



2009 Annual Report

Transitioning to a New Season of Excellence



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Preface

January 22, 2010

Mr. Kevin Anderson, City Manager
City of Dowagiac
241 S. Front Street
Dowagiac, MI 49047

RE: ***2009 Annual Report for the Department of Public Services***

Dear Kevin,

I am pleased to submit the *2009 Annual Report for the Department of Public Services*.

This document contains descriptions and explanations for many of the major functions, services, programs, and activities administered by our department. A listing of the major accomplishments of the past year is presented for each division, as well as a summary of the many challenges and opportunities that we face. And perhaps most importantly, we outline a framework of goals and objectives for the coming year.

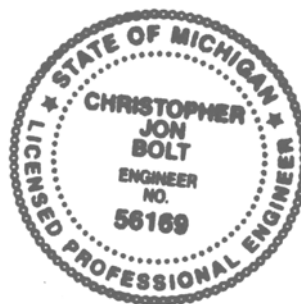
As you know, the Department of Public Services (DPS) provides numerous vital services to the community, most of which could be described as “behind the scenes” – in fact, our efforts are oftentimes invisible, particularly when performed responsively and effectively. It is my hope that this report will be helpful to you, our elected officials, the residents of our community, and others that may be interested in learning more about what we do to maintain our infrastructure and environment, and to provide for the public’s health, safety, and welfare.

As I conclude my first year as director, I must say that I feel very blessed to have an opportunity to work with the many talented and committed employees in DPS.

On behalf of our entire team, I wish to thank you, our elected officials, and our residents for the support that you collectively provide to us on a daily basis. We all look forward to doing our best to serve our community in 2010 and beyond.

Respectfully submitted,

Christopher J. Bolt, P.E.
Director/City Engineer





Mission Statement

The mission of the Department of Public Services is to maintain and protect the infrastructure and environment of our community; and to help ensure the public health, safety, and welfare of its residents, businesses, organizations, and visitors.



I. Introduction

The Department of Public Services (DPS) provides a myriad of essential services to our community – most of which are behind the scenes so it is easy to take them for granted. On any given day, DPS team members ensure that the electricity is on, the water is safe and running properly, and the sanitary sewers are flowing freely. DPS team members make certain that sanitary sewage is properly treated and discharged to the Dowagiac Creek. Moreover, on a seasonal basis DPS team members promptly remove snow and ice from streets and sidewalks, or pickup leaves, lawn refuse, and brush. And as a final example, DPS strives to provide safe and reliable technological tools for all of our employees: computers, software, copiers, phones, and radios.

The City of Dowagiac DPS has experienced a myriad of changes and challenges during the last year, from top to bottom. In close collaboration with our City Manager, DPS administration has sought to explore a variety of opportunities, ideas, and initiatives that will continue to improve the department and the services we offer for years to come.

The DPS is currently comprised of a team of 23 full-time equivalent (FTE) employees in 6 divisions, with operations based out of five different locations around the City:

- **Administration** – 1 FTE support plus Director/City Engineer, City Hall (downstairs)
- **Engineering/Geographic Information Systems (GIS)** – 1 FTE, City Hall (downstairs)
- **Information Technology (IT)** – 1 FTE, City Hall (upstairs)
- **Electric Operations** – 5 FTE, Electric Warehouse (S. Front Street)
- **Public Works Operations** – 11 FTE, Maintenance Garage (Chestnut Street) and Parks Shop (Rotary Park)
- **Wastewater and Water Treatment (WWTP/WTP)** – 4 FTE, Wastewater Treatment Plant

An organizational chart illustrating the overall structure of DPS in graphical form is included in Appendix A for reference.

Each section of the report focuses one of the six major divisions of DPS, presenting a summary of the following key information:

- Overview of the division, with a brief description of
 - Functions and Services
 - Personnel
 - Facilities and Equipment
- Accomplishments for the past year
- Challenges and Opportunities for the upcoming year
- Goals and Objectives for the upcoming year

II. Administration Division

OVERVIEW

Functions and Services

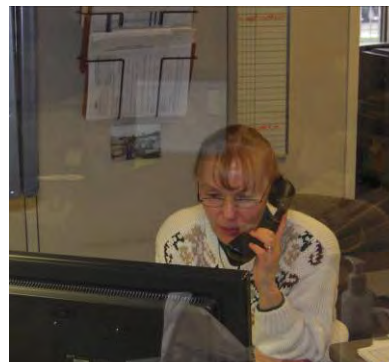
The Administration Division of DPS is responsible for oversight of the department, including work planning and prioritization, customer assistance, grant applications and administration, regulatory reports, special programs and initiatives, payroll, accounting, and associated records.

Personnel

The Administration Division is headed by Christopher J. Bolt, P.E., Director/City Engineer, and supported by Sue Watson, Customer Service Administrative Assistant.

Prior to 2009 the division included 3 additional positions: an Assistant Director/Engineer, a full-time administrative assistant, and a part-time administrative assistant (25 hours per week, or 0.63 full-time equivalents (FTE)). These positions were eliminated as part of the collective reorganization of DPS and City Hall.

The position formerly known as DPS Office Manager has been wrapped into the newly created Customer Service Department, which is supervised by Jim Bradford, Building Official. Therein, Sue Watson serves as the lead DPS specialist, and the Customer Service Department provides administrative support for various duties and needs as assigned. Likewise, Sue assists the Customer Service Team with key functions and duties as needed on a day to day basis.



Sue Watson assists a customer - the entire Customer Service Team stays very busy assisting the public with various issues every day.

During 2009, two SMC interns¹ were hosted by the DPS Administration Team: Jeanne Reed and Adam Springsteen. Their contributions during this time of transition were invaluable and much appreciated.

DPS also participated in the Michigan Works! Program this year, hosting a total of 9 seasonal workers during the months of June and July. The employee wages are fully funded by the State of

¹ DPS began partnering with Southwestern Michigan College (SMC) this year to host students for part-time internships. The interns volunteer between 96 and 144 hours of their time on a part-time basis to assist staff with various duties and services in exchange for academic credit. They must apply for a position, go through an interview process, keep regular schedules and time records, achieve specific objectives, and participate in two evaluations of their performance (which determines their grade).



Michigan, and the program provides invaluable employment experience to youth or unemployed workers. Two participants worked in the office assisting the Administration and IT Divisions, and the remaining seven employees worked in the field with our Public Works Operations and WWTP/WTP Divisions.

Facilities and Equipment

The Administration Division was formerly located on the upstairs floor of City Hall; however, the offices are now located in the downstairs area.

ACCOMPLISHMENTS

- Initiated an extensive discovery process in an effort to assess the overall health of the department.
- Identified numerous strengths and weaknesses in DPS, with several changes implemented within each division to improve the work culture and overall effectiveness.
- Submitted numerous grant applications, with several hundred thousand dollars awarded. A detailed summary is included herein as Appendix B.
- Development and implementation of an Energy Optimization (EO) Plan and a Renewable Energy Plan (REP).
- Various reports and permits filed in support of the other divisions of DPS.
- Various reimbursement requests and supporting documentation for grants and outside funding sources (e.g., MDOT, DNR).
- Implemented new around the clock callout monitoring procedures: the Director/City Engineer receives ALL calls from dispatch first (24/7/365), then issues a recommendation and/or approval for proceeding with call out if deemed to be necessary.
- Reorganized and relocated the Administration Division offices.
- Developed and implemented a viable reorganization of the Public Works Operations Division, which is now comprised of the Water/Sewer, Streets/Bridges, Fleet Maintenance, and Parks/Grounds crews (more fully described later in this report).
- Established a successful internship program – a win-win arrangement for the interns and the City of Dowagiac. In addition to Administration, the program provided interns for the IT and Engineering/GIS Divisions of DPS.
- Initiated positive relations with neighboring municipalities and agencies in the hopes of formulating cost-sharing and partnering arrangements. Preliminary commitments have been made with Niles, Cassopolis, and the Cass County Road Commission; tools and equipment are currently being shared on an as needed basis.
- Improved efforts to utilize computer technology to assist with various routine duties and functions, specifically Laserfiche document archiving software, Adobe Professional (electronic publishing for grants, reports, and documents), and electronic letterhead and memo templates.



- Set up Workplace Improvement Committees to foster communication and collaboration amongst the various divisions of DPS and to seek input and feedback on improvements. The 6 committees are as follows:
 - Safety
 - Tools & Equipment
 - Fleet & Major Equipment
 - Facilities & Grounds
 - Work Culture, Environment, & Strategic Planning
 - Technology & Efficiency

Thus far, the committees have provided recommendations for important safety equipment updates required by law for entering confined spaces (i.e., manholes, vaults, tanks, etc.); evaluation of the office/break room layout in both the Public Works Operations and Electric Operations Facilities; and ideas for securing and organizing tools and equipment.

