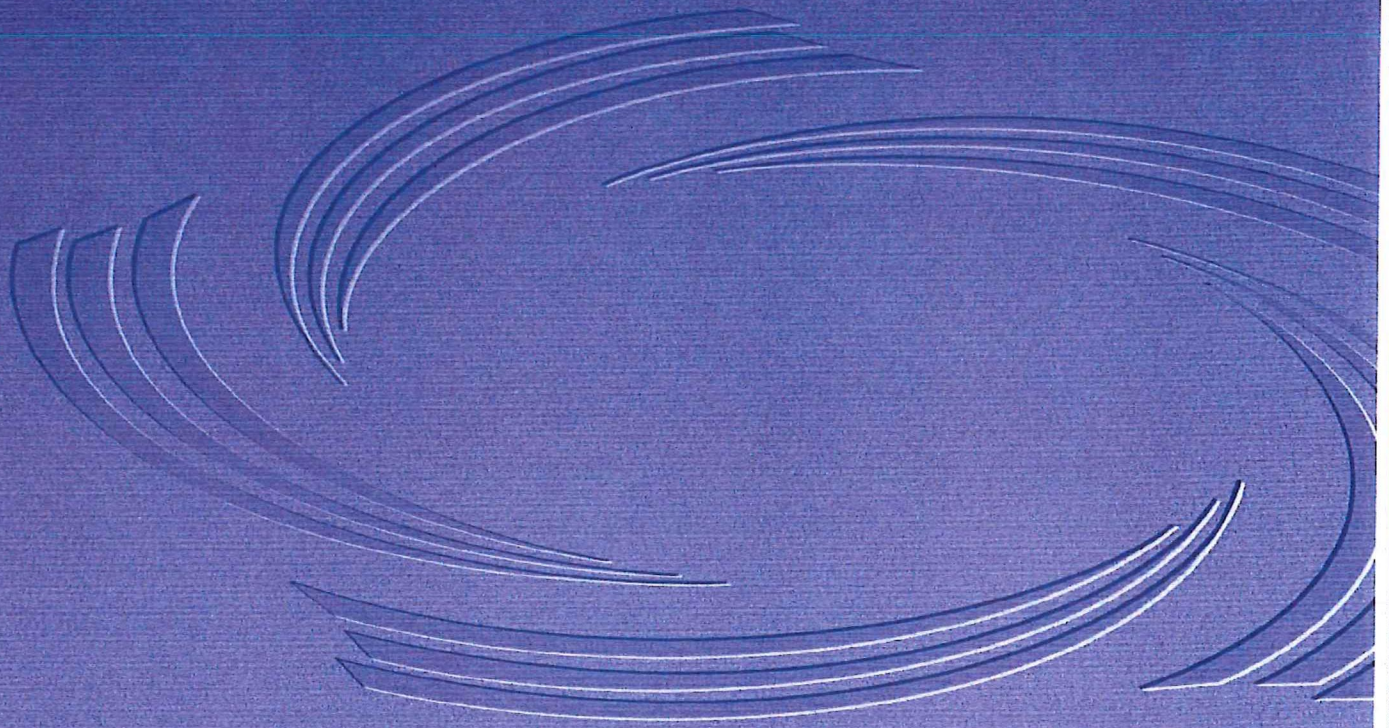


**MSD**

Louisville and Jefferson County  
Metropolitan Sewer District

# Sewer Overflow Response Protocol

May 12, 2006





## **TABLE OF CONTENTS**

### **SECTION 1: INTRODUCTION AND OVERVIEW**

- 1.1 Purpose
- 1.2 Definitions

### **SECTION 2: SYSTEM AND ORGANIZATIONAL FRAMEWORK**

- 2.1 MSD Wastewater Collection, Transmission and Treatment System
  - 2.1.1 Collection System
  - 2.1.2 Transmission and Treatment System
- 2.2 MSD Functional Structure and Resources for SORP Implementation
  - 2.2.1 Resources for Customer Inquiries and Notifications
  - 2.2.2 Resources for Dispatching Work
  - 2.2.3 Resources for Response to Discharges
  - 2.2.4 Resources for Public Notification and Awareness
  - 2.2.5 Resources for Overflow Documentation and Regulatory Reporting
- 2.3 Information Management Systems
  - 2.3.1 Hansen Information Management System (Hansen)
  - 2.3.2 Louisville/Jefferson County Information Consortium (LOJIC)
  - 2.3.3 SAP
  - 2.3.4 Rain Gauge Network
  - 2.3.5 Supervisory Control and Data Acquisition (SCADA)

### **SECTION 3: SEWER OVERFLOW RESPONSE PROTOCOL (SORP) PROCEDURES**

- 3.1 Preparation for Wet weather Events
  - 3.1.1 Monitoring for Wet Weather
  - 3.1.2 Staging Resources
  - 3.1.3 Performing Wet Weather Reconnaissance
- 3.2 Response to Overflows
  - 3.2.1 Mobilizing for Response to Overflow
  - 3.2.2 Assessing the Overflow
    - 3.2.2.1 Assessing the Overflow Cause
    - 3.2.2.2 Assessing the Overflow Extent
    - 3.2.2.3 Assessing the Overflow Impact
    - 3.2.2.4 Assessing the Presence of Hazardous Materials
  - 3.2.3 Establishing a Control Zone
  - 3.2.4 Notifying the Public
    - 3.2.4.1 Event-based Notification Activities
    - 3.2.4.2 Programmatic Educational Activities
  - 3.2.5 Mitigating the Overflow
    - 3.2.5.1 Minimizing the Overflow Impacts
    - 3.2.5.2 Correcting the Overflow Cause
  - 3.2.6 Cleaning the Affected Areas
- 3.3 Overflow Documentation, Reporting and Monitoring
  - 3.3.1 Field Documentation and Volume Estimation
  - 3.3.2 Regulatory Reporting
    - 3.3.2.1 Initial Discharge Report (IDR)
    - 3.3.2.2 Monthly Discharge Reporting
    - 3.3.2.3 Quarterly and Annual Updates

- 3.3.3 Status and Monitoring of Overflows
- 3.3.4 Data Retention and Trending

**SECTION 4: UPDATE, AVAILABILITY AND TRAINING**

- 4.1 Review and Updates to the SORP
  - 4.1.1 Responsibility
  - 4.1.2 Scope
- 4.2 Distribution and Availability of SORP
- 4.3 Training
  - 4.3.1 Schedule for Training
  - 4.3.2 Training Modules
  - 4.3.3 Trainer's Guide

**SECTION 5: APPENDICES: SUPPORTING INFORMATION**

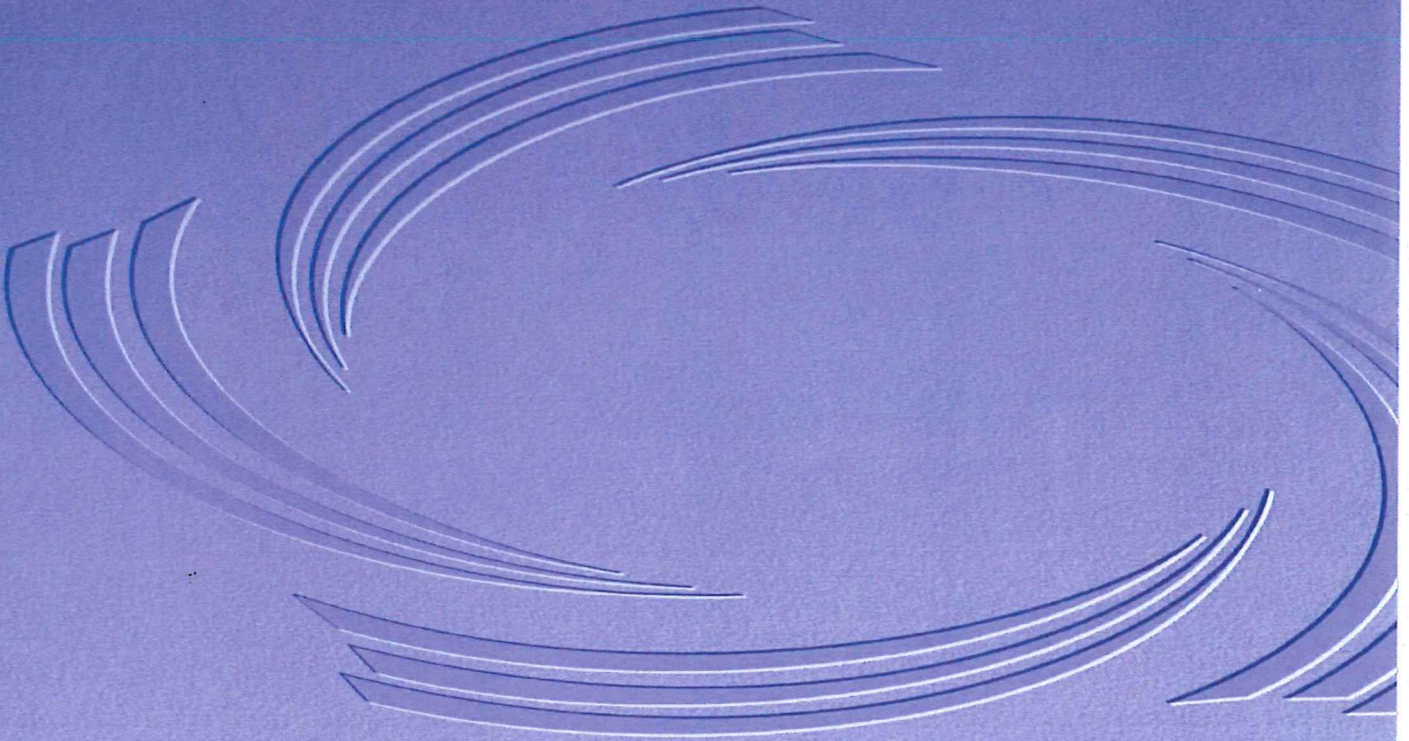
- A. MSD Collection, Transmission and Treatment System
  - 1. MSD KPDES Permitted Wastewater Treatment Plants
  - 2. Map of Collection and Transmission System Components
- B. MSD Organizational Chart
- C. Hansen Procedures for Entering a Customer Service Request (CSR) and Tracking and Reporting Discharges
- D. Overflow Notification Signage (Temporary)
- E. Volume Estimation Guide





**MSD**

Louisville and Jefferson County  
Metropolitan Sewer District





## **SECTION 1: INTRODUCTION AND OVERVIEW**

### **1.1 Purpose**

The Consent Decree, signed into effect on August 12, 2006, requires that MSD develop a Sewer Overflow Response Protocol (SORP), which complies with 401 KAR 5:015, for review and approval by EPA and DOW. The purpose of this SORP is to provide guidance to Louisville and Jefferson County Metropolitan Sewer District (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 DOW and EPA; and
- Provide notification to potentially impacted members of the public.

### **1.2 Definitions**

This section defines the commonly used terms and acronyms used in the SORP.

**Combined Sewer System (CSS)** A sewer system in which a common pipe collects both sewage and stormwater.

**Combined Sewer Overflow (CSO)** An overflow from a permitted outfall identified as a combined sewer overflow or CSO in MSD's Morris Forman Wastewater Treatment Plant KPDES permit.

- Dry Weather CSO - An overflow from a permitted outfall identified as a combined sewer overflow or CSO in MSD's Morris Forman Wastewater Treatment Plant 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 Wastewater Treatment Plant KPDES permit that is the result of a wet weather event.

**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 Environmental and Public Protection Cabinet Department for Environmental Protection - Division of Water (DOW)** Agency responsible for administering KPDES permits and receiving permit-related reports.

**Kentucky Pollutant Discharge Elimination System (KPDES)** A permitting system established under Section 402 of the Clean Water Act. Permits are issued by the state of Kentucky Environmental and Public Protection Cabinet Department for Environmental Protection - Division of Water (DOW) under authorization from EPA for discharges into the Waters of the United States.

**Louisville and Jefferson County Metropolitan Sewer District (MSD)** The 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 discharge.

**Overflow** Any release of wastewater from MSD's sanitary or combined sewer system at locations not specified in any KPDES permit. This includes any Unauthorized Discharge and releases to public or private property that do not reach Waters of the United States, such as basement backups. However, wastewater backups into buildings that are caused by blockages, flow conditions, or malfunctions in a building lateral, other piping or conveyance system that is not owned or operationally controlled by MSD are not overflows for the purposes of this SORP.

**Property Service Connection (PSC)** The portion of a sewer lateral that is within an easement or right of way.

**(Separate) Sanitary Sewer System (SSS)** A sanitary sewer system which is designed to collect and convey sewage to a wastewater treatment plant.

**Unauthorized Discharge** any release of wastewater to Waters of the United States from MSD'S SSS or CSS at locations not specified in any KPDES permit.

**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.

**Waters of the United States** 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 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.

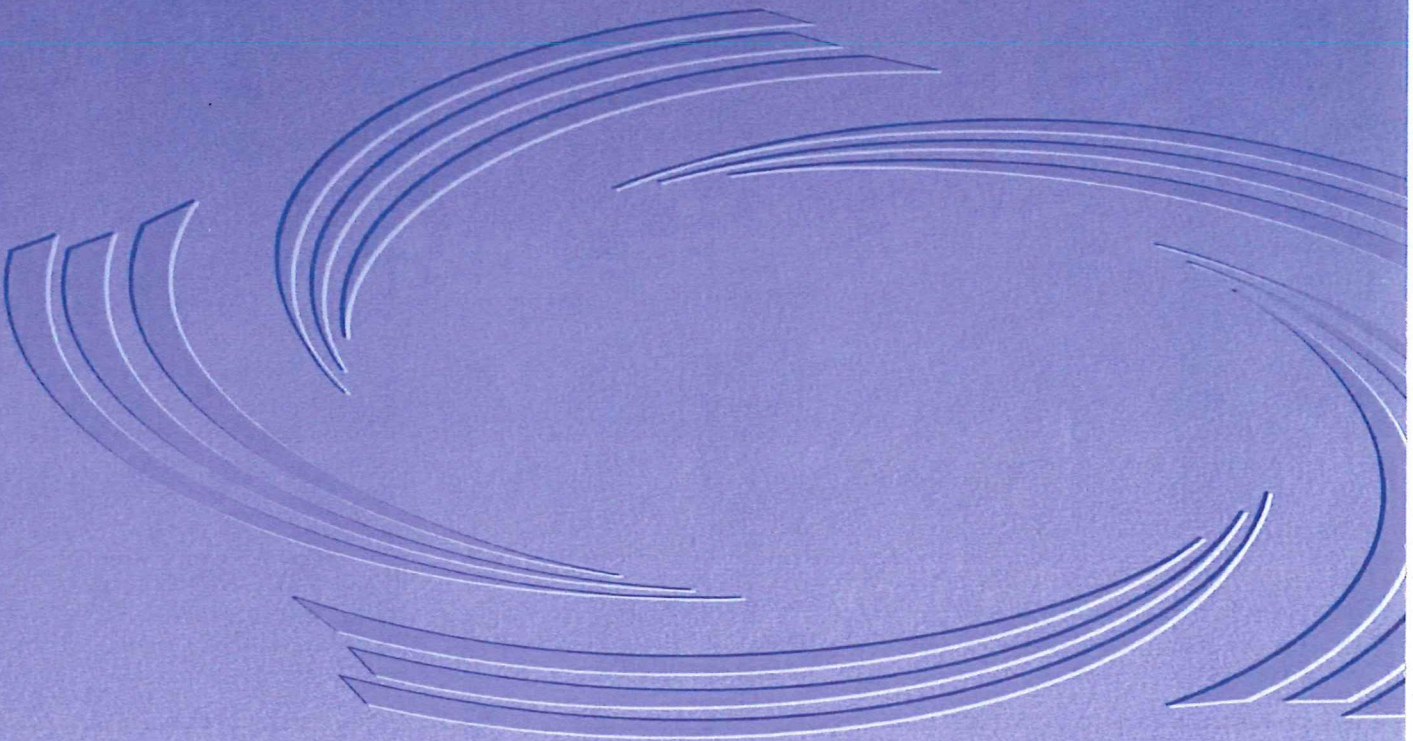
\*\* The regulations exclude waste treatment systems, manmade ponds, and prior converted cropland from the definition of "Waters of the US." With respect to prior converted cropland, EPA maintains jurisdiction for purposes of the Clean Water Act.





**MSD**

Louisville and Jefferson County  
Metropolitan Sewer District





## **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:

- 3,100 miles of sewer lines (gravity and force main)
- 65,000 manholes
- 64,200 catch basins
- 275 pump stations
- 6 regional wastewater treatment plants
- 19 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 POTW before being discharged to the Waters of the United States. The collection and transmission system includes over 275 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 DOW under the 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 CSS and 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 Wastewater Treatment Plants 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 nine 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, Operations, Infrastructure and Flood Protection (I&FP), Regulatory Management Services (RMS), 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.

This organizational structure of MSD is designed to provide prompt response to and mitigation of overflows. First responders are primarily drawn from three areas: I&FP, the Metro Operations (MO) department of the Operations Division, and RMS. Generally, collection system and flood pump station assets are addressed by I&FP, treatment plant and sanitary pump station assets are monitored by MO and established wet weather routes are handled by RMS. In addition, personnel are available from other divisions to support the response and mitigation efforts.



The RMS 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 available 7 days per week, 24 hours per day to receive customer inquiries which are designed as Customer Service Requests (CSR). Customers may call MSD's Customer Relations Call Center (CRCC) directly or submit inquiries using the Internet. 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 to dispatch work for activities within their respective areas of responsibility. The I&FP Dispatch Center includes personnel responsible for routing work during normal working hours 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 pumping stations remotely from the Morris Forman Wastewater Treatment Plant (MFWTP) Process Computer Center (PCC) 7 days per week, 24 hours per day. Both SCADA and telemetry are used for remote data transmission monitoring and control. Personnel are dispatched to a facility at which telemetry indicates a problem condition.

### **2.2.3 Resources for Response to Overflows**

The three areas primarily responsible for investigating and mitigating overflows are MO, I&FP and RMS. 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 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 including more detailed and targeted information on MSD's web site and a system that utilizes the community's E911 or similar system that will automatically notify potentially impacted members of the public by telephone.

### **2.2.5 Resources for Overflow Documentation and Regulatory Reporting**

RMS, I&FP and MO personnel are tasked with documenting information associated with overflows in the Hansen Information Management System (Hansen), as well as ensuring that pertinent information regarding unauthorized discharges is reported to DOW. When feasible, technologies are utilized to optimize the reporting process.



pertinent information regarding unauthorized discharges is reported to DOW. When feasible, technologies are utilized to optimize the reporting process.

### **2.3 Information Management Systems**

MSD utilizes a diverse array of data and communication technologies on a day-to-day basis. Technologies employed range from relatively low tech hand-held radios to sophisticated telemetered systems. In addition, MSD accesses the National Oceanic Atmospheric Administration's National Weather Service to anticipate and prepare for wet weather events.

Information is transmitted to the PCC and received real-time from the field, through a diverse array of technology. Information is transmitted from various field locations such as treatment plants, pump stations, detention basins, flow regulators, gate structures, manholes and other strategic points in the collection system and some locations are equipped with remote reset capability. Atmospheric monitoring of the system using Oxygen, Lower Explosivity Level (LEL) and hydrogen sulfide is also provided, to achieve safe operation. Hydraulic control and in-line storage to maximize the capacity of the system occurs using a closed loop control technology and is supervised by trained personnel. The treatment plants and pump stations are monitored by Metro Operations and maintenance of the gravity collection system is performed by I&FP personnel.

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 the system used by MSD to record, track and report information concerning MSD assets. Hansen is used to enter CSRs 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; and, it is integrated with the LOJIC Geographic Information System (GIS) to allow users to access a graphical view of assets.

#### **2.3.2 Louisville/Jefferson County Information Consortium (LOJIC)**

The Louisville/Jefferson County Information Consortium (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 200 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. Over 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. A twelve-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.

### **2.3.3 SAP**

SAP is an enterprise resource planning product used by MSD for day-to-day financial, human resources and inventory activities. In addition, MSD uses SAP to initiate work requests of an emergency, corrective or preventive nature at pump stations and treatment plants. 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.

### **2.3.4 Rain Gauge Network**

MSD personnel utilize the rain gauge network to track the progress of 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 system serves two primary functions. First, it is used to calibrate MSD's OneRain rainfall prediction application along with NEXRAD 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. The rain gauge network provides geographical coverage of Metro Louisville and Southern Indiana.

Rainfall conditions are continuously telemetered to MSD's central computer 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 and is displayed in inches per hour detected by 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 can be queried from the database for each of the gauging stations.

This network provides real time rainfall and prediction tools from 5 minutes to 24 hours 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.

### **2.3.5 Supervisory Control and Data Acquisition (SCADA)**

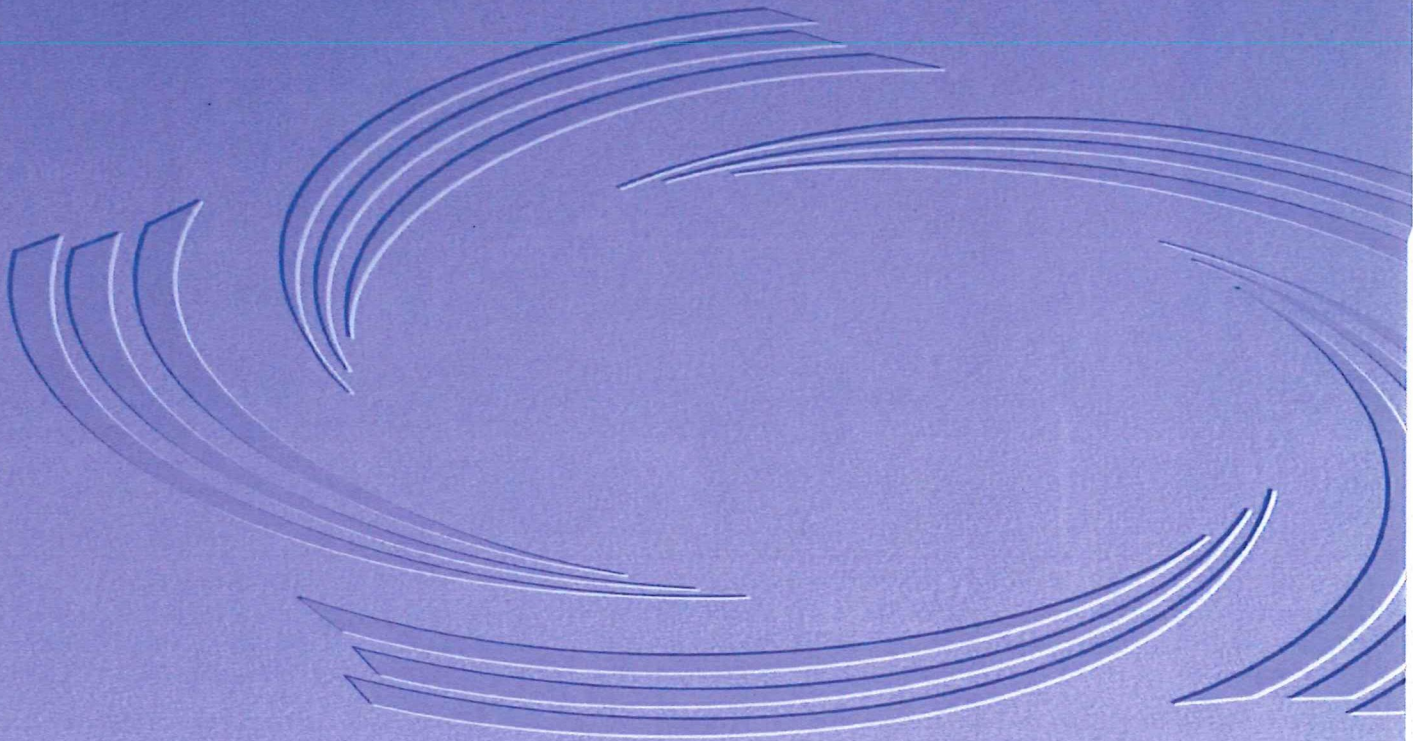
SCADA is a process control application that collects data from sensors within the collection system, pump stations, and treatment facilities, and transfers it to a central computer for management and control. The system compares wastewater treatment plant and collection system conditions against established set points. Adjustments are made according to preset routines in order to achieve optimal operating conditions. The components of the SCADA system transmit and receive the data using FM radio networks, cellular dialup, and other data highway and transmission systems.





