



Annual Workshop Report

January 31 - February 1, 2020
Public Works Department

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Accomplishments 2019

TOPIC 1 – Public Services Division

The Public Services Division includes Streets, Fleet Maintenance, Marina, Water and Sewer Collection and Distribution. It consists of 1 Deputy Director, 1 Superintendent, and 1 Marina Manager. 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, 4 Operators, 1 Assistant Operator, and 1 Maintenance I. The Fleet Maintenance division has 1 Fleet and Supply Controller, 3 Mechanics.

Public Works: The following items include all Public Works Departments.

Cartegraph – Public Works began the upgrade to OMS in 2014. The shop was upgraded to OMS in 2016. In 2019 a new update was installed in Cartegraph which will require staff to build new reports. Old reports will no longer be supported with this update. Staff also started to build Preventative Maintenance Plans in Cartegraph which will automatically generate tasks that need to be done based on time or hours for each asset. A new three year agreement was also approved for 2020, 2021, and 2022.

Ole Miss Marina

- Improvements were made to H-dock during the winter months with new decking being installed along with new water lines and some electrical upgrades.
- Repair of F-dock gangway along with re-decking of gangway over the winter.
- New flotation, floor, storage & lights installed in aluminum Lund workboat.
- Re-decked and refloated Levee Park Courtesy Dock.
- Lots of flood prep & clean up in the middle of all that we had to replace the transformer on the end of the dock at Colvill.
- Re-decking and maintenance is also well under way to be completed by spring on the large workboat the R.H. Mehrkens.

Fleet Maintenance – The shop had 1,725 shop tickets for vehicle repair. 26 new vehicles and equipment were purchased which also includes some battery operated debris blowers and weed whips. 21 vehicles or equipment were sold or traded, of which 7 were traded in and 8 were sold on GovDeals or at auction and 6 were junked out.

Storm Damage - Public works crews from all departments responded to 2 major storm damage incidents in 2019. On 6/4/19 we had a wind event come through and we logged 95 hours labor and hauled 184 yards of material to the waste campus. On September 11, 2019, we had a rain event and logged 207 hours of labor responding to 42 tasks. The rain event caused a storm tunnel to blow apart on 10th Street and a number of manhole covers to blow off on the south side of town.

Flooding - The City also had major flooding in 2019. Spring flooding started in March and lasted into May. There were 3 crests with the highest being 15.79'. Both parks were flooded and delayed the Levee Park Project. The flood met the threshold for FEMA to be called in. Staff is working with FEMA to get reimbursed for work done and also to replace rip rap along Bay Point Park. Staff spent \$86,000 in preparing for the flood, almost \$90,000 in cleanup and hoping to be approved for around \$50,000 in rip rap work. The river came back up again in the fall, but not high enough to cause any damage.

Riverboats – Staff was expecting 12 visits from 5 different boats from American Cruise Lines and American Queen Steamboat Company. Flooding at the beginning and end of the cruise season resulted in the cancelation of 5 visits. Staff also worked with Meyer and the cruise companies to get boats docked during construction.

Sidewalks – Staff and crews continue working on the Mayor's Task Force sidewalk maintenance program. We inspected 1/3 of the city's sidewalks in 2019. Staff will create a list of residents for 2020 that letters will be sent to with sidewalks that rated in the poorest condition. In 2019, City crews replaced 9 sections of sidewalks that were found to be out of compliance as well as 19 sections that needed to be replaced because of damage caused by boulevard trees. The trees were removed along with the sidewalk and were replaced with new.

Sunnyside School Playground – Public Works and Engineering staff worked with the Red Wing School District at Sunnyside School. A new playground was installed with City staff doing the ground work, installing drain tile, pouring concrete, and pavement. Once everything was installed, staff completed the dirt work. Staff spent 702 man hours, poured 57 yards of concrete, paved 32 tons of bituminous, and placed 94 yards of black dirt. The school paid for all materials and staff time was donated by the City.

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 5,569 streets signs, 12 miles of trails, and 69 miles of sidewalks.

