



## CITY COUNCIL AGENDA REGULAR MEETING

**Monday, June 13, 2022  
7:00 P.M.**

The City of Montrose is committed to maintaining a safe, welcoming, family-friendly community, with affordable housing, where parents can raise their families; to ensuring our skilled, motivated employees provide high quality public services at a value; to sound stewardship and fiscal responsibility to ensure our city remains strong and prosperous, both now and into the future; to nurturing business-friendly partnerships to promote economic development and local jobs; to thoughtfully address community needs and plan for growth, innovation and sustainable development; and to ethical leadership that is responsive and accountable to our citizens.

Montrose Community Center  
200 Center Avenue South  
Montrose, Minnesota 55363

**1. CALL TO ORDER**

**2. ROLL CALL**

**3. INVOCATION**

A. Pastor Paul Baker – Montrose United Methodist Church

**4. PLEDGE OF ALLEGIANCE**

**5. APPROVAL OF AGENDA**

**6. APPROVAL OF CONSENT AGENDA**

A. Minutes

1. May 23, 2022 Rescheduled Regular City Council Meeting – prepared by J. Bonniwell

B. Accounts Payable

1. City, June 13, 2022 – prepared by M. Sommerfeld
2. Fire Department, June 13, 2022 – prepared by M. Sommerfeld

C. Monthly Utility Adjustments, May 2022 – prepared by C. Gerard

D. Schedule a Public Hearing for Planning and Zoning July 13, 2022 at 7:00 p.m. to Review Ordinance 1020

7. **2021 AUDIT REPORT – ABDO** – See June 13, 2022 City Council Workshop Packet for Audit Report Information

A. ABDO Audit Report

B. ABDO Professional Services Proposal

8. **WRIGHT COUNTY SHERIFF'S OFFICE**

A. May, 2022 Monthly Report and Hours Report

9. **REPORTS AND RECOMMENDATIONS OF THE CITY DEPARTMENTS, CONSULTANTS, COMMISSIONS, AND COMMITTEES**

A. City Council

1. Monthly Activity Report

B. Montrose Fire Department

1. May, 2022 Activity Report

C. City Planner

1. June 8, 2022 Planning and Zoning Meeting Minutes

D. City Engineer

1. 2021 Downtown Improvement Project Phase I – Pay Application No. 3

2. 2021 Downtown Improvement Project Phase II – Pay Application No. 2

3. Forest Creek Trail Repair Quotes

4. Wastewater Treatment Facility Plan

5. Water Treatment System Study

6. Updates from City Engineer

E. Public Works

1. Firemen Parking in Front of Public Works Shop

2. Updates

10. **OLD BUSINESS**

A. Update May 23, 2022 Request for Council Action from Mr. Charles Smallwood – 200 Crystal Lane

1. Traffic Issues on Crystal Lane and Mindy Lane

B. Electricity for Montrose Days at Veterans Park

C. “No Mow May” Follow-up

11. **NEW BUSINESS**

12. **OPEN FORUM**

13. **UPCOMING MEETINGS**



- A. Park and Recreation Meeting – Monday, June 20, 2022 at 5:30 p.m. in the Montrose City Hall Conference Room
- B. Economic Development Authority Meeting – Tuesday, June 21, 2022 at 12:00 p.m. in the Montrose City Hall Conference Room
- C. Regular City Council Meeting – Monday, July 11, 2022 at 7:00 p.m. at the Montrose Community Center
- D. Planning and Zoning Commission Meeting with Public Hearing – July 13, 2022 at 7:00 p.m. at the Montrose Community Center

**14. ACKNOWLEDGEMENTS**

**15. ADJOURNMENT**

City of Montrose  
 Regular City Council Meeting Rescheduled as a Special Meeting  
 Montrose Community Center  
 200 Center Avenue South  
 Monday, May 23, 2022  
 7:00 P.M.

**1. CALL TO ORDER**

Pursuant to call and notice the Montrose City Council met in Regular Session on Monday, May 23, 2022 at 7:00 p.m.

Mayor Moynagh called the meeting to order at 7:00 p.m.

**2. ROLL CALL**

Present: Mayor Robert W. Moynagh III  
 Council Member Sam Solarz  
 Council Member David Paradeise  
 Council Member Tom Marszalek  
 Council Member Nicole Andreoff

Staff Present: Ms. Jessica Bonniwell, City Administrator  
 Mr. Dan Remer, Public Works Director  
 Mr. Jared Voge, City Engineer  
 Mr. Michael Sommerfeld, City Clerk/Treasurer  
 Mr. Charles Smallwood, Chair – Planning and Zoning

**3. INVOCATION**

A. Pastor Cathy Jones from House of Grace gave the Invocation.

**4. PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was taken.

**5. APPROVAL OF THE AGENDA**

A. Approval of the Agenda

**Council Member Marszalek motioned to approve the May 23, 2022 City Council Agenda as written. Council Member Solarz seconded the motion. Motion carried 5-0.**

**6. APPROVAL OF THE CONSENT AGENDA**

A. Minutes

1. Accepted the minutes of the April 11, 2022 Regular City Council Meeting
2. Accepted the minutes of the May 2, 2022 Special City Council Meeting

B. Accounts Payable

- 1. Approved the May 23, 2022 Accounts Payable for the City of Montrose
- 2. Approved the May 23, 2022 Accounts Payable for the Montrose Fire Department
- C. Approved the Monthly Utility Adjustments for April 2022

**Council Member Andreoff motioned to approve the May 23, 2022 Consent Agenda as presented. Council Member Paradeise seconded the motion. Motion carried 5-0.**

**7. WRIGHT COUNTY SHERIFF’S OFFICE**

- A. April, 2022 Monthly Report presented in packet.

Wright County was not present at the meeting.

**8. REQUEST FOR COUNCIL ACTION**

- A. Mr. Charles Smallwood – 200 Crystal Lane

Mr. Smallwood stated his concerns regarding the increase in traffic on Crystal Lane, Mindy Lane and Emerson Ave N since the construction project started. Mr. Smallwood stated that the traffic is speeding up and down the road all day and night and is causing a dangerous situation in those neighborhoods. Mayor Moynagh stated that he has contacted Wright County about this and spoke with Sheriff Deringer about the problem. Wright County will be stepping up enforcement activity around that area of the project to hopefully slow down the traffic. Mr. Smallwood asked about other temporary signs or speed bumps that could possibly be put in place until the construction is complete. Mr. Voge stated that the temporary measures often do not work and just cause more problems and traffic accidents and that the best way to deal with this is the increased enforcement throughout the duration of the project.

**9. REPORTS AND RECOMMENDATIONS OF CITY DEPARTMENTS, CONSULTANTS, COMMISSIONS AND COMMITTEES**

- A. City Council

- 1. Monthly Activity Report

The City Council Members gave a brief overview of the meetings, activities and/or events they attended.

- B. Montrose Fire Department

- 1. April, 2022 Activity Report

Mr. Triplett gave a brief overview of the April, 2022 activity report and asked for any questions.

- 2. Request Authorization to Purchase five new garage openers and seven remotes (\$1,350 each plus \$50 per remote) – Total of \$7,100 through JLR Garage.

Mr. Triplett stated that the department needs to replace the garage openers and remotes.

**Mayor Moynagh motioned to approve the purchase of five new garage openers and seven remotes from JLR Garage for \$7,100.00. Council Member Marszalek seconded the motion. Motion carried 5-0.**

3. Request Authorization to apply for the 2022 50/50 Matching DNR Grant; City Responsibility would be \$2,500 if awarded.

Mr. Triplett stated that the money will be used for equipment and supplies – it will be some equipment for wildfire fighting and then some general hoses and other equipment.

**Mayor Moynagh motioned to approve submitting a 2022 50/50 Matching DNR Grant for the Fire Department. Council Member Marszalek seconded the motion. Motion carried 5-0.**

4. Review and Accept 2021 Annual Report

Mr. Triplett gave a brief overview of the annual report for the Fire Department, which was another record-breaking call-volume year.

