

CITY OF PEWAUKEE
ANNUAL REPORT TO
THE DEPARTMENT OF NATURAL
RESOURCES

IN ACCORDANCE WITH
NR216 PERMIT REQUIREMENTS

SUBMITTED APRIL 3, 2020

Illicit Discharge Detection and Elimination/Spills Response Program

Description of Program

The purpose of the Illicit Discharge Detection and Elimination program as well as the Spills Response program is to prevent harmful substances from entering the City's Municipal Separate Storm Sewer System (MS4) and being discharged to waters of the state. The Illicit Discharge Detection and Elimination program incorporates field screening procedures of 20 major outfalls for the purpose of detecting, investigating and eliminating discharges to the MS4 system which are not entirely composed of storm water. The Spills Response program is a procedure for responding to, investigating and remediating material spills which could enter the City's MS4 system.

Measurable Goals

Perform field screening of the City's major outfalls to determine if illicit discharges are occurring and document the findings. The measurable goal of the Spills Response program is to document and report on the spills reported to the City.

Results Achieved

City staff performed biannual field screening of the 20 major outfalls identified in its plan. There were no illicit discharges detected during the field screening program.

City Staff responded to two spills during the reporting year. The first occurred on February 14, 2019, as a result of a damaged hydraulic system on a skid loader removing snow within the Stillwater Condominium development. Approximately 2.5 to 3 gallons of hydraulic fluid were sprayed onto a driveway and street curb line. The incident occurred approximately 2 days prior to being reported to City Staff. By the time Staff had investigated the situation the property management company had initiated cleanup efforts. Additionally, two subsequent snow events and snow removal operations had occurred between the time of the spill and Staff investigation. Any remaining fluid not initially cleaned up by the management agency was so dispersed that remaining clean-up efforts would be unproductive.

The second occurred on February 27, 2019, at an industrial building on Watertown Road. A semi-truck ruptured a fuel tank over the private storm sewer system for the industrial building. The spill was believed to be between 50 to 100 gallons. The effected storm sewer system discharged to a storm water pond which was frozen at the time. The City of Pewaukee Fire Department, Sheriff's Department, City Staff and Wisconsin DNR responded to the spill. OSI Environmental Inc., was called in to assist with the cleanup.

The City of Pewaukee Fire Department responded to 2 additional spills in 2019. Both incidents were minor.

Describe Any Planned Changes to the Program

City staff were unable to complete a reevaluation of the outfalls selected for field screening in 2019. A review of the MS4 map indicated a number of the minor and major outfalls need to be adjusted based upon inventory data collected on the City's storm sewer system between 2014 and 2016. Staff anticipate updating the City's MS4 map and re-evaluating the program. Program re-evaluations will be consistent with the recommendations provided in DNR program guidance document 3800-2012-01.

Construction Site Pollutant Control

Description of Program

The City regulates land disturbing activity according to Chapters 14 and 19 of the Municipal code. Chapter 14 of the Municipal Code pertains to the design, construction, alteration, demolition and moving of buildings and structures within the City and associated land disturbing construction activities. The requirements of this chapter are regulated and enforced by the City's Building Inspection Department. Chapter 19 of the Municipal Code pertains to construction site erosion control, post construction site storm water management and illicit discharges. Regulation and enforcement of the requirements of the chapter are conducted by the Engineering Department. The construction site erosion control requirements of the ordinance are consistent with the provisions of NR 216 and the performance standards of NR 151 of the State Statutes.

Measurable Goals

The Engineering Department reviews proposed development for conformance with the erosion control requirements of Chapter 19 of the Municipal Code. The Department and its consultants also conduct weekly and post 0.5-inch rainfall event compliance inspections of permitted construction sites for the purpose of maintaining compliance with Chapter 19 of the Municipal Code. A report is generated for each inspection performed and provided to the owner/designated representatives of the permitted site. The inspection reports detail any maintenance to be performed, deficiencies noted and/or additional BMP's required to maintain compliance. Sites which are out of compliance are subject to enforcement which can include issuing Notices of Noncompliance, Notices of Violations, issuing fines, posting stop work orders and revoking permits.

The Building Inspection Department issues erosion control permits for land disturbing construction activities associated with buildings and structures. Inspections of the erosion control best management practices are performed on sites with disturbances less than 1 acre in area. Inspections are performed each time the Building Inspector is on a site having an erosion control permit.

Results achieved

The Engineering Department issued 5 erosion control permits for new development and conducted approximately 357 compliance inspections in 2019. Seven Notices of Noncompliance were issued during the with no Notices of Violation or Recommendations for Fines being issued.

The Building Inspection Department conducted approximately 149 erosion bond and 135 erosion control inspections in 2019.

Describe Any Planned Changes to the Program

None at this time.

Post-Construction Site Storm Water Management

Description of Program

The City regulates post-construction site storm water management according to Chapter 19 of the Municipal code. The post-construction storm water management requirements are compliant with the performance standards contained in NR 151 of the Administrative Code regarding infiltration and TSS reductions. However, the City's ordinance is more restrictive than the performance standards contained in NR 151 in terms of the pre- and post-developed discharge rates from the site. The City's ordinance generally requires the discharge from the 1, 2, 10 and 100-year post developed site to be at or below the discharge rates from the site under pre-settlement conditions. Post construction site storm water management practices are required to be maintained and the City requires a maintenance agreement be executed and recorded at Waukesha County Register of Deeds for the perpetual maintenance of the practices.

Measurable Goals

The City reviews proposed development plans for conformance with the post-construction site storm water management requirements of Chapter 19 of the Municipal Code and issues a Certificate of Permit Coverage for development plans meeting the requirements of the ordinance.

Results Achieved

The City issued five permits for post-construction site discharges from new development in 2019. City Staff reviewed 12 different proposed developments and 4 completed developments for compliance with the post-construction site storm water management requirements of the Municipal Code.

Describe Any Planned Changes to the Program

The City needs to establish a procedure for conducting compliance inspections of post-construction site storm water management practices to ensure the facilities are adequately maintained in conformance to the storm water management maintenance agreements. The program also needs to be memorialized into a cohesive document. This work has been delayed as the bulk of City Staff's time throughout the year has been taken up with the review, permitting and enforcement of the City's construction site erosion control and post-construction site storm water management ordinance.

Pollution Prevention

The City is required to implement a number of programs under the Pollution Prevention criteria identified within its WPDES permit. These programs are:

1. Inspection, maintenance and inventory of post-construction site storm water management facilities.
2. Catch basin cleaning program.
3. Street sweeping program.
4. Winter road management program.
5. Leaf management program.
6. SWPPP for municipal facilities.
7. Nutrient management plan for municipal properties with pervious surfaces over 5 acres.
8. Management procedures for unplanned water main discharges.
9. Other Reportable Results.

The following will provide a brief summary of each of the above programs, identify the measurable goals (if any), the results achieved and any planned program changes or improvements.

Inspection, Maintenance and Inventory of Post-Construction Site Storm Water Management Facilities

Description of Program

The program consists of an inventory of the existing storm water management facilities and ensuring the facilities are properly maintained to perform according to the performance standards used to design the facility. The City owns 8 municipal facilities between Wagner Park, the City Hall Campus and the newly constructed Pewaukee Sports Complex.

Measurable Goals

In 2010 the City identified through aerial photographs approximately 192 facilities within the municipal boundaries that were potential storm water BMP's implemented to control post-developed discharges and/or provide for TSS reduction. A significant amount of information still needs to be collected from available City records in order to complete the inventory and adequately conduct inspections of the facilities.

The inventory needs to include such items as: the location, general condition, age, and ownership of each facility; whether a long term maintenance agreement exists for the facility; the general design of the facility; results of any previous inspections; and completion of any previously recommended maintenance and repairs.

The two municipal facilities located in Wagner Park are inspected annually by City Staff. Five of the remaining six facilities (4 facilities at the Pewaukee Sports Complex, 1 bioretention facility at Wagner Park and 1 bioretention facility at the City Hall Campus site) were inspected this year, the exception being the bioretention facility at City Hall. All of the remaining six facilities require completion of as-built surveys.

Results achieved

To date the initial inventory has been conducted and inspections of the 2 wet ponds at Wagner Park and 3 at the Pewaukee Sports Complex show the facilities are in of maintenance activities. Additionally, 2 privately owned ponds were also inspected.

Describe Any Planned Changes to the Program

The completion of the inventory is still lagging due to the time requirements of other permit programs. As time allows staff will work on the completion of the inventory, preparation of inspection forms and the development of a procedure for conducting inspections. This work element shares many of the components which need to be prepared as a part of the Post Construction Site Storm Water Management Program.

Catch Basin Cleaning Program

Description of Program

The City identified 12 catch basins along Peterson Drive in 2005 to be inspected and cleaned annually when the program proposal was initially created. This list has been expanded to include 69 catch basins along Green Road which were installed as a part of a road construction project in 2013. This program has also been expanded to include the maintenance and repair of the City's existing storm sewer structures

Measurable Goals

To ensure the continued function of the MS4 system and to remove sediment deposits from the system.

Results achieved

Approximately 31 tons of solids were removed as a result of catch basin cleanings in 2019. Additionally, 10 storm sewer structures were repaired by the Highway Department in 2019.

Describe Any Planned Changes to the Program

The program needs to be updated to include the catch basins installed along Green Road and to include the maintenance and repairs of the storm inlets and manholes that has been occurring annually over the last several years. Previously storm sewer structures were repaired in conjunction with road reconstruction and road maintenance projects as a part of the City's road program. Due to the number of structures requiring immediate attention, maintenance efforts have been accelerated. From 2015 to 2019 over 446 storm sewer structures have been repaired or replaced.

Street Sweeping Program

Description of Program

The City Highway Department is responsible for the sweeping of the City Streets. The current program consists of sweeping all City streets once in the spring (as soon as the snow melts) and sweeping once in the fall all City streets with a curb and gutter cross-section. Additionally, City crews sweep arterial streets once per week for 1.5 months in the spring (as soon as the snow cover permits).

Measurable Goals

To remove sediment and debris from the road surface and gutter line prior to being transported by runoff into the City's MS4 system.

Results Achieved

Approximately 137 hours were spent sweeping 1028 miles of streets in 2019. This effort removed approximately 104 tons of solids prior to entering into the City's MS4 system.

Describe Any Planned Changes to the Program

None at this time.

Winter Road Management Program

Description of Program

The winter road management program prescribes the methodologies and guidelines for the removal and control of snow and ice buildup on the City's streets. The City Highway Department is responsible for establishing the procedures, methods, equipment and labor to implement the program. Details of the program evolve coincident with the evolution of technology and experience within the department regarding snow and ice removal.