**MSD**

Louisville and Jefferson County  
Metropolitan Sewer District





### **SECTION 3: Sewer Overflow Response Protocol (SORP) Procedures**

These procedures outline the process for responding to and mitigating 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 inspect for and report overflows 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 and/or 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 to observe conditions at pump 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 found in Appendix C. 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](http://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 Preparation for Wet Weather Events**

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 Manager – Operations (SM-O) (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 / 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 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 the Metro Louisville area.

MSD also utilizes weather predictions from the National Weather Service and 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 reduce overflow impacts. When inclement weather is forecast, 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 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 and transports it 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. Pump stations are monitored by Operations staff based on information obtained via telemetry or notification from the MSD Process Control Center. Manholes or other sites within the collection system are monitored by the Wet Weather Discharge Reconnaissance Team (WWDRT) along routes established and activated by the Engineering Field Supervisor, or his/her designee.

Upon establishment and activation of a route, the assigned WWDRT team member proceeds directly to their designated route and proceeds to perform reconnaissance activities. Once a route is completed, 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.

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

MSD is in the process of expanding the database of overflow information and enhancing the process utilized to establish the routes. This process will be expanded within the first year of



implementation of the SORP to include enhanced SSO Fact Sheets and more data, such as information related to the historical event(s) that caused the overflow(s). The SSO Fact Sheets, previously submitted in the Sanitary Sewer Overflow Plan Update, will be updated to include additional information regarding the tributary sewer area and the potential impact area. Additionally, information from the SORP and CMOM activities will be utilized to review the process on an annual basis to determine if the procedure should be updated. If it is determined that an update is required, the revised procedure will be incorporated into the SORP and submitted to EPA and DOW for approval.

### **3.2 Response to Overflows**

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 and the guidance contained in the SORP Field 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 investigate, minimize/contain and mitigate the discharge, as described in Section 3.2.5. After the site is evaluated, additional resources are deployed as necessary.

Work orders are initiated in Hansen and SAP to document response activities and perform necessary repairs or clean up actions resulting from the overflow. I&FP Dispatch, Customer Relations Department and Morris Forman Wastewater Treatment Plant (MFWTP) Process Control Center (PCC) personnel serve as communication resources to field personnel during a response situation. Field personnel relay information to the respective areas concerning the status of discharges, as well as requests for additional resources to mitigate the overflow.

MSD uses GPS technology to coordinate the dispatch of critical equipment to locations where a response is required. MSD vacuators, 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 Assessing the Overflow**

Upon arrival to the suspected overflow location, MSD personnel will assess the situation to verify that an overflow has occurred. Personnel will verify the overflow by locating its origin or source. When appropriate, response personnel may take photographs of the overflow area in order to thoroughly document the nature and extent of its impact. Photos will be linked to Hansen work orders.

##### **3.2.2.1 Assessing the Overflow Cause**

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 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. Refer to Table 3.1 and the SORP Field Procedures Manual for additional information regarding these activities.

### **3.2.2.2 Assessing the Overflow Extent**

In order to properly initiate control zone setup, public notification, overflow mitigation and cleanup activities, it is first necessary to determine 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, into Waters of the United States, or into a building/basement. 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. Refer to Table 3.1 and the SORP Field Procedures Manual for additional information regarding these activities.

### **3.2.2.3 Assessing the Overflow Impact**

Along with determining the extent, it is necessary to also determine the impacts of the overflow. These impacts, determined through visual observation, 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. Refer to Table 3.1 and the SORP Field Procedures Manual for additional information regarding these activities.

### **3.2.2.4 Assessing the Presence of Hazardous Materials**

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

If response personnel suspect the presence or release of hazardous materials, they shall immediately notify the Louisville Metro Fire Service by calling 911. Louisville Metro Fire & EMS and Metro Health Department personnel will respond to the incident and dictate the resultant protocol to be followed.

If an oily sheen, hydrocarbon odor or strange color is found in an overflow, the responder will immediately contact Dispatch/CRD/MFWTP Process Computer Center 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.

### **3.2.3 Establishing A Control Zone**

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 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 completion of clean-up activities.

MSD has adopted a standard sign to be used for control zone delineation. The sign requests that the public temporarily avoid contact with the area, and provides contact information for the public for any



comments or questions. Refer to Table 3.1 and the SORP Field Procedures Manual for additional information regarding these activities.

### **3.2.4 Notifying the Public**

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. Refer to Table 3.1 and the SORP Field Procedures Manual for additional information regarding these activities.

MSD continually seeks to enhance the public notification and awareness program. In addition to the notification methods described below, MSD will evaluate several additional options over the upcoming year. For example, MSD is evaluating the feasibility and reliability of utilizing the community's E911 system to contact by telephone, homes, schools and businesses that may be impacted by an overflow event. Radio public service announcements, press releases and news briefings can be utilized to provide a community-wide warning of potential overflows. Partnerships with newspaper and television news channels will be pursued for the possibility of utilizing their websites to provide yet another avenue for communication to the public.

#### **3.2.4.1 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 will be replaced with an enhanced warning message written in English, as well as in Spanish, by October 31, 2006.

Temporary signs are used by response personnel to provide immediate notification of a potential health threat. They are bilingual 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. Refer to Appendix D for a copy of the temporary notification sign.

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.

#### **3.2.4.2 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 has utilized these mechanisms in the past.



However, a more strategic approach needs to be developed. MSD will enhance related program efforts over the upcoming year.

Newsletters, billing inserts and other pamphlets will be enhanced to include such information as the locations of overflows across the service area, the potential public health issues associated with overflows, information on how to minimize the risks of human contact, the current program initiatives aimed at reducing overflows and the role individual customers can assume to help minimize overflows. Additionally, the identification of target audiences, the frequency of the communications and the various messages to be conveyed will be utilized to formalize this programmatic element.

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 will be 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 website is another resource for the public to gain information regarding the community's overflow abatement program. The website will be enhanced to provide both general and area-specific details. MSD's website could be enhanced to post specific warnings and alerts to instruct homeowners about specific issues relative to the neighborhood. MSD will initiate a listserve to allow interested individuals to receive timely information and notification of overflow issues.

To provide additional information in sensitive areas around the community, MSD will perform an analysis of recurring 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 larger numbers. The intent is to develop interpretive signage for permanent placing at these critical locations.

### **3.2.5 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. Refer to Table 3.1 and the SORP Field Procedures Manual for additional information regarding these activities.

#### **3.2.5.1 Minimizing the Overflow Impacts**

After the control zone has been established and the public notification completed, 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 access into 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 can be utilized in the event of a power failure at pump stations to prevent or minimize overflows.

### **3.2.5.2 Correcting the Overflow Cause**

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 pump station or treatment plant equipment. These occurrences can be 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, a sewer line or force main can be repaired and mechanical or electrical problems at a pump station or treatment plant can be corrected.



MSD, as a steward of the environment, makes containment of overflows 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 first containing it. Under those circumstances, MSD is not responsible for mitigation and cleanup of overflows due to private property issues.

### **3.2.6 Cleaning the Affected Areas**

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 clean up 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 has been removed the area is disinfected with lime to kill any remaining bacteria.

MSD recognizes that while an overflow during a rain event may appear to be limited in scope and residual impact, that is largely due to the magnitude of flow in streams, creeks and drainage channels that are flowing at capacity. The bacterial loading during these periods increases, 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 as efficiently as possible.

Refer to Table 3.1 and the SORP Field Procedures Manual for additional information regarding these activities.

## **3.3 Overflow Documentation, Reporting and Monitoring**

The collection 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 pump stations since MSD utilizes it to make decisions about response and abatement strategies.

### **3.3.1 Field Documentation and Volume Estimation**

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 order must be initiated in Hansen within 10 hours of verification that an overflow occurred. This protocol is necessary to ensure transmission of data pertaining to unauthorized discharges to DOW within the required timeframe.

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.



### **3.3.2 Regulatory Reporting**

The reporting requirements for unauthorized discharges are defined in 401 KAR 5:015. This section details the means and methods by which MSD will report unauthorized discharges and submit overflow information to the DOW 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 DOW. The IDR will contain information as required by 401 KAR 5:015. The IDR will be sent to Michael S. Mudd, District Supervisor, Kentucky Division of Water, Louisville Regional Office at the following email address: Mike.Mudd@Ky.org

The following information will be provided in the IDR:

- Location of unauthorized discharge
- Start date and time
- Stop date and time, if discharge terminated
- Estimated volume, if known
- Impact, if known

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

#### **3.3.2.2 Monthly Discharge Reporting**

MSD includes a summary of unauthorized discharges occurring within a given sewershed with the respective wastewater treatment plant Discharge Monitoring Report (DMR). The monthly discharge report covers the same timeframe as the respective DMR and is sent to:

David Morgan, Director  
Environmental and Public Protection Cabinet  
Division of Water  
14 Reilly Road  
Frankfort, KY 40601

Michael S. Mudd  
District Supervisor, Kentucky Division of Water  
Louisville Regional Office  
9116 Leesgate Road  
Louisville, KY 40222-5084

The following information is stored within Hansen and reported to DOW:

- 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

### **3.3.2.3 Quarterly and Annual Updates**

MSD will submit a summary of unauthorized discharges to EPA and DOW each quarter, as well as on an annual basis. Overflow information will be provided to EPA and DOW in the Consent Decree Annual Report. These reports are sent to:

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

Ms. Susan R. Green  
Director, Division of Enforcement  
Department of Environmental Protection  
14 Reilly Road  
Frankfort, KY 40601

### **3.3.3 Status and Monitoring of Overflows**

MSD tracks the status of overflow occurrences on assets such as manholes, sewer lines, and pump stations in Hansen and utilizes the information to make decisions about response and abatement strategies.

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 therefore, 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 an overflow was witnessed by MSD. These 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;
- **D – Documented:** an overflow was observed by MSD staff on one or more occasions. Monitoring will be established based on the cause of the overflow and will continue to be monitored until the status dictates otherwise. For example, capacity related overflows will be monitored in accordance with the Wet Weather Reconnaissance activities outline in this document, while a pump station with telemetry and an overflow caused by mechanical failure will be monitored through the telemetry system and periodic site visits;
- **R – Repaired:** the cause of the overflow has been repaired and was due to situations such as structural defects, unusual obstructions and accidents beyond MSD's control. The chance of reoccurrence at these locations is minimal; therefore, monitoring will not be performed; and
- **E - Eliminated:** the cause of the overflow has been corrected by situations such removing capacity restrictions; building relief sewers or storage basins; performing



management, operations and maintenance (MOM) activities; or, providing alternative power solutions. These locations will be monitored for 3 years by MSD.

#### **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 pump 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.



**Table 3.1 Response To Overflows Matrix**

Overflow Locations and Probability of Human Contact	Potential Overflow Causes	Extent of Overflow Impact Possibilities	Type of Overflow Impact	Control Zone Options	Event-Based Public Notification	Overflow Mitigation Options	Potential Cleanup Options
<b>Main Sewer &amp; Appurtenances – High Probability</b>	Obstruction Structural failure Wet weather surcharge	Soil/Pavement Basement backup Waters of the U.S.	Sewer solids/debris Property damage Fish kill	Barricades/cones Caution tape Traffic control signage	Permanent signage Temporary signage Door hangers Radio public service announcement	Containment Filtration Flow Diversion Pump and Haul	Rake debris Line disinfection Vactor removal Wash down area
<b>Main Sewer &amp; Appurtenances – Low Probability</b>	Obstruction Structural failure	Soil/Pavement	Sewer solids/debris	Barricades/cones Caution tape Traffic control signage	Permanent signage Temporary signage Door hangers	Containment Filtration Flow Diversion Pump and Haul	Rake debris Line disinfection Vactor removal Wash down area
<b>Pump Stations &amp; Wastewater Treatment Plants – High Probability</b>	Mechanical/ Electrical failure Power Failure Obstruction Structural failure Wet weather surcharge	Soil/Pavement Basement backup Waters of the U.S.	Sewer solids/debris Property damage Fish kill	Barricades/cones Caution tape Traffic control signage	Permanent signage Temporary signage Door hangers Radio public service announcement	Containment Filtration Flow Diversion Pump and Haul Portable Generator	Rake debris Line disinfection Vactor removal Wash down area
<b>Pump Stations &amp; Wastewater Treatment Plants – Low Probability</b>	Mechanical/ Electrical failure Power Failure Obstruction Structural failure Wet weather surcharge	Soil/Pavement	Sewer solids/debris	Barricades/cones Caution tape Traffic control signage	Permanent signage Temporary signage Door hangers	Containment Filtration Flow Diversion Pump and Haul Portable Generator	Rake debris Line disinfection Vactor removal Wash down area
<b>Viaduct Surcharges within the Combined Sewer System – High Probability</b>	Wet weather surcharge Mechanical/ Electrical failure	Soil/Pavement	Sewer solids/debris	Recommend road closures to Louisville Metro Barricades/cones Caution tape Traffic control signage	Permanent signage	Containment	Rake debris Line disinfection Vactor removal Wash down area



**Table 3.1 Response To Overflows Matrix**

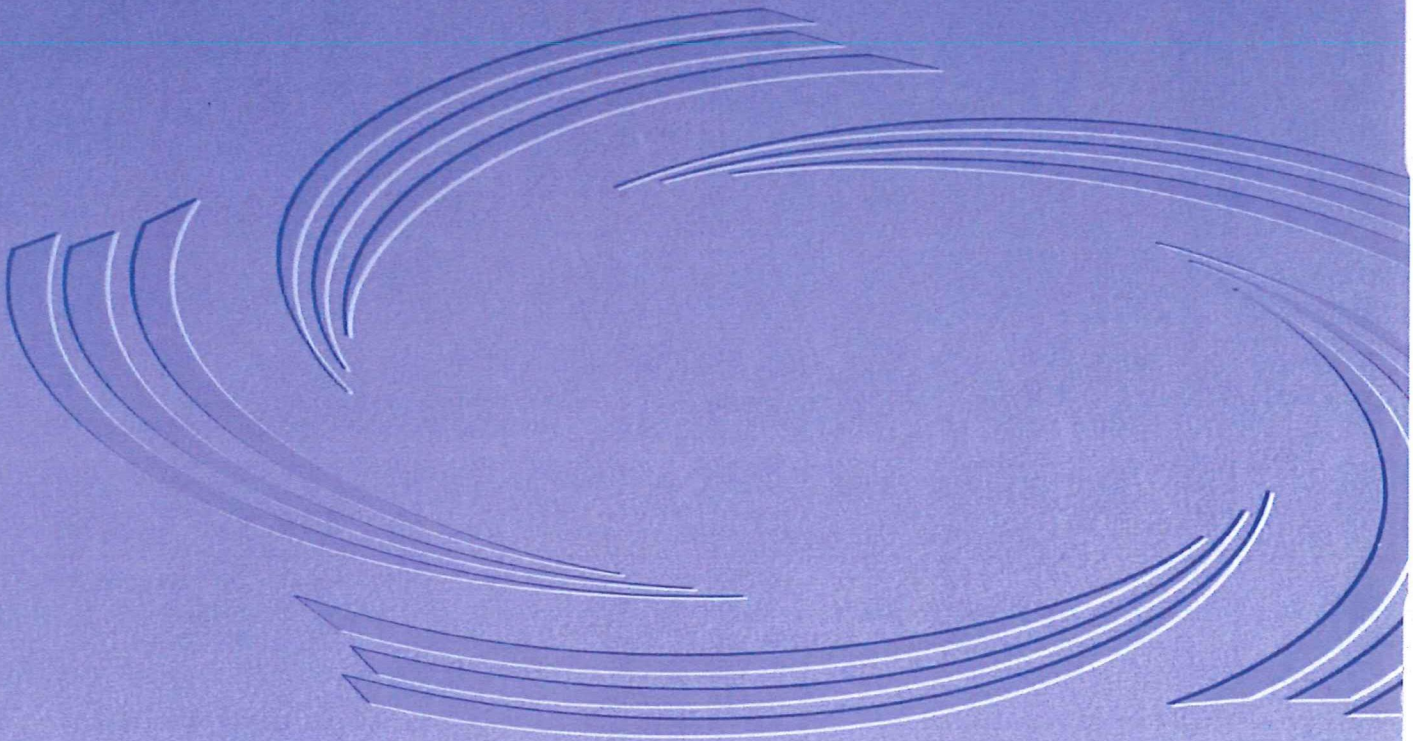
Overflow Locations and Probability of Human Contact	Potential Overflow Causes	Extent of Overflow Impact Possibilities	Type of Overflow Impact	Control Zone Options	Event-Based Public Notification	Overflow Mitigation Options	Potential Cleanup Options
<b>Basement Backup– High Probability</b>	Obstruction Structural failure Wet weather surcharge	Main sewer issue: into basement or building	Sewer solids/debris Property damage	Advise property owner to avoid or minimize contact	Direct communications with property owner Notify Metro Health Department	Flow Diversion Pump and Haul	MSD Contractor removes contaminated materials, cleans and disinfects area
	Private property lateral failure Private property illicit connection	Undetermined source: into basement or building	Sewer solids/debris Property damage	Advise property owner to avoid or minimize contact	Direct communications with property owner Notify Metro Health Department	Because this is a private property issue, MSD will advise the property owner to call a state licensed plumber	Advise Property Owner to clean up the area
<b>Property Service Connection (PSC) or Cleanout – Low Probability</b>	Obstruction Structural failure Wet weather surcharge Private property lateral failure Private property illicit connection	Soil/Pavement	Sewer solids/debris	Barricades/cones Caution tape	Direct communications with property owner Temporary signage Door hangers	Containment Filtration Flow Diversion	Rake debris Line disinfection Vector removal Wash down area





**MSD**

Louisville and Jefferson County  
Metropolitan Sewer District





## **SECTION 4: UPDATES, AVAILABILTY AND TRAINING**

### **4.1 Review and Updates to the SORP**

The SORP and associated procedures contained with this document are subjected to an annual review. The SORP will be amended as appropriate. Responsibilities and specific steps are defined below. In addition, in accordance with the Consent Decree, MSD will conduct a review of the SORP one year from the anniversary of the final approval date by EPA and DOW. Proposed changes will be submitted to EPA and DOW 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 area listed below is responsible for executing an annual, comprehensive review in their respective area(s) of responsibility.

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

#### **4.1.2 Scope**

RMS 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 RMS 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**

A master copy of the SORP is scanned into MSD's eB system and available to MSD personnel. In addition, pages or portions of the SORP that change as a result of the annual review/update process will be scanned into eB. Historical documents will be archived and only the most current version will remain available to MSD personnel.

### **4.3 Training**

MSD training department personnel supervise and administer the overall training program, with support from appropriate managers and supervisors. MSD is developing a comprehensive SORP training program to ensure that all MSD employees have an awareness level of knowledge regarding the purpose, objectives and scope of the SORP, as well as an understanding of the requirements for its execution. Awareness level training will be incorporated into MSD's New Employee Orientation process.

In addition, personnel directly involved in overflow response activities will receive more intensive training to ensure that they possess the appropriate level of knowledge, and or skills, required to comply with the SORP. Training modules will include confirmation of knowledge transfer, whether through tests, quizzes, or group activities. For those employees who are required to actively participate in any aspect of sewer overflow response, classroom training will be augmented with in field skills demonstrations. In addition, MSD will stage announced and unannounced sewer overflow response drills involving response and support personnel to further confirm confirmation of knowledge. Training activities and employee participation will be



documented in MSD's training department database and monitored to ensure that relevant employees receive training.

**4.3.1 Schedule for Training**

By December 31, 2006, MSD will develop the SORP training modules and complete the training for those employees involved in execution of the SORP. After this initial round of SORP training, employees involved in execution of SORP elements will receive refresher training annually, as well as following updates. Specifically, as the SORP is updated, and changes are approved by EPA and DOW per the August 12, 2006, Consent Decree, training content and activities will also be updated accordingly and personnel trained on the new modules. 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. The headings are often by MSD Division, however, this does not mean that all staff members will receive training.

<b>Training Module</b>	<b>Infrastructure and Flood Protection</b>	<b>Wastewater Operations</b>	<b>Regulatory Management</b>	<b>Customer Relations</b>	<b>Information</b>	<b>Area Teams</b>	<b>Legal</b>	<b>Executive Management</b>	<b>MSD Contractors</b>	<b>Community Groups (where applicable)</b>
SORP Overview	X	X	X	X	X	X	X	X	X	X
How MSD Becomes Aware of a Potential Overflow	X	X	X	X		X			X	
Mobilization of Resources	X	X	X	X		X				
Public Notification	X	X	X	X	X	X				
Initial Response	X	X	X	X		X				



<b>Training Module</b>	<b>Infrastructure and Flood Protection</b>	<b>Wastewater Operations</b>	<b>Regulatory Management</b>	<b>Customer Relations</b>	<b>Information</b>	<b>Area Teams</b>	<b>Legal</b>	<b>Executive Management</b>	<b>MSD Contractors</b>	<b>Community Groups (where applicable)</b>
Mitigation of Condition	X	X	X							
Field Documentation	X	X	X	X	X	X				
Clean-Up of Affected Areas	X	X	X							
Data Trending	X	X	X		X	X				

**4.3.3 Trainer's Guide**

As the SORP training materials and methods are developed, a "Trainer's Guide" will also be created. The purpose of the guide will be 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.

**Description of Training Modules**

**1. SORP Overview**

Objective: To summarize the policies and procedures governing MSD's SORP.

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 compliance with conditions of the August 12, 2005, Consent Decree;
- Key definitions (SSO, CSO, unauthorized discharge, overflow, etc);
- Regulations - provides an overview of the regulations requiring reporting of unauthorized discharges;
- A review of the key components of the SORP.



## **2. 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 participants to initiate field responses.

This module discusses:

- Identification of potential non-MSD informants, 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;
- Procedures to follow when an overflow is discovered by MSD personnel.

## **3. Mobilization of Resources**

Objective: To ready MSD operations personnel to respond to notification of a potential overflow, including dispatch to location to investigate, minimize and mitigate overflows when they occur.

This module discusses:

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

## **4. 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;
- Examples of notification methods/materials.

## **5. 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; the different types of overflows (wet weather, dry weather; CSO/SSO);
- 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 impacted area and how to determine the extent of the impacted area;
- The importance of accurate and consistent estimation techniques and calculations;
- How volumes are estimated;



- 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 on place, proper placement of control zones and components for maximum benefit;
- Different types of control zones may employ and suggested site specific control zones (barricades, cones, vehicles, caution tape, signage), as well as optimal placement in the control zone or relative to the control zone;
- How to determine resources required for mitigation and clean-up of the discharge location;

## **6. Mitigation of Condition**

Objective: To prepare MSD personnel to initiate and complete measures required to stop, and contain overflows of varying types in a manner that sustains continuous improvement of performance.