CHALLENGES AND OPPORTUNITIES

- Perhaps most notably, the department has experienced a nearly 22% reduction in its workforce (5.63 FTE) over the past year: 30.63 FTE's in 2008, down to 24 FTE's at the close of 2009. This requires creative thinking and strategic planning on the part of management to ensure that all bases are covered for critical tasks on a day to day basis.
- Migrate from a "crisis" mode of operation to a proactive, strategic work plan. This is essential to emergency preparedness.
- Additional integration with the Customer Service Team will be important to distributing our administrative tasks and workload.
- Training – particularly with regard to exploring the full features and power of computer software to further automate routine report preparation and procedures.
- Filing and record keeping efficiency and archiving procedures need to be better organized.
- Continuous assessment of the DPS work culture is needed.
- The performance evaluation process is limited to non-union employees only. It would be helpful to implement a coaching/mentoring process for all employees.

GOALS AND OBJECTIVES

1. Develop and implement weekly work plans within each division in line with strategic goals that implement proactive/preventative measures. In other words, plan the work, and work the plan.
2. Issue ID cards for all DPS employees.
3. Streamline customer service protocols and communications.
4. Continue to integrate, coordinate, and share tasks with the Customer Service Team.
5. Develop written standard protocols for routine administrative procedures to aid in training efforts.
6. Develop a file indexing system for important city records that mirrors electronic data/records.



7. Utilize the new BS&A software to automate report generation for MDOT reimbursement reports.
8. Develop a Capital Improvements Plan for the City's infrastructure.
9. Develop a Public Works Operations Manual in an effort to improve the departmental culture and our overall emergency preparedness.
10. Continue to seek grants and apply for infrastructure funding programs.
11. Continue efforts to effectively implement Energy Optimization Plan goals and objectives for the year.
12. Assess Energy Efficiency Initiatives throughout the various DPS facilities.
13. Foster improved employee communications, relations, and morale by foster further development of the Workplace Improvement Committees.
14. Implement an improved performance evaluation/coaching process for all employees (union and non-union).

III. Engineering/GIS Division

OVERVIEW

Functions and Services

The Engineering/Geographic Information Systems (GIS) Division is responsible for preparing and issuing maps, exhibits, and construction drawings; performing surveys and construction site observations; assisting with project management and technical research; and organizing and securing various infrastructure records as needed.

Personnel

The Engineering/GIS Division is headed by Christopher J. Bolt, P.E., Director/City Engineer, and supported principally by Gordon Warner, Civil Technician. Prior to 2009, the division was comprised of 2 full time positions: an Assistant Director/Engineer, along with the Civil Technician. However, the Assistant Director/Engineer position was eliminated and combined with the Director/City Engineer duties as part of the DPS reorganization.

Two SMC interns were hosted by the Engineering/GIS team this year: Cody Thomas and Gordon Archer, both of which provided valuable and helpful contributions.

Facilities and Equipment

The Engineering/GIS Division was formerly located on the upstairs floor of City Hall; however, the offices are now located in the downstairs area.

Key equipment includes computer hardware with Computer Aided Design (CAD) software, a large format plotter and scanner, a laser level, a robotic total station (shared with Cass County, see below), and miscellaneous technological devices in support of routine job duties.



Gordon Warner, Civil Technician, is operating the robotic total station – an essential tool for designing and constructing infrastructure projects.

ACCOMPLISHMENTS

- Prepared and submitted grant applications for 16 projects, totaling \$1,006,705, with 10 grants approved and 3 still under review as of the date of this report (see Appendix B for details):
 - Of the \$783,187 of funded projects, nearly 75% (\$572,050) are covered by grant funds.
 - The 3 projects still under review total \$222,898, with a potential \$142,697 covered by grant funds.

- Negotiated a partnering/resource sharing arrangement with the Cass County Road Commission for engineering resources. Foremost, an agreement was negotiated to jointly purchase and share a used survey instrument that would greatly improve the efficiency of designing and administering construction of infrastructure projects. In addition, the costs associated with hiring a graduate engineer (Engineer-in-Training) would be shared between the City and the Commission under a cost-sharing arrangement, of which details are still being worked out.
- SMC Interns assisted in developing improved exhibit templates and CAD protocols.
- Implemented the use of computer aided devices to improve the effectiveness of various duties and functions, specifically Computer Aided Design (CAD) maps and exhibits, infrastructure evaluation, and record keeping.
- Successfully implemented a hydrant flushing and evaluation program in cooperation with the Fire Department, saving the City an estimated \$10,000 annually.
- Revamped the job duties, functions, and training initiatives of the Civil Technician position to better support overall DPS operations.
- Assisted with coordinating and overseeing design and construction of the Patrick-Hamilton Drain project.
- Completed pavement evaluation ratings (PASER) of all city streets.
- Performed an in-house evaluation of the condition of the Old City Landfill cap, including a detailed inventory of the cap, fence, gas vents, and chain link fence. Numerous repairs are needed and have been identified in a report.
- Performed cost/benefit analyses on a variety of maintenance projects to determine whether or not in-house DPS crews could perform the work to save the City money. An estimated savings of at least \$50,000 was achieved through the following efforts:
 - Designed and coordinated installation of two major sculpture installations: *Windsong* and *Cheetahs on the Run*. These combined in-house efforts saved the City an estimated \$10,000 to \$15,000 in engineering and contractor expenses.
 - Researched and administered an in-house effort to complete asphalt patches for utility digs within the City, saving the City an estimated \$15,000 to \$20,000 in contractor expenses.
 - Researched and administered in-house efforts to complete concrete repairs, saving the City an estimated \$5,000 to \$10,000 in contractor expenditures.
 - Administered in-house efforts to complete two major utility repair projects on Johnson Street and M-51, saving the City an estimated \$10,000 to \$15,000 in contractor expenditures.
 - Negotiated efforts to partner with MDOT and the DEQ to save approximately \$5,000 in roadway patchwork expenditures on M-51.



CHALLENGES AND OPPORTUNITIES

- In-house engineering will undoubtedly assist the City in reducing expenditures for engineering consulting fees associated with the grant funded projects already awarded. However, additional training and resources are needed. The award of over \$750,000 in grant funded projects provides us with a unique opportunity to hire an Engineer-in-Training (i.e., new college graduate engineer) to work closely with our City Engineer and Civil Technician to design, bid, and administer construction of these projects. We anticipate that this will save the City tens of thousands of dollars in engineering consulting fees over the next two years. These savings essentially allow us to get more “bang for the buck” on our grant funds, since more dollars are available for actual construction work, as opposed to engineering consulting fees. The position is proposed to be shared with the Cass County Road Commission in an effort to distribute costs work load.
- Training – particularly with regard to exploring the full features and power of computer software to further automate routine design procedures.
- Technology needs to be better utilized to improve the efficiency of records research and acquisition; a Geographical Information System (GIS) will greatly enhance the acquisition and analysis of infrastructure data and records for all staff and the public at large.
- Technology needs to be better utilized to improve the efficiency of project development and design. This can be accomplished through use of the new survey instrument jointly purchased with Cass County Road Commission, and additional training of AutoCAD Civil 3D software. Moreover, the hiring of a new graduate engineer with skills and strengths in these areas will carry us light years forward.

GOALS AND OBJECTIVES

1. Continue to explore intergovernmental partnership opportunities with neighboring communities and agencies, such as the Village of Cassopolis, City of Niles, Cass County Road Commission, Cass County, the Dowagiac Union School District, and surrounding townships and utility authorities.
2. Develop a Capital Improvement Plan, which will formulate costs associated with the short and long term care and maintenance of our infrastructure elements.
3. Research and quantify important data about our critical infrastructure elements, and develop supporting graphs and exhibits for the Capital Improvement Plan and integration with the Geographic Information System.
4. Develop a set of template specifications for city infrastructure projects (first edition).
5. Develop a set of template standard details for city infrastructure projects (first edition).
6. Complete in-house design of the grant projects
 - a) Uneta Street
 - b) Solomon Avenue
 - c) Wolf Street (including a new lift station)
 - d) Middle Crossing
 - e) 2011 Small Urban Projects (as noted in Appendix B)



7. Apply for additional grants, pending further research on eligibility and criteria.
8. Provide improved support services to in-house staff (e.g., maps, records, data, and research). In particular, improve the aesthetics, readability, and efficiency of producing documents in support thereof.
9. Develop a *Geographic Information Systems (GIS) Implementation Plan*.
10. Continue to work with the Fire Department to conduct hydrant flushing, and to collect flow testing data throughout the City.
11. Work with Public Works Operations to complete repairs at the Old City Landfill.
12. Continue in-house training efforts to support the goals and services listed herein:
 - a) Lift Station Design
 - b) AutoCAD Civil 3D
 - c) Advanced Excel and Word

IV. Information Technology (IT) Division

OVERVIEW

Functions and Services

The IT division is responsible for the City's computer system (servers, desktop, and laptop units); data communications, email, and internet access; phone system; mobile communications system (cell phones and smart phones); copiers, fax machines, and printers; utility meter problems and issues; and special projects and issues as they arise.

