



## **Annual Workshop Report**

January 20-21, 2012  
Public Works Department

Prepared by:

Rick Moskwa – Public Works Director  
Lynn Nardinger – Deputy Director, Public Services Division  
Jay McCleary – Deputy Director, Public Works Finance/Contracts/Purchasing  
Jeff Schneider – Deputy Director, Solid Waste Division  
Bob Stark – Deputy Director, Utilities Division  
Bill Rooney - Superintendent of Parks & Cemeteries  
Jerry Plein - Superintendent of Public Services/Collection and Distribution Division  
Jeff Huppert - Superintendant of Solid Waste Division, Collection/FEFC  
Jason Frion - Superintendant of Solid Waste Division, WTE/Maintenance  
Tammie Dougherty – Office Manager/Assistant Airport Manager

### **Accomplishments 2011**

#### **TOPIC 1 – Public Services Division**

The Public Services Division includes Streets, Parks, Building and Grounds, Cemeteries, Fleet Maintenance, Water and Sewer Collection and Distribution. It consists of 1 Deputy Director, and 2 Superintendents. In addition, the Streets department consists of 1 Operation Foreman, 1 Maintenance Lead, and 8 Maintenance I. The water and sewer distribution and collection department consists of 1 Operation Foreman, 2 Operators, 4 Maintenance I, 1 Infrastructure Asset Specialist and 1 Locator (open). The Parks Department consists of 6 Maintenance I and 1 Maintenance lead at the cemetery. Buildings and grounds consists of 1 Operation Foreman, 1 Maintenance Engineer (Open), 1 Maintenance tech, 1 Electrician, and 1 Maintenance I. The Fleet Maintenance division has 1 Fleet and Supply Controller, 2 Mechanics, and 1 Service Tech.

**Parks/Buildings and Grounds:** Consists of 20 different playground areas within 38 parks on 1423 acres, three cemeteries on 117 acres and maintaining 69 acres of it with 15,129 internments, and 12 miles of trails,. There are 104 different buildings to maintain at 24 locations and there are 686 street lights with 22 miles of electrical lines.

The Parks division saw a reduction in staff in 2011 of 2 FTE's. Staff has utilized STS, ICWC, and seasonal help to continue to complete projects within the parks system.

*AP Anderson Park* - Approximately 25 goats were brought in during the summer and spent a week trying to eradicate the buckthorn in the park. Crews were then able to use the brush hog to get rid of

the large stems. The tennis court was reconstructed with new base, asphalt, and fence. The lines will be painted in the spring. New electrical service was installed on field one.

*Volunteers:* - The number of volunteers was down in 2011. We still had our local organizations helping with various projects but the number of individuals volunteering was down. The group of volunteers that helped with the watering of the flower baskets in 2010 returned again in 2011 helping to keep this program blooming.

*Downtown Flower Baskets* - 230 flower baskets were hung in Red Wing this past summer. The Kiwanis continue to fund their portion of the baskets. Staff met with organizers to discuss the 2012 season and it was agreed to increase the number of baskets to 232, with the 2 additional to be placed at the VCB.

*Tree removal* - 11 trees were removed from the downtown core, 15 trees from the parks and 119 trees from the parkways and boulevards. 136 trees were planted and 213 trees were pruned. In anticipation of an Emerald Ash Borer (EAB) infestation the city will again try to secure grants from the DNR for the removal of Ash Trees. The purchase of a pothole machine allowed parks crew to complete tree removal with no additional help.

*Colvill Park* - Staff and ICWC crews repainted the pool, removed a playground from Colvill Park and reassembled it at High Park. ICWC crews have also helped with refurbishing picnic tables. New electric services were run to shelters 3 and 4.

*Athletic Field* - The Red Wing Youth Baseball Association donated \$3,800.00 for the renovation of the batting cages. City Staff supplied the labor and RWYBA paid for supplies. Red Wing Amateur Baseball Association completed another year of maintaining the entire Athletic Field Complex at a cost of \$15,000. The agreement allowed city staff to focus on other areas. The grandstand was tuck pointed and the warming house at the hockey rink was also resided.

*Signs at Barn Bluff* - Late this fall, staff again received complaints about the north trail. The north trail will now be closed every fall when staff determines that conditions are not favorable. The trail will be reopened in the spring after staff checks the condition and is determined to be safe for hikers.

*Park Benches* - There were five donations made last year to upgrade our park benches at a cost of \$2700 per bench. Bay Point Park had two benches installed; Jordan Tower, Vogel Harbor, and Pottery Pond Park each received one. A flag pole was also donated by the Legion for Barn Bluff and staff installed the lighting.

*Ball Fields* - All ball fields at the Athletic Field, AP Anderson, and the high school were regraded and realigned. This work was done with streets and parks staff. All backstops were repaired also.

*Parks* - New electric services, wiring, and pedestals were installed at Bay Point Park for River City Days and other events. Levee Park also was rewired for shore power and new wires were run to the light poles.