This module discusses:

- The definition and purpose of containment (of overflows), when and how to contain an overflow, 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;
- Resources required for containment, filtration and mitigation techniques.

## **7. Field Documentation**

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

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 defines the initial discharge report, monthly discharge report to DOW and quarterly and annual report to EPA and DOW;
- What information is required for the Initial Discharge Report and the importance of accurate and timely submittal of information to MSD personnel responsible for work order entry into Hansen.

## **8. 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.





**MSD**

Louisville and Jefferson County  
Metropolitan Sewer District

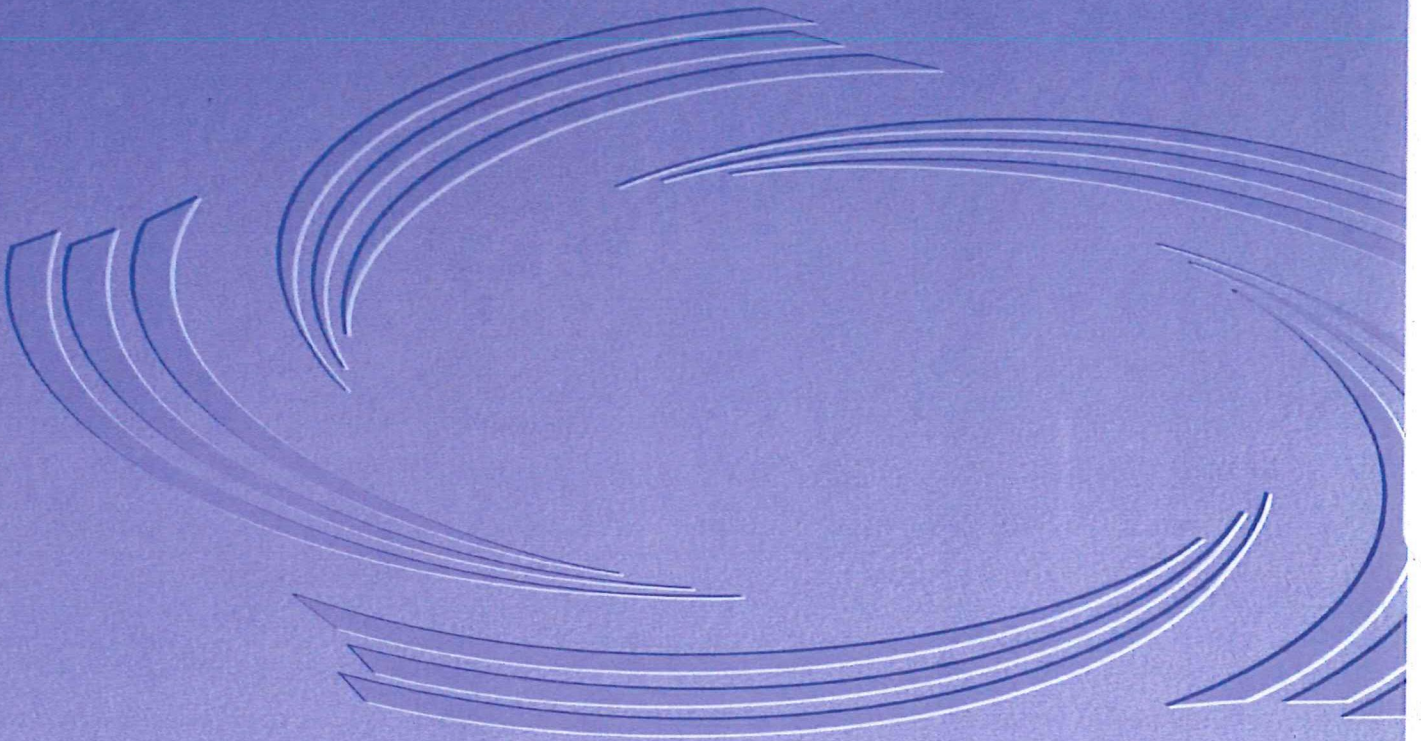
This module discusses:

- 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), proper disposal techniques/procedures, how to deal with odors, and safety concerns;
- MSD Claims Process for basement backups caused by MSD.



**MSD**

Louisville and Jefferson County  
Metropolitan Sewer District





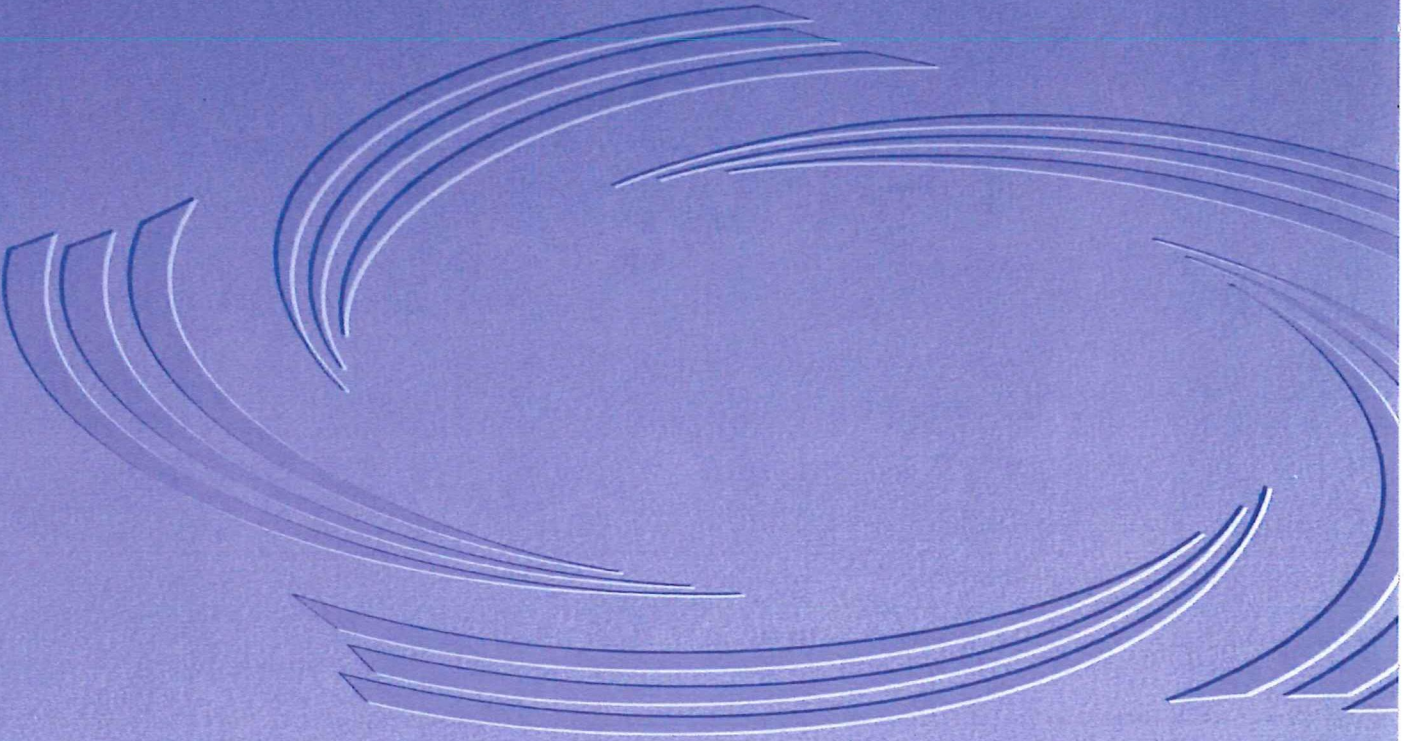
**SECTION 5: SUPPORTING INFORMATION – APPENDICES**

- 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. Hansen Procedures for Entering a Customer Service Request (CSR) and Tracking and Reporting Discharges
- D. Overflow Notification Signage (Temporary)
- E. Volume Estimation Guide



MSD

Louisville and Jefferson County  
Metropolitan Sewer District





# **APPENDIX A**

## **MSD COLLECTION, TRANSMISSION AND TREATMENT SYSTEM**

## MSD KPDES PERMITTED FACILITIES

PLANT NAME	KPDES NUMBER	REGIONAL OR SMALL (STP)	RATED CAPACITY (MGD)	TYPE OF SECONDARY TREATMENT	TYPE OF DISINFECTION	PRETREATMENT PROGRAM? (Yes/No)
MORRIS FORMAN	KY0022411	Regional	120.0	Pure Oxygen	Hypochlorite	Yes
WEST COUNTY	KY0078956	Regional	30.0	Contact Stabilization	Hypochlorite	Yes
FLOYDS FORK	KY0102784	Regional	3.25	Oxidation Ditch	Ultraviolet	No
HITE CREEK	KY0022420	Regional	4.4	Extended Aeration	Ultraviolet	Yes
JEFFERSONTOWN	KY0025194	Regional	4.0	Extended Aeration	Ultraviolet	Yes
CEDAR CREEK	KY0098540	Regional	7.50	Oxidation Ditch	Ultraviolet	No
BANCROFT	KY0039021	STP	0.080	Package Plant	Chlorine	No
BERRYTOWN	KY0036501	STP	0.075	Package Plant	Chlorine	No
GLENVIEW ACRES	KY0022462	STP	0.012	Package Plant	Chlorine	No
GLENVIEW BLUFF	KY0044261	STP	0.010	Package Plant	Chlorine	No
HUNTING CREEK SOUTH	KY0029114	STP	0.251	Lagoon	Chlorine	No
KEN CARLA	KY0022497	STP	0.010	Package Plant	Chlorine	No
KY CORR FOR WOMEN <sup>1</sup>	KY0039004	STP	0.125	Package Plant	Chlorine	No
NORTH HUNTING CREEK	KY0029106	STP	0.358	Extended aeration	Chlorine	No
POLO FIELDS	KY0093441	STP	0.125	Oxidation Ditch	Ultraviolet	No
STARVIEW	KY0031712	STP	0.100	Package Plant	Chlorine	No
TIMBERLAKE	KY0043087	STP	0.150	Package Plant	Chlorine	No
SHADOW WOOD <sup>1</sup>	KY0031810	STP	0.085	Package Plant	Chlorine	No
BECKLEY STATION	KY0042226	STP	0.470	Package Plant	Chlorine	No
CHENOWETH HILLS	KY0029459	STP	0.200	Package Plant	Chlorine	No
LAKE OF THE WOODS	KY0044342	STP	0.044	Lagoon	Chlorine	No
MCNEELY LAKE	KY0029416	STP	0.205	Package Plant	Chlorine	No
SILVER HEIGHTS	KY0028801	STP	0.500	Package Plant	Chlorine	No
WATTERSON WOODS <sup>1</sup>	KY0035211	STP	0.343	Package Plant	Chlorine	No
YORKTOWN	KY0036323	STP	0.150	Package Plant	Chlorine	No

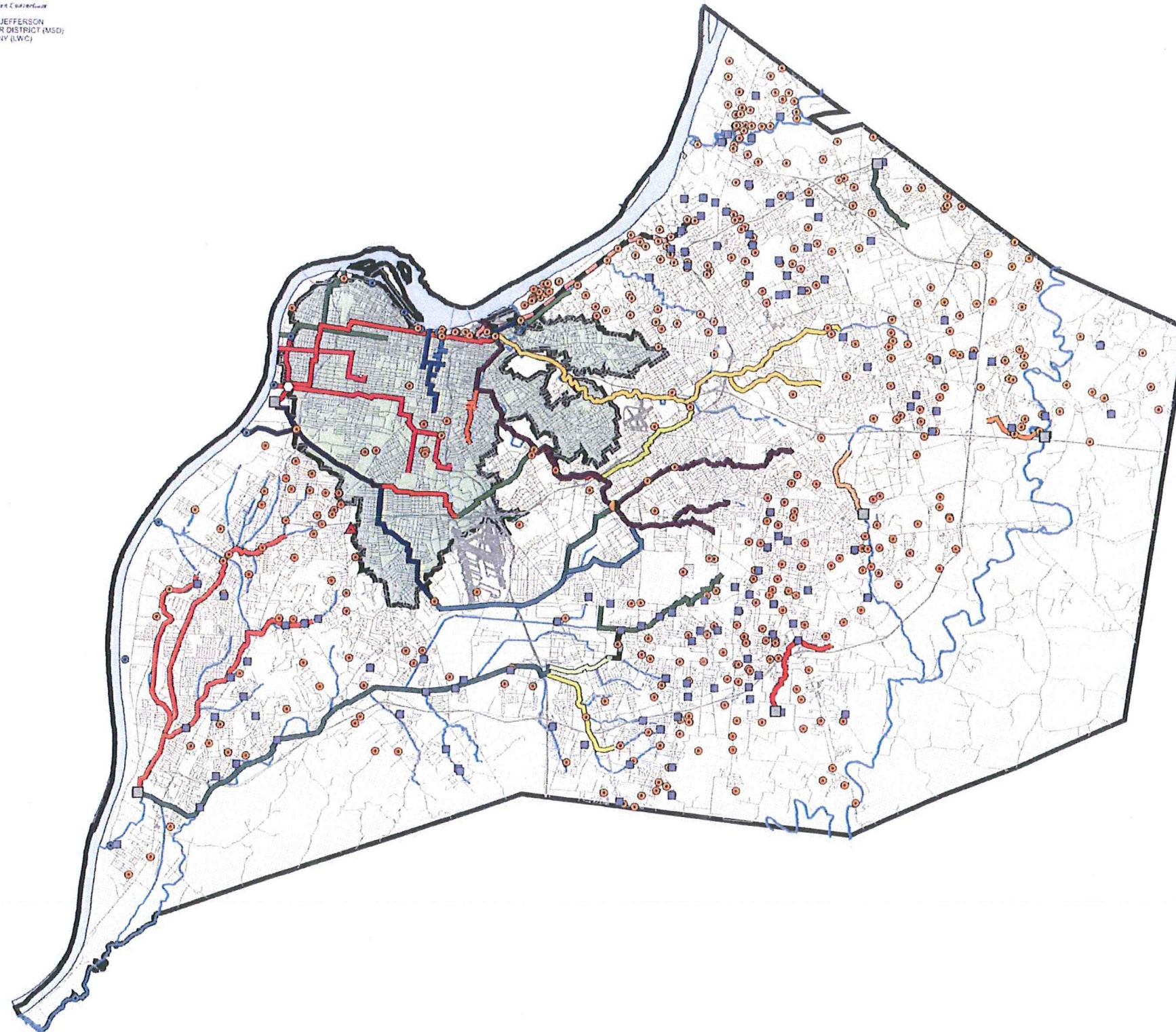
<sup>1</sup>Private/MSD Operated





Copyright (c) 2005, LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT (MSD) and LOUISVILLE WATER COMPANY (LWC). All Rights Reserved.

**FIGURE A-1  
MSD COLLECTION AND  
TREATMENT SYSTEM**



**LEGEND**

**MSD Facilities**

- Regional WTPs
- Main Diversion Structure
- Southeastern Diversion
- ▲ Wheeler Basin
- Small WTPs
- Pump Stations
- Flood Pump Stations

**Major Combined Sewers**

- 38TH ST. BRANCH
- 4TH STREET RELIEF
- BEARGRASS INTERCEPTOR
- BEARGRASS INTERCEPTOR RELIEF
- CENTRAL RELIEF DRAIN
- GOLDSMITH LANE TRUNK
- MANNING RD./CARDINAL DR. SEWER
- MELLWOOD AVE. SEWER
- MIDDLE FORK TRUNK
- MILL CREEK TRUNK
- NORTHEASTERN INTERCEPTOR
- NORTHERN DITCH INTERCEPTOR
- NORTHWESTERN INTERCEPTOR
- OHIO RIVER INTERCEPTOR
- SNEADS BRANCH RELIEF
- SOUTHEASTERN INTERCEPTOR
- SOUTHERN OUTFALL
- SOUTHWESTERN OUTFALL
- UPPER DRY RUN TRUNK
- WESTERN OUTFALL

**Sanitary Sewers**

- CEDAR CREEK INTERCEPTOR
- FISHPOOL INTERCEPTOR
- FLOYDS FORK INTERCEPTOR
- HITE CREEK INTERCEPTOR
- JEFFERSONTOWN INTERCEPTOR
- MILL CREEK INTERCEPTOR
- NORTHERN DITCH INTERCEPTOR
- POND CREEK INTERCEPTOR
- SOUTHERN DITCH INTERCEPTOR
- POND CREEK FORCE MAIN
- OHIO RIVER FORCE MAIN

— Roads

— Creeks

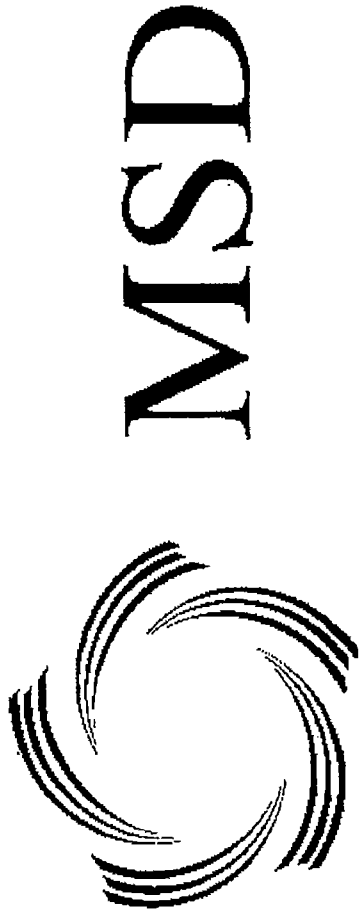
▭ Combined Sewer Area



# **APPENDIX B**

## **MSD ORGANIZATIONAL CHART**





Louisville and Jefferson County  
Metropolitan Sewer District

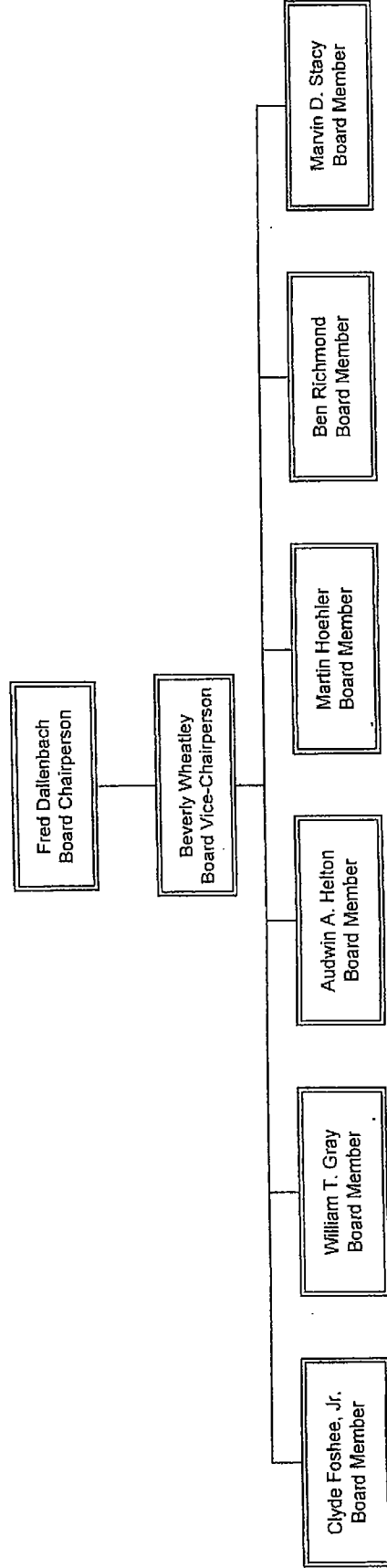
Organizational Chart  
May 12, 2006

# Organizational Summary

	<u>Total</u>	<u>Filled</u>	<u>Vacant</u>	<u>Exempt</u>	<u>Non-Exempt</u>	<u>Unit</u>
Executive Offices Division	4	4	0	2	2	0
Legal Division	7	7	0	5	2	0
Human Resources Division	18	18	0	8	10	0
Finance Division	17	16	1	9	8	0
Physical Assets Division	39	38	1	6	15	18
Regulatory Management Services Division	43	36	7	16	21	6
Engineering Division	24	23	1	12	12	0
Watershed Area Teams Division	29	29	0	19	10	0
Infrastructure & Flood Protection Division						
Administration & Support Services	52	51	1	6	16	30
Sewer/Flood Protection & Stormwater Drainage	159	152	7	12	5	142
Operations Division						
East, Central & West Region	61	59	2	10	2	49
Louisville Green	2.5	2.5	0	1	1.5	0
MFWTP Operations	52	50	2	6	8	38
MFWTP Maintenance	40	40	0	3	9	28
Information Technology Division						
Information Technology	43	43	0	29	14	0
Customer Relations	19	19	0	1	18	0
<b>DISTRICT TOTAL</b>	<b>609.5</b>	<b>587.5</b>	<b>22</b>	<b>145</b>	<b>153.5</b>	<b>311</b>

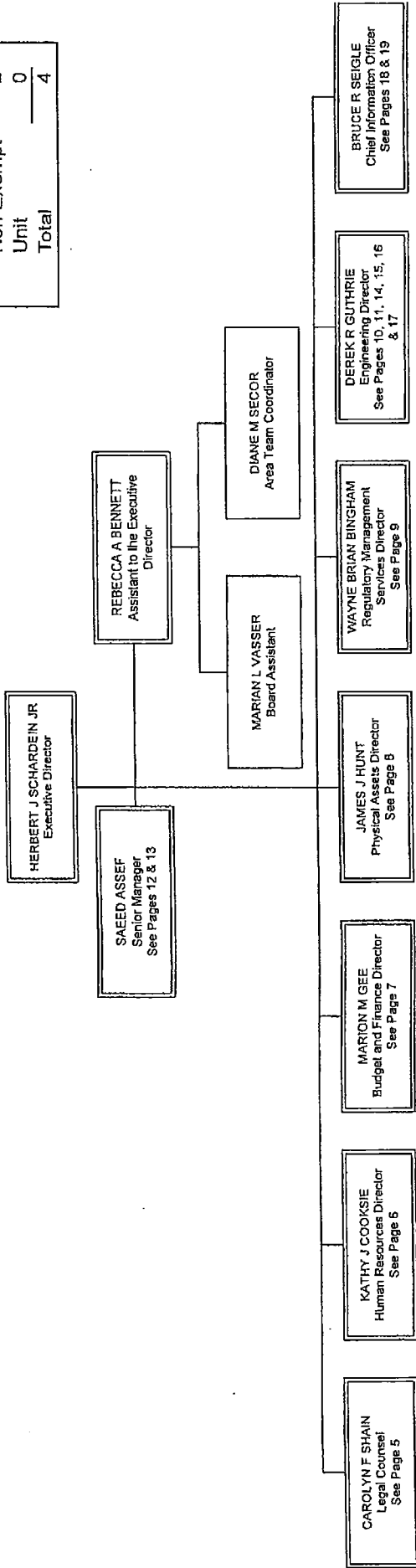


# Board Members



# Executive Offices Division

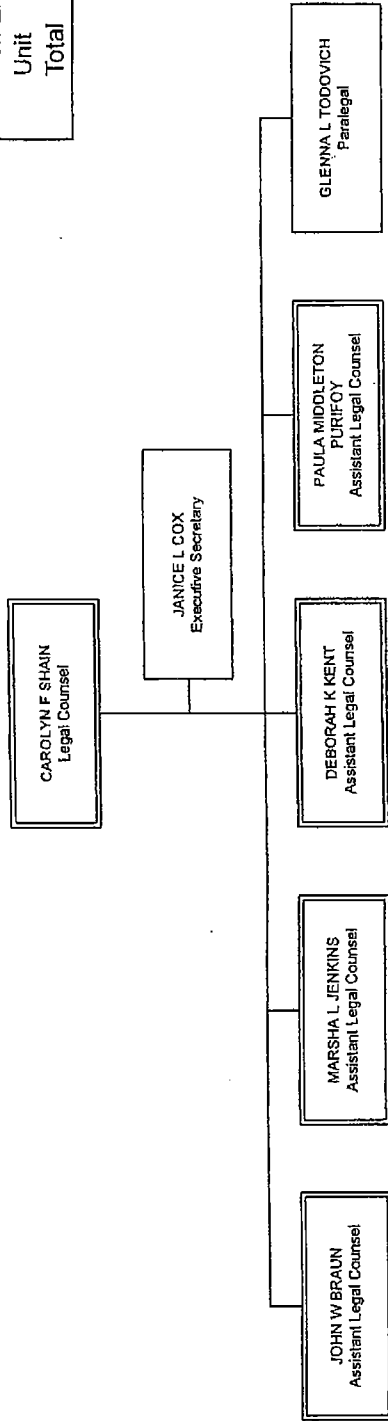
BUDGET STATUS	
Filled	4
Vacant	0
Total	4
Exempt	2
Non-Exempt	2
Unit	0
Total	4





