United States and State of Indiana v. City of Fort Wayne, Indiana

Consent Decree
Appendix 2

Capacity, Management, Operations, and Maintenance Program

CITY OF FORT WAYNE
DIVISION OF UTILITIES

CMOM PROGRAM

DECEMBER 2007

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GLOSSARY

CITY OF FORT WAYNE, INDIANA
CAPACITY, MANAGEMENT, OPERATION AND MAINTENANCE (CMOM) PROGRAM
2007

1.0 INTRODUCTION

Fort Wayne's Water Pollution Control Utility is responsible for the management and operation of the City's sanitary sewage collection and treatment system including: design, construction, operation, maintenance, and repair of all sewers and sewage treatment facilities. The City's separate sanitary sewer system (SSS) was designed to convey wastewater to the City's Water Pollution Control Plant located at 2601 Dwenger Avenue in Fort Wayne, Indiana (WPCP). When wastewater flows in the SSS exceed capacity, sanitary sewer discharges (SSDs) can occur. Among the causes of SSDs are: infiltration of groundwater or stormwater; pipe defects; vandalism; and blockages. An SSD is defined as any discharge to waters of the State as defined by applicable state law, or to navigable waters of the United States as defined by Section 502(7) of the Clean Water Act, 33 U.S.C. § 1362(7), from Fort Wayne's Sanitary Sewer System. Although SSDs can occur during both dry and wet weather, in the City's experience, the SSDs associated with the SSS are most often associated with wet weather. SSDs can occur out of manholes and onto City streets, sidewalks and other terrestrial locations, sometimes reaching waterbodies.

The SSS is a critical element in the success of wastewater treatment. EPA's 2005 document, *Guide for Evaluating Capacity, Management, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems* (hereinafter referred to as "guidance document") identifies criteria used by the EPA to evaluate a separate sanitary sewer system's collection system's management operation and maintenance program activities. The City developed its CMOM program (described herein) according to this EPA guidance document to address its SSS. The City's combined sewer system is addressed separately via the City's Amended Combined Sewer System Operational Plan (CSSOP) and Long-Term Control Plan (LTCP).

1.1 PURPOSE

The purpose of a CMOM approach is to allow sanitary sewer system owners and operators to provide/maintain a high level of service to customers while reducing regulatory noncompliance. According to the guidance document, this includes standard operation and maintenance activities already in place, with an additional information management requirement, to:

- Better manage, operate, and maintain collection systems
- Investigate capacity constrained areas of the collection system
- Proactively prevent SSDs

- Respond to SSD events

In order to provide such services, the City intends to continue to manage, operate and maintain its SSS and ensure that sewage is transported to the WPCP in a safe and effective manner.

1.2 GENERAL INFORMATION - COLLECTION SYSTEM DESCRIPTION

The City's SSS transports sewage from residential homes and businesses to the WPCP for treatment. The City is currently responsible for 1281 miles of sewers and approximately 30,480 manholes from a service area approximately 152 square miles in size. This includes:

- Combination sewers = 346 miles
- Sanitary sewers = 897 miles
- Relief sewers = 37. miles

As of 2000, the population for this service area was approximately 240,000.

The majority of the SSS's sewers operate by gravity drainage flow. In areas where gravity flow is not currently available, 35 wastewater pump stations pump wastewater through special sanitary sewers called force mains to locations where gravity flow is available.

The City's sewer collection system was started well over 125 years ago. The following provides a breakdown summary of the age of the City's sewer system pipes:

- 0-24 years = 14.6%
- 25-49 years = 47.0%
- 50-74 years = 11.4%
- 75-99 years = 15.9%
- 100-125 years = 9.6%
- > 125 years = 1.5%

1.3 REGULATORY REQUIREMENTS

The Clean Water Act's National Pollutant Discharge Elimination System (NPDES) program prohibits discharge of pollutants from any point source into the Nation's waters except as authorized under an NPDES permit. NPDES permits issued to POTWs typically contain conditions requiring proper operation and maintenance practices based upon 40 CFR 122.41(e) ("The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and relative appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit."). The City's current NPDES Permit NO.

IN0032191 was issued December 1, 2004 and modified via a modified permit issued in 2007 with an effective date of December __, 2007.

1.4 GOALS OF THE UTILITY

In 2005, the City Utilities adopted a Strategic Business Plan with the following elements:

Vision: *By delivering high value services, City Utilities will be the utility of choice for our community.*
Mission Statement: *Our mission is to continue to provide water, wastewater and stormwater services for the community in an efficient, effective and highly responsive manner.*

Goal 1: Managing **regulatory** response so that it reflects, to the extent possible, community values and priorities for the allocation of resources.

Goal 2: Making wise and timely investments in **technology** to enhance the performance of the Division of Public Works and City Utilities.

Goal 3: Providing high value services to all **customers** and other stakeholders to build long lasting, positive relationships with our community.

Goal 4: Developing a **growth** strategy that allows the Division of Public Works and City Utilities to address operational needs, fund growth, and remain competitive.

Goal 5: Developing an **asset management** program that efficiently preserves assets while ensuring reliability and meeting customer needs.

Goal 6: Creating a **learning organization** that is efficient, effective and promotes an inspired and accountable workforce.

As documented in the Strategic Business Plan, the City recognizes the importance of using information collection and management practices to tracking how the elements of the CMOM program are meeting performance goals, and whether overall system efficiency is improving. Capital improvements, financial management, asset management and O&M planning activities have been tracked for many years. Performance goals related to wastewater and stormwater management are designed to be flexible to allow WPCM to respond to new priorities as well as unexpected events, such as extreme weather. Therefore, priorities within these goals are constantly being realigned. Maintaining the value of capital assets (the collection system) is a goal of the CMOM program. To track progress toward the City's goals, the City intends to evaluate the following activities on an annual basis:

- Continue to develop and implement the City's CSO reduction projects as part of the Long-Term Control Plan (LTCP)

- Continue with CSO Ponds Master Planning (which is to include a an equalization facility to mitigate SSDs from the City's North Maumee interceptor)
- Continue with WPCP plant upgrades and necessary rehabilitation
- Continue to implement the Combined Sewer Capacity Improvement Program (CSCIP)
- Continue the Fats, Oils and Grease (FOG) Task Force
- Continue Lift Station Task Force
- Degrease 520,000 linear feet of sewer pipe per year
- De-root 210,000 linear feet of sewer pipe per year
- Clean 5,600 catch basin and inlet structures per year
- Televise 135,000 linear feet of sewer pipe per year
- Clean 95,220 feet of sewer pipe per year (this will be represented as a support to the TV program in the future)
- Flush 130,000 linear feet of sewer pipe per year
- Inspect 450 manholes per year
- Budget a minimum of $2 million per year for rehab/repair/replace of small, medium and large diameter pipe
- Continue to design and construct sanitary sewer capacity projects

2.0 COLLECTION SYSTEM CAPACITY, MANAGEMENT, OPERATION, AND MAINTENANCE PROGRAMS

The key elements of the City's CMOM program will be presented in detail in the following sections:

- Collection System Management
- Collection System Operation
- Equipment and Collection System Maintenance
- Sewer System Capacity Evaluation

2.1 COLLECTION SYSTEM MANAGEMENT

Collection system management activities form the structure for effectively operating and maintaining the system.

2.1.1 ORGANIZATIONAL STRUCTURE

The City's Water Pollution Control Utility (City Utilities) is responsible for the management and operation of the City's SSS, combined sewers and WPCP. The Director of City Utilities has primary responsibility for the administration of the entire sewage system including: design, construction, operation, maintenance, and repair of all sewers and sewage treatment facilities.

The Director manages four groups of departments related to the City's sewage collection and treatment programs: Water Resources, Utility Administration (UTA),WPCP, and the Water Pollution Control Maintenance (WPCM) Department.

Water Resources is responsible for the planning and administration of capital projects, service extension permits, and maintaining all sewer maps and GIS infrastructure data. Water Resources is also responsible for planning, evaluating, and developing projects; development, management, and implementation of the capital improvement plan; acquisition of easements and property; and project management from conception through design, construction, completion, and acceptance of the project.

Utility Administration group is responsible for accounting, budgeting, and customer service. They also take the lead in the preparation of rules, regulations, and legislation required to operate City Utilities and for communicating about City Utility policies, procedures and programs.

The WPCP group has the responsibility for operating and maintaining the wastewater treatment plant, one package treatment plant, mechanical regulators, and pumping stations. It is also responsible for regulating industrial waste discharges, pretreatment programs, sampling, analytical laboratory operation, and treatment facilities.

The Water Pollution Control Maintenance (WPCM) group is responsible for both the sanitary and stormwater collection systems, as well as, all in-house sewer-related maintenance and repair functions of the WPC Utility. The WPCM group is involved in a host of other activities including, but not limited to: preventive maintenance, reactive maintenance, emergency maintenance, information gathering, system monitoring, scheduling, and maintenance tracking.

An organizational chart for WPCM is presented in Exhibit A. The WPCM group is organized into 5 functional areas illustrated in Exhibit B and introduced below.

Area	**Primary Function(s)**
1. Maintenance	* Inspections * Cleaning
2. Construction	* Repairs & Replacements
3. CSO Program	* Monitoring CSOs
4. Administrative	* Management Team * Dispatching * Investigations * Storeroom/Yard Inventory
5. Training	* Training

The purpose of Exhibit B is to highlight primary functions within each of the 5 areas. These designations reflect normal day-to-day operations. As can be seen, much of the work done by

the WPCM group relates to information gathering, scheduling, coordination and preventive maintenance. With the exception of the Administrative area, each of the functional areas includes a Supervisor or a Program Manager to report to the Superintendent. The Administrative area is supervised by the Superintendent. A brief description of each area is below.

Maintenance: This area is responsible for overseeing the scheduling of inspections and cleaning for the group. The Operations group performs functions in both areas as needed. The construction group has three crews dedicated to each (3 in stormwater and 3 in sanitary).

Reactive TV inspection and cleaning is performed as requested by the investigators, other areas of the group, or work requested by other groups are performed in this area. This area is also responsible for inspecting and cleaning combined sewers, interceptors and control structures. Details on inspecting and cleaning these sewers may be found in section 2.3.3.

Scheduled preventive maintenance TV inspection and sewer cleaning (cleaning, flushing, derooting, degreasing) operations are also done in this area.

Construction: The Construction area teams perform minor- to moderately-sized repairs and replacements on various elements of the collection system.

CSO Program: The CSO Program area collects CSO flow and rain data from flow meters and the rain gage network and prepare required regulatory reports. It also installs flow meters and helps to maintain the meters.

Administrative: This area is responsible for initiating and scheduling work, investigating customer complaints, managing the replacement materials inventory and preparing annual budgets.

The dispatcher in this area is the first line of contact for the public during normal working hours. The dispatcher initiates "service request" paperwork for customer calls in the department's computer system if a field investigation is needed. After this initial field assessment, the dispatcher may also create "work order" paperwork detailing additional field work required. The dispatcher also processes reports once the investigators are done with a call. All records are maintained in an organized manner and available to City personnel.

The special investigators respond to customer complaint-driven "service requests". They perform field investigations/analysis and then report their findings back to the dispatcher as needed.

During evening hours the night investigator performs the tasks of both the dispatcher and a special investigator. During late night, calls are routed to the night investigators via a pager/call back system. Night investigators in turn investigate complaints or notify "on-call" supervisors if the reported problem warrants additional evaluation or supervision.

The Management team is responsible for scheduling reactive and proactive work activities, creating crew assignments and disseminating work to the appropriate crews. Supervisors and Program Managers also act a liaisons between the crews, the Superintended, and other City departments.

The Superintendent is in charge of the WPCM group and reports to the Director. Although the Superintendent will normally not be personally involved in most service calls, he/she is administratively responsible for activities performed by WPCM, including all fiscal and budgetary matters and coordination with the Director's office. The Superintendent also serves as a valuable technical resource for the design, construction and maintenance of collection systems projects and is often involved in devising strategies and directing actions to solve the most complicated problems.

Administrative support to the WPCM group and storeroom services relating to materials inventory tracking are also provided by this area.

Training: This area is responsible for planning, developing, and implementing training and safety programs for the department.

2.1.2 TRAINING

The City employs a full-time Utility Maintenance Training Coordinator Program Manager . This position is responsible for developing, implementing and scheduling training programs within the WPCM and the City's Stormwater Maintenance group. The various training programs include general environmental awareness, proper operation of specific equipment, policies and procedures, conducting maintenance activities, and identifying opportunities for process improvements.

STANDARD OPERATING PROCEDURES

Each job classification within WPCM has a specific Standard Operating Procedure (SOP) associated with it. The SOPs are utilized to train employees to be safe, effective and efficient in the day-to-day activities for which they are responsible for. If an employee moves from one job classification to another, they are provided with the new job classification's SOP and subsequently trained according to it.

WORKFORCE LEARNING AND FLEXIBILITY PATHWAY INITIATIVE

This initiative aims to train all non-construction personnel on each and every apparatus used to maintain the City's sewer system. Through this initiative, WPCM is educating its employees in capacities that they do not normally operate. Each employee is required to receive structured

classroom training that is focused on each of the different apparatus' that the department uses. After employees receive the classroom instruction, they are given an examination to test how much they have retained. Upon successful completion of the written examination, personnel receive structured hands-on training on the apparatus in the field, and are subsequently assessed on skills in running/utilizing the apparatus. By late 2008 all personnel (construction included) will be trained on all service apparatus.

MANUFACTURER-PROVIDED TRAINING

As technology creates new and improved tools and devices for servicing sewer collection systems, WPCM looks to the manufacturers of its varied apparatus' for help in educating the department's employees. Much of the training that is supplied to WPCM is on-site, and often involves hands-on fundamentals. Because WPCM may have several different vendors for the same type of apparatus, employees tend to get good exposure to the latest technology that is available. WPCM looks to the manufacturers to train its people in a way that will make them as efficient as possible when responding to customers' needs.

OSHA MANDATED TRAINING

Occupational Safety and Health Administration (OSHA) mandates employee training for general industry and construction standards per 29 CFR 1910 and 1926. Most of this training is done on an annual basis as specified in the regulations. Examples of required annual training include Blood Borne Pathogen, Respirator Use, Portable Fire Extinguishers and Emergency Action Plan. Some training goes above and beyond OSHA's minimum requirements, as "refresher" courses are offered from time to time. Examples of "refresher" courses include Confined Space Entry, Personal Protective Equipment (PPE) Care and Use and Machine Guarding. Two in-house certified American Heart Association First Aid and CPR instructors provide first aid and CPR training as employee's certifications expire. "Refreshers" may be provided should any employee make a request.

IWEA TRAINING

The Indiana Water Environment Association (IWEA) provides many educational and training opportunities throughout the year. This State organization works with the Indiana Department of Environmental Management (IDEM) to certify classes that City employees attend. An example of this is a class entitled "The IWEA Water & Sewer Construction Inspection Course". This course has enabled construction personnel to make sound decisions during the installation and repair of sewers within our system. IWEA also provides a certification program for Collection System Operators. Examinations are offered twice a year for four different classes of certification. Employees are given resources to study for each examination and are provided with paid study time. Additionally, the IWEA sponsors a competition annually in which teams compete to test their knowledge of collection and treatment system. This competition also serves

as a tool for educating all who attend. A City team has attended every year since the early 1990's, each time gaining valuable knowledge from the challenges.

MONTHLY SAFETY COMMITTEE MEETINGS

Monthly safety committee meetings are held during which accidents are reviewed, equipment issues, ergonomic issues, PPE and training are discussed. Often training initiatives result from safety committee decisions.

"TUESDAY TOOLBOX TALKS"

Every Tuesday, WPCM employees discuss safety topics or general topics that deal with day-to-day duties. On occasion (approximately 12 times a year), the entire department may view an instructional video. Topics range from positive attitudes and customer service techniques to tool and operational safety. This program was established in early 2006.

EMPLOYEE APPRECIATION DAY

Employee appreciation day was initiated in summer of 2007. This day is intended to thank employees for their service throughout the year. The day consists of a skills competition on different apparatus, classroom training and team-building exercises. This day provides a relaxed environment, which promotes an enhanced learning experience. The feedback from this initial experience has been overwhelmingly positive. Employees have offered many suggestions for future appreciation days.

2.1.3 INTERNAL COMMUNICATION

WPCM understands that good communication from the top down and the bottom up is an essential part of their work processes. Each morning, WPCM managers meet with the entire workforce to deliver daily work assignments and to make miscellaneous announcements. After the daily assignment meeting, field crews meet with their direct supervisor to pick up any necessary paperwork or additional instructions as related to their current day's work. Throughout the day, field crews and their direct supervisors may be in contact via the City's two-way radios, but are usually directed by the dispatcher. At the end of their shift, field crews return to the office and may again touch base with their direct Supervisors to discuss work progress, delays, complications, etc.

WPCM also conducts weekly managers' meetings. These meetings allow for information to flow from the Superintendent to his subordinates, and vice versa. The managers use this weekly opportunity to enlist their peers in problem resolution, project coordination, and commendations for cooperation in recent projects. This is also where discussions about departmental policy changes are facilitated.

Each member of the WPCM management and administrative staff is equipped with a personal computer and electronic mail. This allows communication to occur with other City staff and external customers, as well as among WPCM management and administrative staff.

In addition to information shared at daily and weekly meetings, administrative information important for employees is also routinely printed and posted in both the main lunchroom and by the time clock. This allows employees who do not have electronic mail to stay "in-the-know".

2.1.4 CUSTOMER SERVICE

City Utilities conducts a public relations program that involves media relations public information, public outreach, public education and public involvement. Each level of communication requires a different level of commitment by City Utilities and a different level of involvement by the public. The public relations program is guided by a strategic communication plan and each activity within the public relations program is guided by a work plan.

The City employs a Public Information Officer who is responsible for coordinating the media relations portion of the public relations program and for preparing and scheduling bill stuffers and government access television programming. City Utilities managers plan, organize and conduct the other aspects of the public relations program.

The City communicates with the following groups and organizations:

1. Area Partnerships

The City is geographically divided into four quadrants. Within each quadrant a liaison group has been created to help facilitate communication with City departments and to assist neighborhood associations within that quadrant. Each Area Partnership has officers and the Partnerships usually meet monthly. Area Partnership meetings are usually attended by Neighborhood Association Presidents within the Partnership area, residents, City staff members including the Police Department and Mayor's Office representatives assigned to the particular Partnership, City Council representatives and business people. In addition to regular business of the group, most Partnership meetings include informational presentations from City departments or other community groups. City Utilities actively seeks out opportunities to discuss various topics with Area Partnerships.

In addition to rates, City Utility managers have spoken at Area Partnership meetings about topics such as: sewer and stormwater regulatory requirements, combined sewer overflow management plans, drinking water quality, flood control efforts, watershed management, sewer backups, problems caused by grease in sewers, proposed projects that may affect utility service or transportation corridors, major infrastructure improvement projects (such as sewage treatment or water filtration plant improvements) and programs to assist customers in paying their utility bills.

2. Neighborhood Associations

Fort Wayne has about 450 organized neighborhood associations. The majority of the associations have officers and hold at least annual meetings. Many of the associations publish neighborhood newsletters. Neighborhood Associations frequently lobby City departments for programs or projects to improve their neighborhoods. Neighborhood Associations are given an opportunity each year to submit requests to the City to have CEDIT dollars spent on neighborhood projects. As outlined above, neighborhood associations are grouped into Area Partnerships. City Utilities representatives usually speak to Neighborhood Associations when requested to do so by the individual association.

In addition to the topics mentioned in the section above on Area Partnerships, City Utilities managers have spoken at Neighborhood Associations meetings about topics such as: stormwater drainage complaints, storm drain marking, how utility bills are calculated, easement acquisition, detention pond maintenance, downspout disconnection, proposed projects including sewer line extension to replace septic systems, storm drainage installation and water line installation.

3. Association Presidents

Each month, the presidents of Fort Wayne's Neighborhood Associations meet with City representatives to learn more about City projects and programs and to improve their leadership skills. City Utilities managers frequently attend these meetings to give a very short (2 – 3 minutes) "teaser" about a utility topic that could be discussed at an association meeting.

These "previews" have included such topics as: storm drain marking, ways to keep fats, oils and grease from going down the drain (fat free sewers), best trees to plant to keep roots from clogging sewers, drinking water quality, environmentally friendly landscaping, what to do if you can't pay your utility bill, combined sewer overflows, rate increases and other topics similar to those presented to Neighborhood Associations.

4. Community Services Council

The Community Services Council is another portion of the community-oriented government model that includes Neighborhood Associations and Area Partnerships. The Community Services Council is a group comprised of the Presidents of the four Area Partnerships along with representatives of other community organizations. The Council examines policy issues and helps to determine issues that should be addressed by City, County and other agencies working with citizens.

City Utilities has typically addressed the Community Services Council about water, sewer and stormwater rate increase proposals and other topics that may have a significant impact on the long-term health (physical and financial) of the community.

5. Sewer Advisory Group and Stormwater Subcommittee

In 1995 after several heavy summer storms that caused sewer backups, Fort Wayne City Utilities created a sewer task force as a mechanism for creating a dialogue with the community about how much money should be spent to reduce the possibility of having combined sewer backups into homes and businesses. The Task Force developed a set of recommendations for prioritizing sub-basins to receive infrastructure investments. The Task Force recommended that City Utilities should spend $90-million on combined sewer capacity improvements. The Task force also recommended that City Utilities should work with a citizen advisory group on an on-going basis to involve citizens in making decisions about future regulatory programs and infrastructure investments. Thus the Sewer Advisory Group (SAG) was implemented in 1998 and has been meeting either quarterly or bi-monthly since that time.

The Stormwater Subcommittee of the SAG was created in 2005 to help involve citizens in how stormwater quality improvement programs should be implemented locally.

City Utilities managers have talked with the SAG and Stormwater Subcommittee about issues such as: how to present sewer and stormwater rate increases to the community, priorities for sewer maintenance programs, priorities for infrastructure investments, fat-free sewers, sewer friendly trees, storm drain making, stormwater regulatory requirements, stormwater ordinance changes to implement regulatory programs, how to assist citizens who are having trouble paying their bills, the impact of utility rates on people with limited incomes. SAG members are also regularly asked to speak to neighborhood groups and to City Council members about utility issues. They are always invited to project kick-off events and ribbon cuttings for utility infrastructure improvement projects.

6. Ad Hoc Task Forces and Advisory Groups

City Utilities mangers regularly convene groups of citizens and staff members to discuss how specific projects can best be implemented. Ad hoc groups are typically created to help City Utilities gain neighborhood acceptance of a project or when citizen input will be vital to the success of a program or initiative. Most recently the Curdes Avenue Task Force developed recommendations on how combined sewer overflow and basement backup issue could be addressed in their neighborhood. In the recent past, a citizen group assisted City Utilities with design and marketing of the concept of a constructed wetland at the Camp Scott site.

7. Social Service Organizations

As utility rate rise, area social service agencies have received and will in the future receive more requests for assistance from citizens who are having difficulty paying their bills. City Utilities managers – especially those from the Customer Relations Department – meet regularly with organizations such as the Township Trustees, Salvation Army, Catholic Charities, Lutheran Social Services and others to discuss

8. Associated Churches

Associated Churches is a social service organization that assists individual citizens, but it is also an organization that represents the interests of many churches in Fort Wayne. Churches often have limited income but may have large buildings and high utility bills. In Fort Wayne the Associated Churches organization works to safeguard its members against what it sometimes perceives to be water, sewer and stormwater rate increases that are unfair to non-profit organizations. For this reason, City Utilities is careful to meet with the organization prior to introducing rate increases to explain the reason that the increase is necessary and how large users can manage their bills. The group is also keenly interested in stormwater regulatory issues because of the impact they could have on large churches with large parking lots that potentially produce a huge amount of stormwater runoff.

9. School Corporations/Students

For some of the same reasons outlined in the discussion of Associated Churches, City Utilities managers regularly talk with officials of the four school corporations in City Utilities' service area. Because school corporations rely on tax revenue to pay their bills, they have a keen interest in how utility rate increases will affect them

City Utilities managers also work with school curriculum mangers and with individual teachers to make them aware of educational resources that City Utilities can provide such as field trips to utility facilities, curriculum modules on wetlands, watersheds, water resources and drinking water. When invited, City Utilities managers speak to classes and school groups about water treatment, drinking water quality, watershed issues and sewage treatment. For more than 10 years, City Utilities managers have judged entries in the Northeastern Indiana Regional Science Fair and presented awards form City Utilities to deserving projects that focus on a water resources topic.

10. Fort Wayne Board of Public Works and Stormwater Management

Under Indiana law, the Board of Public Works and Board of Stormwater Management are responsible for establishing policies, rules, regulations and operating procedures for the water, sewer and stormwater utilities. The Boards also review and approve all contracts for professional services and construction of utility infrastructure. The Boards establish budgets for the utilities and recommend rates to City Council.

