2012
Annual Report

CITY OF MT. PLEASANT
DIVISION OF PUBLIC WORKS

Division of Public Works – 2012 Annual Report

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March 2013

Dear Commissioners:

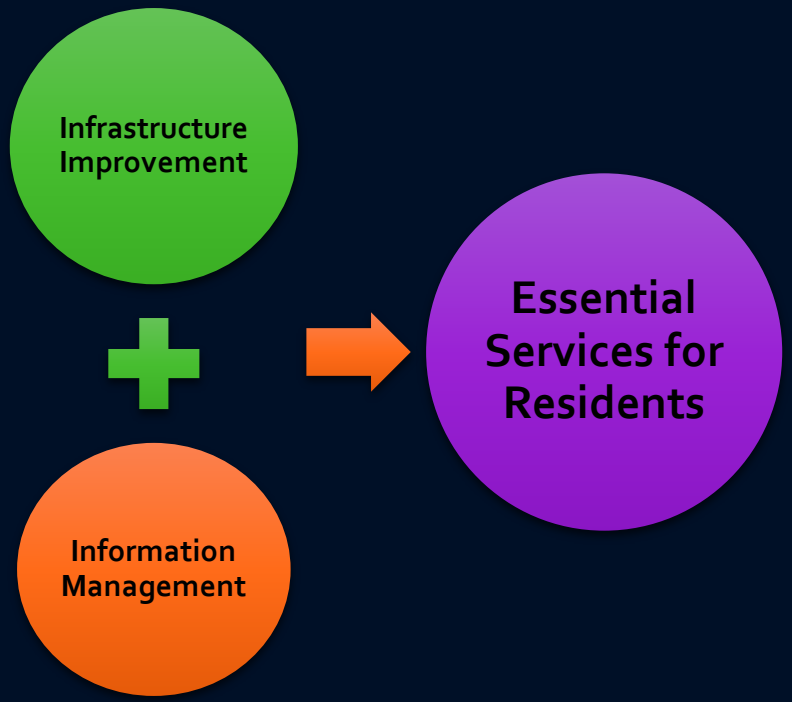
Thank you for your continued support of the Public Works Division. Under your leadership, a great deal of work has been completed and I have had the pleasure of directing an innovative and dedicated staff while they carried out your goals and objectives. They have done an admirable ob on your behalf and I am proud of their accomplishments. Please take a minute to review the subsequent pages of this report as it highlights the many projects and programs that make up the quality of life in Mt. Pleasant.

Regards,
Roger H. Rousse, Director

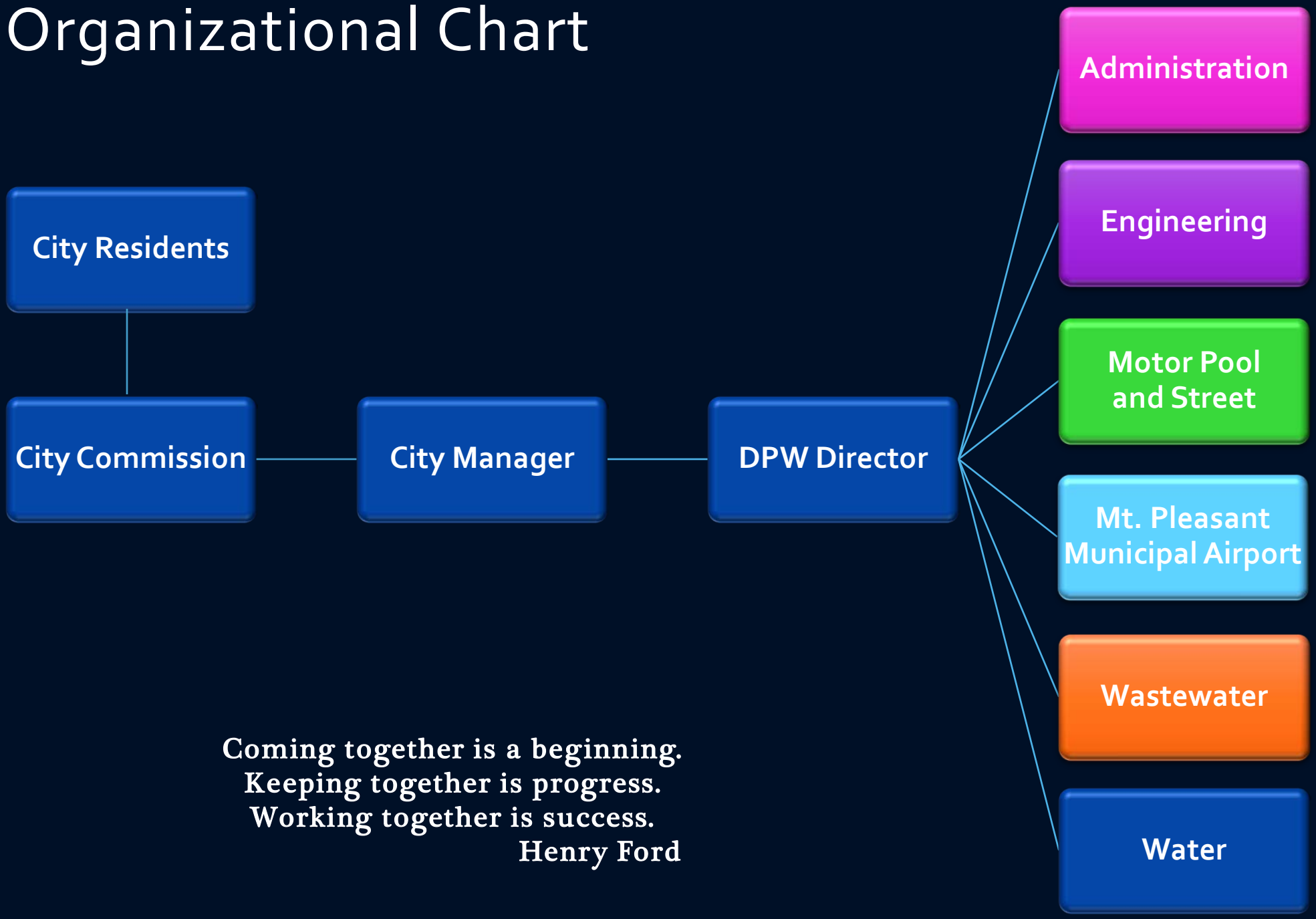
Division of Public Works

We recognize the importance of dedication and good character.

We are committed to provide for the expressed and anticipated needs of the Community of Mt. Pleasant through infrastructure improvement and information management.



Organizational Chart



Coming together is a beginning.
Keeping together is progress.
Working together is success.
Henry Ford

Administrative Services

The DPW Administrative Team is comprised of the director, analyst, and two office professionals.

