

**WORTHINGTON CITY COUNCIL  
SPECIAL MEETING**

**4:00 P.M. - Monday, October 17, 2018**  
**City Hall Council Chambers**

**A. CALL TO ORDER**

**B. CITY COUNCIL BUSINESS**

1. Carp Population Control
2. 2019 Storm Water Budget
3. Disposal of Surplus Property
4. Friday after Thanksgiving
4. December 24, 2018 City Council Meeting

**C. ADJOURNMENT**

## **ADMINISTRATION MEMO**

**DATE:           OCTOBER 17, 2018**

**TO:             HONORABLE MAYOR AND CITY COUNCIL**

**SUBJECT:   ITEMS REQUIRING CITY COUNCIL ACTION OR REVIEW**

### **CASE ITEM**

#### **1. CARP POPULATION ASSESSMENT**

The Okabena-Ocheda Watershed District and Olson Trust retained Wenck Associates to conduct a carp population assessment during fall 2017 and summer 2018. The study estimated that Lake Okabena has common carp densities three times higher than the threshold for maintaining healthy water quality and game fish habitat.

Meeting the state's Total Maximum Daily Load water quality goals for Lake Okabena will likely require reducing the population of carp in the lake and controlling their migration and reproduction. Tom Langer, Wenck biologist, recommended a multi-year project to better understand carp reproduction and successfully remove them. The project would implant radio telemetry trackers in carp to identify where they reproduce, install barriers to keep carp from migrating into spawning areas and ultimately locate carp schools during seining operations.

The Okabena-Ocheda Watershed district is attending the work session to discuss forming a partnership with Worthington and others to pay the costs carp radio tracking, barrier installation and seining.

#### **3. DISPOSAL OF PERSONAL SURPLUS PROPERTY**

There remain several items of modest value in the former liquor store that may be offered for sale to the public. They include two walk-in coolers and display shelving pieces. The items have been listed as available through several industry outlets including the Minnesota Municipal Beverage Association, social media; suppliers Carlson Stewart and Stan Morgan. The estimated market value is less than \$10,000.

In accordance with the City's Property Disposal Policy, Staff is requesting that Council declare the items surplus property and dispose of them via Sale by Quotation.



# OOWD Board Meeting Common Carp Management in Okabena Lake

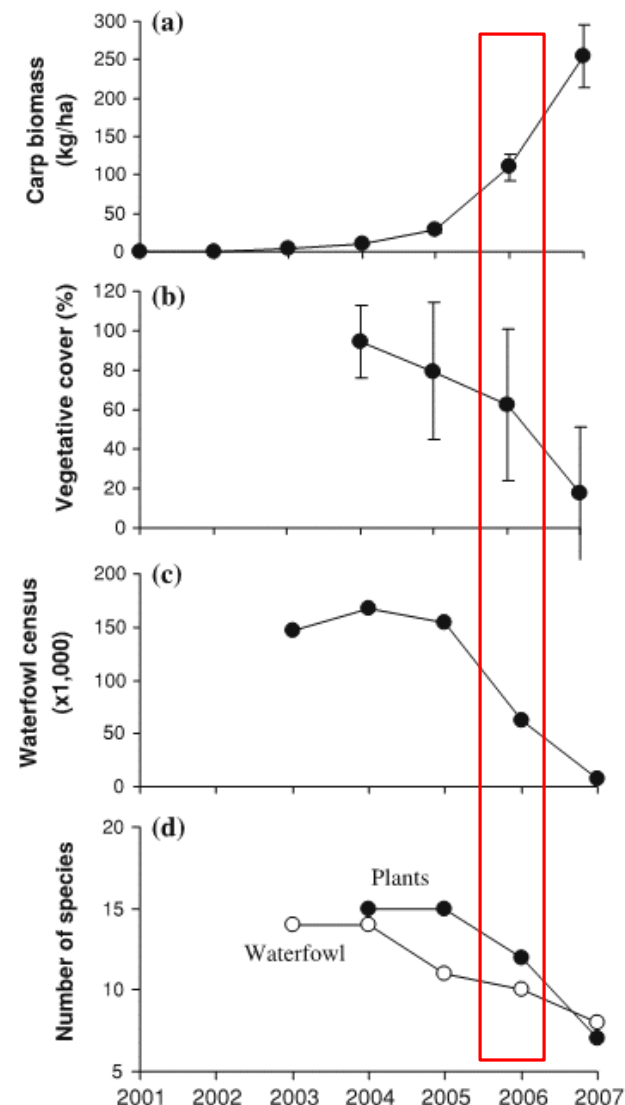
*Presented by*  
Tom Langer

# AGENDA

- Review population assessment results
- Carp management – next steps
- Timeline and costs

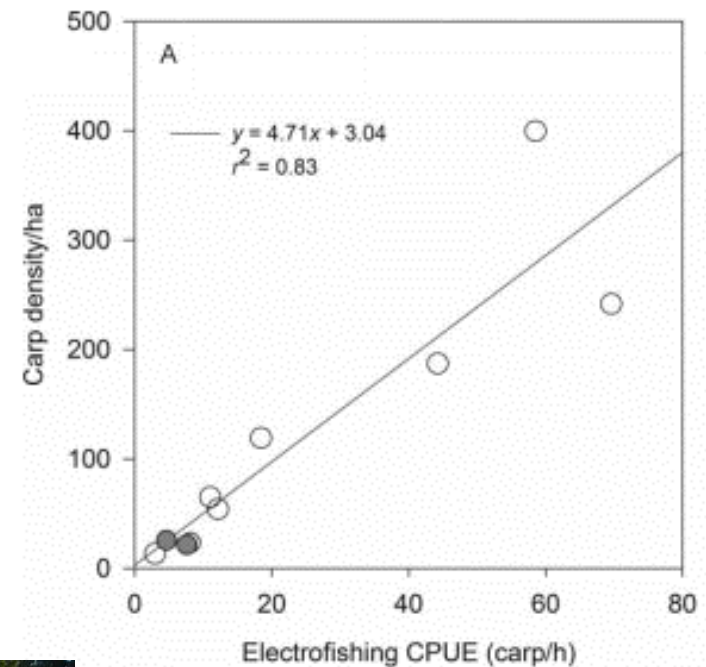
# CARP – WHY MANAGE

- Excessive carp (biomass) in lakes can cause:
  - Increased sediment resuspension
  - Increased turbidity (decreased clarity)
  - Decreased SAV growth
  - Diminished habitat
- Okabena Lake has a 791 lbs/year internal load reduction requirement
- Protect existing and future watershed BMPs



# POPULATION ASSESSMENT

- Use standardized electrofishing protocol to sample shoreline habitats.
- Take catch per unit effort (CPUE) information and use regression model to determine density.



# POPULATION ASSESSMENTS



**To:** Dan Livdahl, Okabena-Ocheda Watershed District  
**From:** Tom Langer, Wenck Associates, Inc.  
Jeff Strom, Wenck Associates, Inc.  
**Date:** October 18th, 2017  
**Subject:** Lake Okabena Carp Assessment

Wenck Associates was contracted by the Okabena Ocheda Watershed District (OOWD) to perform a common carp (*Cyprinus carpio*) population assessment on Lake Okabena on 10/10/2017. This technical memo summarizes the methods and results of this assessment.