City Utilities managers appear before the Boards on a weekly basis to present information and seek approval of utility policies and contracts.

11. Fort Wayne City Council (and committees)

The Fort Wayne City Council is responsible for approving rates and charges for the water, sewer and stormwater utilities. Also, City Council is responsible for the ordinances that enable the utilities to bill customers and perform collections. Local ordinances also establish the authority that allows City Utilities managers and staff to implement programs to regulate how utility services are used.

City Council has several standing committees that hear proposed legislation and make a recommendation to the full Council to pass the legislation or not.

12. Mayors/Town Councils of Other Communities

Fort Wayne's Water Pollution Control Utility provides sewage treatment to four communities within Allen County under terms established in Water Pollution Control Agreements. City Utilities managers meet with Mayors and Council members from these communities when sewer rate increases are proposed that will affect the cost of sewage treatment or when contract renewals or amendments are necessary. When a community served by Fort Wayne wishes to expand its sewer system to serve new areas, Fort Wayne must also sign a certification stating that treatment capacity is available and will be allocated to the wholesale customer.

13. Sewer Districts

Fort Wayne's Water Pollution Control Utility provides sewage treatment service to three regional sewer districts that operate sewer collection systems in Allen County. Services are provided under the terms of Water Pollution Control Treatment Agreements similar to the agreements between City Utilities and other municipalities discussed above. City Utilities mangers meet with sewer district representatives when sewer rate increases are proposed that will affect the cost of sewage treatment or when contract renewals or amendments are necessary. As with other municipalities, Fort Wayne must sign off on capacity allocations when sewer districts want to serve new areas.

14. Chamber of Commerce and Other Business and Economic Development Groups

Businesses in Fort Wayne, like churches and schools, are particularly attuned to how proposed utility rate increases or regulatory changes will affect their bottom line. City Utilities managers actively seek out opportunities to talk with the Chamber of Commerce and other business groups when rate increases are proposed or when any program changes will affect businesses.

In addition to the Chamber of Commerce, a number of small business organizations exist in Fort Wayne such as the Metro Business Group and Southside Business Association. The Economic Development Alliance is a quasi-governmental entity created as a cooperative effort of the City of Fort Wayne Allen County and the Greater Fort Wayne Chamber of Commerce. The Alliance works to retain existing businesses and jobs and to bring new businesses to the community.

15. Apartment Owner's Association

Large apartment complexes pay some of the biggest customers of the Fort Wayne water, sewer and stormwater utilities. Like other businesses, apartment complex owners are typically concerned about how utility rate changes and regulatory programs will affect them.

City Utilities managers meet with the Apartment Owner's Association to discuss rate changes and new regulatory requirements. Apartment complexes typically discharge a lot of grease to the sanitary sewer system. Often apartment residents are the first to notice taste and odor issues with drinking water. City Utilities managers frequently communicate with maintenance staff members from large apartment complexes about water quality concerns and sewer system operations.

16. Service Clubs

After neighborhood associations and churches, the groups in which citizens are most likely to be involved are service groups such as Rotary, Lions Clubs, etc. Many community and opinion leaders who may not regularly attend Neighborhood Association meeting do participate in service club meetings for the networking opportunities.

City Utilities managers proactively look for opportunities to address service clubs concerning issues of general community interest such as a rate increase or major environmental initiatives such as combined sewer overflow reduction.

17. Watershed Groups

City Utilities managers participate actively in two local watershed groups: the St. Joseph River Watershed Initiative and the Maumee River Basin Partnership of Local Governments.

The St. Joe Initiative is a non-profit organization that is dedicated to improving the quality of the St. Joseph River while promoting economically and environmentally compatible land uses. The St. Joseph River is the source of drinking water for the Fort Wayne water utility. The Initiative conducts weekly water quality testing at 20 sites on the St. Joe River and its tributaries. The Initiative also conducts extensive outreach/education efforts and works with agricultural producers in the St. Joe watershed to encourage the use of conservation practices. City Utilities provides direct financial and in-kind support for the Initiative and holds a seat on its Board of Directors.

The Maumee River Basin Partnership of Local Governments (MRBPLG) is a networking organization that brings together representatives of communities within the Maumee River watershed. The Maumee River is the largest tributary to the Great Lakes and has the largest watershed in the Great Lakes basin. Maumee River communities work together through MRBPLG to share resources and data, to coordinate regulatory compliance efforts, to share technical resources and to lobby. "Core cities" including Fort Wayne and New Haven in Indiana and Toledo, Defiance, Bowling Green, Perrysburg, Lima and Paulding in Ohio fund the effort. Fort Wayne City Utilities managers co-chair the group and regularly speak at meetings about Fort Wayne's stormwater quality management efforts, combined sewer overflow reduction efforts, drinking water quality programs and outreach/education programs.

18. Professional Associations and Industry Organizations

City Utilities managers participate in a variety of national and state professional organizations including the American Water Works Association, American Public Works Association, Association of Metropolitan Sewerage Agencies, Water Environment Federation, Indiana Water Environment Association and its subcommittees, Indiana Association of Stormwater and Floodplain Managers and its subcommittees and the City-County Communication and Marketing Association.

Representatives from Fort Wayne regularly speak to these and other industry organizations about Fort Wayne's experiences with utility rate setting, regulatory program implementation, and public involvement and community outreach/education efforts.

19. Community Events

City Utilities managers participate in many community events where opportunities exist to share information about City Utilities' programs. Some of these events include: Three Rivers Festival Kids Fest, Allen County 4-H Fair, Fort Wayne Home and Garden Show, Earth Day Festival and Johnny Appleseed Festival. Topics addressed include: drinking water quality, what are CSOs, things citizens can do to improve stormwater runoff quality, benefits of wetlands, what is a watershed, how to build a rain garden in your yard, availability and use of biosolids, and environmentally friendly landscaping.

City Utilities has also organized events to showcase its own programs including: open house at Camp Scott Wetlands, Water Filtration Plant Open House and National Drinking Water Week activities in schools.

2.1.4.1 WPCM Customer Service

WPCM operates an effective customer service and public relations program to ensure that City Utilities address all incoming inquiries, requests, and complaints in a timely fashion. The following describes the process by which an employee handles "Service Request" or "Complaint" calls:

"Service Request" or "Complaint" calls are those initiated by the public in response to sewer-related problems. Typically those may include water-in-basement complaints, or reports of sewage in streets. In many instances these calls end up being false alarms in that no real problem is occurring and the caller only perceived that a problem was occurring. In other instances, WPCM finds that the customer's concern is due to problems with building service lines (e.g. building service lateral) on private property or a privately-owned sewer line.

Although not all "Service Request" or "Complaint" calls are actual emergencies, all require a prompt response. The process utilized by WPCM to respond to "Request for Service" or "Complaint" calls is defined in the Process Flowchart. Each step of the flow chart is described in Exhibit C. This procedure is followed for all calls received at WPCM, regardless of whether a sewer overflow has occurred. The "Service Request" procedures outlined in Figure 5-1 provide

insight into the coordinated efforts of all members of WPCM and how they work together as an integrated team.

"Service Request" calls also provide WPCM with valuable information. For example, a sewer line may need frequent root removal. By tracking "Service Request" calls, WPCM may determine that, a particular line should be added to the pool of root removal project sites and scheduled in the future for preventive maintenance.

Homeowners are notified by City personnel when their properties may be affected by construction. If extensive field work will be done, the City will notify the public of major construction or maintenance work by the following means:

- Door hangers
- Newspapers
- Local TV news
- Fliers
- Signs
- Utility bill stuffers
- Neighborhood Associations

The City also distributes information on cleanup and safety procedures following basement backups and other overflows.

2.1.5 MANAGEMENT INFORMATION SYSTEMS

In November 2006, the City began a migration from its original Infrastructure Management System (IMS) to the Hansen Information System™. Tracking of complaint calls coming into WPCM, as well as work performed by the field crews, has long been accomplished via the IMS system but are to be recorded in greater detail with the Hansen™ system. The migration of data, and the resulting workflows, is not yet complete. Essential functions are being tracked appropriately but not all sewer assets (mains, structures, etc) have been completely input into the new system. Preventative maintenance routines are still being generated and tracked in the older IMS system. Data is not being lost – it is just not yet being entered at the detailed level that Hansen™ will allow. All collection system maintenance activities are recorded and tracked in electronic databases (Hansen™, Flexidata™ and IMS). These programs are used together to provide a comprehensive picture of all maintenance work completed in the collection system.

Complaint calls and internal requests (those coming from other City departments) are logged into the Hansen™ system as "Service Requests". If additional field work is required to address a Service Request, then Work Orders are created in the Hansen™ system. Instructions for creating and/or tracking Complaint Service Requests and Work Orders, as well as scheduled work orders, can be found in the Hansen™ HELP menu. Once the City updates Hansen™ to allow it to track

scheduled preventative maintenance, written instructions will be located in the HELP menu as well.

Instructions for scheduled inspections and scheduled monitoring and sampling are maintained by the Program Managers who lead the CSO operations and the Stormwater NPDES programs. The CSO Program Manager also has instructions on compliance and overflow tracking.

Equipment and tools tracking programs are currently being developed. A new storekeeper has been hired and been tasked with developing and establish this program. The storekeeper is also responsible for entering inventory materials purchased into the Hansen™ system. Materials used on the jobsites are tracked when the corresponding Work Orders are closed out in the Hansen™ system.

2.1.5.1 Mapping

The City's Geographic Information System (GIS) is a mapping system which includes natural features (rivers, topography, land use), utility information (sewers, manholes, water mains), and property information (property lines, right-of-way lines, addresses, and street segments). The City Utility's GIS Department operates and maintains both the Hansen™ System and GIS as they relate to City Utility infrastructure.

The City's GIS tracking began in 1985 with the tabular, attribute-based (no graphics) IMS for street segments, water, and sewer mains. In 1990, a City GIS Department was formed and created a cadastral base map. The City began a mapping venture with the local gas company to create a digital version of the City's then-existing manually-drafted base map. By late 1992, a digital base map was created, and then underwent 2 years of updates and aesthetic changes. The digital base map data has a high degree of relative and temporal accuracy, with a varying degree of absolute accuracy (+/- 40 feet). These accuracies have made the City's GIS a very productive, successful and expanding project.

WPCM Service Request and Work Order data recorded in Hansen™, and various other tracking systems, can be linked to the City's GIS via unique structure identification numbers or the street address associated with those records. Because of this, GIS analysis is available for looking at numerous themes including but not limited to: complaint call locations, maintenance (reactive and proactive) activity locations, repairs and replacements in the collection system, pipe condition assessment ratings, pipe attributes (age, material, diameter), etc.

2.1.6 SSD NOTIFICATION PROGRAM

In cooperation with the EPA and IDEM, the City has identified 4 SSD systems where sanitary sewer discharges occur. Those 4 areas are generally identified as Devonshire, Warfield, Rothman and North Maumee, and collectively include twelve structures. Eleven of the twelve

are listed as sanitary sewer discharge points in the City's current NPDES permit (the twelfth has been eliminated).

The City reports discharges from its sanitary sewer system to IDEM in accordance with its NPDES permit. Receiving waters, if any, are identified within such reports, and records of the reports are kept by WPCM. The City reported a total of 32 sanitary sewer discharges in 2005 and 2006. As the agencies are aware, recent judicial decisions, including the U.S. Supreme Court's decisions in *SWANCC*, *Rapanos* and *Carabell*, have resulted in a significant lack of clarity as to the scope and meaning of the term, "Waters of the United States" as used in the Clean Water Act. In *Rapanos* and *Carabell*, no clear majority of the Justices could to agree on the meaning and scope of "Waters of the United States." Due to this lack of clarity, the City is unable to specify which of its reported sanitary sewer discharges have reached waters that are considered to be "Waters of the United States."

When an SSD occurs, the City reports the date, time, location, cause, volume of the overflow, how it was stopped and any remediation actions taken. The City continues to visually inspect all 11 structures on a daily basis according to the schedule previously agreed upon between the City, IDEM and the EPA. The City documents the results of those visual inspections and reports any identified SSDs to IDEM and EPA.

2.1.7 LEGAL AUTHORITY

Fort Wayne provides sewage treatment for 14 satellite collection systems. Those systems are operated by other municipal sewer utilities (4), a private utility company (3), or regional sewer districts (7).

The following describes the total area in each satellite community that contributes flow to the Fort Wayne collection and treatment systems.

Wholesale Customer	Service Area Acreage
Leo-Cedarville Regional Sewer District	12,700
Town of Huntertown	11,635
City of New Haven	11,110
Arcola (Allen County Regional Sewer Dist.)	9,196
Maysville Regional Sewer District	7,672
Town of Grabill	3,131
Town of Zanesville	1,078
AquaIndiana – Pine Valley	485
AquaIndiana – Clearwater	474
AquaIndiana – Lake River Estates	285
Hessen Cassel (Allen County Regional Sewer Dist.)	278
Muldoon (Allen County Regional Sewer Dist.)	264

Mayhew (Allen County Regional Sewer Dist.)	144
Canyon Run (Allen County Regional Sewer Dist.)	136

Satellite communities are required to enter into an agreement with the City. Each "wholesale contract customer" relationship is governed by a contract document (copies of such documents have previously been provided to EPA and IDEM for illustrative purposes). The contracts have similar requirements and terms. Provisions regarding expiration dates, service area size, volume and peak limits and reopeners vary by customer. Each contract contains a provision requiring the wholesale customer to adopt its own sewer use ordinance and providing for the City's review and approval of such ordinances. Nonetheless, the City does not own or operate the sewer systems of its wholesale contract customers. Rather, such customers independently must maintain and operate their sewer systems up to the point of connection with the City's SSS. Accordingly, the City's CMOM program does not apply or concern sewers owned or operated by the City's wholesale contract customers.

Most of the contracts extend for 20 years from the initial effective date. Each allows for contracts to be modified by agreement of the two parties. Contracts that have been recently renegotiated contain provisions for periodic reopeners to discuss specific provisions. Each contract also allows for Fort Wayne to adjust wholesale sewage treatment rates by ordinance.

Each contract contains either a 90-day average volume limit or an instantaneous peak flow limit. The contracts provide financial penalties when either the volume limit or peak flow limit is exceeded.

Fort Wayne uses three documents to implement standard and requirements for inspections and new connections. First, the City's Sewer Use Ordinance (SUO) provides that the Board of Public Works shall adopt General Rules and Regulations for the Water Pollution Control Utility as well as standards and specifications. The Board of Public Works has adopted Rules and Regulations (most recent update effective May 15, 2002) that specify processes for inspections and approval of new connections. The Board of Public Works has also adopted a Development Criteria/Standards Manual that sets standards and specifications for sewer construction and connections to the public system.

All of the contracts with satellite communities currently contain provisions under which the satellite operator authorizes City Utilities to be the authority for industrial and commercial discharge limits. Therefore, the limitations stated in Fort Wayne's SUO apply to wholesale contract customers unless they chose to enact more stringent requirements.

Because it is made contractually applicable to the City's wholesale contract customers, the City's SUO requires wholesale contract customers to issue control permits for significant industrial

users (SIU). The SUO contains provisions for addressing excess strength of waste surcharge from satellite communities[1]. Wholesale contract customers are treated as commercial accounts and are subject to quarterly effluent quality testing and follow up compliance through testing in the case of an exceedance. Strength of waste surcharges are applied to these contract customers as described in the SUO.

2.2 COLLECTION SYSTEM OPERATION

2.2.1 BUDGETING

The Budget is one of the most important variables in the CMOM program. The City's wastewater utility budget includes treatment, maintenance, engineering, overhead and administration costs.

2.2.1.1 Rate Analysis

Rate studies identify funding requirements necessary to operate the City's overall wastewater system and implement its overall wastewater Capital Improvement Program (CIP). The CIP includes combined sewer overflow controls, improvements to wastewater treatment facilities, pumping stations, sanitary sewer rehabilitation, construction of new sanitary sewers to ensure adequate capacity, and sanitary/storm sewer water quality projects. The City increases rates in two ways; 1) cost of service studies and 2) across-the-board increases. Cost of service studies are more precise but are more costly and time consuming to prepare than across-the-board increases. Across-the-board rate increases generally raise rates for all classes of customers while cost of service studies impact each customer class to varying degrees.

The City typically alternates between cost of service studies and across-the-board increases to balance the cost of rate cases. This pattern also recognizes that fundamental cost patterns don't change rapidly. The City enacted rate increases in 1997 (35.84%), 2001 (38.00%) and 2007 (25%). The 1997 increase was based on a cost of service study and the 2001 and 2007 rate increases were based on an across-the-board application.

2.2.1.2 Basis Of Rates

The basis for billing in wastewater utility for majority of customers is usage based on water consumption metering. In addition to wastewater charges based on water consumption, industrial and commercial customers pay additional surcharges for strength beyond that of

[1] City of Fort Wayne Code of Ordinances: Chapter 51 Sewers, Excess Strength of Waste Surcharge is defined – In the event a contract customer user contributes waste having a toxic strength in excess of domestic waste characteristics, as hereinbefore define, a surcharge based on the following unit process charges will be in effect for all waste found to be in excess of limitations.

normal sewage. Surcharges are applied for suspended solids, the higher of biochemical oxygen demand (BOD) or chemical oxygen demand (COD), ammonia nitrogen and Phosphorus. Surcharges for each are as follows:

- Suspended Solids - $0.0943 per pound in excess of 300 mg/l
- BOD - $0.1955 per pound in excess of 300 mg/l
- COD - $0.0978 per pound in excess of 600 mg/l
- Ammonia Nitrogen - $0.2862 per pound in excess of 25 mg/l
- Phosphorus - $1.3271 per pound in excess of 10 mg/l

The City imposes various other charges related to sewer service. Restaurants attract a 25% extra surcharge anticipating a standard BOD load. Wholesale contract customers' rates are based on the same cost allocation principles used during typical cost of service studies and result in common treatment rates but varying conveyance rates. Customers connected to certain developer-installed interceptors pay capital surcharges until the installation cost is recovered.

All setting and rate increases require Board of Public Works and City Council approval.

2.2.1.3 Budget Process

Operating Budget:

In the third quarter of each year, budget templates are prepared for each department along with a budget kick-off memorandum. The budget memorandum describes any budget constraints or conditions that each department must consider as departmental budgets are prepared. The budget template includes the prior year's budget, actual spending for the current year and a space for next year's budget amount. Each department is also given a salary worksheet with current staff, critical employee data and current pay rates. Based on the appropriate assumptions, the salary worksheet calculates the next year's wages and benefits.

A budget memorandum is prepared by each department manager and e-mailed to the budget manager along with the completed budget worksheets. Each budget is entered into the budget portion of the general ledger system. The budgets are uploaded into worksheets for analysis and better quality report presentation. The City Utilities Controller contacts each department and rationalizes the appropriate budget amounts based on prior spending and current operating plans. The Controller presents the budget to the Director of City Utilities and then the Mayor noting revisions, if any. Finally, the Controller presents the budget to Board of Public Works for final approval.

Capital Budget:

Capital budgets cover the next five year's capital expenditures and are refreshed annually. The capital budgets guide the overall improvement strategy and provide essential cash flow data useful in analyzing financing and rate setting needs. Typically, the City distribute its current 5-year capital budget electronically as a spreadsheet. Department managers, with support from engineering staff and guided by operating plans, review and update the data as well as add another year's requirement.

The results are compiled and redistributed. Department managers clarify their changes and explain project justifications in subsequent meetings. The Controller evaluates the cash needs and may put limits on the number or size of certain projects. A final package is assembled and goes through the same steps as the operating budget: reviews by the Director, Mayor and approval by the Board of Public Works.

2.2.1.4 Reporting Analysis

OPERATING BUDGET:

Each month, budgets and actual spending are downloaded into spreadsheets. Variances are computed and the spreadsheets are stored on a shared network drive. An e-mail notifies the department managers that the budgets are available for review and analysis. Variances over a designated amount need to be explained by the appropriate department manager. The budget manager summarizes the results for the Controller. E-mails are exchanged if the variance was unexpected or potentially of a recurring or unmanageable nature.

Most often, spending concerns are addressed before any funds are committed to the issue. Department managers contact the Financial Services Department to discuss any problem requiring funds in excess of budgeted amounts. Budgets are important tools and help formulate responses to day-to-day activities as well as provide context for new or surprising events.

CAPITAL BUDGET:

At any point in time, the City may have over 300 capital projects in progress, valued in excess of $40 million. To manage this large volume of work, City Utilities developed a tracking and reporting tool that refreshes actual spending data daily, compares spending to budget and is available on-line throughout the organization.

Quarterly, senior engineering staff meets with all departments to review progress and budgets for existing projects and to evaluate the need for new projects. Change requests are cataloged and the engineers, department managers and Controller meet again and evaluate the changes for cost/benefit and cash flow. The approved changes are loaded into the tracking and reporting tool and are also loaded into the cash flow projection models.

LONG-TERM BUDGETS:

The Water Pollution Control Utility utilizes a five-year capital budget, which is updated every year. Operating budgets are prepared for the current year. We also have a continuous improvement cycle that starts with a utility-wide Strategic Plan. Three to five year strategic operating plans are developed at the Department level based on the division's strategic plan. The strategic-operating plans include a long term budget section consisting of staffing discussions and targeted budget improvements.

AUDITS:

After the close of each year, the books and records are audited by the Indiana State Board of Accounts. The audit is conducted in accordance with generally accepted audit standards. The audit concludes that the financial statements present fairly, in all material respects, the financial position and change in financial position and cash flows for each major fund of City Utilities in conformity with accounting principles generally accepted it the United States.

Additionally, Fort Wayne's Internal Audit Department conducts operational and financial audits periodically. The Internal Audit group reports to a City Audit Board consisting of business professionals and high ranking city officials.

FUNDING SOURCES:

Funding of CMOM-related activities is derived from a variety of sources including: Water Pollution Control Utility general revenues, state revolving loan funds, revenue bonds and occasionally stormwater utility general revenues. All user fees (rates) and new debt require Board of Public Works and City Council approval. The following paragraphs briefly detail each source.

Water Pollution Control Utility general revenues are collected from sewer user fees. These funds are used to maintain, upgrade and construct new sanitary facilities and infrastructure, contribute to shared general and administrative expenses and fund debt service associated with financing Water Pollution Control Utility projects.

State Revolving Fund (SRF) monies are made available at below-market interest rates to the City through the IDEM and the State Budget Agency. The City pledges repayment of the borrowed SRF funds from future Water Pollution Control Utility general revenues. SRF funds may be used to maintain, upgrade and construct sanitary facilities and infrastructure and address combined sewer overflow issues. Projects that extend sewers for future development are not eligible for SRF funds.

Revenue Bonds funds are derived from publicly issued debt for long-lived facilities and infrastructure projects. Bonding allows for a large infusion of cash to accelerate completion of important infrastructure projects. Future revenues are pledged to pay the debt service on

Revenue Bonds (hence the name "Revenue" bonds). Typically, these bonds have a duration of 15 or 20 years. As a municipal organization, revenue bonds issued by the City are considered tax-exempt and attract lower interest rates than bonds issued by for-profit organizations.

Stormwater Utility general revenues are generated from a fee placed upon all properties inside the City limits. Residential properties pay a flat fee (typically one ERU) and non-residential properties pay based on the amount of impervious surface (multiple ERUs) on their property, minus allowable credits for stormwater controls. Stormwater Utility funds may be used only for expenditures related to the City's stormwater system. Some stormwater system improvements that are completed by the City also benefit the wet-weather impacts on the sanitary sewer system.

2.2.2 WATER QUALITY MONITORING

In addition to effluent and pretreatment monitoring required by the City's NPDES permit, the City conducts river water quality monitoring once a week from April 1 through October 31 at six sites in the three rivers (this sampling is described more fully in the City's LTCP). E.Coli data from the sampling program is generally posted on the City's website cityoffortwayne.org during the recreation season. River sampling is also conducted once a month during the winter months (November through March) in a shared program with IDEM. River sampling is conducted by Fort Wayne's Industrial Pretreatment Section (IPS). Analysis of the monthly sampling events is performed in house and by IDEM with appropriate chain of custody.

Monitoring locations are important in establishing water quality. The safest and easiest access points have been designated on bridges. There are two existing monitoring locations on each river. The sampling sites are located at Harrison St., Anthony Blvd., Spy Run Ave., Ferguson Rd., Landin Rd. and Mayhew Rd. Bridges. Weekly samples are collected at each site to determine water quality. Sampling from these sites provides upstream as well as downstream water quality data. The upstream sampling points are significantly upstream of the City's first CSO discharge point.