Personnel

The IT Division is essentially a one-man operation, with Mitch Billingham at the helm. Occasionally, it is necessary to work closely with technical consultants for troubleshooting and recommendations; however, as much work as possible is completed in-house.

One SMC intern was hosted as part of the IT team in 2009. Elwynn Martin assisted in completing a wide variety of special tasks and projects while Mitch was busy tackling some of the major accomplishments listed below.

Facilities and Equipment

The IT Division was formerly located on the downstairs floor of City Hall; however, the offices are now located upstairs. IT manages numerous computers and communications equipment located in most of the City's buildings and facilities.



Mitch Billingham performs maintenance on the City's main servers – the heart of the entire computer system for the City.

ACCOMPLISHMENTS

- Installed upgraded BS&A accounting software for utility billing, payroll, accounts receivable, and financial management.
- Handled a myriad of emergency IT issues, large and small, on a daily basis.
- Purchased and installed an upgraded back up device unit to improve the efficiency and reliability of data backups from the server.
- Designed and coordinated rerouting of communications between City Hall and the Depot Building (necessitated by the demolition of the former Fire Station building).



- Researched and explored SCADA systems for combining the three primary meters at Ameriwood in an effort to combine it as one primary meter for billing purposes (i.e., a virtual meter).
- Coordinated and assisted with installation of the data communications hardware for the new Fire Station.
- Resurrected three older computers for use at the Electric Operations and Public Works Operations Facilities.

CHALLENGES AND OPPORTUNITIES

- A staff of one full-time individual causes a bottle-neck for many projects and initiatives. Careful prioritization is essential.

GOALS AND OBJECTIVES

1. Explore intergovernmental partnership opportunities with neighboring communities and agencies, such as Cass County and the Dowagiac Union School District.
2. Setup and administer a new SCADA system for electric service associated with the Ameriwood service and the incoming main metering station.
3. Work closely with the Engineering Division to create a *Geographic Information Systems (GIS) Implementation Plan*, including assessment of GIS integration with the utilities system software (BS&A) for work orders, etc.
4. Continue exploration on the costs and benefits associated with implementing a virtual server environment to reduce long term energy and hardware costs, improve system reliability, and enhance disaster resiliency and recovery.
5. Develop a *Data Integrity and Security Plan and Policy*.
6. Identify and setup an offsite Emergency Operations Center for city administration's use in the event that City Hall is destroyed or unavailable.
7. Explore the viability of installing a radio repeater on one of the water towers to improve communications between handheld radios, particularly in the event of an emergency.
8. Explore the viability of achieving faster data communications with the new Fire Station and the Wastewater Treatment Plant.
9. Explore the viability of achieving faster data communications with the Electric Operations Facility, the Public Works Operations Facility, and Water Treatment Plant.
10. Implement an in-house training program for city staff, teaching new skills, tips, and tricks for Microsoft Excel and Word, and possibly other programs as the need arises.
11. Work with the Electric Operations and Administration Divisions to ensure successful implementation of a Vendor Managed Inventory system.
12. Implement a QA/QC review process for reviewing the meter readings/billings on a regular basis for our largest customers.



13. Convert and/or upgrade the assessing and building permit to new BS&A version.

14. Train at least one customer service specialist in the following areas:

- ACH Payment processing routine (customer payments by phone)
- Sales tax routine
- City bill payment routine
- Utility bill adjustments
- Meter reading software (ITRON) operations
- Train at least one customer service specialist in the following areas:

V. Electric Operations Division

OVERVIEW

Functions and Services

The Electric Operations Division is responsible for all infrastructure required to distribute electricity throughout the city, including services, metering, and administration of the warehouse inventory. The crew also installs and maintains the City's numerous street and security lights.

As of December of 2009, the City of Dowagiac had 2,572 electric customers, of which 2,162 were residential, and 410 were commercial, industrial, or governmental/municipal. Each year, our customers consume approximately 70,000,000 kilowatt-hours (kWh) of electricity. Approximately 25% of this total is used by residential customers, and just over 50% is consumed by industrial customers; the remaining 25% is for commercial and governmental customers.

Personnel

The Electric Operations Division is headed by Dave Scott, Foreman, who oversees the work of 3 Linemen and 1 Serviceman. DPS witnessed the retirement of John Wolff, Stockroom Clerk in December of 2009. In addition, the division congratulated Pat Harding on the completion of his lineman apprenticeship program in August of 2009. Notably, Dale Meyer completed his apprenticeship in August of 2008.

The division witnessed the retirement of John Wolff, Stockroom Clerk, in December of 2009. John had worked with the City for nearly 25 years. In recent years, he led a successful effort to overhaul and reorganize the stockroom inventory.

Facilities and Equipment

The Electric Operations Division is currently headquartered in the Electric Operations Facility (Warehouse Facility) located on South Front Street. The headquarters were relocated in 2009 in an effort to allow for additional space in the Public Works Operations Garage, and to provide the Electric Crew with a certain degree of autonomy with regard to its work program and operations.



Dave Scott proudly presented the line truck in this year's Christmas Parade.



The division maintains 3 substations: Telegraph Street, Chestnut Street, and Poplar Street, and cares for approximately 58.6 miles of electric lines, 440 distribution transformers, and 871 street lights, and 458 security lights throughout the City.

ACCOMPLISHMENTS

- Completed installation of radio read meters for all major electric customers – all meters are now up to date.
- Improved communications, interaction, and work planning collaboration between DPS Administration and Electric crew.
- Installed new industrial services:
 - Wolford Electric (Industrial Park)
 - Premier Tool & Die (N. Paul)
- Installed/replaced several transformers:
 - National Guard Building
 - Public Library
 - Patrick-Hamilton Elementary School
- Performed installation of the *Windsong* and *Cheetahs on the Run* sculptures.
- Researched and explored the viability of replacing various street lights with energy efficient alternatives, such as magnetic induction and LED technology. Applied for a grant to implement a pilot/demonstration project (still under review at the date of this report).
- Installed new decorative parking lot/security lights at Borgess Lee Memorial Hospital.
- Initiated replacement of outdated Mercury Vapor street light fixtures with High Pressure Sodium units.
- Completed a cursory independent review/audit of our distribution system by a licensed electrical engineer (a free benefit for members of AMP, American Municipal Power). A written report was received and is under review and consideration.
- Conducted tree trimming in-house where feasible and safe.
- Performed routine maintenance on the distribution system as needed.

CHALLENGES AND OPPORTUNITIES

- The Electric Warehouse Building requires extensive maintenance and weatherization. A grant has been applied for that will assist the City in evaluating the overall condition of the building.
- Substations have been operating with little or no maintenance or monitoring of the transformers. It is critical that monitoring and maintenance efforts commence immediately to proactively avoid major outages that could be very expensive to repair (such as the Poplar Street Substation outage in October of 2008).



- The retirement of the stockroom clerk presents new challenges for existing staff on how these duties will be accomplished in the future. The services of a vendor supply system, with computer assisted inventory control, will be essential in moving forward.
- In conjunction with economic conditions as they are, electric usage has been declining over the last two years. This trend will hopefully stabilize, but it is incumbent on administration to keep a close watch on this over the next year.