**Council Member Marszalek motioned to accept the 2021 Montrose Fire Department Annual Report. Mayor Moynagh seconded the motion. Motion carried 5-0**

#### **C. Economic Development Authority**

1. April 19, 2022 Economic Development Authority Meeting Minutes

Council Member Marszalek gave a brief overview of the meeting minutes from the April 19, 2022 Economic Development Authority Meeting.

#### **D. Planning and Zoning Commission**

1. May 18, 2022 Planning and Zoning Commission Meeting Minutes

Commission Chair Smallwood gave a brief overview of the meeting minutes from the May 18, 2022 Planning and Zoning meeting.

#### **E. Park and Recreation**

1. May 5, 2022 Park and Recreation Meeting Minutes

Ms. Bonniwell gave a brief overview of the May 5, 2022 Park and Recreation Meeting Minutes.

2. Approve Park and Recreation Recommendations for Appointments of Chair, Vice-Chair, and Secretary.

Ms. Bonniwell stated that Mr. Duane Isle was appointed to Chair, Mr. Toby Nelson was appointed to Vice-Chair, and Ms. Kayla McCluskey was appointed to Secretary.

**Mayor Moynagh motioned to approve the Park and Recreation recommendations for Chair, Vice-Chair and Secretary. Council Member Solarz seconded the motion. Motion carried 5-0.**

#### **F. City Engineer**

1. 2021 Downtown Improvement Project Phase I: Payment Estimate No. 2

Mr. Voge stated that the project is progressing on schedule and this is the second payment request from the contractor.



**Mayor Moynagh motioned to approve the 2021 Downtown Improvement Project Phase I, Payment Estimate No. 2. Council Member Marszalek seconded the motion. Motion carried 5-0.**

2. 2021 Downtown Improvement Project Phase II: Payment Estimate No. 1

Mr. Voge stated that the project is progressing on schedule and this is the first payment request from the contractor.

**Council Member Marszalek motioned to approve the 2021 Downtown Improvement Project Phase II, Payment Estimate No. 1. Council Member Paradeise seconded the motion. Motion carried 5-0.**

3. 2021 Downtown Improvement Project Phase I: Center Avenue South Culvert Replacement

Mr. Voge stated that the manager from the Mobile Home Manor contacted the engineers regarding a deteriorating culvert that was discovered during the replacement of the culvert under Hwy 12. The cost of this replacement will be about \$23,000 and this would be the time to replace it since we already have people working on that road and the culvert is in bad shape. Mr. Voge said the Mobile Manor will need to be detoured out the back side again, but will not cause a Hwy 12 shut down.

**Mayor Moynagh motioned to approve the 2021 Downtown Improvement Project Phase I: Center Avenue South Culvert Replacement for \$23,000. Council Member Andreoff seconded the motion. Motion carried 5-0.**

4. 2021 Downtown Improvement Project Phase I & II: Street Light System Improvements

Mr. Voge stated that the street light improvements City Council opted for earlier in the project have a final price quote of \$146,370.00 for both Phase I and Phase II parts of the project. Xcel came up with a design for the project, and with the over-head utility conflicts, there will street lights on the east side of Center Ave only. The lights on the south side of the tracks will have outlets, but the ones on the north will not. Mr. Voge stated that there will be a total of 16 acorn pedestrian lighting fixtures.

**Council Member Marszalek motioned to approve the 2021 Downtown Improvement Project Phase I & II Street Light System Improvements for \$146,370.00. Council Member Paradeise seconded the motion. Motion carried 5-0.**

5. Updates from City Engineer

Mr. Voge stated the Forest Creek Trail quote for repair, and a water system report will be on the June Council Meeting Agenda. The work on the Regional Park Shelter is also progressing and will be coming to Council in the next couple meetings.

Council Member Paradeise asked about flooding issues at 202 Pheasant Run Drive. Mr. Voge said he looked at the grading and it does look very flat and he would be willing to come out and take a look to see if there is anything the city can do to help the situation with flooding when we get heavy rain.

## G. Public Works

1. Quote for 2024 Western Star 47X Plow Truck

Mr. Remer stated there were two quotes provided in the packet for consideration that are just for the chassis of the plow truck, and another quote for the installation of plow equipment. One quote is from Boyer for \$125,016 just for the chassis. A second quote from Momentum Truck Group for \$141,000 just for the chassis. Mr. Remer stated that the Towmaster Truck Equipment Quote for the plow truck equipment attachments is an estimated \$150,816. Mr. Remer stated that he needs to get this ordered since the chassis are about two years out from right now and the other plow equipment the city owns is starting to fail as well.

**Council Member Marszalek motioned to approve the Boyer Quote of \$125,016.00 for the 2024 Western Star 47X Plow Chassis. Council Member Solarz seconded the motion. Motion carried 5-0.**

**Council Member Paradeise motioned to approve the Towmaster Truck Equipment Quote of \$150,816.00 to add the plowing attachments to the chassis. Council Member Marszalek seconded the motion. Motion carried 5-0.**

## 2. Request Approval to Hire Maintenance Worker I

Mr. Remer stated that the city received 10 applications for Maintenance Worker I and narrowed the applications down to three to be brought in for interviews, and two were brought back for a second interview. Those present at the second interviews were: Jessica Bonniwell, Tom Marszalek, Dan Remer, and Coco Henry. Mr. Remer asked for approval to hire Mr. Ryan Ross, who currently works for the City of Coon Rapids and has experience for a hiring rate of \$25 for Maintenance Worker I.

**Council Member Marszalek motioned to approve hiring Mr. Ryan Ross at \$25 for the Maintenance Worker I position. Council Member Solarz seconded the motion. Motion carried 5-0.**

## 3. Public Works Update

Mr. Remer stated the house at 101 Center Avenue North has been completely removed. City Clean-Up Day went very well, even with the construction in the area. The road projects are progressing on target and the Hwy 12 closure went as well as it could.

## 10. OLD BUSINESS

No Old Business

## 11. NEW BUSINESS

### A. Montrose Days Committee to Discuss Montrose Days Celebration

Ms. Jeannie Beck, Vice-President of the Montrose Days Committee, stated they were there to get Council approval on some items for Montrose Days.

1. Ms. Beck stated there have been several discussions regarding the parade route, and the one that was decided on will start at Aspen Lane, going to Emerson Avenue North, and back out to County Road 12 through 5<sup>th</sup> St N and back up to Aspen to breakdown. That route will avoid any County Road closures and gives plenty of space to breakdown on Aspen after the event.

**Mayor Moynagh motioned to approve the Parade Route starting from Aspen Lane, going south on Emerson Ave N, then east on 5<sup>th</sup> St N, and back north on County Road 12 to Aspen**

**Lane. Council Member Solarz seconded the motion. Motion carried 4-0-1 with Council Member Andreoff abstaining for conflict of interest.**

2. Ms. Beck stated the second thing they are looking for approval for is to shut down Charity Lane from County Road 12 to Sherri Lane for the duration of the one-day event.

**Mayor Moynagh motioned to approve the shut-down of Charity Lane between County Road 12 and Sherri Lane during the Montrose Days event on August 20, 2022. Council Member Solarz seconded the motion. Motion carried 4-0-1 with Council Member Andreoff abstaining for conflict of interest.**

3. Ms. Beck stated that they also wanted to discuss the liquor premises extension to include the park and road that will be shut down. Ms. Bonniwell stated that staff is currently working with the City Attorney on an ordinance that will allow premises extension, and that she will check to see if they can extend on the road and into the park. Ms. Bonniwell stated staff should have an answer for them at the June 13, 2022 meeting.
4. Ms. Beck stated they would like to have the pond and creek area fenced off with orange/snow fencing and if Public Works has fencing that they can use for the day that would be great. Mr. Remer stated he would check to see how much they have and staff will let them know.
5. Ms. Beck stated that the last thing they are looking for is access to power for the band. Mr. Remer stated that he assumed the band would need 220V power hookup, which Mr. Remer did not believe was available at the park currently. Mr. Remer will take a look and see how much power is currently at the park and Ms. Beck will find out how much power the band will need and update each other with that information. Mr. Remer stated that the city could look into upgrading, but would likely be a high cost to do so, and generators available would be very loud and he questioned whether those would have quite enough power for the band. Ms. Beck asked if the city would waive the "regular" electricity charges for the park for that day, not including if any upgrading needs to be done.