As detailed at Chapter 3 of the City's CSSOP, the City thoroughly reviewed its existing pretreatment ordinances and rules, water quality data, and SIU discharge data to determine if SIUs were impacting the water quality of the receiving waters. The review concluded that the City's existing ordinances or rules were adequate and accomplishing intended purposes.

2.2.3 HYDROGEN SULFIDE MONITORING AND CONTROL

Fort Wayne receives very few odor complaints attributable to hydrogen sulfide. The complaints that are received are tracked in the Hansen™ data management system and then mapped in the GIS application.

In order to limit the formation of hydrogen sulfide, the City of Fort Wayne Department of Water Resources Development Criteria / Standards Manual requires all sewers to have a minimum slope that will maintain a flow velocity of 2 ft/sec when flowing full. Minimum slope requirements are found in "Unit III – Sanitary Sewer Design Standards" , Chapter III, Sections 3.8 as shown below:

Hydraulic Design Criteria

General

Manning's Equation shall be utilized to determine the required pipe size and slope. Manning's equation is as follows:

$$Q = \frac{1.49}{n} (A) (r_H)^{2/3} / S^{1/2}$$

Design shall be for full flow at saturation conditions with the following characteristics:

a. Roughness coefficient, n = 0.013
b. Minimum velocity, v = 2.0 ft/sec
c. Minimum pipe size, D = eight inches (8")
d. Minimum allowable slopes

Hydraulic Grade Line

The hydraulic grade line for peak flows shall not rise above the crown of the pipe. If velocity entering a manhole is above critical, the hydraulic grade line must be computed to ensure that service connections will not experience surcharging that causes back-ups. In critical instances or when requested by Water Resources, the hydraulic grade line shall be computed to show its elevation at manholes, transition structures, and junction points. The calculations shall provide for losses at structures and elevation differences. When necessary, the pipe exiting the manhole must be adjusted in elevation to ensure that the energy gradient remains constant across the manhole.

Water Resources shall be consulted when either hydraulic grade line or energy grade line calculations are required.

Velocity

The minimum velocity allowed in sanitary sewer pipes under design flow conditions shall be two (2.0) ft/sec. The maximum allowable velocity shall be 15 ft/sec.

In instances where severe topographic constraints or other unusual conditions result in a design velocity which must be greater than 15 ft/sec, Water Resources must be consulted during design. Special provisions shall be made to protect against displacement by erosion and impact. Specific, written approval will be required for the special provisions as well as for hydraulic design and the pipe material selection.

Slopes

Exhibit III-3-3 defines the minimum allowable slopes for various pipe sizes. These minimum slopes shall be required during design. As-built sewers with slopes less than those defined which result in velocity of flow being less than two (2.0) ft/sec may not be accepted by the City of Fort Wayne.

Slope Between Manholes

Sewers shall be laid with uniform slope between manholes or other junction structures.

Corrosion and odor control programs are in are developed and put in place to solve hydrogen sulfide problems when they exist. Written procedures for applying chemicals have been developed with help from the manufacturer based up on data from each application location.

Through the proactive and reactive closed circuit television (CCTV) programs, all sewer segments showing signs of hydrogen sulfide corrosion are noted by the appropriate defect codes. If segments are corroded to point of possible failure, they are rehabbed/repaired/replaced through the City's Sewer Repair & Replacement Program.

2.2.4 SAFETY

The City's Utility Maintenance Training Coordinator/Program Manager provides training for the WPCM's safety program. Employees are made aware of safe work procedures and specific regulations and policies. These policies and procedures are documented at WPCM.

Safety programs are in place for the following areas:

- Lockout/tagout
- MSDS

- Chemical Handling
- Confined Space Permit Program
- Trenching and Excavations
- Biological Hazards in Wastewater
- Traffic Control and Work Site Safety
- Electrical and Mechanical Systems
- Pneumatic and Hydraulic Systems Safety

Safety equipment necessary for system staff to perform their daily activities and also undertake any emergency repairs include:

- Rubber/disposable gloves
- Confined Space Ventilation Equipment
- Hard Hats
- Safety Glasses
- Rubber Boots
- Antibacterial Soap and First Aid Kit
- Tripods or Non-entry Rescue Equipment
- Fire Extinguishers
- Equipment to Enter Manholes
- Portable crane/hoist
- Atmospheric Testing Equipment and Gas Detectors
- Oxygen Sensors
- H_2S Monitors
- Full Body Harness
- Protective Clothing
- Traffic/Public Access Control Equipment
- 5-minute Escape Breathing Devices
- Life Preservers for Lagoons
- Safety Buoy at Activated Sludge Plants
- Fiberglass or Wooden Ladders for Electrical Work
- Respirators and/or Self Contained Breathing Apparatus
- Methane Gas or OVA Analyzer
- LEL Metering

2.2.5 EMERGENCY PREPAREDNESS AND RESPONSE

The City understands that proper emergency planning and response are important elements of any safety program. An emergency plan has been developed to identify the steps staff should take in the even of emergency situations.

The Fort Wayne Fire Department's Hazmat team responds to all chemical spills within the City's sewer service area. When an incident occurs, the Fire Department contacts WPCM. WPCM assists by providing maps of the sewer and storm system in effort to prevent the spill from entering a nearby waterway. The procedures in the plan are located in Exhibit E. This plan is specific to the collection system and is reviewed annually.

2.2.6 MODELING

The City's overall sewer modeling strategy was initiated in the late 1990s, and began with development of a system-wide planning-level model to support LTCP development efforts. Since then, and as part of the strategy, the City has updated and refined its model in local areas on an as needed basis to support master planning efforts and specific projects and studies. For example, as part of the preliminary design efforts for the City's ongoing Combined Sewer Capacity Improvements Program, the City updates the model for targeted subbasins to support analysis efforts. The northern portion of the collection system model was updated in 2002 as part of master planning and capacity analysis efforts.

The development of the City's original full-system model is documented in the 1999 "Fort Wayne Combined Sewer System Analysis" report. Additional refinements to the model reflecting significant system changes and/or refinements to local calibration, are documented in a series of additional technical memoranda and reports.

As part of its LTCP development the City needed a hydraulic model that could:

- Accurately represent the CSS hydraulics, including backwater effects and surcharging
- Adequately estimate runoff flows influent to the sewer system
- Predict the behavior of unmonitored overflows
- Perform both short and long term simulations
- Assess the effects of control alternatives for the LTCP
- Support an analysis of LTCP controls and their ability to meet the Demonstration Approach and/or Presumption Approach requirements

The City selected XP SWMM modeling software, a complex dynamic model, as the hydraulic model for the collection system. The model includes all relevant hydraulic features, including significant in-system pump stations.

The City's model is a planning-level tool, used to predict a wide range of hydraulic performance measures in the system including peak flow capacity, peak flows, combined sewer overflow frequency, volume, etc. This information is used directly in the City's wet-weather planning efforts and also supports informed decisions on system growth, operation, maintenance and design.

2.2.7 ENGINEERING DESIGN & CONSTRUCTION

2.2.7.1 Design Standards

City Utility's Water Resources departments are involved in the design and permitting process for new sewer infrastructure construction and sewer connections. Guidelines and basic design criteria and standards for the installation of new sewers, pump stations, City infrastructure projects, and other related items are specified in:

- City of Fort Wayne, Department of Water Resources Development Criteria/Standards Manual, January 2002 (Development Criteria/Standards Manual).
- City of Fort Wayne, Department of Water Resources Design Manual – Volumes 1-4
- Water Pollution Control Utility General Rules and Regulations
- Applicable State requirements for sewer main extensions under Indiana Administrative Code, Title 327, Article 3.

Generally stated, the Development Criteria/Standards Manual:

- Enumerates general standards that have been either commissioned or authorized by local and state agencies to facilitate Water Resources compliance with local, state and federal regulations.
- Identifies submittal requirements and procedures for the review of private infrastructure projects within the service areas for the individual departments within the Department of Water Resources, specifically Development Services.
- Serves as a reference document for developers and engineers to define review procedures and design requirements, hence facilitating the approval of infrastructure projects.

The Design Manual further details design procedures and methods, provides more comprehensive design guidelines and methodology, provides more discussion of intent, and contains various computation worksheets to assist in infrastructure design. The Development Criteria/Standards Manual is intended to be used in conjunction with the Design Manual.

The purpose of these design standards is to provide guidance for the design of sanitary sewer systems and pump stations. These standards set forth minimum criteria for the design and construction of all such facilities within the City's jurisdiction.

Compliance with this standard does not eliminate the need to comply with other applicable City, County, State and Federal ordinances and regulations. This includes, but is not limited to, the submission and approval of preliminary and final subdivision plats, IDEM permits (IDEM or City issued) for sanitary facilities construction, building and zoning permits, construction inspections, appeals, and similar matters.

The design of an expansion to or extension of the sanitary sewer system in Fort Wayne, whether privately-owned or publicly-owned, requires the approval of the following agencies:

- City Utilities
- Indiana Department of Environmental Management

2.2.7.2 Easements

All public sanitary sewers and City-owned pump stations must be constructed in public right-of-way, easements, or on publicly-owned or City Utilities-owned properties.

2.2.7.3 Inspection

Inspections are accomplished through professional service agreements with outside contracted inspection services providers. Inspectors ensure projects are constructed to City specifications, keep daily logs as well as test reports that are turned over to the City when the job is complete.

2.2.8 PUMP STATION OPERATION

City WPCP staff operate, maintain, and perform minor repairs to all 34 city-owned sewage lift stations. Exhibit F illustrates the location of all 34 sewage lift stations. Due to the specialized nature of work, duties are divided into mechanical and electrical categories and performed by their respective crews. Variations in equipment type, configuration, and physical environment, determine station design and O&M requirements.

2.2.8.1 Inspection

There are two, two-person mechanical crews who are charged with visiting every lift station at least twice per month. A three-person electrical crew visits every lift station monthly, at a minimum. Station visits generally consist of inspection and preventative maintenance work on equipment and systems. Details of the work performed are summarized on standard log forms.

2.2.8.2 Engineering

City Utilities Planning and Design Services department (PDS) provides nearly all engineering, studies, and capital planning for existing lift stations. Capital planning has identified and prioritized most major repair/replacement activities thru 2010. Since 2003, nearly half of all lift stations have received major mechanical improvements. Three stations are currently being studied for possible elimination.

2.2.8.3 Response

By the end of 2007, 32 of 34 stations will have backup power capabilities. Most stations have a portable generator receptacle; two have dual electrical feeds; seven have a generator on-site. The WPCP has two 300kW portable generators and two 6" portable diesel pumps for bypass pumping in the event of emergency. All stations are equipped with audible and visual failure alarms. 33 of 34 stations are equipped with Supervisory Control and Data Acquisition (SCADA) telemetry.

2.2.8.4 Record Keeping

Inspection logs filled out by the mechanical and electrical crews are kept at the WPCP. The 33 sewage lift stations in the SCADA system are monitored by an operator at the WPCP. The SCADA system detects pump run times, faults, high level alarms, power failures, intruder alarm, and on-site generator activity. All data is stored using Proficy™ Historian software system.

2.3 EQUIPMENT AND COLLECTION SYSTEM MAINTENANCE

The City has a comprehensive equipment and collection system maintenance program. The system is maintained by both WPCM and WPCP staff on a daily basis. The maintenance activities of each (WPCM and WPCP) are detailed separately below.

2.3.1 WPCM PLANNED AND UNPLANNED MAINTENANCE

Although many of these tasks can be considered preventative or reactive, others are "emergencies" and cannot be anticipated. City Utilities is aware that its reputation, in the eyes of the public, often depends on how it responds to such "emergencies". The majority of preventative or proactive work done by the WPCM is to address potential problem areas in the collection system before they become "emergencies". WPCM expends a significant effort in the following work areas:

- Root and debris removal;
- Internal inspection by closed circuit television (CCTV) to detect pipe defects before they become failures;
- Grease removal;
- Caller complaint investigation;
- Construction activities (main and structure repair/replacement).

2.3.1.1 Preventive Maintenance

Although City Utilities recognizes that some maintenance emergencies are inevitable, it places a premium on preventive maintenance to minimize the occurrence of future "emergencies."

Many of the programs administered by WPCM were introduced in Section 2.1.1 along with a brief discussion as to which functional area was in principal charge. WPCM relies heavily on the use of CCTV to provide information that drives subsequent maintenance activities.

For the purpose of preventive maintenance, WPCM generally selects lines to be CCTV inspected based on the following:

- Sewers located in areas of reported basement flooding
- Sewers located in areas of repeated requests for service
- Sewers located in areas of planned public improvements

Pipe defect information obtained from CCTV is entered into the City's sewer televising database, and labor and equipment usage for each survey is tracked in the Hansen™ database. The database assists City Utilities in deciding which lines need additional maintenance and repair, what type of action is appropriate, and when this work may be required.

Based on the findings obtained from CCTV, City Utilities may perform one or more of the following activities:

- Perform additional line cleaning/root removal
- Perform minor repairs
- Recommend a Capital Improvement Project

Each of these activities is described further below:

Perform Additional Root Removal and Sewer Cleaning

WPCM will sometimes discover that the available capacity in a sewer line has been reduced by the presence of roots, grease, grit material and other debris. By removing these obstructions, the available capacity in a line can be effectively restored.

Perform Minor Repairs

In other instances, CCTV inspection work will reveal situations where a minor or moderate repair is warranted. Typical repairs performed by WPCM include point repairs on main line sewers, manholes or force mains.

Recommend a Capital Improvement Project

In other instances where the scope or complexity of repairs require engineering design and/or efforts of an outside contractor, WPCM will work with other City Utility departments to formulate a capital improvement project.

2.3.1.2 Reactive Maintenance

WPCM understands that, because the occasional occurrence of emergencies is unavoidable and incapable of anticipation regardless of preventative maintenance efforts, it is imperative to be prepared to properly respond when an emergencies does occur. As discussed in Section 2.1.4, Service Requests are created in Hansen™ , detailing complaint information and field investigation. After the initial field investigation is complete, the field crews and management team work together to determine appropriate next steps to resolve the emergency.

Emergency contractors are used to assist WPCM with larger maintenance and repair projects. A procedure for hiring contractors to perform emergency repairs has been established by statute (IC 36-1-12-2; IC 36-1-12-9). The situations in which emergency contractors are mobilized vary; however emergency contractors are generally used for larger maintenance and repair projects.

2.3.2 WPCP PLANNED AND UNPLANNED MAINTENANCE

WPCP staff are responsible for all in-house maintenance and repair functions at the City's WPCP related to mechanical or electrical equipment. In addition, WPCP employees are responsible for other activities including operating the water pollution control treatment plant, a package treatment plant, the biosolids facilities, the industrial pre-treatment program, the sanitary sewer system and pump stations, and the WPCP laboratory.

More specifically, the WPCP's Maintenance group is charged with the mechanical and electrical maintenance for the WPCP and its appurtenances. Electricians install wiring, calibrate instruments, and maintain instrument and control systems. Two mechanical crews perform preventative and reactive maintenance at the WPCP. The mechanical crew performs preventative and reactive maintenance at the pump stations and mechanical regulators through out the collection system.

Although it is impractical to here detail every function performed by the WPCP maintenance group, the following sections describe the operation and maintenance procedures for the facilities, pump stations, and mechanical regulators respectively. These sections emphasize WPCP capabilities to operate and perform preventive and emergency maintenance.

2.3.2.1 Facility Maintenance

The maintenance of the City's facilities and combined sewer system are detailed in Chapter 1 of the City's CSSOP but, for illustrative purposes, can be summarized as described below.

Preventative Maintenance

Each facility was designed for its own set of site conditions and, therefore, has unique components and maintenance requirements. WPCP's preventative maintenance program is a key consideration during the design and construction of a new facility. The facility's layout and equipment selection are decided with maintenance in mind. At the end of construction, an O&M manual is prepared and provided to WPCP's Maintenance group. Upon receiving the O&M manual, information about parts, maintenance procedures, and maintenance frequency is entered into the City's Computerized Maintenance Management System (CMMS). The CMMS has become a reference for parts and automatically generates work orders for preventative maintenance. The initial maintenance procedures and schedules have been refined by actual experience. Similar information about the City's older facilities have also been input into the CMMS. Preventative procedures and schedules are kept in the WPCP's CMMS.

Emergency/Reactive Maintenance

WPCP operators monitor the status sensors and alarms for the equipment used in facilities. When an unanticipated equipment failure or emergency situation is identified, a walkie talkie is typically used to contact the maintenance supervisor who directs necessary response activities and create a work request in the CMMS. Emergency procedures manuals are maintained at the three plant operators' stations. After the work is completed the activities are recorded in the CMMS.

2.3.2.2 Pumping Stations

The maintenance of the City's pumping stations are detailed in Chapter 1 of the City's CSSOP but, for illustrative purposes, can be summarized as described below.

Preventative Maintenance

A schedule listing the preventative maintenance and inspection frequency is maintained for each station. Preventative maintenance activities typically include, but are not limited to the following:

- Check operation of pumps
- Report pump run times when applicable
- Check floats or float sticks, clean as necessary
- Check wet well and clean when necessary
- Change charts and check ink levels when applicable
- Check for unusual vibration, bearing heat, belt wear, pipe leaks etc.

Records of all preventative maintenance activities are kept on file in the CMMS.

Emergency/Reactive Maintenance

WPCP operators monitor the status sensors and alarms for the equipment used in the pump stations. When an unanticipated needed repair or emergency situation is identified, WPCP staff contact the maintenance supervisor who facilitates the necessary response activities and creates a work request in the CMMS. Emergency procedure manuals are maintained at the three plant operators' stations. After the work is completed the activities are recorded in the CMMS.

2.3.3 SEWER CLEANING

Maintaining a clean sewer is an important part of the preventive maintenance program. Roots, grease, and deposited solids are the most common cleaning problems. Cleaning methods can be grouped into 3 general categories: hydraulic cleaning, mechanical cleaning and chemical cleaning. WPCM uses methods from each of these three categories on a regular basis. Each is discussed briefly below, and Table 3.4 of the Water Environment Federation (WEF). 1999. Wastewater Collection Systems Management, Manual of Practice No. 7, 5th Edition suggests which methods should be used for what types of stoppages.

2.3.3.1 Hydraulic Cleaning

Hydraulic cleaning refers to any application of water to clean SSS sewers. Hydraulic cleaning includes the use of sewer balls, pigs, high-velocity jet nozzles and vacuums. These methods are discussed more fully in Water Environment Federation (WEF). 1999. Wastewater Collection Systems Management, Manual of Practice No. 7, 5th Edition

2.3.3.2 Mechanical Cleaning

The term mechanical cleaning denotes the use of machinery to scrape, cut or pull material out of a sewer. Among the most common methods of mechanical cleaning are rodding, power rodding and the use of bucket machines. These methods are discussed more fully in Water Environment Federation (WEF). 1999. Wastewater Collection Systems Management, Manual of Practice No. 7, 5th Edition

2.3.3.3 Chemical Cleaning

Chemical dosing is an option only after careful observation and planning and close consideration of the problems associated with the process. Chemicals cannot clear sewer line stoppages and are often expensive. Moreover, chemicals used to solve one problem in one location may cause a problem somewhere else. Chemicals can also harm the environment, employees, or the treatment process. Chemical cleaning is discussed more fully in Water Environment Federation (WEF). 1999. Wastewater Collection Systems Management, Manual of Practice No. 7, 5th Edition

2.3.4 PARTS AND EQUIPMENT INVENTORY

An inventory of spare parts, equipment and supplies for WPCM is maintained at the following City locations:

- 520 E. Wallace Street
- 515 E. Wallace Street
- 302 E. Pettit Avenue
- 600 E. Wallace Street

Collection system maintenance equipment and replacement parts are maintained by the City's Fleet Management group. Supplies and material used for collection system repair and maintenance include, but are not limited to, pipe, precast concrete manhole components, castings, fittings, etc. WPCM maintains an inventory of replacement parts. The supply levels and materials usage costs are tracked by the Hansen™ system.

All crews and field personnel are equipped with necessary equipment and tools to perform all aspects of operation and maintenance of the collection system. A list of parts and inventory is located in Exhibit G.

2.3.5 MAINTENANCE SCHEDULING

2.3.5.1 WPCM

All SSS sewer segments are cleaned during structural inspections. SSS sewers are also commonly cleaned as the result of a performance inspection. When these types of inspections identify SSS sewer segments with chronic problems, the segments are put on a regular cleaning list, also known as the scheduled maintenance program. There are lists for grease, roots, and sediment. The frequency of cleaning is dependant upon the type of obstruction and the severity of the problem. In some segments grease removal is required weekly. In others, root removal is required every two years.

2.3.5.2 WPCP

WPCP staff use the CMMS to establish and monitor appropriate maintenance schedules. The initial maintenance procedures and schedules have been refined by actual experience. A schedule listing the preventative maintenance and inspection frequency is maintained for each pump station.

2.4 SEWER SYSTEM CAPACITY EVALUATION – TESTING AND INSPECTION

The primary mechanism to determine the available capacity of SSS sewers is the use of capacity schematics, developed through a combination of the City's hydraulic model and engineering judgment. These schematics show pipe diameter, pipe capacity and peak wet-weather flow under a reference design storm. In addition, the City's hydraulic model and flow metering is used on a case-by-case basis to further investigate capacity and connection decisions. However, the model is not used as the sole determinant in accepting or rejecting new connections.

The following are testing and inspection procedures conducted by the City:

2.4.1 Inspections

Purpose

Inspections can be used to determine the structural integrity of the system's components, performance of the system, or the cause of poor system performance. Manhole inspections, pulling a mandrel through sewers, and CCTV are all used to determine the structural condition of sewers. Metering and user observations are used to detect sewer performance problems. Visual inspections of surface conditions, manhole inspections, smoke testing, dye testing, and CCTV are all used to determine the causes of poor system performance.

Visual Inspection of Surface Conditions

Surface conditions above and/or near buried sewer assets may be used as an indicator of structural problems in the collection system. Sidewalk irregularities, cracked, settled, or dipped pavement, or depressions along the path of a pipe are all common indicators. If a joint is bad or a pipe is broken, wastewater may wash away the surrounding soil and create a cavity beneath the surface. Sometimes the weight of the overlying soil is enough to cause a pipe collapse and a depression at the surface. In easements, these depressions can be seen a flooded or sunken areas along the pipe route.

2.4.2 TESTING

Smoke Testing

In years past, City Utilities contracted with outside firms for most smoke testing. Currently, however, the City is developing an in-house program to assist in the discovery of inflow and infiltration problem areas. Smoke tests reveal roof, footing, and yard drain connections, as well as leaky manholes, cracked and leaky pipes, poor joints, and missing caps.

Smoke testing procedures can be found in Chapter 4 "Methods of Infiltration and Inflow Evaluation" of Water Environment Federation (WEF) 1994. Existing Sewer Evaluation and Rehabilitation, Manual of Practice FD-6, 2nd Edition.

Dye Water Testing

Dye testing is a method used to locate rain or ground water entry points into the SSS. Dye testing with a non-toxic dye is one method used in determining where a pipe or structure drains. This also aids in identifying private and public pipes. Dye testing is also used to identify illegal connections.

2.4.3 SSES - INTERNAL TV INSPECTION

Sewer inspection is an important and invaluable part of the City's maintenance program. The main method of inspecting the sewer collection system for the City is through the use of CCTV.

In 1995, through a Sewer Task Force comprised of representatives of neighborhood associations and City officials, a policy was adopted to clean and televise the City's sewer system. That policy required the City to televise all of the large diameter (+36") sewers and clean and televise all of the medium (16-36") diameter sewers. The small (<16") diameter sewers were to be proofed by means of pulling a wire basket through each sewer segment. This proofing would show only a "Go" or "No Go" situation in the segment. A "No Go" would mean there was a blockage and this would require the segment to be televised to find the blockage and remove it.

The defect-coding system the City had at that time used only 16 defect codes. This limitation precluded the reflection of pipe conditions desired by the City. Consequently, in 1997, the City had a televising software program called "Rapid View" designed, based on the world standard "*WRc*" standard defect coding system. This coding system increased the number of defect codes to be tabulated for sewer segments to 80. The purpose of establishing these defect codes, and using the computer software Rapid View, was to begin setting a "Sewer Condition Assessment Rating" for all SSS segments.

The benefits of having established this rating system in 1997 are many. This rating system allows the City to inventory and assess its SSS. It allows the City to refine its existing, extensive GIS system and improve the accuracy of its mapping system. The sewer condition assessment rating allows the City to repair, replace, rehabilitate, plan and schedule work in the most efficient and effective manner. Prioritizing is crucial to a preventative and predictive maintenance program and to the elimination of SSD's, basement backups and inflow and infiltration removal. Utilizing a condition assessment rating also allows a prioritization of work and shifts maintenance from a reactive to a proactive mode. Fort Wayne's existing inspection and data collection efforts directly support a CMOM program.