Street Work – Public Works crews reconstructed 2 alleys this past summer. The alley between Franklin and Fulton and 3rd and 4th Streets as well as the alley between Dakota and Fulton and 3rd and 4th. This consisted of removal of the old blacktop, sub base installation, installation of new curb and gutter and installation of new bituminous as well as matching up all driveways. Crews spent 848 hours spray patching pot holes using 3,139 gallons of oil and 88 yards of rock on various city streets. Staff spent 674 hours painting crosswalks, stop bars and parking stalls using 614 gallons of paint. From 2011 to 2012 the city went from 4,200 signs to 4,375 signs. We have not updated this number since 2012, but we now have 5,569 signs, an increase of 1,194 signs. That's an average increase of 170 signs per year. We also contracted the painting of all 125,183 feet of centerline striping.

Concrete and Blacktop – Crews poured approximately 730 yards of concrete and paved roughly 975 tons of blacktop on various city projects.

Snow and Ice - Crews spent 6,901 man hours on snow and ice removal operations last season. We applied 1,044 tons of treated salt, 151 yards of class 5 mixed with salt on gravel roads, 900 gallons of anti-ice liquid pretreating roads and hauled away 54,191 yards of snow from the downtown area and some residential areas (almost 5 times the previous year's amount). We called 4 snow emergencies, one on 1/28/19 when we received 6" of snow, one on 2/13/19 when we received 10" of snow, one on 2/21/19 when we received 8.5" of snow and one on 2/24/19 when we received 11" of snow. We received about 94.5" of snow for the season. With the amount of snow received in 2019, the snow and ice budget will also be over. Most of the overage will be labor. At total of \$402,251 was spent on labor. The total cost of snowplowing last season was \$709,980.

Sweeping – Crews spent 1,232 hours sweeping city streets picking up over 732 yards of sand and 1,124 yards of leaves.

Material Handling Site – We hired a contractor to crush our yearly blacktop and concrete piles and they crushed 2,930 tons of concrete and 2,680 tons of blacktop. We also hauled up approximately 500 yards of black dirt/dredged material to the site to be used for turf reestablishment in the future.

Water Distribution Sewer Collection and Storm: Maintains all underground infrastructure including 1,010 fire hydrants, 3,020 water valves, and 102 miles of water main. The sewer system includes 12 lift stations, 2,369 man holes, and 99 miles of sewer mains. Storm Water System: Consists of 926 manholes, 2,890 inlets, 209 outlets, 64 ponds (57 City, 7 private), 7 miles of tunnels, and 50 miles of storm water pipes. All storm water projects are completed with staff from both streets and utilities.

Sewer Main Repairs and Maintenance – The sewer collections crews responded to 9 sewer main backups of which all but 1 were private lines. The Vactor cleaned about 229,924 feet of the 523,000 total feet of sewer lines and videotaped 4,500 feet of sanitary and storm sewer.

Construction Projects - Crews worked 375 hours on the 10th and Bush Street, Sanford / Kingman / McSorley projects. 498 man hours were spent on the street overlay project. 389 hours on valve turning and 563 hours were spent repairing inlets.

ISO Project And Hydrants – (Insurance Service Office) Crews have been working on the ISO project which was initiated by the Fire Department to get a better fire rating for insurance rates. Public Works crews had 498 tasks in Cartegraph for Hydrant maintenance and painting. Crews also spent 424 hours on 1,992 tasks for flushing and required annual inspections of hydrants.

Water Main Repairs – Crews responded to 1 water main breaks and 1 service leak. Crews spent 389 hours turning 262 water valves.

Storm Water Repairs – Crews spent 382 hours clearing trees and brush from easements.

Airport – Crews spent 676 man hours clearing snow at the Airport.

TOPIC 2 - Airport

New Hangar Construction – The construction of 2 new private hangars were approved with work to be completed in 2020.

Storm Damage – The Aircraft Service Center were severely damaged in a 2018 wind storm. Work was completed with the replacement of the roof and hangar door in 2019.

Jet “A” Fueling System Upgrades –These upgrades included the replacement of the fuel cabinets, hose reels, communication lines, data logger and lighting improvements. This work was included in a grant covering 70% of the costs received from the State of Minnesota.

Arrival Departure (Terminal) Building upgrades – These improvements included replacing bathroom fixtures to meet ADA standards, hall heater replacement, lighting upgrades and the installation of exterior handicap accessible doors. This work was included in a grant covering 70% of the costs received from the State of Minnesota.

Tree Removal – Staff coordinated the removal of multiple trees that were reported by the State of Minnesota 5010 inspection to be growing into the approach surface at the airport. The work was completed and the state notified to remove the obstructions from the Airport Master Record.