*Flooding* - All staff (Streets, Parks, Building and Grounds, Utilities, STS, and ICWC crews) spent time with spring flooding. Although levels did not reach predicted levels, a significant amount of time was spent preparing and cleaning up.

*Trails* - Hay Creek Bike Trail was in need of bank stabilization as part of the trail was sliding into the creek. Crews placed rip rap along the shore of the creek preventing any further erosion and then repaved the trail. Rip rap was also placed along the shore of Bay Point Park. Fog sealing was

completed on 3 miles of trails on Hay Creek, Pine Ridge and Hi Park. This process is a protective coating which lasts 8-10 years.

*Cemeteries* - There were 94 internments in 2011 with 51 of them being regular burial vaults and 43 cremations.

*Ramp Projects* - All three ramps received shot blasting and were routed and sealed. New expansion joints were also installed. A pedestrian topping was installed at LaGrange ramp.

*Sheldon Auditorium* – The tuck pointing of the south wall was completed this year and the repair on the west portico was started and will be completed in the spring. Emergency repairs were also made to the chiller. Windows are also being refurbished by PW staff.

*Goodhue County Historical Museum* - Roof repairs were completed to resolve an ongoing issue with water leaks. The HVAC controls were replaced, below grade windows were filled in, and tuck pointing on the chimney was completed. The window replacement will be completed this spring.

*Library Elevator* - Bids were received for repairs to the elevator. A contractor was hired and the elevator will be repaired before spring.

*City Hall*-Staff from streets, buildings and grounds spent time at City Hall completing electrical upgrades and general construction on phase III of the remodel. Also new time clocks were installed at all city buildings.

*Janitor Staff* - All three janitors retired in 2011. This service was reorganized and has seen a reduction of one FTE. The Maintenance Engineer position is open and will be filled within the first month of 2012. The Maintenance Tech started on December 5<sup>th</sup>. Pro Act started January 3<sup>rd</sup> to help fill our cleaning needs. Their crew consists of one lead and 4 workers. They clean at City Hall and Public Works daily and cover the outlying buildings after that.

**Streets:** There are 105 miles of paved streets, 6 miles of alleys, and 15 miles of gravel roads to maintain spread over 40 square miles with 4,200 streets signs and 69 miles of sidewalks.

*Alley Reconstructions* - City crews reconstructed 4 alleys and a short street doing all of the grading and base, curb and gutter, paving, and restoration work.

*Other projects* - Crews realigned South Service drive by Vincent Ave. They worked with MN Dot on the intersection of 3<sup>rd</sup> and Plum did ditch work on Green Spring Road, and had two crews working at night painting the downtown core areas. Blacktopping was completed on the cart paths at MNGL, the entrance to the marina boat yard, all water main break areas and an area at the Waste Campus. All blacktopping was done by city crews with the paver purchased in 2010.

*Recycle Blacktop and Concrete* - Over 15,000 tons of blacktop and concrete was crushed and will be recycled for use on other projects and used as base for roads.

*Crack Sealing* - 70,000 pounds of crack sealing material was applied to city streets by a contractor. This process is usually done one to two years after a street is over-laid.

*Side Walk Repairs* - 3,700 square feet of sidewalks were mud jacked in 2011. City staff continues to look at ways to repair sidewalks caused by tree damage.

*Signs* - City staff continues to work on the federal mandate for retro-reflectivity. The 4,200 signs on city boulevards are rated and entered into CatreGraph and put on a replacement schedule. 535 of the signs that were in the poor or failed category were replaced in 2011 bringing the total replaced to 1,100.

*Snow and Ice* - January through April brought 37 inches of snow in eight different events with one snow emergency declared. A very mild November and December kept this budget from being over. The city also sub-contracts with Luhman's Construction to plow roads in the Prairie Island area.

*Dedicated land* - Two properties donated to the city required buildings to be removed. One on Trenton Island needed a house and garage removed, well capped, and septic system dug out. The other property on Levee Road had a 70' x 120' shed and out building to be removed and both sites were leveled and seeded.

**Storm Water System:** Consists of 859 manholes, 2,550 inlets, 209 outlets, 45 ponds, 7 miles of tunnels, and 50 miles of storm water pipes. All storm water projects are completed with staff from both streets and utilities.

*Storm Sewer Work* - 20 inlets were repaired or replaced along with 5 for the school district. 2 ponds had structures at MNGL that were leaking water and draining the ponds. Repairs were made and ponds are holding water. Red Wing Golf Course also had pond issues and repairs were made there also. Outfalls were repaired at Frenn Ave., Tile Drive, Sweet Briar Rd., and Mounds View Drive.

*Camera Storm Lines* - Contracted for the videotaping of 40,000 feet of storm sewer line and jet rod cleaning of another 15,000 feet. A number of problems were identified and will need to be addressed in the near future.

*Pioneer Road Drainage ditch* - 900 yards of Rip rap was placed on 2,000 feet of embankment in the waterway.