**Mayor Moynagh motioned to approve waiving the regular electrical fee for Montrose Days for their August 20, 2022 Montrose Days Event. Council Member Paradise seconded. Motion carried 4-0-1 with Council Member Andreoff abstaining for conflict of interest.**

#### **B. Community Meals Discussion**

Ms. Michelle Otto, 205 Garfield Avenue North, stated that she is part of the group hosting the Community Meals each month at the Community Center. Ms. Otto stated that the stove/oven does not seem to be working, and the pilot lights are not staying lit. Ms. Otto requested that staff have an appliance specialist come look at the oven and see if it could be repaired, or if it needs replacement.

**Mayor Moynagh motioned to direct staff to have an appliance specialist come take a look at the oven at the Montrose Community Center. Council Member Solarz seconded the motion. Motion carried 5-0.**

#### **C. Sunflower Field Discussion**

Ms. Bonniwell stated that Mayor Moynagh contacted staff to let them know that Johnny Fish from Fish Sunflowers texted the mayor to let him know he would not be planting the sunflower fields this year. Ms.

Bonniwell stated that the Council will have to decide what to do with the field at this point since the grass was removed for the sunflowers and has now turned to mostly weeds. Council Member Paradeise asked when Mr. Fish would be coming out to fix the berm. Mayor Moynagh stated that is part of the contract to restore the property once he was not going to plant sunflowers anymore. Council Member Solarz asked if Mr. Fish had a reason he will not be planting and Mayor Moynagh stated the reason given to him was that the drought took a toll on Mr. Fish financially and he will not be able to continue to plant the field. Mr. Remer stated this particular area of the regional park had not been contracted out for summer mowing services and staff will have to mow it and take care of the weeds. Mr. Remer stated that the parks, including the regional park, have not yet been sprayed for weeds due to being short staffed. Mr. Remer stated they recently tried to order the spray, but it is now on backorder and they will keep trying to find some before that comes in so they can start spraying. Mayor Moynagh asked if they would spray for weeds in the section that was to be planted in sunflowers, in case Mr. Fish changes his mind. Mr. Remer asked if they should be spraying weed killer where the sunflowers were going to be since it is all going to weeds. Council agreed that we should be spraying weed killer in the entire regional park, including the sunflower portion. Mayor Moynagh asked Ms. Bonniwell if she or the City Attorney could contact Mr. Fish regarding his contract and promise to restore the land and remove the berm that was created.

#### D. Fee Schedule Amendment

##### 1. Ordinance 2022-04 – *An Ordinance Amending Various Development and Administrative Fees for the City of Montrose*

Ms. Bonniwell stated that she has had some discussions with the City Engineers and Planner to discuss development fees since they have not been updated since development fell off back in 2007-2008. Ms. Bonniwell stated the fees are now more in line with other cities in the area and mostly are connected to development. Ms. Bonniwell stated there is one fee that was not development – for the food truck permit license. Ms. Bonniwell stated that the city has gotten requests to reduce permit fees because gas prices are so high and impacting the food truck's ability to earn profits. Ms. Bonniwell stated that many surrounding cities have also reduced their food truck permit fees because of the gas prices.

**Council Member Marszalek motioned to approve Ordinance 2022-04 – *An Ordinance Amending Various Development and Administrative Fees for the City of Montrose*. Council Member Paradeise seconded the motion. Motion carried 5-0.**

##### 2. Resolution 2022-23 – *A Resolution Authorizing Summary Publication of Ordinance 2022-04 – An Ordinance Amending Various Development and Administrative Fees for the City of Montrose*

**Mayor Moynagh motioned to approve Resolution 2022-23 - *A Resolution Authorizing Summary Publication of Ordinance 2022-04 – An Ordinance Amending Various Development and Administrative Fees for the City of Montrose*. Council Member Andreoff seconded the motion. Motion carried 5-0.**

## 12. OPEN FORUM

### A. Mr. Ed Rothberg – 271 1<sup>st</sup> Street North

Mr. Rothberg stated that he has been contacted by the City Engineers because he lives within the project area and needs to have his fence moved out of the way of the new sidewalk that will be installed. Mr. Rothberg stated he currently has a 6' privacy wood fence that is necessary because of the proximity of his house to the adjacent street/sidewalk. Mr. Rothberg would like his fence replaced to be the same, or higher at 8', that he currently has. Ms. Bonniwell said that Council could approve the 6' "like-for-like"



fence, but they would not be able to approve an 8' fence since it is outside the ordinance. Mr. Remer stated that once the fence is constructed, we need to have Mr. Rothberg sign an agreement that the fence is his and he is responsible for the maintenance of the fence for the life of the fence – the fence will not belong to the city.

**Mayor Moynagh motioned to approve a 6' privacy fence to replace the existing fence that is required to be removed for the road project. Council Member Marszalek seconded the motion. Motion carried 5-0.**

### 13. UPCOMING MEETINGS

- A. Planning and Zoning Commission Meeting – Wednesday, June 8, 2022 at 7:00 p.m. at the Montrose Community Center
- B. Regular City Council Meeting – Monday, June 13, 2022 at 7:00 p.m. at the Montrose Community Center
- C. Park and Recreation Commission Meeting – Monday, June 20, 2022 at 5:30 p.m. at Montrose City Hall
- D. Economic Development Authority Meeting – Tuesday, June 21, 2022 at 12:00 p.m. at Montrose City Hall

### 14. ACKNOWLEDGEMENTS

- A. Mr. Remer acknowledged public works and city office staff for a great job at clean-up day.
- B. Ms. Bonniwell acknowledged the City Council members and Commission Member that came out to volunteer and help on clean-up day.
- C. Mayor Moynagh acknowledged Montrose Days Committee for their commitment to putting on a celebration for the city.

### 15. ADJOURNMENT

**Council Member Marszalek motioned to adjourn the Rescheduled Regular Special City Council Meeting at 8:43 p.m. Mayor Moynagh seconded the motion. Motion carried 5-0.**

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Robert W. Moynagh, III Mayor  
City of Montrose

ATTEST:

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Jessica Bonniwell  
City Administrator  
City of Montrose