TOPIC 3 - Buildings and Grounds:

There are 104 different buildings to maintain at 24 locations and there are 686 street lights with 22 miles of electrical lines. Our grounds consist of 20 different playground areas within 38 parks on 1,423 acres with 6,075 trees located in city parks and boulevards, three cemeteries on 117 acres and maintaining 69 acres of it with 15,206 internments, and 12 miles of trails.

The Buildings and Grounds Department includes Buildings, Cemeteries, Parks, Utility Locating and Asset Management. It consists of 1 Deputy Director, 2 Superintendents, 1 Operation Foreman, 1 Facilities Maintenance Tech, and 1 Facilities Repair Tech, 2 Electricians, 1 Plumber, 1 Infrastructure Asset Specialist, 1 Utility Locator and 5 Maintenance I.

Grounds

- **Weed Violations**
 - 55 weed violations inspected
- **Bluff View Park – Park Renovation and Playground Replacement**

- Removed old warming house
- Replaced all play features
- Installed new storm water mains to mitigate ground water
- Installed new and bigger basketball court
- Installed new ADA sidewalks and repaired retaining wall
- Installed park lighting
- **Colvill Park**
 - Extended horseshoe pit area and installed bean bag boards
 - Rehabilitated the Old Concessions Stand
 - New Doors
 - New Garage Door
 - New Concessions rollup door
 - Courtyard Building
 - Replaced lights with LED lights
 - New Ceiling Tile Grid work
- **Colvill Aquatic Center**
 - Startup of the new play feature
 - It's awesome go check it out
- **Pottery Pond**
 - Phase 1 finalization of ADA access and fishing Pier
 - Phase 2 north bank stabilization
 - Two new fishing opportunities with limestone steps
 - Control wall weir replacement in storm manhole
 - Stabilization of bank with additional rip rap
 - New railing installed
 - New pedestrian/bike trail with buffer from road
 - Street lighting – 3 new street lights installed
 - Water Main extended from Bay Point Park to Boat Storage Yard
 - New water service to “J Dock”
 - New water service to the boat storage yard
- **John Rich Park**
 - Installed the base for the new purple heart veterans memorial
- **Athletic Field**
 - **Splash Pad**
 - Got new pad up and running
 - Installed two new picnic tables
 - Installed three new park benches
 - Planted sod and grass seed
 - **Main Field**
 - Replace field irrigation
 - Installed new standing room and Handicap sitting in grandstand
 - Upgraded mound and home plate.
 - Removed outfield stands that were structurally deficient
- **Memorial Park**
 - Finalized eradication of Crown Vetch in planted prairies
- **Bay Point Park**

- Replaced of the old parks lights with the new style lights
- Replaced several sections of bad sidewalk
- **Sandy Lane Park**
 - Painted Pickle Ball Court Lines

Buildings

- **Red Wing Airport**
 - Remodeled Terminal Bathrooms
 - New Fixtures and Lights
 - Men's/Women's to Uni-Sex ADA Accessible
 - Re-Grouted and glazed tile (including kitchen area)
 - Cleaned Carpets
 - Replaced the roof and hanger door at the Aircraft Service Center
- **Goodhue County History Center**
 - Full roof replacement
 - Replaced windows in original section of building
 - Replaced all HVAC equipment
 - Replaced majority of exterior doors
 - Upgraded lighting in exhibit spaces to LED
- **T.B.Sheldon**
 - Installed new water softener
 - Installed new mini-split AC for rehearsal area
 - Repaired walls and ceiling from caused by flooding
- **City Hall**
 - Installed new sump near the boilers to mitigate Jordan River water
- **Fire Stations #2**
 - Grounds around the building up to expectations
- **Solid Waste Campus Admin Building**
 - Remodeled the two offices
- **Cemetery Activities**
 - 50 full burials
 - 59 cremation burials
 - 6 columbaria internments
 - 36 monument foundations installed totaling 26,880 Lbs of concrete
 - 16 lots sold
 - 4 columbaria niches sold
 - 5 flower fund accounts sold

Private Use of Public Property Applications and Facility use Requests – Public Works staff processed 77 PUPP's for events and construction projects. Staff also processed 319 requests for the use of the various shelters and facilities in the Parks.