*Street Cleaning* - Completed 3 mandatory street cleanings with 540 yards of debris picked up during the spring and summer and 733 yards of leaves and debris picked up in the fall.

**Public Services – Water and Sewer Collection and Distribution:** Maintains all underground infrastructure including 976 fire hydrants, 2,791 water valves, and 102 miles of water main. The sewer system includes 13 lift stations, 2,342 man holes, and 99 miles of sewer mains.

*Slip Lining* - Over 15,000 feet of sewer lines were slip lined and 34 different manholes totaling 107 vertical feet were rehabilitated with a spray lining.

*Sewer Main Repairs and Maintenance* – The Utilities department responded to 13 sewer main backups of which 9 were private mains, 1 was a customer's service, 2 were rags in our line and 1 was a lift station drive failure. The Vactor cleaned about 211,000 feet of the 523,000 total feet of sewer lines and videotaped 454 main segments for a total of 103,000 feet of the area cleaned. Crews also flushed 2,000 feet of large sewer main in an easement. The startup of two lift stations, including the Fairview lift station which has a new structure alongside the old one, and a new lift station at the Waste Campus were completed.

*Water Main Repairs* - Responded to 5 water main breaks and service leaks. Two areas that continue to have problems are Old West Main and Spruce/Twin Bluff Road due to soil and pipe condition. An average water main break costs about \$8500. Also water valves were replaced at Fourth and Bush Streets.

*Valve Turning* - Staff started a valve turning program which involves exercising 217 of the 2,791 valves. Three valves were found inoperable, two have been replaced and the other is in the middle of Highway 58.

*Water Shutoffs* - On the first Wednesday of every month, staff shuts water off to an average of eighty residents for non-payment of their water utility bill. This on average involves four employees for two days.

*Other repairs* - A manhole on a sewer main along Pioneer Road was missing. Crews located the structure and brought it to the surface. About 525 of the 976 fire hydrants were painted with help from seasonal staff. Crews spent about 260 man hours clearing snow at the airport. Crews started RPZ inspections and identified approximately 265 RPZs within the city.

**Intergovernmental services:** Fleet maintenance takes care of maintaining 399 different pieces of equipment including police, fire, public works, refuse /recycling, and airport.

*City Maintenance Shop* – The shop has seen an increase in job tickets. With an aging fleet, repair costs are going up and the time and frequency that equipment is in the shop is increasing. Last year shop tickets totaled 1546. 2011 saw an increase of about 75 tickets. We are still contracting out our oil changes for the refuse and recycling equipment to Lawrence Motors. Their shop has an evening shift that allows the trucks to be serviced in the evening and back on the road the next morning.

*Sentencing to Service* – The STS crews has filled a void that was created by a cut in seasonal employees. STS has taken care of the all maintenance at Burnside Cemetery and spent one day a week weed whipping at Oakwood Cemetery along with helping with winter sidewalk maintenance and cutting brush on easements. The STS contract is for 1000 hours per year.

*Institution Community Work Crew* - The City has a one year contract for 2080 hours for an ICWC crew. The crew has done everything from construction of buildings, roofing, brushing easements, removing snow from sidewalks, helping in the cemetery, refurbishing picnic tables or whatever is needed.

*MN Dot* - The State shares their salt storage shed with the city and we provide a loader that stays there from November through April. They also provide lane closures when work needs to be done on the highway or an arrow board when we need one. We provide the vactor for maintenance at their shop and water for cleaning bridge decks.

*Goodhue County* - The County has provided hydro-seeding, conveyor for salt storage, and has exchanged streets for winter maintenance because of location and start times. We provide them with our cement crew for curb and gutter work, vactoring services and supply water for cleaning bridge decks.

*Red Wing School District* – The district provides Right to Know training for all public works employees and pays for the spraying and fertilizing of city parks. We provide them with our concrete crew for

sidewalk repair, sanding of parking lots, and some blacktop repairs. We also share equipment and employees for ball fields and parks.

*City of Lake City* - The cities of Lake City and Red Wing have been sharing vactoring services; if one of the vactors is being repaired the other community is on call for backup. Also, if two vactors are needed on a job, a vactor is provided by the other community. We have just made the same agreement with the City of Cannon Falls.

## **TOPIC 2 - Utilities Division**

The Utilities Division is responsible for the operation of the wastewater treatment plants; water supply, treatment, pumping and storage facilities; stormwater permitting and detention/treatment facilities; and the City analytical laboratory. Division staff also provides engineering support to other Public Works planning, design and construction projects. Sewage collection, including lift station maintenance, and water distribution and metering are included in the Public Service Division.

Facilities include the Main Wastewater Treatment Plant, the Bench Street Industrial Pretreatment Plant, the Twin Bluff and Charlson Crest Water Treatment Plants, 8 ground and elevated water storage reservoirs and 5 water booster pump stations.

Utility Division personnel include 1 Deputy Director/Environmental Engineer, 1 City Chemist, 1 Chief Wastewater Operator, 1 Chief Water Operator, 3 Wastewater Operators, 2 Water Operators, 1 Maintenance I and the City Environmental Compliance Officer.