# ACCOUNTS PAYABLE LIST

## June 13, 2022

Payroll	06/13/22 Payroll	14100.69
IRS-Federal Tax Payment	06/13/22 FED/FICA Tax	4721.29
MN Dept. of Revenue	06/13/22 State Withholding	892.79
PERA	06/13/22 Payroll	2755.27
*Ameritas Life Ins.	Employee Optical Ins.	49.40
MN Dept. of Revenue	May Sales Tax	83.00
Payment Service Network	May PSN/ACH Fees	1295.89
Adam's Pest Control	C.H./C.C. Pest Control	80.53
Aramark	Uniforms/Floor Mats	148.56
Cardmember Services	Education/Certification	245.00
Cardmember Services	Annual Dues	149.90
Cardmember Services	6000 Plastic Eggs	753.33
CR Electric	Street Light Repair	1065.42
CR Electric	WWTP Electric Repair	2560.00
Delta Dental	June Dental Insurance	438.30
Hawkins	Water Chemicals	2082.44
Health Partners	June Health Ins.	6246.85
ISD 877 Community Ed.	Montrose Elem. Open Gym	880.00
*Kennedy & Graven	Legal Fees	4735.50
Kuechle Underground	Dwtn. Proj. Phase 1, App. 2	405641.91
*Larson, Connor	Utility Overpayment	27.69
Lincoln Nat'l Life Ins.	June Life Ins.	134.15
*Lindenman, Kendall	Utility Overpayment	116.99
*Linder, Breanna	Utility Overpayment	107.11
*Madison Nat'l Life	June Disability Ins.	349.42
*Metro West Insp. Svcs.	April Final Permits	4172.39
Mini Biff	Parks, WWTP Sani. Rentals	686.46
MVTL Laboratories	Water Testing	74.00
MVTL Laboratories	WWTP Testing	272.20
*Namie, Jessica	Utility Overpayment	93.08
Nelson Sanitation & Rental	Lift Station Maint.	1260.00
Northdale Construction Co.	Dwtn. Proj. Phase 2, App. 1	328736.78
*NW Assoc. Consultants	Planners Services	4484.20
Paumen Computer Services	Monthly IT/Backup & Support	635.00
*Petersen, Mitchell	Utility Overpayment	21.23
Quality Flow Systems	WWTP Repair/Supplies	964.50
Riteway Business Forms	Util. Office Supplies	734.04
*Roushar, Dan	Utility Overpayment	27.50
*Schumacher, Rachel	Utility Overpayment	63.47
*Sheldon, Valarie	Utility Overpayment	36.31

June 13, 2022

Page 2

*Sommerfeld, Michael	Travel Expense	35.51
Surplus Warehouse Willmar	Clean-up Day Disposal	1306.55
Wex Bank	PW, Str, Sew, WW Vehicle Fuel	909.66
Wright-Hennepin Co-op	Electrical Services	266.34
Xcel Energy	Electric/Gas Charges	4218.54
Ziegler	WWTP System Maint.	5142.90

ACCOUNTS PAYABLE SUBTOTAL	803802.09
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Abdo	2021 Audit	10000.00
Adam's Pest Control	Comm. Ctr. Pest Control	80.53
Aramark	Uniforms/Floor Mats	224.84
Badger Meter	May Hosting	146.90
*Bolton & Menk	Engineering Services	14405.00
Bolton & Menk	D.I. Proj. Engineering	71892.20
Braun InterTec	D.I. Proj. Envir. Engineer.	7386.55
Centra Sota Coop.	Parks Chemicals	485.70
*Colonial Life Ins.	June Employee Ins.	19.56
Comcast	Internet Service	543.48
Gopher State One Call	Water/Sewer Locates	205.20
*Helmer, Nicholas	License Overpayment	100.00
*IUOE Local #49	July Union Dues	140.00
IUOE Local #49 HW FUND	May Hlth, Dent, HRA	6180.00
*Jake's Excavating, Inc.	Waterline Repair	1000.00
Klein Heating & Cooling	WWTP Maintenance	225.00
Kuechle Underground	Dwtn. Proj. Phase 1, App. 3	504925.44
Kurkosky, John	Protective Gear Reimb.	148.15
LMCIT	Work. Comp. Annual	27486.00
M&M Express	Parks Maint. Equip.	829.91
Marco Tech.	Printer Maint.	53.12
MCFOA	Membership Renewals	100.00
Menards	PW Shop Supplies	120.58
Menards	PW Small Tools	113.90
Menards	Street Flag Poles	599.76
Midwest Machinery Co.	Mower Parts	12.57
Milhausen Auto Repair	PW Vehicle Maint.	556.87
MN Computer Systems	Copier Maint. Agreement	275.48
MN Dept. of Health	Qtrly. Service Connect Fee	3056.00
MVTL Labs	WWTP Testing	431.50
Northdale Construction Co.	Dwtn. Proj. Phase 2, App. 2	269616.81
Nuso (NEC Cloud Comm.)	Telephone Service	184.04
*NW Assoc. Consultants	Planners Services	1930.58

June 13, 2022

Page 3

Petty Cash Refill	Clean-up Day/Postage/Parking	67.59
Republic Services	Shredding	37.95
Rustic Garden	City Pot Flowers	283.08
Stones Edge Landscaping	Landscaping Herzog Property	2850.00
U.C. Laboratory	Water Testing	180.00
US Internet	Email Hosting	149.25
USA BlueBook	Water/WWTP Supplies	534.05
Verizon	Cellphones/Tablets	375.94
Walmart	CH Office Supplies	33.29
Water Conservation Services	Leak Detection (3/15/22)	331.59
Wright Co. Finance Dept.	June Patrol Services	25610.83
Wright Co. Finance Dept.	2021 Assessment Contract	27102.00
Wright Co. Treasurer	Jan.-Apr. Fines	3927.95
*Wright Co. Journal Press	Legal Notices	781.00
Xcel Energy	Electric/Gas Charges	35.11
Xcel Energy	D.I. Proj. Light Pole Upgr.	146370.00
*Graves, Adrian	Utility Overpayment	68.11
*Kuchenmeister, Alayne	Utility Overpayment	10.82
*Latour, Brad	Utility Overpayment	19.77
*Lofrano, Katie	Utility Overpayment	151.56
*McDonald, Jacob	Utility Overpayment	661.97
*Roubinzck, Amy	Utility Overpayment	431.78
TOTAL ACCOUNTS PAYABLE		1937291.40

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 MOYNAGH

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 BONNIWELL

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 MARSZALEK

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 ANDREOFF

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 SOLARZ

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 PARADEISE



June 13, 2022

Page 4

## \* Appendix

Payments received to offset checks written

Payroll Deduction	June Optical Ins.	49.40
Payroll Deduction	June Disability Ins.	349.42
Payroll Deduction	IUOE #49 Jun. Union Dues	140.00
Payroll Deduction	June EE Ins.	19.56
Developer Expense	Bolton & Menk	1158.50
Developer Expense	Kennedy & Graven	3350.00
Developer Expense	NW Assoc. Consultants	1891.23
License Overpayment	Helmer, Nicholas	100.00
Owner Expense	Jake's Excavating, Inc.	1000.00
Utility Overpayment	Graves, Adrian	68.11
Utility Overpayment	Kuchenmeister, Alayne	10.82
Utility Overpayment	Larson, Connor	27.69
Utility Overpayment	Latour, Brad	19.77
Utility Overpayment	Lindenman, Kendall	116.99
Utility Overpayment	Linder, Breanna	107.11
Utility Overpayment	Lofrano, Katie	151.56
Utility Overpayment	McDonald, Jacob	661.97
Utility Overpayment	Namie, Jessica	93.08
Utility Overpayment	Petersen, Mitchell	21.23
Utility Overpayment	Roubinzck, Amy	431.78
Utility Overpayment	Roushar, Dan	27.50
Utility Overpayment	Schumacher, Rachel	63.47
Utility Overpayment	Sheldon, Valarie	36.31