The director's role is complex and multi-faceted as he is responsible for the overall daily functions of all of the DPW Division departments. He administers the Division's operating and capital budgets, as well as DPW construction projects. The director serves on a variety of committees for the City of Mt. Pleasant and Isabella County, and, when needed, Saginaw Chippewa Indian Tribe and Central Michigan University. In addition, he is the Street Administrator for Michigan Department of Transportation (MDOT).

The analyst is responsible for the DPW capital budget, Administrative, Airport, Motor Pool and Street Department annual operating budgets, and is the central coordinator for all other DPW department operating budgets. Other responsibilities of this position include the central stores inventory, vehicle replacement schedule, MDOT reports, and Street Department employee training, to name a few. The analyst also provides research, analytical, and administrative support functions in the gathering, managing and reporting of data and information for completion of Division and community goals.

As an essential component of the DPW team, the office professionals provide clerical, analytical, and research support to the DPW director, department heads, and staff, as well as assisting with requests from other departments, such as Finance or Police. They are the first point of contact for the residents seeking information and/or assistance with public works services, such as sewer backups, refuse and recycling issues, annual large item collection, Miss Digs, right-of-way permitting, and dispatching personnel to complete service requests. Other responsibilities include issuing all of the DPW construction and Street Department bids on an annual basis, creating newsletter articles, informational brochures and communications, and database management.

Staff:
Roger H. Rousse, Director

Michelle Smith, DPW Analyst

Office Professionals
Tammy Bow
Julie Courtney

Engineering

The Engineering Department provides technical and administrative support services to each of the DPW departments, as well as the Planning, Building, Assessing, and other City departments. The Engineering Team is responsible for Capital Improvement Projects, including sanitary sewer and storm sewer main lines, parking lots, sidewalk, water main lines, small buildings, and street reconstruction and crack sealing. For most projects, the Department provides all of the technical services required to complete the job, such as field surveying, design, construction administration, and inspection work.

In addition, the Engineering Team is responsible for reviewing site plans and inspection of all construction that occurs within the City's rights-of-way. Each site plan is reviewed for conformance with the City's standard construction specifications and is coordinated with the Building and Planning Departments, Planning Commission, and the Zoning Board of Appeals.

The Engineering Team continues to develop the City's Geographic Information System (GIS). Currently, the GIS system includes maps of the City's water and sanitary sewer main lines, street system, property parcels, storm sewers, street trees, building footprints, streetlights, and general topographic information.

Staff:

City Engineer (Vacant)

Engineering Aides / Inspectors
Bill Brickner
Jennifer Flachs
Jason Moore

GIS Specialist
Jason Moore

Motor Pool and Street

The Street Department is responsible for the maintenance and improvements of over 75 miles of city streets, sidewalks, and sanitary and storm sewer systems. The Department is also responsible for curb repair, large item collection, sign installation and maintenance, sewer cleaning, fall yard waste collection, sidewalk replacement, tree maintenance (removal, planting, trimming, and ash tree treatment), Christmas tree collection, and brush chipping. The Street Department also provides support services as needed for other City departments, such as trash removal for Code Enforcement, excavation and backfilling for the Water Department, and lift station cleaning for the Wastewater Department. During the construction season, the Street Department performs project-related work, such as preparatory patching prior to work completed by the City's contractors.

The central stores operations are included under the Street Department umbrella as well. Central Stores provides miscellaneous supplies to each of the departments within the Division, such as black dirt, grass seed, barricades, signage, manhole castings, etc.

The Motor Pool maintains and supplies a fleet of 70 vehicles and heavy equipment for use by the Code Enforcement, Parks, Street, Water, and Wastewater Departments. Approximately 95% of the vehicle maintenance is performed by the Motor Pool mechanic; the remaining 5% is completed by outside agencies. New equipment purchases are completed by the Motor Pool staff, street superintendent, and DPW analyst, with input from the appropriate department team.

Staff

Robert Murphy, Superintendent

Mechanic
Carl Cornell

Street Maintenance Specialists
William Albaugh
Richard Doherty
Christopher Duffy
Chad Goffnett
Curt Hoyt
Devin Nelson
James Sanders
Chad Sapp
Ronald Wiggins

Mt. Pleasant Municipal Airport (KMOP)

The Mt. Pleasant Municipal Airport (KMOP) is located 1.5 miles northeast of the City limits on Airport Road, and is categorized as a T-4 General Utility airport by the Federal Aviation Administration (FAA). The airport's main runway, 9-27, is a 5,000' x 100' asphalt runway that can accommodate all general aviation and corporate business aircraft that carry up to 30 passengers, such as a Gulfstream 4 (see photo below). General aviation aircraft also have the option of using runway 5-23, a 2,500' x 160' turf crosswind runway.

Staff:

John Benzinger, Airport Manager

Bill Brickner, Assistant Manager

The airport is serviced by a real-time all-weather observance system (AWOS) that is shaped like an upside down ice cream cone. The AWOS is accessible by radio, telephone, or computer, and has both Vertical Omni Range Distance Measuring Equipment (VOR DME) and Global Positioning System (GPS) published approaches that allow use of the airport during inclement weather conditions.

In addition, there are 32 T-hangars that house privately-owned aircraft. A 120' x 120' x 30' corporate hangar houses four permanently-based corporate aircraft. A second City owned corporate hangar is currently leased to Gateway Air Service.

Wastewater

The Wastewater Treatment Plant (WWTP) is responsible for processing all residential and commercial sanitary sewage generated within the city limits. The sewage is transported through a network of mains lines and 15 lift stations. The WWTP is an advanced secondary plant that utilizes primary sedimentation, bio towers, rotating biological contactors, final clarification, chlorination and dechlorination for treatment of wastewater.

In addition, the WWTP is a Michigan Department of Environmental Quality (MDEQ) approved septage receiving station, and as such accepts septage from waste hauling companies. In return for receiving the extra septage, wastewater plants are allowed to charge a disposal fee for this service, generating much needed revenue through their septage receiving stations. Currently, the disposal fee is $0.09 per gallon multiplied by 80% of the truck tank's capacity, rounded to the nearest whole dollar. This fee is comparable to that charged at other regional wastewater plants and is charged each time the septic company empties a tank load. Approximately 18 area waste haulers utilize the City's septage receiving station. In the past five years, the facility has generated over $570,000 in revenue.

The Department staff are responsible for the repairs and maintenance of the plant and lift station equipment. Staff also monitor and perform laboratory analysis on the sewage as it processed. The treated sewage must meet stringent State and Federal standards before the end product is discharged into the Chippewa River.

All plant operators are required to have a minimum of a Class D Wastewater Treatment license, as mandated by the Michigan Department of Environmental Quality (MDEQ). Currently, all of the WWTP staff possess Class A, B, and C Wastewater Treatment licenses, which exceed MDEQ requirements.