TOPIC 4 - Utility Division

The day-to-day activities related to the City's water and wastewater utility operations fall within two Public Works Divisions, Public Services and Utilities. The Public Services component includes

operation and maintenance of the water distribution and fire protection systems; sanitary wastewater collection, including remote lift stations; and the storm water collection, conveyance and treatment/discharge facilities. The Utility Division components include the operation and maintenance of five wells, two water treatment plants, seven water storage reservoirs, five booster pump stations, three pressure reducing valve vaults, an industrial wastewater pretreatment plant, the main wastewater lift station and the main wastewater treatment plant. The Utility Division also provides engineering design and construction contract administration to utility related capital improvement and maintenance projects, and is responsible for the programming requirements, permitting and inspection associated with the storm water management program.

Utility Division personnel that are not part of Public Services include the Deputy Director, Environmental Services Manager, Field and Laboratory Technician, Chief Wastewater Operator, Chief Water Operator, two Wastewater Operators, two Water Operators and an Assistant Wastewater Operator. An Apprentice Wastewater Operator has also been recently hired, and will be starting his employment in February. The organizational structure was modified mid-year to accommodate the retirement of the City Chemist. This provided an opportunity to change the way the some of the laboratory analyses for our permit compliance are handled. These analyses are now sent out to a commercial laboratory instead of completing the analyses in-house. This resulted in an annual saving of \$50,000-\$60,000, and allowed our field and laboratory technician to focus more on storm infrastructure inspections.

Public Services Division staff breakdown and accomplishments were provided elsewhere. Some of the more significant Utility Division accomplishments are identified below.

Utility Division Accomplishments

The accomplishments identified below represent specific projects outside of the main Division focus, which is operating the water and wastewater treatment and pumping facilities. The accomplishments were largely completed on a management level, however considerable input and assistance was provided by the operations staff.

Bench Street Industrial Pretreatment Plant Optimization – The Bench Street Pretreatment Plant uses chemical treatment and enhanced settling to treat the water from the S.B. Foot Tannery. This treatment process is unique and its operation is continually optimized and enhanced. The treatment process results in a sludge that is dewatered and landfilled at an industrial landfill. Work continues on optimizing the operation of both the water and sludge treatment facilities.

2019 Emergency 12th Street Drift Storm Tunnel Repair – An extreme rain event that occurred on September 9th resulted in the failure of the 12th Street drift storm tunnel. Approximately 50 feet of the roof of the tunnel was displaced and damaged as a result of the excess pressure from the very high flowrate. The limestone slab roof of the tunnel was replaced with cast-in-place concrete. The replaced section was expanded to include a nearby tunnel section that was rated as critical in the tunnel assessment that was previously completed.

2019 Storm Water Tunnel Repairs in Levee Park – The discharge outfalls for three of the larger storm tunnels are located in Levee Park. These outfalls and a significant portion of the tunnels in Levee Park were replaced as part of the Levee Park renovations. The cost for this work exceeded \$1.3 million dollars.

2019 Levee Road Cured-In-Place Pipe Project - The design and bidding for installation of a cured-in-place liner in approximately 2500 feet of Levee Road 30" trunk sewer was completed.

Construction will be completed in the first quarter of 2020 and will eliminate a major source of infiltration that occurs when the river level is high. The bid cost for this work was \$456,000.

Replacement of the Roof on the Charlson Crest water Treatment Plant – The Charlson Crest Water Treatment Plant has experienced significant leaks resulting in internal and external masonry deterioration. The original standing seam metal roof was replaced with a 5-ply built up roof, and proper masonry flashing was installed through much of the building. The total project cost for this work was \$900,000.

TOPIC 5 - Solid Waste Division

The Solid Waste Division includes the Refuse and Recycling Collection operations, 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 R/R Waste Campus, 1 Office Coordinator, 1 Office Clerk and 1 Weekend Municipal Gate Attendant, (Saturday, Part Time). Refuse and Recycling Collection Staff consists of, 1 Operational Foreman Refuse/Recycling, 8 Maintenance I/Apprentice Maintenance. The Waste and Recycling Processing and Refuse Derived Fuel Staff includes 1 Operations Foreman, 1 Maintenance Staff, 5 Maintenance I/Apprentice Maintenance, and 1 Institution Community Work Crew (ICWC) Leader with 7-10 ICWC Staff.