GOALS AND OBJECTIVES

1. Continue work on the distribution voltage upgrade from the Poplar Street Substation to the Industrial Park (2,400 to 7,200 Volts).
2. Initiate testing, monitoring, and critical maintenance on each of the three substations.
3. Continue transformer oil testing program to identify transformers requiring disposal due to the presence of PCB compounds.
4. Weatherize, paint, and improve the office and operations area at the Electric Operations Building.
5. Implement a Vendor Managed Inventory (VMI) system.
6. Complete the Bishop Street rebuild project (repairs to poles and 2,400 V primary line).
7. Complete the King Avenue system rebuild project (new poles, wires, and services (as needed)).
8. Work with the Police Department to replace street light outages as they occur throughout the year.
9. Conduct an extensive street/security light audit, with recommendation for areas of the community where street lights can be reduced or eliminated.
10. Install energy efficient retrofit fixtures at various locations in the City as a test program, using both magnetic induction and LED lighting as a test pilot program. Magnetic induction lighting retrofits are to be installed downtown in the decorative luminaries. A combination of magnetic induction and LED lights are to be tested in an effort to assess the cost effectiveness and overall quality of the light output.
11. Work with Public Works Operations Division to complete change out of all water-system radio read units under warranty by November 1, 2010.
12. Continue to assess the feasibility and costs associated with installation of a new distribution loop to the Middle School via 1st Avenue.
13. Audit the condition of all underground system pedestals and transformer cabinets; repair as necessary to secure them safely.

VI. Public Works Operations Division

OVERVIEW

Functions and Services

This division, the single largest within DPS, is responsible for the physical maintenance and repairs for most of the City's infrastructure not otherwise covered by other divisions:

- Water Distribution System – water mains, water services, hydrants, and water main valves
- Sanitary Sewer Collection System - sanitary sewer mains, sewer laterals, and sewer manholes
- Storm Sewer System – storm sewer mains, outlets, inlets, catchbasins, culverts, ditches, and drainageways
- Pumping (Lift) Station Operations & Maintenance for the City and surrounding lake districts
- Streets, Bridges, and Solid Waste
 - Compost site maintenance
 - Lawn , leaf, and brush removal (solid waste)
 - Tree and Brush trimming (alleys and streets)
 - Patching and potholes
 - Sidewalk and curb repairs
 - Street sweeping
 - Old City Landfill cap mowing and maintenance
 - Snow and ice removal
- Fleet Maintenance – maintenance and repair of all city owned vehicles
- Parks, Grounds, and Cemetery Maintenance – mowing, snow removal, and maintenance of all city owned grounds and parks, including the cemetery and the downtown business district. Crews also repair and maintain specialized equipment used for their operations, setup and administer burial services at the cemetery, and perform mowing and spraying activities in various city-owned right-of-way areas (e.g., the Industrial Park) and city-owned vacant lots.

The Public Works Operations Division also handles a variety of customer service issues and special projects throughout the year.

As of December of 2009, the City of Dowagiac had 2,109 water customers, of which 1,840 were residential, and 269 were commercial, industrial, or governmental/municipal. In addition, there were 2,031 sanitary sewer customers, of which 1,781 were residential, and 250 were commercial, industrial, or governmental/municipal.

Personnel

The Public Works Operations Division is managed by Matt Stack, Superintendent. He supervises a team of 10 employees: 4 water/sewer/streets crew members; 1 lift station maintenance worker; 1 chief mechanic; and 4 parks/grounds/cemetery crew members. Matt also serves as Sexton of Riverside Cemetery, and works closely with DPS Administration and Robin Coffey, a member of the Customer Service Team, regarding cemetery services and other important record keeping and management issues.

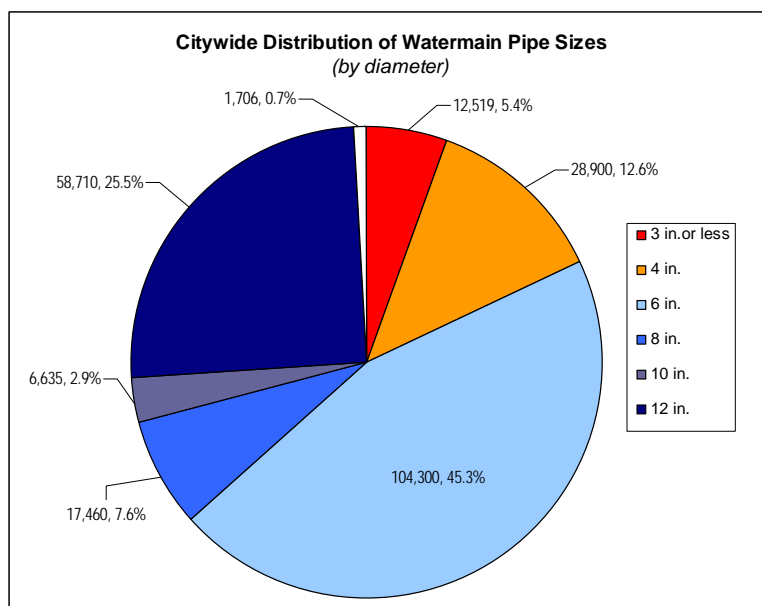
The division also hires seasonal help to monitor the compost site, and to assist with leaf pickup operations in the fall.

This division has experienced a tremendous amount of change during 2009. Foremost, the division experienced the retirements of Butch Nystedt and Roger Bower, with over 32 years and 20 years of experience, respectively. Secondly, the division was reorganized to include the Parks/Grounds/Cemetery workers, all directly supervised and managed by the Operations Superintendent. The DPS organization structures for both pre and post reorganization are included in Appendix A.

Facilities and Equipment

The Public Works Operations Division is housed in two key facilities: Water/Sewer/Streets, and Fleet Maintenance are at 203 Chestnut St., and Parks/Grounds are principally located at the shop located in the woods behind Rotary Park.

The Public Works Operations Division handles maintenance tasks associated with approximately 39.4 miles of watermain (distribution of various sizes are shown to the right), 36 miles of sanitary sewer main (gravity flow), 4 miles of force main (pressurized sanitary sewer flow), along with nearly 30 miles of storm sewers. In addition, they provide around the clock care for over 40 sanitary sewer pumping stations (commonly referred to as *lift stations*) throughout the area:



Footage of watermains of various sizes are shown here. Mains less than 4 inches in diameter are inadequate for fire protection. Further analysis will be done in the future to determine the condition of the various mains.



- City of Dowagiac: 13 lift stations
- Indian Lakes: 7 lift stations
- Sister Lakes: 23 lift stations

This division is responsible for maintaining nearly 40 miles of streets, including approximately 13 miles of major streets, 2.5 miles of State Highways, 23.5 miles of local streets, nearly 3 miles of alleys, and several parking lots. In addition, the division is responsible for plowing snow on approximately 38 miles of sidewalks throughout the City, including the downtown business district, as well as removing snow from the cemetery and city parks.

The Parks/Grounds unit of the division strives to provide mowing, brushing, trimming, trash pickup, turf care, and other maintenance services for over 11 city parks and community spaces year round:

- | | |
|--------------------|-------------------------------------|
| ▪ Beckwith Park | ▪ Boat Launch |
| ▪ Farr Park | ▪ Rudy Park |
| ▪ Burke Park | ▪ Rudolphi Woods Park |
| ▪ Walter Ward Park | ▪ Rudolphi Woods Hiking Trails |
| ▪ Optimist Park | ▪ Downtown streetscape, shrubs, and |
| ▪ Water Tower Park | walkways |

Fleet maintenance unit responsibilities include a wide variety of equipment, as shown below in Table 1. Moreover, the Chief Mechanic is also responsible for maintaining the city’s emergency generators, and the emergency generators for various pumping stations at Indian and Sister Lakes.

Table 1: Summary of Equipment Maintained by the Public Works Operations Division

Equipment Description	Number of Units Maintained
Pickups	11
Dump Trucks	6
Large Trucks	3
Forklift	1
Front End Loader	1
Street Sweeper	1
Backhoe	1
Vactor Truck	1
Trailers	2
Brush Chipper	1
Leaf Vacuum	1
Police Cars	7
Fire Vehicles	8
Dial-a-Ride Transit (DART) Buses	3

ACCOMPLISHMENTS

- Major improvements are evident in the work culture and overall productivity of the crew.
- Major improvements are evident in the organization and cleanliness of the work environment at the Public Works Operations Garage, the superintendent/foreman offices, the storage buildings, and the vehicles.
- Unknown hazardous waste and junk material was purged from the PW Operations facility grounds.
- All gates to the PW Operations and WTP facility are now closed after hours in accordance with standard accepted Homeland Security practices.
- The maintenance garage has been caulked, painted, and a sign has been posted publicly identifying the facility. Preliminary efforts have been made to weatherize the facility, including: implementation of remote door openers to minimize ingress/egress heat loss; replacement of broken window panes;
- Significant reductions in overtime are being realized through careful monitoring of callouts and prioritizing work tasks. Creative solutions have also aided this effort: for example, an estimated \$5,000 - \$10,000 in overtime wages is being saved annually by having the Fire Department assist DPS with hydrant flushing activities.
- Successful maintenance and care of the City's parks, grounds, and cemetery during 2009.
- Completed cemetery improvements at the main entrance (repair of the sign, and installation of a decorative street sign), and continued restoration efforts on the underground vault and its conversion to a columbarium.
- Completed the Spring Cleanup Program on time and under budget.
- Completed fall tub grinding operations (for un-chipped brush) on time and significantly under budget.
- Completed fall leaf pickup operations within budget and prior to December snow fall; approximately 4000 cubic yards are picked up and hauled annually through this program.
- Received delivery of the new Ford dump truck (shown to the right), with front plow, belly plow, and salt spreader. Negotiated a 2% credit (over \$1,000) because the truck was white rather than the specified yellow.
- Implemented oil dispensing system free of charge to DPS; drastically improved the efficiency of performing oil changes on large vehicles.