## Methods

Biologists and scientists from Wenck Associates conducted a common carp population assessment on Lake Okabena 10/10/2017 using standard research methods described in (Bajer and Sorensen 2012). The assessment was performed using a boat electrofishing unit to sample three shoreline transects for approximately 20 minutes each under MnDNR permit #23410. The three transects were conducted in the following locations:

- ▲ Transect 1: E/SE shoreline, Lake Okabena Outlet to Ludlow Park
- ▲ Transect 2: S/SW/W shoreline, Slater Park along South Shore Drive
- ▲ Transect 3: N/NW shoreline, Vogt Park to public swimming beach

All common carp were netted, counted and measured for total length and weight prior to being released. This information, along with the amount of time spent electrofishing, were used in linear regression models developed by (Bajer and Sorensen 2012) to estimate the current population size and density within Lake Okabena.

## Results

A total of 9 common carp were captured during the 10/10/2017 assessment. Average length and width of the 9 carp was 66 cm (26 inches) and 4.3 kg (9.5 pounds), respectively. All of the common carp captured during this assessment were netted during transect 2 along the riprap shoreline of South Shore Drive which separates Lake Okabena from Sunset Bay. No common carp were collected at the other transect locations within the lake.

Using results of this assessment and the regression equation described above, it is estimated that Okabena has a common carp density of ~45 carp/ha (18 carp/acre) and a biomass density of 196 kg/ha (175 lbs/acre). Extrapolating this density across the entire lake basin suggests that there are ~14,000 individual carp within Lake Okabena. Table 1 provides a summary of the common carp survey results for Lake Okabena.



**To:** Dan Livdahl, Okabena-Ocheda Watershed District  
**From:** Tom Langer, Wenck Associates, Inc.  
Jeff Strom, Wenck Associates, Inc.  
**Date:** August 2<sup>nd</sup>, 2018  
**Subject:** Okabena Lake and Sunset Bay Carp Assessments

Wenck Associates was contracted by the Okabena Ocheda Watershed District (OOWD) to perform a common carp (*Cyprinus carpio*) population assessment on Okabena (main-lake) and in Sunset Bay on 7/24/2018. This is the second population assessment conducted on the main-lake (first on 10/11/2017) and the first population assessment conducted within Sunset Bay. The 10/11/2017 survey results suggested common carp densities that exceed impairment thresholds, however these results may have been impacted by a sudden change in weather conditions and drop in water temperatures. The 07/24/2018 survey effort was intended to better inform lake managers of the abundance and density of carp within the system during "normal" summer conditions. Sunset Bay was sampled to determine the abundance and density of carp within the Bay as it is believed to have high levels of carp compared to the main-lake. This technical memo summarizes the methods and results of the 7/24/2018 assessment and provides management recommendations.

## Methods

Biologists and scientists from Wenck Associates conducted a common carp population assessment on Okabena (main-lake) and in Sunset Bay 7/24/2018 using standard research methods described in (Bajer and Sorensen 2012). The assessment was performed using a boat electrofishing unit to sample three shoreline transects for approximately 20 minutes each under MnDNR permit #23410. Due to the relatively small area of Sunset Bay we were able to sample the entire shoreline area within the three transects. The three transects in Lake Okabena were conducted in the following locations:

- ▲ Transect 1: E/SE shoreline, Lake Okabena Outlet to Ludlow Park
- ▲ Transect 2: S/SW/W shoreline, Slater Park along South Shore Drive
- ▲ Transect 3: N/NW shoreline, Vogt Park to public swimming beach

All common carp were netted, counted and measured for total length (weight was extrapolated from length using a regression model) prior to being released. This information, along with the amount of time spent electrofishing, were used in linear regression models developed by (Bajer and Sorensen 2012) to estimate the current population size and density within Lake Okabena.

## Results

A total of 57 common carp were captured during the 7/24/2018 assessments. Results of each survey effort are described below.

# POPULATION RESULTS

- Transect 1: E/SE shoreline, Lake Okabena Outlet to Ludlow Park
- Transect 2: S/SW/W shoreline, Slater Park along South Shore Drive
  - All 9 carp were captured in this transect.
- Transect 3: N/NW shoreline, Vogt Park to public swimming beach



Lake	Date	n	Shock Time (hour)	Average Length (cm)	Average Weight (kg)	Biomass mean (kg/ha)	Estimated Population Size
Sunset Bay	7/24/2018	29	1	57.9	2.67	372.7	1,808
Okabena	7/24/2018	28	1.18	59.6	3.05	350.2	36,052
Okabena	10/11/2017	9	1	66.1	4.31	195.7	14,267

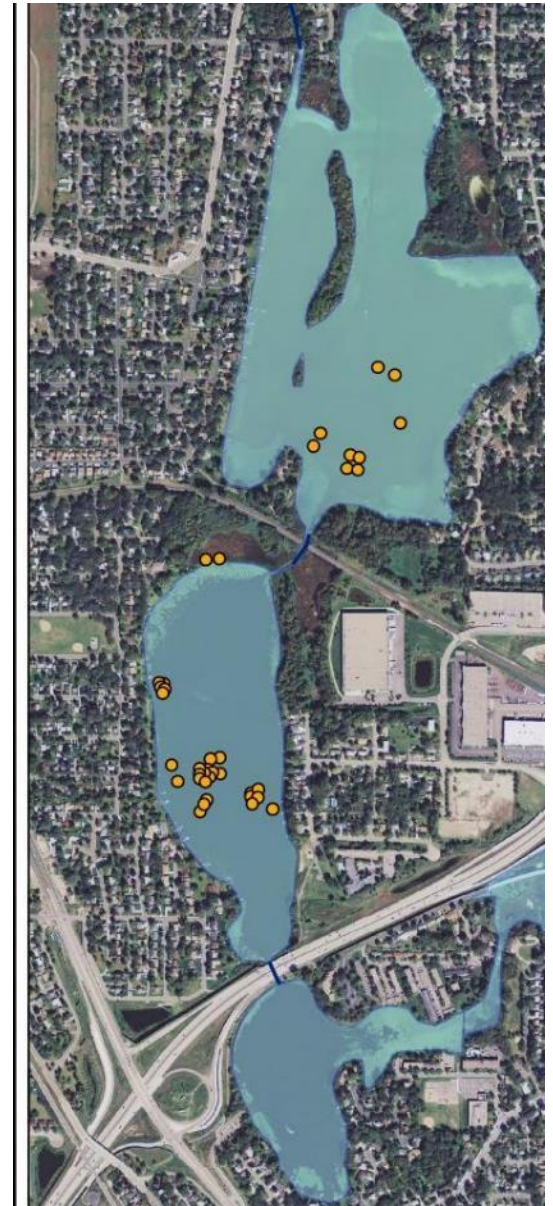
# MANAGEMENT APPROACH

1. Is there an issue?
  - Population Assessment
2. Yes, where are the areas of concern?
  - Population Tracking
3. How can the problem be resolved?
  - Removals
  - Aging
4. How can we prevent from reoccurring?
  - Implement controls



# POPULATION TRACKING

- Implant radio tags and track with telemetry equipment
- Why?
  - Understand seasonal movement patterns
  - Limit recruitment
  - Target schools for removals



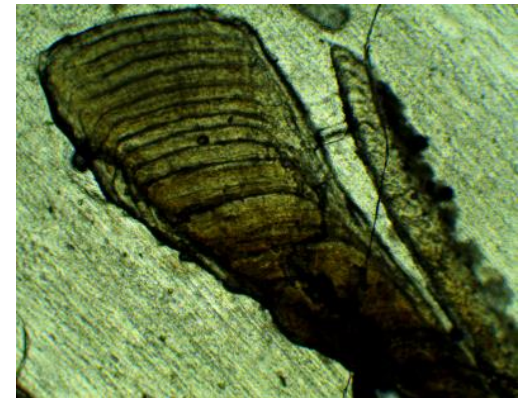
# AGING

Aging tells us about the population.

- Number of year classes

We use this to aid removals and long term management.