Significant Utilities Division 2011 accomplishments are summarized below.

### **General**

*Division Reorganization* – The Division organizational structure was modified as a result of an employee electing to take the early retirement package. The Facilities Manager position was eliminated and duties were distributed to the Deputy Director, City Chemist and Chief Wastewater Operator.

*Participated in Minnesota Environmental Science and Economic Review Board (MESERB)* – The City is a member and active participant of MESERB. The Division Director was elected to be an at large member of the MESERB Executive Committee.

*SCADA Modifications* - Water and wastewater facilities are monitored and remotely controlled using a Supervisory Control and Data Acquisition (SCADA) system. The original system consisted of stand-alone installations with an automatic dialer to notify operations staff of any alarm conditions. The stand-alone configuration was converted to a central server configuration with a secure web portal access. The new configuration enables operations staff to monitor normal operation and alarm conditions remotely through home computers. This enables staff to determine background information before responding to alarm conditions. The remote access capability will become even more useful when the radio SCADA communication currently used is replaced with fiber-optic communication.

*Underground Utility Locates* – The Utility Division furnished a full time individual to provide utility locates for the Hiawatha Broadband fiber-optic network installation.

*CIPP Sewer Rehabilitation* - Two Cured-in-Place-Pipe (CIPP) installation projects were completed in 2011, resulting in the rehabilitation of nearly 8000 feet of sanitary sewer. Utility Division staff provided engineering design and construction contract administration services.

*Fairview Lift Station* – Construction of the Fairview Station on North Service Drive was completed. Several City Departments or Divisions were involved including PW Public Services, Engineering and Finance. The Utilities Division was responsible for the preparation of the plans and specifications, and construction contract administration.

*Incinerator Lift Station* – The sanitary sewer lift station at the Incinerator was designed and constructed in 2011. This station serves the incinerator, landfill and the businesses on Bench Street south of Tyler Road.

*eRportal Implementation* – The Utilities Division continued with the implementation of the eRportal maintenance tracking software. The goal is to be able to generate work orders and track maintenance requirements for all major pieces of equipment by the third quarter 2012.

## **Water**

*Conservation Water Rates* – A water rate structure was developed to discourage discretionary water use. This was a statutory requirement. The proposed rates will be implemented in 2013. There will be a Council Workshop scheduled in the first quarter of 2012 to gain Council input to the proposed rate structure.

*Pressure and Flow Improvements* – The water distribution computer model that was developed in 2010 was utilized to evaluate alternatives to address the pressure and fire flow capacity concerns in the east side of the city. The best alternative was to create a new low-intermediate pressure zone using below ground pressure reducing vaults. Bidding documents were prepared and quotations from several vendors were obtained. The vaults are currently being fabricated and will be installed in the spring.

*Hiawatha Hills Ground Storage Reservoir Renovation* - The Hiawatha Hills Ground Storage Reservoir was completely renovated. Utility Division staff prepared the bidding documents and administered the construction contract. The cost of this project was approximately \$455,000. The reservoir was placed back in service in November.

*800 Megahertz Antenna Installation on Sand Hill Reservoir* – Division staff worked with the Goodhue County Sheriff's Department and their contractor on the installation of antennas on the Sand Hill Reservoir to improve coverage for the new 800 megahertz communication system.

*Conservation and Emergency Response Plan* – The Minnesota Department of Health requires all public water supplies to prepare and update a comprehensive water conservation and emergency response plan every ten years. The Utilities Division has completed the plan and will be reviewing it with the Council and submitting it to the Health Department in the near future.

*Wellhead Protection Plan* – The Minnesota Department of Natural Resources requires all public water supplies to prepare a wellhead protection plan. This plan is a two phase process that is intended to identify potential sources of groundwater supply contamination and to develop a plan to eliminate or manage these contamination sources. The first phase is the development of a groundwater computer model that can predict direction and speed of groundwater movement in the vicinity of each well. Utilities Division staff has prepared a Request for Proposals and will be sending it to qualified engineering firms in the near future.

## **Wastewater**

*Bench Street Clarifier Rehabilitation* – All four clarifiers at the Bench Street Industrial Pretreatment Plant were rehabilitated. The rehabilitation consisted of complete replacement clarifier drives and scraper mechanisms, replacement of weirs and baffles and renovation of deteriorated concrete. The plans and specifications were prepared in house. The construction cost was \$385,022. Public works electricians completed the electrical installation, significantly reducing the construction cost.

*Elimination of Biological Treatment at Bench Street* – The treatment process at the Bench Street Industrial plant was changed from a biological to a physical process. Polymer assisted enhanced settling is being implemented in conjunction with the clarifier modifications. This change reduces electrical costs and eliminates the need to use the aeration basin that would otherwise require extensive and costly renovation or replacement.