# CITY OF MONTROSE

## Monthly Adjustments

05/31/22 9:10 AM

Page 1

Account	Tran Type	Charge Name	Charge Type	Amount	Date
00-00001869-01-	Adjustment		UR	(\$75.00)	5/18/2022
01-00002539-00-	Adjustment	Hang Disconnect N	Service	\$25.00	5/10/2022
01-00003118-00-	Adjustment	Hang Disconnect N	Service	\$25.00	5/10/2022
01-00002539-00-	Adjustment	Hang Disconnect N	Service	(\$25.00)	5/10/2022
00-00001093-02-	Adjustment		UR	(\$69.81)	5/18/2022
00-00001075-01-	Adjustment		UR	(\$27.69)	5/18/2022
00-00001533-00-	Adjustment		UR	(\$27.50)	5/18/2022
00-00006018-01-	Adjustment		UR	(\$93.08)	5/18/2022
00-00005061-03-	Adjustment		UR	(\$63.47)	5/18/2022
00-00003122-03-	Adjustment		UR	(\$36.31)	5/18/2022
00-00004060-02-	Adjustment		UR	(\$107.11)	5/18/2022
01-00001146-00-	Adjustment	Hang Disconnect N	Service	\$25.00	5/10/2022
00-00002662-01-	Adjustment		UR	(\$116.99)	5/18/2022
00-00003132-01-	Adjustment		UR	(\$68.11)	5/26/2022
00-00001846-00-	Adjustment		UR	(\$96.64)	5/18/2022
00-00001848-01-	Adjustment		UR	(\$62.00)	5/18/2022
00-00002018-01-	Adjustment		UR	(\$217.90)	5/18/2022
00-00002715-01-	Adjustment		UR	(\$128.34)	5/18/2022
00-00005077-01-	Adjustment		UR	(\$21.61)	5/18/2022
00-00001015-00-	Adjustment		UR	(\$54.70)	5/18/2022
00-00004000-01-	Adjustment		UR	(\$151.56)	5/26/2022
00-00001255-00-	Adjustment		UR	(\$10.82)	5/26/2022
00-00001142-03-	Adjustment		UR	(\$19.77)	5/26/2022
00-00001072-00-	Adjustment		UR	(\$431.78)	5/26/2022
00-00002607-04-	Adjustment		UR	(\$661.97)	5/26/2022
00-00002673-02-	Adjustment		UR	(\$21.23)	5/18/2022
				(\$2,513.39)	

((Type="Adjustment")) AND ((Date Between [enter start date] And [enter stop date]))

May 31st, 2022  
CG

# Value

We at Abdo help cities achieve their financial goals.

Fees are based on the scope, assumptions and timeline outlined within this proposal.

<u>DELIVERABLE</u>	<u>INVESTMENT</u>	<u>SELECTION OF SERVICES</u>
Process Evaluation	\$ 19,500	<input type="checkbox"/>
Long-term Financial Plan	14,500	<input type="checkbox"/>
Accounting Services:		
Monthly Support	Hourly Rate	<input type="checkbox"/>
Cash and Investment	Hourly Rate	<input type="checkbox"/>
Budget Assistance	Hourly Rate	<input type="checkbox"/>
Quarterly Financial Reporting	\$1,900 / quarter	<input type="checkbox"/>
<u>ACCOUNTING SERVICES (PROVIDED AT HOURLY RATE, WITH EXCEPTION OF QUARTERLY REPORTS)</u>		
	<u>HOURLY FEE</u>	

Associate	\$165
Manager	240
Senior Manager	295
Partner	405

Abdo FS hourly bill rates are subject to change on September 1<sup>st</sup> of each year.

Monthly fees will be invoiced throughout the remainder of this contract. Process Evaluation and Long-term Plan will be invoiced 50% at the start of the project, and 50% sixty (60) days later.

In an effort to reduce environmental impact, you will receive printable, downloadable PDFs of your report. To receive one (1) paper report, you will be charged \$150 for a set-up fee. Additional paper copies will be charged at the rate of \$50 per report.

This quote is valid for thirty (30) days.

# Scope of Services

Abdo FS Contract Task	Client Responsibility	Frequency
<b>Cash and Investment Monitoring</b>	<b>(Hourly Rate Service)</b>	
Reconcile cash and investments		Monthly
Review monthly to ensure timely and accurately balance		Monthly
Verify bank has proper amount of collateral pledged to City's account	Request monthly collateral statement from the bank	Monthly
Review cash flow to ensure proper amounts are available for operations		Monthly
<b>Quarterly Reporting</b>	<b>(Fixed Fee Service)</b>	
Complete quarterly dashboard of key indicators		Quarterly
Provide narrative to quarterly financial report	Review and provide input	Quarterly
<b>Monthly Support</b>	<b>(Hourly Rate Service)</b>	
Assist the client with general ledger coding of taxes, special assessments, debt, capital, and other items as necessary.		
Perform analytical procedures on general ledger accounts and provide assistance to the client in reconciling general ledger accounts.		
Review monthly budget to actual reports for coding errors	Review and provide input	Monthly
Review journal entries and payroll entries to ensure accuracy	Review and provide input	Bi-weekly
Review payroll and other monthly/quarterly reports	Review and provide input	Monthly/Quarterly
Monthly City meeting		Monthly



# Scope of Services

Abdo FS Contract Task	Client Responsibility	Frequency
<b>Budget Assistance</b>	<b>(Hourly Rate Service)</b>	
Provide technical assistance for the preparation of the following items:	Provide individual responsible for the budget process and preparation	All tasks will be performed one time
Budget calendar		
Personnel budget		
Budget assumptions		
Budget worksheets for departments		
Budget workshop presentation		
Preliminary budget report and tax levy calculation		
Certification of preliminary levy		
Continued refinement of the budget		
Final budget report and tax levy calculation		
Truth-in-taxation presentation		
Certification of final levy		
Submittal of budget reports to MN Revenue, MN Office of the State Auditor, and newspaper publication		



# Wright County Sheriff's Office

Sheriff Sean Deringer

3800 Braddock Ave. NE, Buffalo, MN 55313  
1-800-362-3667 Fax: 763-682-7610



Montrose Monthly Report 2022

Printed on June 1, 2022

Incident Start Date/Time	Initial Call	CFS #	Final Incident	Case Number	How Reported
<b>911 Abandoned; Medical - Seizure Total: 1</b>					
05/21/22 11:38	911 Abandoned;	2022039497			911
<b>911 Hang-up Total: 2</b>					
05/20/22 02:52	911 Hang-up	2022039103			911
05/30/22 08:37	911 Hang-up	2022042191			911
<b>911 Open Line Total: 7</b>					
05/02/22 14:06	911 Open Line	2022033881			911
05/02/22 16:55	911 Open Line	2022033942			911
05/11/22 12:46	911 Open Line	2022036535			911
05/17/22 14:54	911 Open Line	2022038365			911
05/25/22 11:30	911 Open Line	2022040724			911
05/28/22 16:22	911 Open Line	2022041704			911
05/31/22 18:21	911 Open Line	2022042735	911 Open Line	WP22013290	911
<b>911 Open Line; Domestic Disturbance Total: 1</b>					
05/24/22 10:34	911 Open Line;	2022040367	Domestic Disturbance	WP22012451	911
<b>Abandoned Vehicle Total: 1</b>					
05/10/22 21:16	Abandoned Vehicle	2022036381	Abandoned Vehicle	WP22011100	Phone
<b>Agency Assist Total: 2</b>					
05/09/22 17:24	Agency Assist	2022036020	Agency Assist	WP22010977	Phone
05/16/22 21:47	Agency Assist	2022038184	Agency Assist	WP22011727	Phone
<b>Animal Total: 2</b>					
05/08/22 11:27	Animal	2022035667			Phone
05/25/22 15:48	Animal	2022040804	Animal	WP22012622	Phone
<b>Animal - Abuse Total: 1</b>					
05/11/22 12:11	Animal - Abuse	2022036529	Animal - Abuse	WP22011154	Phone
<b>Animal - Barking Dog Total: 2</b>					
05/06/22 13:46	Animal - Barking Dog	2022035058	Animal - Barking Dog	WP22010672	Phone
05/15/22 17:39	Animal - Barking Dog	2022037824	Animal - Barking Dog	WP22011594	Phone
<b>Animal - Bites - Attacks Total: 1</b>					
05/23/22 15:15	Animal - Bites - Attacks	2022040161	Animal - Bites - Attacks	WP22012378	Phone
<b>Assault Total: 1</b>					
05/21/22 11:46	Assault	2022039501	Assault	WP22012164	911