- Many classes = more frequent survival
- Few classes = less frequent survival



# REMOVALS

- Last commercial removal was 2006.
- Techniques
  - Winter Seines
  - Open Water Seines/ Box netting
  - Migration Entrapments



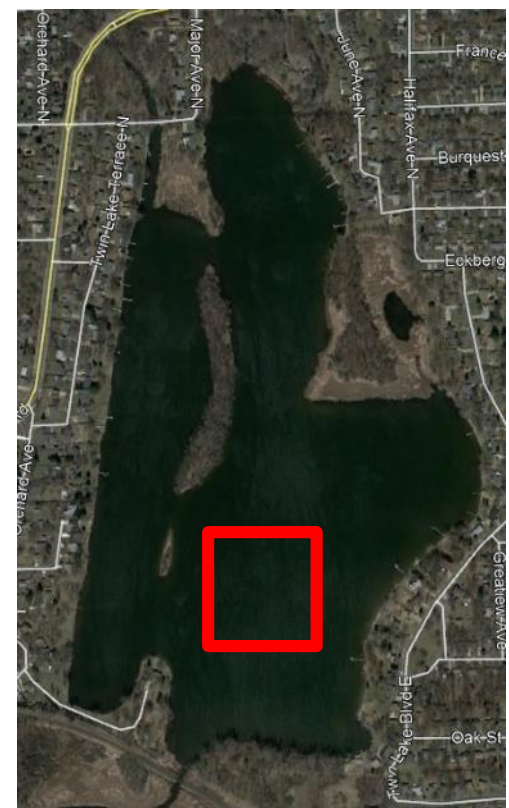
# RECRUITMENT CONTROLS

Prevent movement

- Barriers
  - Known spawning locations
  - Areas prone to winterkill

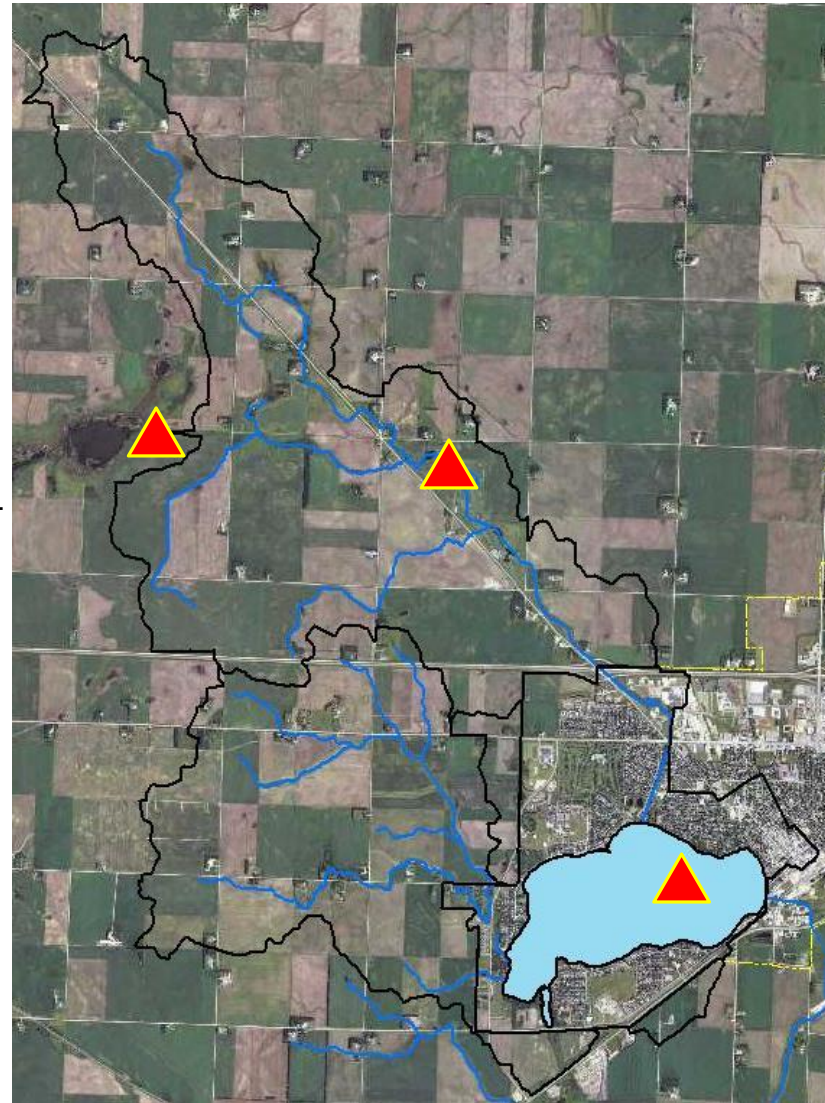
Prevent winterkill

- Aeration



# CURRENT CONTROLS

- Internal recruitment:
  - Aeration
    - Have been since 1980s
    - Partial winter kill 2014
      - Strong Buffalo and Carp year class in 2014
- External recruitment:
  - Barriers
    - Boote-Herlein Marsh/ Prairie View Ponds
      - Ditch Plug (2014) and pond retrofit (2017)
        - 2017: Carp presence during dewatering
      - Unknown recruitment impact



# RECRUITMENT LOCATIONS

## City Stormwater Ponds

- College pond
  - (Carp observed in 2013)
- Glenwood Heights Pond



## Prairie View Pond

## Sunset Bay

- Partial winterkill years?



# CONCLUSIONS

- Carp persist at densities harmful to water quality and habitat degradation.
- Tracking and aging would improve our understanding and assist management efforts towards carp within Okabena Lake.
- Removals are needed to reduce carp impacts.
- Carp management is a large initial costs and can require annual/ period maintenance similar to other BMPs.

# PROPOSE

Initial phase - 3 year project

- Population tracking, aging, large scale removals, follow up population assessments, annual vegetation monitoring, water quality monitoring
- Phase and fund in annual stages
- At end of 3 years – have a continued carp management plan in place and begin enacting

# NEXT STEP – FALL 2018 (OR YEAR 1)

- Implant radio tags, develop removal goals, 3<sup>rd</sup> population assessment
- Equipment costs:
  - ~\$6,500 for surgical and tracking equip., radio tags
  - 15 tags that last for 3-3.5 years
- Labor costs:
  - ~\$13,000 for permitting, carp collecting, surgeries, initial tracking event/training
- Optional year 1 add on: Age assessment
  - A) ~\$4,000 for collection and prep of 50 otoliths
  - B) ~\$3,000 for lab dissection and aging, QA/QC
- Reporting and meeting
  - ~\$2,500

**Year 1 total: \$22,000 (\$29,000 with optional)**

# NEXT STEP –2019 (OR YEAR 2)

## 1) Tracking carp (Winter 18, Spring – Winter 19) ~\$15-50K

- Train you to collect seasonal location information
  - Increased frequency of data, reduced consulting fees
- We assist with a spawning event tracking effort and all winter removal effort tracking
- We assist with data processing, review and reporting

## 2) Optional: 1) SAV surveys and SAV management plan ~\$10-15k

- Track and determine pre-removal vegetation community
- Develop plan to control possible SAV response to improved water quality

## 3) Construct any recruitment barriers

- Determine after year 1 of tracking

## 4) If appropriate at this time: 1<sup>st</sup> Removal ~ \$10-40K

- 2019 – Winter Seine
  - We assist with coordination, data collection, modeling, tracking
  - Winter seine is possibly most efficient and cost effective though highly variable removal technique
  - Work with commercial fisherman ahead of time to set terms/ costs

# NEXT STEP –2020 (OR YEAR 3)

1. Continue tracking carp as needed and before removals
2. Optional: 1) SAV survey
  - This would be post removal efforts to document improvements
3. Continue removals
  - Re-evaluate winter seine removals and determine if/how removals should continue.
4. Develop monitoring plan and continue carp management efforts.