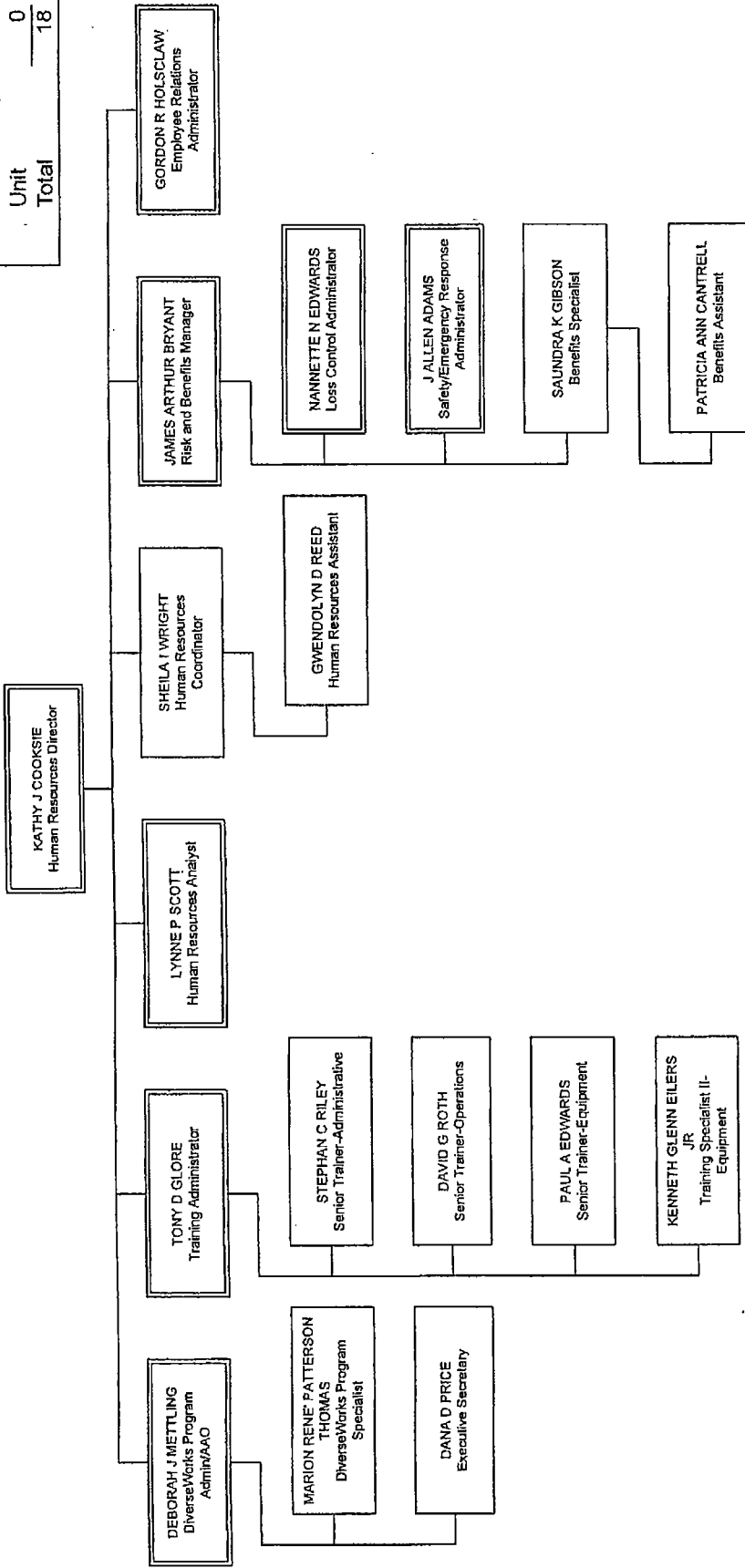
# Legal Division

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



# Human Resources Division

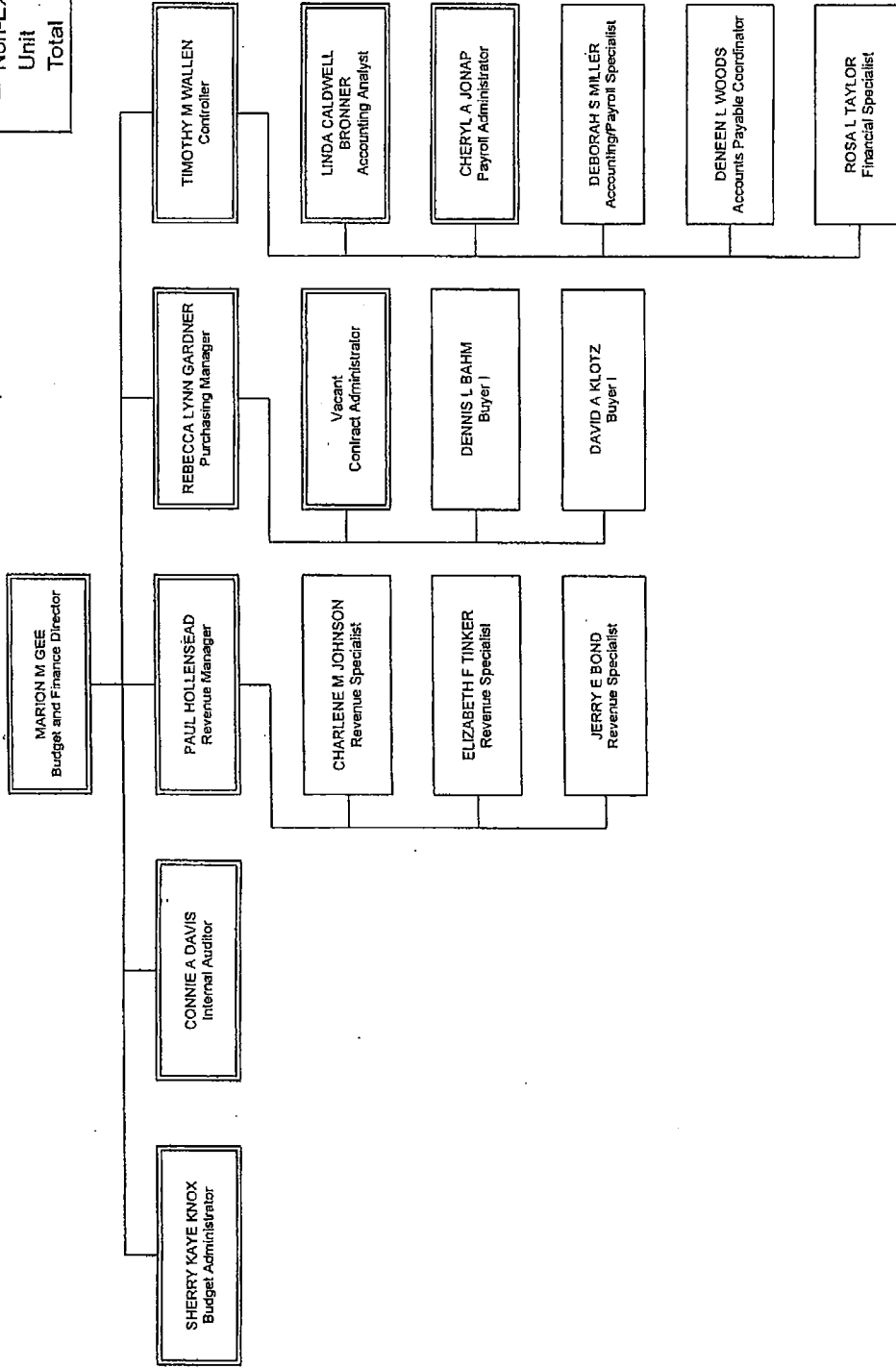
BUDGET STATUS	
Filled	18
Vacant	0
Total	18
Exempt	8
Non-Exempt	10
Unit	0
Total	18





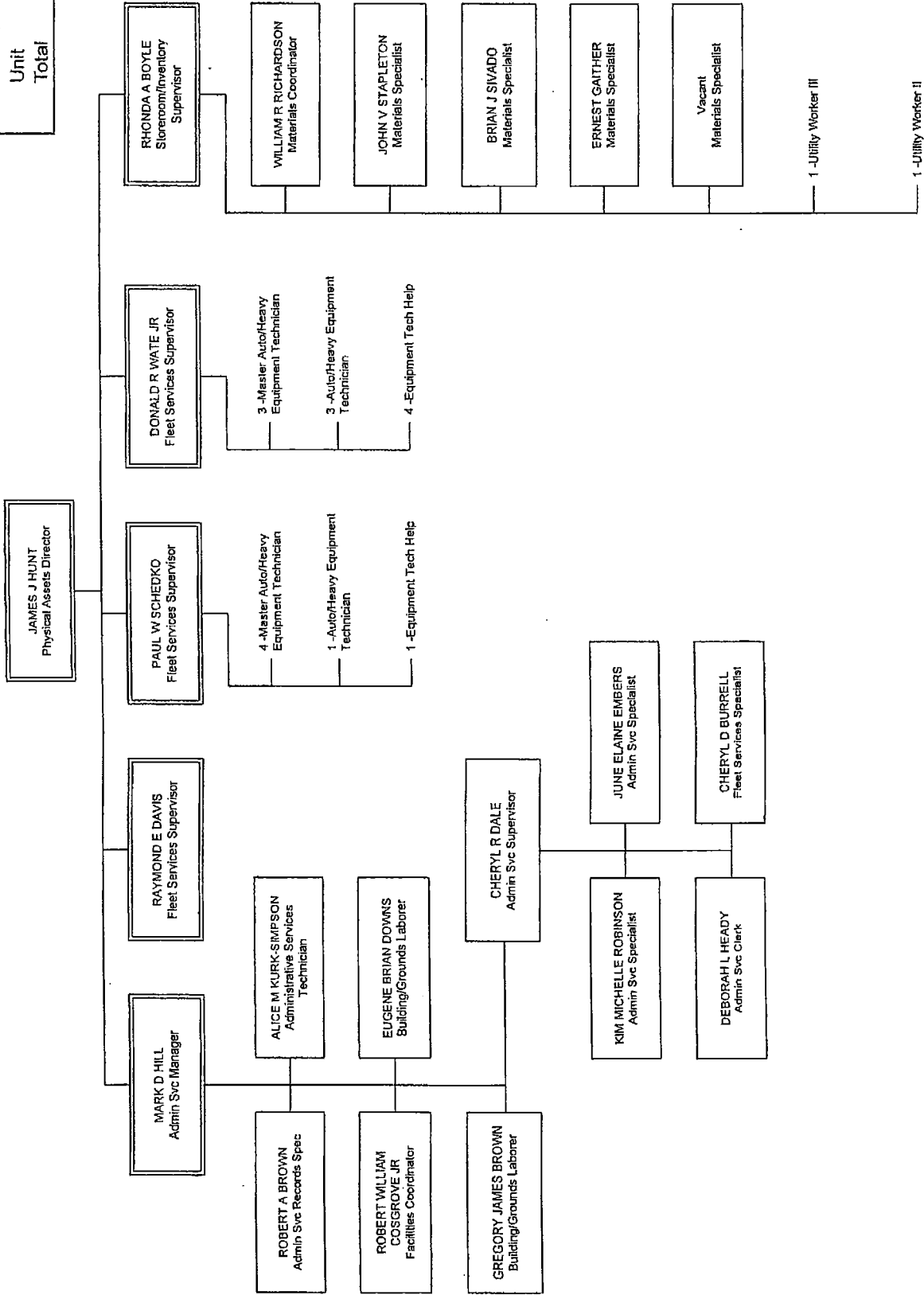
# Financ Division

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



# Physical Assets Division

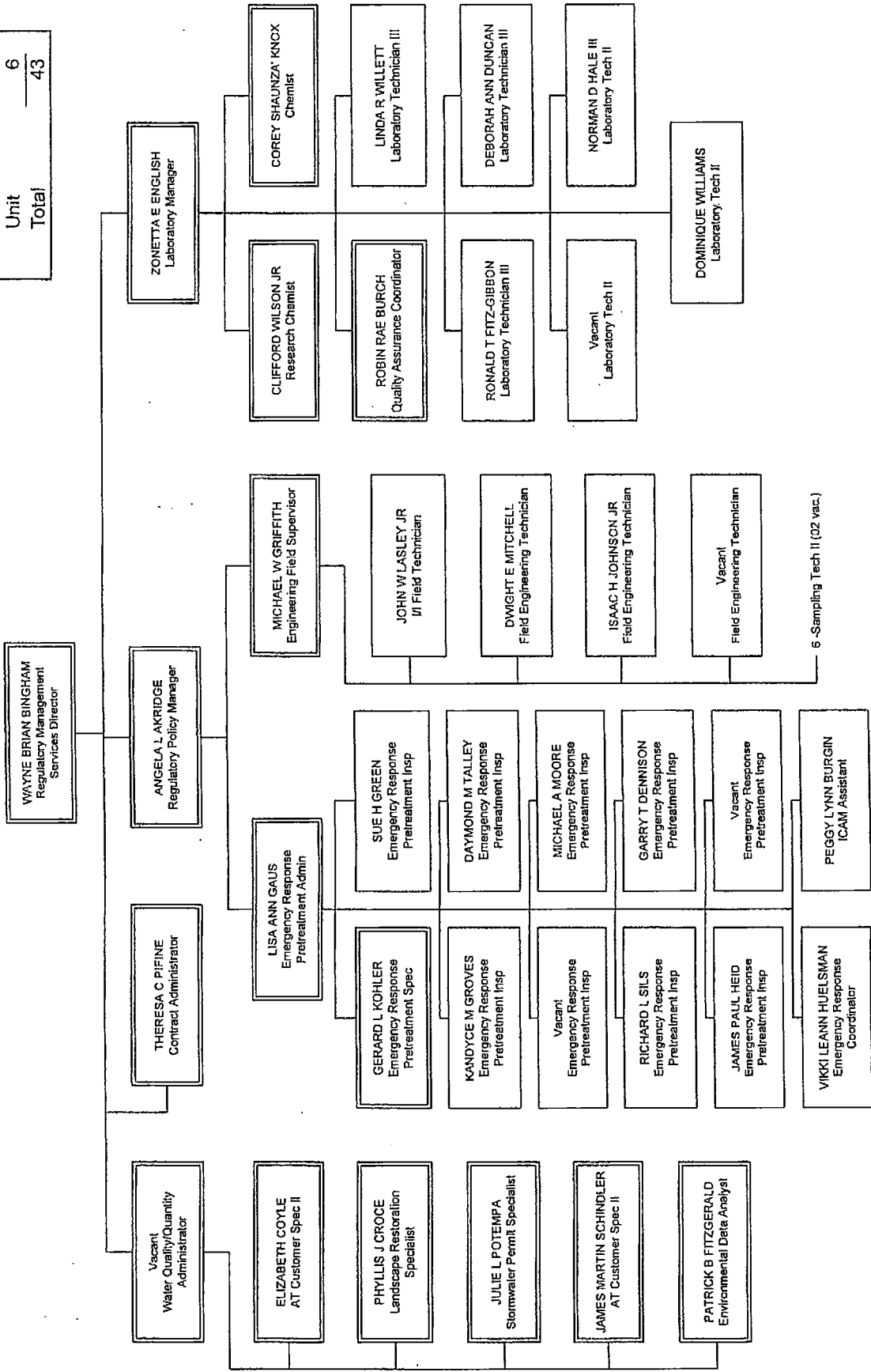
BUDGET STATUS	
Filled	38
Vacant	1
<b>Total</b>	<b>39</b>
Exempt	6
Non-Exempt	15
Unit	18
<b>Total</b>	<b>39</b>





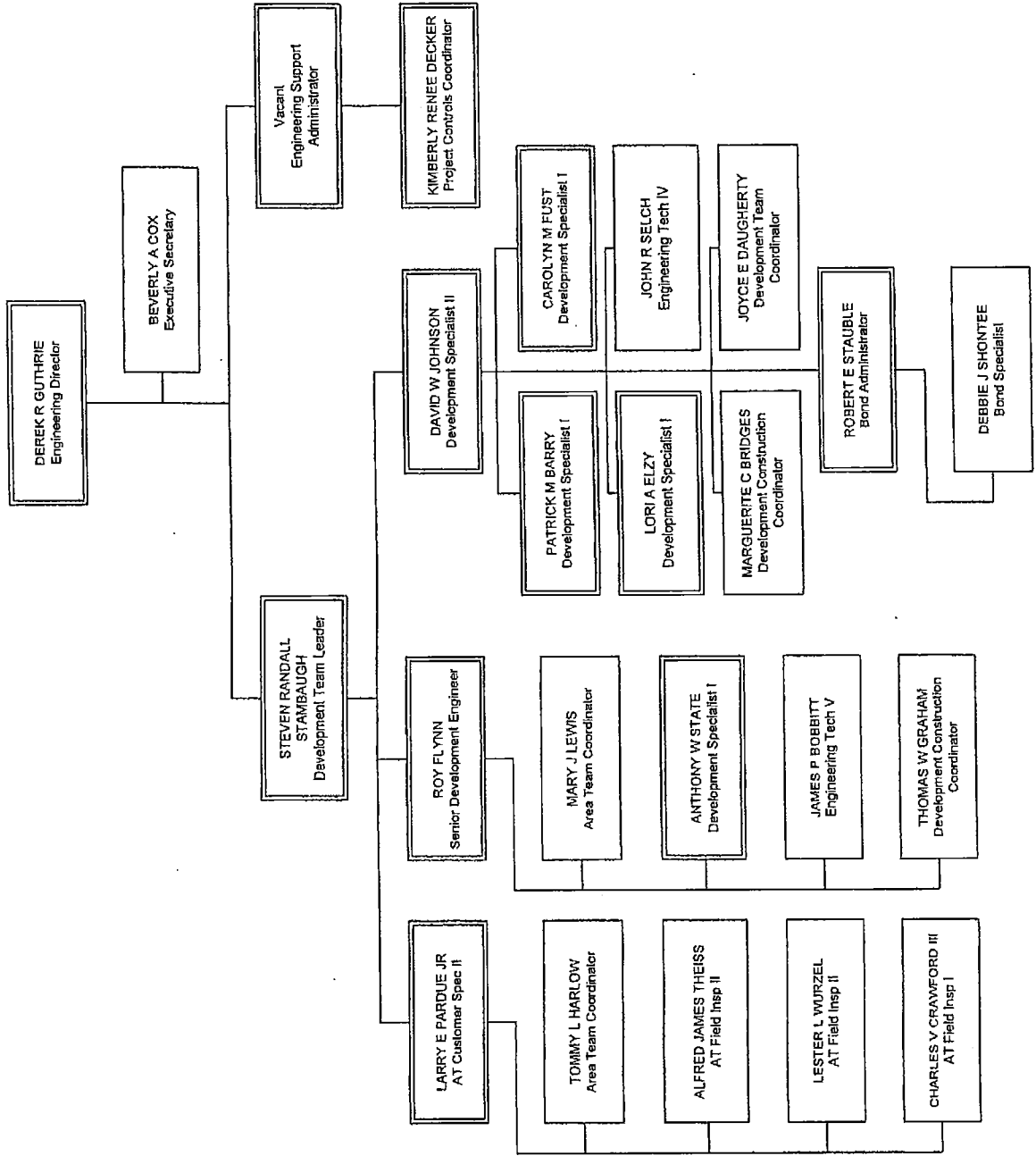
# Regulatory Management Services Division

BUDGET STATUS	
Filled	36
Vacant	7
<b>Total</b>	<b>43</b>
█ Exempt	16
— Non-Exempt	21
Unit	6
<b>Total</b>	<b>43</b>



# Engineering Division

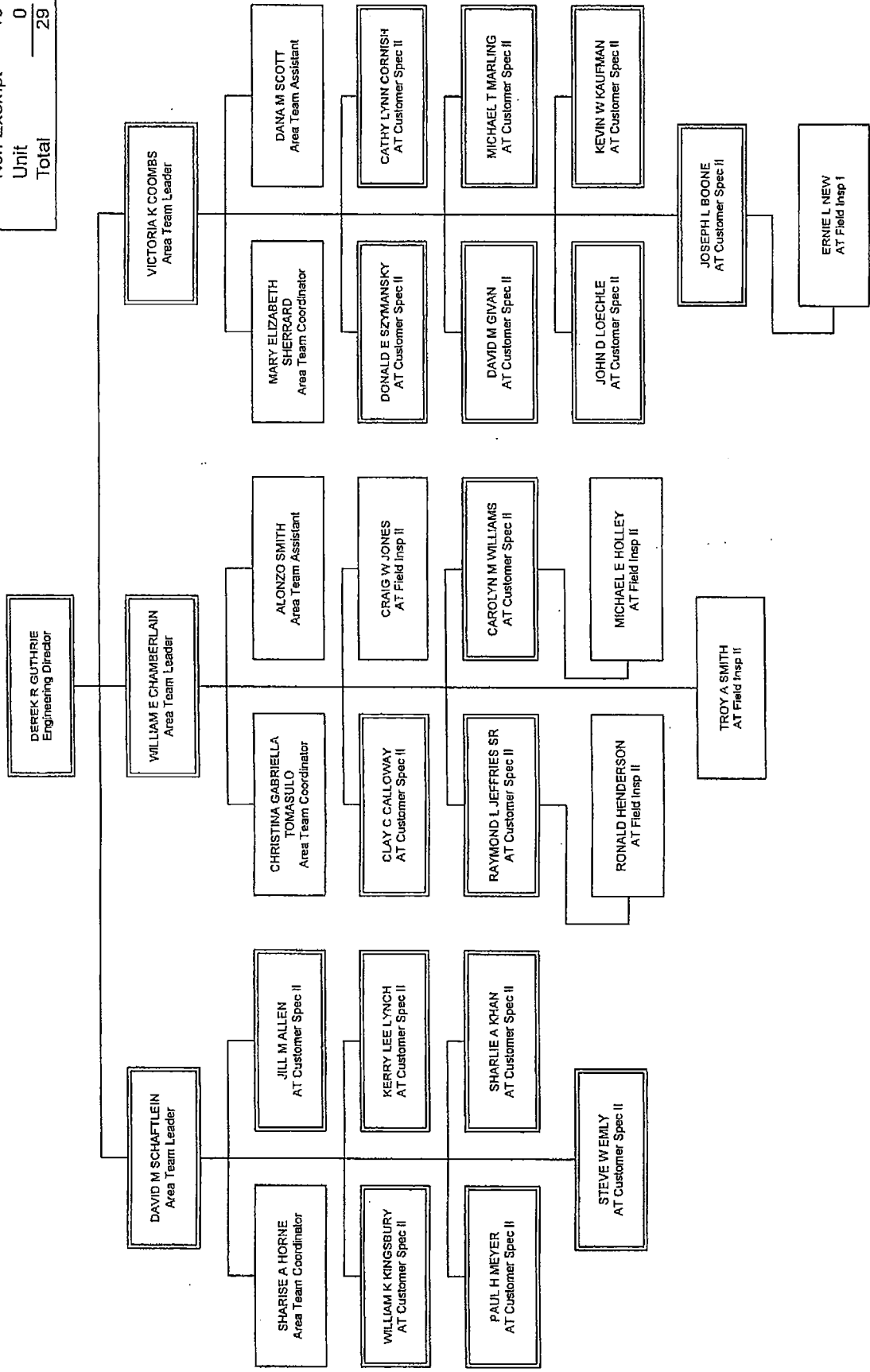
BUDG		STATUS	
Filled	23		
Vacant	1		
Total	24		
Exempt	12		
Non-Exempt	12		
Unit	0		
Total	24		