Staff

Steven Hein,
Superintendent

Plant Operators
Kurt Adams
Darrin Beebe
Robert Keller
Tim Middleton
Aaron Rivard
Scott Zamarron

Water

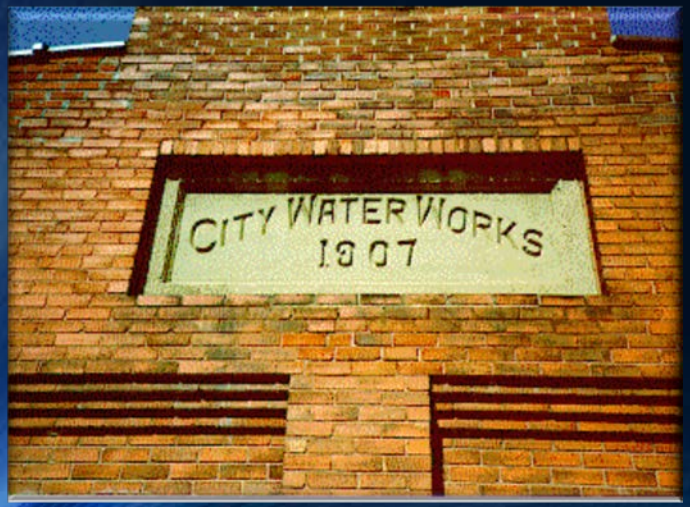
Constructed in 1994, the Water Treatment Plant (WTP) processes and pumps water to the City's water distribution system for fire protection and customer use on a 24-hour per day, seven-day-a-week basis. The WTP operates in accordance with Michigan Department of Environmental Quality and United States Environmental Protection Agency regulations to ensure that all public health requirements are met for potable water distribution to City residents. In addition, there are two water towers; a .5 million gallon tower located on North Kinney Street, and a one million gallon tower located in Industrial Park South.

The WTP staff are responsible for the operation and repair of plant equipment, as well as the installation, operation, and maintenance of the system's water main lines, valves, service leads, meters, and 862 hydrants. The staff also perform laboratory testing required for quality control and to meet State and Federal guidelines. Each year, approximately 658 million gallons of water are distributed through the system.

Staff

Malcolm Fox, Supervisor
James Rabedioux, Assistant Supervisor

Plant Operators
Sarah Forsyth
Scott Haltiner
Andy Keehbauch
David Lipski
Mike Smith
Scott Smith
Pat Southworth



The City of Mt. Pleasant will work toward being a community…

That finds logical solutions to the problems of traffic congestion

Of safe and clean neighborhoods with low crime rates and low vacancy rates that are inhabited by multi-generational owner-occupants

With stable funding from a diverse tax base to finance the government services citizens need

Where economic opportunity for businesses offering good wages for employees is readily available

2012 Capital Projects

ENGINEERING
MICHIGAN STREET RECONSTRUCTION PROJECT
SIDEWALK REPLACEMENT PROJECT

MT. PLEASANT MUNICIPAL AIRPORT
AIRPORT LAYOUT PLAN
APRON RECONSTRUCTION PROJECT

STREETS
STREET OVERLAY PROJECT

WASTEWATER
HIGH SERVICE PUMP REHABILITATION
LIFT STATION PUMP AND PANEL REPLACEMENTS
SEWER RELINING PROJECT

WATER
HIGH SERVICE PUMP THREE AUXILIARY ENGINE REPLACEMENT
WATER MAIN PROJECT

Engineering

…That finds logical solutions to the problems of traffic congestion

MICHIGAN STREET RECONSTRUCTION PROJECT

- $762,000 project, partially paid with Federal grant funds of $375,000
- The project administration and inspection services were provided by Orchard, Hiltz & Mccliment of Mt. Pleasant
- Prior to this project, portions of Michigan Street were last reconstructed in 1972 and 1976, with a full asphalt overlay in 2003
- Reconstructed between Washington and Fancher Streets
- Replaced the existing curb, sidewalks, streetlight conduit, sanitary sewer main, storm sewer, and asphalt
- Driving lanes were narrowed to include bump-out parking
- Sidewalks in the Central Business District were widened from 4-1/2 feet to 6 feet, and 12 feet from University to Washington to incorporate the City's vision to become a more walkable and bikeable community

…Of safe and clean neighborhoods with low crime rates and low vacancy rates that are inhabited by multi-generational owner-occupants

SIDEWALK REPLACEMENT PROJECT

- Robbin Harsh Excavating of Clare was awarded the contract in the amount of $45,000
- Damaged sidewalk was replaced on Mill, Franklin, Chippewa, Wisconsin, and May Streets.
- Mill Street – 158′
- 400 block of N. Franklin Street (both sides) – 294′
- East Chippewa Street – 120′
- East Wisconsin Street – 130′
- East May Street – 109′
- $52,000 of damaged sidewalk was replaced during the street reconstruction on Lincoln and Chippewa Streets
- 7 handicap ramps were installed in accordance with the Americans with Disabilities Act compliance regulations at a cost of $6,400

Mt. Pleasant Municipal Airport

…Where economic opportunity for businesses offering good wages for employees is readily available

AIRPORT LAYOUT PLAN (ALP)

- The Airport Layout Plan includes capital improvement projects that have been designated for funding through the Michigan Department of Transportation – Bureau of Aeronautics and Federal Aviation Administration's (FAA) grant programs
- The existing ALP was last updated in 1997 and did not include projects completed since that time or the changing needs of the airport
- FAA design criteria has changed since 1997
- Mead & Hunt, Incorporated was selected through the RFQ process to provide for airport engineering services and is assisting with the ALP revisions
- Recent studies have shown small airports have an economic impact of $3.97 million at the local level and $4.1 million statewide
- Revisions are ongoing through 2013