# WENCK

Responsive partner.  
Exceptional outcomes.

## 2. 2019 STORM WATER UTILITY FUND BUDGET

Attached is the proposed 2019 Storm Water Utility (606) Fund budget including the Capital Improvement Budget and Equipment Revolving Schedule. This budget requires \$659,613 in utility operating revenue, or \$25,885 more than the 2018 budget. The major budget changes includes the addition of debt service payments (2019 interest payment and increase in reserve for early 2020 P&I payment) and a partially offsetting decrease in the amount set aside (increase in reserves) for capital improvements. The debt service is that associated with financing a portion of the CD 12 Flood Mitigation project.

As proposed, the 2019 storm sewer fund budget will require a 4.55% storm water utility rate increase. City Council adopted an ordinance establishing the City's storm water system as a utility in December of 2003. The ordinance set the annual storm water fee or rate for residential use. The annual rate is adjusted by a multiplier based on land use, multiplied by the property area, and billed in 12 monthly payments. An ordinance is required to amend the storm water utility rate.

The base rate (annual residential rate per acre) required to meet the 2019 revenue requirements is \$276.00. The current annual residential rate is \$264.00 per acre. The area of a residential lot is defined as .24 acres yielding a 2019 monthly residential charge of \$5.52 or \$.24 more than the current rate of \$5.28. The annual cost will increase \$2.88 per residential lot. The per acre rates for land uses other than residential (1 through 3 units) are as follows:

	2018	2019	Monthly	Annual
Land Use	Rate/Acre	Rate/Acre	Increase	Increase
Commercial	\$44.22	\$46.23	\$2.01	\$24.12
Industrial	\$36.74	\$38.41	\$1.67	\$20.04
Multi Family	\$32.56	\$34.04	\$1.48	\$17.76
Institutional	\$44.22	\$46.23	\$2.01	\$24.12

The following are generic samples of the impacts of the rate changes:

Facility	2018	2019	Monthly	Annual
	Monthly Bill	Monthly Bill	Increase	Increase
.5 Acre Commercial Site	\$22.11	\$23.12	\$1.01	\$12.12
2.5 Acre Church Site	\$110.55	\$115.58	\$5.03	\$60.36
4 Acre Commercial Site	\$176.88	\$184.92	\$8.04	\$96.48
10 Acre Industrial Site	\$367.40	\$384.10	\$16.70	\$200.40
42 Acre Industrial Site	\$1,543.08	\$1,613.22	\$70.14	\$841.68

Also attached is a distribution of revenue sources, and graphs of the rate history. Staff recommends that Council approve the 2019 storm sewer fund budget. Should Council approve the budget, a proposed ordinance amending the storm water utility base rate will be presented to Council at a regular Council meeting. Should Council direct changes, a revised budget and corresponding ordinance will be presented at a future meeting.

CITY OF WORTHINGTON, MINNESOTA

606	STORM WATER MANAGEMENT FUND	2016	2017	'18 REVISED	2018	2019
	REVENUE (30000)	ACTUAL	ACTUAL	BUDGET	PROJECTED	BUDGET
	INTERGOVERNMENTAL REVENUES (33000)					
	FEDERAL GRANTS (33100)					
33191- 0000	OTHER FEDERAL GRANTS	169,060	172,527	2,500,000	2,498,424	0
	TOTAL FEDERAL GRANTS	169,060	172,527	2,500,000	2,498,424	0
	TOTAL INTERGOVERNMENTAL REVENUES	169,060	172,527	2,500,000	2,498,424	0
	PROPRIETARY OPERATING REVENUES (37000)					
	UTILITY OPERATING REVENUES (37100)					
37111- 0000	RESIDENTIAL SALES	193,362	198,527	212,105	210,708	221,838
37112- 0000	COMMERCIAL SALES	161,138	165,008	174,446	173,481	178,644
37113- 0000	INDUSTRIAL SALES	114,541	117,409	127,380	124,564	133,166
37119- 0000	INSTITUTIONAL SALES	68,103	69,807	74,823	74,009	77,796
37121- 0000	MULTI-FAMILY SALES	40,574	41,855	44,974	45,609	48,169
	TOTAL UTILITY OPERATING REVENUES	577,718	592,606	633,728	628,371	659,613
	UTILITY NON-OPERATING REVENUES (38000)					
38001- 0000	INTEREST EARNINGS	9,497	15,061	8,500	15,000	15,000
38009- 0000	OTHER NON-OPERATING	1,879	0	0	0	0
	TOTAL UTILITY NON-OPERATING REVENUES	11,376	15,061	8,500	15,000	15,000
	TOTAL REVENUES BEFORE OTHER FINANCING SOURCES	758,154	780,194	3,142,228	3,141,795	674,613
	OTHER FINANCING SOURCES (39000)					
39310- 0000	BOND PROCEEDS	0	0	2,272,130	1,100,000	0
	TOTAL REVENUES BEFORE USE OF EQUITY	758,154	780,194	5,414,358	4,241,795	674,613
	USE OF RETAINED EARNINGS (26000)					
	USE OF RESERVED BALANCES (26300)					
26307- 0000	EQUIPMENT REVOLVING	0	60	0	0	0
26309- 0000	COMMITMENT SUBSEQUENT YEAR	0	0	17,500	0	0
	USE OF UNRESERVED UNDESIGNATED RETAINED EARNINGS (26400)					
26499- 0000	UNRESERVED UNDESIGNATED RETAINED FROM CAPITAL RESERVE FINANCING	864,627	0	82,625	82,625	0
	#49775 ACQUISITION OF RETENTI	0	0	50,000	0	50,000
	#49779 HAGGE-DIAGONAL TO TOI	90	0	0	0	0
	#48782 6TH AVE-9TH TO LAKE ST	0	0	0	0	32,540
	#49787 ALLEY BLK 19 PVMT REPL	0	0	18,270	0	19,000
	#49788 CLOMR (CONDITIONAL LE	16,900	0	0	0	0
	#49789 TOWER ST-10TH TO 11TH	3,863	0	0	0	0
	#49783/49794 4TH AVE @ LAKE ST	38,062	0	0	0	0
	#49791 8TH AVE-12TH ST TO 190'	0	0	0	0	47,640
	#49795 CD 12 FLOOD MITIGATION	130,865	93,170	750,000	778,501	0
	TOTAL USE OF RETAINED EARNINGS	1,054,407	93,230	918,395	861,126	149,180
	TOTAL STORM WATER MANAGEMENT FUND CASH SOURCES	1,812,561	873,424	6,332,753	5,102,921	823,793

ADDITIONAL INFORMATION:

606- 37111-37121 Represents 4.6% increase  
 38009- 0000 Contract sweeping, reimbursement Nobles County for County Ditch#12 maintenance per agreement (\$1,344)