Measurable Goals

The goal of the program is to maintain the roadway in a safe driving condition within the limitations of resources, climactic conditions, preservation of the driving surface and environmental concerns. In balancing these concerns, the department is recommended to strive for "passable roadway" conditions on the driving lanes during the storm event. A "passable roadway" is defined as a roadway surface that is free from drifts, snow ridges and as much ice and snowpack as is practical and can be traveled safely at reasonable speeds.

Secondary to maintaining safe driving conditions is the reduction of the amount of salts used during a winter storm event. To this extent the City has invested in equipment which allows for the use of a salt brine for pre-wetting of salt or as a stand-alone pre-treatment of the pavement surface. As a stand-alone treatment, salt brine helps to prevent ice/snow from bonding to the pavement surface thereby providing for easier removal during plowing operations. When used to pre-wet dry salt prior to application to a pavement surface, the brine helps to maintain the salt on the pavement surface rather than be displaced into the ditch or curb line. In either case the salt brine is anticipated to reduce the amount of dry salt required to achieve a "passable roadway."

The equipment utilized by the Highway Department is calibrated annually. Salt applications are set based upon the ground speed of the vehicle and the temperature of the pavement. The brine solution used for pre-wetting the salt is set not to exceed 10 gallons per ton with 8 gallons per ton being typical.

City Staff from the Highway Department attend training periodically regarding winter management operations. The last training event was held in 2016 (Smart Salting Level 1) with seven members of the Highway Department attending.

Results Achieved

The Highway Department maintains records of each event during the winter season which includes the amount of product used, pertinent weather data, hours worked, number of trucks in service and other measurable data. These records are maintained for the purpose of evaluating the program on a yearly basis. Snowfall totals used in the evaluation are taken from the weather station at Milwaukee International Airport.

The amount of salt used for a given event or season is highly variable and dependent on a number of conditions such as but not limited to: air temperature, pavement temperature, type of precipitation, intensity of storm, the miles of road to be maintained and the number of events in a given year. It is therefore difficult to evaluate whether or not the City's salt application is reduced through the use of salt brines for pre-wetting or as a stand-alone pre-treatment from year to year. Table 1 below summarizes the City's salt use for the

winter seasons beginning with the 2010-2011 winter season. A typical salt brine solution is composed of 23.3 % salt which yields approximately 2.5 pounds of salt per gallon of brine.

The City implemented the use of salt brines with the 2011-2012 winter season. Prior to that combinations of salt and salt/sand were used in conjunction with plowing for removal of ice and snow from the municipal streets. As can be seen in Table 1, overall salt use in terms of tons/lane mile of roadway has generally been less since the use of salt brines. However, this simplistic evaluation is a little misleading as it does not consider the severity of the winter season or the effort required by road crews to maintain a “passable roadway”.

Table 1. City of Pewaukee Salt Use for Winter Road Management.

Winter Season	Tons of Salt	Gallons of Salt Brine	Total Tons of Salt	Lane Miles of Roads	Tons of Salt/lane mile
2010-2011	3203*		3203*	176.4	18.2
2011-2012	1540	14200	1558	176.6	8.8
2012-2013	3520	22679	3548	177.0	20.0
2013-2014	3160	11490	3174	176.8	18.0
2014-2015	2390	4800	2396	179.4	13.4
2015-2016	1865	5100	1871	183.0	10.2
2016-2017	2900	11225	2914	183.0	15.9
2017-2018	3365	5650	3372	184.3	18.3
2018-2019	3365	9070	3376	184.3	18.3
2019-2020	2450	7750	2460	184.3	13.4

*Total includes salt and salt/sand mixture.

The Wisconsin DOT has created a Winter Severity Index (WSI) which it utilizes in evaluating the severity of the winter season in relation to its winter management program. The index considers factors such as number of snow events, amount of snow, number of freezing rain events, storm durations, and number of incidents (frost runs, drifting and clean up). The State DOT developed the WSI in 1995. Prior to the 2013-2014 winter season, index values ranged from 0 to 100. Therefore, the higher the index value, the more severe the winter season and the lower the index value the milder the winter season. The State DOT revised the WSI in the 2013-2014 winter season to provide results which are scaled and compared to the average of the 5 previous winters; the value of which is set as 100. Therefore, values in excess of 100 indicate a severer than average winter and values less than 100 indicate a milder than average winter.

The statewide average WSI is shown in Table 2 for each winter season. Included in Table 2 are values for the WSI for Waukesha County as well. Previously, values for the Waukesha County WSI from 2010 to 2013 were only given in the previous index (weighted from 0 to 100) with the remainder provided in the revised index. The values shown for Waukesha County in Table 2 for those years before the revised index

were extrapolated based upon the statewide average values which were available in both versions of the index.

The approximate total snowfall per season and the number of measurable snow events are taken from the Mitchell International weather station in Milwaukee. The average snowfall is based upon the total snowfall for the season divided by the number of measurable events shown.

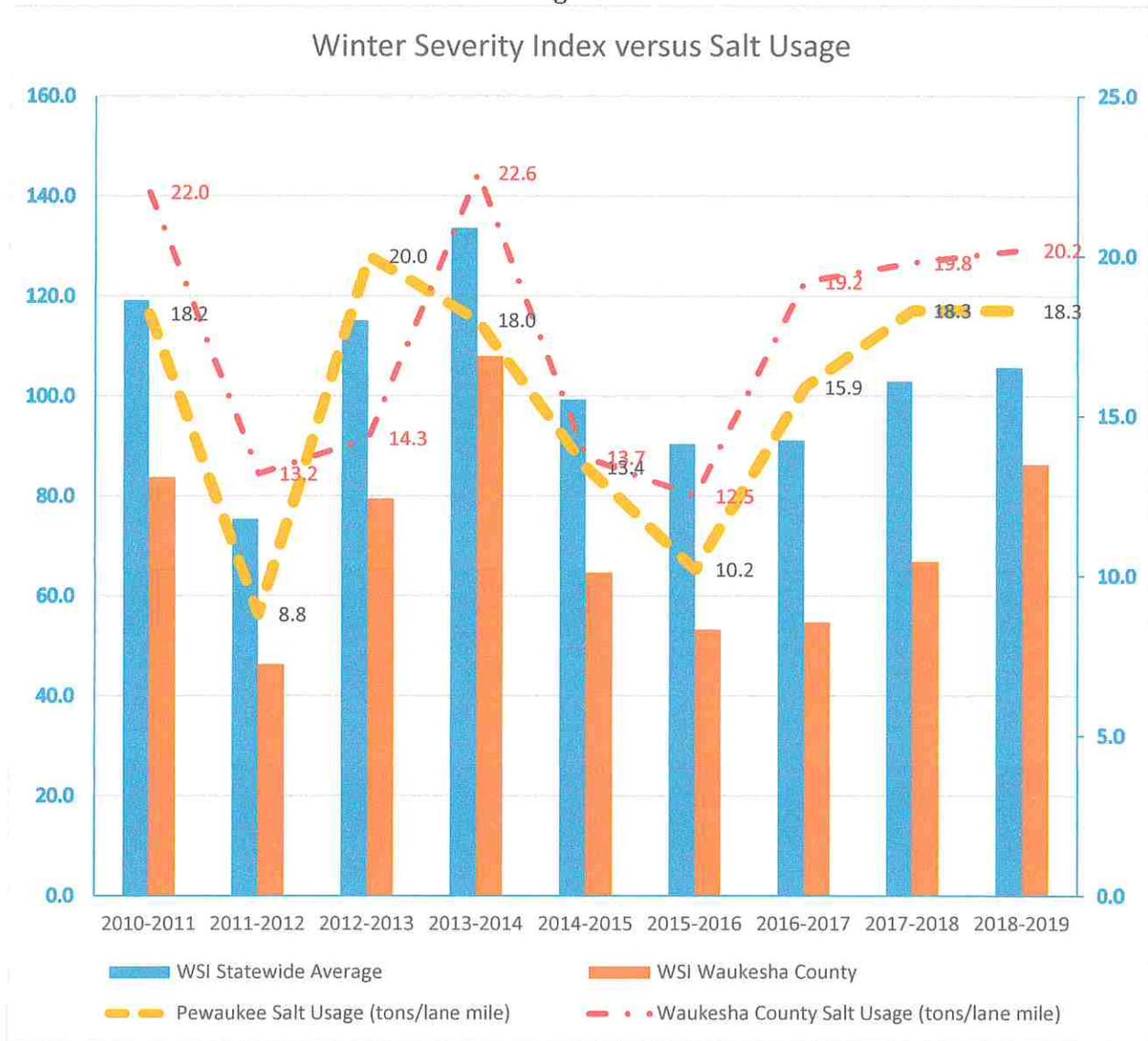
Figure 1 compares the Winter Severity Index for the statewide average and Waukesha County versus the salt usage for the City of Pewaukee and Waukesha County in tons of salt per lane mile. Overall, the WSI generally coincides with the amount of salt utilized per lane mile to maintain the City’s streets in a passable condition for a winter season. The WSI for the 2019-2020 winter season will not be available until the State publishes its Annual Winter Maintenance Report, usually at the end of the year.

Table 2. Comparison of Winter Seasons and City of Pewaukee Salt Use.

Winter Season	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Approx. Total Snowfall (inches)	61.9	29.6	45.0	63.4	43.0	39.1	37.6	46.7	55.8	35.4
Number of Measurable Events	45	26	31	52	38	25	23	36	40	28
Average Snowfall/event (inches)	1.4	1.1	1.5	1.2	1.1	1.6	1.6	1.3	1.4	1.3
Total Tons of Salt	3203*	1558	3548	3174	2396	1881	2914	3372	3376	2460
Total Hours Worked	NA	596	1272	1863	903	812	1171	1215	1564	1213
Tons of Salt/lane mile of Road	18.2	8.8	20.0	18.0	13.4	10.2	15.9	18.3	18.3	13.4
Average Pavement Temperature (degrees F)	NA	NA	NA	20.1	20.9	26.7	25.3	23.1	26.4	28.3
WisDOT Statewide WSI	119.2	75.4	115.1	133.6	99.3	90.4	91.1	102.9^b	105.7	**
WSI for Waukesha County	83.7^a	46.3^a	79.4^a	107.9	64.6	53.2	54.7	66.8^b	86.3	**
Waukesha County Tons of Salt/Lane mile	22.0	13.2	14.3	22.6	13.7	12.5	19.2	19.8	20.2	**

*Total includes salt and salt/sand mixture. **Not determined at the time of reporting. ^aExtrapolated values to statewide index. ^bCorrected WSI from previous report.