Refuse & Recycling Collection 600 Fund

During 2019, the City of Red Wing adopted a new recycling program transitioning the community from utilizing collection bins, which required presorting of materials, to that of a new “single-sort” cart system. The goal for using the new single-sort carts was to make recycling easier and increase recycling participation. This meant educating audiences on the expanded types of materials that could newly be included within the recycling stream. Primary target audiences included: residential single-family homes, multi-tenant dwellings, and commercial businesses. To maximize communications outreach, several strategies were identified which included direct mailings, earned media, paid advertisements, social media and directly delivered educational materials such as 1,400 door hangers distributed at apartment complexes.

In all 6,500 Toter 96-gallon and 600 64-gallon carts were purchased. Each cart had tags embedded within the handle for data tracking of each receptacle. Of those 96-gallon carts, 5,971 were distributed directly to residential households and approximately 150 were provided to commercial accounts. The City has not yet distributed the smaller 64-gallon carts in an effort to have residents try using the 96-gallon carts first. To support collection of materials from the new carts, the City purchased a 26-yard McNelius ZR Automated Side Loader for the final purchase price of \$268,301.

The City did conduct independent pre- and post-analysis to establish the success of the project. In the end, the community’s recycling participation rate increased from 81.6 to 94.2 percent. The amount of targeted recyclables increased by approximately 15.4 percent. This improvement came from a combination of increased recycling participation and increased capture of recyclables from participating homes. The City expended just over \$700,000 on the overall project; however, the City was awarded two grants, from the MN Pollution Control Agency and the Recycling Partnership to cover \$297,700 of those expenses. In addition, the City received \$155,000 of in-kind services through the Recycling Partnership.

Waste Campus 603 Fund

In June of 2017, the Waste Campus had a significant fire that caused extensive damage while under renovation to upgrade the old incinerator building. By the end of 2019, the City was able to finalize its claim with the League of Minnesota Cities Insurance Trust for the Solid Waste Campus fire that occurred on June 7, 2017. In the end, the City received a total settlement of over \$4.9 million to cover expenses incurred by the fire. The settlement helped the City to rebuild its refuse processing facility, rehabilitate material recovery equipment, cover lost commodity revenue and reimburse for additional operational expenses incurred.

At this time, the Waste Campus has concluded the majority of rebuilding the old incinerator building and refurbishing the City's Material Recovery Operations. The overall project cost being in excess of \$12.5 million dollars. This project was funded through the following sources:

- Local Government Aid \$3,000,000
- Xcel Renewable Energy Development Grant \$2,000,000
- LMCIT Settlement \$1,560,000
- GO Bond \$6,000,000

Key to the environmental, economic & efficient goals for operations is the ability to secure waste streams from outside of the City of Red Wing in order to operate at or very near to capacity. New waste streams have been contracted with including the Cities of Hastings and Farmington. In 2019 Tennis Sanitation agreed to deliver all of the City of Hasting's MSW to the City of Red Wing. At the end of 2019 the City of Farmington signed a 2-year agreement to deliver their residential waste to the City's Waste Campus as well. At this time, the City is optimistic that Goodhue County will complete the Designation process that will require all waste generated in Goodhue County to be delivered to the City of Red Wing as well. In total the City may receive in excess of 36,000 tons of waste at the Waste Campus in 2020.

In December of 2019 the City's Solid Waste Permit was renewed and expanded to provide for up to 60,000 tons of waste capacity annually. With the added capacity the City should be able to provide the necessary waste capacity to Goodhue County and our municipal partners of Hastings and Farmington with available capacity for many years to come while bringing in sufficient waste streams to keep the City's Solid Waste & Recycling operations successful.

At this time we have demonstrated an overall increase in our tons of material received and processed in 2019. As well as a significant increase in daily traffic and use by the general public from walk in customers to customers using the yard waste services. 2019 records show increase in waste received, waste processed, customer service and revenues.

	<u>2018</u>	<u>2019</u>	<u>Percent Increase/Decrease</u>
TONNAGE			
Received from Haulers	22,509.48 tons	23,684.32 tons	5.22%
Total Waste Received & Processed	22,554.64 tons	26,734.92 tons	18.53%

CUSTOMER SERVICE

Walk-in Cash/Charge Customers	12,983 43.86/day	14,601 49.66/day	12.46%
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Yard Waste Customers	11,823 39.94/day	11,441 38.91/day	-3.23%
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Revenues from Walk-in Customers	\$338,445.72	\$396,218.72	17.07%
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ROLL-OFFS

Revenue from Roll-Off	\$167,414.04	\$174,709.57	4.36%
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