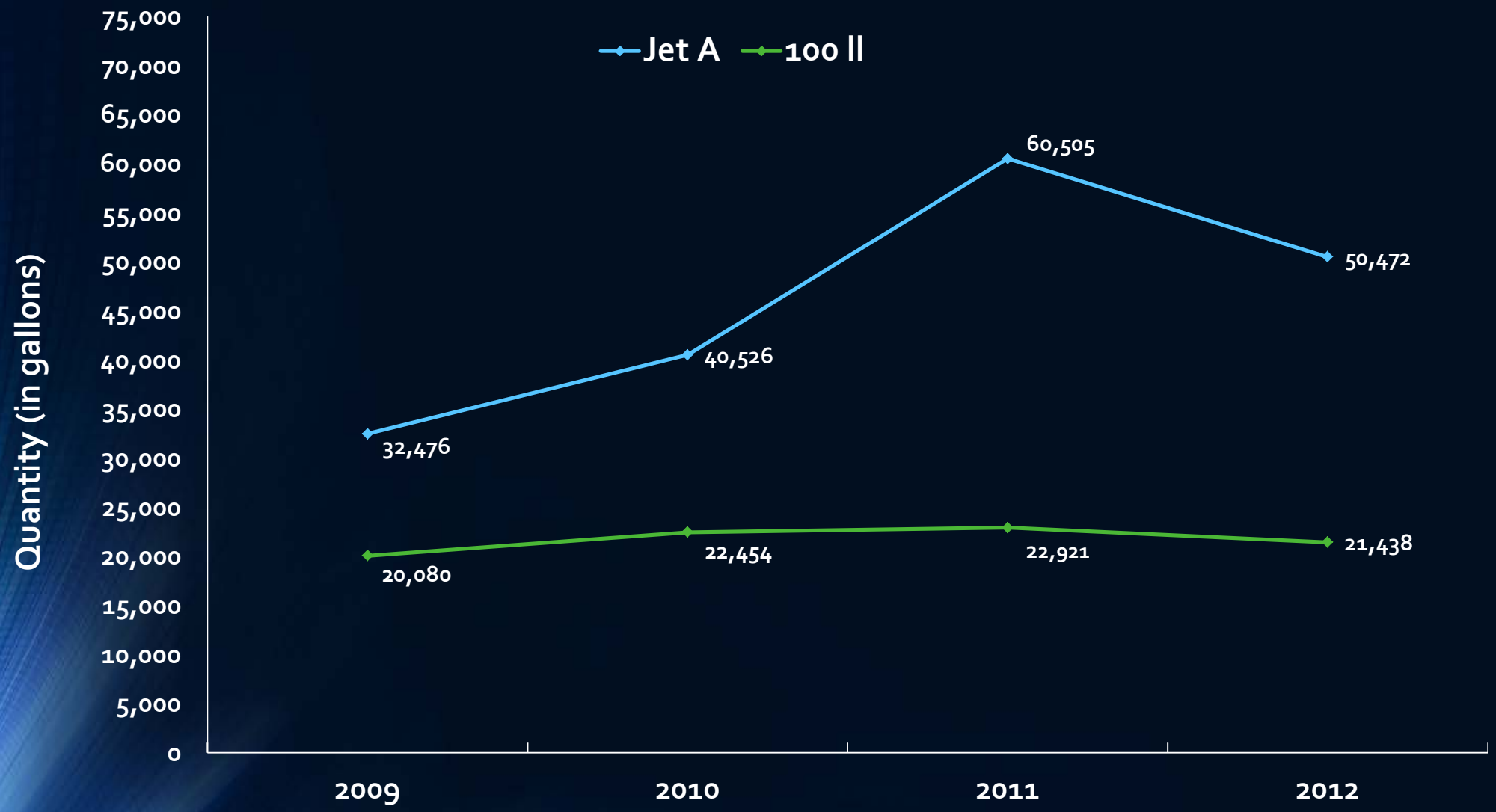
…Where economic opportunity for businesses offering good wages for employees is readily available

CORPORATE APRON REHABILITATION PROJECT

- The corporate apron was originally constructed in 1993 and designed to accommodate heavier jet aircraft weighing up to 60,000 pounds
- Michigan Department of Transportation – Bureau of Aeronautics awarded the contract to Crawford Construction and J. Ranck Electric, both of Mt. Pleasant
- Total project cost was approximately $325,150; City's co-share was approximately $16,000
- Project included excavation of over six thousand cubic yards of existing asphalt and sand subbase, and installation of new corporate hangar lighting
- Construction began on September 4 and was completed October 31, with minimal impact on fuel sales

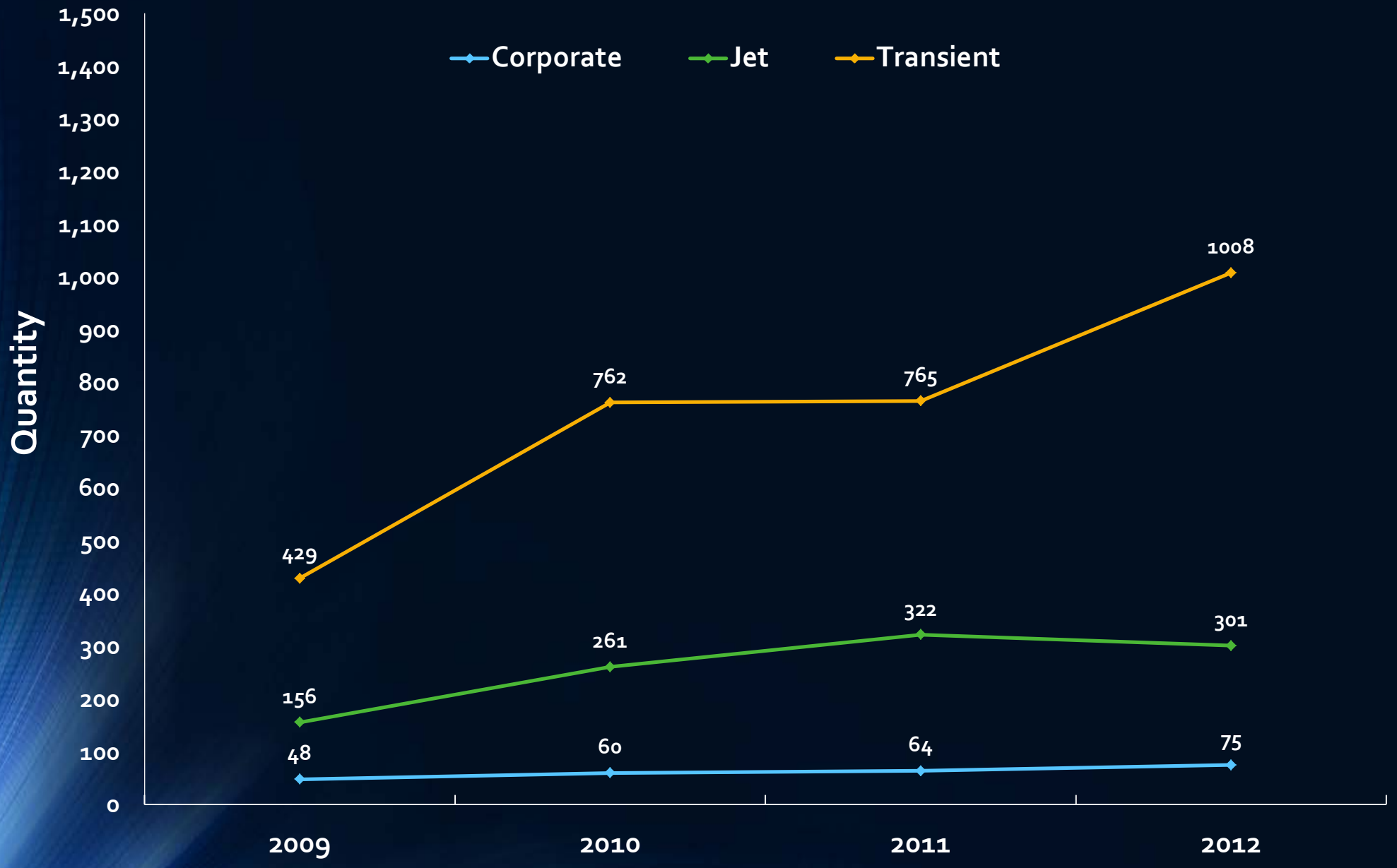
Before construction: This photo shows a ground-level section of the gap in the apron pavement, causing a hazard to aircraft.