Since the initiation of the sewer televising program and condition assessment rating system was established in 1997, the program has continued to be refined and improved. Some of the major improvements that have been accomplished are noted in following paragraphs.

In 2005, the City began process improvements to prioritize the sewers needing to be televised. These efforts resulted in the development of prioritization model and three general phases and/or levels of televising prioritization. City engineering plotted basement backups, basement floods and maintenance calls that occurred from 1995 to 2005 on individual quarter section maps of the City. The locations plotted were per the City's GIS data base according to the address the complaint or call occurred. The sewer segment(s) next to these addresses of calls and complaints were highlighted on the quarter section maps and identified as high priority. In Phase I of televising the City intends to televise the high priority line segments that have been highlighted on the quarter section maps. In addition to complaint data, installation dates for when each sewer segment was constructed were entered into the prioritization model. The resulting analysis indicates that it is not the age of the sewer that is most critical, but the time period when it was originally constructed (certain construction years and/or periods of time consistently have pipe in worse condition than those years around them). After the sewers in Phase I are televised, it is the intent of Phase II to then televise the sewer segments constructed during the years that appear to be the most problematic. Phase III is intended to then televise the remaining pipe in the system beginning with the oldest sewers and continuing through to the most recent. As the sewers are being televised, the Sewer Condition Assessment Rating, as mentioned in above paragraphs will be performed.

In 2006. the City's sewer evaluation program went through another major change. It was decided that City forces would stop proofing small diameter sewers and begin a program of televising all sewers. In this way, a true sewer condition assessment rating could be done for every foot of the SSS. The City also purchased a new televising truck and a new combination jet/ vac truck dedicated to proactive televising so all this work could be done in house, and not contracted out had been in past years.

Also, in 2006, a new computer software program was purchased for the televising. All televising videos are now digitally captured and stored in a computer server, with backup. This eliminates the need for VCR tapes or DVD's. The videos may be viewed on computers throughout different City departments that are involved in the collection system. The new computer software called "Flexidata™" is based on the NASSCO's PACP (Pipeline Assessment and Certification Program) program. This new system, along with the City's PACP coding system, automatically scores each sewer segment on ten attributes: five scores for structural defects and five scores for O&M defects. The PACP coding system uses over 240 defect codes to better qualify the condition of the sewer. This scoring system furthers the establishment of a true sewer condition assessment for every segment in the sewer system. All TV operators are tested and Certified in the use of the PACP ratings.

The PACP coding system uses a 5 point scale for assessing the condition of each pipe: 5 being the worst to 1 being the best. The City has amended that scale and uses a "Red", "Yellow" and "Green" scale. A SSS segment given the rating of "Red" is a sewer that is in poor condition and will be repaired or replaced within the next five years. A sewer segment rated "Yellow" will be re-cleaned and re-televised in ten years to see if it has deteriorated to the point of needing to be

repaired or replaced. A sewer segment rated "Green" will be re-cleaned and re-televised in twenty years to see if its condition has deteriorated to the point of giving it a new sewer rating.

In summary, this internal televising inspection and the sewer condition assessment rating system helps manage timely, relevant information to prioritize appropriate maintenance and sewer rehabilitation activities. The City's implementation of the above-described sewer evaluation program is well underway. To date, 940,000 lf of sewers have been given a sewer condition assessment rating.

2.4.4 SURVEY AND REHABILITATION

The City has had an ongoing, budgeted and established sewer rehabilitation program since July of 1998. The program is titled "Sewer Repair / Replacement Program". The program has a Program Manager and a Designer II. In 1998, the Mission Statement for the Repair / Replace Program was established as follows;

> ***"The Sewer Repair Replacement Program is responsible to develop, implement and monitor sewer repair / replacement strategies to identify deteriorating areas of the sewer collection system. It is also to coordinate the review and analysis of sewer maintenance data to select and prioritize sewer repair and replacement projects to solve chronic maintenance problems."***

In 2003, the City performed a "Snapshot-in-time" analysis of its sewer collection system using data collected from 1995 to 2003. Using the GIS system, a count was made of all basement backups, basement floods and all WPCM complaint calls resulting in actual work repairing our sewers in that time period.

The City's wastewater service area is divided into quarter sections. The total calls in that eight year period were attached to their appropriate quarter section. The quarter sections were subsequently prioritized based on the total number of backups, floods and maintenance calls.

The purpose of having such a prioritized list is to approach a large sewer system in the most effective way to find those sewer segments that create blockages or that are in structurally poor condition. By locating and repairing these sewer segments Fort Wayne hopes to eliminate SSDs, basement backups and basement floods and reduce the frequency and costs of emergency repairs. The prioritized list is used to help establish the proactive televising schedule described above and to optimize the use of human and material resources by shifting maintenance activities from reactive to proactive. This leads to savings through avoided overtime costs, reduced emergency construction costs, and the elimination of basement backups and basement floods.

Since the establishment of the Repair / Replace Program in 1998, 304,765 lf (57.72 miles) of sewers, (or 4.5% of the entire system), have been repaired/replaced. The breakdown of repairs is as follows:

Structural Repairs	=	290,853 lft.
I/I Removal	=	13,912 lft
Small diameter sewers	=	164,687 lft.
Medium diameter sewers	=	135,689 lft
Large diameter sewers	=	4,389 lft.
Combination sewers	=	195,955lft.
Separate Sanitary sewers	=	108,810lft.

The City uses various rehabilitation methods to repair of its sewers. The methods that have been used in the past are Cured-in-Place lining, Pipe Bursting, Excavation, GRP (Glass Reinforced Panels) and Horizontal Directional Drilling (HDD).

2.4.5 SEWER CLEANING RELATED TO INFLOW AND INFILTRATION REDUCTION

The City's Inflow and Infiltration Reduction program is prioritized first by major interceptor, then by subbasin, then by minibasin. Cleaning and televising priorities for inflow/infiltration reduction are based primarily on sewer age, pipe material, environmental factors, and flow monitoring. Pipes less than 20 years old and those made of PVC or HDPE are typically given the lowest priority and not cleaned/televised unless other factors warrant such activity.

2.4.6 FLOW MONITORING

City Utilities utilizes flow monitoring for three basic functions: billing, engineering, and CSO monitoring. Nineteen (19) magnetic meters are dedicated to billing large customers.

The City's PDS department uses four area/velocity meters for inflow/infiltration tracking as well as other hydraulic issues that may present themselves. These four meters are installed by WPCM, downloaded and maintained by an Operations Technician from Engineering Support Services (ESS), and evaluated by a Designer or Program Manager in PDS. Data is compared to nearby rain gauges to determine whether I/I exists and whether it is likely to be inflow, infiltration, or both. In addition to City owned monitors, City Utilities sometimes contracts out flow monitoring work for large projects in order to further calibrate the sewer model maintained by Malcolm Pirnie.

2.4.7 MANHOLE INSPECTIONS

There are two types of manhole inspection are performed by the City. The older and more in-depth assessment is performed by City televising crews as part of their normal cleaning operations. Results from these detailed inspection are written on a form and forwarded to PDS

where the data is entered into an electronic database. (Eventually, as the Hansen™ Information System migration is complete, the data will be entered directly into Hansen™.) The database is a useful tool in making design decisions on a variety of projects. Twenty-seven pieces of information are recorded during this type of inspection. This type of inspection is geared more toward noting structural features of the manhole.

The second type of inspection is performed as part of the inflow/infiltration removal program and focuses on areas where inflow/infiltration is known or suspected. This type of inspection is performed by PDS during and just after rainfall events. The purpose is to witness and document rainfall induced inflow/infiltration and groundwater infiltration. Observations are written down and remediation is diagnosed during inspection. Diagnoses are based on location and severity of leaking. Hand written data is then entered into an electronic database where each manhole is placed into one of the following categories: Good Manhole/Do Nothing; Manhole Rehab Contract; Give to Maintenance; and No Access. Once categorized, the appropriate response activity is scheduled and completed.

2.4.8 MANHOLE REPAIRS

Manhole repair work can be generated by WPCM or PDS. Manhole repairs are typically performed either by WPCM or outside contractors, depending on the rehabilitation method, repair environment, and availability of City crews. For structural repairs requiring excavation or I/I repairs on the chimney, WPCM is given the first opportunity to perform the work. If the repair is beyond the means of WPCM, it is combined with similar type work and publicly bid. If a coating system is prescribed, it is automatically bid out.

3.0 CONCLUSION

Fort Wayne's Water Pollution Control Utility is committed to properly manage, operate and maintain the City's SSS. This includes: design, construction, operation, maintenance, and repair of all aspects of the SSS. The SSS is a critical element in the success of wastewater treatment. City Utilities has implemented its CMOM program in an effort to provide/maintain a high level of service to customers while reducing regulatory non-compliance. The City has already been practicing activities that are included in a CMOM program. Consequently, this document largely serves to formalize and consolidate the already existing activities undertaken by City Utilities.

EXHIBIT A-1

Current as of 10/2/07

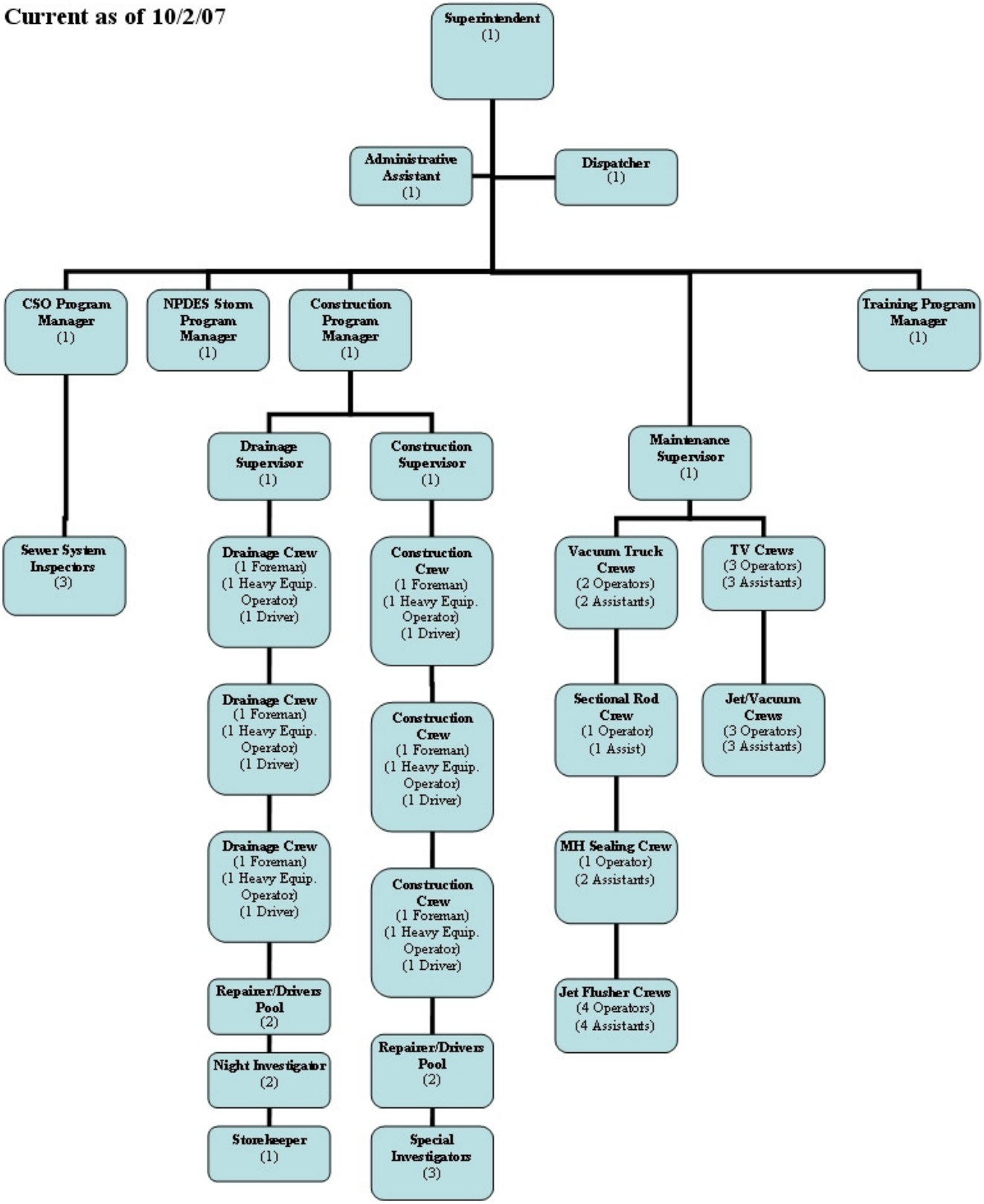

EXHIBIT A-2

WPCP Organizational Chart

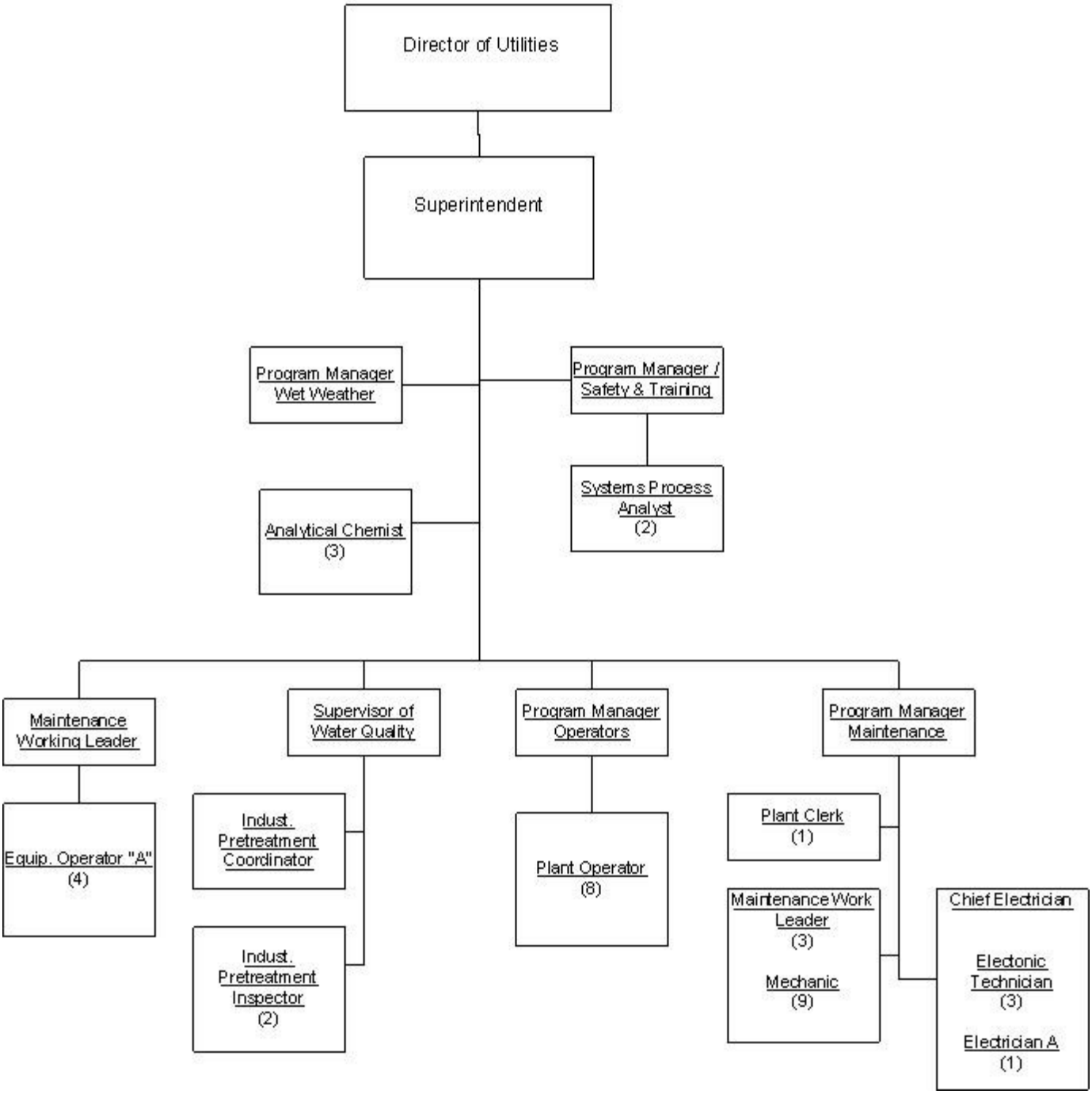

EXHIBIT A-3

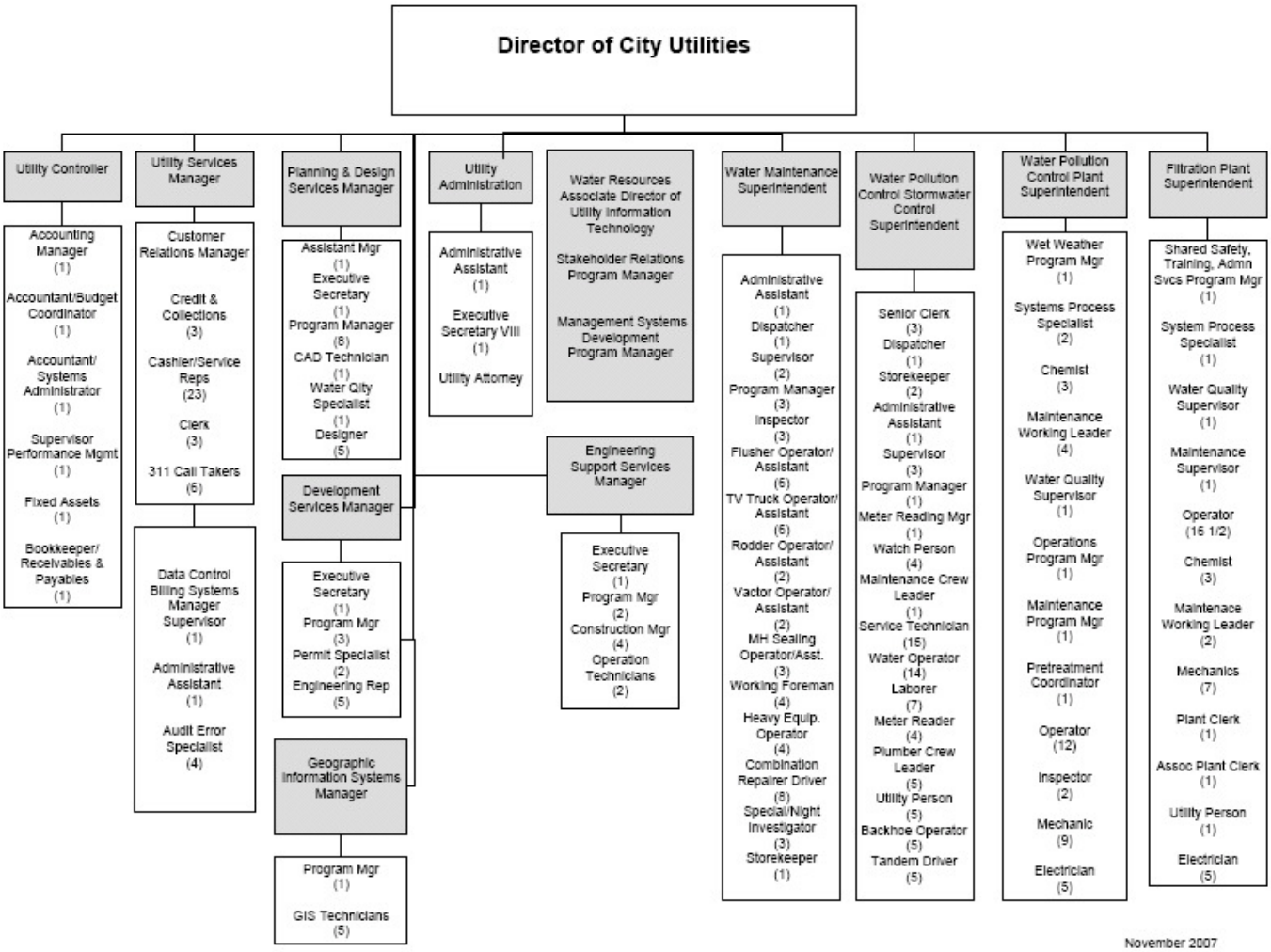
Director of City Utilities
Utility Controller
Accounting Manager (1)
Accountant/Budget Coordinator (1)
Accountant/ Systems Administrator (1)
Supervisor Performance Mgmt (1)
Fixed Assets (1)
Bookkeeper/ Receivables & Payables (1)
Utility Services Manager
Customer Relations Manager
Credit & Collections (3)
Cashier/Service Reps (23)
Clerk (3)
311 Call Takers (6)
Data Control Billing Systems Manager Supervisor (1)
Administrative Assistant (1)
Audit Error Specialist (4)
Planning & Design Services Manager
Assistant Mgr (1)
Executive Secretary (1)
Program Manager (8)
CAD Technician (1)
Water City Specialist (1)
Designer (5)
Development Services Manager
Executive Secretary (1)
Program Mgr (3)
Permit Specialist (2)
Engineering Rep (5)
Geographic Information Systems Manager
Program Mgr (1)
GIS Technicians (5)
Utility Administration
Administrative Assistant (1)
Executive Secretary VIII (1)
Utility Attorney
Water Resources Associate Director of Utility Information Technology
Stakeholder Relations Program Manager
Management Systems Development Program Manager
Engineering Support Services Manager
Executive Secretary (1)
Program Mgr (2)
Construction Mgr (4)
Operation Technicians (2)
Water Maintenance Superintendent
Administrative Assistant (1)
Dispatcher (1)
Supervisor (2)
Program Manager (3)
Inspector (3)
Flusher Operator/ Assistant (5)
TV Truck Operator/ Assistant (5)
Rodder Operator/ Assistant (2)
Vactor Operator/ Assistant (2)
MH Sealing Operator/Asst. (3)
Working Foreman (4)
Heavy Equip. Operator (4)
Combination Repairer Driver (8)
Special/Night Investigator (3)
Storekeeper (1)
Water Pollution Control Stormwater Control Superintendent
Senior Clerk (3)
Dispatcher (1)
Storekeeper (2)
Administrative Assistant (1)
Supervisor (3)
Program Manager (1)
Meter Reading Mgr (1)
Watch Person (4)
Maintenance Crew Leader (1)
Service Technician (15)
Water Operator (14)
Laborer (7)
Meter Reader (4)
Plumber Crew Leader (5)
Utility Person (5)
Backhoe Operator (5)
Tandem Driver (5)
Water Pollution Control Plant Superintendent
Wet Weather Program Mgr (1)
Systems Process Specialist (2)
Chemist (3)
Maintenance Working Leader (4)
Water Quality Supervisor (1)
Operations Program Mgr (1)
Maintenance Program Mgr (1)
Pretreatment Coordinator (1)
Operator (12)
Inspector (2)
Mechanic (9)
Electrician (5)
Filtration Plant Superintendent
Shared Safety, Training, Admin Svcs Program Mgr (1)
System Process Specialist (1)
Water Quality Supervisor (1)
Maintenance Supervisor (1)
Operator (16 1/2)
Chemist (3)
Maintenace Working Leader (2)
Mechanics (7)
Plant Clerk (1)
Assoc Plant Clerk (1)
Utility Person (1)
Electrician (5)
November 2007

EXHIBIT B

Functional Areas of WPCM

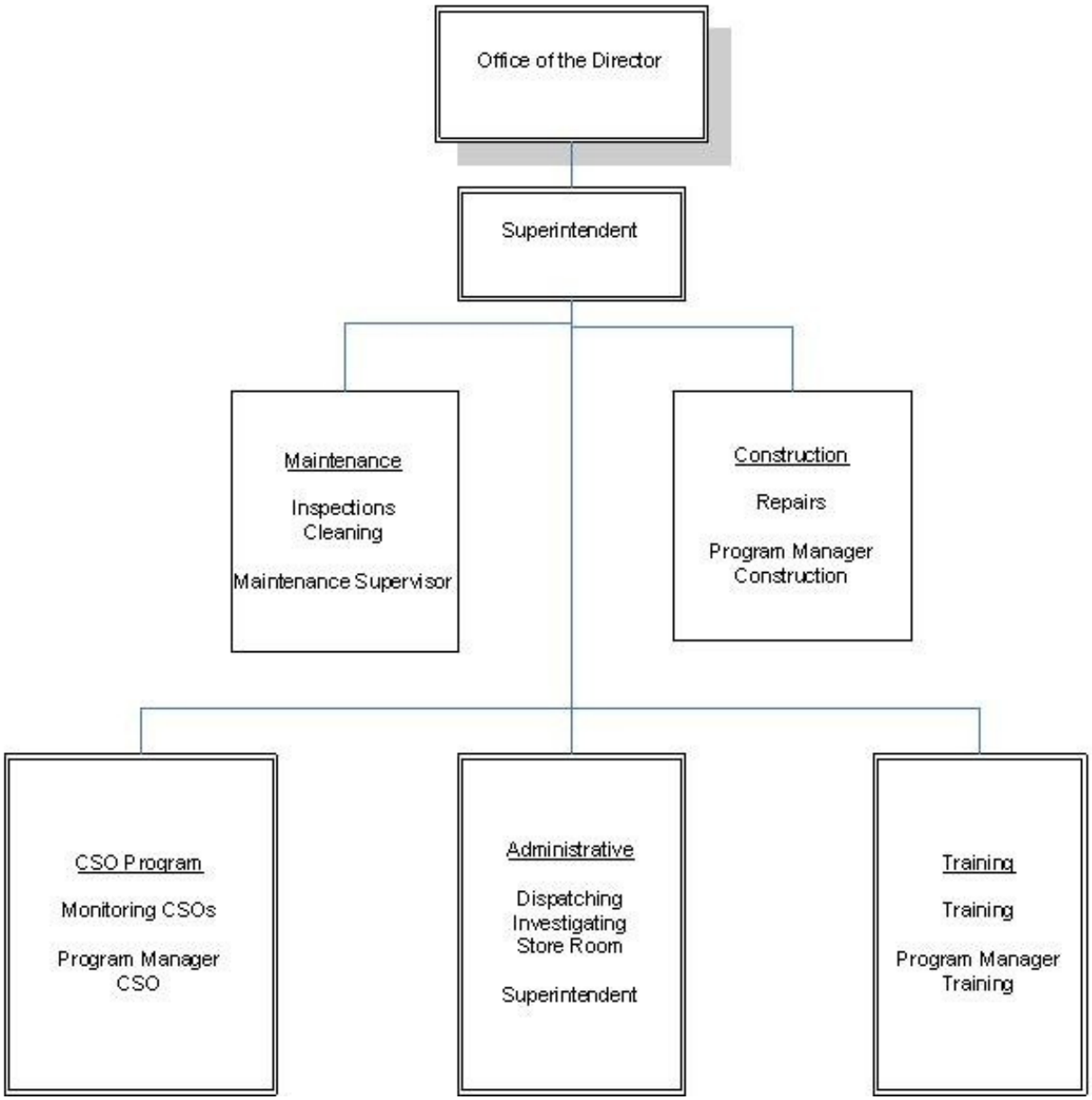

EXHIBIT C

Exhibit C WPCM Call Process

Step 1 – Dispatcher Receives Telephone Call

Request for service calls are received by the Dispatcher at 427-1255. Dispatchers are trained to elicit information on the exact nature and magnitude of the problem, including whether the sewer problem is on private property or in the WPC Utility owned main-line sewer.