## CITY OF WORTHINGTON, MINNESOTA

606	STORM WATER MANAGEMENT FUND	2016	2017	'18 REVISED	2018	2019
	EXPENDITURES (40000)	ACTUAL	ACTUAL	BUDGET	PROJECTED	BUDGET
	STREET - COMMUNITY SERVICE (43100)					
43150	STORM DRAINAGE					
	PERSONNEL SERVICES					
1101	FULL-TIME EMPLOYEES-REGULAR	33,350	31,604	23,128	23,000	23,532
1102	EMPLOYEES-OVERTIME	189	0	1,047	1,000	1,084
1121	PERA CONTRIBUTIONS	3,075	2,974	1,813	1,800	1,846
1122	FICA CONTRIBUTIONS/MEDICARE	2,930	2,800	1,849	1,849	1,883
1131	HEALTH INSURANCE ADMIN/CLAIMS	10,222	8,378	6,490	5,000	6,159
1132	MBA INSURANCE	35	99	0	50	0
1133	LIFE INSURANCE	39	30	24	30	24
1134	LTD INSURANCE	281	240	156	150	159
1135	DEFERRED COMPENSATION	38	80	0	0	0
1136	HSA CONTRIBUTION	0	0	0	0	72
1151	WORKERS COMP-INS PREMIUMS	1,724	1,711	1,679	2,152	2,204
	TOTAL PERSONNEL SERVICES	51,883	47,916	36,186	35,031	36,963
	SUPPLIES					
2212	MOTOR FUELS	2,797	2,815	4,000	4,000	4,000
2219	MISC. OPERATING SUPPLIES	551	4,238	1,500	1,500	1,500
2221	EQUIPMENT PARTS	1,229	951	1,500	1,500	1,500
2223	BUILDING REPAIR SUPPLIES	0	0	100	0	100
2229	MISC. REPAIR AND MAINT SUPPLIES	3,186	2,348	6,000	6,000	6,000
	TOTAL SUPPLIES	7,763	10,352	13,100	13,000	13,100
	OTHER SERVICES AND CHARGES					
3301	AUDITING AND ACCOUNTING SERVICES	25,481	25,994	38,673	28,300	29,400
3307	MANAGEMENT FEES	13,397	12,660	20,000	20,000	20,000
3309	EDP, SOFTWARE & DESIGN	6,009	6,029	6,156	6,156	6,182
3319	MISC. PROFESSIONAL SERVICES	24,679	760	23,000	23,000	25,000
3331	TRAVEL, CONFERENCE, SCHOOLS	0	170	0	0	0
3349	MISC ADVERTISING (PROMOTION)	0	0	1,000	0	0
3352	GENERAL NOTICES & PUBLIC INFO	3,989	1,189	20,000	5,000	15,000
3361	GENERAL LIABILITY INSURANCE	230	288	300	250	300
3362	PROPERTY INSURANCE	15	13	30	30	40
3381	ELECTRIC UTILITIES	2,279	2,019	2,400	2,400	2,500
3388	CLEANING & WASTE REMOVAL	2,789	0	100	100	100
3403	IMPROVE OTHER THAN BUILD- REP/MAINT	3,014	2,146	4,000	4,000	5,000
3404	MACHINERY AND EQUIP - REP & MAINT	318	309	1,000	500	1,000
3419	MISC. RENTALS	0	260	1,000	14,000	15,000
3437	LICENSES & TAXES	4	404	100	10	100
	TOTAL OTHER SERVICES AND CHARGES	82,204	52,241	117,759	103,746	119,622
	TOTAL STORM DRAINAGE	141,850	110,509	167,045	151,777	169,685
	SANITATION - COMMUNITY SERVICE (43200)					
43220	STREET CLEANING					
	PERSONNEL SERVICES					
1101	FULL-TIME EMPLOYEES-REGULAR	26,244	22,299	25,049	18,500	26,626
1102	EMPLOYEES-OVERTIME	216	0	1,236	1,000	1,324
1103	PART-TIME/TEMPORARY EMPLOYEES	1,174	8,955	6,156	9,000	6,156
1121	PERA CONTRIBUTIONS	1,973	1,672	1,971	1,000	2,096
1122	FICA CONTRIBUTIONS/MEDICARE	1,998	2,191	2,482	2,000	2,609
1131	HEALTH INSURANCE ADMIN/CLAIMS	4,159	6,619	8,535	8,000	7,343
1132	MBA INSURANCE	43	0	0	0	0
1133	LIFE INSURANCE	18	21	28	25	28
1134	LTD INSURANCE	124	130	169	150	180
1135	DEFERRED COMPENSATION	47	15	0	0	0
1136	HSA CONTRIBUTION	0	0	0	0	26
1151	WORKERS COMP-INS PREMIUMS	3,330	2,904	2,399	2,300	3,255
	TOTAL PERSONNEL SERVICES	39,326	44,806	48,025	41,975	49,643

## CITY OF WORTHINGTON, MINNESOTA

606	STORM WATER MANAGEMENT FUND EXPENDITURES (40000)	2016 ACTUAL	2017 ACTUAL	'18 REVISED BUDGET	2018 PROJECTED	2019 BUDGET
43220	STREET CLEANING SUPPLIES					
2212	MOTOR FUELS	4,780	7,020	8,000	8,000	8,000
2221	EQUIPMENT PARTS	9,562	14,170	12,000	9,000	12,000
2229	MISC. REPAIR AND MAINT SUPPLIES	9,142	5,020	10,000	7,000	10,000
	TOTAL SUPPLIES	23,484	26,210	30,000	24,000	30,000
	OTHER SERVICES AND CHARGES					
3361	GENERAL LIABILITY INSURANCE	1,122	1,059	1,200	1,000	1,200
3362	PROPERTY INSURANCE	1,152	974	1,300	1,000	1,300
3363	AUTOMOTIVE INSURANCE	112	105	200	120	200
3381	ELECTRIC UTILITIES	171	146	400	400	400
3388	CLEANING & WASTE REMOVAL	10,042	389	3,000	0	2,000
3404	MACH & EQUIP - REPAIR & MAINT	5,821	5,504	4,000	1,000	4,000
3437	LICENSES AND TAXES	390	390	400	406	410
	TOTAL OTHER SERVICES AND CHARGES	18,810	8,567	10,500	3,926	9,510
	SUBTOTAL STREET CLEANING	81,620	79,583	88,525	69,901	89,153
	CAPITAL OUTLAY (over \$5,000 ea.)					
5549	MACHINERY & EQUIP MISC.	0	0	17,500	17,500	0
	TOTAL CAPITAL OUTLAY	0	0	17,500	17,500	0
	TOTAL STREET CLEANING	81,620	79,583	106,025	87,401	89,153
	DEBT SERVICE (47000)					
	GENERAL OBLIGATION REVENUE BONDS (47200)					
47222	GO REVENUE BONDS, SERIES 2018A					
6611	BOND INTEREST	0	0	0	0	23,953
	TOTAL GO REVENUE BONDS, SERIES 2018A	0	0	0	0	23,953
	TOTAL DEBT SERVICE	0	0	0	0	23,953
	ADMINISTRATION (49600)					
	CUSTOMER ACCOUNTS (49640)					
49643	ACCOUNTS-CUSTOMER SERVICE & INFORMATION					
	OTHER SERVICES AND CHARGES					
3439	MISCELLANEOUS	8,331	131	250	150	250
	TOTAL OTHER SERVICES AND CHARGES	8,331	131	250	150	250
	TOTAL ACCOUNTS-CUSTOMER SERVICE & INFO	8,331	131	250	150	250
	TOTAL EXPENDITURES BEFORE FIXED ASSETS	231,801	190,223	273,320	239,328	283,041
	FIXED ASSETS (49700)					
49771	UNANTICIPATED YARD/STREET PROBLEMS					
1XXX	PAYROLL EXPENDITURES	6	0	0	0	0
5536	IMPROVEMENT ENGINEERING	39	0	0	0	0
5539	IMPROVEMENT MISCELLANEOUS	1,065	0	25,000	20,000	25,000
	TOTAL UNANTICIPATED YARD/STREET PROBLEMS	1,110	0	25,000	20,000	25,000
49772	CATCH BASIN & LEAD REPLACE @4TH AVE & 12TH					
5539	IMPROVEMENT MISCELLANEOUS	0	0	0	0	55,300
	TOTAL CATCH BASIN & LEAD REPLACE @4TH AVE	0	0	0	0	55,300
49773	2ND AVE-15TH TO OKABENA STORM SEWER RECON					
1XXX	PAYROLL EXPENDITURES	13	0	0	0	0
	TOTAL 2ND AVE-15TH TO OKABENA STORM SEWE	13	0	0	0	0