Airport Fuel Sales



* Corporate apron closed for reconstruction September 4 - October 31, 2012

Airport Traffic Summary



* Corporate apron closed for reconstruction September 4 - October 31, 2012

Motor Pool and Street

…Of safe and clean neighborhoods with low crime rates and low vacancy rates that are inhabited by multi-generational owner-occupants

…That finds logical solutions to the problems of traffic congestion

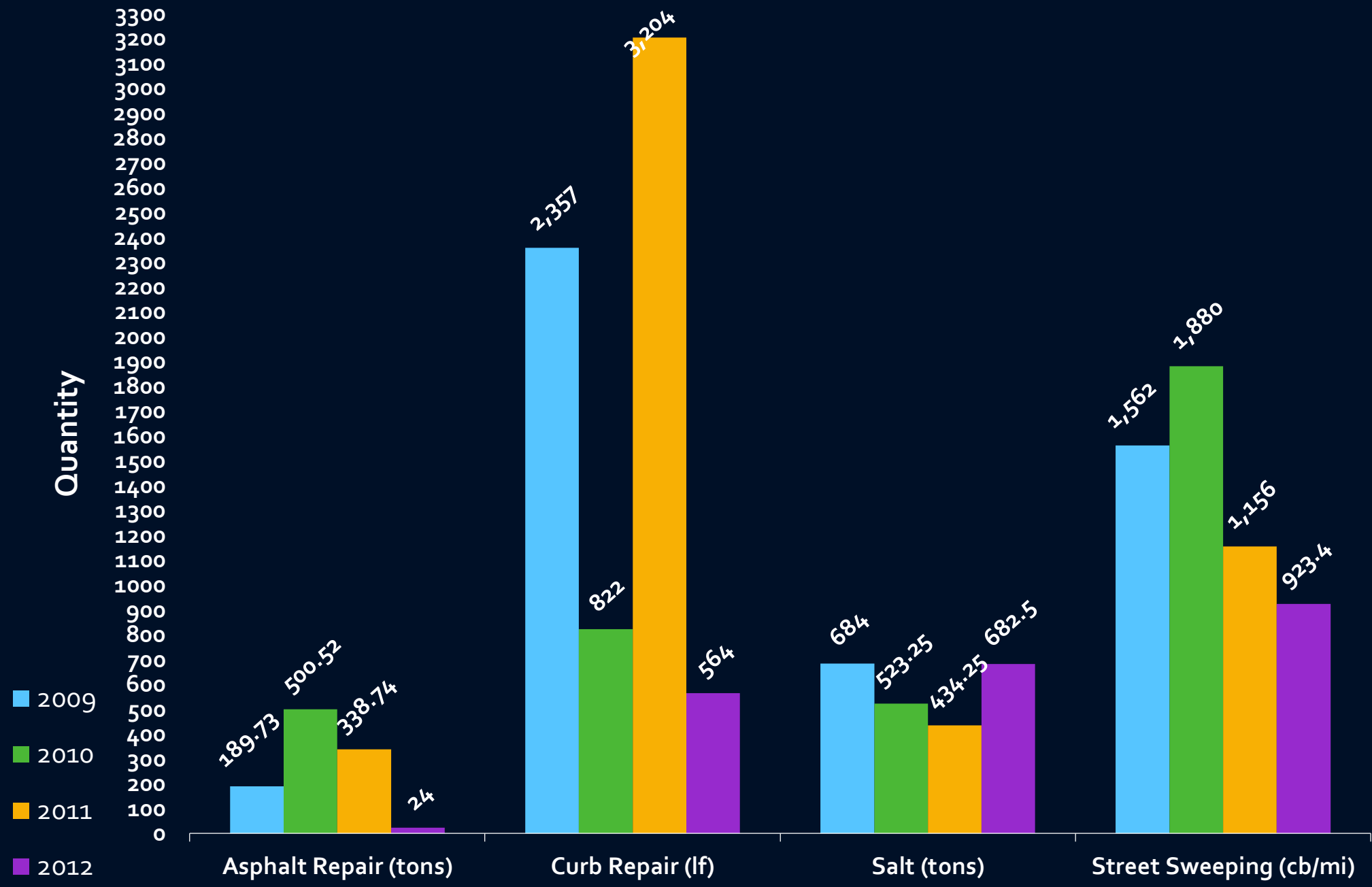
STREET OVERLAY PROJECT

- Several city streets are scheduled for milling and asphalt overlays each year
- According to the National Asphalt Pavement Association, asphalt overlays are a popular approach to pavement management because it provides improved ride quality, and reduces life-cycle costs, driving hazards, and road noise.
- In order to provide a level surface for the asphalt overlay, some streets require milling of the damaged portion of the street
- Work on the $162,000+ project included the replacement of deteriorated curb and the installation of sidewalk ramps
- The following streets received an asphalt overlay in 2012
- Eastwood – Elizabeth to Preston
- Lincoln – Mission to Brown
- Glen – Gordon to Preston
- Gordon – Watson to Glen
- Appian Way – Mission to Dead End
- Via Aurelia – Appian Way to Dead End