Step 2 – Dispatcher Logs Basic Information in Log Book

At this time, the Dispatcher manually logs key information into the "Log Book". Information to be obtained is as follows:

- Name of the person calling,
- Phone number of the person calling,
- Date and time the call was received,
- Location of the problem, and
- Type of problem.

Step 2A – Dispatcher Creates a Service Request for the Investigation

The Dispatcher enters the information from the "Log Book" into the Hansen database and prints a Service Request.

Step 3 – Dispatcher Dispatches an Investigator to Assess the Situation

The Dispatcher pages Investigators by radio to respond to the service call. An Investigator has a pickup truck containing some hand tools and a few barricades.

Step 4 – Investigator Assesses the Situation

During this step, the investigator arrives on site and locates the problem. If needed, the investigator places the initial barricades. The investigator then attempts to determine the cause of the problem.

Step 5 – Investigator Adds Findings to Service Request

The findings are written down on the Investigator's Daily Time Sheet, and reported to the Dispatcher. When the investigator returns to the office he adds the findings to a hard copy of the investigation work order.

Step 5A – Dispatcher Enters the Information from the Completed Service Request into Hansen

Step 6 – Is Further Action Required?

At this point the Investigator has assessed the situation and reported to the Dispatcher if further action is needed.

Step 7 – Is This an Emergency Situation?

In addition to reporting the need for additional action to the Dispatcher, the Investigator has indicated if emergency action is required or if routine action is required.

Step 7A – Dispatcher Dispatches Crew.

If emergency action is required the dispatcher dispatches an appropriate crew. If the situation merits discussion with a supervisor the appropriate supervisor is contacted.

Step 7B – Dispatcher Creates a Follow-up Work Order.

The Dispatcher enters the dispatch information in the Hansen database and prints a work order.

Step 8 – Supervisor Investigates Site.

The supervisor may be involved in determining site conditions and crew requirements when follow-up work is requested.

Step 9 – Is This a Capital Project?

The supervisor determines if this could be included in a current capital project. If it could be a capital project, the Supervisor should check with Engineering.

Step 9A – Forward Site Information to Engineering.

If it is determined that the work is or should be part of a capital project, the Supervisor should forward all inform he has to Engineering.

Step 10 – Can This Work Be Handled With WPCM Forces?

The Supervisor determines if WPCM Group has the required resources to perform the required work.

Step 10A – Contract Work.

If the Supervisor determines that the WPCM Group does not have the required resources he solicits bids from contractors.

Step 11 – Supervisor Plans Project and Creates a Follow-up Work Order.

The Supervisor obtains the required locates, permits, traffic plans, and notifications. Then the Supervisor creates the follow-up work order in Hansen that provides the appropriate crew with the information that they need to complete the required tasks.

Step 12 – Supervisor Dispatches Crew.

The supervisor gives the appropriate crew the follow-up work order and sends them to the site.

Step 13 – Crews Perform Work.

Step 14 – Crews Report Resources Used On Follow-up Work Order.

Crews record work results, labor hours, equipment hours, and material used on the hard copy of the follow-up work order. They will also indicate on the hard copy if additional follow-up work is necessary.

Step 15 – Dispatcher Enters Information From the Completed Work Order Into Hansen.

EXHIBIT D

Fort Wayne WPC Plant
Standard Operating Procedure No. 450-3
IPS Procedure 18
Revised: 12-07

River Sampling Procedure

River samples are collected weekly from April 1 through October 31 at six sites to monitor river water quality in the three rivers. E.coli data from the sampling program is posted weekly on the City's website during the recreation season.

Equipment No.	**Locations** • St. Marys at Ferguson Rd. (SMF) • St. Marys at Spy Run Ave.(SMSR) • St. Joseph at Mayhew Rd. (SJM) • St. Joseph at Tennessee St. (SJT) • Maumee at Anthony Blvd. (MAA) • Maumee at Landin Rd. (MAL)
Equipment Type • IDEM sampling device • River elevation/depth worksheet • River chain-of-custody sheets • Electronic distance sounding unit	• Coolers with ice • Non-talc disposable gloves • Safety glasses • YSI 600 Sonde multiprobe • DO bottles with fixing reagent
Safety Precautions • Use the arrow board and flashers when stopping at sampling sites. • Park the van so that it protects personnel from oncoming traffic. • Contact the Sheriff for the Mayhew site. • Wear gloves. • Wear safety glasses.	**References** • 2007 Amended CSSOP Manual • YSI 600 Manual

EXHIBIT E

FORT WAYNE FIRE DEPARTMENT

HAZARDOUS MATERIALS CONTROL GROUP

STANDARD OPERATING GUIDELINES

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SCOPE

THE PURPOSE AND INTENT OF THE FORT WAYNE FIRE DEPARTMENT HAZMAT TEAM IS AS FOLLOWS:

Identification:

Hazmat product identification can become an extremely difficult task considering the conditions and potential exposure problems. It will be the responsibility of the Hazmat Team, using the tools and person protective gear available, to advance into he incident area and to obtain and communicate any and all information regarding hazardous material to command for evaluation and consideration.

Stabilization:

The Hazmat Team, using the tools and equipment available to them, may, after the material has been identified and the strategic options evaluated, be directed to take whatever measures are considered necessary to stabilize the incident. The definition of stabilizes in this context would include: “action by the team to confine the incident to the area involved”, and “action taken to prevent escalation of the incident”.

Containment:

Hazmat containment would include only those actions necessary to prevent the spread of the incident beyond a defined boundary.

It is not the intent of the Fort Wayne Fire Department to become involved in the clean up, recovery or disposition of Hazmat waste. It is our function to identify the threat to the community, stabilize the incident, to minimize the threat to life and property and to attempt to contain the incident within reasonable bounds and to protect the incident scene until a Hazmat contractor arrives and can insure their ability to reduce and remove the threat from the community.

This manual is a basic outline of the Fort Wayne Fire Department’s Standard Operating Procedures at a Hazardous Materials Incident. These procedures are NOT intended to restrict the actions necessary to bring a Hazmat incident to a successful conclusion.

Fort Wayne Fire Department Goals

1. The primary operational goal of our department shall be isolation, containment and stabilization of the product.
2. Extreme caution shall be exercised by all Fire personnel to insure minimum exposure.
3. All available specialized tools, equipment and apparatus shall be used to provide maximum protection and efficiency.
4. Only those persons specifically trained shall use the specialty equipment.
5. All tactics and procedures described herein form the basis for hazardous materials incidents but, when conditions warrant, shall not relieve department personnel of the responsibility for exercising initiative and independent judgment.

Control of the Response Effort

Experienced responders do not rush in. They stop as soon as they have visual sighting and perform a detailed size-up, using binoculars to evaluate the situation, if necessary, before committing personnel and equipment. They identify fire/explosion/reactive/health/environmental hazards and evaluate potential impacts. They identify rescue needs and estimate danger areas, exposures, consider wind direction and velocity, consider potential secondary emergencies, and decide if evacuation may be necessary.

Experienced responders initiate a staging area outside the danger zone where all personnel and equipment report in and receive orders. Those not needed immediately are placed on remote standby until needed. Personnel and equipment area committed to the danger zone only as needed and sufficient reserves are obtained and held in readiness. A command post is established immediately to serve as a focal point for information gathering and decision making. Approach of committed personnel and equipment is from up-wind and upgrade , using natural barriers for protection. Specific individuals area assigned to protect equipment and tools from run-offs, vapors, sprays or residues. Ignition sources are identified and controlled, and unmanned equipment is used when possible. Standby personnel are used to lug and carry equipment so the attack team will not expend valuable energy before arranging at the point of attack. Long lays of hose are utilized rather than driving apparatus close to the danger zone. Responders recognize that some people think they are immune, so attention is paid to insuring that protective equipment is not only available but used, that face shields are down and self-contained breathing apparatus is worn. Operations in the danger zone are performed with the minimum number of personnel to limit casualties if the situation gets out of hand.

Hazardous Materials Preparedness

Seven factors are crucial to initiating and maintaining the high level of preparedness that is necessary: continuous training, provision of specialized equipment and materials, identifiable support for the program from the top on down, extensive prior planning, extremely effective organization, detailed written guidelines and procedures, and placement of a high priority on communications.

There is a constant upgrading of equipment and techniques because, as the state-of –the-art changes out there, we have to adapt and learn how to handle new hazards. The vast growth in products and processes within the entire petro-chemical industry has really affected the fire service. The whole situation has changed. We are no longer just fighting Class A fires. We have to be ready to combat nearly any challenge the mind can devise.

Purpose

1. The purpose of this Plan is to identify and remove the threat to public heath and safety, which may result form an accident involving hazardous materials. It is not a detailed operational manual, but more of a planning guide.

2. The Fort Wayne Fire Department (FWFD) Operations Chart listed on page 15, is a basic step-by-step flow char indicating required actions to be taken when a hazardous materials has been, or may be, released into the environment. The chart is designed as a simple, but effective indication of how hazmat incidents can be mitigated.

3. Hazardous materials are commonly used, transported and produced, in Allen County and surrounding areas. The operational concepts upon which this Plan is based are applicable to hazardous materials identification and mitigation.

4. The guidelines presented in this Plan are written with the concept that the Fort Wayne Police Department may be in charge of the perimeter, and all activities outside of the perimeter, and that the Fort Wayne Fire Department Incident Commander will be in charge of activities inside the perimeter. (When an incident occurs outside of the City of Fort Wayne in fire districts protected by the FWFD, the County Sheriff Incident Commander may be in charge of establishing the perimeter and control all activities outside of that perimeter.

5. The basic concept of mutual aid is the backbone of any hazardous material response. The Fort Wayne Fire Department Hazmat Control Group and its resources area available, and will respond to incidents outside of its jurisdiction, when requested. However, when responding to an incident outside of its jurisdiction, the Fort Wayne Fire Department's Hazmat representative will report to the individual in charge at the scene, and offer services to assist in mitigating the incident.

SECTION 1

HAZARDOUS MATERIALS DEFINITIONS

Hazardous Materials Incident Levels

Hazardous material incident levels are separated into three (3) levels to assist in determining the seriousness of the situation.

Level I

A Level I response can be defined as one which can be easily handled with the initial emergency response crews. This means that law enforcement, fore and emergency medical personnel form the immediate area able to mitigate the incident. Mutual aid response and evacuation are not necessary. Examples of a Level I incident include a gasoline spill which is contained and not ignited, a leak of a small cylinder of chlorine not requiring any evacuation, an outside leak from a 55-gallon drum, and a small pesticide spill.

Level II

A Level II is one that is more complex than a Level II. At this level, some sort of specialized regional response team would be needed. Outside help from other agencies (government and private) will have to be used. Examples of incidents at this level include: A leak from a drum of a poison, fire involving pesticide storage, a propane truck on fire with flame impingement on the tank, and a rail car leaking chlorine.

Level III

A Level III incident can be simply defined as a disaster for the local community. It is one, which has escalated beyond the ability of the local government to cope with problems. As a result, many other agencies would now be involved. Assistance would be provided by transportation companies, manufacturers, Coast Guard, Environmental Protection Agency, state and local health groups, local elected officials, and local government legal advisers. Because of the magnitude of this level of incident, the duration is measured in days instead of hours. Incident Commander must be concerned with the logistical problems of the evacuees as well as the emergency forces.

The Level I, II, and III is determined by the incident commander:

1. Recommended agency responses are listed in the Agency Response Guide on Page____. It is a guide to be used for information and planning purposes.

2. The primary response team responds to all levels of incidents. The secondary response team can be called during a Level I incident if the I.C. feels they are necessary.

SECTION II

RESPONSE

Response

1. In some cases a hazardous materials situation will require the expertise of several agencies. Because of the wide variety of agencies that may be involved, and the differences in which their services may be required, two groups were organized for maximum efficiency. Groups are categorized by the intensity of the need for their services. The two groups are designated as the Primary and Secondary Response Groups.

2. The Primary Response consists of agencies whose specialized services are needed in most initial emergency calls. They are responsible for responding immediately to the dispatched incident, unless otherwise requested.
   A. FWFD Communications, shall dispatch a full assignment as indicated by the Zone Map (if the incident is one of minor involvement, a “One Engine Company” shall be dispatched).

   B. Dispatcher shall radio responding Battalion Chief and provide all available information.

   C. Dispatcher shall notify Hazmat Group Leader and all Staff Personnel and provide all available information if a Level II or III incident is called, (They may be notified at Level I, if requested).

   D. City EMS and Law Enforcement Agencies will respond.

   E. All hospitals shall be alerted if incident appears serious.

3. The Secondary Response consists of agencies who specialize as information sources, or those who will provide auxiliary assistance at the scene.

   A. State Police
   B. Fort Wayne Department of Public Health
   C. Department of Street and Highways (includes County Department)
   D. City Water and Sewer Departments
   E. NIPSCO and Indiana Michigan Power (AEP)

Their responsibilities lie with contacting other agencies to provide services such as: removal, containment, specialized emergency teams, etc. The Secondary Response will be contacted and placed on standby until service are required.

Agency Response Guide

Agency	Level I			Level II			Level III		
Primary Response:	A	S	R	A	S	R	A	S	R
City Fire Department			X			X			X
City Law Enforcement			X			X			X
EMS			X			X			X
Secondary Response:									
County Sheriff Department				X					X
Indiana State Police				X					X
City Street and Highway				X					X
City and State Highway Departments				X					X
City Public Health				X					X
Other Support Agencies:									
*Hospitals				X				X	
Indiana & Michigan (AEP)				X					X
NIPSCO				X					X
Indiana Public Health				X				X	
Department of Transportation				X				X	
Technical Support Agency's				X				X	

*Agency may be employed in Level I or II.
Note: Agencies in Standby Status may be required to respond immediately upon request.

A-Alert S-Standby R-Respond

FORT WAYNE FIRE DEPARTMENT

1. Within the jurisdicational areas of the Fort Wayne Fire Department as provided by law and ordinances, the Department's responsibility will be as follows:

   A. Command of all activities within the perimeter established by the Fire Incident Commander, to include the Incident Command Post.

   B. Coordinate activities of nay and all support agencies functioning within the perimeter.

   C. Provide a Public Information Officer, in coordination with the City Police Department or County Sheriff's Department.

   D. Provide specialized equipment, material and expertise available from the Department's resources for successful mitigation of the incident.

   E. Provide a Safety Officer who will provide for decontamination of personnel by wash-down, R & R area and continuous air supply of Self Contained Breathing Apparatus.

   F. Coordinate or provide assignment of outside fire departments responding on a mutual aid basis.

   G. Assist any and all support agencies in any way possible.

   H. Maintain chronological record of all activities pertinent to the incident, including initial assessment of incident, continual update of progress, responses of various agencies and additional equipment, weather conditions and changes, and any other information that may be required in a final report.

   I. Insure constant open communications with Fire Department Communications.

2. In area outside the City limits, or contractual districts of the Fort Wayne Fire Department jurisdiction, the Department will act as a support agency and function under the direction of the Incident Commander, if called upon to respond by an appropriate authority, Fire Chief, Police.

SECTION III

STANDARD OPERATING GUIDELINE

General Factors to Consider

Due to the wide variety of situations Fire Department personnel may encounter in dealing with hazardous materials, these considerations will not attempt to provide specific guidelines on any one individual chemical or situation and are not listed in any priority.

It is imperative that the First Arriving Unit determine what hazardous material(s) is involved, and how much, prior to taking action to stabilize the incident. The major problem in most cases is to identify the material involved. Look for D.O.T. identification four digit number labels, markers, and shipping papers.

The best Way to make a positive identification of hazardous materials involved in transportation accidents is through the shipping papers carried on all vehicles regardless of the mode of transportation. Highway vehicles carry shipping papers in the driver packet located in the tractor cab, usually on or near the driver's seat. Railroad shipping papers, or waybills, are located with the train's conductor. The waybills are kept in the order that the train is made up, from front to rear, listed by the initials and the number of cars in the trains consist. The waybill packet usually has a train manifest with it which is a computer printout listing all the engine numbers and cars in the train as the way the training is made up, shipper, consignee, originating point, destination, and engine. Air cargo shipments have an air bill on each piece of the shipment. The captain of the aircraft will have a cargo manifest with him.

Entering the scene to make a positive identification ma be a considerable risk. The danger of explosions, leaking gas and poisoning may be great. If an approach can be made to secure the shipping papers, do it in the following manner:

A. Operate with a Two-Man Team
B. Wear Full Turn Out Clothing
C. Wear SCBA
D. Use Natural Barriers (hills, gullies, etc)
E. Approach from Upwind
F. Avoid Contact with the Hazardous Materials
G. Secure Papers, Assess Problems Quickly and Return
H. Have a Two Man Back Up Team Ready

If an approach cannot be made safely, await the arrival of the H.M.C.G. (It may be necessary to make immediate rescue but this should be done with an awareness of the same risks and procedures mentioned for securing the shipping papers).

Transportation emergencies are often more difficult than those at fixed locations. The materials involved may be unknown, warning signs may not be visible, the driver may be killed or missing.

Hazardous materials incidents involving fixed installations involve different procedures for identifying materials involved if the problem occurs when the plant is in operation. Valuable information can obtained from the plant manger, plant engineering, and plant supervisors. Bulk storage facilities may or may not have identifying markings, such as product names or NFPA 704 system of identification. Fire company pre-planning can be a useful tool for identify the used of hazardous materials and hazardous processes.

Considerations

First Arriving Units: The first arriving officer must begin a size up and consciously avoid committing to a dangerous situation. When approaching, slow down or stop to assess any visible activity-taking place. Evaluate the effects of the weather and location of the situation. All other units will stop at a safe location form the incident until instructed to take specific action.

Size Up: The Incident Commander must make a careful size up before deciding on a commitment. It may be necessary to take immediate action to make rescue or evacuate an area, but this should be done with an awareness of the rush to Fire Department personnel, and taking advantage of available protective equipment.

The objective of the size-up is to identify the nature and severity of the immediate problem and gather sufficient information to formulate a valid action plan. A HAZARDOUS MATERIALS INCIDENT REQUIRES A MORE CAUTIOUS AND DELIBERATE SIZE UP THAN MOST FIRE SITUATIONS!

Avoid premature commitment of companies and personnel to potentially hazardous locations. Proceed with caution in evaluating risks before formulating a plan and keep uncommitted companies at a safe distance.

The following items may be significant to consider at any hazardous materials incident. (Not all will be significant at any particular incident).

1. Cooling Containers:
   - A. Use adequate water supply (minimum 500 gpm)
   - B. Apply heavy streams to vapor space.
   - C. Use unmanned streams
   - D. Use natural barriers to protect personnel

2. Remove Uninvolved Containers:
   - A. Move individual containers
   - B. Move tank cars away from flame
   - C. Cool containers before moving

3. Stop Leak:
   - A. Close valves
   - B. Place plug in openings
   - C. Place container in upright position
   - D. Use water spray to approach leak

4. Apply Diluting Spray
   - A. Dilute water soluble liquids
   - B. Flush corrosives to reduce danger
   - C. Use spray streams to absorb vapors
   - D. Use water with caution on some materials

5. Construct Dams, Dikes or Channels:
   - A. Direct running liquid away form explosives
   - B. Control run off from corrosive materials
   - C. Use sand or dirt

6. Remove Ignition Sources
   A. Start down wind.
   B. Eliminate all sources of heat, spark, and friction.

7. Natural Gas Leaks
   A. No attempt shall be made to stop a leak in a natural gas line rupture.
   B. Units shall stand by and wait for the arrival of the gas company.
   C. When responding to a gas leak in a structure, gas detection equipment shall be used to determine the concentration of the product before entrance is made. Remember: When introducing fresh air into a gas filled structure, the gas can reach its explosive range.

8. Call for additional resources when the need is only anticipated. The actions taken by the Incident Commander in the first minutes of an incident affects the outcome more than any other single factor.

On Scene Decision

1. Prior to the arrival of the Battalion Chief, the first FWFD Officer on the scene shall verify dispatcher information. Company Officer shall brief Battalion Chief upon his arrival. When Battalion Chief is apprised of incident situation, he will notify communication of status and request additional assistance as necessary. Note: If a large liquid fire is a part of the incident, then Foam Unit shall be dispatched.

2. The Incident Commander shall determine, to the best of his ability, the level of the incident.

3. If a level II or III is announced, then members of the Hazmat Control Group shall be notified and respond with the Hazmat trailer. The Incident Commander shall also determine the best and most safe location for the Incident Command Post. This information shall be provided to all agencies in the Primary and Secondary Response Groups. Fire Communications shall also be notified of evacuation requirements, if necessary. Communications shall attempt to provide wind direction to the Incident Commander.

4. Preparation of establishing the Incident Command Post must begin when the initial response is made. Location of the Incident Command Post will be determined by the type situation encountered, wind direction and accessibility. The ICP must be located on the perimeter, a safe distance form the incident. The ICP must be prepared to relocate if there is a change in the incident seriousness or wind direction.

5. Requests for additional assistance will be decided upon as soon as possible after the arrival of the Incident Commander.

6. Additional assistance is a judgment decision by the Incident Commander. Additional assistance is not limited to what has been identified in the plan, but will normally follow the outline of this plan. Additional assistance may not involve Police Department personnel, but must be considered. Upon arrival of the Law Enforcement Incident Commander, all facts concerning the incident shall be
reviewed with the Police Incident Commander as soon as possible.

Stabilizing the Emergency

A. Extinguish the Fire

1. Determine proper extinguishing agent
2. Wear full protective clothing and SCBA
3. Determine quantity and flow rate of foam needed to extinguish fire.
4. Delay attack until sufficient foam is available on site unless it is necessary to protect exposures by limiting fire intensity.
5. Have foam flowing from nozzle before attacking fire.
6. Approach from up-wind and up-grade.
7. Maintain back –up lines during attack.
8. Attack from side of container rather than the ends.
9. Remove or cool container rather than the ends
10. Apply water to vapor space of exposed containers and especially to the point of flame impingement.
11. Set unmanned monitors and pull back firefighters when adequate coverage of exposed containers cannot be assured.
12. Do not extinguish burning gases unless the supply can be shut off.
13. Give though to allowing pesticides to burn out while protecting exposures.