## CITY OF WORTHINGTON, MINNESOTA

606	STORM WATER MANAGEMENT FUND EXPENDITURES (40000) FIXED ASSETS (49700)	2016 ACTUAL	2017 ACTUAL	'18 REVISED BUDGET	2018 PROJECTED	2019 BUDGET
49774	2016 STORM SEWER IMPR					
1XXX	PAYROLL EXPENDITURES	2,510	160	0	0	0
5536	IMPROVEMENT ENGINEERING	14,913	419	0	0	0
5537	IMPROVEMENT ADMINISTRATION	223	0	0	0	0
5538	IMPROVEMENT CONSTRUCTION	120,497	1,191	0	0	0
	TOTAL 2016 STORM SEWER IMPR	138,143	1,770	0	0	0
49775	ACQUISITION OF RENTENTION AREA FOR CD 12 IMPROV					
5539	IMPROVEMENT MISCELLANEOUS	0	0	50,000	0	50,000
	TOTAL ACQUISITION OF RENTENTION AREA FOR C	0	0	50,000	0	50,000
49776	STORM REP @ 6TH AVE & 9TH ST INT - S SIDE					
5536	IMPROVEMENT ENGINEERING	0	0	32,540	0	42,140
	TOTAL STORM REP @ 6TH AVE & 9TH ST INT - S SI	0	0	32,540	0	42,140
49777	CHURCH AVE COMBINED					
1XXX	PAYROLL EXPENDITURES	1	0	0	0	0
	TOTAL CHURCH AVE COMBINED	1	0	0	0	0
49778	TH 59 N COMMAND/IND PARK STORM WTR IMPROV					
5539	IMPROVEMENT MISCELLANEOUS	0	0	1,262,130	0	0
	TOTAL TH 59 N COMMAND/IND PARK STORM WTR	0	0	1,262,130	0	0
49779	HAGGE-DIAGONAL TO TOWER CB REPLAC					
1XXX	PAYROLL EXPENDITURES	12	15	0	0	0
5536	IMPROVEMENT ENGINEERING	78	40	0	0	0
	TOTAL HAGGE-DIAGONAL TO TOWER CB REPLAC	90	55	0	0	0
49781	REINSTALL CATCH BASINS & LEAD ON DARLING DR					
1XXX	PAYROLL EXPENDITURES	76	0	0	0	0
5536	IMPROVEMENT ENGINEERING	383	3,332	0	0	0
5537	IMPROVEMENT ADMINISTRATION	0	123	0	0	0
5538	IMPROVEMENT CONSTRUCTION	7,716	34,355	0	0	0
	TOTAL REINSTALL CATCH BASINS & LEAD ON DAR	8,175	37,810	0	0	0
49782	6TH AVE-9TH TO LAKE ST SWR SPOT REPAIR PVMT RESTORE					
5539	IMPROVEMENT MISCELLANEOUS	0	0	0	0	7,450
	TOTAL 6TH AVE-9TH TO LAKE ST SWR SPOT REPA	0	0	0	0	7,450
49783	ST SWR OUTLET @ 620 JAMES BLVD PVMT REPLAC					
1XXX	PAYROLL EXPENDITURES	0	1,683	0	0	0
5536	IMPROVEMENT ENGINEERING	0	4,698	0	0	0
5537	IMPROVEMENT ADMINISTRATION	0	69	0	0	0
5538	IMPROVEMENT CONSTRUCTION	0	43,501	0	0	0
	TOTAL ST SWR OUTLET @ 620 JAMES BLVD PVMT	0	49,951	0	0	0
49786	6TH AVE-9TH TO LAKE STORM SEWER SPOT REPAIR					
1XXX	PAYROLL EXPENDITURES	0	915	0	0	0
5536	IMPROVEMENT ENGINEERING	0	3,075	0	0	0
5538	IMPROVEMENT CONSTRUCTION	0	6,982	0	0	0
5539	IMPROVEMENT MISCELLANEOUS	0	1,324	0	0	0
	TOTAL 6TH AVE-9TH TO LAKE STORM SEWER SPC	0	12,296	0	0	0

## CITY OF WORTHINGTON, MINNESOTA

606	STORM WATER MANAGEMENT FUND EXPENDITURES (40000) FIXED ASSETS (49700)	2016 ACTUAL	2017 ACTUAL	'18 REVISED BUDGET	2018 PROJECTED	2019 BUDGET
49787	ALLEY BLK 19 PAVEMENT REPLAC					
5539	IMPROVEMENT MISCELLANEOUS	0	0	19,000	0	19,000
	TOTAL ALLEY BLK 19 PAVEMENT REPLAC	0	0	19,000	0	19,000
49788	CLOMR PREPARATION					
5536	IMPROVEMENT ENGINEERING	17,061	0	0	0	0
	TOTAL CLOMR PREPARATION	17,061	0	0	0	0
49789	TOWER ST-10TH TO 11TH PVMT RESTORATION					
1XXX	PAYROLL EXPENDITURES	15	0	0	0	0
5536	IMPROVEMENT ENGINEERING	41	0	0	0	0
5538	IMPROVEMENT CONSTRUCTION	3,807	0	0	0	0
	TOTAL TOWER ST-10TH TO 11TH PVMT RESTORAT	3,863	0	0	0	0
49791	8TH AVE-12TH ST TO 190' EAST MAIN REPLAC					
1XXX	PAYROLL EXPENDITURES	0	62	0	0	0
5536	IMPROVEMENT ENGINEERING	0	147	0	0	0
5539	IMPROVEMENT ENGINEERING	0	0	47,640	0	61,640
	TOTAL 8TH AVE-12TH ST TO 190' EAST MAIN REPL	0	209	47,640	0	61,640
49792	15TH ST-1ST TO OKABENA PVMT RESTORE					
1XXX	PAYROLL EXPENDITURES	0	23	0	0	0
5536	IMPROVEMENT ENGINEERING	0	56	0	0	0
5539	IMPROVEMENT ENGINEERING	0	0	10,110	0	0
	TOTAL 15TH ST-1ST TO OKABENA PVMT RESTORE	0	79	10,110	0	0
49794	4TH AVE @ LAKE ST CB REPAIRS PVMT RESTOR					
1XXX	PAYROLL EXPENDITURES	998	15	0	0	0
5536	IMPROVEMENT ENGINEERING	2,708	40	0	0	0
5537	IMPROVEMENT ADMINISTRATION	45	0	0	0	0
5538	IMPROVEMENT CONSTRUCTION	41,336	0	0	440	0
	TOTAL 4TH AVE @ LAKE ST CB REPAIRS PVMT RE	45,087	55	0	440	0
49795	CD 12 FLOOD MITIGATION PHASE 1					
1XXX	PAYROLL EXPENDITURES	21	0	0	0	0
5511	LAND PURCHASE	746	1,832	0	638,000	0
5536	IMPROVEMENT ENGINEERING	230,878	181,875	0	250,000	0
5537	IMPROVEMENT ADMINISTRATION	50	2,830	0	26,925	0
5538	IMPROVEMENT CONSTRUCTION	0	0	0	3,462,000	0
5539	IMPROVEMENT ENGINEERING	0	0	4,300,000	0	0
	TOTAL CD 12 FLOOD MITIGATION PHASE 1	231,695	186,537	4,300,000	4,376,925	0
49797	BLOCK 18 MH REPLACEMENT					
1XXX	PAYROLL EXPENDITURES	185	0	0	0	0
5536	IMPROVEMENT ENGINEERING	560	0	0	0	0
	TOTAL BLOCK 18 MH REPLACEMENT	745	0	0	0	0
	TOTAL FIXED ASSETS	445,983	288,762	5,746,420	4,397,365	260,530
	TOTAL EXPENDITURES BEFORE OTHER FINANCING USES	677,784	478,985	6,019,740	4,636,693	543,571