The City's new dump truck on display in the 2009 Christmas Parade. The truck was purchased in late 2008 at a total cost of just under \$100,000.



- Began performing maintenance duties on all police and fire vehicles, except for major items requiring specialized training such as fire truck pump systems, etc.
- Planted over 55 trees throughout the City and cemetery using in-house forces as part of the City's urban forestry grant from the Michigan Department of Natural Resources. In addition, 10 additional dogwoods were planted at the Riverside Cemetery (part of an ongoing annual program).
- Routinely respond to and administer markings for the City's utilities as part of the MISS DIG System.
- Painted and cleaned up three of the four storage buildings south of the Electric Operations Warehouse building; these buildings house signs, barricades, tools, and equipment needed by the crews and were in severe disarray and disrepair.
- Assisted other divisions as needed with various work items (e.g., cleanout of the WWTP lagoons, replacement of a hot water tank at the WWTP, various tasks at the new Fire Station).
- Worked with the Engineering and Electric Divisions to install two major sculptures: *Windsong* and *Cheetahs on the Run*. These in-house efforts saved the City several thousand dollars in fees otherwise paid to contractors.
- Worked closely with the Director/City Engineer on a variety of projects in an effort to save money, now and well into the future:
 - Completed asphalt patches for utility digs within the City, saving the City an estimated \$15,000 to \$20,000 in contractor expenses.
 - Completed concrete repairs, including installation of sidewalks and curb/gutter sections, saving the City an estimated \$5,000 to \$10,000 in contractor expenditures.
 - Completed two major utility repair projects on Johnson Street and M-51, saving the City an estimated \$10,000 to \$15,000 in contractor expenditures.
 - Completed brushing, trimming, and stump removals around the perimeter of the Old City Landfill, saving the City an estimated \$3,000 to \$5,000 in contractor expenditures.

CHALLENGES AND OPPORTUNITIES

- Along with the Administration Division, this DPS division has undergone the most drastic changes within the department in 2009:
 - Loss of 3 FTE positions
 - Reorganization under a new Public Works Operations Superintendent
 - Extensive culture shift, with a focus on improved safety, emergency preparedness, organization, and professionalism
 - Increased expectations for completing work in-house that was traditionally out-sourced
- Emergency preparedness is weak, but improving as the division gets organized.
- Integration of the non-union Parks/Grounds crew with unionized Water/Sewer/Streets crew will be an area of focus in the coming months.

- Usages for both water and sewer must be closely monitored, particularly in the current economic conditions.
- Water and sewer system maintenance has been deferred over the years, with many repairs only partially or inadequately completed. The division must strive to improve the methods and means of performing repairs. This is imperative to keeping maintenance and operations expenditures in check over time.
- Watermain valve turning is not being conducted on an annual basis, as is required by the Michigan Department of Environmental Quality (MDEQ).
- Documentation of crew maintenance activities is inadequate. For example, sanitary sewer jetting/cleaning operations should be diligently recorded and turned into the Engineering/GIS Division for tracking on city maps. Efforts are improving in recent months.
- Creation of “pin maps” is not being done to assist administration with evaluating “hot spots” of trouble. Such efforts for customer complaints, particularly with regard to sewer backups, will greatly assist in proactively addressing system maintenance needs and priorities.
- The sanitary sewer system has a great number of cross connections with storm sewer systems, and is comprised of aging pipes and manholes that will require more and more maintenance as time passes. Routine televising has not been occurring in recent years; however, such efforts on several key mains are essential in order to proactively diagnose and prevent problems and issues.
- The water distribution system has a large number of very old mains and valves that are in disrepair. Maintenance needs will continue to increase every year.
- Energy consumption by the PW Operations facilities must be carefully evaluated – a preliminary audit is already completed; however, a more extensive study is proposed as part of a grant already submitted and under review (see Appendix B).
- Many of the City’s lift stations are in very poor condition, and continue to require extensive maintenance. Rebuilding of the stations must be a priority in the coming years.
- Recent retirements necessitate additional training in order to adequately service the City’s lift stations, as well as those at Indian Lakes and Sister Lakes.
- The Sister Lakes lift station and emergency generator facilities are now 10 years old, and will require a more rigorous, planned maintenance effort. Careful coordination with the Sister Lakes Area Utility Authority (SLAUA) is imperative.



The Maintenance Garage is extremely energy inefficient, as evidenced by the extensive ice cycles. Weatherization is needed to save on energy costs.



- Cross-Connection inspections are not being conducted on a regular, annual basis as required by the MDEQ. One or more staff members must be trained and certified to perform these inspections.

GOALS AND OBJECTIVES

1. Continue training and development of the Public Works Operations Superintendent through interaction with the crews, introductions to key stakeholders, etc.; migrate duties to proactive patrolling and work planning over time.
2. Strictly enforce safety standards and requirements, reinforcing the expectations of the department to consistently work safely. Provide training for three critical, high priority areas of concern: confined space entry, excavation, and traffic control regulations and procedures.
3. Formulate weekly work plans, and execute operations accordingly. Shift the crew focus to proactive, preventative efforts as much as possible.
4. Continue minor improvements to the PW Operations garage facility, including reconfiguration of the office, operations, and break room area to better accommodate the needs of employees.
5. Conduct a sign inventory, with recommendations for replacement based on condition and reflectivity.
6. Work with the Engineering and Electric Operations to conduct a citywide hazard tree inventory on city-owned properties, including right-of-way areas.
7. Develop and sustain a sanitary sewer jetting program, with documented completion of key problem areas on a routine basis.
8. Develop and sustain a valve turning program for all water mains in the City (as is required by the MDEQ).
9. Support the efforts of any/all employees wishing to get their Commercial Drivers Licenses, S (Distribution) Licenses, and Cross-Connection training through MDEQ.
10. Develop improvements to the Fall Leaf Pickup Program by implementing an improved leaf vacuum system that facilitates routine one-man operations.
11. Implement a computerized fleet maintenance system to monitor work load and track costs.
12. Work with the Electric Serviceman to complete change out of all water-system radio read units under warranty by November 1, 2010.
13. Implement a hydrant reconditioning/repainting program that includes repair of mechanically deficient hydrants, and incorporates color coding of the hydrants by tested flow capacity.
14. Complete repairs at the Old City Landfill with in-house crews to the maximum extent practicable.
15. Coordinate with the Engineering Division on the rehabilitation of Middle Crossing Road by performing selective full-depth patching. (Note: this work, including equipment rental, is to be reimbursed by grant funds.)



16. Continue to work with DPS Administration and the Customer Service Team to manage, organize, and clarify cemetery records issues.
17. Complete the installation/construction of the new Wolf Street Lift Station (that replaces the unit on N. Paul).
18. Assess the condition of the City's lift stations, and incorporate the findings within the Capital Improvement Plan.
19. Conduct an inventory/audit of various city owned parks/properties, and determine the extent of routine maintenance needs (mowing, plowing, and other maintenance).

VII. Wastewater and Water Treatment (WWTP/WTP) Division

OVERVIEW

Functions and Services

This division is responsible for the maintenance and operation of two important and essential City facilities: the Wastewater Treatment Plant (WWTP) and the Water Treatment Plant (WTP). Each facility is governed by a stringent set of regulatory requirements, with various reports and procedures mandated by state and federal agencies.

Personnel

The WWTP/WTP Division is headed by Kevin Cox, Wastewater/Water Plant Superintendent. He works closely with 3 full-time employees to operate and maintain both the WWTP and WTP on a daily basis. The operations of both plants must be managed and supervised by highly trained, state certified personnel.

The WWTP/WTP Division staff operates both plants 365 days per year, working 8 hour shifts during the week, and ½ day shifts on weekends (a new change in 2009). The plants both run automatically via computer controlled monitoring systems while unattended – these systems include integrated alarm systems that alert a dispatching service with any problems.