# Watershed Art Teams Division

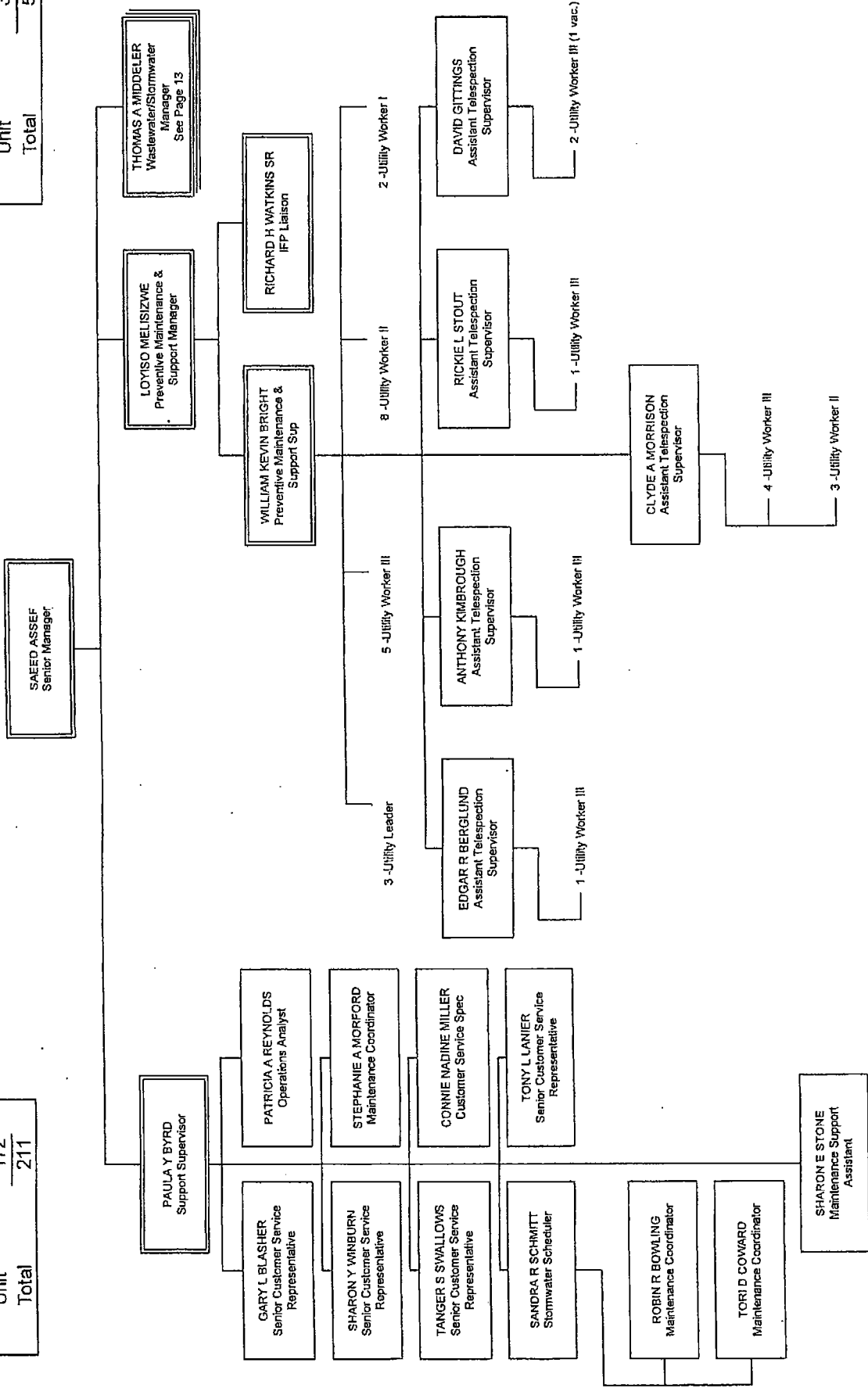
BUDGET STATUS	
Filled	29
Vacant	0
<b>Total</b>	<b>29</b>
Exempt	19
Non-Exempt	10
Unit	0
<b>Total</b>	<b>29</b>



# Infrastructure & Flood Protection Division Administration & Support Services

DIVISION BUDGET STATUS	
Filled	203
Vacant	8
<b>Total</b>	<b>211</b>
Exempt	18
Non-Exempt	21
<b>Unit</b>	<b>172</b>
<b>Total</b>	<b>211</b>

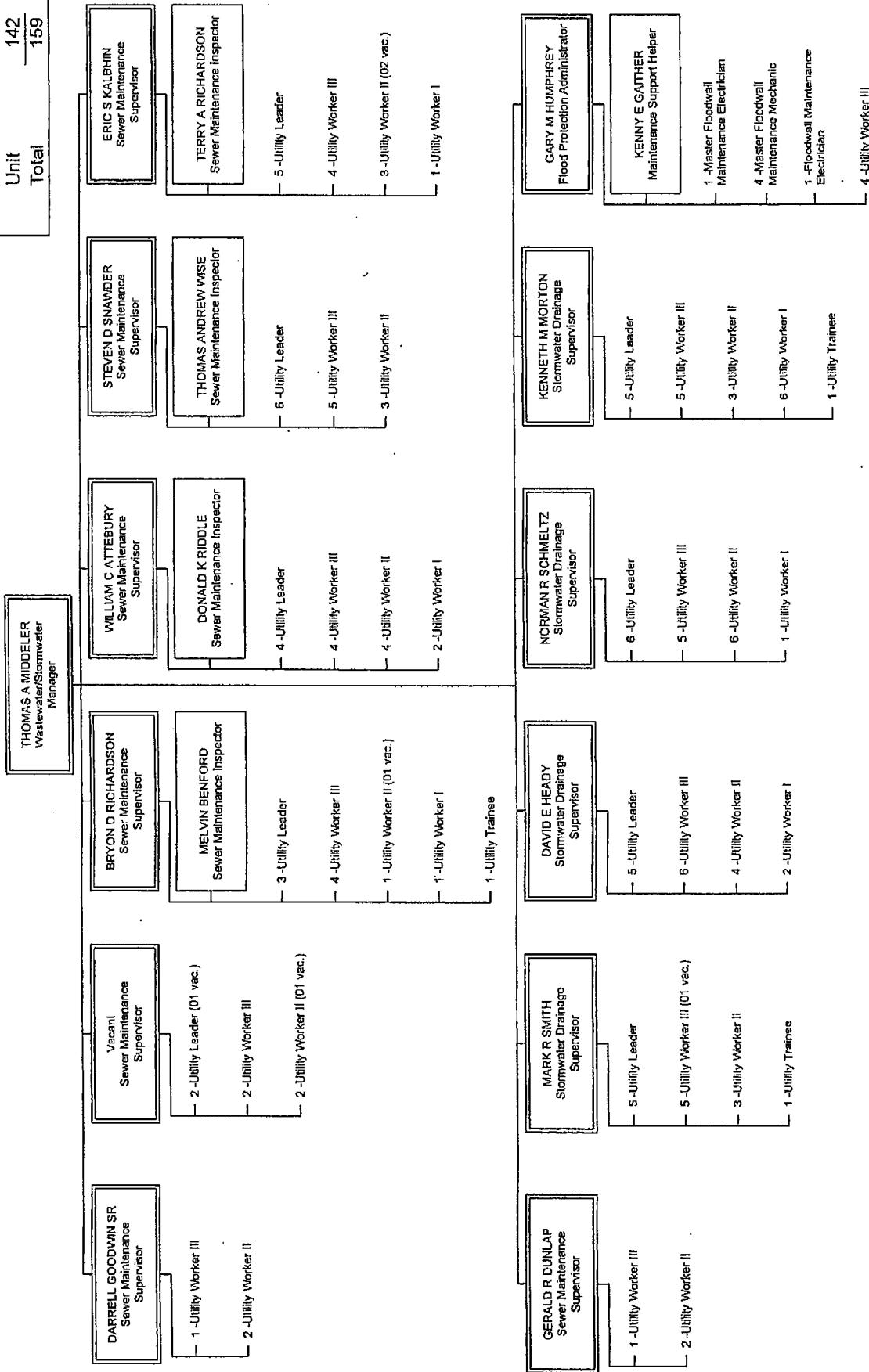
BUDGET STATUS	
Filled	51
Vacant	1
<b>Total</b>	<b>52</b>
Exempt	6
Non-Exempt	16
<b>Unit</b>	<b>30</b>
<b>Total</b>	<b>52</b>





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

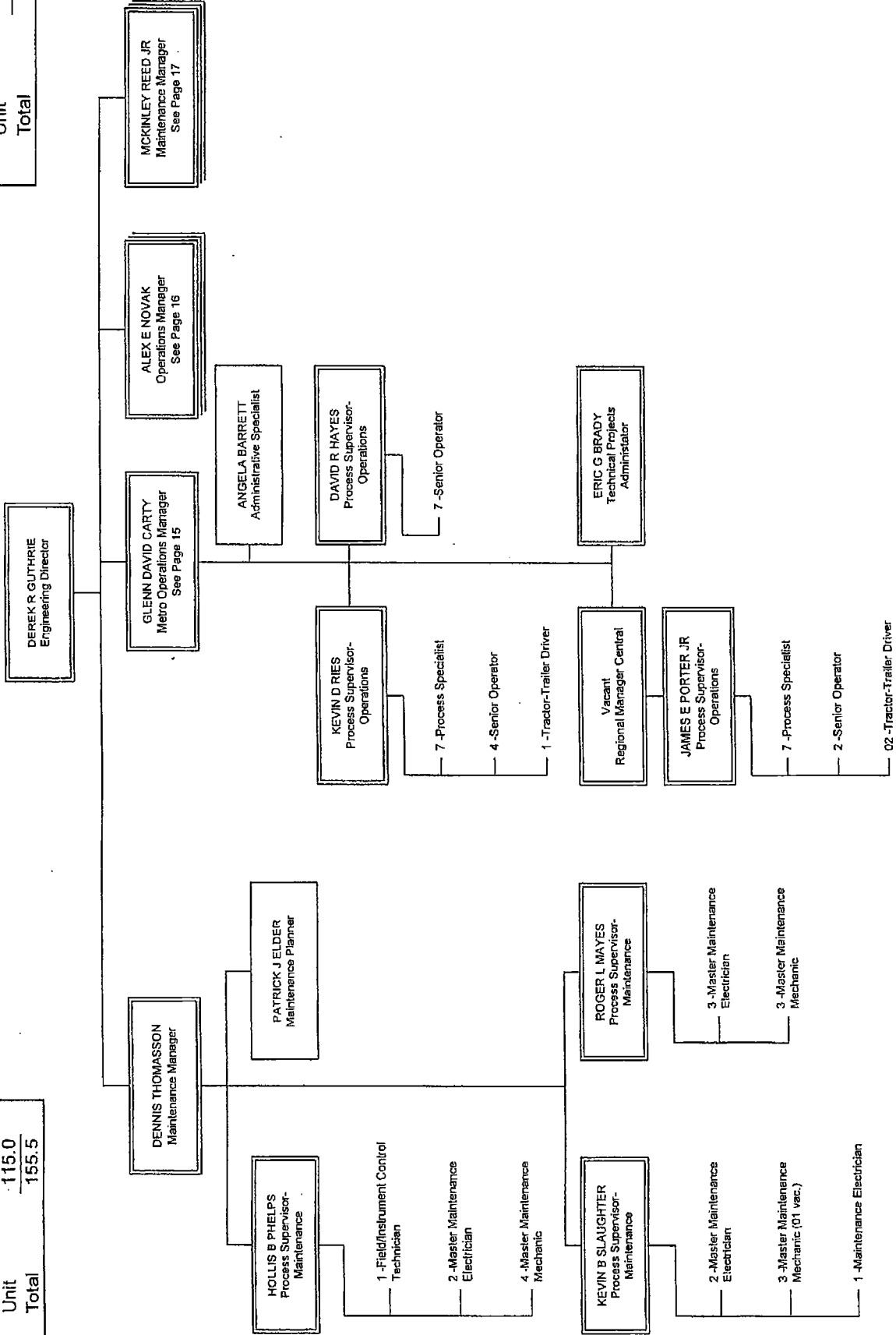
BUDGET STATUS	
Filled	152
Vacant	7
<b>Total</b>	<b>159</b>
Exempt	12
Non-Exempt	5
Unit	142
<b>Total</b>	<b>159</b>



# Operations Division East, Central & West Region

DIVISIONAL BUDGET STATUS	
Filler	151.5
Vacant	4.0
<b>Total</b>	<b>155.5</b>
Exempt	20.0
Non-Exempt	20.5
Unit	115.0
<b>Total</b>	<b>155.5</b>

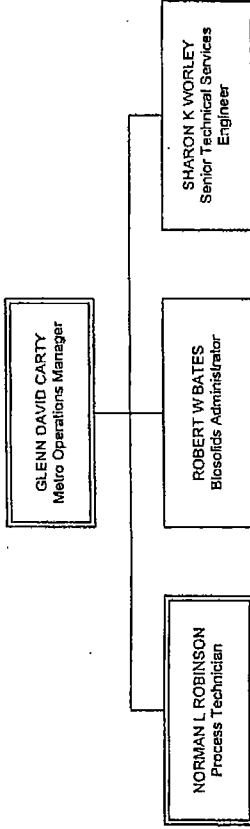
BUDGET STATUS	
Filler	59
Vacant	2
<b>Total</b>	<b>61</b>
Exempt	10
Non-Exempt	2
Unit	49
<b>Total</b>	<b>61</b>





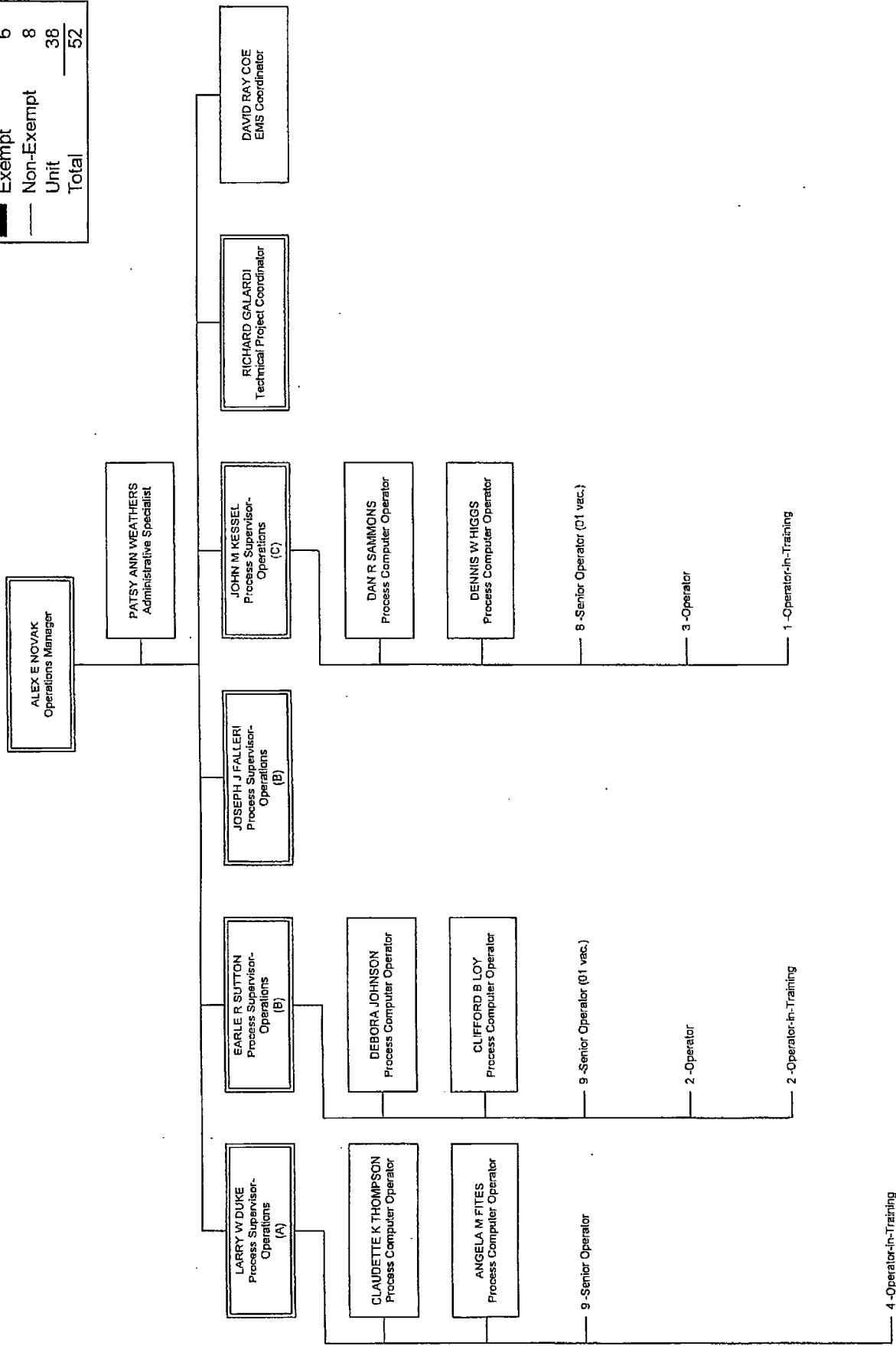
# Operations Division Louisville Green

BUDGET		TUS	
Filled	2.5		
Vacant	0		
Total	2.5		
Exempt	1		
Non-Exempt	1.5		
Unit	0		
Total	2.5		



# Operations Division MFW 1P Operations

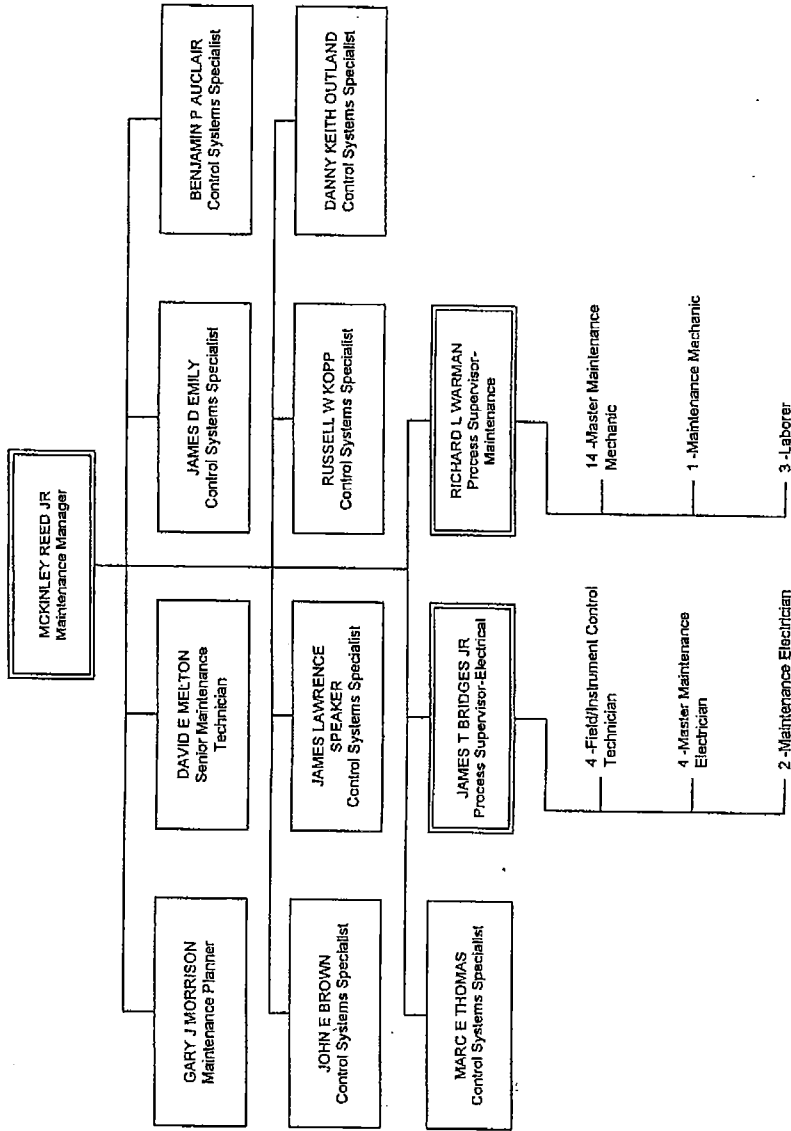
BUDGET STATUS	
Filled	50
Vacant	2
<b>Total</b>	<b>52</b>
Exempt	6
Non-Exempt	8
<b>Unit</b>	<b>38</b>
<b>Total</b>	<b>52</b>