B. Confining Released Chemical

1. Wear full protective clothing and SCBA
2. Catch leaking material in a container
3. Avoid contact with the material or with vapors of the material.
4. Avoid working in flammable atmospheres.
5. Confine spills with dams of dirt, sand, fire hose, or other available materials.
6. Cover storm drains
7. Notify Water Department when a spill threatens or has entered a waterway.
8. Cover spills with foam to suppress vapors.
9. Absorb or disperse vapors with water fog.
10. Avoid water on the leak of containers of chlorine and similar corrosive materials.
11. Remove ignition sources near and down wind from flammable vapors.

C. Stopping Further Release

1. Stop the leak if it safe to do so wearing fire clothing
2. Wear full protective clothing and SCBA.
3. Shut off valve to control leak.
4. Plug or slow leak with available material.
5. Be sure plugging material is compatible with chemical.
6. Avoid overhead leaks and other type leaks that saturate fire clothing.
7. Leave poisons, corrosives, pesticides, PCB's and radioactive materials to H.M.C.G.

Disposal of Petroleum Contaminated Materials

Response to a small volume of petroleum product (less than 150 gallons) by local fire departments or other response agencies often ends with that agency in possession of contaminated absorbent materials that must be disposed of. IDEM recommends the following guidelines can be used to dispose of contaminated petroleum materials.

I. Containment and Removal of Spilled Materials:

1. Use absorbents to collect the petroleum, build dikes to keep it out of severs and streams, etc. Suitable materials include:
    a. sand
    b. oil-dry, kitty litter
    c. commercially available absorbent pads and booms

2. Do not flush petroleum into a waterway or sewer. It may actually increase the toxic effect of the petroleum to aquatic organisms and the bacteria in sewage treatment plants. The materials previously listed may be used, provided they are prevented form entering the waterway or sewer, but they must be removed and disposed of. If they do enter or threaten to enter the waterway or sewer, then it becomes a spill that must be contained and cleaned up.

II. Disposal

1. If the total amount to be disposed of is less than 220lbs., the hazardous waste and special waste rules do not apply. Therefore, if you take some reasonable precautions, it can be disposed of as normal solid waste by putting it into sturdy plastic bags and putting it into a dumpster or trash bin. The following are alternative suggestions for disposing of these materials:
    a. If the fuel has been spilled onto a roadway and there is no waterway nearby, and if sand was applied, it can be left in place or swept to the road shoulder.
    b. If sand was used as an absorbent, another possibility may be to take it to an asphalt batch plant to be incorporated into their product.
    c. If the absorbent must be removed from the site, then consider the following suggestions.
        1. Highly volatile products (i.e. gasoline) should be placed on Visqueen (protected from rainfall), and allowed to volatilize for a day or two to eliminate the flammable vapor hazard; then bag the absorbent and dispose of it as regular solid waste.
    d. If the total amount to be disposed of is more than 220 lbs.; it must be treated as special waste and in this case, it is the responsibility of the spiller to clean up the spill.
    e. If a clean-up company is needed, several companies are listed on the spill notification form (page___) for your use. On any Hazmat incident, remember to notify the EMS Office. If a clean-up company is needed, their office must make that decision. If this procedure of notification is not followed, you could be liable for the clean up bill.
    f. After every Hazmat incident, remember to complete all necessary paperwork and forward it to the office.
    g. When responding to an incident involving illegally dumped hazardous materials, have dispatch notify the following personnel:

        Fire 11
        Director of Emergency Management
        Arson Investigator

Standard Operating Guidelines for First on the Scene

A. Circumstances of HMI (Hazardous Materials Incidents) vary so widely it is impossible to establish specific guidelines to cover all incidents.

B. The goal is to remove the threat to public health or welfare, safety and property, which may result from a hazardous materials incident.

C. Do not compound the problem by creating a disaster out of an emergency.

D. The First On-Scene Officer is the Incident Commander until properly relieved by a more senior officer. As such, he makes all the decisions.

E. The Incident Commander must take charge and set the scene for a coordinated response and recovery.

F. No one is an expert in all areas of hazardous materials. Experts in specific fields need to be called.

G. You may have to delay attending to the injured in order to save the lives of many others.

H. Do not concern yourself with saving the H/M or carrier. It can be replaced.

I. Keep the dispatched advised of your actions. He will advise others.

J. Isolate the area of everyone not directly involved.

K. Do not become part of the problem yourself.

Standard Operating Guidelines
First on the Scene

TREAT ALL CONTAINERS AS HAZARDOUS MATERIALS UNTIL PROVEN OTHERWISE!!

The first arriving unit must avoid committing itself to a dangerous situation.

1. Size –Up: the situation and report the incident as a possible Hazmat Incident. Give Exact Location.

2. Stay Up-Wind and Up-Grade: Avoid driving into or near vapor clouds and coming in contact with liquids or fumes.

3. Isolate: The area of nonessential personnel.

4. Eliminate: Ignition sources (smoking, flares, combustible engines).

5. Rescue: Injured only if Prudent.

6. Identify: materials and determine conditions (spills, fire, leak, solid, liquid vapor, single or mixed load, way-bills, bills of lading-shipper, owner, manufacturer, carrier).

7. Initiate Evacuation if necessary, Down-Wind-first. Report your actions.

8. Establish Command Post Location: Up-Wind a safe distance. Give exact location and approach route.

Standard Operating Guidelines
Later Arriving Companies

All later arriving fire companies shall stage:

1. Away from the site unless otherwise directed by the First In Officer

2. Up-Wind and Up-Grade form the emergency

3. Out of and well away from vapor clouds.

Standard Operating Guidelines
Incident Commander

The Incident Commander is responsible for incident activities, including the development and implementation of strategic decision and for approving the ordering and releasing of resources.

Duties:

1. Size Up: Hazard assessment, materials identification, exposure hazards, etc.
2. Conduct: initials briefing
3. Crowd control, relocation and/or evacuation
4. Establishment of Command Post, Staging Area, and if necessary, the hazard zone, evacuation zone, restricted area and isolation.
5. Determine information needs and inform Command Personnel of those needs
6. Develop and action plan it must provide for:
    a. safety of citizens
    b. safety of firefighters
    c. evacuation of endangered area, if necessary
    d. control of the situation
    e. stabilization of hazardous material and its disposal
    f. decontamination of personnel (civilian and fire)
7. Verification of material involved (samples, records, labels, owner, manufacturer)
8. Notify/alert emergency medical facilities
9. Assess Utility of hazard potential (drainage, sewers, storm sewers, streams, highways, electrical, gas)
10. Determine/notify owner of property involved
11. Authorize release of information to new media
12. Keep necessary records
13. Approve plan for demobilization

Command and Control

Control of hazardous material emergencies is vital in stabilizing the emergency without injury to fire personnel and civilians. The I.C. shall:

1. Establish a Command Post and therein shall remain throughout the incident
2. Define limits of the hazard zone, and, if needed, the evacuation zone, restricted zone, and isolated zone. Also a staging zone, if not already established.
3. Size up the emergency
4. Develop and initiate a plan of action.

Command Size Up

The following incident factors will be considered when developing a plan of action:

1. Type of incident
    a. Fire
    b. Spill
    c. Release
    d. Leak

Command Post

Fort Wayne Fire Department Command Post procedures shall apply during a hazardous material emergency and the Command Post will be:

1. Establish outside the hazard zone
2. Positioned where the overall scene can be viewed.
3. H.M.C.G. will be located adjacent to the C.P. when possible

Hot Zone

The hot zone in an area surrounding the emergency for a distance in which personnel are in immediate danger the hot zone shall be:

1. Cleared of all personnel
2. Controlled by the Fire Department
3. Guarded by Fire personnel assigned by the I.C.
4. Entered only by personnel in full protective clothing and who have a assigned duty.
5. Maintained until the conclusion of the emergency.
6. Appropriate agencies will be notified when transportation or shelter is needed for evacuees.

Evacuation Zone

The evacuation zone is an area beyond the hazard zone and depends on the nature and quantity of the hazardous materials. It may be a radius around the hazard zone for a potential explosion or downwind from the hazard zone for toxic and flammable vapors.

Guidelines for the evacuation zone are:

1. Evacuation may be ordered by the Incident Commander
2. The evacuation zone may be evacuated and controlled by the Police Department
3. Fire personnel will commence evacuation if Police have not yet arrived.
4. Additional Fire companies may be called by the I.C. to aid Police during large scale evacuations.
5. Firefighters will be assigned areas of the evacuation zone, which have been overrun by hazardous vapor clouds or in any way have become dangerous for personnel without protective clothing and SCBA.
6. Appropriate agencies will be notified when transportation or shelter is needed for evacuees.

Warm Zone

The warm zone is an area in which only necessary and authorized personnel shall enter. This area will be where only acceptable contamination levels exist.

Cold Zone

The I.C. shall establish the cold zone. This area is the closest that back-up forces and Incident Commander will be located. This area shall be free of contaminated atmosphere.

Isolated Area

There shall be an isolated area, within the restricted zone, where the Hazardous Material Response Group and their vehicle shall be isolated form all other personnel. The isolated area shall be as close as possible to the Command Post.

Staging Area

If not already established, the I.C. will establish a staging area. All personnel not specifically committed shall report to this area and shall remain there until ordered to do otherwise.

Standard Operation Guidelines
Hazardous Material Control Group (H.M.C.G)

The Fort Wayne Fire Department Hazardous Material Control Group was formed due to the rising amount of hazardous material used in the area, as well as the vast amounts that are shipped through the City and County by rail, road, and air.

Responsibilities of the Team at hazardous material emergencies include:

1. Serve as advisor to the Incident Commander.
2. Maintain contact with the Incident Commander.
3. Identify the hazardous material and determine hazard.
4. Communicate with technical advisors and kept the Incident Commander apprised of their recommendations.
5. Monitor the area for toxic and flammable vapors
6. Confine released material
7. Secure leaking containers
8. Establish zones defined by the Incident Commander
9. Provide decontamination area for personnel
10. Insure the proper clean up and decontamination of the site.
11. Keep records for time of exposure to hazardous material for exposed team members.

Standard Operation Guidelines
Decontamination

After a hazardous material incident has been encountered, requiring the use of total protective clothing, a decontaminating area must be established and personnel decontaminated prior to being approached by anyone.

Decontamination of personnel applies to civilians on the scene prior to the arrival of the fire units, as well as fire personnel working within the incident.

1. Special attention will be given to personnel and equipment during all hazardous material incidents.
2. Efforts will be made to minimize the number of personnel and the amount of equipment in the contaminated area.
3. Careful determination will be made as to the specific decontamination procedures necessary to handle a particular product.
4. Prior to entry into a contaminated area by the H.M.C. G. a decontamination station should be set up.
5. Due to weather conditions or other pertinent factors, decontamination out of doors may not be advisable. In this situation the nearest suitable firehouse may be made available to decontaminate all men and equipment.
6. During decontamination close attention shall be given to water run-off. Wherever possible, this water shall be collected and disposed of properly.
7. Any fire personnel exposed to any hazardous material must be decontaminated. Remember, if you are exposed to a hazardous material, do not bring that contaminant from the exposed to the unexposed personnel when they arrive on the scene.
8. See Section on Decontamination for further details.

Decontamination

I. Introduction

Personnel responding to hazardous substance incidents may become contaminated in a number of ways including:

- Contacting vapors, gases, mists, or particulates in the air
- Being splashed by materials while sampling or opening containers. Walking through puddles of liquids or sitting or kneeling contaminated soil.
- Using contaminated instruments or equipment.

Protective clothing and respirators help prevent the wearer from becoming contaminated or inhaling contaminants. Good work practices help reduce contamination on protective clothing, instruments, and equipment.

Even with these safeguards, contamination may occur. Harmful materials can be transferred to clean areas, exposing unprotected personnel. During removal of contaminated clothing, personnel may contact contaminants on their clothing or inhale them. To prevent such occurrences, methods to reduce contamination, and decontamination procedures must be developed and established before anyone enters a site and must continue (modified when necessary) throughout site operations.

Decontamination consists of physically removing contaminants or changing their chemical nature to innocuous substances. How extensive decontamination must be depends on a number of factors; the most important being the type of contaminants involved. The more harmful the contaminant, the more extensive and thorough decontamination must be. Less harmful contaminants may require less decontamination.

Combining decontamination, the correct method of doffing personnel protective equipment, and the use of site work zones minimizes cross contamination form protective clothing to wearer, equipment to personnel, and from one area to another. Only general guidance can be given on methods and techniques for decontamination. The exact procedure to use must be determined after evaluating a number of factors specific to the incident.

II. Preliminary Considerations

A. Initial Planning

The initial decontamination plan assumes all personnel and equipment leaving the Hot Zone (area of potential contamination) are grossly contaminated. A system must be established for personnel decontamination to wash and rinse, at least once, all the protective equipment worn. This is done in combination with a sequential doffing of protective equipment, starting at the first station with the most heavily contaminated item and progressing to the last station with the least contaminated article. Each procedure requires a separate station.

The spread of contaminants during the washing/doffing process is further reduces by separating each decontamination station by a minimum of three (3) feet . Ideally, contamination should decrease as a person moves form one station to another further along in the line.
While planning site operations, methods should be developed to prevent the contamination of people and equipment. For examples, using remote sampling techniques, not opening containers by hand, bagging monitoring instruments, using drum grapplers, watering down dusty areas, and not walking though areas of obvious contamination would reduce the probability of becoming contaminated and require a less elaborate decontamination procedure.

The initial decontamination plan is based on a worst-case situation or assumes no information is available about the incident. Specific conditions at the site area then evaluated, including:

- Type of contaminant
- The amount of contamination
- Levels of protection required
- Type of protective clothing worn
- Type of equipment needed to accomplish the task

The initial decontamination can be modified, eliminating unnecessary stations or otherwise adapting it to site conditions. For instance, the initial plan might require a complete was and rinse of chemical protective garments. If disposable garments are worn, the wash/rinse step could be omitted. Wearing disposable boot covers and gloves could eliminate washing and rinsing these items and reduce the number of stations needed. Changes in the decontamination procedure must be noted in the Site Safety Plan.

B. Contamination Reduction Corridor

An area within the Contamination Reduction Zone is designated the Contamination Reduction Corridor (CRC). The CRC controls access into and out of the Hot Zone and confines decontamination activities to a limited area. The size of the corridor depends on the number of stations in the decontamination procedure, overall dimensions of work control zones, and amount of space available at the site. A corridor of 50 feet by 20 feet is the minimum area for full decontamination. Whenever possible, it should be a straight path.

The CRC boundaries should be conspicuously marked, with entry and exit restricted. The far end is the hotline, the boundary between the Hot Zone and the Contamination Reduction Zone. Personnel exiting the Hot Zone must go through the CRC. Anyone is the CRC should be wearing the same level of protection as the entry team or one level below. Another corridor may be required may be for heavy equipment needing decontamination.

Within the CRC, distinct areas are set aside for decontamination of personnel, portable field equipment, removed clothing, etc. These areas should be marked and personnel restricted to those wearing the appropriate level or protection. All activities within the corridor are confined to decontamination.

Personnel protective clothing, respirators, monitoring equipment, and sampling supplies are all maintained outside of the CRC. Personnel don their protective equipment away form the CRC and enter the Hot Zone through a separate access control point at the hotline.

III. Extent of Decontamination Required

A. Modifications of Initial Plan

The original decontamination plan must be adapted to specific conditions found at incidents. These conditions may require more or less personnel decontamination than planned, depending on a number of factors.

1. Type of Contaminant

The extent of personnel decontamination depends on the effects the contaminants have on the body. Contaminants do not exhibit the same degree to toxicity (or other hazard). Whenever it is known or suspected that personnel can become contaminated with highly toxic or ship destructive substances, a full decontamination procedure should be followed. If less hazardous materials are involved, the procedure can be downgraded.

2. Amount of Contamination

The amount of contamination on protective clothing (and other objects or equipment) is usually determined visually. If, on visual examination, it appears grossly contaminated, a thorough decontamination is generally required. Gross material remaining on the protective clothing for any extended period of time may degrade or permeate it. This likelihood increases with higher air concentrations and greater amounts of liquid contamination. Gross contamination also increases the probability of personnel contact.

3. Level of Protection

The Level of Protection and specific pieces of clothing worn determine on a preliminary basis the layout of the decontamination line. Each Level of Protection incorporates different problems in decontamination and doffing of the equipment. For example: decontamination of the harness straps and a backpack assembly of the self-contained breathing apparatus is difficult. A butyl rubber apron worn over the harness makes decontamination easier. Clothing variations and different Levels of Protection may require adding or deleting stations in the original decontamination procedure.

4. Work Function

The work each person does determine the potential for contact with hazardous materials. In turn, this dictates the layout of the decontamination line. All personnel in the Hot Zone with a potential for direct contact with the hazardous material will require more thorough decontamination. Different job functions, or certain stations in a line could be omitted for personnel performing certain tasks.

5. Location of Contamination

Contamination on the upper areas of protective clothing poses a greater risk to the worker because volatile compounds may generate a hazardous breathing concentration both for the worker and for the decontamination personnel. There is also an increased probability of contact with skin when doffing the upper party of clothing.

6. Reason for Leaving Site

The reason for leaving the Hot Zone also determines the need and extent of decontamination. A worker leaving the Hot Zone to pick up or drop off tools or instruments and immediately returning may not require decontamination. A worker leaving to get a new air cylinder or to change a respirator or canister, however, may require some degree of decontamination. Individuals departing the CRC for a break, lunch, or at the end of the day, must be thoroughly decontaminated.

B. Effectiveness of Decontamination

There is no method to immediately determine how effective decontamination is. Discolorations, stains, corrosive effects, and substances adhering to objects may indicate contaminants have not been removed. However, observable effects only indicate surface contamination and not permeation (absorption) into clothing (tools or equipment). Also many contaminants are not easily observed.

In many cases, depending on the substances involved, chemical protective clothing (or naturally absorbable materials) may have to be discarded. If it cannot be determined that clothing or other items, for example, tools and equipment have been completely decontaminated, the only safe action is to consider them hazardous wastes and have them dispose of properly.

C. Equipment

Decontamination equipment, materials, and supplies are generally selected based on availability. Other considerations are ease of equipment decontamination or disposability. Most equipment and suppliers can be easily procured. For example, soft bristle scrub brushes or long handle brushes are used to remove contaminants. Water is buckets or garden sprayers are used for rinsing. Large galvanized washtubs or stock tanks can hold wash and rinse solutions. Children's wading pools can also be used. Large plastic garbage bags store contaminated clothing and equipment. Contaminated liquids can be stored temporarily in metal or plastic cans or drums. Other gear includes paper or cloth towels for drying protective clothing and equipment.

D. Decontamination Solution

Personnel Protective equipment, sampling tools, and other equipment are usually decontaminated by scrubbing with detergent water using a soft bristle brush followed by rinsing with copious amount of water. While this process may not be fully effective in removing some contaminants (or in a few cases, contaminants may react with water), it is a relatively safe option compared with using a chemical decontaminating be identified. A decon chemical is then needed that will change the contaminant into a less harmful substance. Especially troublesome are unknown substances or mixtures form a variety of known or unknown substances. The appropriate decontamination solution must be elected in consultation with an experienced chemist. If the product is one which decontamination with soap and water is not adequate, the protective clothing shall be disposed of at the site. Remember dry decontamination can be used if necessary depending on the chemical involved and prevailing weather conditions.

E. Establishment of Procedures

One decontamination procedures have been established, all personnel requiring decontamination must be given precise instruction (and practice, if necessary). Compliance must be frequently checked. The time it takes for decontamination must be ascertained. Personnel wearing SCBA's must leave their work area with sufficient air to walk to CRC and go through decontamination.

IV. Decontamination during Medical Emergencies

A. Medical Emergency Decontamination

The plan should establish procedures for decontaminating personnel with medical problems and injuries. There is the possibility that decontamination may aggravate or cause more serious health effects. If life threatening injuries are received, prompt life saving first aid and medical treatment should be administered concurrently with decontamination. Whenever a member of the Hazmat Response Team needs medical assistance, a copy of their physical shall be sent along with that person to the medical facility.

B. Physical Injury

Physical injuries can range from a sprained ankle to a compound fracture, form a minor cut to massive bleeding. Depending on the seriousness of the injury, treatment may be given at the site by trained response personnel. For more serious injuries, additional assistance may be required at the site of the victim may have to be treated at a medical facility. Life saving care should be instituted immediately after decontamination. The outside garments can be removed (depending on the weather) if they do not cause delays, interfere with treatments, or aggravate the problem. Fully encapsulating suits or chemicals –resistant clothing can be cut away. If the outer contaminated garments cannot be safely removed, the individual should be wrapped in plastic, rubber, or blankets to help prevent contaminating the inside of ambulances and medical personnel. Outside garments are then removed at the medical facility.

C. Heat Stress

Heat related illnesses range form heat fatigue to heat stroke, the most serious. Heat stroke requires prompt treatment to prevent irreversible damage or death. Protective clothing may have to be cut off. Less serious forms of heat stress require prompt attention or they may lead to a heat stroke. Unless the victim is obviously contaminated, decontamination should be omitted or minimized and treatment begun immediately. Any fluids or foods shall not be consumed before decontamination has been completed.

D. Chemical Exposure

Exposure to chemicals can be divided into two categories:

- Injuries from direct contact, such as acid burns or inhalation of toxic chemicals
- Potential injury due to gross contamination on clothing or equipment

For inhaled contaminants treatment can only be by qualified physicians. If the contaminant is on the skin or in the eyes, immediate measure must be taken to counteract the substance's effect. First aid treatment usually is flooding the affected area with water; however, for a few chemicals, water may cause more severe problems.

When protective clothing is grossly contaminated, contaminants may be transferred to treatment personnel or the wearer and cause injuries. Unless severe medical problems have occurred simultaneously with splashes, the protective clothing should be washed off as rapidly as possible and carefully removed.

E. Protection for Decontamination Workers

The Level of Protection worn by decontamination workers is determined by:

- Amount of Contaminant
- Type of contaminant and associated respiratory and skin hazards
- Total vapor/gas concentrations in the contaminations reduction corridor
- Time of exposure to contaminant

V. Decontamination of Equipment

Insofar as possible, measures should be taken to prevent contamination of sampling and monitoring equipment. Sampling devices become contaminated, but monitoring instruments, unless they are splashed , usually do not. Once contaminated, instruments are difficult to clean without damaging them. Any delicate instrument which cannot be easily decontaminated should be protected while it is being used. It should be placed in a clear plastic bag, and the bag taped and secured around the instrument. Openings are made in the bag for sample intake and exhaust.

A. Decontamination Procedures

1. Sampling Devices

Sampling devices require special cleaning. The EPA Regional Laboratories can provide information on proper decontamination methods.

2. Tools

Wooden tools are difficult to decontaminate because they absorb chemicals. They should be kept on site and handled only by protected workers. At the end of the response, wooden tools should be discarded. For decontaminating other tools, Regional Laboratories should be consulted.

3. Respirators

Certain parts of contaminated respirators, such as the harness assembly and straps, are difficult to decontaminate. If grossly contaminated, they may have to be discarded. Rubber components can be soaked in soap and water and scrubber with a brush. Regulators must be maintained according to manufacturer's recommendations. Persons responsible for decontaminating respirators should be thoroughly trained in respirator maintenance.

4. Heavy Equipment

Bulldozers, trucks, back-hoes, bulking chambers, and other heavy equipment are difficult to decontaminate. The method generally used is to wash them with water under high pressure or to scrub accessible parts with detergent/water solution under pressure. In some cases, shovels, scoops, and lifts have been sand blasted or steam cleaned. Particular care must be given to those components in direct contact with contaminants such as tires and scoops. Swipe test should be utilized to measure effectiveness. Personnel doing the decontamination must be adequately protected for the methods used can generated contaminated mists and aerosols.

B. Sanitizing of Personnel Protective

Respirators, reusable protective clothing, and other personal articles not only must be decontaminated before being reused, but also sanitized. The inside of masks and clothing becomes soiled due to exhalation, body oils, and perspiration. The manufacturer's instructions should be used to sanitize the respirator mask. If practical, protective clothing should be washed (in a dedicated unit) after a thorough decontamination; otherwise they must be cleaned by hand.

C. Persistent Contamination

In some instances, clothing and equipment will become contaminated with substances that cannot be removed by normal decontamination procedures. If persistent contamination is expected, disposable garments should be used.

D. Disposal of Contaminated Materials

All materials and for decontamination must be disposed of properly. Clothing, tools, buckets, brushes, and other equipment that is contaminated must be secured in drums or other containers and labeled. Clothing not completely decontaminated onsite would be secured in plastic bags before being removed from the site. All contaminated materials and equipment which must be disposed of will be left at the scene for the clean up company to remove.