Figure 1



As of the writing of this report, the salt use for the 2019-2020 winter season is calculated to be 916 tons lower than the previous season with approximately 2460 total tons of salt used. This translates to approximately 13.4 tons per lane mile of salt applied to City Streets which is 4.9 tons per lane mile lower than the previous two years. By comparison, Waukesha County was reported to have utilized approximately 20.2 tons of salt/lane mile for the 2018-2019 winter season which was 1.9 tons per lane mile higher than the City of Pewaukee’s application over the same period. The average application for the City of Pewaukee since beginning the use of salt brines in the 2011-2012 winter season to 2018-2019 winter season is approximately 15.4 tons per lane mile. The winter management summary tables for each year of the program are attached to this report as Item B.

Describe Any Planned Changes to the Program

None at this time.

Leaf Management Program

Description of Program

The City accepts leaves and grass clippings at the City Recycling Center drop off site located on the lower level of the Pewaukee City Hall campus. Material collected at the site is taken to a facility in Menomonee Falls for composting. The City's waste hauler will also pickup leaves and grass clippings for a fee.

Measurable Goals

To provide an alternative means of disposing of leaves and grass clippings for the City residents as opposed to burning or dumping the debris into the City's right-of-way or ditches.

Results Achieved

In previous years yard waste was broken down into categories to determine the mass of leaves taken to the yard waste site. Similar to last year's reporting by Waukesha County the mass of leaves collected is included in the total yard waste collected which was 851 tons of material. The City's waste hauler reported collecting approximately 2 tons of yard waste in 2019.

Describe Any Planned Changes to the Program

None at this time.

SWPPP for Municipal Facilities

Description of Program

The City had prepared an update to its Evaluation of Public Works Yard in 2011. The goal of the evaluation was to identify potential sources of non-point pollution and provide recommendations to mitigate these sources. The City provided additional information in the 2015 annual report regarding planned projects to occur within the City "campus" site which will impact operations on site as well as potentially how storm water is handled. These planned projects included the construction of a new water tower, the construction of a new salt storage facility and repairs to the City Hall and highway garage. To date the new water tower and the repairs to City Hall and highway garage have been completed.

Measurable Goals

The goal of the program is to reduce non-point pollutant loadings from the City "campus" site.

Results achieved

An inspection of the Public Works Yard was performed in 2019.

Describe Any Planned Changes to the Program

Staff are still awaiting guidance from City leadership regarding the remaining projects. A formal update to the program for the City "campus" site will be made as soon as staff receives direction. Remaining major projects on the site are the construction of a new salt storage building, potential removal of the existing salt storage building and potential additional repairs or replacement of the highway garage.

Nutrient Management Plan for Municipal Properties with Pervious Surfaces over 5 acres

Description of Program

The City has 5 parks with pervious areas over 5 acres: Balmer Park, Wagner Park, South Park, Nettesheim Park and the Pewaukee Sports Complex. A formal nutrient management plan exists for the Pewaukee Sports Complex which is still under construction. The remaining parks do not have a formal plan as of yet.

The current practice for maintaining the turf areas in the City's park system is to contract with a company specializing in turf maintenance to assess the condition of the fields and to apply treatments as recommended. Treatments are typically composed of one or more of the following products: Dimension 2EW (a post emergence herbicide); a Urea Nitrogen-Potash fertilizer 25-0-5; a Urea Nitrogen-Potash fertilizer 17-0-5; Trupower 3 (a selective post emergence herbicide); and Cool Power (a selective post emergence herbicide). In addition, the infields of existing baseball fields receive a non-phosphorous fertilizer treatment (composed of a 33-0-5 NPK ratio) three times a year. Mowing of the established turf areas occurs on a weekly rotation with mowing of the baseball infields occurring up to three times a week if necessary.

Measurable Goals

The goal of the program is to reduce the amount of nutrients (namely phosphorous) applied to the turf areas and to apply only what is required to maintain a vigorous growth of vegetation.

Results Achieved

The City's current practice and ordinance bans the use of fertilizers containing phosphorous except for the establishment of new turf areas or if soil tests confirm phosphorous is required.

Describe Any Planned Changes to the Program

Formal plans for the remaining 4 parks need to be developed.

Management Procedures for Unplanned Water Main Discharges

Description of Program

The City is required by permit to develop a program to mitigate discharges of sediment to its MS4 system from unplanned water main discharges otherwise known as "water main breaks." The program was developed for Water and Sewer Utility staff who may be responding to such incidents. The priority for staff responding to a water main break is to locate the source of the discharge and to isolate it, or in layman's terms to "shut it off" as quickly as possible. Temporary erosion control measures, if required, can then be employed to prevent sediment from entering the MS4 system. The program identifies potential erosion control measures that can be employed to contain/limit the discharge of sediment from a water main break.

Measurable Goals

The goal of the program is to reduce the amount of sediment entering the City's MS4 system or a Water of the State from an unplanned water main discharge.

Results Achieved

The City had 2 unplanned water main discharges last year resulting in an estimated, combined discharge of approximately 7,611 gallons of municipal water. One of these breaks required the Highway Department to assist with removing accumulated off the parking lot of a local business.

Describe Any Planned Changes to the Program

None at this time.

Other Reportable Results

Roadways within the City are comprised of a combination of rural cross sections and urban cross sections. Rural cross sections include roadside ditches to collect storm water runoff along with gravel shoulders and paved travel lanes. Urban cross sections include storm sewers and curb and gutter to collect storm water runoff and paved travel lanes. The City of Pewaukee contains approximately 92.2 lineal miles of roads with almost 45 miles of roads having a rural cross-section. Roadside swales need to be periodically cleaned of accumulated sediment to function properly. Each year the City's Highway Department cleans a number of its roadside swales of sediment. Last year the Highway Department cleaned approximately 4371 feet of roadside swales which netted roughly 984 tons of soil.

Worksheets for the Fiscal Analysis required as a part of the City's annual report are included in Item C.

Public Education and Outreach and Public Involvement and Participation Programs

Description of Program

The City of Pewaukee along with other members of the Upper Fox River Watershed Group contract with Waukesha County to implement the public education and outreach and public involvement and participation programs as required by Group WPDES permit. The County organizes the plan based upon a target audience. For each target audience a set of activities and goals are defined.

Item C contains a summary of the County's 2019 Activity Summary Report identifying the key components of last year's plan, the measurable goals and the results achieved.

City Staff work with our elected and Municipal officials regarding the City's municipal storm water discharge permit through discussions regarding: the function and need of the City's Storm Water Utility; budget hearings and discussions; discussion regarding potential changes to the City's MS4 permit; changes to the City's post construction site storm water management and construction site erosion control ordinance; discussions related to capital improvement projects that impact storm water discharges; and discussions regarding enforcement of the City's post construction site storm water management and construction site erosion control ordinance. City Staff knowledgeable of the MS4 permit requirements disseminate this knowledge internally as well as to the public through answering general questions regarding the operations and maintenance of storm water BMP's; questions regarding what storm water utility fees are used for; answering drainage concerns; and discussions regarding how permit requirements impact internal job functions and the burden of reporting requirements.

Item A

WDNR eReporting System Annual
Report

Item B

Winter Road Management Summary Tables

**Road Salt / Deicers Usage
City of Pewaukee
2010-2011**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature (°F) Range during event (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
4-Dec-10	Plow	0	Salt	128	23 to 30		3		8		
9-Dec-10	Plow	0	Salt	145	19 to 23		2		8		
12/11/2010 to 12/12/2010	Plow	0	Salt	290	0 to 30		2.5		8		Storm began as drizzle before changing to snow
12/20/2010 to 12/21/2010	Plow	0	Salt	160	25 to 31		2		8		
30-Dec-10	Salting Only	0	Salt	80	16 to 40		Ice		8		Due to drop in temp, slish and light drizzle on road turned to ice
4-Jan-11	Salting Only	0	Salt	80	10 to 24		1		8		Early am event
5-Jan-11	Salting Only	0	Salt	80	10 to 20		0.5		8		Start flurries at approx 2 pm
11-Jan-11	Plow	0	Salt	160	17 to 27		3		8		
14-Jan-11	Salting Only	0	Salt	80	15 to 24		0.25		8		
15-Jan-11	Plow	0	Salt	90	13 to 22		2.5		8		Overnight snowfall
01/17/2011 to 01/18/2011	Plow	0	Salt	260	13 to 30		5		8		Snow start at approx 7 am
22-Jan-11	Salting Only	0	Salt	90	5 to 20				8		
27-Jan-11	Plow	0	Salt	120	5 to 22		3		8		Snow start at approx 4:30 am
29-Jan-11	Salting Only	0	Salt	90	20 to 26		0		8		Ice
31-Jan-11	Plow	0	Salt	90	15 to 23		2		8		Snow start at approx 8:30 am
1-Feb-11	Plow	0	Salt	120	8 to 20		8		9		Blizzard
2-Feb-11	Plow	0	Salt	120	9 to 24		11		9		Blizzard - multiple day clean up
6-Feb-11	Salting Only	0	Mix	90	22 to 30		Trace		8		
7-Feb-11	Salting Only	0	Mix	80	11 to 20		Trace		7		
8-Feb-11	Salting Only	0	Salt	80	0 to 11		Trace		7		
20-Feb-11	Salting Only	0	Mix	160	22 to 32		1		8		Rain, sleet, snow and freezing rain mix event
21-Feb-11	Plow	0	Mix	90	15 to 25		3.2		8		See above
22-Feb-11	Plow	0	Mix	90	19 to 21		2		8		See above
02/26/2011 to 02/27/2011	Plow	0	Mix	180	16 to 23		2		8		

**Road Salt / Deicers Usage
City of Pewaukee
2010-2011**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (Inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
5-Mar-11	Salting Only	0	Mix	80	22 to 33		Trace		8		
9-Mar-11	Plow	0	Mix	80	20 to 34		3		8		rain, snow, sleet
24-Mar-11	Salting Only	0	Salt	90	19 to 25		1		8		
		<i>Total Brine Used (gal)</i>		<i>Total Salt Used (tons)</i>							
		0		3203							