## CITY OF WORTHINGTON, MINNESOTA

606	STORM WATER MANAGEMENT FUND EXPENDITURES (40000)		2016 ACTUAL	2017 ACTUAL	'18 REVISED BUDGET	2018 PROJECTED	2019 BUDGET
	OTHER FINANCING USES (49900)						
	OPERATING TRANSFERS OUT						
49910	6729	MISC OPERATING TRANSFERS	0	1,500	82,625	82,625	0
TOTAL EXPENDITURES BEFORE INCREASE IN RETAINED EARNINGS			677,784	480,485	6,102,365	4,719,318	543,571
	INCREASE IN RETAINED EARNINGS (26000)						
	INCREASE IN RESERVED BALANCES (26300)						
26301-	0000	DEBT SERVICE	0	0	0	0	50,417
26307-	0000	EQUIPMENT REVOLVING	21,127	46,125	54,165	54,165	77,139
26322-	0000	CAPITAL PROJECTS	1,113,650	346,814	176,223	329,438	152,666
	INCREASE IN UNRESERVED UNDESIGNATED RETAINED EARNINGS (26400)						
26499-	0000	UNRESERVED UNDESIGNATED RETAINED	0	0	0	0	0
TOTAL INCREASE IN RETAINED EARNINGS			1,134,777	392,939	230,388	383,603	280,222
TOTAL STORM WATER MANAGEMENT FUND CASH USES			1,812,561	873,424	6,332,753	5,102,921	823,793

ADDITIONAL INFORMATION:

606-	43150-	1101	The Regular Employee Hours are as follows:		
			100 hrs	Street Supervisor	
			804 hrs	Public Works Operators	
			104 hrs	WWTP Operators	
	1102	25 Hours - various operator hours.			
	2212	Gas, oil, grease, pumping during high water conditions, etc. Fuel for vac-all cleaning catch basins.			
	2219	Miscellaneous items such as batteries, flashers, smoke bombs, spray weeds at storm ponds, etc.			
	2221	Repairs to storm sewer lift stations, repairs to vac-all 33%.			
	2223	Lift station doors, locks, bulbs, electrical, etc.			
	2229	Castings, cement, block, tile, miscellaneous sand, lumber, concrete, blacktop repair of catch basins, etc.			
	3301	Fund 702 - \$2,952 and Utilities - \$26,385 (4% of revenues rounded)			
	3307	Allocation of Superintendent of Public Works \$5,527 and Engineering \$11,413			
	3319	Contractor Cleaning, Televising, professional services NPDES Storm Water Permit, Whiskey Ditch SWIF			
	3352	Costs for public education and outreach activities, publications in paper			
	3381	Electric utility for operation, Tower Street lift-dependent on rainfall			
	3403	Outside labor used in maintenance of catch basins or tile replacement			
	3404	Labor to repair lift station pump/vac all			
	3419	Rental of equipment such as backhoe, end loader, hydra hammer, etc.			
	3437	Miscellaneous permits			
43220-	1101	The Regular Employee hours are as follows:			
			36 hrs	Street Supervisor	
			1,172 hrs	Public Works Operator	
	1102	40 Hours x 1.5			
	1103	400 Hours - two temporary employees			
	2212	Fuel for sweeper, flusher, truck			
	2221	Main brooms, gutter brooms, bearings, strip brush, runners, parts for sweeper and flusher trucks			
	2229	New motor & pump for #423 flusher truck			
	3381	Electric utility for operation of Liberty Drive water fill stand			
	3388	Street sweeping disposal-haul to Nobles County Landfill (1,000 yards)			
	3404	Outside labor on flusher and sweeper			
	3437	Permits, etc.			
	5549	Pad for catch basin material dewatering			
21841-	0000	Lease to purchase regenerative air sweeper-Sixth payment of six beginning June 2008.			
26301-	0000	11/12 of \$55,000 principal payment			
26322-	0000	Reserve for Centennial Park Lift Station \$135,000, total accumulated reserve 12/31/19 - \$405,000			

## CITY OF WORTHINGTON, MINNESOTA

CAPITAL IMPROVEMENT PROGRAM  
FOR THE YEARS 2019 - 2023  
(AMOUNTS IN DOLLARS)

I.	2019	STORM DRAINAGE	PROPOSED BUDGETARY FUND/ACCOUNTS	PROJECT TOTALS	GENERAL TAX FINANCING	CAPITAL RESERVE FINANCING	UTILITY REVENUE FINANCING	SPECIAL ASSESSMENT FINANCING	G.O. BOND FINANCING	G.O. REV BOND FINANCING	STATE AID FINANCING	FEDERAL AID FINANCING	OTHER
	I1	UNANTICIP. YARD/STREET PROB.	606-49771-55XX	25,000			25,000						
	I2	CATCH BASIN & LEAD REPLACE @ 4'	606-49772-55XX	55,300			55,300						
	I3	RETENTION AREA FOR CD 12 IMPROV	606-49775-55XX	50,000		50,000							
	I4	STORM REP @ 6TH AVE & 9TH ST IN	606-49776-55XX	42,140		32,540	9,600						
	I5	TH 59 N COMMAND/IND PARK STORM	401-48661-55XX	1,302,520				321,630	980,890				
	I6	6TH AVE-9TH TO LAKE ST SWR SPO	606-49782-55XX	7,450			7,450						
	I7	ALLEY BLK 19 PAVEMENT REPLAC	606-48787-55XX	19,000		19,000							
	I8	8TH AVE-12TH ST TO 190' EAST MAIN	606-49791-55XX	61,640		47,640	14,000						
	I9	ADD TO RESERVE FOR CENTENNIAL	606-26322-0000	135,000			135,000						
2019	2019	STORM DRAINAGE	TOTALS	1,698,050	0	149,180	246,350	321,630	980,890	0	0	0	0
I.	2020	STORM DRAINAGE											
	I1	UNANTICIP. YARD/STREET PROB.	606-49771-55XX	15,000			15,000						
	I2	PVMT REPLAC @ 6TH AVE & 9TH ST INT-S SIDE		22,630			22,630						
	I3	8TH AVE-12TH TO 190' E PVMT REPLACEMENT		7,020			7,020						
	I4	15TH ST-1ST TO OKABENA PVMT RESTORE		10,110		10,110							
	I5	KNOLLWOOD DR STORM SEWER IM	401-48651-55XX	187,660				57,180	130,480				
	I6	ADD TO RESERVE FOR CENTENNIAL	606-26322-0000	200,000			200,000						
2020	2020	STORM DRAINAGE	TOTALS	442,420	0	10,110	244,650	57,180	130,480	0	0	0	0

## CITY OF WORTHINGTON, MINNESOTA

CAPITAL IMPROVEMENT PROGRAM  
FOR THE YEARS 2019 - 2023  
(AMOUNTS IN DOLLARS)