Facilities and Equipment

Wastewater Treatment Plant (WWTP)

The WWTP is located along M-62 on the west edge of the City. It was constructed in stages between 1961 and 1979, and provides primary, secondary, and tertiary treatment of sanitary sewage. Because the City of Dowagiac still has a *combined sewer system*² in some areas (i.e., storm sewers connected



² Prior to the early 1900's, communities throughout the Great Lakes Region and Northeast US typically had only one sewer system for both surface water drainage and sanitary sewage; such systems typically drained straight to lakes and rivers with little or no treatment. Such systems were banned in the mid-1900's, and passage of the Clean Water Act in 1972 mandated treatment of sanitary sewage. Separating these systems is an expensive and complicated process, often requiring reconstruction of entire neighborhoods. From a short-term infrastructure cost standpoint, the most practical solution is to temporarily store peak flows from heavy rainfall and/or snowmelt events, and to then treat the water as the plant can handle it. However, this has significant long-term costs and consequences, as substantial energy and chemicals are wasted in treating rain and snowmelt runoff water.

to sanitary sewers), the WWTP was designed to divert excess incoming flows during heavy rainfall events into storage lagoons until treatment can be accomplished at a later time. The average *design* flow of the plant is 2.5 million gallons per day (MGD), and the actual average flow is generally 1.3 to 1.5 MGD.

The plant process can be characterized as a Conventional Activated Sludge Process, with phosphorous removal, and tertiary filtration. The plant includes two anaerobic digesters (128,447 gallons each; used only for storage in recent years); 2 aerobic digesters (293,590 gallons each), and a detention lagoon with a 5 million gallon holding capacity (for infiltrated storm water peak flows during and after rainfall/snowmelt events).

In general terms, the plant is designed to remove approximately 90% of carbonaceous organic materials, suspended solids, total phosphorous, and ammonia nitrogen. However, through careful administration of the treatment processes, our staff is able to surpass this, removing 99% of carbonaceous organic materials, 99% of suspended solids, 95% of total phosphorous, and 95-98% of ammonia nitrogen.

With the aforementioned *average* daily flow rate of 1.3 to 1.5 MGD, the plant treatment processes require the following amounts of chemicals on a daily basis:

- Ferrous chloride (9-12% Iron; for phosphorous removal); 150 gallons per day
- Sodium hypochlorite (liquid chlorine for disinfection); 40 gallons per day
- Sodium bisulfite (removal of chlorine prior to final discharge); 90 lbs per day

It is interesting to note that because the plan includes tertiary filtration, the amount of chlorine required (as sodium hypochlorite) is reduced by over 60% (70-80 gallons per day). Similarly, the amount of sodium bisulfate required to remove chlorine is also dramatically reduced.

Water Treatment Plant (WTP)

The WTP is located at 203 Chestnut Street, behind the Public Works Operations Garage. The City's water supply comes from 4 wells located around the plant. They are approximately 160 feet deep, and are drilled into a gravel/sand aquifer. The plant was constructed in 1974; however, these wells supplied the community with drinking water without treatment for many years before this time. While the groundwater from these 4 wells is technically safe for consumption as is, the





natural water contains high levels of iron and other minerals, which is reduced by about 90% by the WTP (iron is not considered to be a health hazard; however, it does cause objectionable taste and odor problems, as well as staining of fixtures and laundry). The WTP also disinfects the water through the addition of chlorine, and adds trace amounts of fluoride to aid in the prevention of tooth decay.

The WTP was designed for a peak production flow of 2.0 million gallons per day (MGD). The average daily flow is generally around 700,000 gallons per day, with a maximum of about 1.5 MGD and a minimum flow of about 500,000 gallons per day.

Water Distribution Facilities

The WWTP/WTP Division also monitors and manages major aspects of the water distribution system. The Riverside Drive Pumping Station and Standpipe/Storage Tank (920,000 gallon capacity) were constructed together between 1973 and 1980, and the Rudolphi Woods water tower (150,000 gallon capacity) was constructed in 1994, along with a pumping control system. The Clyborn Street water tower, constructed in 1955, provides a storage capacity of 500,000 gallons. The City's three water towers have a total storage capacity of 1,570,000 gallons – enough water to serve the City for 24 – 36 hours in the event of an emergency.

ACCOMPLISHMENTS

- Administer daily operation of the WWTP and WTP facilities. All Michigan Department of Environmental Quality (MDEQ) standards are met or surpassed on a routine basis. Laboratory results are reported to the state on a monthly basis.
- Completion and distribution of the annual Consumer Confidence Report for Drinking Water, as required by the MDEQ (available on the City's website).
- Administer the Industrial Pretreatment Program (IPP). The IPP was developed in 1984 in accordance with US Environmental Protection Agency requirements. The program monitors, tracks, and regulates discharges from various industries to ensure that the overall plant effluent complies with its mandatory limits. Moreover, the program is designed to prevent industries from discharging toxic materials, chemicals, heavy metals, or flows that may cause problems with treatment at the WWTP, or that may simply pass through the system untreated. The IPP program is contained within the City's Sewer Use Ordinance (SUO), which outlines specific criteria mandated by the federal and state government.
- Executed various repairs of WWTP pump systems, including the Seepex dewatering process pump, and replacement of the filter backwash pumps. These were performed with a high degree of sensitivity to cost – both short and long term. For example, the repair of one filter backwash pump, including removal and installation, was estimated to be in excess of \$30,000 (close to \$80,000 for both pumps). However, further research and analysis revealed that the pumps could both be replaced and installed for much less than \$30,000, with a much longer

anticipated life cycle before rebuild/repair. The overall estimated savings to the City was approximately \$50,000 in just this one example.

- Enacted proper mowing and maintenance of the stormwater retention lagoons as mandated by the MDEQ (e.g., mowing of the slopes, removal of cattails, trapping of muskrats).
- Commenced research regarding potential energy savings for the WWTP, including reduced chemical consumption. DPS Administration concluded that a detailed *WWTP Energy and Process Audit* by a qualified, independent consultant would be in the best interests of the City. Subsequently, the Director/City Engineer prepared a grant application in November of 2009 seeking funding assistance for this important project. The grant application is still under review as of the date of this document.
- Reduced weekend shift hours to ½ days when possible by shifting select operations responsibilities to weekdays. This saves the City an estimated \$10,000 in labor costs each fiscal year.
- An Emergency Generator for the WTP was successfully installed and tested in late 2008, and the contract was closed out in 2009.

CHALLENGES AND OPPORTUNITIES

- The WWTP facility ranges between 50 and 30 years old, and has never had a major upgrade, maintenance audit, or renovation. The plant is showing its age and requires constant and extensive maintenance attention, from failing pumps and motors to leaking roofs. The aforementioned *WWTP Energy and Process Audit* will undoubtedly reveal details and suggestions for improvements.
- The WWTP is highly inefficient in its energy consumption. The proposed *WWTP Energy and Process Audit* will provide valuable insight concerning the “low hanging fruit” that may help the City to permanently reduce energy costs. One key question relates to the viability of geothermal energy for heating the plant buildings: a preliminary meeting was held with a specialist, and it was deemed to be not only viable, but could potentially save the City 50-60% of its current heating costs in perpetuity.
- The WWTP consumes a large volume of chemicals around the clock (as noted above), and chemical prices continue to rise every year. It is important to consider ways to minimize chemical costs associated with treatment processes, and this will be included in the proposed *WWTP Energy and Process Audit*.
- The WTP is over 30 years old, and has never had an upgrade, maintenance audit, or renovation. Portions of the plant are in dire need of evaluation and assessment. For example, the high service pump suction pipes are heavily corroded and must be carefully evaluated by a qualified expert team. If these pipes fail, the plant must be shut down for several days and/or weeks while repairs are made; meanwhile, untreated well water would have to be supplied to the community. It is imperative that we are proactive in designing a solution to either (1) halt further corrosion, or (2) replace the pipes while the plant is running.
- The City’s wells are aging and require attention and evaluation. In particular, the pumps and motors should be thoroughly evaluated for replacement and/or rebuilding. Most notably, the well pumps have historically failed prematurely due to excessive corrosion of the couplings on

the pump shaft (i.e., they corrode long before they are worn out or due for replacement). As a result, the well pumps have been on an 8-year cycle for overhaul (one every two years) at a cost of several thousand dollars each. This is expensive, and likely to be unnecessary if we can get at the root cause of the corrosion problem by working with a qualified expert. Time is of the essence: if the couplings completely fail, the entire well may be significantly damaged and/or ruined.