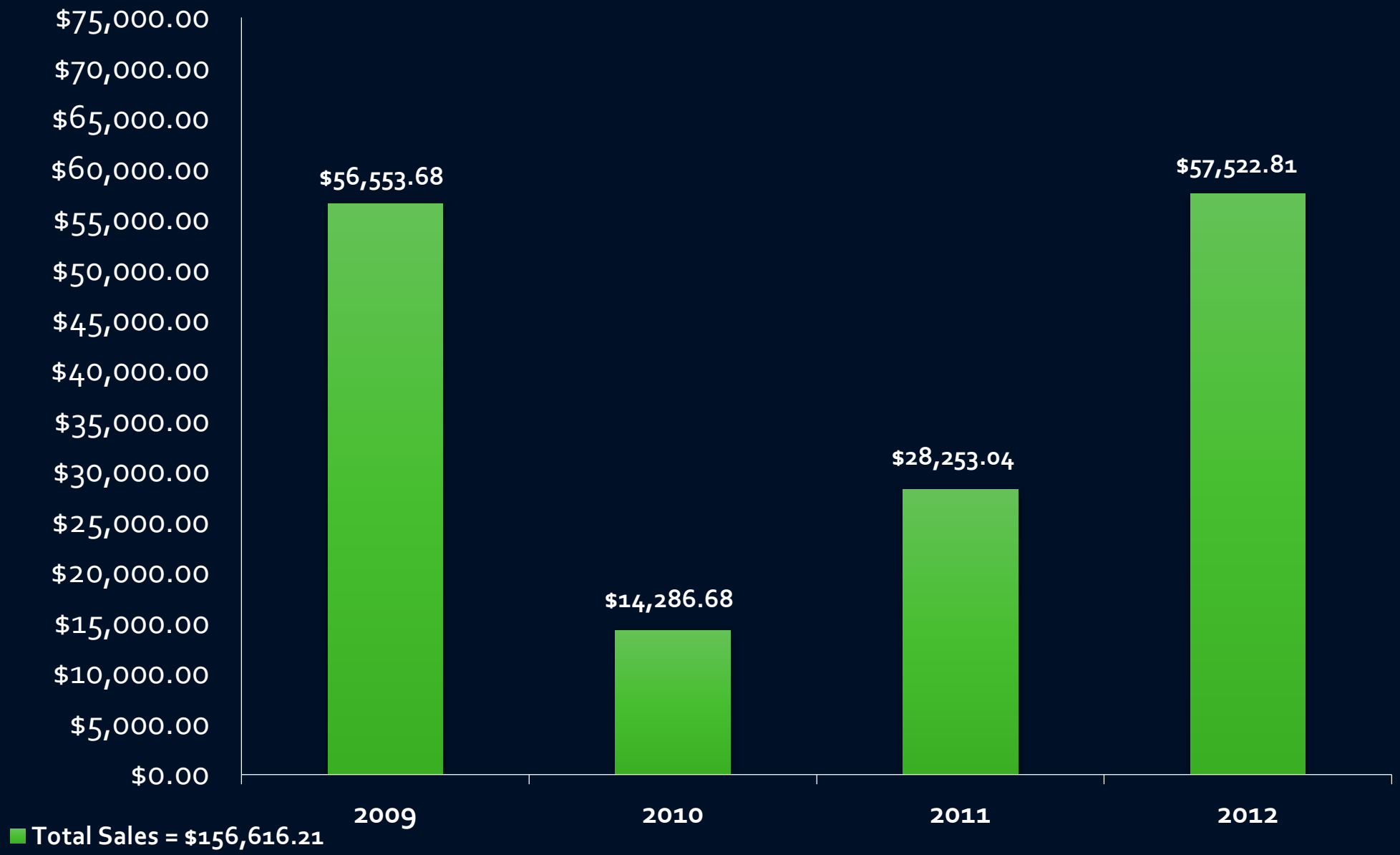
…Of safe and clean neighborhoods with low crime rates and low vacancy rates that are inhabited by multi-generational owner-occupants

- Chipped 822.25 cubic yards of brush at 109 locations
- Cleaned 690 catch basins
- Cleaned 21,137 linear feet of sewer main line
- Cleaned 923.40 curb miles of city streets
- Collected 26,796.8 cubic yards of leaves
- Completed 582 repair orders
- Marked the utility locations for 1,243 Miss Digs
- Planted 160 new trees in the City's rights-of-way
- Rebuilt 108 manholes and catch basins
- Removed 128 diseased, dying or dead trees
- Repaired 564 linear feet of concrete curb
- Responded to 92 sewer back-up calls, 86 of which were caused by a problem in the homeowner's lead

Street Maintenance Activity Summary



Auction Summary
Motor Pool Equipment Sold on eBay



*Revenue greater in 2009 and 2012 due to higher number of items available for auction and existing replacement schedule.

Wastewater

… Of safe and clean neighborhoods with low crime rates and low vacancy rates that are inhabited by multi-generational owner-occupants
…With stable funding from a diverse tax base to finance the government services citizens need

MANHOLE REHABILITATION PROJECT

- Work on the sanitary and storm sewer system is completed on an annual basis and is necessary to maintain the quality and integrity of the sanitary and storm sewer system and related structures
- The contract was awarded to Advanced Underground of Westland, Michigan
- Over 800 vertical linear feet of manholes were rehabilitated in 2012

SEWER RELINING PROJECT

- Sanitary sewer relining is a low-impact method of replacing sanitary sewers that are in poor condition and used when excavation of the sanitary sewer is not possible or where it is less expensive to reline the sewer when no street construction is planned
- In 2012, 11,455 linear feet of sanitary sewer mains were relined in various locations throughout the City

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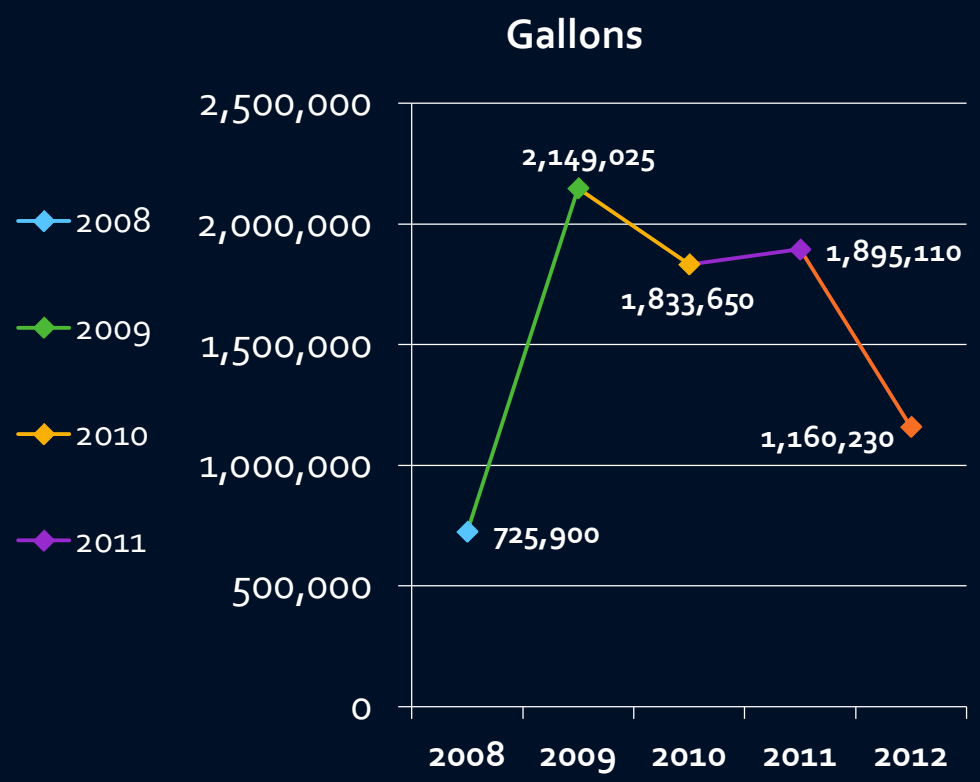
LIFT STATION UPGRADES – NELSON PARK AND NORTH ISABELLA ROAD