Incident Start Date/Time	Initial Call	CFS #	Final Incident	Case Number	How Reported
<b>Burglary Total: 1</b>					
05/26/22 20:55	Burglary	2022041169	Burglary	HP22000559	911
<b>Check Welfare Total: 8</b>					
05/05/22 00:57	Check Welfare	2022034623	Check Welfare	WP22010514	911
05/09/22 12:18	Check Welfare	2022035930	Check Welfare	WP22010940	Phone
05/10/22 10:02	Check Welfare	2022036207	Check Welfare	WP22011037	Phone
05/11/22 15:17	Check Welfare	2022036578	Check Welfare	WP22011178	Phone
05/13/22 18:01	Check Welfare	2022037209	Check Welfare	WP22011369	Phone
05/20/22 12:58	Check Welfare	2022039196	Check Welfare	WP22012078	911
05/24/22 13:46	Check Welfare	2022040422	Check Welfare	WP22012470	Phone
05/30/22 19:57	Check Welfare	2022042421	Check Welfare	WP22013167	Phone
<b>Citizen Aid Total: 3</b>					
05/04/22 20:12	Citizen Aid	2022034564	Citizen Aid	WP22010495	Phone
05/27/22 10:44	Citizen Aid	2022041284	Citizen Aid	WP22012779	Phone
05/27/22 20:57	Citizen Aid	2022041506	Citizen Aid	WP22012868	Phone
<b>Civil Complaint Total: 11</b>					
05/04/22 19:50	Civil Complaint	2022034559	Citizen Aid	WP22010492	911
05/10/22 19:52	Civil Complaint	2022036360	Civil Complaint	WP22011096	Phone
05/16/22 07:18	Civil Complaint	2022037935	Civil Complaint	WP22011631	Phone
05/24/22 18:31	Civil Complaint	2022040556	Civil Complaint	WP22012523	Phone
05/25/22 17:36	Civil Complaint	2022040838			Phone
05/26/22 14:06	Civil Complaint	2022041044	Civil Complaint	WP22012691	Phone
05/26/22 18:46	Civil Complaint	2022041130	Civil Complaint	WP22012729	Phone
05/27/22 18:37	Civil Complaint	2022041444	Civil Complaint	WP22012841	Phone
05/27/22 20:13	Civil Complaint	2022041487	Civil Complaint	WP22012858	Phone
05/29/22 19:49	Civil Complaint	2022042081	Civil Complaint	WP22013054	Phone
05/31/22 19:03	Civil Complaint	2022042746	Civil Complaint	WP22013295	Phone
<b>Civil Process Total: 18</b>					
05/02/22 16:16	Civil Process	2022033927			Officer
05/02/22 16:20	Civil Process	2022033928			Officer
05/03/22 13:40	Civil Process	2022034168			Officer
05/04/22 10:49	Civil Process	2022034400			Officer
05/05/22 14:00	Civil Process	2022034746			Officer
05/09/22 15:58	Civil Process	2022035990			Officer
05/09/22 17:01	Civil Process	2022036015			Officer
05/17/22 14:28	Civil Process	2022038351			Officer
05/17/22 14:56	Civil Process	2022038367			Officer
05/17/22 18:27	Civil Process	2022038429			Officer
05/19/22 11:00	Civil Process	2022038852			Officer
05/19/22 14:57	Civil Process	2022038924			Officer
05/20/22 08:19	Civil Process	2022039126			Officer
05/20/22 08:27	Civil Process	2022039128			Officer
05/20/22 15:08	Civil Process	2022039235			Officer
05/25/22 11:12	Civil Process	2022040719			Officer

Incident Start Date/Time	Initial Call	CFS #	Final Incident	Case Number	How Reported
05/27/22 09:07	Civil Process	2022041256			Officer
05/27/22 13:50	Civil Process	2022041346			Officer

### Commercial General Alarm Total: 4

05/02/22 05:59	Commercial General	2022033763			Phone
05/22/22 14:13	Commercial General	2022039834			Phone
05/31/22 01:43	Commercial General	2022042504			Phone
05/31/22 04:31	Commercial General	2022042513			Phone

### Court Order Violation Total: 1

05/24/22 14:58	Court Order Violation	2022040455	Court Order Violation	WP22012485	Phone
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### Criminal Damage to Property Total: 1

05/02/22 10:36	Criminal Damage to	2022033827	Suspicious - Circumstances	WP22010234	Phone
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### Domestic Disturbance Total: 4

05/02/22 00:27	Domestic Disturbance	2022033749	Domestic Disturbance	WP22010204	911
05/04/22 20:22	Domestic Disturbance	2022034571	Domestic Disturbance	WP22010497	Phone
05/10/22 13:43	Domestic Disturbance	2022036261	Domestic Disturbance	WP22011060	
05/26/22 21:47	Domestic Disturbance	2022041186	Domestic Disturbance	WP22012747	911

### Extra Patrol Total: 1

05/24/22 11:53	Extra Patrol	2022040390	Extra Patrol	WP22012457	
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### Fight Total: 2

05/15/22 01:43	Fight	2022037658	Domestic Disturbance	WP22011540	911
05/25/22 13:48	Fight	2022040754	Disorderly	WP22012600	Phone

### Fire - Electrical Total: 1

05/23/22 19:07	Fire - Electrical	2022040230	Fire - Electrical	WP22012402	Phone
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### Fire - Gas Leak Total: 2

05/24/22 08:40	Fire - Gas Leak	2022040339	Fire - Gas Leak	WP22012434	911
05/31/22 18:11	Fire - Gas Leak	2022042730	Fire - Gas Leak	WP22013287	911

### Fire - Smoke - Odor Total: 1

05/12/22 10:47	Fire - Smoke - Odor	2022036782	Fire - Smoke - Odor	WP22011240	911
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### Fireworks Total: 1

05/30/22 19:43	Fireworks	2022042414	Fireworks	WP22013168	Phone
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### Fraud - Checks - Cards Total: 1

05/20/22 12:08	Fraud - Checks - Cards	2022039181	Fraud - Checks - Cards	WP22012072	Phone
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### Fraud - Internet Total: 1

05/16/22 13:44	Fraud - Internet	2022038036	Fraud - Internet	WP22011673	Phone
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### Harassment Total: 4

05/02/22 22:34	Harassment	2022034040	Harassment	WP22010321	Phone
05/03/22 12:05	Harassment	2022034154	Civil Complaint	WP22010351	Phone
05/22/22 11:53	Harassment	2022039801	Harassment	WP22012253	Phone

Incident Start Date/Time	Initial Call	CFS #	Final Incident	Case Number	How Reported
05/28/22 11:01	Harassment	2022041612	Civil Complaint	WP22012902	Phone
<b>Info Total: 2</b>					
05/23/22 11:38	Info	2022040084			Phone
05/26/22 09:51	Info	2022040983			Phone
<b>Juvenile - Complaint Total: 2</b>					
05/15/22 20:47	Juvenile - Complaint	2022037868	Juvenile - Complaint	WP22011607	911
05/29/22 19:11	Juvenile - Complaint	2022042068	Juvenile - Complaint	WP22013049	911
<b>Juvenile - Complaint; Fraud - Internet Total: 1</b>					
05/27/22 17:24	Juvenile - Complaint;	2022041418	Juvenile - Complaint	WP22012834	Phone
<b>Juvenile - Runaway Total: 1</b>					
05/21/22 10:27	Juvenile - Runaway	2022039478	Juvenile - Runaway	WP22012156	Phone
<b>Lock Out - Lock In Total: 2</b>					
05/23/22 18:02	Lock Out - Lock In	2022040212	Lock Out - Lock In	WP22012398	Phone
05/31/22 17:23	Lock Out - Lock In	2022042717	Lock Out - Lock In	WP22013281	Phone
<b>Medical - Abdominal Pain Total: 1</b>					
05/03/22 02:30	Medical - Abdominal	2022034062			911
<b>Medical - Bleeding - Lacerations Total: 1</b>					
05/06/22 14:50	Medical - Bleeding -	2022035081			Phone
<b>Medical - Fall Under 6 Feet Total: 1</b>					
05/16/22 07:30	Medical - Fall Under 6	2022037938			Phone
<b>Medical - Heart Problems Total: 3</b>					
05/06/22 03:42	Medical - Heart	2022034925			911
05/06/22 23:04	Medical - Heart	2022035263			911
05/26/22 01:19	Medical - Heart	2022040924			911
<b>Medical - Psychiatric - Behavioral Total: 1</b>					
05/29/22 22:18	Medical - Psychiatric -	2022042117	Medical - Psychiatric -	WP22013070	Phone
<b>Medical - Sick Total: 1</b>					
05/17/22 13:35	Medical - Sick	2022038328			911
<b>Medical - Trauma Total: 1</b>					
05/19/22 13:12	Medical - Trauma	2022038895			911
<b>Medical - Unconscious - Fainting Total: 1</b>					
05/02/22 23:33	Medical - Unconscious -	2022034047	Drugs	WP22010325	Phone
<b>MVA - No Injuries Total: 5</b>					
05/17/22 18:05	MVA - No Injuries	2022038426	MVA - No Injuries	WP22011808	
05/20/22 08:19	MVA - No Injuries	2022039127	MVA - No Injuries	WP22012057	Other
05/20/22 10:58	MVA - No Injuries	2022039162	MVA - No Injuries	WP22012066	911
05/21/22 05:39	MVA - No Injuries	2022039434	MVA - No Injuries	WP22012139	
05/27/22 06:46	MVA - No Injuries	2022041227	MVA - No Injuries	WP22012762	