- The well pump buildings are in severe disrepair and require heavy maintenance and/or replacement. Two of the buildings could simply be removed; however, electrical services for the pump motors would require significant effort for relocation and reconfiguration.
- Two of the roofs are leaking severely at the WWTP. Quotes are underway, with repairs estimated to cost between \$20,000 and \$30,000.
- Employee absenteeism has been a problem in recent years, and has hindered progress on maintenance operations. Whenever an employee is gone, the crew must attend to the operational duties of the plants.
- The WTP is 36 years old, and is due for partial renovation and maintenance.

GOALS AND OBJECTIVES

1. Continue to evaluate and explore operations procedures and staffing changes to improve overall operations efficiency and effectiveness; including evaluation of SCADA/monitoring system improvements.
2. Embark on a thorough maintenance program, including cleaning and painting of the pipe galleries, pump rooms, laboratories, and service areas in both the WTP and the WWTP.
3. Conduct a *WWTP Energy and Process Audit* in an effort to ascertain details and suggestions for cost saving improvements to the plant and its processes.
4. Complete the inspection of the Rudolphi Woods Water Tower, and seek recommendations for preventative maintenance.
5. Complete repairs to the Riverside Drive pump station (bad seal), and assess the viability of restoring connection to the pressure tank as a back up in the event that the Rudolphi Woods 150,000 gallon tower must be drained. The tower must be drained for a scheduled inspection; if the pressure tank is not hooked up, then a pressure pump system must be rented at significant cost to the City.
6. Evaluate alternative options for cost-effective disposal of dewatered sludge.
7. Complete roof repairs at the WWTP (2 buildings).
8. Explore the viability of removing the former dewatering equipment – possibly for scrap.
9. Complete chain link fence repairs along the Dowagiac Creek bank.
10. Assess the viability of repairing asphalt areas in the WWTP driveway using in-house crews.

VIII. Conclusion

It is our hope that this report has been informative and helpful in sharing what DPS is, and how our department works to fulfill our mission:

*...to maintain and protect the infrastructure and environment of our community;
and to help ensure the public health, safety, and welfare of its residents,
businesses, organizations, and visitors.*

The entire DPS team strives to serve the public excellence and minimal disruption to the daily lives of city residents, organizations, and visitors. Many of the functions and services performed by DPS are expected and necessary 24 hours a day, 7 days a week, 365 days per year. Moreover, such services are inherently invisible, particularly when performed responsively and effectively. This report sets an important stage for us to evaluate the effectiveness of the department as we work to fulfill our mission to serve the community's needs well into the future.

The most significant challenge for the DPS team is to provide the best level of service possible for the taxpayer's dollar – to be effective and proactive in continuously implementing the necessary changes to do so is absolutely paramount, especially given our nation's economic crisis.

Herein, we have attempted to present a synopsis of the many challenges and opportunities that our department is facing, along with the goals and objectives we are implementing to help us succeed. Our team of dedicated employees will endeavor to achieve these goals throughout 2010.



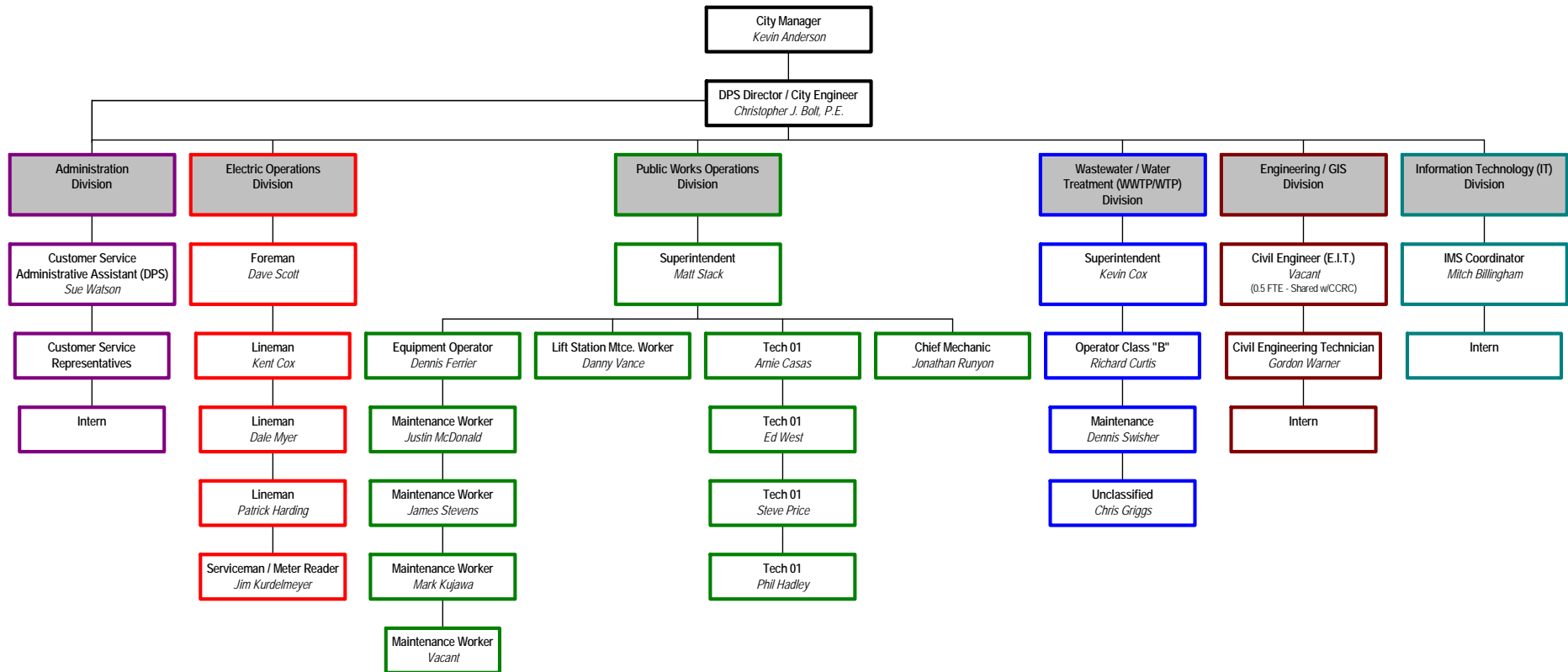
Appendix A

Organizational Chart



Exhibit A-1: ORGANIZATIONAL CHART

Department of Public Services



EMPLOYEE SUMMARY

Director / City Engineer	1.00
Administration Division	1.00
Electric Division	5.00
Public Works Operations Division **	11.00
WWTP / WTP Division	4.00
Engineering / GIS Division **	1.00
<u>Information Technology (IT) Division</u>	<u>1.00</u>