*Planning for Bench Street Industrial Plant Reconfiguration* – The treatment facilities at the Bench Street Plant have reached the end of their useful operating life. The treatment requirements and needs have changed significantly since the plant was most recently renovated in the mid 1980's. Significant planning efforts were initiated in 2011 to determine the best configuration for the plant as these deteriorated facilities are replaced. Design and construction activities will be implemented during 2012.

*Flood Preparation* - Wastewater operations staff spent a significant effort to prepare for the flooding that was predicted this spring. The treatment plant was flood-proofed to a river elevation equal to the 1965 flood. A detailed flood preparation Standard Operating Procedures (SOPs) document was prepared. This document can be used for flooding events that could occur in the future.

*Sewer Rate Structure Evaluation* - A detailed evaluation of the rate structure used to charge customers for wastewater collection and treatment was completed. The purpose was to develop a rate structure that would provide sufficient revenue to cover operational costs, debt service and capital improvements; and be fair to each customer category and to individual customers within a category. This analysis resulted in a rate structure that differs from the current structure, and will be the subject of an upcoming Council Workshop.

*Anaerobic Digester Cover Replacement* – Plans and specifications for the replacement of the cover on the secondary anaerobic digester at the main treatment plant were prepared. The new cover will be an insulated gas holding cover that will have the capability of storing approximately 10,000 cubic feet of digester gas. Gas storage will reduce the need for natural gas to heat the primary digester in the winter. Additional gas monitoring instrumentation is included to determine the feasibility of incorporating other digester gas utilization options, including electrical power generation. Fabrication will occur over the spring and summer and installation will be coordinated with fall biosolids land application.

*Operations Award* – The wastewater treatment plant staff received an operations award from the Minnesota Pollution Control Agency recognizing their efforts in operating the treatment plant for the entire year of 2010 without exceeding a single permit limit. Only about 30% of the treatment plants achieve this award in a given year. It appears that they will also earn this award for the plant performance in 2011.

## **Stormwater**

The stormwater related accomplishments identified here are programmatic in nature. Specific maintenance and improvement projects are addressed in the Public Services Section.

*Watershed Management Plan Revision* - A comprehensive revision of the City's Watershed Management Plan was initiated. This plan provides a frame work for managing the stormwater collection, conveyance and treatment infrastructure, and will result in a prioritized list of activities recommended to stay in compliance with stormwater regulations. This plan will include two separate computer modeling efforts. The first is a hydraulic model that will assist in sizing conveyance and treatment facilities while the second is a water quality model that will provide guidance with efforts that will be needed to meet the anticipated water quality requirements.

*Stormwater Pond Evaluation* – A detailed survey of all 34 stormwater treatment/detention ponds was completed. The survey will enable staff to assess future maintenance needs, operational concerns and will enable the stormwater facility construction and maintenance needs to be incorporated into a Capital Improvement Program.

### **City Laboratory**

The Minnesota Department of Health determined that analytical laboratories that perform environmental analyses that are reported to the State be accredited through the National Environmental Laboratory Accreditation Committee (NELAC). This change resulted in numerous changes in the way the City Laboratory will be staffed and operated. Staff achieved initial accreditation in 2010, and continued to work toward meeting all the new NELAC requirements.

*Ethics Policy* – An ethics policy was prepared in accordance with the NELAC requirements. The policy defines methods and procedures to insure sample, data and reporting integrity.

*Performance Tests (PT)* - Two sets of performance tests were completed successfully in accordance with NELAC requirements.

### **TOPIC 3 - Solid Waste Division**

The Solid Waste Division includes the Refuse and Recycling Collection operations, the Waste-to-Energy facility (Incinerator), the Material Recovery Facility (MeRF) and the Waste Campus activities listed below. Staffing for these operations and activities is distributed as follows:

- 1 Deputy Director
- 2 Superintendents WTE/Maintenance, R/R FEFC
- 1 Cover Clerk/Receptionist
- 1 Weekend Municipal Gate Attendant (Saturday, Part Time)
- Refuse and Recycling Collection Staff
  - 1 Lead Maintenance
  - 7 Maintenance I/Apprentice Maintenance
  - 1 open Laborer Position
- MeRF Operations
  - 1 Front End Fuel Cleaning Maintenance Operator
  - 1 Institutional Correction Worker Crew (ICWC) Crew Leader
    - 7-10 ICWC Staff
- Waste-to-Energy Facility
  - 5 Operators
  - 3 Maintenance I/Apprentice Maintenance
  - 1 open Assistant Operator

## **2011 Refuse & Recycling Collection Operations**

In 2011, City of Red Wing refuse and recycling collection operations provided waste and recycling collection services to all residents and approximately 60% of businesses within the City of Red Wing. City waste and recycling collection services include but are not limited to:

- Weekly Curbside Residential Waste & Recycling Collection
- Commercial Waste & Recycling Collection Services
- Residential Valet Scooters Services (Handicapped & Elderly Residents)
- Event Collection Services (Downtown Main Street Events, Holiday Stroll, River City Days, Car Show, 4th of July Celebrations)

Using industry standards to estimate average residential can set out rates (90% of households with collection services will be at the curb every week) the City of Red Wing waste collection crews make approximately 6,600 service stops every week and approximately 345,000 stops in 2011. In 2011, City waste crews collected more than 6,458 tons of MSW from the residents and businesses within the City of Red Wing.