Incident Start Date/Time	Initial Call	CFS #	Final Incident	Case Number	How Reported
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### Neighborhood Dispute Total: 4

05/08/22 12:25	Neighborhood Dispute	2022035681	Neighborhood Dispute	WP22010861	911
05/14/22 09:24	Neighborhood Dispute	2022037376	Neighborhood Dispute	WP22011441	911
05/17/22 09:53	Neighborhood Dispute	2022038261	Neighborhood Dispute	WP22011754	
05/24/22 16:01	Neighborhood Dispute	2022040492	Neighborhood Dispute	WP22012501	

### Off-Road Vehicle Complaint Total: 3

05/03/22 16:45	Off-Road Vehicle	2022034221	Off-Road Vehicle Complaint	WP22010383	Phone
05/10/22 17:52	Off-Road Vehicle	2022036329	Off-Road Vehicle Complaint	WP22011085	Phone
05/24/22 18:40	Off-Road Vehicle	2022040561	Off-Road Vehicle Complaint	WP22012524	Phone

### Probation Check Total: 5

05/05/22 14:38	Probation Check	2022034761			Officer
05/05/22 14:58	Probation Check	2022034770			Officer
05/16/22 15:32	Probation Check	2022038071			Officer
05/25/22 14:16	Probation Check	2022040762			Officer
05/25/22 15:49	Probation Check	2022040805			Officer

### Prowler Total: 1

05/09/22 02:15	Prowler	2022035826	Suspicious - Person - Vehicle	WP22010906	911
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### Public Works - Utilities Total: 2

05/02/22 19:55	Public Works - Utilities	2022033998	Public Works - Utilities	WP22010310	911
05/28/22 18:19	Public Works - Utilities	2022041761	Public Works - Utilities	WP22012934	Phone

### Repossession Total: 1

05/22/22 19:35	Repossession	2022039930			
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### Residential General Alarm Total: 3

05/12/22 07:25	Residential General	2022036745			Phone
05/21/22 10:25	Residential General	2022039476			Phone
05/30/22 16:33	Residential General	2022042307			Phone

### Search Warrant Total: 1

05/31/22 10:55	Search Warrant	2022042578	Search Warrant	WSIU22013235	Officer
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### SIA Area Watch Total: 2

05/05/22 17:09	SIA Area Watch	2022034820			
05/16/22 05:37	SIA Area Watch	2022037925			

### SIA Business Walk Through Total: 1

05/27/22 22:18	SIA Business Walk	2022041527			Officer
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### SIA City Council - City Hall Total: 1

05/09/22 17:59	SIA City Council - City	2022036031			Officer
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### Sign - Signal Repair Total: 4

05/01/22 16:55	Sign - Signal Repair	2022033684			911
05/20/22 00:46	Sign - Signal Repair	2022039090			Officer
05/30/22 18:28	Sign - Signal Repair	2022042337			Phone

Incident Start Date/Time	Initial Call	CFS #	Final Incident	Case Number	How Reported
05/31/22 08:47	Sign - Signal Repair	2022042544			Phone

### Suspicious - Circumstances Total: 4

05/10/22 08:12	Suspicious -	2022036179	Civil Complaint	WP22011022	Phone
05/15/22 11:24	Suspicious -	2022037722	Suspicious - Circumstances	WP22011564	Phone
05/27/22 09:10	Suspicious -	2022041257	Suspicious - Circumstances	WP22012772	Phone
05/30/22 22:44	Suspicious -	2022042478	Suspicious - Circumstances	WP22013198	Phone

### Suspicious - Person - Vehicle Total: 8

05/03/22 20:54	Suspicious - Person -	2022034294	Suspicious - Person - Vehicle	WP22010399	Phone
05/05/22 09:48	Suspicious - Person -	2022034677	Suspicious - Person - Vehicle	WP22010533	Phone
05/07/22 20:22	Suspicious - Person -	2022035522	Suspicious - Person - Vehicle	WP22010817	Phone
05/13/22 13:18	Suspicious - Person -	2022037123	Suspicious - Person - Vehicle	WP22011340	Phone
05/13/22 21:37	Suspicious - Person -	2022037274	Suspicious - Person - Vehicle	WP22011394	Phone
05/24/22 15:50	Suspicious - Person -	2022040488	Suspicious - Person - Vehicle	WP22012500	911
05/27/22 23:21	Suspicious - Person -	2022041539	Suspicious - Person - Vehicle	WP22012879	911
05/28/22 07:18	Suspicious - Person -	2022041575	Suspicious - Person - Vehicle	WP22012892	Phone

### Theft Total: 3

05/02/22 11:16	Theft	2022033844	Theft	WP22010239	
05/05/22 17:07	Theft	2022034819	Theft	WP22010581	Phone
05/23/22 21:01	Theft	2022040265	Theft	WP22012413	Phone

### Theft - Shoplifting Total: 1

05/18/22 01:59	Theft - Shoplifting	2022038503	Theft - Shoplifting	WP22011830	Phone
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### Threats Total: 1

05/26/22 13:50	Threats	2022041039	Threats	WP22012684	911
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### Traffic - Complaint Total: 12

05/01/22 19:59	Traffic - Complaint	2022033713	DUI	WP22010193	911
05/04/22 19:43	Traffic - Complaint	2022034556	Traffic - Complaint	WP22010491	Phone
05/06/22 09:51	Traffic - Complaint	2022034975	Traffic - Complaint	WP22010630	Phone
05/09/22 20:04	Traffic - Complaint	2022036062	Traffic - Complaint	WP22010984	Phone
05/16/22 14:01	Traffic - Complaint	2022038044	Traffic - Complaint	WP22011677	
05/18/22 15:51	Traffic - Complaint	2022038670			Phone
05/19/22 16:09	Traffic - Complaint	2022038947	Traffic - Complaint	WP22012010	Phone
05/20/22 16:03	Traffic - Complaint	2022039260	Traffic - Complaint	WP22012098	Phone
05/24/22 13:59	Traffic - Complaint	2022040431	Traffic - Complaint	WP22012472	Phone
05/27/22 23:34	Traffic - Complaint	2022041541	Traffic - Complaint	WP22012882	911
05/28/22 21:11	Traffic - Complaint	2022041815	Traffic - Complaint	WP22012955	911
05/30/22 20:40	Traffic - Complaint	2022042448	Traffic - Complaint	WP22013179	Phone