**Road Salt / Deicers Usage
City of Pewaukee
2011-2012**

Dates) of Event	Activity	Salt Brine Used (gal)	Product Used (mix-salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information	
17-Dec-11	Plow	450	Salt	80	23 to 28		1	28	7	0	Started at 2 am ended 7 am	
29-Dec-11	Salting Only	450	Salt	80	28 to 30		Ice	32	8	0	Rain at 4:30 am ended 7:30 am	
1-Jan-12	Plow	450	Salt	80	30 to 32		1	30	8	0	Rain @ 4:00 am switched to snow 1"	
2-Jan-12	Plow	450	Salt	90	19		1	32	8	0	1" overnight with 40 mph winds	
12-Jan-12	Plow	1200	Salt	220	32 to 15		6	52	8	24	10:00 am start 6" total Ended 3:00 am o the 13th	
17-Jan-12	Plow	1000	Salt	160	29 to 23		4	64	8	12	5:30am start snow @6:00am done @ noon	
20-Jan-12	Plow	800	Salt	120	15 to 20		3	90	8	0	3"Started @ noon ended @ 7 PM	
22-Jan-12	Salting Only	400	Salt	60	32		Ice	24	8	0	Freezing Rain started @4:30 PM	
23-Jan-12	Salting Only	500	Salt	60	32		Ice	24	8	0	Freezing rain throught the the night	
28-Jan-12	Plow	450	Salt	80	26		1	32	8	0	10 PM start ended 3AM 1"	
9-Feb-12	Pre-Wetting	1100									Pre-storm Pre-Wet	
10-Feb-12	Plow	450	Salt	120	32 to 18		3	64	8	0	11 AM start 5PM	
13-Feb-12	Pre-Wetting	1050									Pre-storm Pre-Wet	
14-Feb-12	Plow	500	Salt	70	29		1	32	8	0	3 PM start 1 AM ended	
21-Feb-12	Plow	450	Salt	80	31		2	31	8	0	5AM start 8Am ended 2"	
23-Feb-12	Pre-Wetting	1425									Pre-storm Pre-Wet	
24-Feb-12	Plow	925	Salt	120	30		4	32	8	24	Started 8PM ended 6 Am on 24th	
1-Mar-12	Pre-Wetting	1450									Pre-storm Pre-Wet	
2-Mar-12	Plow	700	Salt	120	30		5	29	8	0	Started at 2 pm and ended at 6 pm	
Total Brine Used (gal)		14200	Total Salt Used (tons)	1540	Total event hours worked			596	Number of Entries			18

**Road Salt / Deicers Usage
City of Pewaukee
2012-2013**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
7-Dec-12	Pre-Wetting	1200									Pre-storm Pre- Wet
18-Dec-12	Pre-Wetting	1375									Pre-storm Pre- Wet
18-Dec-12	Plow	500	Salt	140	32 to 34		2	45	9	0	Started at 2 pm and ended at 6 pm
19-Dec-12	Pre-Wetting	650									Pre-storm Pre- Wet
20-Dec-12	Plow	600	Salt	120	32 to 36		6	100	9	0	1 am started with 3 inches by morning; switched to rain 1.30 inches.....
21-Dec-12	Plow	500	Salt	120	28		3	36	9	0	Clean up from night before
28-Dec-12	Plow	500	Salt	100	29		1	27	9	0	7 am start 1 inch
29-Dec-12	Plow	500	Salt	110	27		1	32	8	0	5:30 start 1 inch
29-Dec-12	Plow	600	Salt	110	26		1	27	8	0	All day snow 1 inch
5-Jan-13	Salting Only	400	Salt	120	31		0.5	24	7	0	4 pm start 0.5 inch salt run
13-Jan-13	Plow	500	Salt	110	23		1	30	8	0	1 inch overnight
13-Jan-13	Plow	350	Salt	90	16		0	32	8	0	Had to re-plow and salt; roads wouldn't melt
23-Jan-13	Salting Only	350	Salt	90	14		0.5	20	7	0	Light dusting; temperatures dropping
27-Jan-13	Plow	450	Salt	140	28		1	28	8	0	1 inch of snow turned to rain
28-Jan-13	Salting Only	500	Salt	150	32		Ice	32	8	0	Roads refroze with rain turning to ice
30-Jan-13	Salting Only	500	Salt	150	33		Ice	16	8	0	Rain changing to ice; no accumulation
30-Jan-13	Plow	500	Salt	120	33		2	32	8	0	Snow, 2 inches by mid-morning
30-Jan-13	Plow	400	Salt	100	28		1	32	8	0	1 inch of additional snow with full clean-up
31-Jan-13	Plow	250	Salt	120	16		0.5	24	8	0	Light dusting with temperatures dropping and high winds
2-Feb-13	Plow	0	Salt	100	13		2	36	8	0	10 pm snow began; snow ends at 5 am
4-Feb-13	Plow	0	Salt	100	10		2	36	9	0	3 am start
4-Feb-13	Plow	0	Salt	80	8					0	Clean up from morning run
5-Feb-13	Plow	500	Salt	80	17		2	36	8	0	Started at 11 am and ended at 1 pm
7-Feb-13	Plow	700	Salt	150	28		7	36	9	0	Snow started at 11 am and ended at 11 pm
8-Feb-13	Plow	500	Salt	80	20		3	54	9	0	Clean up from 27
13-Feb-13	Plow	672	Salt	60	22		Ice	27	9	0	Pre-storm Pre-wet 3 inches of snow
14-Feb-13	Plow	500	Salt	60	33		Ice	24	9	0	Light rain turning to ice
15-Feb-13	Salting Only	450	Salt	70	13		0.5	24	7	0	Light snow overnight
19-Feb-13	Plow	500	Salt	90	16		2	36	9	0	0.3 inch rain changed over to snow
19-Feb-13	Plow	400	Salt	90	16			40	9	0	Second run for storm snot and ice.
22-Feb-13	Plow	500	Salt	90	30		5	36	9	0	2 am start with 5 inches ending by 6 am
22-Feb-13	Plow	40	Salt	60	32			24	8	0	Clean up from storm
25-Feb-13	Pre-Wetting	1497	Salt								Pre-storm Pre-wet
26-Feb-13	Plow	500	Salt	60	31		7	27	9	0	Start of Storm
27-Feb-13	Plow	500	Salt	36	32			36	9	0	Beginning of clean up
27-Feb-13	Plow	500	Salt	45	32			48	9	0	Finished clean up

**Road Salt / Deicers Usage
City of Pewaukee
2012-2013**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information	
28-Feb-13	Salting Only	500	Salt	40	32		0.5	20	8	0	Dusting overnight	
5-Mar-13	Plow	500	Salt	50	30		3	36	9	0	9 am snow started; out until rush hour	
6-Mar-13	Plow	500	Salt	70	30		3	36	9	0	3 am start total cleanup	
6-Mar-13	Plow	500	Salt	40	32		0	24	8	0	Slush run	
12-Mar-13	Salting Only	500	Salt	54	28		0.5	24	9	0	Rain chugging to ice; no accumulation	
15-Mar-13	Pre-Wetting	695	Salt								Pre-storm Pre-wet	
16-Mar-13	Salting Only	500	Salt	45	30		0.5	24	9	0	Light dusting	
18-Mar-13	Plow	400	Salt	50	31		2	27	9	0	Started at 8 am and done at 5 pm	
19-Mar-13	Salting Only	200	Salt	30	12		0	24	9	0	Temps dropped overnight; spotty ice	
Total Brine Used (gal)		22679	Total Salt Used (tons)	3520	Total event hours worked			1272	Number of Entries		44	

**Road Salt / Deicers Usage
City of Pewaukee
2013-2014**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	pavement Temperature (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
25-Nov-13	Salting Only	250	Salt	70	30	30	2	60	8	0	2" started at 6:30 am and ended at 11:00 am
8-Dec-13	Plow	400	Salt	60	23	21	2	38	9	0	2" started at 10:00 am
9-Dec-13	Plow	300	Salt	70	16	16	3	45	9	0	Snowed throughout the night, 3:00 am start
9-Dec-13	Plow	200	Salt	60	23	25	0			27	
10-Dec-13	Plow	0	Salt	60	5	7	Drifting	28	7	0	30 mph wind from the West
10-Dec-13	Plow	0	Salt	80	5	7	Drifting	12	4	0	30 mph wind from the West
11-Dec-13	Plow	0	Salt	60	7	9	1	27	9	0	1" started at 3:00 am
11-Dec-13	Plow	0	Salt	60	8	17	Drifting	15	5	0	25 mph wind from the Northwest
14-Dec-13	Plow	450	Salt	70	22	25	2	36	9	0	
14-Dec-13	Plow	450	Salt	70	26	28	2	40	9	0	
15-Dec-13	Plow	0	Salt	70	12	17	0.5	27	9	0	0.5" started at 2:00 am
16-Dec-13	Plow	450	Salt	70	15	18	2	27	9	0	2" started at 2:00 am with another 2" during the day
17-Dec-13	Plow	450	Salt	70	21	20	0.5	27	9	0	0.5" started at 2:00 am
19-Dec-13	Plow	0	Salt	70	29	31	Ice	20	9	0	2" Clipper started @ 3:30 and ended at 7:30
20-Dec-13	Plow	0	Salt	90	26	22	Ice	32	9	0	0.5" from 5:00 am to 7:00 am
20-Dec-13	Plow	0	Salt	80	28	28	Ice	32	9	0	Rain with freezing rain
21-Dec-13	Plow	0	Salt	70	26	28	Ice	27	9	0	Freezing rain
22-Dec-13	Plow	900	Salt	120	29	31	9	18	9	0	Freezing rain
23-Dec-13	Plow	200	Salt	60	22	24	0.5	99	9	0	9" started at 3:00 am
24-Dec-13	Plow	0	Salt	60	0	4	1	18	7	0	0.5" overnight
25-Dec-13	Plow	200	Salt	60	17	19	2	27	9	0	1" overnight
26-Dec-13	Plow	200	Salt	60	18	19	0.5	32	9	0	2" overnight
31-Dec-13	Plow	0	Salt	60	2	8	1	36	8	0	0.5" overnight
31-Dec-13	Plow	0	Salt	80	7	13	1	27	9	0	1" overnight
1-Jan-14	Plow	200	Salt	60	15	21	2	24	9	0	1" started at 3:00 pm
2-Jan-14	Plow	300	Salt	60	18	22	2	32	9	0	2" started at 7:00 am
4-Jan-14	Plow	400	Salt	60	29	30	1	27	9	0	2" started at 5:00 am
10-Jan-14	Plow	400	Salt	30	35	34	Ice	27	9	0	30 mph winds from Southwest and 1" of snow
10-Jan-14	Plow	200	Salt	40	36	35	Ice	27	9	0	Heavy freezing rain
11-Jan-14	Plow	400	Salt	40	33	32	Ice	27	9	0	Heavy freezing rain with 0.5" of ice
14-Jan-14	Plow	0	Salt	50	25	24	3	27	9	0	Roads refroze overnight
15-Jan-14	Plow	0	Salt	50	12	14	0	42	9	0	Still snowing back at 3:00 am
16-Jan-14	Plow	300	Salt	40	27	25	0.5	25	9	0	Total clean-up
17-Jan-14	Plow	400	Salt	50	18	15	1	30	9	0	Light dusting
18-Jan-14	Plow	400	Salt	50	15	19	1	24	8	0	1" all day snow
20-Jan-14	Plow	0	Salt	40	13	15	1	25	9	0	1" all day snow