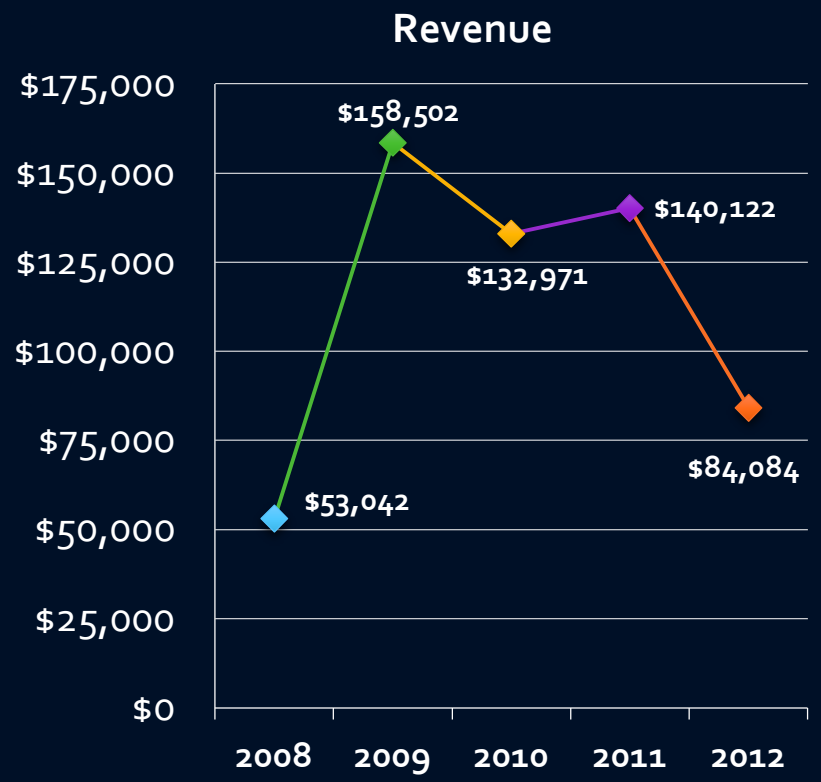
- In 2012, two MultiTrode-brand control panels were installed at the Nelson Park and North Isabella Road lift stations
- Since 2006, several lift stations have been renovated to include new control panels that use current technology
- The new technology allows the WWTP to continue to standardize replacement pumps for several stations
- Replacement panels, probes and alarms systems were replaced as part of the 2012 Capital Improvement Plan
- Replacement panels, probes and alarm systems were replaced
- Bid was awarded to Kennedy Industries of Milford, Michigan in the amount of $24,760

…With stable funding from a diverse tax base to finance the government services citizens need

SEPTAGE RECEIVING STATION

While the septage receiving station remains an important source of revenue, a few unanticipated changes occurred in 2012. Three septic companies went out of business and Security Septic, one of the highest volume customers, built their own disposal facility and no longer use the City's facility. Two smaller companies were added, but had little impact on revenue. As a result, the annual revenue for 2012 was reduced approximately 40% compared to 2011. These factors have been accounted for in the 2013 Operating Budget.





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- Purchased and had installed a new methane/natural gas-fired boiler
- Purchased a new sewer camera that also works as a pole camera for inspecting manholes
- Replaced a 15 HP high pressure effluent pump with two 1 HP pump and pressure tank systems. Water from these systems is used to run the geothermal heating and cooling system at the plant, as well as general flushing water where potable water is not required
- Designed and installed a timer-based decant pumping system for the A tank, which allows the staff to control the amount of supernatant recycled through the plant from stored biosolids, to avoid overloading the plant
- Received over 1.1 Million gallons of septage from area septic haulers, which generated an additional $84,000 in revenue

Water

…Of safe and clean neighborhoods with low crime rates and low vacancy rates that are inhabited by multi-generational owner-occupants

WATER MAIN PROJECT

- The scope of this project included the replacement of 4" and 6" cast iron water main in select locations, and excavation of the existing sidewalk to access existing water services and connect them to the new main.
- Work was completed through a directional boring process, alleviating the need to for street excavation.
- The contract was awarded to the Isabella Corporation of Mt. Pleasant.
- Work was completed in July on the following streets:
- Chippewa Street between Mission and Brown Streets
- Lincoln Street between Kane and Russell Streets
- Lincoln Street between Mission and Brown Streets

Water

…Of safe and clean neighborhoods with low crime rates and low vacancy rates that are inhabited by multi-generational owner-occupants

HIGH SERVICE PUMP THREE ENGINE REPLACEMENT

- Four high service pumps in the High Service Pump Station are used to pump water from the storage reservoirs to the City water distribution system
- Replacement of pump three was scheduled as part of the 2012 Capital Improvement Plan due to its age and non-availability of replacement parts
- Bid was awarded to Cummins Bridgeway of Wyoming, Michigan in the amount of $72,800