I.	2021	STORM DRAINAGE	PROPOSED BUDGETARY FUND/ACCOUNTS	PROJECT TOTALS	GENERAL TAX FINANCING	CAPITAL RESERVE FINANCING	UTILITY REVENUE FINANCING	SPECIAL ASSESSMENT FINANCING	G.O. BOND FINANCING	G.O. REV BOND FINANCING	STATE AID FINANCING	FEDERAL AID FINANCING	OTHER
	I1	27TH, 29TH & ROSE AVE AREA STOR	401-	328,800				219,340	109,460				
	I2	3RD & 4TH-9TH TO 11TH RECON	401-	462,840		388,790		74,050					
	I3	SE TRUNK & POND SYSTEM	401-48663-55XX	2,801,970				1,975,310	826,660				
	I4	CENTENNIAL PARK LIFT ST REPLAC		824,000		605,000	219,000						
	I5	10TH AVE-TOWER TO PARK STORM	606-49784-55XX	166,670		48,200	1,850				116,620		
	I6	CB AND LEAD REPLACEMNT @ 4TH AVE & 12TH PVMT RE		30,600			30,600						
2021	2021	STORM DRAINAGE	TOTALS	4,614,880	0	1,041,990	251,450	2,268,700	936,120	0	116,620	0	0
I.	2022	STORM DRAINAGE											
	I1	LINING 12" STORM UNDER UP RR @ 10TH ST		99,340			99,340						
	I2	CHERRY PT BETTY S DITCH TO PIPE CONVERSION		119,280			119,280						
	I3	UNANTICIP. YARD/STREET PROB.	606-49771-55XX	20,000			20,000						
2022	2022	STORM DRAINAGE	TOTALS	238,620	0	0	238,620	0	0	0	0	0	0
I.	2023	STORM DRAINAGE											
	I1	OKABENA CR SW SIDE STORM TRUN	401-48659-55XX	3,302,550				2,642,900	659,650				
	I2	8TH AVE-9TH TO 10TH STORM SEWER IMPROV		145,640			145,640						
	I3	JOHNSON-CLARY TO DOVER ST SWR OUTLET REP		93,240			93,240						
	I4	UNANTICIP. YARD/STREET PROB.	606-49771-55XX	20,000			20,000						
2023	2023	STORM DRAINAGE	TOTALS	3,561,430	0	0	258,880	2,642,900	659,650	0	0	0	0

## CITY OF WORTHINGTON, MINNESOTA

EQUIPMENT REVOLVING SCHEDULE  
FOR THE YEARS 2019-2023  
(AMOUNTS IN DOLLARS)

		Years of Useful Life	Replace in (Year)	Reserve Goal	12/31/2018 Reserve Balance	Add to Reserve for 2019	With- draw for 2019	Carry- over from 2018	12/31/2019 Reserve Balance	DECEMBER 31 RESERVE BALANCES			
Equip. No.	Equipment Description									2020	2021	2022	2023
STORM WATER MANAGEMENT FUND - 606													
STORM DRAINAGE:													
329	VACTOR	15	2020	95,000	75,000	10,000			85,000	95,000	5,000	10,000	15,000
	@4" REARING POND PUMP	14	2029	3,700	792	264			1,056	1,320	1,584	1,848	2,112
TOTAL STORM DRAINAGE					75,792	10,264	0	0	86,056	96,320	6,584	11,848	17,112
STREET CLEANING:													
*408	08 TYMCO SWEEPER	20	2028	240,000	60,013	19,998			80,011	100,009	120,007	140,005	160,003
413	02 PELICAN SWEEPER	18	2020	200,000	108,106	45,947			154,053	200,000	11,111	22,222	33,333
423	95 INTL 2 TON	30	2020	38,000	36,937	530			37,467	38,000	1,267	2,534	3,801
423A	85 ROSCOE FLUSH TANK	30	2044	12,000	1,600	400			2,000	2,400	2,800	3,200	3,600
TOTAL STREET CLEANING					206,656	66,875	0	0	273,531	340,409	135,185	167,961	200,737
TOTAL STORM WATER MANAGEMENT FUND - 606					282,448	77,139	0	0	359,587	436,729	141,769	179,809	217,849

@Used to fill Water truck for sweeping, storm sewer & sanitary maintenance-fill rearing ponds on a limited basis. Will not replace until not serviceable.

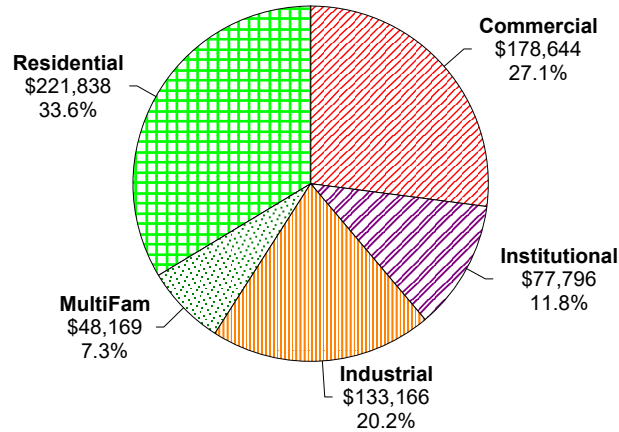
# PROPOSED 2019 STORM WATER UTILITY RATES 4.6% INCREASE

INCREASE IN RESERVE FOR UNSPECIFIED CAPITAL IMPROVEMENTS:

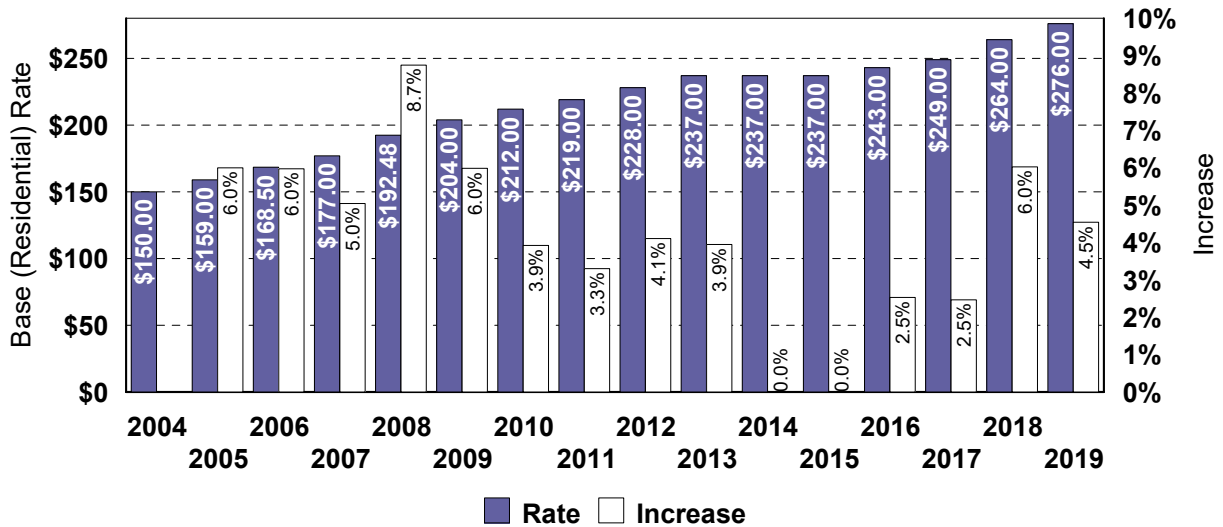
\$17,666.00

USE	AREA	FACTOR	UNITS
Comm	322.02	2.01	647.26
Inst	140.23	2.01	281.87
Ind	288.91	1.67	482.49
MultiF	117.92	1.48	174.53
Res	803.76	1.00	803.76

## Revenue Distribution



## Annual Rates



## Accumulative Increase