# Operations Division MFWTP Maintenance

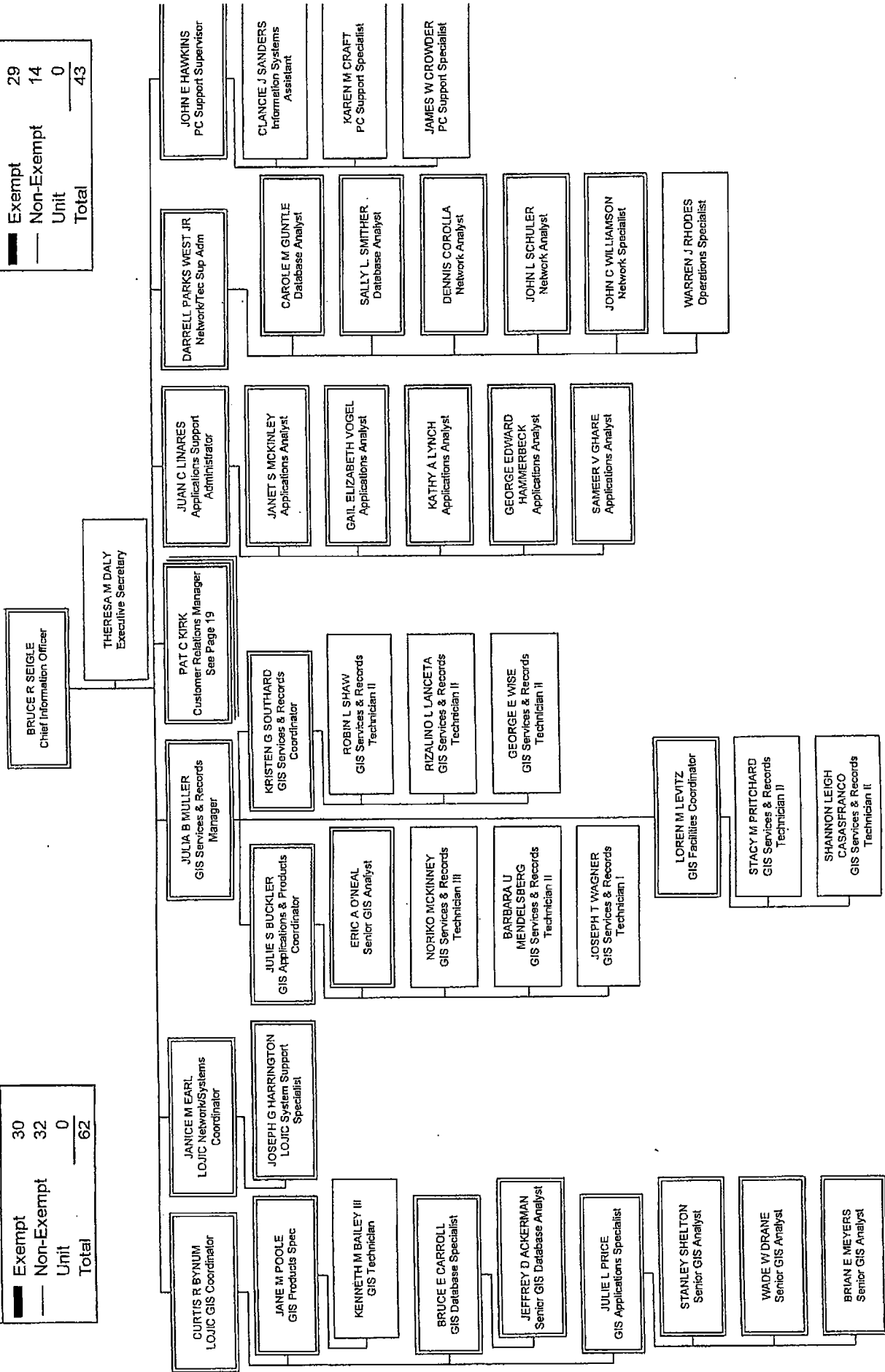
BUDGET		TUS
Filled		40
Vacant		0
Total		40
Exempt		3
Non-Exempt		9
Unit		28
Total		40



# Information Technology Division Information Technology

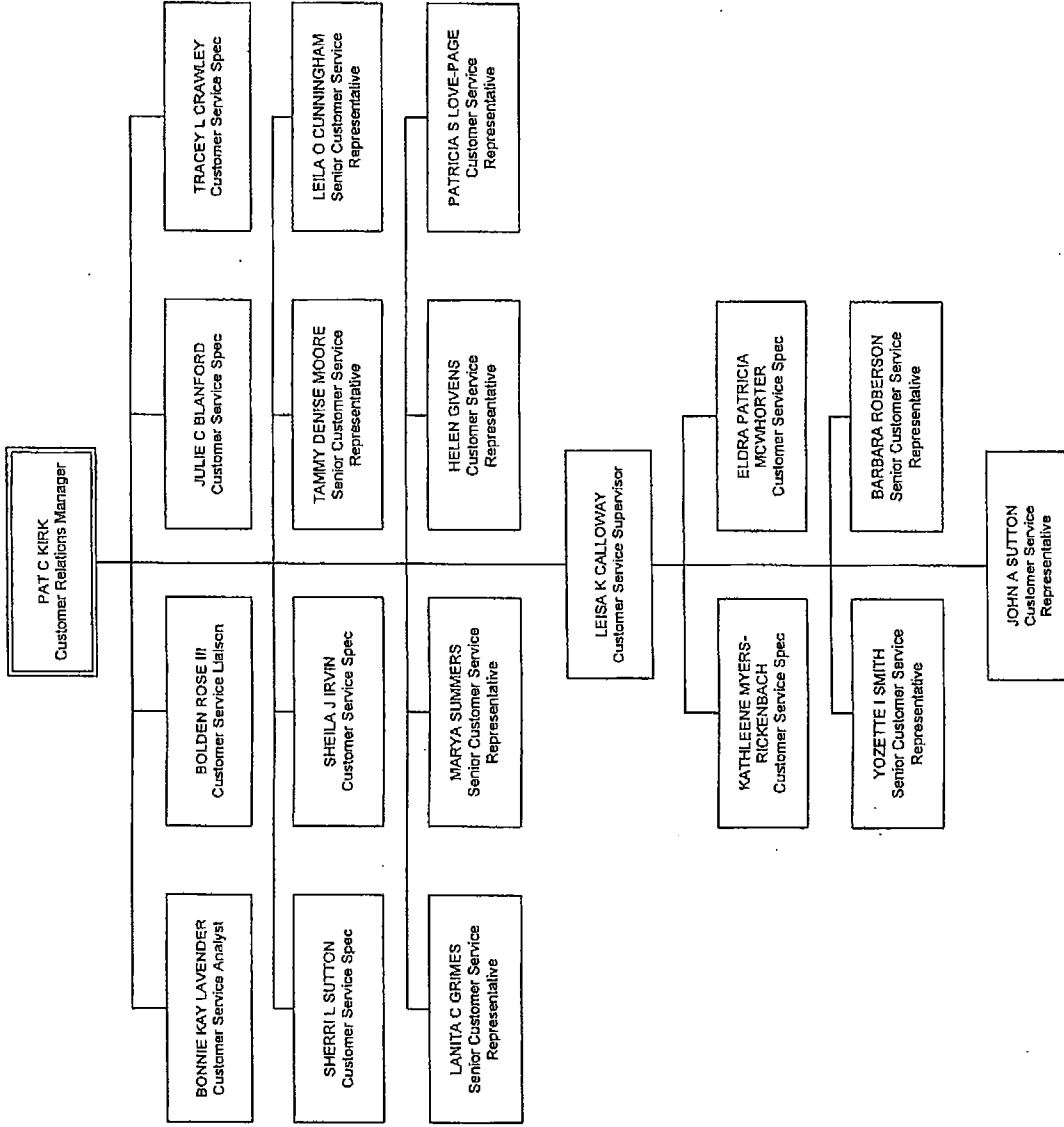
DIVISION BUDGET STATUS	
Filled	62
Vacant	0
<b>Total</b>	<b>62</b>
Exempt	30
Non-Exempt	32
Unit	0
<b>Total</b>	<b>62</b>

BUDGET STATUS	
Filled	43
Vacant	0
<b>Total</b>	<b>43</b>
Exempt	29
Non-Exempt	14
Unit	0
<b>Total</b>	<b>43</b>



# Information Technology Division Customer Relations

BUDGET STATUS	
Filled	19
Vacant	0
<b>Total</b>	<b>19</b>
Exempt	1
Non-Exempt	18
<b>Unit Total</b>	<b>19</b>





# **APPENDIX C**

## **HANSEN STANDARD OPERATING PROCEDURES (SOPS)**

**Hansen Procedures for Entering a Customer Service Request (CSR) and Tracking and Reporting Overflows including Unauthorized Discharges**

**Hansen Procedures for Tracking and  
Reporting Overflows including  
Unauthorized Discharges**

---

Maintain Asset Data..... 3

Adding a Discharge Service Request..... 5

Pump Placement Work Order in Rain Event ..... 7

    Create Individual Work Orders..... 7

    Create Work Orders for a Group..... 8

Close Out PUMP Work Orders..... 9

    Close Out Individual Work Orders ..... 9

    Close Out Group of PUMP Work Orders ..... 10

    Discharge Report ..... 12

Completing the Discharge Report Form ..... 13

Enter Discharge Information in Hansen..... 15

    Locate the Asset..... 15

    Create Work Order for Discharge..... 17

    Completing Discharge Work Order ..... 18

Hauling Sewage with Tanker Trucks..... 21

Generator Placement..... 22



## Maintain Asset Data

Static data related to the particular asset is housed in the appropriate Asset Inventory Record in Hansen.

1. The type of asset (manhole, pump station, treatment plant) will determine which inventory to use.
2. Standard data maintained will include:
  - Asset ID
  - Name of the asset.
  - Address
  - Subtype
  - Other Location identifying the area responsible in MSD.
  - IN and Out Mains.
3. In addition, static data related the asset's "discharge situation" will be housed on the Additional Data tab in the inventory record, including:

A. *Status* – whether or not this asset is classified as an SSO and in which category

**N – No Report** – No discharges

**D – Documented** – An unauthorized discharge was observed by MSD staff on one or more occasions.

**S – Suspected** – An unauthorized discharge or evidence of one was reported to MSD by the public, but was not witnessed by MSD staff. These locations will be monitored for 3 years. If no unauthorized discharges occur during that time or additional evidence is not discovered, it will be removed from the list.

**E – Eliminated** – The cause of the unauthorized discharge has been corrected, these locations will be monitored for 3 years.

B. *Plan* – Whether there is a plan in place for its elimination (checkbox); and if so, the Project ID is filled in with the budget ID of the capital project.

If more than one project is planned for the asset, use the grid provided. Click the Insert button to enter the project ID number.

C. *Type of Discharge*

**B – Constructed / Diversion**

**C – Surcharge**

**D – Dry Weather**

**P – Pumped**

D. *Discharge To* – Where it discharges to (Catch Basin, Ditch, Ground, Stream). The following definitions apply:

**Ditch** – Reaching a stream or water body via conveyance such as drainage ditch, ditches in front of homes and other buildings, neighborhood drainage channels that eventually drain to a stream or other water body.

**Stream** – Direct discharge to any water body other than a ditch or neighborhood drainage channel (for example, Northern Ditch and Pond Creek). A stream is also known as a water body (capable of supporting aquatic life).

4 ■ **Tracking and Reporting Overflows including Unauthorized Discharges** ■

**Ground** – Discharge that does not at any time reach a stream or water body.

Catch Basin – Discharge to a stream or water body via the storm water conveyance.

E. *Receiving Stream* – Name of the stream which the discharge impacts.

4. This data is reviewed and updated quarterly by staff from the Regulatory Management Services Team or its consultants.

## Adding a Discharge Service Request

1. Look for an existing call at this location using one of three search methods.

**Lookup**  
**ArcView**  
**Property Browser**

2. If you find an existing open call, add the caller to the call list.

If there is not an existing call use the following steps to enter a new call.

3. Click the **Location** tab.

### Location Tab

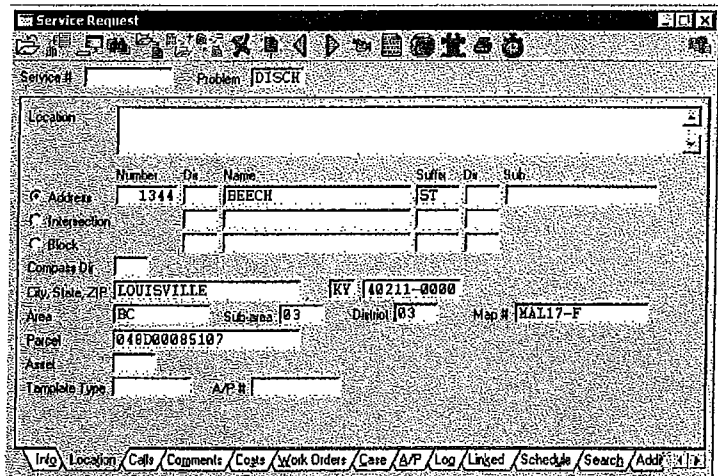
4. *Problem* – Press **Enter** to choose **DISCH** from the popup.
5. *Address Number* – Type the house number.
6. Press **Tab** twice.
7. *Address Name* – Type the first few letters of the street name.
8. Press **Enter**.
9. Double-click the address from the popup.
10. Click the **Calls** tab.

### Calls Tab

11. Click the **Primary Caller** subtab.
12. Enter the customer's contact information.
13. Activate **Advisor** from your Task bar.
14. Answer the questions in **Advisor**.
15. Once back in Hansen, click the **Calls** tab.
16. Click the **Caller Comments** subtab.
17. Go to the last line in the scripting.
18. Press **Ctrl + Enter** to begin a new line.  
Type a summary of the caller's comments.

19. Click **Add** .

Continued on the next page.



Service Request

Service # [ ] Problem: DISCH

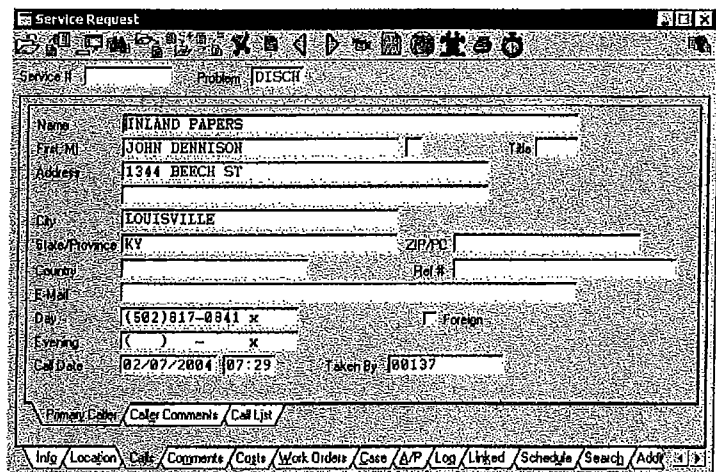
Location: [ ]

C. Address	Number	St	Name	Suffix	City	State	Zip
1344	BEECH	ST			LOUISVILLE	KY	40211-0000

Parcel: 048D00085107

Map #: HAL17-F

Info / Location / Calls / Comments / Costs / Work Orders / Case / A/P / Log / Linked / Schedule / Search / Add



Service Request

Service # [ ] Problem: DISCH

Name: INLAND PAPERS

Firm: JOHN DENNISON Title: [ ]

Address: 1344 BEECH ST

City: LOUISVILLE

State/Province: KY ZIP/PC: [ ]

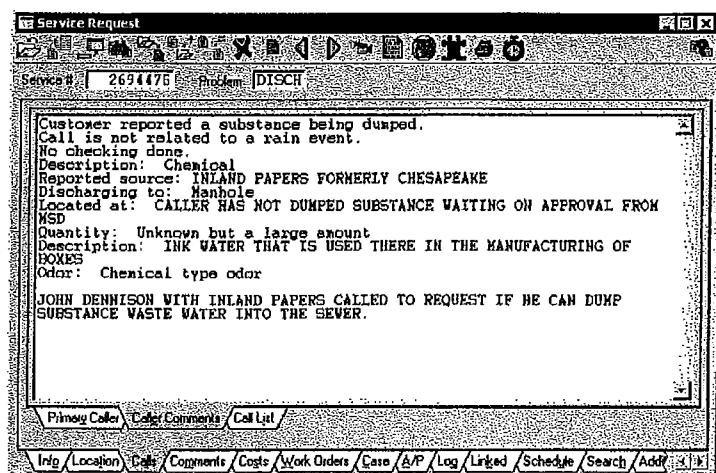
Phone: (502) 817-0841 x [ ] Foreign: [ ]

Day: [ ] Evening: [ ]

Call Date: 02/07/2004 07:29 Taken By: 80137

Primary Caller / Caller Comments / Call List

Info / Location / Calls / Comments / Costs / Work Orders / Case / A/P / Log / Linked / Schedule / Search / Add



Service Request

Service # 2694476 Problem: DISCH

Customer reported a substance being dumped.  
Call is not related to a rain event.  
No checking done.  
Description: Chemical  
Reported source: INLAND PAPERS FORMERLY CHESAPEAKE  
Discharging to: Manhole  
Located at: CALLER HAS NOT DUMPED SUBSTANCE WAITING ON APPROVAL FROM MSD  
Quantity: Unknown but a large amount  
Description: INK WATER THAT IS USED THERE IN THE MANUFACTURING OF BOXES  
Odor: Chemical type odor  
JOHN DENNISON WITH INLAND PAPERS CALLED TO REQUEST IF HE CAN DUMP SUBSTANCE WASTE WATER INTO THE SEWER.

Primary Caller / Caller Comments / Call List

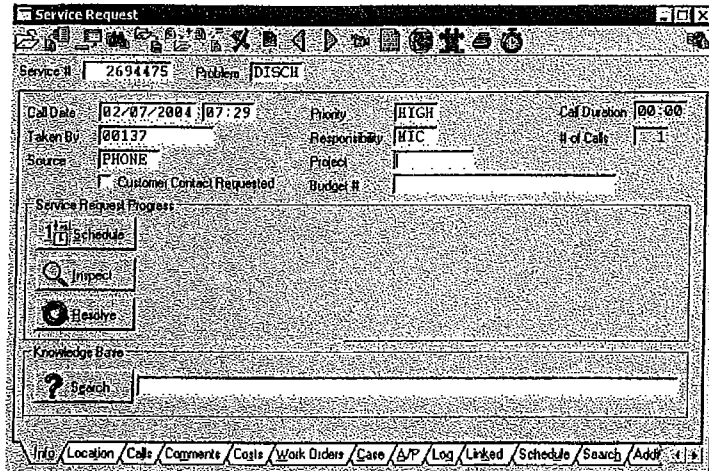
Info / Location / Calls / Comments / Costs / Work Orders / Case / A/P / Log / Linked / Schedule / Search / Add



20. Click the **Info** tab.

**Info Tab**

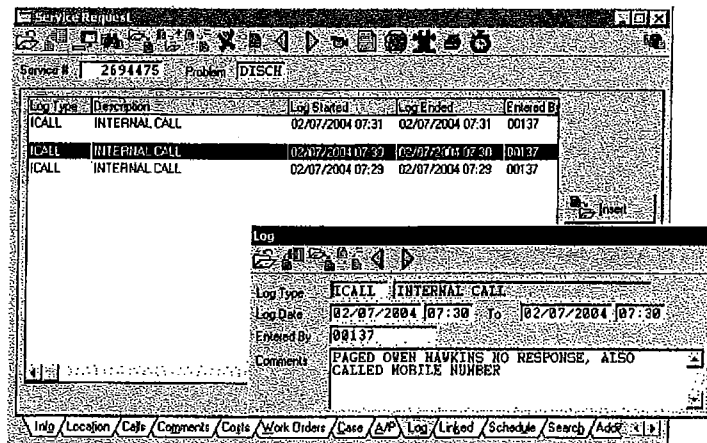
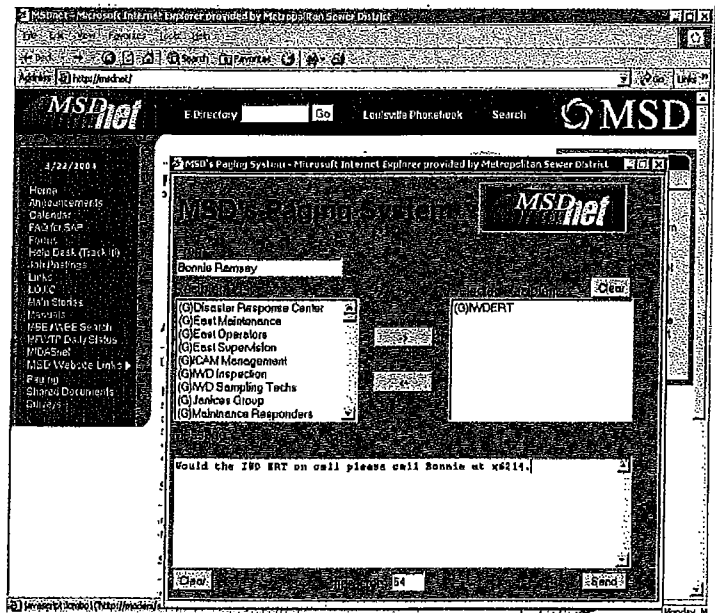
- 21. If the Responsibility is **MIC**, you must contact the On-call IWD team.
- 22. Activate **MSDNet**.
- 23. Click the **Paging** link.
- 24. In the Paging box, complete the following fields:  
 From – Type your name.  
 To – IWDERT  
 Message – Type the following message:  
 Would the IWD ERT on call please call “your name” at extension \_\_\_\_.



- 25. Click the **Send** button
- 26. Activate Hansen.
- 27. Click the **Log** tab.

**Log Tab**

- 28. Click **Insert**
- 29. **Log Type** – Press Enter to choose **ICALL** from the popup.
- J. **Log Date** – Press **Enter Enter** to choose today’s date.
- 31. **Entered By** – Enter your Employee ID.
- 32. **Comments** – Enter whom you spoke with or the steps you have taken to contact them.
- 33. Click **Add** to add the Log.
- 34. Click **Close** to close the Log box.



## Pump Placement Work Order in Rain Event

If this discharge is in response to a rain event and pumps are being placed in the field, the first tracking action will be to issue a pump placement work order for all pumps placed in field. The work order is issued against the impacted asset (for example, manhole, lift station, etc.) There are two work order options:

One or two work orders placed – Create individual work orders for each asset.

Groups of pumps – Create work orders using the group project issues work orders to all the facilities within the group.

There are two groups of pumps:


PUMP 1 (5 manholes) 21153, 21156, 18505, 82371

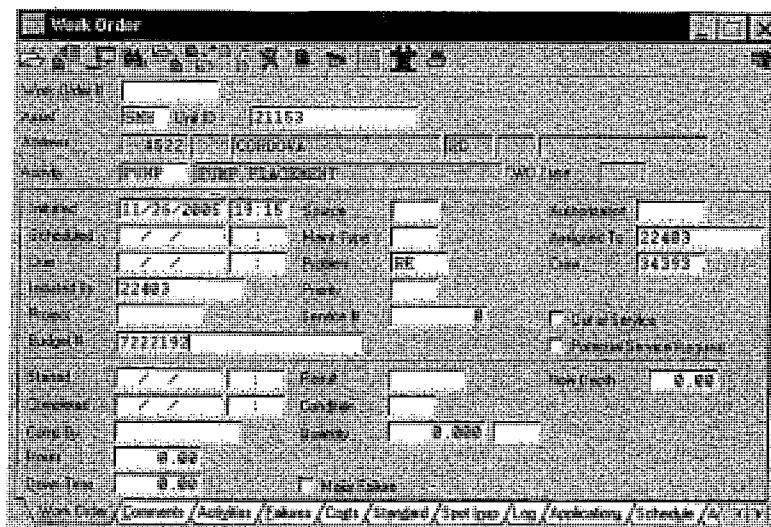
PUMP 2 (7 manholes) 17571, 21089, 21061, 18595, 18483, 21101, 21506

### Create Individual Work Orders

- From the menu bar choose:  
**Work Order → Work Order**
- Click the **Work Order** tab.

#### Work Order Tab



- Asset* – Type **SMH**.
- Unit ID* – Choose an ID from the popup.
- Activity* – Type **PUMP**.
- Initiated* – Enter the date and time when the work began setting up the pump.
- Initiated By* – Choose the Employee ID of the person that made the decision to set the pumps out.
- Budget #* – Always type **7222192**.
- Problem* – Type **RE** for rain event.
- Service#* – Type the service request number.
- Assigned to* – Choose the Employee ID of the Supervisor in charge from the popup.
- Crew* – Choose the Employee ID of the crew leader or person performing the work.
- Click **Add** .