Contaminated was and rinse solutions should be contained by using step in containers (for example, child's wading pool) to hold spent solutions. Another containment method is to dig a trench about four inches deep and line it with plastic. In both cases, the spent solutions are transferred to drums, which are labeled and disposed of with other substances on site.

VI. Decontamination Layout

The following sections will established decontamination for all incidents. Depending on the product, this procedure can be modified. Wind direction must be considered when setting up decon. Remember to stay up wind.

Level A Decontamination

A. Equipment Worn

The full decontamination procedure outlined is for personnel wearing Level A protection (with taped joints between gloves, boots, and suit) consisting of:

- Fully encapsulating suit
- Self contained breathing apparatus
- Hard hat (optional)
- Chemical resist and, steel toe and shank boots
- Boot covers
- Inner and outer gloves

B. Procedure for Full Decontamination

Station 1: Segregated Equipment Drop

Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Each will be contaminated to a different degree. Segregation at the drop reduces the probability of cross-contamination.

Equipment:

- Various size containers
- Plastic liners
- Plastic drop cloths

Station 2: Outer Glove and Boot Removal
Equipment –plastic container

Station 3: Gross Decon Shower
Personnel to walk through shower to rinse off outer protective equipment.
Equipment:

- 1, decon shower
- containment box

Station 4: Wash and Rinse with Assistance of Helper
Equipment:

- 1, kiddie pool
- 1, long handle, soft bristle brush
- detergent water

Station 5: SCBA Tank Change Up Wind
If necessary exchange tank gloves and boots. Tape joints.
Equipment:

- plastic container
- stool
- clean gloves and boots
- spare SCBA bottles

Station 6: Suite Removal
With assistance of helper, remove fully encapsulating suit, put in bag.
Equipment:

- large plastic bag
- stool

Station 7: Inner Glove and Boot Removal
Equipment:

- plastic container

Station 8: SCBA Removal
Disconnect face-piece and with assistance from helper remove backpack.
Equipment:

- drop cloth
- table

Station 9 Field Wash
Shower if highly toxic materials are known or suspected to be present.
Wash hands and face if shower is not available.
Equipment:

- water basin towels
- soap field shower tarp (shower curtain)

Station 10 Redress/Medical Check

Personnel will put on clean clothing and have his vital sign's checked

Equipment:

- tables
- chairs
- clothes
- medical person

Standing Operating Guidelines
Staging Area Officer

I. Responsibilities
   A. Manage all staging area activities: Apparatus parking, Company Standby Area.
   B. Develop organization sufficient to handle assignments
   C. Plan layout of staging area consider immediate and future needs.

II. Establish Location
   A. Apparatus parking-police assistance
   B. Outside agencies
   C. Equipment and supplies pool location
   D. Staging command location
      1. control
      2. communication

III. Strategy, Tactics
   A. Assess resources needs commands, communications, equipment, supplies, apparatus, personnel, relief, police, etc.
   B. Consult with I.C.
   C. Give job assignments

IV. Needs
   A. Food
   B. First Aid facilities
   C. Restroom facilities

V. Records
   A. Staging Officer will keep a log of all materials and supplies, equipment and apparatus, and all personnel entering or leaving the staging area.

Standard Operating Guidelines
Public Information Officer

1. The Public Information Officer (PIO) will function as a part of the Incident Command Post and will be the spokesman for all matters pertaining to the incident.

2. If the incident occurs within the Fort Wayne City Limits, the PIO may be a member of the Police and/or Fire Department. If the incident is in the fire protection districts serviced by the FWFD, the PIO will be either a FWFD officer or a County Sheriff Officer.

3. The duties of the PIO include:
   A. Maintain a current status of incident
   B. Brief the new media on a timely basis, at 15 minute intervals
   C. Select briefing area, in a safe area, preferably adjacent to the CP.
   D. Insure information furnished is timely and accurate.

4. If evacuation is necessary, exact areas of evacuation shall be provided to all media for immediate dissemination.

Standard Operating Guidelines
Safety Officer

1. The Safety Officer shall be appointed by and report to the Incident Commander
2. The Safety Officer should provide the I.C. with recommendations on establishing the Hazard Zones, based on the identification and evaluation of the hazard.
3. The Safety Officer should maintain the security and control of entry into the various hazard zones.
4. The Safety Officer should implement a site safety plan (safety of all on scene personnel)
5. The Safety Officer should make the final decisions on any tactics proposed
6. The Safety Officer should monitor Communications between entry personnel and I.C.
7. The Safety Officer should ensure all pertinent data is collected and recorded.

Standing Operating Guidelines
Communications

When an incident is reported to communications, the following information should be obtained in as much detail as possible:

A. identification of the caller, how he/she can be contacted
B. exact location of the incident
C. basic description of what occurred
D. identification of vehicle, building or object involved
E. Approximate time incident occurred

1. The dispatcher will attempt to obtain any and all information from the person reporting a hazardous material incident. The information should, if possible, include material name and/or type, amount and size of container(s), problem (leak, spill, fire, etc).
2. If possible, the dispatcher should stay on the phone with the caller.
3. Additional information shall be relayed to responding units.
4. Who is to be dispatched? (see agency response guide)
5. Give location, the exact number related to street corner, intersections, cross streets, or other physical land-marks, such as large building s, signs, etc.
6. Give disposition (if known) type of material involved, visible activity (smoke, fire, etc), type of vehicle involved, type of placard, traffic control information (blocked streets, etc.) , weather information.
7. Notify the companies of wind direction and velocity, temperature, relative humidity, precipitation (type, amount, intensity, beginning and ending time)
8. Weather reports are to be updated hourly at 10 minutes before the hour. Emergency updates will be prepared upon request.
9. Response outside the Fort Wayne Fire Department jurisdiction will only be made when requested by Allen County Sheriff, Indiana State Police or a Fire Chief or his representative. The Fire Chief or Duty Chief, in that order, will authorize the response.

Weather Information for Hazardous Material Accident/Incident

To be requested from National Weather Service (NWS); supply information in paragraph A to NWS.

A. General requirement presented to NWS.
   1. Area of interest: (Give the particular area for which the weather information id desired)
   2. Date/Time: (Give time period for which the weather information id desired)

B. Information to be supplied by NWS.
   1. Location form which the information is applicable
   2. Date/time: (when the weather information is valid).
   3. Wind: hazardous material accident/incident (wind direction to the nearest 10 degrees or 16 cardinal points and wind speed to nearest know, accurate to + 5 knots)
   4. Temperature available-Baer field airport
   5. Relative humidity: (nearest 5%)
   6. Precipitation:
      - Type
      - Amount
      - Intensities
      - Beginning and end time
   7. Cloud:
      - Coverage (eights or tenths of sky)
      - Type (standard classifications)
      - Base height (feet)

E.M.S.

Items to be considered include:
1. Special protection
2. Decontamination of Patient
3. Decontamination of Ambulance
4. Protection of Hospital Emergency Room becoming contaminated.

EMS personnel need to be aware of necessary safety precautions. When an individual dons and EMS jacket and begins to perform emergency medical work, an invisible shield protects them from the chemical hazard, some think.

Think about the last incident which your department handled, were there EMS personnel on the scene and did they have full protective clothing and breathing apparatus? Or, were they encase in a coat, leather shoes, and without gloves? Certainly no protection for them.

Yet, these EMS people are called upon to work in the toxic atmosphere as well as handle any civilian or emergency workers injured. Does contamination occur before handling? Each of these items must be considered.

Remember that EMS personnel can also be injured and care must be exercised in handling, treating, and transporting individuals who have an injury due to exposure to chemicals.

EMS personnel must exercise care to provide for their own protection for their own protection when responding to hazardous material incidents.

EMS personnel are there to assist the H.M.C.G. Medical vitals will be taken for all entry personnel. If the On-Scene medical personnel determine that any entry personnel does not meet certain medical requirements (pulse rate, temperature, heart rate,etc.)he/she will not enter the Hot Zone.

Before any person exposed to a hazardous material is transported to the hospital information concerning the material and incident shall be relayed to the On scene EMS personnel and hospital.

Standing Operating Guidelines
Radiological Accident

A. In an incident involving radioactive materials spillage or leakage, police and fire department personnel will take the following emergency actions at scene of incident, pending the arrival of radiological emergency experts.
   1. Rescue injured or trapped persons and remove them form the area, if radiation levels permit, otherwise additional personnel may be exposed.
   2. Limit first aid to those actions necessary to save life or minimize immediate injury.
   3. Try to hold all people who have been involved in the incident in the incident area until the radiation monitoring team arrives. They must be checked with a radiation survey instrument for radioactive contamination before being allowed to leave scene.
   4. When it is necessary to send an individual to a hospital or other medical facility BEFORE a radiological emergency team or a physician knowledgeable in radiological health arrive, inform ambulance and other transporting vehicle personnel who will be in contact with the individual, of the possibility of radioactive contamination. Also, inform the hospital or medical facility that the individual may be contaminated with radioactive material.
   5. Be sure no none except Emergency Service Personnel is admitted into the area, and advise all persons not to handle or remove any part of the debris from the incident.
   6. Fight fire, and to the extent possible, keep upwind and avoid smoke, fumes and dust.
   7. DO NOT eat, drink, or smoke in the incident area, or use food or drinking water that may have been in contact with radioactive material.
   8. DO NOT handle, use or remove from the incident area any material, equipment, or other items suspected of being radioactively contaminated unless released by radiation monitoring personnel.

B. When the emergency monitoring team arrives on the scene, it will advise and act as requested by and under the general direction of the official in charge, (Incident Commander), direct the technical operations and , as necessary, perform the following operations:

1. Survey and determine facilities, equipment, area or environmental radioactive contamination.
2. Initiate steps to minimize personnel exposure and the spread of contamination.
3. Conduct instrument check for contamination of exposed emergency workers and other persons involved in the incident area.
4. Segregated and, if necessary, have contaminated persons decontaminated.
5. Initiate or recommend other decontamination action as required.
6. Provide information to the Emergency Operating Center for release to the public, when necessary, to minimize public alarm or to assist in the conduct of emergency activities.
   (advice and instructions to be issued to the public would be dictated by requirements on the developing situation)

C. When decontamination is required, take the following actions:

1. Have the local Public Works Department assist in decontamination and disposal of contaminated material if the use of heavy equipment is required.
2. Have the Fire Department provide personnel and equipment (for wash-down, etc) to assist in decontamination.
3. Have Police obtain names and addresses of al persons involved, restrict access to the incident area and prevent unnecessary handling of incident debris; and if necessary , initiate evacuation of areas subject to contamination.
4. When a transportation incident involves radioactive material, DO NOT move vehicle, shipping containers, or wreckage, except to rescue people. Detour pedestrian and vehicle traffic. If a right of way must be cleared before radiological emergency assistance arrived, move vehicle and debris the shortest distance required to open an pathway. Before permitting the passage of traffic, spillage on the cleared pathway should be washed, or wetted and swept, to the edge of the pathway with a minimum dispersal of wash water and spilled material.

D. If no explosion has occurred and it is believed that a nuclear weapon is involved, take the following actions:

1. Restrict area of incident and keep public as far from the scene as practicable. Restrict the area 2000 feet or more in all directions.
2. Rescue injured or trapped persons as quickly as possible rescue and remove them form the incident area.
3. Evacuate all unnecessary personnel within the area as quickly as possible, except those involved in emergency operations.
4. Do not allow public entrance to the area.
5. Fight fire as though toxic chemicals are involved: keep upwind and avoid smoke, fumes and dust.

E. If an explosion has occurred and a nuclear weapon is believed to be involved, take the following actions:
   1. Restrict area for 2000 feet or more in all direction.
   2. Rescue injured or trapped persons
   3. Evacuate all persons form the area and prevent access until advice can be obtained form appropriate radiological and ordinance experts.
   4. Fight fires and handle other emergency situations that may occur as an aftermath, in accordance with appropriate emergency service checklists.
   5. When the radiological monitoring (and ordinance, if applicable) experts indicate the incident area is safe, resume normal routine, notify the Emergency Operating Center, and submit final reports as required.

Standing Operating Guidelines
Incident Command

I. Introduction

The personnel needed to respond to a hazardous materials incident can vary greatly,. Regardless if few or many responders are involved, they must be organized. Without a coordinated, organized effort, the primary reason for responding (protection of the public's health, environment and property) may be ineffective.

The number of people responding to an incident may range from a few to hundreds, and represent a variety of sources from government as well as private industry. Some incidents are readily managed by trained responders from local jurisdictions. Others may require additional responders from state and federal agencies and form private industries. These groups, each with diverse functions and responsibilities must blend into a cohesive response unit capable of conducting the required remedial activities.

Every hazardous materials incident in unique. The materials involved, their effect, as well as operations required to prevent or reduce the effect of their release are incident specific. Common, however, to all incidents, is the need for organizations.

II. Incident Command System

In order to better maintain control of an incident and according to OSHA 1910.120, Sec. Q the Incident command System shall be implemented when a hazardous materials incident occurs. It s an in-place command system used by the Fire Service when responding to emergencies which may threaten the community. The ICS designates who is in charge, establishes a chain of command and lists key personnel and their functions.

The Incident command System shall automatically be activated when a hazardous materials incident occurs. The first arriving officer shall be the Incident Commander and remains so throughout the incident until a higher ranking officer properly relieves him/her of that responsibility.

Using the ICS as a framework provides the Incident Commander with a manageable and organized structure necessary to control the incident. The size and complexity of the organization needed is dictated by the magnitude of that particular incident.

III. Command Staff and Responsibilities

A. Incident Commander: Directly responsible for the overall incident activities. Determines manpower and other resources needed. Develops strategy for controlling the incident.

B. Safety Officer: Designated by and reports to Incident Commander. Is responsible for overseeing all operations at the scene and identifies hazards and hazardous situations. Has emergency authority to stop operations or activities due to unsafe conditions.

C. Operations Officer: Responsible for management of the incident. Supervises suppression operations. Briefs and receives directions from Incident Commander.

D. Public Information Officer: Is the liaison between the Incident Commander, the news media and the public. Prepares and releases new updates.

E. Resource Officer: Responsible for obtaining all the resources needed to control the incident. Collects and stores information and prepares reports on incident activities.

F. Staging Officer: Determines sites and arranges for which areas to be used for staging equipment, supplies, additional units and arriving personnel.

G. Medical Officer: Responsible for all needed medical service. Provides on-site triage, treatment, hospital transport and medical monitoring of on-site personnel.

H. Liaison Officer: Is the liaison between the Incident Commander and other government and private organizations.

I. Sector Officer: Supervisor for the various sectors (activities) that may be needed, for example: evacuation of people form the immediate area, monitoring or collecting samples and others.

The severity and size of an incident will determine the number of command staff personnel needed to successfully mitigate an incident.

IV. H.M.C.G. Command Structure

When a hazardous materials incident occurs, the Fire Department's Hazardous Materials Team shall be integrated into the Incident Command System. The response team, as an entity and aside from the ICS, must be organized such that they can effectively function to control and restore the situation.

The H.M.C.G. must have a table of organization and personnel job descriptions paralleling the command structure of the ICS. The following job descriptions are written specifically for the H.M.C.G., thereby establishing an organized and functional hazardous materials Incident Command System, which would help maintain control and bring about a successful outcome of an incident.

A. Hazmat Sector Officer: Ensures all pertinent data is recorded and collected. Oversees all areas of response team and assigns personnel to various Hazmat sectors needed. Responsible for stabilization and mitigation of the incident. Reports to Operations Officer or Incident Commander, depending on size of incident.

B. Safety Officer: Designated by the Hazmat Sector Officer and reports to the Hazmat Officer. Maintains control and security of entry and exit of all personnel between the various zones. Assures that safe practices are being observed by H.M.C.G. personnel. Responsible for assessing the incident, monitoring entry personnel and changes that might occur during the incident.

C. Decon Officer: Responsible for establishment and control of the entire decontamination process.

D. Research Officer: Identifies product and researches the chemical characteristics of the product. Determines compatibility of product to protective equipment.

E. Entry Officer: Responsible for entry team and back-up personnel. Reports to Hazmat Sector Officer

Section IV
Resources

Post Incident Analysis

Identify the Problem:

A. Provide date of incident
B. Provide time of incident
C. Location: address or general area description.
D. Type of emergency, ie, structure fire (commercial, residential, train wreck, bus fire, plane crash, etc.
E. Describe situation as seen on arrival of first unit, (ie, “Rear half of building totally involved and fire coming through the roof.”)Provide drawings of the entire problem with the location of units committed.
F. Provided equipment dispatched on each alarm. Include companies and time of dispatch.

Identify the Objective:

A. State the plan of attack utilized
B. Provide alternatives considered at time of arrival
C. If any changes were made in the original plan during subsequent alarms, stated the new plan and the reason for the change.

Implementation of Strategic Plan:

A. Provide unit numbers and reasons for any special equipment and time requested.
B. Provide unit numbers, arrival time, and assignment given to incoming units by arrival sequence for all alarms.
C. Changes in strategies, time unit involved and reason.

Discussion:

A. General discussion form first alarm people
B. Same as “A” involving second alarm people
C. Same as “A” involving third alarm people
D. List major problems as identified by your personnel. Be descriptive and provide the name of the person identifying the problem.
E. Identifying minor problems
F. Identifying all safety violations

Conclusions:

Provide any recommendations for changes in tactics, equipment, location, improvement of safety, etc. In general, what could be done to improve the next emergency of this type?

Hazmat Control Team Member Job Description

1. Will have completed one year of service with the Fort Wayne Fire Department
2. Must pass an annual physical
3. Will assist in training when necessary
4. Will give assistance to the team leader in the daily operation of the team
5. Must be able to think quickly and clearly under stress
6. Must be able to communicate freely both verbally and physically
7. Must be able to adjust behavior pattern from structural firefighter tactics to hazmat emergencies
8. Will attend monthly training sessions
9. Must be willing to attend various schools and seminars
10. Will attend mandatory training sessions set up by the team leader
11. Will assist in maintaining all hazmat equipment
12. Will assist the team leader in making suggestions at a Hazmat incident
13. Must successfully complete the State Hazmat technician Certification Course
14. Must meet all NFPA 472 and OSHA 1910.120 standards pertaining to hazardous materials team emergency responders.
15. Must maintain on a yearly basis, a minimum of 24 hours documents hazardous materials team training to remain as member of the H.M.C.G.

H.M.C.G. Team Leader Job Description and Responsibilities

1. Will select the team members
2. Will initiate training sessions for team members when necessary
3. Will set up and conduct training sessions for rest of the Fire Department
4. Will conduct training sessions for any other City Department that the Chief deems necessary
5. Will take care of the day to day business of the team
6. Will make an annual report
7. Will recommend team members to attend various training program and seminars
8. Will make purchase recommendations
9. Will manage the maintenance of accurate resource information
10. Will provide for the maintenance of team records including: training records, exposure time and products response records and any other information pertinent to the Hazmat function.
11. Will work with the incident commander regarding team and/or equipment needs, SOP's tactical considerations and problem resolution at a Hazmat Incident
12. Will develop training schedules and programs
13. Will meet semi-annually with team members to discuss team organizational problems and needs
14. Will file and maintain all records pertaining to the Hazmat response team
15. Will establish and maintain a Hazmat response team and it equipment to the degree prescribed by the Fire Chief
16. Will monitor all activities of the Hazmat team and is support agencies to insure that the rules and regulations of the Fort Wayne Fire Department area adhered to.

17 Will keep the Fire Chief informed of all team activities periodically

H.M.C.G. Requirements for Probationary Trainees

All training shall be in accordance with NFPA 472 and OSHA 1910.120 Hazardous Materials Emergency Response Standards. The instruction shall be completed within one year form the date applicants are selected for training as H.M.C.G. members. The training shall be scheduled and instructed by the Team Leader and/or various outside instructors.

The probationary period will be one year, during this period no tech pay shall be paid. Upon completion of the probationary period the new member must obtain a Masters in Hazardous Materials within one year. If the Masters in Hazardous Materials is not completed in the allotted time the member has two options, first continue as a member of the team without tech pay until the certification is obtained or resign.

When the number of personnel involved in training exceeds the number of available positions, the following procedure shall be utilized. All persons who complete the training and required testing will receive a ranking according to their final test average. The person with the highest average will be offered the first opening on the H.M.C.G

If that person refuses to accept that opening, then the person with the next highest test average will be offered the position. This procedure will be followed until the position or positions have been filled. During the probationary period all trainees will respond to an incident to only act as an assistant. You are not to enter the Hot Zone or don an entry suit.
(job description for team members is applicable to all trainee)

ALL TRAINING SHALL BE IN COMPLIANCE WITH NFPA 472: STANDARD FOR COMPENTENCE OF RESPONDERS TO HAZARDOUS MATERIALS INCIDENTS.

Instruction Outline

I. Basic Chemistry for Firefighters
II. IAFF Awareness, Operatioinal and Technician Program
III. Incident Analysis
IV. Incident Command
V. SOP and HMCG Procedures
VI. Pesticide Challenge
VII. Simulated Hands on Incidents
VIII. Final Exam

EXHIBIT F

CITY OF FORT WAYNE
SEWER PUMP STATIONS

LEGEND

- DUAL FEED PUBLIC SANITARY
- PUBLIC SANITARY WITHOUT BACKUP POWER
- PUBLIC SANITARY WITH GENERATOR ON SITE
- PUBLIC SANITARY WITH RECEPTACLE FOR PORTABLE GENERATOR
- DUAL FEED PUBLIC STORMWATER
- PUBLIC STORM WITHOUT BACKUP POWER
- PUBLIC STORM WITH RECEPTACLE FOR PORTABLE GENERATOR
- ALLEN COUNTY REGIONAL SEWER DISTRICT
- PRIVATE PUMP STATION
- PRIVATE PUMP STATION MAINTAINED BY WPCP
- TOE DRAIN WITH RECEPTACLE FOR PORTABLE GENERATOR

PUMP STATION IDENTIFICATION

GG59 008	ABOITE	Q11 090	CAMP SCOTT
D02 034	FLAUGH DITCH	R07 124	CAMP SCOTT
D43 006	COVERDALE ROAD (GENERAL MOTORS)	R31 101	HESSEN CASSEL
E30 005	(PRIVATE)	R31 109	(PRIVATE - GATHINGS DRIVE)
F07 017	(PRIVATE)	R34 148	(PRIVATE - FT WAYNE RETIREMENT RESIDENCE)
F07 022	(PRIVATE)	R42 004	(PRIVATE)
F30 022	GOLFVIEW	R58 022	(PRIVATE)
F42 027	(PRIVATE)	S46 XXX	PARKERDALE
G15 010	ENGLE ROAD	S74 006	HAWTHORNE PARK
G26 006	STEEPLE CHASE	T38 003	EVARD ROAD
G42 002	(PRIVATE)	T46 001	RIVER BEND WOODS
H15 076	(PRIVATE)	T46 032	REBECCA
H26 005	(PRIVATE)	T46 114	ROTHMAN ROAD
H30 019	(PRIVATE)	U10 022	PUMP STATION FOR LIME SLUDGE LAGOONS
H66 009	(PRIVATE)	U38 003	(PRIVATE)
I23 144	BRADBURY	U38 005	(PRIVATE)
I54 004	(PRIVATE)	U38 063	BRANDENWOOD
J03 268	BROWN STREET	U54 017	(PRIVATE)
J06 270	GREENWOOD	U54 028	(PRIVATE)
K06 232	NEBRASKA	U58 025	AQUA SOURCE PRIVATE PUMP STATION
K70 012	CARROLL OAKS	U66 015	OAK POINTE
L10 348	FAIRMOUNT	U106 006	DEER TRACK
L10 358	VAN BUREN	V14 047	LAKE FOREST
M10 235	GRISWOLD	V30 001	MAPLEWOOD
M10 312	THIRD STREET	V58 035	RIVER BEND BLUFFS
M14 255	STATE BLVD AND NORTH SIDE DR (KELLY)	W02 001	(PRIVATE)
M14 284	NUSSBAUM AVENUE	W02 010	(PRIVATE)
M14 309	AEP	W22 001	BELLSHIRE
M18 296	NORTH SIDE HIGH SCHOOL	W26 169	(PRIVATE)
M27 028	TILLMAN/CALHOUN	W30 079	(PRIVATE)
M74 001	COPPER LEAF	W70 014	(PRIVATE)
N10 353	LA FORT STREET AND LAKE AVENUE	X26 036	(PRIVATE)
N10 359	ELMWOOD AVENUE	Y38 005	CHERRY HILL
N14 057	LAWTON PLACE	Z26 004	NORTH MAUMEE
N14 379	MCDOUGAL AVENUE	Z50 022	FOXWOOD
N14 399	TENNESSEE AVENUE BRIDGE	ZZ38 002	(PRIVATE)
N14 412	ELIZABETH STREET (SPY RUN)		AIR NATIONAL GUARD
N14 425	PLEASANT AVENUE		ARCOLA (LOCATION NOT AS SHOWN ON THE MAP)
N30 223	(PRIVATE)		CEDAR CANYON
O10 096	MORTON STREET		HESSEN CASSEL
O10 251	MORTON STREET		PEMBERTON
O22 184	WOODROW AVENUE ST JOE RIVER DRIVE		SMITH ROAD
O26 078	ST JOE		UNITED REFUSE
O74 015	PERRY LAKES		VERA BRADLEY
P10 107	WPCP FACILITY STORM PLANT		ZANESVILLE (LOCATION NOT AS SHOWN ON THE MAP)
P74 007	CHAPEL CREEK		