**Road Salt / Deicers Usage
City of Pewaukee
2013-2014**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event (Clean-Up)	Other Information
22-Jan-14	Plow	0	Salt	50	13	18	0.5	27	9	0	Light dusting
25-Jan-14	Plow	200	Salt	60	16	12	2	38	9	0	2" with a 40 mph wind and heavy drifting
26-Jan-14	Plow	0	Salt	60	15	12	3	45	9	0	3" started at 3:00 am
27-Jan-14	Plow	0	Salt	50	0	2	Drifting	72	9	0	40 mph wind out of the Northwest
30-Jan-14	Plow	400	Salt	50	26	28	1	30	9	0	1" from fast moving system
1-Feb-14	Plow	500	Salt	60	15	18	2	74	9	0	All day snow
5-Feb-14	Plow	40	Salt	50	20	23	2	30	9	0	2" overnight
8-Feb-14	Plow	100	Salt	40	15	12	1	32	9	0	1" from fast moving system
12-Feb-14	Salting Only	400	Salt	50	20	18	0.5	27	9	0	0.5" in 4 hours
13-Feb-14	Plow	400	Salt	40	26	28	2	36	9	0	2" from fast moving system
17-Feb-14	Plow	500	Salt	70	25	26	6	96	9	0	6" all day snow
20-Feb-14	Plow	200	Salt	30	32	31	1	36	9	0	freezing rain turning to snow
21-Feb-14	Salting Only	200	Salt	30	26	26	0	18	9	0	1" of rain with temps dropping
27-Feb-14	Plow	0	Salt	40	0	1	0.5	27	9	0	Light dusting of snow
1-Mar-14	Plow	400	Salt	40	15	16	2	30	9	0	2" overnight
2-Mar-14	Plow	0	Salt	50	6	8	2	42	9	0	2" overnight
4-Mar-14	Plow	200	Salt	50	13	15	3	64	9	0	3" from fast moving system
5-Mar-14	Plow	200	Salt	50	16	18	0.5	27	9	0	Light dusting of snow
25-Mar-14	Plow	300	Salt	40	18	22	1	30	9	0	1" overnight
Total Brine Used (gal)		11490	Total Salt Used (tons)	3160	Average Air Temp per Entry (deg F)	18.7	Average Pavement Temp. per Entry (deg F)	20.13	Number of Entries	54	

Total event hours worked
1863

**Road Salt / Deicers Usage
City of Pewaukee
2014-2015**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (Inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
15-Nov-14	Plow	400	Salt	80	24	27	2	27	9	0	2" of snow; very icy
16-Nov-14	Salting Only	300	Salt	60	27	29	1	27	9	0	1" overnight
19-Nov-14	Salting Only	300	Salt	70	18	21	1	24	8	0	1" of snow; 7:00 am run
22-Nov-14	Salting Only	400	Salt	40	30	32	Ice	22	6	0	Light icing
24-Nov-14	Plow	400	Salt	80	28	30	3	36	8	0	3" total precip; rain changing to snow
25-Nov-14	Plow	300	Salt	80	25	28	2	45	9	0	2" overnight
28-Nov-14	Salting Only	300	Salt	60	29	28	Ice	18	9	0	Light icing
2-Dec-14	Plow	300	Salt	80	28	27	1	36	9	0	1" overnight; fast moving system
8-Dec-14	Salting Only	200	Salt	60	34	31	Ice	22	8	0	Light icing
18-Dec-14	Plow	200	Salt	60	31	30	Ice	24	8	0	Light icing
3-Jan-15	Plow	300	Salt	120	32	29	3	36	9	0	3" changing to freezing rain
4-Jan-15	Plow	0	Salt	80	10	13	2	96	9	0	2" of blowing snow
6-Jan-15	Plow	0	Salt	80	0	4	2	45	9	0	2" of blowing snow
8-Jan-15	Plow	0	Salt	120	0	3	3	27	9	0	3" of snow with high winds
8-Jan-15	Plow	0	Salt	80	-2	0	1	30	9	0	1" during rush hour
9-Jan-15	Plow	0	Salt	80	6	8	2	30	9	0	2" overnight
9-Jan-15	Plow	0	Salt	80	8	12	0	21	7	0	Drifting and slash run
21-Jan-15	Plow	300	Salt	90	27	28	2	24	9	0	2" overnight
25-Jan-15	Salting Only	300	Salt	60	27	26	0.5	21	9	0	Light dusting of snow
26-Jan-15	Plow	400	Salt	70	24	26	1	24	9	0	1" overnight; fast moving system
29-Jan-15	Salting Only	100	Salt	50	34	31	Ice	18	9	0	Light icing
1-Feb-15	Plow	0	Salt	120	10	14		40	9	0	Beginning of storm
1-Feb-15	Plow	0	Salt	120	10	14		40	9	0	
2-Feb-15	Plow	0	Salt	150	8	10	9	54	9	0	9" total accumulation with high winds
3-Feb-15	Plow	0	Salt	100	13	15	2	30	9	0	2" from fast moving system
18-Feb-15	Salting Only	0	Salt	100	3	5	1	30	9	0	Light dusting of snow
25-Feb-15	Plow	0	Salt	100	12	16	1	20	9	0	1" from fast moving system
3-Mar-15	Plow	300	Salt	120	30	27	2	36	9	0	2" from fast moving system

Total Brine Used (gal) **4800** *Total Salt Used (tons)* **2390** *Average Air Temp per Entry (deg F)* **19.48** *Average Pavement Temp. per Entry (deg F)* **20.89** *Number of Entries* **27**

Total Event hours worked **903**

**Road Salt / Deicers Usage
City of Pewaukee
2016-2017**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
4-Dec-16	Plow	850	Salt	160	31	29	2	27	9		Long storm start 8:00am and end 8:00pm. Clean up included.
9-Dec-16	Pre-storm	750		0							Pre-storm treatments.
10-Dec-16	Plow	400	Salt	80	24	22	4	50	10		Start 7:00pm on the 10th.
11-Dec-16	Plow	300	Salt	80	28	27	5	55	10		End 8pm on the 11th.
14-Dec-16	Plow	0	Salt	60	6	6	0	16	6		30mph winds - drift run.
15-Dec-16	Plow	0	Salt	80	8	10	0	16	4		Drift run.
16-Dec-16	Plow	0	Salt	140	10	11	7	64	8 to 10		Light dusting followed by long duration storm starting at 2:00pm.
17-Dec-16	Plow	0	Salt	170	16	18	6	88	10 to 9		Still snowing.
18-Dec-16	Plow	0	Salt	80	8	9	2	50	9		Storm ends.
19-Dec-16	Plow	0	Salt	60	12	14	0	36	9	50	
20-Dec-16	Plow	100	Salt	60	26	30	0	36	9	50	
23-Dec-16	Plow	300	Salt	80	31	30	4	50	9		Fast moving storm.
3-Jan-17	Salt	100	Salt	90	34	34	ice	32	8		Light icing.
9-Jan-17	Salt	200	Salt	60	34	31	1	24	9		Pre-storm salting.
10-Jan-17	Plow/salt	400	Salt	260	34	31	1	84	9		1 inch snowfall overnight followed by freezing rain.
11-Jan-17	Salt	400	Salt	120	28	26	ice	27	9		Freezing rain.
16-Jan-17	Salt	900	Salt	260	34	32	ice	76	9		Freezing rain.
17-Jan-17	Salt	300	Salt	80	34	32	ice	27	9		Freezing rain.
18-Jan-17	Salt	100	Salt	40	32	32	ice	15	5		Freezing rain.
25-Jan-17	Salt	300	Salt	60	32	32	0.5	36	9		Light snow.
26-Jan-17	Plow	300	Salt	80	27	29	1	36	9		1 inch overnight.
30-Jan-17	Plow	1400	Salt	70	27	29	1	18	9		Pre-storm treatments followed by a salt run.
31-Jan-17	Plow	300	Salt	80	29	29	2	36	9		2 inches overnight.
3-Feb-17	Pre-storm	1390		0							
12-Feb-17	Salt	300	Salt	60	31	32	ice	22	8		Light freezing rain.
24-Feb-17	Salt	400	Salt	140	30	31	ice	36	9 to 8		Light freezing rain.
25-Feb-17	Plow	200	Salt	100	23	25	1	30	9		1 inch overnight.
1-Mar-17	Plow	400	Salt	120	32	28	2	47	9		1 inch in morning followed by light snow all day.
13-Mar-17	Plow	400	Salt	130	22	25		81	9		Start storm with 3 inches and continues to snow.
14-Mar-17	Plow	200	Salt	50	18	19	6	32	9		Storm wraps up with 6 inch total.
16-Mar-17	Pre-storm	335									
17-Mar-17	Salt	200	Salt	50	32	31	ice	24	8		Light freezing rain.
Total Brine Used (gal)		11225	Total Salt Used (tons)	2900	Average Air Temp per Entry (deg F)	25.28	Average Pavement Temp. per Entry (deg F)	25.31	Number of Entries	29	

**Road Salt / Deicers Usage
City of Pewaukee**

2016-2017

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
<i>Total Event Hours Worked 1171</i>											