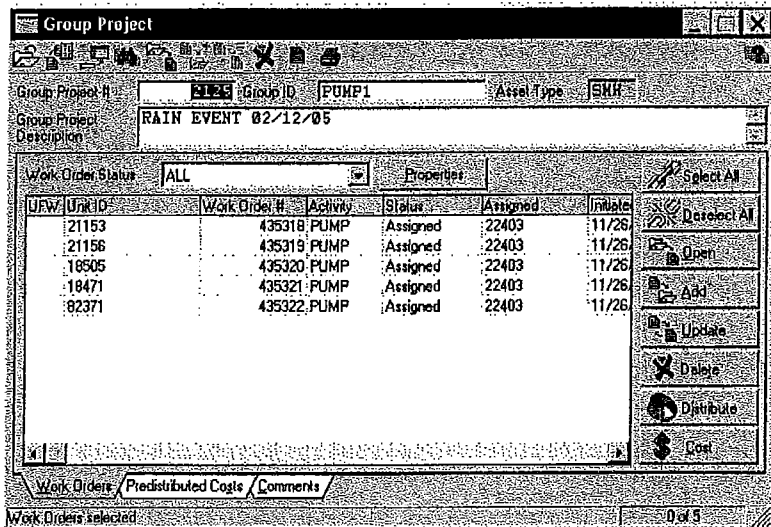
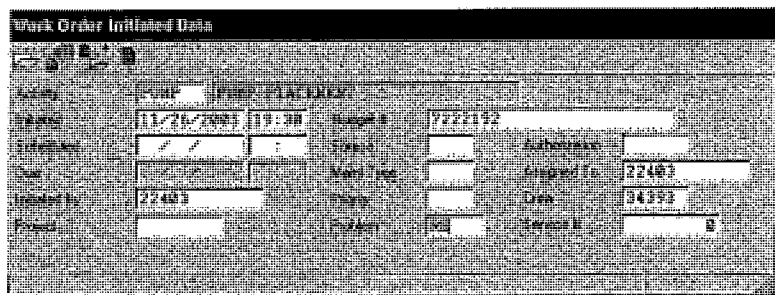
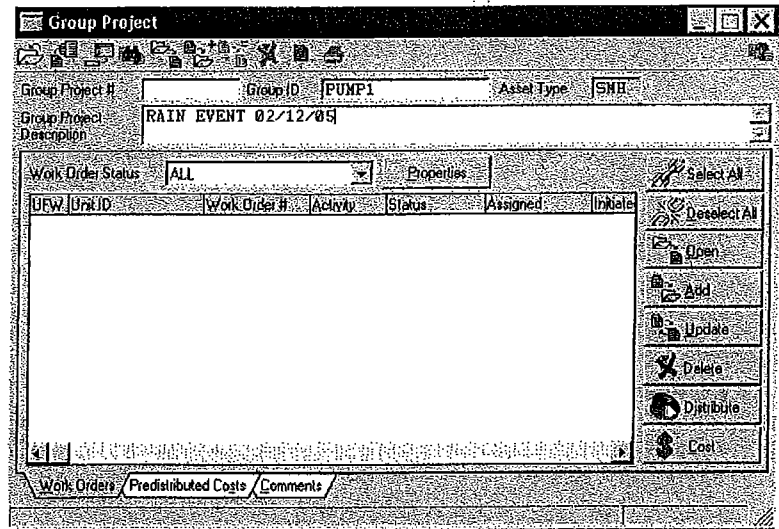


### Create Work Orders for a Group

1. From the menu bar choose:  
**Work Order → Group Project**
2. Click the **Work Order** tab.


#### Work Order Tab

3. *Group ID* – Choose **PUMP1** or **PUMP2** from the popup.
4. *Group Project Description* – Type a description of project and the date.
5. Click **Add**  to display the Work Order Initiated Data window.
6. *Activity* – Type **PUMP**.
7. *Initiated* – Enter the date and time when the work began setting up the pump.
8. *Initiated By* – Choose the Employee ID of the person that made the decision to set the pumps out.
9. *Budget #* – Always type **7222192**.
10. *Problem* – Type **RE** for rain event.
11. *Assigned To* – Choose the Employee ID of the Supervisor in charge from the popup.
12. *Crew* – Choose the Employee ID of the crew leader or person performing the work.
13. Click **Add** .
14. The list of work orders displays.




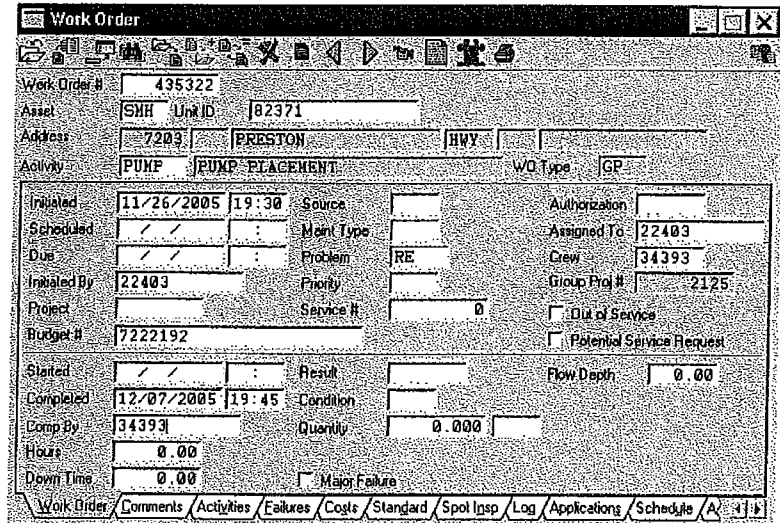


## Close Out PUMP Work Orders

 The PUMP work orders must be closed out when the pumps are removed from the field.

### Close Out Individual Work Orders

1. From the menu bar choose:  
**Work Order** → **Work Order**
2. *Work Order #* – Type the work order number.
3. Click **Load** .
4. *Completed* – Enter the date the pumps were removed from the field.
5. *Comp By* – Choose the Employee ID of the person that completed the work.



The screenshot shows a 'Work Order' window with the following data:

Work Order #	435322		
Asset	SMH	Unit ID	82371
Address	7203	PRESTON	HWY
Activity	PUMP	PUMP PLACEMENT	WQ Type GP
Inited	11/26/2005	19:30	Source
Scheduled	/ /	:	Maint Type
Due	/ /	:	Problem
Inited By	22403		Priority
Project			Service #
Budget #	7222192		
Started	/ /	:	Result
Completed	12/07/2005	19:45	Condition
Comp By	34393		Quantity
Hours	0.00		
Down Time	0.00		
			Flow Depth
			0.00
			Major Failure
			<input type="checkbox"/>
			Potential Service Request
			<input type="checkbox"/>
			Out of Service
			<input type="checkbox"/>
			Assigned To
			22403
			Crew
			34393
			Group Proj #
			2125

Menu bar: Work Order / Comments / Activities / Failures / Costs / Standard / Spot Insp / Log / Applications / Schedule / A / 11

**Close Out Group of PUMP Work Orders**

1. From the menu bar choose: **Work Order → Group Project**
2. Click the **Work Order** tab.


**Work Order Tab**

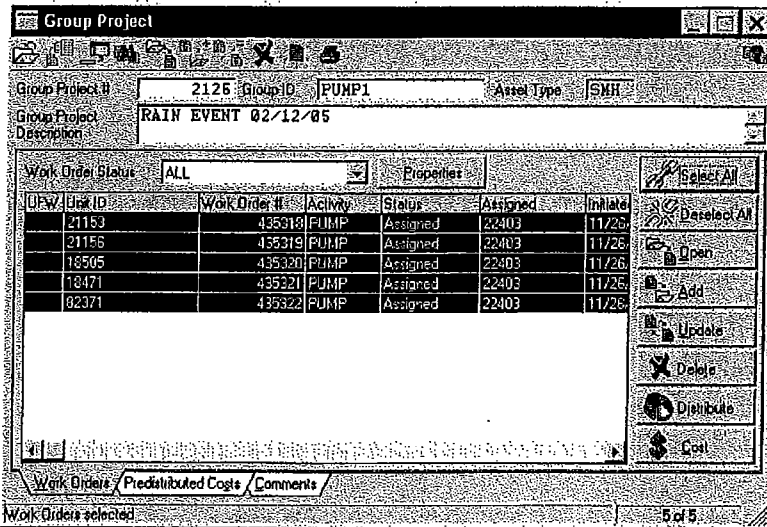
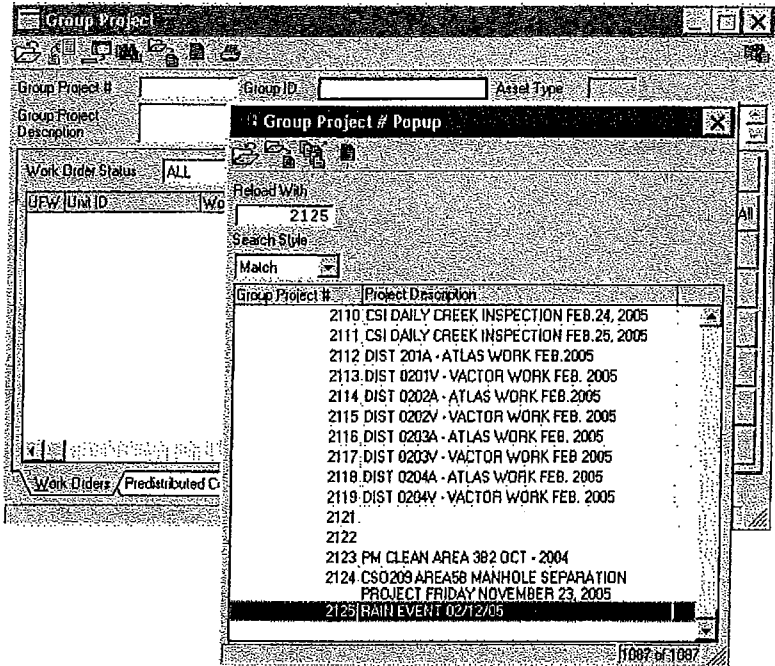
3. *Group Project #* – Press **Enter** to choose the project from the list.
4. Double-click the project number.
5. If the same crew completed the group of work orders, then click **Select All**




OR

If different crews completed each work order, then highlight the relevant work order from the list.

6. Click **Update**  to display the work order form.



7. *Completed* – Enter the date the pumps were removed from the field.
8. *Comp By* – Choose the Employee ID of the person that completed the work.
9. Click **Update** .

**Work Order Data**

Order Number: 2225 Order ID: PUMP1 Asset Type: JBRB

Description: RAIN EVENT 02-12-05

Scheduled	Start Date	End Date	Assignment
Priority	Source	Work Type	Service
Priority	Assigned To	Time	
Priority	Time	Work Order	0 00
Completed	12-07-2005 19:55	Created	
Priority	34393	Priority	0 00
Notes	0 00		

Buttons: Update / Comments / Additional Data



# Discharge Report

The Overflow Report form was designed in such way to efficiently enter the data in Hansen. The information gathered for the form are the same fields that need to be completed in Hansen.

**OVERFLOW REPORT FOR**

Asset: \_\_\_\_\_

Overflow Began: \_\_\_\_\_ Date: \_\_\_\_\_

Overflow Stopped: \_\_\_\_\_ Date: \_\_\_\_\_

Overflow Cause of Release:

- POWER Power Outage
- MECH Mechanical Failure
- OBST Sewer Main Obstruction
- ELEC Electrical

Est. Volume Released: \_\_\_\_\_

Cleanup Actions: \_\_\_\_\_

Impact Observed (Check as they apply):

- Debris
- Solids
- Fish Kill

Comments: \_\_\_\_\_

Name: \_\_\_\_\_

Overflow Stopped: \_\_\_\_\_

Additional Cause Info: \_\_\_\_\_

Repair Actions: \_\_\_\_\_

Discoloration in Stream: \_\_\_\_\_

Personal Hygiene Products: \_\_\_\_\_

Report Begun By (ID): \_\_\_\_\_ Report Completed By (ID): \_\_\_\_\_

Should correspond to asset record in Hansen

Initiated and Complete dates in Hansen

Obtained from the volume estimation guide. This information ins entered in Spot Inspection form DISMAT.

Describes what was done to clean up the discharge. Spot Inspection form DISCLN.

Documentation of the date, time and volume of what was hauled.

Activity Code on the work order.

Treatment plant or pump station

These serve as the Problem code in Hansen.

Additional information related to the cause of the release. Spot Inspection form DISCAU.

Indicates the impact caused by the overflow.

Additional information regarding the discharge.

MSD employee that first observed the discharge.

MSD employee that noted the completion date of the discharge.

Write the Hansen work order number and the initials of the person entering this data into Hansen.

## Completing the Discharge Report Form



The new Overflow Report form has been designed for ease of data entry into Hansen. Check boxes and blank fields correspond to entry fields in Hansen. The form must be filled out completely or the information must be provided to the person responsible for the data entry.

1. Wet Weather and Dry Weather check boxes correspond to the Activity code on the work order.
2. The Asset Type and Hansen ID number should correspond to the asset record in Hansen.
3. The Name field should indicate the name of the Treatment Plant or Pump Station. If you are reporting on a Manhole, no name is needed.
4. Overflow Began and Overflow Stopped should correspond to the release begin and end date/times. These will be entered in the Initiated Date and Completed Date fields on the Hansen work order.
5. One of the Cause of Overflow checkboxes MUST be checked. This will be entered in the problem field on the Hansen work order.
6. Estimated Volume should be obtained using the Volume Estimation Guide or calculation and will be entered on the Spot Inspection form DISMAT entry.
7. Additional Cause Information should specify detailed information about the cause of the release. This information will be entered on the Spot Inspection form DISCAU entry.
8. Cleanup Actions should specify what was done to cleanup the site after the discharge took place. This information will be entered on the Spot Inspection form DISCLN entry. If cleanup was not necessary, enter "Cleanup not needed." On the form and in the Spot Inspection for the DISCLN entry into Hansen. Examples of other entries include "MSD cleaned the area and "MSD raked and limed the area then swept and disposed of debris."
9. Actions taken to repair and /or mitigate release should contain information about any subsequent work that may have been required to repair or mitigate the cause of the release. This information will be entered on the Spot Inspection form DISREP entry. If repairs were not necessary, enter "Repairs not needed." In the Spot Inspection form DISREP entry. Examples of other entries include "MSD root cut to clean the line." Or "MSD excavated and repaired the sewer" and "MSD excavated and replaced 8 feet of PVC pipe."
10. The Comments line is included in case there is additional associated information which should be noted regarding this occurrence. This should only be used when information does not fit in any other the other categories indicated on the form. It might be a reminder to someone who will pick up action on this discharge to it might be something unusual about the discharge itself. These comments should be entered into the work order comments field in Hansen. This will only happen rarely.
11. Notifications should be specified and initiated if the call or notification was made by someone other than who is initiating or completing the form. These entries will be made in the work order log form with a DISNOT entry.
12. Report Begun By should be signed by the person who first observed the discharge. This should correspond to the Assigned to field on the work order screen and will be filled in with the employee's ID.
13. Report completed by should be signed by the person who noted that the discharge ended. This should correspond to the Completed By field on the work order screen and will be filled in with the Employee's ID. If the initiated by and completed by person are the same, then only one name needs to be indicated on the form. But the entry needs to be made in both places on the Hansen work order.
14. Hansen work order number and initials should be filled out with the number of the Hansen work order issued to the form entry and the initials of the person who performed the data entry. This will be used to verify information and for quality control.







## Enter Discharge Information in Hansen

Discharges from the sanitary sewer system are tracked with a work orders in Hansen. These work orders are created against the asset in which the discharge occurs. Remember – A pump station facility has a different asset record than the wet well just outside. If the wet well is where the discharge is coming from, you should attach the work order to the wet well asset record. You must be specific in choosing the correct asset.

### Locate the Asset

- From the menu bar choose:  
**Asset → Sewer →**  
 Sewer Manhole Inventory  
 Sewer Lift Station Inventory  
 Sewer Treatment Plant Inventory  
 Sewer Service Line Inventory

The Sewer Service Line Inventory is used when the Backup request was discharged from the cleanout at the exterior of the building or into the building itself.

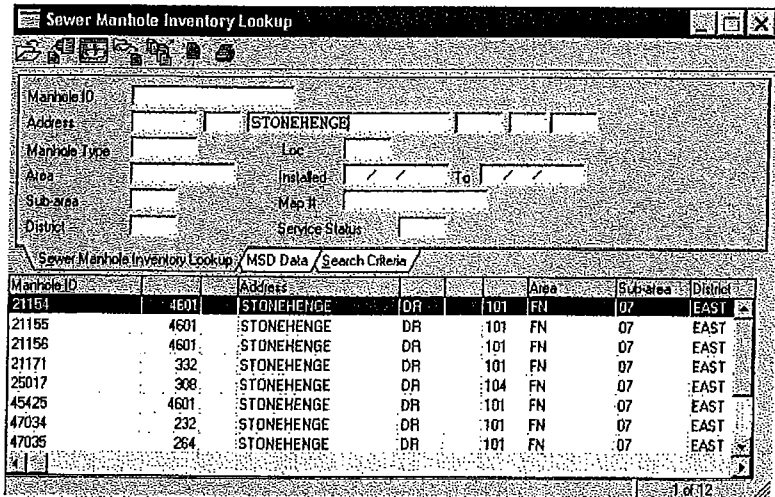
- Click **Lookup** .
- Address* – Type the street name of the asset.
- Click **Load** .
- Double-click the asset number from the list.
- Click the **Additional Data** tab.

### Additional Data Tab

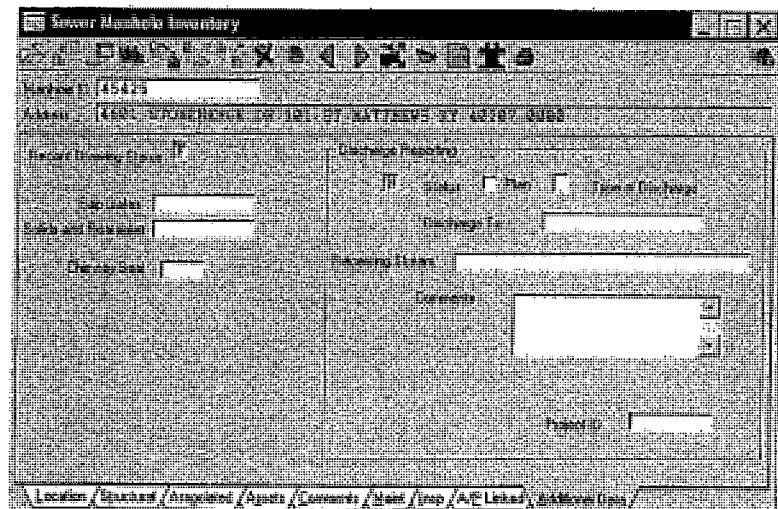
- For Reporting purposes, each manhole, pump station and treatment plant facility where discharges occur routinely, should have the Discharge Reporting section completed.

If this information has not been completed, consult field personnel to determine the appropriate values.


- If the asset is a Sewer Service Line, Click the **Associated** tab. Otherwise, continue with step 1 on page 18.




Manhole ID	Address	DR	Area	Sub-area	District
21154	4601 STONEHENGE	DR	101 FN	07	EAST
21155	4601 STONEHENGE	DR	101 FN	07	EAST
21156	4601 STONEHENGE	DR	101 FN	07	EAST
21171	332 STONEHENGE	DR	101 FN	07	EAST
25017	308 STONEHENGE	DR	104 FN	07	EAST
45425	4601 STONEHENGE	DR	101 FN	07	EAST
47034	232 STONEHENGE	DR	101 FN	07	EAST
47035	264 STONEHENGE	DR	101 FN	07	EAST



**Associated Tab**

 If the asset is a Sewer Service Line complete the following:

9. **Complex** – Verify the treatment plant from the popup to associate the discharge with the SSL. If the Complex field is empty, use the following steps to complete:

 You must have GIS ArcView Loaded before clicking the Map button.

10. Click **Map** .

11. Select the Sewer Line Type selection.

12. Click on ArcView Projects and choose a project from the list.

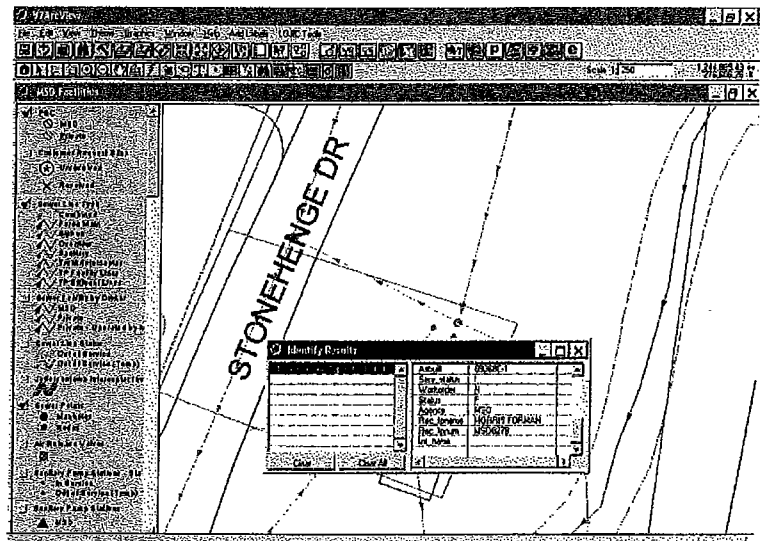
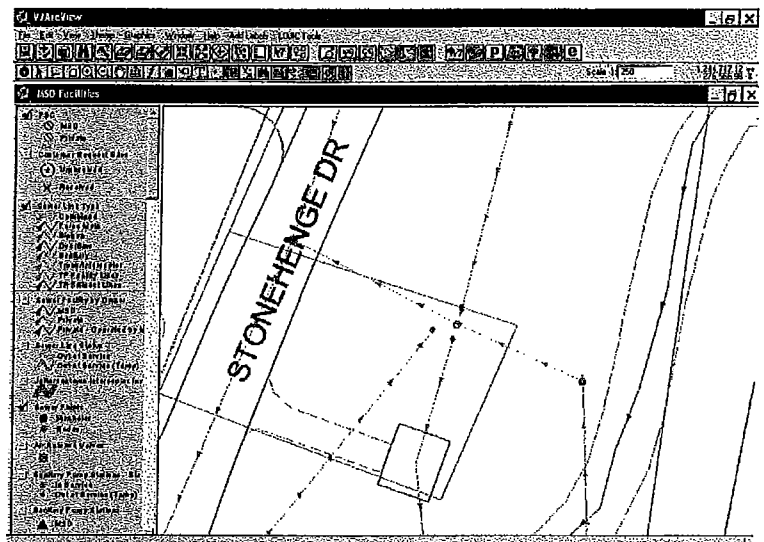
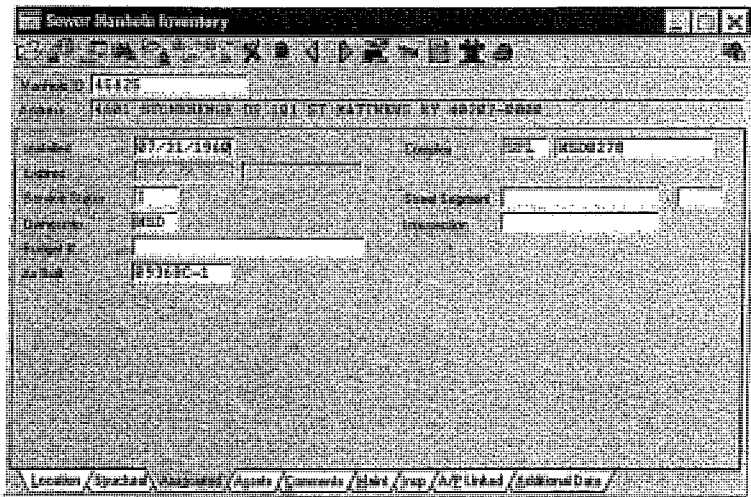
13. Click the **Identify** button .

14. Click on a sewer line to display the Sewer Line Data popup.


15. Scroll down on the right side of the popup to locate the Treatment Plant name and Treatment Plant number.

Go back to Hansen and type the information in the Complex field.