Red Wing recycling crews are responsible for pickup of all residential recycling within the City of Red Wing. Based on 2009 audits of actual bin use by residents, it is estimated that approximately 60-65% of all Red Wing residents are active recyclers. This indicates that each week the City recycling crews make approximately 4,500 residential service stops and 162 commercial recycling stops. This equates to over 240,000 recycling service stops within the City of Red Wing every year.

In total the City waste and recycling crews make over 585,000 service stops annually within the City and collect over 8,400 tons of material for processing and the recovery of resources and energy from the waste stream.

In addition to the daily services provided to the businesses and residents, the City collection crews provided waste and recycling services to 78 events scheduled throughout the City. This work included delivery and collection of waste and recyclable containers set out to serve the vendors and attendees to each of these events. We only charge for the actual amount of disposed waste not the setup or removal of waste receptacles.

Recyclable materials picked up at Red Wing homes and businesses need to be sorted by 3 types:

- Fibers ~ Newspapers, magazines, cardboard, boxboard, phone books, catalogs, shredded paper, and office and school papers
- Rigid/Containers ~ Plastic (#1 & #2) Bottles and Jugs, Aluminum Beverage Cans, Tin Food Cans, and empty aerosol containers
- Glass Food & Glass Beverage Containers ~ All Colors of Glass Food & Glass Beverage Bottles can be Placed Together in your Recycling Bin.

## **2011 Waste-to-Energy (Incinerator Operations)**

In 2011, the Public Works Department began discussions with Xcel Energy's Refuse Derived Fuel (RDF) representatives to communicate and explore opportunities of mutual interest through various public/private partnerships. Topics of significant and direct interest to the City and Xcel include ash disposal capacity and ash landfill expansion and resource sharing; potential for City to provide processed waste to Xcel and secure long term RDF disposal capacity at Xcel; PUC Renewable Energy Grant programs and possible proposals to secure grant funding for RDF processing equipment. These discussions are on-going and have been very encouraging with respect to future collaborations.

<b>2011 Waste Managed</b>		
<b>Waste Type</b>	<b>Tons</b>	<b>Increase/(Decrease) from 2010</b>
<b>Municipal Solid Waste (MSW)</b>	<b>19,968</b>	<b>946</b>
<b>Demolition Waste</b>	<b>4,166</b>	<b>491</b>
<b>Confidential Waste</b>	<b>95</b>	<b>4</b>
<b>Special Waste</b>	<b>158</b>	<b>(203)</b>
<b>MSW Bypassed</b>	<b>1,232</b>	<b>(362)</b>
<b>Demo Bypassed</b>	<b>3,666</b>	<b>292</b>
<b>Total Waste Managed</b>	<b>24,387</b>	<b>1,237</b>

Waste tonnages received and managed by the City have increased across the board with the exception of Special Waste received from Stericycle. The City terminated its contract with Stericycle in 2011 due to unfavorable terms and compensation. The City has already begun the process of replacing lost tonnages by successfully negotiating 2 new contracts for Special Waste delivery with the Monsanto Corporation and BIC. Overall tonnages managed at the Waste Campus increased by 1,237 tons and MSW bypass tonnages decreased by 362 tons. This was all accomplished without any significant staff additions or resources.

The City's required emissions testing for heavy metals, specifically cadmium and mercury provided outstanding results and appears to support the success of the implementation of the City's upfront processing system as a critical component in environmental outcomes.

The Waste Campus also invited the Commissioner of the MPCA to tour the City's operations and in early October of 2011, Commissioner Paul Aasen and several Deputies from the MPCA visited and toured the City's comprehensive waste management campus. In addition to the City Council representatives and several County commissioners were local State elected officials Representative Tim Kelly and Senator John Howe. The City's intent was to demonstrate the progressive management programs that have been invested and developed in Red Wing and to include state officials in the discussions between the City and Xcel Energy to promote alternative energy projects active in the region.

City staff also worked closely with the MPCA to promote and enforce the State's use of the Metro Area Processing Statute 473.848 which requires waste generated within the 7 designated Metro counties to be processed prior to land disposal. The enforcement of this Statute will ensure all available capacity at processing facilities that have accepted waste from the Metro must be used before land disposal options. The significance of this to the City of Red Wing is the potential for utilization of the City's available processing capacity and the State and Municipal investment in processing may be fully realized to achieve public policy goals and objectives for positive long term environmental outcomes.

### **2011 Material Recovery Facility (MeRF) Operations**

In 2011, the City operated its Material Recovery Facility (MeRF) for the entire year without any significant issues. The City's MeRF is best described as a hybrid MeRF in that this MeRF is both a "Dirty MeRF" and a "Clean MeRF". A "Dirty MeRF" is a MeRF that recovers resources and removes

hazards as well as non-burnable materials from the garbage in order to provide a clean and consistent fuel for waste incinerators improving emissions and environmental outcomes. The City's MeRF is also a "Clean MeRF" in that it processes the City's source separated recyclables collected at the curb by City collection crews.