**Road Salt / Deicers Usage
City of Pewaukee
2017-2018**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (Inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
9-Dec-17	Plow	500	Salt	100	26	24	2	64	9		All night snow
11-Dec-17	Salt	300	Salt	80	26	22	1	27	9		Fast moving storm - 1 inch
13-Dec-17	Salt	300	Salt	60	22	19	0.5	24	9		Light Dusting
13-Dec-17	Salt	300	Salt	50	32	30	2	24	9		2" north part of City/dusting south part of City
13-Dec-17	Plow	500	Salt	50	28	26	1.5	27	9		Flurries predicted - 1.5 inches
14-Dec-17	Plow	100	Salt	50	28	25	0.5	24	9		Light Dusting
24-Dec-17	Plow	350	Salt	80	22	22	2	36	9		Fast moving storm - 2 inches
25-Dec-17	Plow	200	Salt	60	16	18	1	27	9		Fast moving storm - 1 inch
28-Dec-17	Plow	0	Salt	80	14	14	1	22	9		Fast moving storm - 1 inch
29-Dec-17	Plow	0	Salt	80	15	15	1	22	8		Fast moving storm - 1 inch
30-Dec-17	Plow	0	Salt	80	8	10	1	24	8		Fast moving storm - 1 inch
3-Jan-18	Plow	0	Salt	80	15	15	1	27	9		1 inch overnight.
11-Jan-18	Salt	0	Salt	80	34	32	ice	36	9		1 inch overnight.
15-Jan-18	Plow	300	Salt	120	28	24	3	56	9		Rain to ice
15-Jan-18	Plow	200	Salt	80	24	22	3	36	9		3 inches overnight - slow mover
16-Jan-18	Plow	200	Salt	50	24	28	0	24	9	24	3 inches - same storm lake effect
23-Jan-18	Plow	400	Salt	160	28	28	4	72	9		Slash run
28-Jan-18	Salt	400	Salt	60	28	28	1	20	9		Heavy rain changing to snow turning to hardpack
3-Feb-17	Plow	400	Salt	160	29	29	1	27	9		Fast moving storm - 1 inch
4-Feb-18	Plow	400	Salt	240	16	18	7	108	9		1 inch beginning of storm
5-Feb-18	Plow	0	Salt	120	8	8	1	27	9		7 inches of snow - total storm was 8 inches
6-Feb-18	Plow	0	Salt	120	6	6	1	36	9		1 inch - still snowing
9-Feb-18	Plow	0	Salt	180	14	16	4	72	9		1 inch overnight.
17-Feb-18	Salt	400	Salt	100	28	28	0.5	18	9		4 inches - 12 hour storm
4-Mar-18	Plow	400	Salt	100	31	31	3	36	9		Light Dusting
4-Apr-18	Plow	0	Salt	100	21	22	2	36	9		Fast moving storm - 3 inches
4-Apr-18	Plow	0	Salt	100	24	26	0	0	9		Rain changing to snow
14-Apr-18	Plow	0	Salt	100	28	28	ice	20	9		Hard pack ice
15-Apr-18	Plow	0	Salt	250	30	30	4	108	9		Light icing
16-Apr-18	Plow	0	Salt	180	28	28	1	36	9		Rain with heavy snow
18-Apr-18	Plow	0	Salt	140	32	32	2	63	9		1 inch - slow mover
19-Apr-18	Plow	0	Salt	75	34	34	3	36	9		2 inches - still snowing
											5 inches total from storm - wet and heavy
Total Brine Used (gal)		5650	Total Salt Used (tons)	3365	Average Air Temp per Entry (deg F)	23.34	Average Pavement Temp. per Entry (deg F)	23.06	Number of Entries	32	

**Road Salt / Deicers Usage
City of Pewaukee
2017-2018**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
<i>Total Event Hours Worked 1215</i>											

**Road Salt / Deicers Usage
City of Pewaukee
2018-2019**

Other Information	Hours of Post-Event	# of Drivers/# of Trucks	Hours of Event (worked)	Precipitation Amount (inches)	Range during event (°F)	Air Temperature Range during event (°F)	Amount of Product Used (Tons)	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Range during event (°F)	Amount of Product Used (Tons)	Activity	Dates) of Event
	0	6	22	1	32	31	40	200	Salt	31	40	Salt	9-Nov-18
<i>Light Dusting</i>	0	6	27	2	32	31	60	200	Salt	31	60	Plow	10-Nov-18
<i>2 inches - fast mover</i>	0	5	27	1	30	29	40	200	Salt	29	40	Plow	16-Nov-18
<i>Light Dusting</i>	0	5	24	1.5	30	28	50	300	Salt	28	50	Salt	17-Nov-18
<i>Slower moving storm - lingering snow showers</i>	0	3	12	0.05	30	30	15	200	Salt	30	15	Salt	26-Nov-18
<i>Blizzard to the south - worked 3 routes south of I-94</i>	0	9	32	1	29	30	70	200	Salt	30	70	Plow	29-Nov-18
<i>1 inch overnight - slow mover</i>	0	8	24	Ice	32	31	70	300	Salt	31	70	Salt	2-Dec-18
<i>Light Dusting</i>	0	8	24	0.05	31	33	70	200	Salt	33	70	Plow	12-Dec-18
<i>1 inch - fast mover</i>	0	9	30	1	30	28	80	100	Salt	28	80	Plow	25-Dec-18
<i>Light Dusting</i>	0	9	22	0.05	32	32	80	200	Salt	32	80	Salt	28-Dec-18
<i>Ice - very slippery</i>	0	9	27	0	32	32	80	200	Salt	32	80	Salt	29-Dec-18
<i>All day - changed to snow</i>	0	9	45	2	30	30	80	200	Salt	30	80	Plow	31-Dec-18
<i>Melt off and re-freeze</i>	0	9	32	Ice	31	32	70	200	Salt	32	70	Salt	2-Jan-19
<i>Light Dusting</i>	0	9	27	0.05	32	32	80	150	Salt	32	80	Salt	2-Jan-19
<i>Pre-wet run</i>	0	1	8				0	700	Brine		0	Pre-wet	9-Jan-19
<i>Beginning of storm - 6 inches expected</i>	0	9	30	1	21	22	100	200	Salt	22	100	Plow	18-Jan-19
<i>Snow all night - total clean up</i>	0	9	80	5	21	22	160	0	Salt	22	160	Plow	19-Jan-19
<i>Beginning of storm - 5 inches expected</i>	0	9	27	1	21	21	80	200	Salt	21	80	Plow	22-Jan-19
<i>Total snow 7 inches</i>	0	9	96	6	21	22	240	200	Salt	22	240	Plow	23-Jan-19
<i>Light Dusting</i>	0	9	22	0.05	4	19	80	0	Salt	4	80	Salt	26-Jan-19
<i>Started at 3 am and snowed all day</i>	0	9	180	11	21	21	400	0	Salt	19	400	Plow	28-Jan-19
<i>Pre-wet/pre-salt runs - ice expected</i>	0	9	21		26	27	0	500	Brine	27	0	Pre-wet	5-Feb-19
<i>1 inch of sleet then rain then freezing</i>	0	10	140	1	30	31	240	400	Salt	31	240	Plow	6-Feb-19
<i>Freezing rain</i>	0	10	60	Ice	32	33	180	500	Salt	33	180	Plow	7-Feb-19
<i>Heavy rain turned to ice</i>	0	10	30	Ice	31	25	80	200	Salt	25	80	Salt	7-Feb-19
<i>Fast moving storm</i>	0	10	24	1	28	29	60	300	Salt	29	60	Plow	10-Feb-19
<i>Wet - heavy snow</i>	0	10	110	9	30	31	100	400	Salt	31	100	Plow	12-Feb-19
<i>1 inch overnight, followed by lots of drifting</i>	0	10	50	1	22	24	80	200	Salt	24	80	Plow	13-Feb-19
<i>6 inches of expected snow</i>	0	10	32	2	26	28	100	200	Salt	28	100	Plow	17-Feb-19
<i>End of storm - 7 inches</i>	0	10	40	2	24	26	100	200	Salt	26	100	Plow	18-Feb-19
<i>1 inch snow with freezing rain</i>	0	10	60	1	28	31	140	300	Salt	31	140	Plow	20-Feb-19
							0	820	Brine		0	Pre-wet	22-Feb-19
<i>Ice with rain to follow</i>	0	10	30	Ice	31	32	80	400	Salt	32	80	Salt	23-Feb-19
<i>Heavy rain over night that turned to ice with 60 mph wind</i>	0	10	24	Ice	29	31	80	100	Salt	31	80	Salt	24-Feb-19
<i>1 inch over night</i>	0	10	40	1	24	25	80	100	Salt	25	80	Plow	27-Feb-19
<i>2 inches from fast moving over night storm</i>	0	9	30	2	11	13	80	0	Salt	13	80	Plow	2-Mar-19

**Road Salt / Deicers Usage
City of Pewaukee
2019-2020**

Date(s) of Event	Activity	Salt Brine Used (gal)	Product Used (mix=salt/sand)	Amount of Product Used (Tons)	Air Temperature Range during event (°F)	Pavement Temperature Range during event (°F)	Precipitation Amount (inches)	Hours of Event (worked)	# of Drivers/# of Trucks	Hours of Post-Event Clean-Up	Other Information
October	Salt	300	Brine	140							
November		360		1300							
December		310		1950							
January		1100		3000							
February		540		1200							
March		0		0							

Item C

Fiscal Analysis Worksheets

Spreadsheet for Fiscal Analysis Portion of City of Pewaukee's 2019 MS4 Annual Report

	Budget for Reporting Year	Annual Expenditures for Reporting year	Budget for Upcoming Year
Public Education and Outreach	\$1,500.00	\$1,422.50	\$2,637.50
Public Involvement and Participation	\$1,500.00	\$1,422.50	\$2,637.50
Illicit Discharge Detection and Elimination	\$1,340.00	\$4,740.00	\$1,420.00
Construction Site Pollution Control	\$1,000.00	\$52,440.00	\$1,000.00
Post-Construction Storm Water Management	\$10,000.00	\$55,000.00	\$10,000.00
Pollution Prevention	\$730,968.00	\$419,107.00	\$724,226.00
Storm Water Quality Management	\$350,000.00	\$0.00	\$350,000.00
Storm Sewer System Map	\$5,000.00	\$0.00	\$5,000.00
Totals	\$1,101,308.00	\$534,132.00	\$1,096,921.00

Public Information and Outreach

Budget for Reporting Year	\$1,500.00
Expenditures for Reporting Year	\$1,422.50
Budget for Upcoming year	\$2,637.50

Budget item for reporting purposes is identified as Permit Compliance-Information and Education and includes contracted amount to Waukesha County. This dollar figure is half of the reported/budgeted number as the Public Involvement and Participation program is included in here as well.

Note: for upcoming year budget, dollars are estimated for reporting purposes and may not necessarily correspond to the City's Budget summary. DNR categories do not correspond to City Budget Accounting Fields.

Public Involvement and Participation

Budget for Reporting Year	\$1,500.00
Expenditures for Reporting Year	\$1,422.50
Budget for Upcoming year	\$2,637.50

Budget item for reporting purposes is identified as Permit Compliance-Information and Education and includes contracted amount to Waukesha County. This dollar figure is half of the reported/budgeted number as the Public Education and Outreach program is included in here as well.

Note: for upcoming year budget, dollars are estimated for reporting purposes and may not necessarily correspond to the City's Budget summary. DNR categories do not correspond to City Budget Accounting Fields.

Illicit Discharge Detection and Elimination Program

Budget item for reporting purposes is an estimation of Engineering Technicians time and Civil Engineers time to inspect identified MS4 outfalls and review reports. Costs will include estimates of time spent persuing spills/dumping complaints by Engineering Staff and by City Fire Services.