TOTAL EMPLOYEES: 24.00

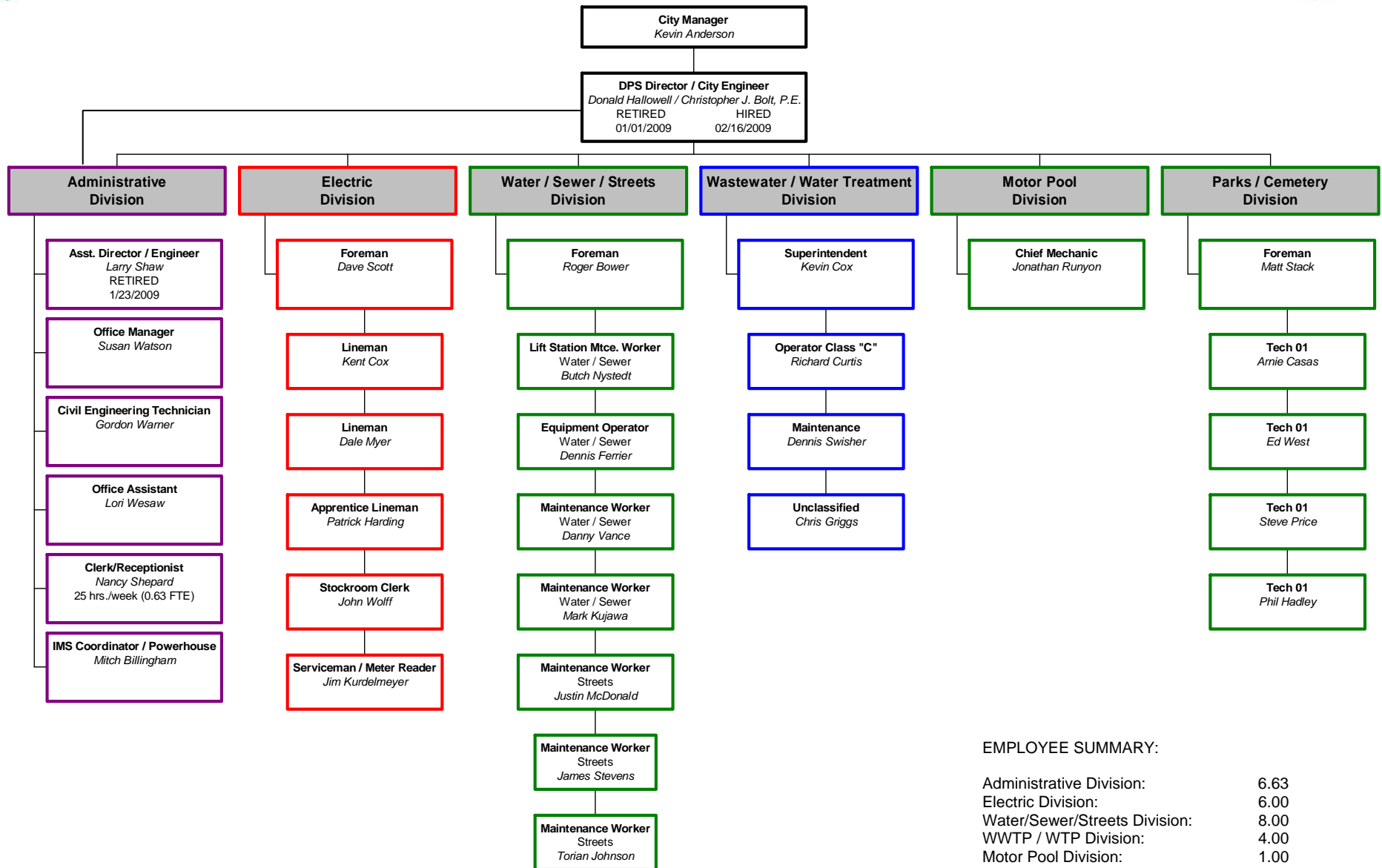
** Vacant positions not included in total.



Exhibit A-2: ORGANIZATIONAL CHART (Prior to July 2009 Reorganization)



Department of Public Services



EMPLOYEE SUMMARY:

Administrative Division:	6.63
Electric Division:	6.00
Water/Sewer/Streets Division:	8.00
WWTP / WTP Division:	4.00
Motor Pool Division:	1.00
<u>Parks/Cemetery Division:</u>	<u>5.00</u>
TOTAL EMPLOYEES:	30.63



Appendix B

Summary of 2009 Grant Applications and Awards



Summary of Grants Submitted in 2009

Department of Public Services



Name/Title	Project Description	Granting Agency	Grant Program	Project Details	Estimated Project Cost	Date Applied	Amount Requested	Amount of Required Local Match	Status (Approved / Not Approved / Under Review)	Notes
Community Forestry Grant		MDNR	Urban & Community Forestry Grant	Grant to purchase and plant trees throughout the City of Dowagiac	\$4,500.00	8/28/2008	\$2,250.00	\$2,250.00	Approved	
Arbor Day Mini Grant		MDNR	Arbor Day Mini Grant	Grant to purchase trees & material to celebrate Arbor Day.	\$620.00	10/27/2008	\$200.00	\$200.00	Not Approved	Lack of funding
Railroad Crossing Upgrades (ARRA)	Upgrades to all RR Crossings	MDOT	Special ARRA Fund Allocation	Upgrades to all crossings of city streets	N/A	3/2/2009	N/A	N/A	Not Approved (program not funded)	No dollar amounts requested - only prioritization of project candidates; ARRA funds were not allocated for this program
US Rural Development	Uneta Street Reconstruction and Utility Improvements Project	USDA	Rural Development Program	Reconstruction of approximately 480 LF of city street along with water, sanitary sewer, storm sewer, and electrical system upgrades	\$113,300.00	4/30/2009	\$98,800.00	\$14,500.00	Not Approved	Unemployment not "bad enough"
2010 Small Urban (ARRA)	Middle Crossing Street Improvements	MDOT	Small Urban (ARRA)	Full-depth patch repairs and asphalt overlay from Prairie Ronde to City Limits	\$53,937.00	5/1/2009	\$50,000.00	\$3,937.00	Approved	Patching and signage to be done via force account. Partnership with Cass County on paving.
2011 Small Urban Program	North Lowe Street (Main to Telegraph)	MDOT	Small Urban Program	0.14 miles of selective joint, base, curb & gutter repairs and patching; mill and overlay	\$60,000.00	5/1/2009	\$48,000.00	\$12,000.00	Approved	Grade Inspection (preliminary design) packages are to be submitted in 2010.
2011 Small Urban Program	N. Paul St. and W. High St. (Spruce to Tuthill)	MDOT	Small Urban Program	0.10 miles of selective joint, base, curb & gutter repairs and patching; mill and overlay	\$30,000.00	5/1/2009	\$24,000.00	\$6,000.00	Approved	Grade Inspection (preliminary design) packages are to be submitted in 2010.
2011 Small Urban Program	Robinson St. and Park Place (Depot to E. High St.)	MDOT	Small Urban Program	0.13 miles of selective joint, base, curb & gutter repairs and patching; mill and overlay	\$34,000.00	5/1/2009	\$27,200.00	\$6,800.00	Approved	Grade Inspection (preliminary design) packages are to be submitted in 2010.
2011 Small Urban Program	Marcellus Highway (Colby to City Limits)	MDOT	Small Urban Program	0.57 miles of selective joint repairs, patching, and seal coat (chip or cape seal); add aggregate shoulders	\$50,000.00	5/1/2009	\$40,000.00	\$10,000.00	Approved	Grade Inspection (preliminary design) packages are to be submitted in 2010.
2011 Small Urban Program	E.Prairie Ronde (N. Front to RR)	MDOT	Small Urban Program	0.46 miles of selective joint repairs, patching, curb/gutter repairs, and seal coat (chip or cape seal)	\$50,750.00	5/1/2009	\$40,600.00	\$10,150.00	Approved	Grade Inspection (preliminary design) packages are to be submitted in 2010.
MDOT 2011 Category F Program	Area A: N. Paul and W. High Street (from Spruce St. to Tuthill St.)	MDOT	MDOT Economic Development Fund - Category F Program (Cities in Rural Counties)	Mill & overlay with C&G repairs/storm water improvements; federal-aid roads/streets within federal-aid boundary; improve all-season capabilities and access to state trunkline system	\$44,600.00	6/5/2009	\$35,680.00	\$8,920.00	Not Approved	20% match required.
MDOT 2011 Category F Program	Area B: Park Place and Robinson Street (from S. Front St. to E. High St.)	MDOT	MDOT Economic Development Fund - Category F Program (Cities in Rural Counties)	Mill & overlay Park Place; reconstruct (Robinson); federal-aid roads/streets within federal-aid boundary; improve all-season capabilities and access to state trunkline system	\$94,600.00	6/5/2009	\$75,680.00	\$18,920.00	Not Approved	20% match required.
Energy Efficiency and Conservation Grant	Development of an Energy Efficiency and Conservation Strategy (EECS) Plan	MDELEG	Energy Efficiency and Conservation Block Grant Program	Develop an EECS Plan with three focal points: (1) Municipal Bldg Lighting & HVAC/Weatherization Assessment; (2) WWTP Audit; and (3) Street and Pedestrian Lighting Pilot Program	\$83,698.00	11/5/2009	\$52,361.00	\$31,337.00	Approved	Local match is mostly in-kind
Infrastructure Capacity Enhancement (ICE) Grant	Uneta Street Utility and Street Improvements	MEDC	ICE	500 LF of Sewer Improvements and Street Reconstruction; 1000 LF Watermain Improvements	\$99,750.00	11/25/2009	\$67,830.00	\$31,920.00	Approved	Contract/agreement expected mid-January
Infrastructure Capacity Enhancement (ICE) Grant	Solomon Avenue Utility and Street Improvements	MEDC	ICE	800 LF of Sewer, Water, and Street Improvements (500 LF of Street)	\$99,750.00	11/25/2009	\$67,830.00	\$31,920.00	Approved	Contract/agreement expected mid-January
Infrastructure Capacity Enhancement (ICE) Grant	Wolf Street Sewer, Lift Station, and Street Improvements	MEDC	ICE	1200 LF Sanitary Sewer; 500 LF Street Reconstruction	\$300,500.00	11/25/2009	\$204,340.00	\$96,160.00	Approved	Contract/agreement expected mid-January
TOTALS					\$1,120,005.00		\$834,771.00	\$285,014.00		