N W E S

0.00 0.25 0.50 0.75 1.00 mi

SCALE 1 : 3000

OCT - 18 - 2007

Created on August 10, 1999
Last updated on October 3, 2007
FILENAME: \city_utilities\sewer\gws\sewer_pump_stations.gws
LAYOUT WINDOW: Sewer Pump Stations - TG
Prepared By Fort Wayne City Utilities/Public Works GIS

NOTE: INFORMATION UPDATED 10/3/07. FOR ANY DISCREPANCIES, PLEASE NOTIFY THE CITY GIS DEPARTMENT

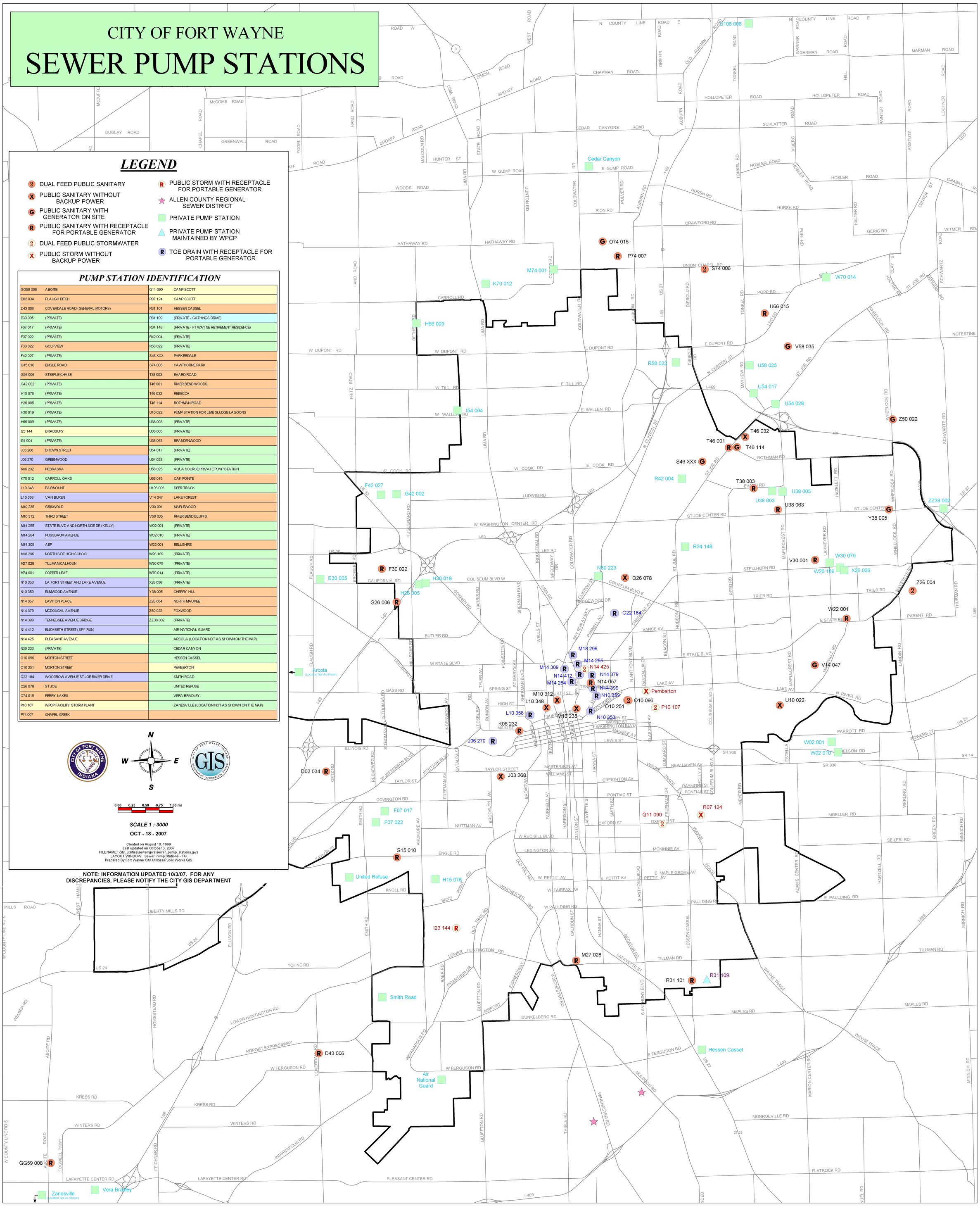

EXHIBIT G

MASTER VEHICLE & EQUIPMENT LIST BY DEPARTMENT - last update 9/12/05							
DEPT	VEH#	YEAR	VEH MAKE	VEH ID #	LICENSE	TIRE SIZE	REPLACE
SWM	44032	2004	Sterling Semi Tractor	2FWJAZCV74AM67357	65325	(F&R) 11.R22.5	2015
SWM	39077	1999	INT'L 2TN DUMP	IHTSLABM9XH665273	55270		2007
SWM	20112	2000	Chevy Pickup Truck	1GCEK19V5YZ315520	57443	P245/75R16	2008
SWM	25024	2005	GMC Sierra Hybrid	1GTEC19T45Z258136	27810	(F&R) P235/75R16	2012
SWM	27322	2007	Ford Escape Hybrid	1FMYU59H97KB06485		(F&R) P235/70R16	2014
SWM	33105	2003	4300 INT'L 2TN DUMP	1HTMNAAMX3H589237	63178	(F&R) 245/70R19.5	2010
SWM	34209	2004	4300 INT'L 2TN DUMP	1HTMNAAM94H656380	65318	245/70R 19.5	2011
SWM	56700	1996	Lg. Kobelco Excavator	YQU2558	NP		
SWM	43169	2003	Volvo Tandem Dump Truck	4V5KC9GF63N347919	63158	(F)315/80R22.5(R)11R22.5	2011
SWM	45186	2005	INT'L Vacuum Truck	1HTWYAHT05J159421	33432	(F)385/65R22.5(R)11R22.5	2012
SWM	45187	2005	INT'L Vacuum Truck	1HTWYAHT55J168700	33431	(F)385/65R22.5(R)11R22.5	2012
SWM	46084	2006	IH Tandem Dump Truck	1HTWYAHT16J260789	69092	(F)315/80R22.5(R)11R22.5	2013
SWM	47002	2007	IH 7600 Combo Truck	1HTWYAHT37J496300		(F)315/80R22.5(R)11R22.5	2014
SWM	53240	2003	Gradall Ditch Machine	225419	NP		2013
SWM	53239	2003	Vermeer Chipper	1VRN1312521002876		215/75R175	
SWM	54119	2004	JD Backhoe 410G	T0410GX933936		(F) 12.5/80-18 (R) 19.5L-24	2015
SWM	55101	1985	INGERSL AIR COMP	146845U85953	6096	F4.10/3.50-4(B)P215/75R15	2003
SWM	55701	2006	CAT Shid Loader	0287BCZSA02797	NP	Rubber Tracks	
SWM	61005	1971	DUETZ 6" PUMP	F3-6L912/W	NP	P215/75B15	2003
SWM	63616	2003	Lg. Target Concrete Saw	saw #373602-motor #00680186	NP		
SWM	65102	1985	6" CH&E PUMP	TO4219D111672	NP	(F)4.80-8(B)P195/75R15	2006
SWM	65103	1985	6" CH&E PUMP	TO4219D111671	NP	(F)4.80-8(B)P195/75R15	2006
SWM	65104	1985	6" CH&E PUMP	TO4219D113921	NP	(F)4.80-8(B)P195/75R15	2006
SWM	66101	1986	6" CH&E PUMP	TO4239D140668	NP	(F)4.80-8(B)P195/75R15	2006
SWM	66102	1986	6" CH&E PUMP	TO4239D145267	NP	(F)4.80-8(B)P195/75R15	2007
SWM	66103	1986	6" CH&E PUMP	TO4239D145266	NP	(F)4.80-8(B)P195/75R15	2007
SWM	62109	2002	Godwin Hydraulic Pump	2209222	NP	ST205/70D15	
SWM	74613	1994	Hudsn htd18c bh trl	10HHTD1C9R1000036	842	9.50-16.5LT	2014
SWM	47112	1997	INT'L TANDEM DMP	1HTSWAARXVH447791	492	11R22.5 front & rear	2008
SWM	71207	2001	Talbert Lowboy Trl	40FS0493811020602		255/CR22.5	
SWM	72614	2002	Eager Beaver Trl - 20 ton	112H8V3212L060539	63131	215/75R 17.5	2014
SWM	43169	2003	Volvo Tandem Dump	4V5KC9GF63N347919	temp	(F) 315/80R22.5(R) 11R22.5	2011
SWM	77702	2007	Towmaster Trailer	4KNUT20207L163320		215/75R 17.5	
SWM	78507	1998	CAM Utility Trailer	4YUUF0910WL001497	57426	205/75R15	
WPM	45555	2004	INT'L Combo truck	1HTWYAHT75J148268	27837	(F)425/65R22.5 (R)11R22.5	2012
WPM	47003	2007	INT"L Combo truck	1HTWAHT27J550895	74211	(F)315/80R22.5(R)11R22.5	2014
WPM	22017	2002	Ford F250 Pick Up	1FTNF20L32EC50042	60629		2010
WPM	23759	2003	Ford F250 Superduty	3FTNF20LX3MB36759		LT 235/85R16 M/S	2011
WPM	23760	2003	Ford F250 4x4	3FTNX21L53MB36762		LT 235/85R16 M/S	2011
WPM	36106	2006	INT'L 2TN Dump	1HTMNAAM06H319714	69250	(F&R) 245-70R 19.5	2014
WPM	36210	2006	INT'L 4700 2TN Dump	1HTMNAAM66H327249		(F&R) 245/70R 19.5	2014
WPM	37115	2006	INT'L 4300 2 Ton Dump	1HTMNAAM67H451281	54719	(f&r) 245/70R 19.5	2013
WPM	27525	1997	Ford F250 Pick Up	3FTHF25HOVMA39221	54647	LT 235/85R16 M/S	2006
WPM	25182	2005	Ford Ranger Super Cab	1FTZR45EX5PA42652	27561	(f&r) P255/70R16	2013
WPM	25183	2005	Ford Ranger Super Cab	1FTZR45E15PA42653	27560	(f&r) P255/70R16	2013
WPM	26013	2006	GMC Sierra Hybrid	1GTEC19T06Z297811	21173	(F&R) P235/75R16	2014
WPM	26318	2006	Ford Escape Hybrid	1FMYU96H76KC95874	69837	(f&r) P235/70R16	2014
WPM	26319	2006	Chevy Colorado 4x4	1GCDT136368296365	69905	P235/75R15	2014
WPM	29527	1999	Ford F250 4X4	1FTNF21L4XEA71952	55201	LT265 / 75R16	2008
WPM	27308	1997	Ford Rodder F350	1FDNF80C1VVA31776	57422	225/70R19.5 FRT &REAR	2010
WPM	55703	2005	Medium Size Excavator	7H04-03236	NP		2015
WPM	58701	1998	Mini-excavator	8004858	NP		
WPM	72614	2007	Komatsu mini-excavator	KMTPC029T01003195	NP		2017
WPM	30064	2000	MH Sealing Truck	3FCMF53S3YJA02636	57414	(f & r) 245/70R 19.5	2010
WPM	29065	1989	Hydro-seeder Truck	1GBKP32K6K3317176	53598	8-19.5	
WPM	22068	2002	TV Truck (white)	1FDWE35L12HA66170	60696	(f&r) LT225/75r16 -	2008
WPM	39111	1999	Sterling Flusher	2F2HRJAA1XAA32000	55855	11R-22.5	2007
WPM	40159	2000	Sterling Tri-axle	2FZXEPYB2YAG10146	54447	(F)425/65R22.5(R)11R22.5	2010
WPM	32081	2002	INT'L 4900 Flusher	1HTSDADRX2H408637	53642	255/70R22.5	2009
WPM	34018	2004	Sprinter TV Truck	WD2PD543145603017	65383	(f & r) 195/70R 15	2012
WPM	34208	2004	4300 INT'L 2TN DUMP	1HTMNAAM24H656379	65200	245/70R 19.5	2011
WPM	35166	2005	4700 INT'L Flusher	1HTWCAZR95J010457	27830	(f&r) 11R22.5	2012
WPM	37116	2006	INT'L 7400 Flusher	1HTWCAAR87J488187	71279	(F)295/75R22.5 (R)11R22.5	2013
WPM	27526	1997	Ford F250 Pick Up	1F1HF25H1VEC13819	53261	LT 235/85R16 M/S	2006
WPM	14047	2004	Ford Taurus	1FAFP55U24G110677	65389	(F&R) P215/60R16	2012
WPM	25021	2005	GMC Sierra Hybrid	1GTEC19T05Z267481	27825	(F&R) P235/75R16	2012
WPM	25023	2005	GMC Sierra Hybrid	1GTEC19T45Z280895	27823	(F&R) P235/75R16	2012
WPM	43168	2003	Volvo Tandem Dump	4V5KC9GF43N347918	63159	(F)315/80R22.5(R)11R22.5	2010
WPM	51117	2001	Ford N.H. Skid Loader	196024	NP	16.5	2013
WPM	55103	1985	Ingersoll Air Comp	146846U85953	5587	F4.10/3.50-4(B)P215/75R15	
WPM	50116	2000	410E Deere Backhoe	T0410EX884046	NP	(F) 12.5/80-18 (R) 21L.24	
WPM	57285	1997	Mauldin Roller	32			
WPM	60087	1989	Sereco Power Mach	LB-9-881729	NP	(F) hard rubber(B)7.00-15LT	
WPM	60088	1989	Sereco Power Mach	LB-9-881728	NP	(F) hard rubber(B)7.00-15LT	
WPM	64071	1984	Western mortar mixer	23362	NP	4.80-12	
WPM	64150	1984	Best cement mixer	4641118	NP	b78-13	
WPM	65108	2005	Godwin Hydraulic Pump	4313311	NP	LT235/85R16	
WPM	66104	1986	CH&E 6" pump	TO4239D140670	NP	(F)4.80-8 (B) P195/75R15	
WPM	63107	2003	ACME 6" Pump	30505			

DEPT	VEH#	YEAR	VEH MAKE	VEH ID #	LICENSE	TIRE SIZE	REPLACE
WPM	66105	1986	Hand Rodder Sreco	PDL1994	NP	Hard Rubber	
WPM	70610	1990	Interstate BH Trailer	1JKDTP292LA601828	53357	8-14.5 LT	
WPM	70611	1980	Reids Utility Trailer	702477	6456	8-14.5 LT	
WPM	71611	1991	Bemis Arrowboard	9107B201	NP	P185/80D13	
WPM	79610	1999	Tracom Arrowboard	645		205 \ 75 R14	
WPM	72717	1992	Shore Trailer	10HHD1206N1000019	298	8-14.5LT	
WPM	72718	1992	Shore Trailer	10HHD1202N1000020	299	8-14.5LT	
WPM	73100	1993	Brindle TV Trailer	1L90V1113PG085016	53607	p235/75r15	
WPM	74592	1954	Concrete saw trailer	no id	NP	6.50-16LT	
WPM	78719	2007	Felling concrete saw trailer	5FTPE122581029994		ST225/75R15	
WPM	79530	1989	S&S MFG Trailer	PH124F308K1J1000L	NP	p215/75b15	
WPM		1990	Backhoe att skid ldr	88M2CL1391			
WPM	WPM03	1995	Partner Abrasive Saw		Spare	Tool Room	
WPM	WPM04		Abrasive Saw	14" blade			
WPM	WPM07	1995	Honda Pan Tamper				
WPM	WPM08	1995	Honda Pan Tamper				
WPM	WPM09		Jumping Jack Tamper				
WPM	WPM14	1995	3" Pump				
WPM	WPM15		3" Pump				
WPM	WPM16	1995	3" Pump				
WPM	WPM18	1995	3" Pump				
WPM	WPM20	1995	3" Pump				
WPM	WPM21	1995	2" Pump				
WPM	WPM22	1995	2" Pump				
WPM	WPM23	1995	2" Pump				
WPM	WPM27	1995	2" Pump				
WPM	WPM28	1995	3" Pump				
WPM	WPM29		Dayton Generator				
WPM	WPM30		Dayton Generator				
WPM	WPM32		Hand Rod Machine				
WPM	WPM33		Air Blower	sets in mh frame			
WPM	WPM34		Air Blower	sets in mh frame			
WPM	WPM35		Mower	21" cut John Deere			
WPM	WPM36		Mower	21" cut Murry			
WPM	WPM38		Smoke Test Blower				
WPM	WPM41		Stihl Chain Saw	24" bar			
WPM	WPM42		Stihl Chain Saw	24" bar			
WPM	WPM43		Stihl Concrete Saw				
WPM	WPM45		Honda Air Compressor				
WPM	WPM46		Snow Blower				
WPM	WPM47	2001	Stanley Hydraulic Unit	99122511			
WPM	WPM48	2001	3" Gorman Rupp Pump	1207811			
WPM	WPM49	2001	Kohler Hydro-seeder	2811104731			
WPM	WPM50	2001	Ryobi Weed-Eater	101144309			
WPM	WPM51	1987	Cement Pump in MHST				
WPM	WPM053	2003	Target Abrasive Saw	1311494352			
WPM	WPM054	2003	Stanly hydr abrasive saw	1590			
WPM	WPM57	2004	Partner Abrasive Saw	04 0500089		Spare (toolroom)	
WPM	WPM58	2004	Partner Abrasive Saw	04 0500093			
WPM	WPM059	2004	Stihl Chain Saw - MS180	262-190-104			
WPM	WPM060	2004	Tamper for JD Backhoe	220083			
WPM	WPM061	2004	Handi-ram for JD Hoe				
WPM	WPM062	2004	Hydraulic Pump for JD	49334FXJ0418X8			
WPM	WPM063	2005	Stihl Chain Saw MS180	264392843			
WPM	WPM064	2005	Stihl Weed-eater	257067353			
WPM	WPM065	2004	Partner Concrete Saw	04-5200477	#112		
			Chicago Pneumatic drill	(CP 9 A) 04232X019N			
WPM	WPM66	2005	Stihl Chainsaw-MS290	264749546			
WPM	WPM67	2005	Stihl Leaf Blower-BR550	265203987			
WPM	WPM068	2005	Abrasive Saw	05-3700416	#124		
WPM	WPM069	2005	Abrasive Saw	968 34 14-00	#107		
WPM	WPM070	2000	Kent Handy Ram C.P.6				
WPM	WPM071	1990	New Holland B-109				
	WPM072		attachment to 50162				
WPM	WPM073	2006	Barrel Grinder CAT HM312	DJP00108			
	WPM074		Harley Rake			attachment to 51117	
WPM	WPM075	2006	Mower Deck CAT BR378	RDN00189			
		2006	Milwaukee 41/2" Grinder	856H80543 0598		Hand held (red in color)	
		2006	Milwaukee 71/4" Circular Saw	983C80609 0913		Red in color	
WPM	WPM076	2006	Boss Snow Plow	STB03167		attached to unit #29527	
WPM	WPM077	2006	Partner 750 Abrasive Saw	06-2500457	#169		
WPM	WPM078	2006	Partner 750 Abrasive Saw	06-4200617	#105		
		2007	Rugby 300 SG Lazer Level	300-61682		Purchased by Engineering	
		2007	Rugby 300 SG Lazer Level	300-61540		Purchased by Engineering	
		2007	Dewalt 18 volt cordless drill	126372	#124	keeping on truck #34209	
		2007	Dewalt 18 volt cordless drill	126377	#169	Keeping on truck #34208	
		2007	Dewalt 18 volt cordless drill	126363	#112	Keeping on truck #36210	
		2007	Dewalt 18 volt cordless drill	126358	#107	keeping on truck #37115	
		2007	Dewalt 18 volt cordless drill	126337	#105	keeping on truck #36106	
		2007	Dewalt 18 volt saws-all	352342	#120	keeping on truck #30064	
WPM	WPM079	2007	Troybuilt Pony Tiller	1D107K80049			
WPM	WPM080	2007	Troybuilt Pony Tiller	1L015K80004			

GLOSSARY

ACPWQ: Allen County Partnership for Water Quality – ACPWQ was created by the City and other local governmental entities to help educate the public and the media about water resource issues.

Board of Public Works – The Board of Public Works of the City of Fort Wayne, Indiana.

CCTV – Closed Circuit Television

CFR - Code of Federal Regulations

City - The City of Fort Wayne

CMMS - Computerized Maintenance Management System keeps inventory of equipment, access parts information, and schedule maintenance activities and maintain a history of maintenance performed.

Combined or Combination Sewer – A sewer that carries storm, surface and groundwater runoff as well as sewage.

CSO – Combined Sewer Overflow

GIS - Geographic Information System – GIS is a term used to describe the creation, manipulation, analysis, and storage of spatial data. This technology integrates common database operations such as query and statistical analysis with geographic data through visualization and maps. These attributes distinguish GIS from other information systems and make it valuable for exploring options, explaining results, and deciding strategies.

IDEM - Indiana Department of Environmental Management

IMS - Infrastructure Management System – Electronic database to track maintenance activities

Industrial Pre-Treatment Program - A City program that handles the process to reduce, eliminate, or alter the nature of wastewater pollutants from non-domestic sources (mostly industrial) before they are discharged into Publicly Owned Treatment Works (POTWs).

Infiltration - The penetration of water entering sewers or pipes through defective joints, connections, or manhole walls.

Inflow - Stormwater entering a sewer system from sources such as basement drains, manholes, and storm and driveway drains.

IWEA – Indiana Water Environment Association

LTCP - Long-Term Control Plan – A document developed by CSO communities to describe existing waterway conditions and various CSO abatement technologies that will be used to control overflows.

Manhole - A hole, usually with a cover, through which a person may enter a sewer, boiler, drain, or similar structure.

NPDES - National Pollutant Discharge Elimination System – A national program under Section 402 of the Clean Water Act (CWA) for regulation of discharges from point sources to waters of the United States. Discharges are illegal unless authorized by an NPDES permit.

O&M - Operations and Maintenance

OSHA – Occupational Safety and Health Administration

POTW - Publicly Owned Treatment Works

Private Sewer – Sewer owned and maintained by a private company, person, group or persons or other private entity.

Public Sewer – A sewer to the use of which all owners of abutting property have equal rights and is controlled and maintained by City Utilities.

Pump Station - A station positioned in the public sewer system at which wastewater is pumped to a higher level.

SAG – Sewer Advisory Group

Sanitary Sewer – A sewer that carries domestic and industrial sanitary sewage and to which storm, surface, groundwaters and unpolluted industrial wastewaters are not intentionally admitted.

Sanitary Sewer Discharge (SSD) – any discharge to waters of the State as defined by applicable state law, or to navigable waters of the United States as defined by Section 502(7) of the Clean Water Act, 33 U.S.C. § 1362(7), from Fort Wayne's Sanitary Sewer System.

SIU - Significant Industrial User – An indirect discharger that is the focus of control efforts under the national pretreatment program; includes all indirect dischargers subject to national categorical pretreatment standards, and all other indirect dischargers that contribute 25,000 gpd or more of process wastewater, or which make up five percent or more of the hydraulic or organic loading to the municipal treatment plant, subject to certain exceptions [40 CFR 122.23(b)(9)]

SOP - Standards of Operation

SSS – Separate Sanitary Sewer System

Storm Sewer – A sewer designated or intended to convey only stormwater, surface runoff, street wash waters and drainage and not intended for sanitary sewage and industrial wastes other than unpolluted cooling water.

SUO – Sewer Use Ordinance

U.S.EPA - United States Environmental Protection Agency

UTA - Utility Administration Group

Water Pollution Control Utility (Wastewater Utility) – All facilities and systems for collecting, transporting, pumping, treating, disposing of sewage and sludge, including the sewage treatment plant and the sanitary, storm and combination sewer collection systems whether or not in active use.

WEF – Water Environment Federation

WPCM - Water Pollution Control Maintenance

WPCP - Water Pollution Control Plant – Any equipment, device, unit, structure, etc., that is used to control, prevent, pretreat, or treat any discharge or threatened discharge of pollutants into any waters of the State of Indiana, including surface and subsurface waters and public or private sewerage systems.