Note: for upcoming year budget, dollars are estimated for reporting purposes and may not necessarily correspond to the City's Budget summary. DNR categories do not correspond to City Budget Accounting Fields. Fire Dept. projections are not included for budget purposes as Fire is a 24/7 service and is a required service regardless of whether or not a spill occurs.

Budget for Reporting Year

Engineering Staff	Hourly Wage	Hours	Cost
Engineering Technician	\$35.34	20.00	\$706.80
Advanced Engineering Technician	\$38.75	4.00	\$155.00
Civil Engineer	\$48.19	8.00	\$385.52
Asst. City Engineer	\$60.58	1.00	\$60.58
Mileage costs			\$26.75
			\$1,334.65 Subtotal
Fire Department Staff			
Fire Paid on Premise Division Chief	\$35.03	0.00	0.00
Fire Paid on Premise Driver/Paramedic	\$25.56	0.00	0.00
Fire Paid on Premise Fire Fighter	\$17.04	0.00	0.00
Paramedic	\$21.30	0.00	0.00
Engine Cost	\$650.00	0.00	0.00
Ambulance	\$500.00	0.00	0.00
Command Vehicle	\$62.00	0.00	0.00
			0.00 Subtotal
			1,334.65 Total
			1,340.00 Use

Annual Expenditures for Reporting Year

Hourly Wage	Hours	Cost
\$35.34	32.00	\$1,130.88
\$38.75	0.00	\$0.00
\$48.19	14.25	\$686.71
\$60.58	0.00	\$0.00
		\$16.05
		\$1,833.64 Subtotal
\$35.03	2.50	\$87.58
\$25.56	4.25	\$108.63
\$17.04	2.00	\$34.08
\$21.30	2.75	\$58.58
\$650.00	2.25	\$1,462.50
\$500.00	2.00	\$1,000.00
\$62.00	2.50	\$155.00
		\$2,906.36 Subtotal
		\$4,740.00 Total
		4,740.00 Use

Budget Upcoming Year

Hourly Wage	Hours	Cost
\$37.59	20.00	\$751.80
\$41.18	4.00	\$164.72
\$50.37	8.00	\$402.96
\$67.34	1.00	\$67.34
		\$27.25
		\$1,414.07 Subtotal
\$35.03	0.00	\$0.00
\$25.56	0.00	\$0.00
\$17.04	0.00	\$0.00
\$21.30	0.00	\$0.00
\$650.00	0.00	\$0.00
\$500.00	0.00	\$0.00
\$62.00	0.00	\$0.00
		\$0.00 Subtotal
		\$1,414.07 Total
		\$1,420.00 Use

Engine cost assumed based on apparatus cost of 650,000 with 10 year life cycle and 100 hours of use per year.
 Command Vehicle assumed based on cost of 49,613 with 8 year life cycle and 100 hours of use per year.
 ALS Unit assumed based on cost of 350,000 with 7 year life cycle and 100 hours of use per year.
 Mileage costs based on vehicle distance of 30 miles (expenditures) and 50 miles (budget) at mileage rate of 53.5 cents for 2017 and 54.5 cents for 2018.
 Wages based upon hourly rate multiplied by 1.42 to account for benefits, etc.

Construction Site Pollutant Control Program

Note: The City's Construction Site Pollution Control Program includes compliance inspections, enforcement, erosion control plan review and permitting. The financial estimates contained in this spreadsheet are for construction sites over an acre only and do not include estimates of Building Inspection costs. As developer driven expenditures are generally billed back, there are really no budget estimates provided except globally as Permit Compliance.

Budget for Reporting Year					Budget for Upcoming Year			
		<u>\$1,000.00</u>					<u>\$1,000.00</u>	
Annual Expenditures for Reporting Year		<u>\$52,440.00</u>						
Project	Nauman Property	Wages	Hours	Total				
	R/M Bills			\$0.00				
	Engineer Tech	\$35.34	0.00	\$0.00				
	Adv. Engineer Tech	\$38.75	3.75	\$145.31				
	Civil Engineer	\$48.19	1.00	\$48.19				
	Asst. City Engineer	\$60.58	0.00	\$0.00				
	Total				\$193.50			
	Pewaukee Industrial Development							
	R/M Bills			\$2,574.85				
	Engineer Tech	\$35.34	0.00	\$0.00				
	Adv. Engineer Tech	\$38.75	0.00	\$0.00				
	Civil Engineer	\$48.19	4.50	\$216.86				
	Asst. City Engineer	\$60.58	0.00	\$0.00				
	Total				\$2,791.71			
	Briohn Builders Northmound Bldg							
	R/M Bills			\$5,837.56				
	Engineer Tech	\$35.34	0.00	\$0.00				
	Adv. Engineer Tech	\$38.75	0.00	\$0.00				
	Civil Engineer	\$48.19	42.25	\$2,036.03				
	Asst. City Engineer	\$60.58	0.00	\$0.00				
	Total				\$7,873.59			
	Hammacher Building							
	R/M Bills			\$47.50				
	Engineer Tech	\$35.34	0.00	\$0.00				
	Adv. Engineer Tech	\$38.75	0.00	\$0.00				
	Civil Engineer	\$48.19	0.00	\$0.00				
	Asst. City Engineer	\$60.58	0.00	\$0.00				
	Total				\$47.50			
	Pewaukee Sports Complex							
	R/M Bills			\$0.00				
	Engineer Tech	\$35.34	33.00	\$1,166.22				
	Adv. Engineer Tech	\$38.75	0.00	\$0.00				
	Civil Engineer	\$48.19	8.00	\$385.52				
	Asst. City Engineer	\$60.58	0.00	\$0.00				
	Total				\$1,551.74			
	Prairie Grass Multi Family Apartments							
	R/M Bills			\$144.98				
	Engineer Tech	\$35.34	0.00	\$0.00				
	Adv. Engineer Tech	\$38.75	0.00	\$0.00				
	Civil Engineer	\$48.19	0.00	\$0.00				

Asst. City Engineer	\$60.58	0.00	\$0.00	
				Total \$144.98
Swan View Farms Ph. 1				
R/M Bills			\$0.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	32.25	\$1,554.13	
Asst. City Engineer	\$60.58	0.00	\$0.00	
				Total \$1,554.13
J&R Dreamfield LLC/Knutson				
R/M Bills			\$0.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	8.75	\$421.66	
Asst. City Engineer	\$60.58	0.00	\$0.00	
				Total \$421.66
Stenz Multi-Family Development				
R/M Bills			\$0.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	3.75	\$180.71	
Asst. City Engineer	\$60.58	0.00	\$0.00	
				Total \$180.71
City Hall New Water Tower				
R/M Bills			\$0.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	11.50	\$445.63	
Civil Engineer	\$48.19	5.75	\$277.09	
Asst. City Engineer	\$60.58	0.00	\$0.00	
				Total \$722.72
Trout Building-Duplainvell Rd				
R/M Bills			\$0.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	12.75	\$614.42	
Asst. City Engineer	\$60.58	0.00	\$0.00	
				Total \$614.42
Woodleaf Reserve Phase 3				
R/M Bills			\$13,138.30	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	28.75	\$1,385.46	
Asst. City Engineer	\$60.58	0.00	\$0.00	
				Total \$14,523.76
Glen of Parkway Ridge				
R/M Bills			\$0.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	6.00	\$232.50	
Civil Engineer	\$48.19	32.75	\$1,578.22	
Asst. City Engineer	\$60.58	0.00	\$0.00	
				Total \$1,810.72
James Craig Builders-Swan Road				
R/M Bills			\$0.00	

Engineer Tech	\$35.34	0.00	\$0.00
Adv. Engineer Tech	\$38.75	28.25	\$1,094.69
Civil Engineer	\$48.19	8.00	\$385.52
Asst. City Engineer	\$60.58	0.00	\$0.00

Total \$1,480.21

Baenen_Northview Road

R/M Bills			\$0.00
Engineer Tech	\$35.34	0.00	\$0.00
Adv. Engineer Tech	\$38.75	0.00	\$0.00
Civil Engineer	\$48.19	16.00	\$771.04
Asst. City Engineer	\$60.58	0.00	\$0.00

Total \$771.04

Meadowbrook Village

R/M Bills			\$936.98
Engineer Tech	\$35.34	0	\$0.00
Adv. Engineer Tech	\$38.75	0	\$0.00
Civil Engineer	\$48.19	0.25	\$12.05
Asst. City Engineer	\$60.58	0	\$0.00

Total \$949.03

Klein Dickert Glass

R/M Bills			\$1,773.48
Engineer Tech	\$35.34	0	\$0.00
Adv. Engineer Tech	\$38.75	0	\$0.00
Civil Engineer	\$48.19	25.5	\$1,228.85
Asst. City Engineer	\$60.58	0	\$0.00

Total \$3,002.33

Christ Evangelical Lutheran Church

R/M Bills			\$6,255.40
Engineer Tech	\$35.34	0	\$0.00
Adv. Engineer Tech	\$38.75	0	\$0.00
Civil Engineer	\$48.19	32.25	\$1,554.13
Asst. City Engineer	\$60.58	0	\$0.00

Total \$7,809.53

Rainbow Childcare

R/M Bills			\$429.83
Engineer Tech	\$35.34	0	\$0.00
Adv. Engineer Tech	\$38.75	0	\$0.00
Civil Engineer	\$48.19	19.5	\$939.71
Asst. City Engineer	\$60.58	0	\$0.00

Total \$1,369.54

US Cellular Tower

R/M Bills			\$0.00
Engineer Tech	\$35.34	0	\$0.00
Adv. Engineer Tech	\$38.75	2.5	\$96.88
Civil Engineer	\$48.19	1.25	\$60.24
Asst. City Engineer	\$60.58	0	\$0.00

Total \$157.11

Skydance Pet Lodge

R/M Bills			\$0.00
Engineer Tech	\$35.34	0	\$0.00
Adv. Engineer Tech	\$38.75	0	\$0.00
Civil Engineer	\$48.19	11.25	\$542.14
Asst. City Engineer	\$60.58	0	\$0.00

Total \$542.14

Briohn Bldrs-Angulus Bldg Springdale Road

R/M Bills			\$1,910.27
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Engineer Tech	\$35.34	0	\$0.00
Adv. Engineer Tech	\$38.75	0	\$0.00
Civil Engineer	\$48.19	26.75	\$1,289.08
Asst. City Engineer	\$60.58	0	\$0.00

Total \$3,199.35

Stollenwerk Agricultural Pond

R/M Bills			\$691.01
Engineer Tech	\$35.34	0	\$0.00
Adv. Engineer Tech	\$38.75	0	\$0.00
Civil Engineer	\$48.19	0.71	\$34.21
Asst. City Engineer	\$60.58	0	\$0.00

Total \$725.22

Post Construction Storm Water Management

Note: The City's Post Construction Site Storm Water Management Program Program includes pond inspections, review of maintenance agreements, plan review and permitting. Estimates are provided for Engineer Tech's review of Wagner Park Ponds and Civil Engineer's review of Green Road Pond, the Pewaukee Sports Complex Ponds and the Rockwood Drive Pond. As developer driven expenditures are generally billed back, there are really no budget estimates provided except globally as Permit Compliance.