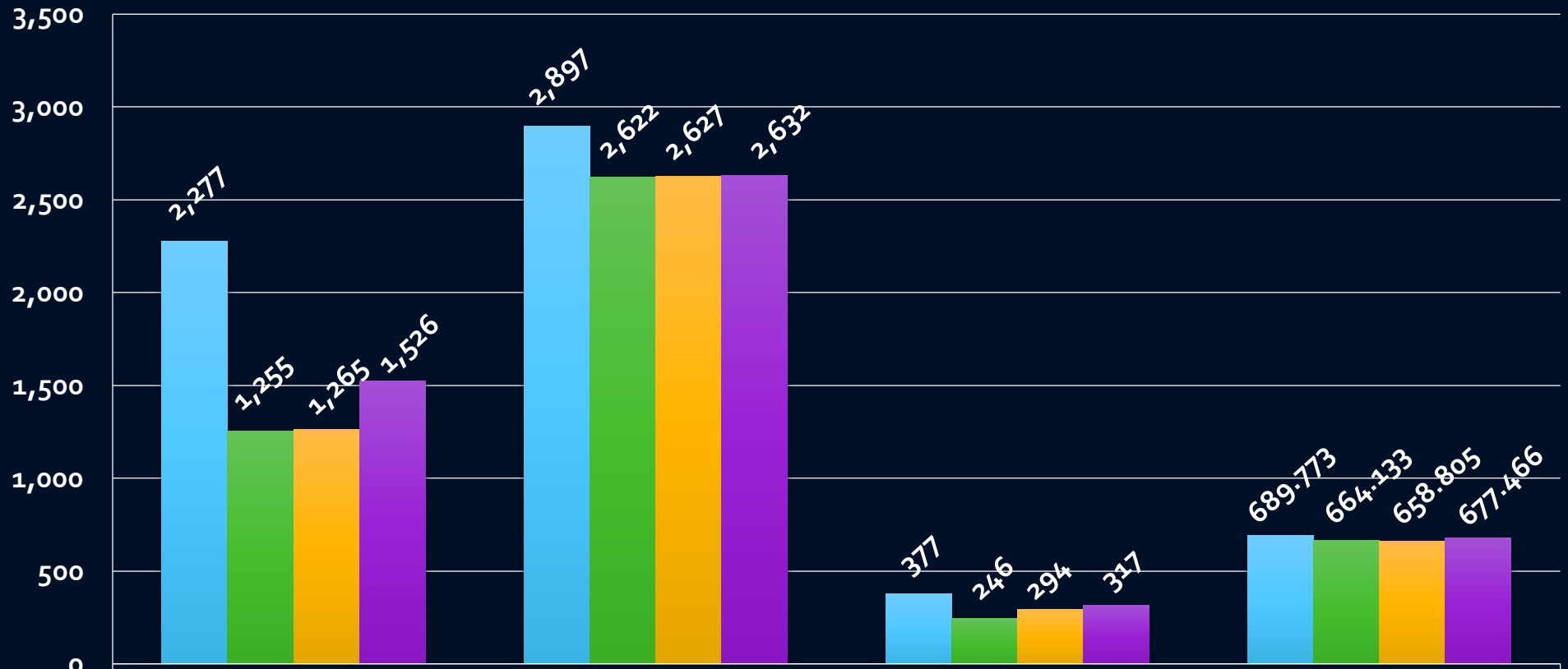
WELL 16 REHABILITATION

- Rehabilitation was planned as part of the Water Department's planned maintenance schedule
- Located on East Broomfield Road
- Bid was awarded to Peerless-Midwest of Ionia, Michigan in the amount of $65,789

…Of safe and clean neighborhoods with low crime rates and low vacancy rates that are inhabited by multi-generational owner-occupants

- Pumped 677.466 million gallons of water in 2012, with a daily average of 1.822 million gallons, up from 658.805 and 1.805 million respectively, in 2011.
- Responded to 333 customer service calls
- Reread 242 meter readings
- Completed 996 final meter readings
- Delivered 923 door tags
- Completed 138 service shut-offs for non-payment
- Installed 43 new meters
- Rotated 79 meters
- Completed 47 cross connection inspections
- Completed 152 meter touchpad and wire repairs
- Flushed 17 hydrants
- Frost checked 1272 hydrants
- Repainted 10 hydrants

Water Department Activity Summary



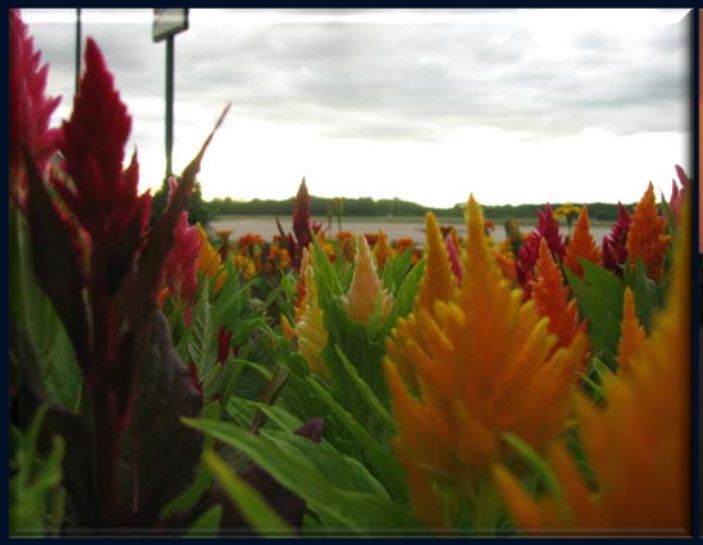
	Construction & Maintenance (ea)	Customer Service Calls (ea)	Meter Services (ea)	Water Pumped (Mil. Gals.)
2009	2,277	2,897	377	689.773
2010	1,255	2,622	246	664.133
2011	1,265	2,627	294	658.805
2012	1,526	2,632	317	677.466

Customer Service Calls - Service turn on/off; water quality calls; meter re-reads; final meter reads; door tags; non-payment shutoffs

Meter Services - New meter installations; rotate old meters; touchpad and wire repairs; meters delivered

Construction & Maintenance - Locating services for contractors, water main leaks/repairs, hydrant flushing and frost checks; valves operated, & cross connection inspections completed.

The Year in Pictures



Airport in bloom

Carlos Santana's Gulfstream 4 , the largest type of aircraft able to land at the airport.

KMOP after dark

Animal Planet's pilot was assisted by Airport Manager John Benzinger in a "hot" refueling operation, (with the rotors blades still operating), before the pilot continued north with the "Finding Bigfoot" cast

Chippewa River District Library's Summer Reading Program celebrated their achievements with an afternoon visit

Soaring high above the city, skydivers enjoy an aerial perspective of Mt. Pleasant

CORPORATE APRON REHABILITATION PROJECT

BELLOWS STREET MINI ROUNDABOUT REMOVAL

Christmas tree collection

The Street Department assisted Parks and Rec staff with the installation of a new sign at Riverside Cemetery

2012 Dickens Parade

95% of all equipment repairs are performed by the City's mechanic, with occasional assistance from Street Department staff

In 2012, numerous Emerald Ash Borer-infected ash trees located in the City's rights-of-way and parks system were removed , including this stately tree in Nelson Park.

City snow plows painted by Art Reach, summer 2012.

The new Vactor/rodder sewer truck replaced the City's old model, which was sold on eBay for $35,302.03.

Welding the rotating biological contactor (RBC)

Wastewater staff installed a new grit screen housing at the plant

In memoriam

Leni
Airport Ambassador

2001 - 2012

"He's the airport dog. He's a dandy."
Owner and Airport Manager John Benzinger

Respectfully submitted
to the Mt. Pleasant City Commission
by the Division of Public Works

Photos provided by DPW staff. Airport photos provided by Mark Drumheller, Donna Husted Kriss, and DPW staff.
Leni's photos courtesy of Morning Sun photographer Holly Mahaffey
("Leni is canine ambassador at Mt. Pleasant Municipal Airport" Morning Sun , 12 May 2012)