With this new operation, the City has been able to improve the quality of fuel used by the City's Waste-to-Energy facility by processing the garbage prior to incineration. Garbage is "processed" by first loading garbage onto a conveyance system where the waste is physically sorted using various equipment as well as staff from the Minnesota Correctional Facility and the City of Red Wing in order to inspect, sort and remove some of the following items:

- Marketable Commodities
- Oversized & Bulky Waste
- Propane Tanks
- Car Batteries
- Cement & Stone
- Non-Burnables, Dry Wall
- "Fines" Grit, Broken Glass, Kitty Litter
- Drop Cord & Electrical Cords from Appliances
- Appliances, Microwaves, Water Softeners

This facility also allows the City to "process" the recyclable materials collected by City collection crews in order to achieve clean recyclable commodities which can be sold to region manufactures for the purpose of replacing raw natural resources. The materials currently being collected from both the waste and recyclable processing activities are sold as commodities to the following markets:

- Steel ~ Sold to Local Markets AMG Alliance, Toy, Hove
- Aluminum ~ Same as Above
- Plastics ~ Bedford Technologies, Worthington, MN
  - TREX Decking
- Cardboard & Mixed Paper ~ LDI Fibers & Rock Tenn
  - Large Paper Mills in Becker & St. Paul
- Drop/Electrical Cordage
- Copper Scrap
- Textiles/Clothing
- Batteries (lead acid batteries used in automobiles)

The City's efforts are a prime example of "Resource Recovery" and "Alternative Energy" in that the steam produced by the City's Waste-to-Energy facility operations and through its recycling efforts has offset the need to use fossil fuels which helps to lessen the need for foreign oil as well as the need for virgin resources or raw materials. These efforts can be quantified in terms of energy savings equivalent to approximately 111,794,210,000 BTU's which can also be represented in terms of either 19,275 barrels of oil or 894,354 gallons of gas. This level of energy savings is only a portion of the total amount of energy that could be saved if the Waste-to-Energy facility was able to sell the entire amount of steam produced. Steam use by the Tannery is cyclical with 100% of steam produced by the Waste-to-Energy operations being used by the Tannery during the winter months for Tannery processes and supplemental heating and 50-65% of total steam produced being used during the summer months when supplemental heat is unnecessary.

An important aspect of recyclable commodity collection is the marketing of the recyclables to ensure the best return on the City's materials. The scope of marketing recyclables is an area that would consume extensive resources and daily commitment. To manage this aspect the City became a full

voting member of the Southern Minnesota Recycling Exchange (SEMREX) Joint Powers Board. As a full member the City is represented in the administration of this organization and the activities SEMREX is involved in across a broad spectrum of recycling related issues. SEMREX is primarily a cooperative marketing organization developed to sell the recyclable commodities from 9 southern Minnesota Counties, and businesses to gain the advantages of a high volume market participant. Revenues from recycling commodity sales in 2011 surpassed budget forecasts by over \$200,000. In 2011, the City processed and sold approximately 1,950 tons of recyclables broken out as follows:

- 666 Tons of Mixed Fibers/Paper
- 461 Tons of Old Corrugated Cardboard
- 494 Tons of Mixed Metals (Steel, Tin, Copper and Aluminum)
- 210 Tons of Beverage Glass
- 122 Tons of Plastics (Primarily #1 & #2)
- 48 Tons of Miscellaneous Materials (Tires, Electronics, Appliances)

### **2011 Waste Campus Operations, Demolition Processing, Yard Waste, Convenience Drop-Area**

The City's convenience area, yard waste management operations and demolition processing activities are another important component in the City of Red Wing's integrated solid waste management goals. The convenience area is available to accept small quantities of garbage, demolition and scrap metals from area residents and businesses. In 2011, the City added recyclable material bins for residents and business recycling drop off at the Waste Campus. This addition of services is important to the Public Works department as a whole and is also reflected in the decision to expand the available hours. The 2012 Waste Campus hours have been modified once more to eliminate confusion and provide consistent service times without seasonal variation. The Waste Campus listed below.

Monday through Friday	Open 9:00 am ~ 5:00 pm
Saturday	Open 7:00 am ~ 1:00 pm

Through 2011, the City issued almost 10,000 service transaction charges to individuals and businesses that paid to use the convenience drop off area at the Waste Campus. Many of these transactions were repeat customers that use the City's disposal services on a weekly basis. The Public Works Department is confident that the Waste Campus will see a significant increase in use due to the expanded access to the public.

Yard waste management was another area that received extensive use by the residents and businesses of the region. In 2011, the City again provided yard waste special collections and free disposal of grass and leaves to residents at the Waste Campus. The Waste Campus received 7,928 separate loads of brush, grass and leaves from the public in 2011. This translated into 10,331 cubic yards of wood chips and 3,595 cubic yards of leaves and grass managed by the Public Works Department at the Waste Campus.