Budget for Reporting Year		<u>\$10,000.00</u>		Budget for Upcoming Year		<u>\$10,000.00</u>	
Annual Expenditures for Reporting Year		<u>\$55,000.00</u>					
Project		Wages	Hours	Total			
Cloverland Farms	AECOM Bills			\$0.00			
	Engineer Tech	\$35.34	0.00	\$0.00			
	Adv. Engineer Tech	\$38.75	0.00	\$0.00			
	Civil Engineer	\$48.19	12.00	\$578.28			
	Asst. City Engineer	\$60.58	0.00	\$0.00			
	Total						\$578.28
Pewaukee Industrial Development	AECOM Bills			\$0.00			
	Engineer Tech	\$35.34	0.00	\$0.00			
	Adv. Engineer Tech	\$38.75	0.00	\$0.00			
	Civil Engineer	\$48.19	7.25	\$349.38			
	Asst. City Engineer	\$60.58	0.00	\$0.00			
	Total						\$349.38
Glen at Parkway Ridge	AECOM Bills			\$3,658.74			
	Engineer Tech	\$35.34	0.00	\$0.00			
	Adv. Engineer Tech	\$38.75	0.00	\$0.00			
	Civil Engineer	\$48.19	9.75	\$469.85			
	Asst. City Engineer	\$60.58	0.00	\$0.00			
	Total						\$4,128.59
Hammacher Building	AECOM Bills			\$0.00			
	Engineer Tech	\$35.34	0.00	\$0.00			
	Adv. Engineer Tech	\$38.75	0.00	\$0.00			
	Civil Engineer	\$48.19	5.50	\$265.05			
	Asst. City Engineer	\$60.58	0.00	\$0.00			
	Total						\$265.05
Swan View Farms Ph 1	AECOM Bills			\$9,649.92			
	Engineer Tech	\$35.34	0.00	\$0.00			
	Adv. Engineer Tech	\$38.75	0.00	\$0.00			
	Civil Engineer	\$48.19	16.00	\$771.04			
	Asst. City Engineer	\$60.58	0.00	\$0.00			
	Total						\$10,420.96
Klein Dickert Glass	AECOM Bills			\$6,561.78			
	Engineer Tech	\$35.34	0.00	\$0.00			
	Adv. Engineer Tech	\$38.75	0.00	\$0.00			

Civil Engineer	\$48.19	11.50	\$554.19	
Asst. City Engineer	\$60.58	0.00	\$0.00	
			Total	\$7,115.97

Green Road Pond Inspection

AECOM Bills			\$0.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	2.50	\$120.48	
Asst. City Engineer	\$60.58	0.00	\$0.00	
			Total	\$120.48

Christ Evangelical Church

AECOM Bills			\$2,483.88	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	10.50	\$506.00	
Asst. City Engineer	\$60.58	10.50	\$636.09	
			Total	\$3,625.97

Skydance Pet Lodge

AECOM Bills			\$5,953.83	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	5.50	\$265.05	
Asst. City Engineer	\$60.58	1.25	\$75.73	
			Total	\$6,294.60

Rainbow Childcare

AECOM Bills			\$4,854.15	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	9.50	\$457.81	
Asst. City Engineer	\$60.58	0.00	\$0.00	
			Total	\$5,311.96

J&R Dreamfield LLC-Knutson

AECOM Bills			\$1,435.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	4.00	\$192.76	
Asst. City Engineer	\$60.58	0.00	\$0.00	
			Total	\$1,627.76

Woodleaf Reserve Phase 3

AECOM Bills			\$0.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	2.50	\$120.48	
Asst. City Engineer	\$60.58	0.00	\$0.00	
			Total	\$120.48

Stenz Multi-Family Development

AECOM Bills			\$2,105.22	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	1.75	\$84.33	
Asst. City Engineer	\$60.58	0.00	\$0.00	
			Total	\$2,189.55

Briohn Bldrs-Angulus Bldg Springdale Road

AECOM Bills			\$4,562.73	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	12.00	\$578.28	
Asst. City Engineer	\$60.58	0.00	\$0.00	
Total				\$5,141.01

Baenen_Northview Road

AECOM Bills			\$0.00	
Engineer Tech	\$35.34	0.00	\$0.00	
Adv. Engineer Tech	\$38.75	0.00	\$0.00	
Civil Engineer	\$48.19	7.75	\$373.47	
Asst. City Engineer	\$60.58	0.00	\$0.00	
Total				\$373.47

Troutd Building on Duplainville

AECOM Bills			\$2,821.38	
Engineer Tech	\$35.34	0	\$0.00	
Adv. Engineer Tech	\$38.75	0	\$0.00	
Civil Engineer	\$48.19	6	\$289.14	
Asst. City Engineer	\$60.58	0	\$0.00	
Total				\$3,110.52

Briohn Builders Northmound Bldg

AECOM Bills			\$3,105.30	
Engineer Tech	\$35.34	0	\$0.00	
Adv. Engineer Tech	\$38.75	0	\$0.00	
Civil Engineer	\$48.19	16	\$771.04	
Asst. City Engineer	\$60.58	0	\$0.00	
Total				\$3,876.34

Wagner Park Pond Inspections

AECOM Bills			\$0.00	
Engineer Tech	\$35.34	0	\$0.00	
Adv. Engineer Tech	\$38.75	0	\$0.00	
Civil Engineer	\$48.19	2	\$96.38	
Asst. City Engineer	\$60.58	0	\$0.00	
Total				\$96.38

Rockwood Drive Pond Inspection

AECOM Bills			\$0.00	
Engineer Tech	\$35.34	0	\$0.00	
Adv. Engineer Tech	\$38.75	0	\$0.00	
Civil Engineer	\$48.19	2.25	\$108.43	
Asst. City Engineer	\$60.58	0	\$0.00	
Total				\$108.43

AECOM Bills			\$0.00	
Engineer Tech	\$35.34	0	\$0.00	
Adv. Engineer Tech	\$38.75	0	\$0.00	
Civil Engineer	\$48.19	0	\$0.00	
Asst. City Engineer	\$60.58	0	\$0.00	
Total				\$0.00

Sports Complex Pond Inspections

AECOM Bills			\$0.00	
Engineer Tech	\$35.34	0	\$0.00	

Adv. Engineer Tech	\$38.75	0	\$0.00	
Civil Engineer	\$48.19	3	\$144.57	
Asst. City Engineer	\$60.58	0	\$0.00	
				Total
				\$144.57

Pollution Prevention

	2019 Budgeted	2019 Expenditure	2020 Budgeted
Catch Basin Cleaning and Maintenance	\$31,236.00	\$39,006.00	\$20,636.00
Storm Inlets and Catch Basins	\$250,000.00	\$12,631.00	\$250,000.00
Street Sweeping	\$19,233.00	\$14,366.00	\$20,286.00
Ditch and Culvert Maintenance	\$196,033.00	\$187,460.00	\$225,026.00
Storm Sewer Maintenance	\$130,869.00	\$86,848.00	\$118,287.00
Yard Maintenance	\$15,000.00	\$0.00	\$0.00
Yard Waste Recycling	\$88,597.00	\$78,796.00	\$89,991.00
Totals	\$730,968.00	\$419,107.00	\$724,226.00

Items reported here were typically broken out in the budget. Yard Maintenance used to be found under Permit Compliance; for 2019 Yard Maintenance was not reported and is not assumed to be budgeted for in 2020. Storm Inlets and Catch Basins was found under Storm Water Projects. Yard Waste Recycling was taken from a re-trac form Weigel/Wagner files with the County. The present and future budget amounts were taken as a fraction of the re-trac amount versus the totals reported and budgeted for Recycling (10.307%)..

Storm Water Quality Management

Budget for Reporting Year	\$350,000.00
Expenditures for Reporting Year	\$0.00
Budget for Upcoming year	\$350,000.00

Storm Water Quality Management within the permit is the maintenance of the City's pollution reduction total at the time the law was changed to negate the 40% requirement. As there is no budget line item for this, I have included the budgeted costs for a new Storm Water Management Plan found under Projects. This would include a complete remodel for water quality purposes.

Storm Sewer System Mapping

Budget for Reporting Year	\$5,000.00
Expenditures for Reporting Year	\$0.00
Budget for Upcoming year	\$5,000.00

Storm Sewer System Mapping is lumped within Storm Sewer Maintenance budget category. There is not breakout for this Asbuilt And Mapping in the 2020 Budget listing. Carried over the previous year budget amount for reporting purposes.

Item D

Waukesha County Contracted Program Summary

Public Education and Outreach Reporting Numbers for 2019

Waukesha County Stormwater Partners

1. Detection and elimination of illicit discharges
Target audiences: general public
Mechanism: information booth 6 events estimated 4,900 people

2. Management of materials that may cause storm water pollution from automobiles, pet waste, household hazardous waste and household practices
Target audiences: general public, school groups, residential, businesses
Mechanism: educational activity 53 events 2,134 people
 Media Offerings 8
 Social Media 3 posts 29,850 people
 Active distribution print media 70 households
 Information booth 21 events 12,480 people

3. Beneficial onsite reuse of leaves and grass clippings/proper use of lawn and garden fertilizers and pesticides
Target Audiences: general public, school groups, residential
Mechanism: educational activity 52 events 2,131 people
 Active distribution of print media 100,000 households
 Information booth 21 events 12,840
 Media offerings 3
 Social Media 2 19,900

4. Management of streambanks and shorelines by riparian landowners to minimize erosion and restore and enhance the ecological value of waterways
Target Audiences: general public, lakeshore property owners, school groups
Mechanism: Information booth 7 events 5,070 people
 Educational activity 2 events 411 people

5. Infiltration of residential storm water runoff from rooftop downspouts, driveways and sidewalks
Target Audience: general public, residential, school groups
Mechanism: educational activity 53 events 2,119 people
 Media offerings 1
 Social media 2 posts 19,900
 Active distribution of print media 150 households
 Information booth 21 events 12,840 people

6. Inform and ,where appropriate, educate those responsible for the design, installation, and maintenance of construction site erosion control practices and storm water management facilities on how to design, install and maintain the practices
Target Audience: Developers, Contractors, Public Employees, Residential, students
Mechanism: targeted group training 2 events 116 people
 Educational activity 2 events 23 people