17. Click **Update** .




### Create Work Order for Discharge

18. Click the **Action** button  and choose **Create Work Order**.
19. Click the **Work Order** tab.

#### Work Order Tab




20. *Asset* – Choose an asset from the popup.
21. Press the **Tab** key on the keyboard.
22. *Unit ID* – This field should automatically populate with the previous asset.
23. *Activity* – Choose one of two codes from the popup:  
**DISREV** for discharges that happen during a rain event

**DISDW** for discharges that happen in dry weather due to an obstruction.

24. *Initiated* – Enter the date and time when the discharge began.
25. *Initiated By* – Choose the Employee ID of the person entering the work order.
26. *Budget #* – Type the related cost center.
27. *Problem* – Refer to the paper form completed in the field. Type the problem code selected on that form.
28. *Service #* – Type the service request number.
29. *Assigned to* – Choose the Employee ID of the employee responding to the discharge from the popup.
30. *Crew* – Choose the Employee ID of the employee performing the work.
31. Click **Add** .

32. Click the **Log** tab.

#### Log Tab

33. Click **Insert** .
34. *Log Type* – Press **Enter** to choose a contact method.
35. *Log Date* – Enter the contact date and time.
36. *Entered By* – Type your Employee ID.
37. *Comments* – Type additional information related to the contact.
38. Click **Add**  and **Close** .

**Work Order**

Work Order #: 435322  
 Asset: SWH Unit ID: 42345  
 Address: 3607 CASCADE RD  
 Activity: DISDW DRY WEATHER DISCHARGE WO Type: [ ]

Initiated: 11/26/2005 21:36 Source: [ ] Authorization: [ ]  
 Scheduled: [ ] Main / type: [ ] Assigned To: 22403  
 Due: [ ] Problem: CAP Crew: 33983  
 Initiated By: 34213 Priority: [ ]  
 Project: [ ] Service #: [ ] 0  Out of Service  
 Budget #: 7222122  Potential Service Request  
 Started: [ ] Result: [ ] Flow Depth: 0.00  
 Completed: [ ] Condition: [ ]  
 Comp By: [ ] Quantity: 0.000  
 Hours: 0.00  
 Down Time: 0.00  Major Failure

Work Order / Comments / Activities / Failures / Costs / Standard / Spot / Log / Applications / Schedule / A / 3

#### Problem Codes

- **POWER** Power Outage caused by LG&E such as during a storm or due to problem in the line
- **MECH** Mechanical Failure of equipment
- **OBST** Sewer Main Obstruction used for anything **NOT** a GB or R.
- **CAP** Lack of System Capacity such as during a rain event
- **PUMP** Pumped Overflow
- **STRUC** Structural Failure such as a sewer collapse
- **FLOOD** Corps Pump Station Operation
- **UPSET** Spill at Treatment Plant
- **PPI** Private Property Issue (for SSLs only)
- **R** Obstruction in mainline due to roots
- **GB** Grease Blockage
- **ELEC** Electrical such as when pumps are tripped due to a power surge or there is an electrical problem with a pump station or piece of equipment at the station.
- **UD** when the sewer is obstructed or damaged by another utility (LG&E / LWC) or a contractor either private or working for another utility include MSD.

**Work Order**

Work Order #: 435322  
 Asset: SWH Unit ID: 82371  
 Address: 7283 PRESTON RD  
 Activity: PUMP PUMP PLACEMENT WO Type: CP

Log Type	Description	Log Date	To	Entered

Work Order / Comments / Activities / Failures / Costs / Standard / Spot / Log / Log /

**Log**


Log Type: CALL PHONE CALL NO CUSTOMER  
 Log Date: 01/22/2006 01:47 To: [ ]  
 Entered By: 13643  
 Comments: [ ]


Log

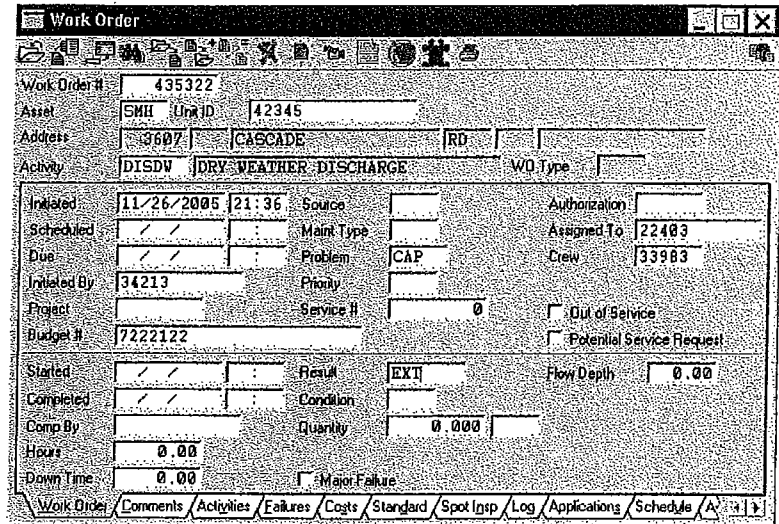


### Completing Discharge Work Order

From the menu bar choose:  
**Work Order → Work Order**




2. *Work Order #* – Type the work order number.
3. Click **Load** .
4. *Completed* – Enter the date the discharge ended.
5. *Comp By* – Choose the Employee ID of the person in charge of overseeing the discharge and resulting actions.
6. *Result* – Complete this field if the discharge was on a SSL. Choose **INT** or **EXT** from the popup.

 Choose INT if the discharge occurred both in and out of the building.



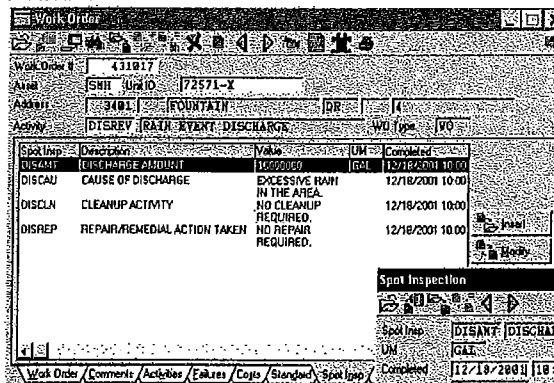
Work Order # 435322  
 Asset SHU Ura ID 42345  
 Address 3607 CASCADE RD  
 Activity DISDW DRY WEATHER DISCHARGE W/O Type  
 Inited 11/26/2005 21:36 Source  
 Scheduled / / Maint Type  
 Due / / Problem CAP  
 Inited By 34213 Priority  
 Project Service # 0  
 Budget # 7222122  
 Started / / Result EXT  
 Completed / / Condition  
 Comp By Quantity 0.000  
 Hours 0.00  
 Down Time 0.00  
 Main Failure  
 Authorization  
 Assigned To 22403  
 Crew 33983  
 Out of Service  
 Potential Service Request  
 Flow Depth 0.00

### Spot Inspection Tab

7. Click the **Spot Inspection** tab.
8. Highlight the Spot Inspection type.
9. Click **Modify** .
10. Complete the information on the spot inspection.
11. Click **Update** .
12. Click **Close** .
13. Complete the remaining spot inspections.

**DISAMT** – (Discharge Amount)

### DISMAT



Spot Insp	Description	Value	UM	Completed
DISAMT	DISCHARGE AMOUNT	1000000	GM	12/18/2001 10:00
DISCAU	CAUSE OF DISCHARGE	EXCESSIVE RAIN IN THE AREA.		12/18/2001 10:00
DISCLN	CLEANUP ACTIVITY	NO CLEANUP REQUIRED.		12/18/2001 10:00
DISREP	REPAIR/REMEDIAL ACTION TAKEN	NO REPAIR REQUIRED.		12/18/2001 10:00

Spot Inspection  
 Spot Insp DISAMT DISCHARGE AMOUNT  
 UM GM  
 Completed 12/18/2001 10:00  
 Value 1000000  
 Comments

**DISCAU** – (Cause of Discharge) Type additional information about the cause. If the cause of the discharge is not known at the time of the report, type that in the value. **DO NOT enter information in the Comments field!**

This information should both match and provide more explanation about what happened than is indicated by the Problem Code.

If the cause of the discharge is not known at the time the report is due to be submitted to DOW, enter “The cause of this discharge has not been determined at the time of the report. An update will be provided on the monthly report.”

**DISCLN** – (Clean up Activity) What was done to clean up the site after the discharge. If cleanup was not needed, enter “Cleanup not needed.”

Examples of cleaning actions:  
 “Area was washed down”  
 “Area was raked and debris hauled”  
 “MSD cleaned the area”

If work order were initiated in Hansen to mitigate the discharge such as a sewer flush, enter “Work Order # - MSD flushed area” or “Work Order # - MSD washed down the site.”

**DISREP** – (Repair / Remedial Action Taken) What actions have been taken to repair or mitigate the discharge. Enter information about subsequent work that is required. If repairs are not needed, enter “Repairs not needed.”

Examples of Repair actions:  
 ”Pump was repaired.”

If work order were initiated in Hansen to repair, enter “Work Order # - MSD root curt to clear the obstruction.” Or “Work Order # - MSD excavated and replaced 5’ 6” of PVC pipe.”

**DISCAU**

The screenshot shows a 'Work Order' window for Work Order # 431817. The address is 3481 Fountain Dr. The activity is DISREP RAIN EVENT-DISCHARGE. The table below shows the following entries:

Spot Insp	Description	Value	UM	Completed
DISAMT	DISCHARGE AMOUNT	1000000	GAL	12/18/2001 10:00
DISCAU	CAUSE OF DISCHARGE	EXCESSIVE RAIN IN THE AREA		12/18/2001 10:00
DISCLN	CLEANUP ACTIVITY	NO CLEANUP REQUIRED.		12/18/2001 10:00
DISREP	REPAIR/REMEDIAL ACTION TAKEN	NO REPAIR REQUIRED.		12/18/2001 10:00

The Spot Inspection window shows:  
 Spot Insp: DISCAU CAUSE OF DISCHARGE  
 UM: UM  
 Completed Value: 12/18/2001 10:00  
 Value: EXCESSIVE RAIN IN THE AREA.

**DISCLN**

The screenshot shows a 'Work Order' window for Work Order # 431817. The address is 3481 Fountain Dr. The activity is DISREP RAIN EVENT-DISCHARGE. The table below shows the following entries:

Spot Insp	Description	Value	UM	Completed
DISAMT	DISCHARGE AMOUNT	1000000	GAL	12/18/2001 10:00
DISCAU	CAUSE OF DISCHARGE	EXCESSIVE RAIN IN THE AREA		12/18/2001 10:00
DISCLN	CLEANUP ACTIVITY	NO CLEANUP REQUIRED.		12/18/2001 10:00
DISREP	REPAIR/REMEDIAL ACTION TAKEN	NO REPAIR REQUIRED.		12/18/2001 10:00

The Spot Inspection window shows:  
 Spot Insp: DISCLN CLEANUP ACTIVITY  
 UM: UM  
 Completed Value: 12/18/2001 10:00  
 Value: NO CLEANUP REQUIRED.




**DISREP**

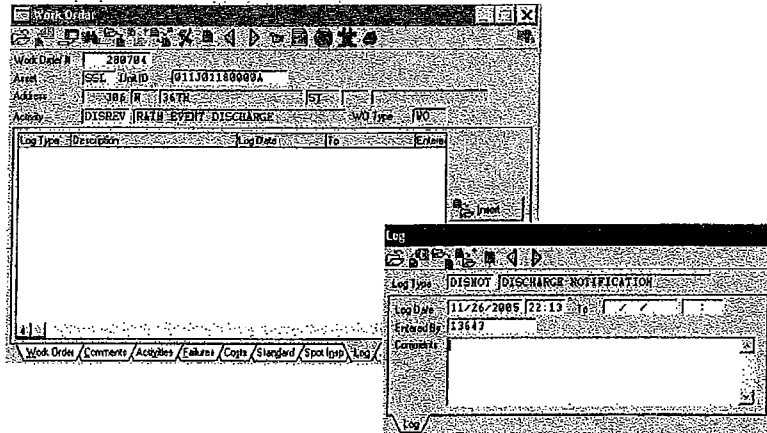
The screenshot shows a 'Work Order' window for Work Order # 431817. The address is 3481 Fountain Dr. The activity is DISREP RAIN EVENT-DISCHARGE. The table below shows the following entries:

Spot Insp	Description	Value	UM	Completed
DISAMT	DISCHARGE AMOUNT	1000000	GAL	12/18/2001 10:00
DISCAU	CAUSE OF DISCHARGE	EXCESSIVE RAIN IN THE AREA		12/18/2001 10:00
DISCLN	CLEANUP ACTIVITY	NO CLEANUP REQUIRED.		12/18/2001 10:00
DISREP	REPAIR/REMEDIAL ACTION TAKEN	NO REPAIR REQUIRED.		12/18/2001 10:00


The Spot Inspection window shows:  
 Spot Insp: DISREP REPAIR/REMEDIAL ACTION TAKEN  
 UM: UM  
 Completed Value: 12/18/2001 10:00  
 Value: NO REPAIR REQUIRED.

14. Click Update



15. *Samples* – If the paper form indicated that samples were taken, click **Insert** .
16. *Spot Insp* – Choose **DISSAM** from the popup.
17. *Completed* – Enter the date the sample was tested.
18. *Value* – Type the LIMS ID number.
19. Click **Add** .
20. Click **Close** .
21. Click the **Log** tab.



**Log Tab**

22. Click **Insert** .
23. *Log Type* – Choose **DISNOT** (Discharge Reporting) from the popup.
24. *Log Date* – Enter the date and time the call was made.
25. *Entered By* – Choose the Employee ID of the person that made the call from the popup.
26. *Comments* – Type information about who was contacted.


Type the following:  
 To the Ky Division of Water (KDOW).  
 KDWO 429-7122 or 1-800-928-2380  
 after 5 PM.

27. Click **Add** .
28. Click **Close** .
29. Repeat this process for the Health Department or any other agency contacted.
30. When calling the BOH recording (574-6650), leave a message about the discharge. **DO NOT** press 1. This will automatically page the on-call staff.




## Hauling Sewage with Tanker Trucks


Start this process from the asset where the hauling will occur:

1. Click the **Action** button  and choose **Create Work Order**.
2. Click the **Work Order** tab.

### Work Order Tab

 The asset and Unit ID fields fill in automatically when you start from the asset form.


3. *Asset* – Choose the type of facility that the sewage is being hauled from.
4. *Unit ID* – Unit ID of selected asset.
5. *Activity* – Type **HAULOP** for Hauling Sewage Operations.
6. *Initiated* – Enter the date and time when the hauling began.
7. *Initiated By* – Choose the Employee ID of the person entering the work order.
8. *Assign To* – Choose the Employee ID of the person performing the hauling.
9. *Budget #* – Choose the budget number based on the facility the sewage is being hauled from.
10. *Completed* – Enter the date and time when the hauling stopped.
11. *Comp By* – Choose the Employee ID of the person updating the work order.
12. *Quantity* – Type the amount hauled (in gallons) and fill out the units.

 If one hauling event results in more than 99,999.99 GAL being hauled, then multiple WO have to be created to capture the volume of sewage hauled.


If the asset is not a PS or TP, verify that the asset being hauled from has a Function Location identified on the Additional Data Tab of the asset. If the asset is not associated with a Functional Location then this data will not show up on the Hansen Report IMSWO3004. Contact GIS Services to adjust.

## Generator Placement

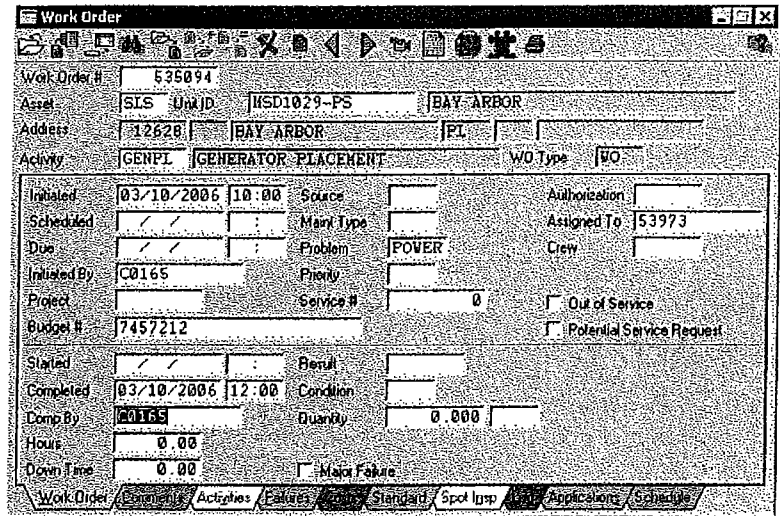
Starting this process from the asset where the generator will be placed.

1. Click the **Action** button  and choose **Create Work Order**.
2. Click the **Work Order** tab.

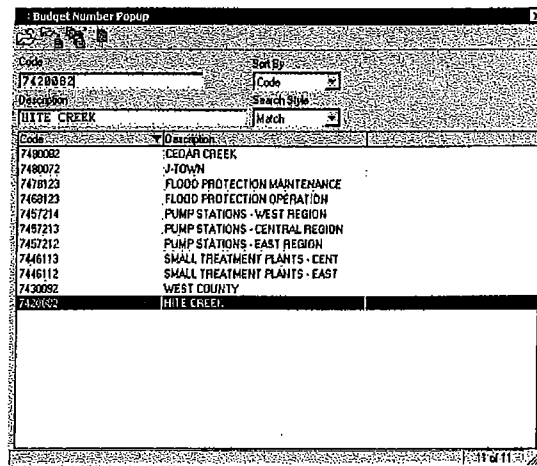
### Work Order Tab

 The asset and Unit ID fill in automatically when you start from the asset form.

3. *Asset* – Type of facility that the generator is placed at.
4. *Unit ID* – Unit ID of selected asset.
5. *Activity* – Type **GENPL** for Generator Placement Operations.
6. *Initiated* – Enter the date and time when the generator was placed and turned on.
7. *Initiated By* – Choose the Employee ID of the person entering the work order.
8. *Assign To* – Choose the Employee ID of the person performing the hauling.
9. *Budget #* – Choose the budget number based on the facility the generator is placed at.
10. *Completed* – Enter the date and time when the generator is turned off.
11. *Comp By* – Choose the Employee ID of the person updating the work order.



Work Order # 535094  
 Asset SLS Unit ID HSD1029-PS BAY-ARBOR  
 Address 12628 BAY-ARBOR FL  
 Activity GENPL GENERATOR PLACEMENT WO Type WO  
 Initiated 03/10/2006 10:00 Source [ ] Authorization [ ]  
 Scheduled [ ] [ ] [ ] [ ] Many Type [ ] Assigned To 53973  
 Due [ ] [ ] [ ] [ ] Problem POWER Crew [ ]  
 Initiated By C0165 Priority [ ]  
 Protect [ ] Service # 0  Out of Service  
 Budget # 7457212  Potential Service Request  
 Started [ ] [ ] [ ] [ ] Result [ ]  
 Completed 03/10/2006 12:00 Condition [ ]  
 Comp By C0165 Quantity 0.000  
 Hour 0.00  
 Down Time 0.00  Make Failure  
 Work Order: [ ] Activities [ ] Dates [ ] Standard [ ] Spot Insp [ ] Applications [ ] Schedule [ ]



Budget Number Popup  
 Code 7420002 Set By [ ]  
 Description HITE CREEK Search Style [ ]  
 Match [ ]  

Code	Description
740002	CEDAR CREEK
7480072	J-TOWN
7478123	FLOOD PROTECTION MAINTENANCE
7469123	FLOOD PROTECTION OPERATION
7457214	PUMP STATIONS - WEST REGION
7457213	PUMP STATIONS - CENTRAL REGION
7457212	PUMP STATIONS - EAST REGION
746113	SMALL TREATMENT PLANTS - CENT
746112	SMALL TREATMENT PLANTS - EAST
740002	WEST COUNTY
7420002	HITE CREEK

 7/11/06

# **APPENDIX D**

## **OVERFLOW NOTIFICATION SIGNAGE**

**(TEMPORARY)**



# PRECAUCIÓN



El agua de superficie en esta área puede estar contaminada debido a un desborde temporal del alcantarillado sanitario. Por favor evite todo contacto físico con aguas residuales por el riesgo de salud que representa. Para más información, llame a MSD al 587-0603.



**MSD**

Para servicio e información en español, llamar a 540-6423 de 8:00AM a 5:00PM, de Lunes a Viernes.

# CAUTION



The surface water in this area may be contaminated by a temporary overflow of a sanitary sewer.

Please avoid physical contact as it may pose a health risk.

For additional information, call MSD at 587-0603.



MSD

# **APPENDIX E**

## **VOLUME ESTIMATION GUIDE**



**Overflow Volume Estimation Guide**  
**Prepared for Field Use**  
**Volumes (gallons)**

<b>Manhole Overflow Condition</b>	<b>Rim/Casting On</b>			
	Height of Flow above Rim/Casting	Minute	Hour	Day
	0.04 foot (0.5 inches)	3	180	4,320
	0.08 foot (1 inch)	9	540	12,960
	0.17 foot (2 inches)	25	1,500	36,000
	0.25 foot (3 inches)	54	3,240	77,760
	0.33 foot (4 inches)	100	6,000	144,000
	0.5 foot (6 inches)	244	14,640	351,360
	<b>Rim/Casting 1/4 Off</b>			
	Height of Flow above Rim/Casting	Minute	Hour	Day
	0.5 foot (6 inches)	450	27,000	648,000
	1 foot	1,350	81,000	1,944,000
	<b>Rim/Casting 1/2 Off</b>			
	Height of Flow above Rim/Casting	Minute	Hour	Day
	0.5 foot (6 inches)	900	54,000	1,296,000
	1 foot	2,700	162,000	3,888,000
	2 feet	6,000	360,000	8,640,000
	<b>Rim/Casting Off</b>			
	Height of Flow above Rim/Casting	Minute	Hour	Day
0.5 foot (6 inches)	1,800	108,000	2,592,000	
1 foot	5,300	318,000	7,632,000	
2 feet	12,000	720,000	17,280,000	
3 feet	14,800	888,000	21,312,000	
4 feet	16,700	1,002,000	24,048,000	

<b>Pumped Overflows</b>	<b>Portable Pumps</b>			
		Minute	Hour	Day
	2" Pump at Full Throttle	150	9,000	216,000
	3" Pump at Full Throttle	300	18,000	432,000
	4" Pump at Full Throttle	600	36,000	864,000
	6" Silent Knight Pumps at Idle	1,100	66,000	1,584,000
	6" Silent Knight Pumps at Full Throttle	1,300	78,000	1,872,000
	<b>Highgate Springs Pump Station</b>			
		Minute	Hour	Day
	Overflow with 1 pump running	3,100	186,000	4,464,000
Overflow with 2 pump running	6,200	372,000	8,928,000	
Overflow with 3 pump running	9,300	558,000	13,392,000	

<b>Owner Specific Locations</b>	<b>Location</b>			
		Minute	Hour	Day
	Middle Fork @ Breckinridge Lane	1,200	72,000	1,728,000
	Southeastern Diversion	4,150	249,000	5,976,000
	J-Town Siphon	8,300	498,000	11,952,000

**Notes:**

1. Many locations have actual flow meters installed. Metered flows should be used for reporting where available.
2. Other methods of estimation are acceptable, such as estimating the number of 5 gallon buckets or the number of 55 gallon drums, or multiplying the length times the width time the depth of the overflow and multiplying by 7.48 to convert the volume to gallons.