The total number of Waste Campus Demolition processing operations continued due to State approval of the City's request to extend the existing Stipulation Agreement reached with the MPCA regarding these activities. It will be incumbent upon Public Works officials to secure alternatives to current operations in 2011 if the City wishes to continue these operations past November of 2011. Slightly fewer tons were received from residents and customers in 2011, but significantly more materials were recovered from the waste stream in terms of recyclable commodities or for disposal within the City's incinerator. A reduction in the amount of material bypassed and managed off-site is

consistent with a reduction in the associated costs for bypassing this material or a reduction in revenues received from commodity sale versus a cost incurred from commodity disposal.

## **TOPIC 4 – Public Works Administration Division**

*Sale of Maple Street Building* - The City Council authorized the sale of the Maple Street Building to Bob Ryan. Staff has been working on the final purchase agreement and the transfer of ownership should take place early in 2012

*Community Development* - A lease for a portion of this building was negotiated with Fernbrook Family Center. The lease runs from 1/1/2012 to 12/31/14. Anticipated growth in the Red Wing area for this company could mean an expanded lease in the near future.

*Minnesota GreenCorp* - In October, Mark Peterson came to the City of Red Wing as a member of the Minnesota GreenCorp program. Mark's focus has been data entry on the mandated B-3 Benchmarking Program for the City and the Red Wing School District and working with the Sustainability Commission on public education efforts.

*Budget Preparation* - Multiple modifications and scenarios for the 2012 budgets. Eliminated 3 General funded positions, 2 Parks and 1 Janitor from Building and Grounds Division.

*Purchasing* – Major purchases included a dump truck, refuse truck, several pickup trucks and squad cars.

*Major Public Bid procedures* – The Auditorium Theatre external repairs project was publicly bid twice and came substantially over budget both times. With staff working closely with the Historical Society of Minnesota, we were able to modify the scope of work and put contracts in place to begin the needed repairs on this building.

*Urban Landscape Ordinance* – Staff worked with Council members and Sustainability Commission members to put in place a policy to manage landscapes throughout the City.

*Contract and Lease management* – In 2011 the PW office monitored and administered approximately 31 individual contracts and/or leases. Examples of this are cell towers leases, elevator maintenance contract, uniform service contract, Mississippi National lease, and parking stall lease in the 4<sup>th</sup> Street Ramp.

## **TOPIC 5 – Red Wing Regional Airport**

*Joint Airport Zoning Board* - Created the JAZB which consists of two members from each of the following entities; Pierce and Goodhue Counties, Hartland, Trenton, Isabelle, and Wacouta Townships, the Village of Bay City and the City of Red Wing. The goal of this board will be to draft the airport zoning ordinance and to administrate the process for zoning completion for the areas surrounding the airport. Meetings have begun and will continue into 2012.

*Taxiway M Extension* - Completed the construction of a Taxiway extension to allow for a private hangar to be constructed on Lot 2, Block 13. The City received a grant from MnDOT in the amount of \$8500 to complete this extension at a 50/50 match.

*Pavement Rehabilitation Project* - Procured funding and authorization to rehabilitate a portion of the Airport taxiway and fuel pump area. At the meeting on September 12, Council accepted the low bid from Pember Companies for the project. The project costs are \$353,520 with the proportionate shares of the project costs at \$335,844 (federal share) and \$17,676 (local share). The project was expected to be completed by the end of 2011, however due to incomplete testing by the contractor; the project will be completed in the spring of 2012.

*MnDOT Grant Agreement* – Renewed the bi-annual MnDOT Grant Agreement for Airport Maintenance and Operation. This appropriates Mn/DOT funding for operation and maintenance of the Airport. The City will receive the maximum amount from the state for our maintenance needs at the facility. This amount is \$40,235 for the state appropriation.

*FBO and Caretaker Agreements* - Renegotiated the FBO and Caretaker Agreements with Blue Airways. The fuel flowage paid to the City of Red Wing was increased from \$.075 per gallon to \$.15 per gallon. The Caretaker agreement now contains language that requires Blue Airways to perform snow removal from the areas surrounding the private and commercial hangars. The City will continue to remove snow from the taxiways and entrance.

*Tree Removal* - The FAA had identified trees that were penetrating the 34:1 approach slope for Runway 27. A land use authorization was obtained from the Wisconsin DOT allowing work to be done in the scenic easement and trees were removed in the area requested by the FAA. The cost for this work was \$17,500 with the grant from the FAA covering 95% of the cost.

*Maintenance Truck Purchase* - Received a grant from MnDOT for the purchase of a new maintenance pick-up to replace the 40 year old truck currently in use. MnDOT offered a grant for \$23,936.95 (66.7%) and the City's portion was \$11,968.46 (33.3%). The new 2012 Silverado was delivered in December of 2011.