### Traffic - Hazard Total: 2

05/25/22 17:41	Traffic - Hazard	2022040840	Traffic - Hazard	WP22012633	Phone
05/27/22 21:44	Traffic - Hazard	2022041515	Traffic - Hazard	WP22012869	

### Traffic Stop Total: 82

05/02/22 05:32	Traffic Stop	2022033760			Officer
05/03/22 10:52	Traffic Stop	2022034132	Traffic Stop	WP22010348	Officer

Incident Start Date/Time	Initial Call	CFS #	Final Incident	Case Number	How Reported
05/03/22 13:20	Traffic Stop	2022034163			Officer
05/03/22 21:27	Traffic Stop	2022034303			Officer
05/03/22 23:40	Traffic Stop	2022034325	Traffic Stop	WP22010407	Officer
05/04/22 16:57	Traffic Stop	2022034498			Officer
05/04/22 20:40	Traffic Stop	2022034574			Officer
05/05/22 10:18	Traffic Stop	2022034686	Traffic Stop	WP22010537	Officer
05/05/22 13:34	Traffic Stop	2022034741	Traffic Stop	WP22010560	Officer
05/07/22 19:15	Traffic Stop	2022035496	Traffic - Complaint	WP22010809	Officer
05/08/22 16:49	Traffic Stop	2022035722			Officer
05/10/22 04:37	Traffic Stop	2022036157			Officer
05/11/22 21:44	Traffic Stop	2022036699			Officer
05/12/22 15:48	Traffic Stop	2022036857			Officer
05/12/22 22:33	Traffic Stop	2022036990			Officer
05/12/22 22:39	Traffic Stop	2022036994			Officer
05/13/22 16:55	Traffic Stop	2022037182			Officer
05/13/22 20:39	Traffic Stop	2022037250			Officer
05/13/22 20:52	Traffic Stop	2022037253			Officer
05/13/22 21:35	Traffic Stop	2022037272			Officer
05/14/22 10:02	Traffic Stop	2022037387			Officer
05/14/22 21:47	Traffic Stop	2022037603			Officer
05/15/22 02:15	Traffic Stop	2022037661			Officer
05/16/22 00:10	Traffic Stop	2022037910	Traffic Stop	WP22011624	Officer
05/16/22 00:59	Traffic Stop	2022037915			Officer
05/16/22 05:42	Traffic Stop	2022037926	Traffic Stop	WP22011630	Officer
05/16/22 10:05	Traffic Stop	2022037971	Traffic Stop	WP22011651	Officer
05/16/22 10:21	Traffic Stop	2022037975	Traffic Stop	WP22011652	Officer
05/16/22 10:30	Traffic Stop	2022037980	Traffic Stop	WP22011654	Officer
05/16/22 10:48	Traffic Stop	2022037983	Traffic Stop	WP22011657	Officer
05/16/22 11:22	Traffic Stop	2022037993			Officer
05/16/22 16:01	Traffic Stop	2022038081	Traffic Stop	WP22011694	Officer
05/16/22 17:17	Traffic Stop	2022038105			Officer
05/16/22 23:21	Traffic Stop	2022038203			Officer
05/17/22 13:39	Traffic Stop	2022038330			Officer
05/17/22 13:48	Traffic Stop	2022038332	Traffic Stop	WP22011776	Officer
05/17/22 13:58	Traffic Stop	2022038336	Traffic Stop	WP22011778	Officer
05/17/22 14:02	Traffic Stop	2022038339	Traffic Stop	WP22011781	Officer
05/17/22 14:06	Traffic Stop	2022038341	Traffic Stop	WP22011782	Officer
05/17/22 14:15	Traffic Stop	2022038346			Officer
05/17/22 14:27	Traffic Stop	2022038350	Traffic Stop	WP22011785	Officer
05/17/22 14:29	Traffic Stop	2022038353			Officer
05/17/22 14:35	Traffic Stop	2022038355			Officer
05/17/22 14:45	Traffic Stop	2022038360			Officer
05/17/22 14:51	Traffic Stop	2022038361			Officer
05/17/22 14:56	Traffic Stop	2022038368			Officer
05/17/22 14:58	Traffic Stop	2022038369			Officer
05/17/22 15:06	Traffic Stop	2022038371	Traffic Stop	WP22011788	Officer
05/17/22 15:11	Traffic Stop	2022038372			Officer



Incident Start Date/Time	Initial Call	CFS #	Final Incident	Case Number	How Reported
05/17/22 15:12	Traffic Stop	2022038374	Traffic Stop	WP22011789	Officer
05/17/22 15:19	Traffic Stop	2022038376	Traffic Stop	WP22011791	Officer
05/17/22 15:30	Traffic Stop	2022038380			Officer
05/17/22 15:30	Traffic Stop	2022038381	Traffic Stop	WP22011793	Officer
05/17/22 15:38	Traffic Stop	2022038383			Officer
05/17/22 15:44	Traffic Stop	2022038386			Officer
05/17/22 16:01	Traffic Stop	2022038394			Officer
05/17/22 16:11	Traffic Stop	2022038397			Officer
05/17/22 16:22	Traffic Stop	2022038399			Officer
05/17/22 23:37	Traffic Stop	2022038492			Officer
05/17/22 23:47	Traffic Stop	2022038493			Officer
05/18/22 00:52	Traffic Stop	2022038499			Officer
05/18/22 02:14	Traffic Stop	2022038506	Traffic Stop	WP22011831	Officer
05/18/22 15:10	Traffic Stop	2022038654			Officer
05/19/22 11:54	Traffic Stop	2022038866			Officer
05/19/22 20:18	Traffic Stop	2022039025			Officer
05/19/22 21:10	Traffic Stop	2022039038			Officer
05/20/22 15:50	Traffic Stop	2022039254			Officer
05/20/22 16:19	Traffic Stop	2022039266			Officer
05/21/22 20:32	Traffic Stop	2022039651			Officer
05/23/22 12:19	Traffic Stop	2022040097			Officer
05/23/22 13:01	Traffic Stop	2022040107			Officer
05/23/22 13:10	Traffic Stop	2022040114			Officer
05/23/22 13:58	Traffic Stop	2022040132			Officer
05/23/22 23:59	Traffic Stop	2022040297			Officer
05/24/22 12:20	Traffic Stop	2022040396			
05/26/22 17:37	Traffic Stop	2022041108	Traffic Stop	WP22012718	Officer
05/27/22 01:44	Traffic Stop	2022041214	Traffic Stop	WP22012758	Officer
05/28/22 12:42	Traffic Stop	2022041648			Officer
05/29/22 13:11	Traffic Stop	2022041981			Officer
05/31/22 09:12	Traffic Stop	2022042554			Officer
05/31/22 09:19	Traffic Stop	2022042556			Officer
05/31/22 09:45	Traffic Stop	2022042564	Traffic Stop	WP22013227	Officer

### Unwanted Person Total: 1

05/26/22 14:14	Unwanted Person	2022041047	Unwanted Person	WP22012687	911
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### Warrant - Attempt Total: 2

05/09/22 14:12	Warrant - Attempt	2022035956	Warrant - Arrest	WP22010959	Officer
05/13/22 10:21	Warrant - Attempt	2022037082			Phone

**Total Records: 253**

## Montrose/Waverly Patrol Hour Summary

<b>Hours Purchased Per Contract:</b>	<b>5,840.00</b>
Starting Hours (beginning of month):	3,922.00
M-T-D (detailed below):	499.50
Balance going forward (to next month):	3,422.50
Y-T-D:	2,417.50

\*\* Estimated Hours not verified by final monthly payroll

### Shift Start

Date	Shift Start Time	Shift Stop Date	Shift Stop Time	Schedule	Position	Time Type	Regular Hours
1-May-22	10:00	1-May-22	11:00	Montrose/Waverly	4620 Sheriff Gener		1.00
1-May-22	11:00	1-May-22	16:00	Montrose/Waverly	4620 Sheriff Gener		5.00
1-May-22	16:00	1-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		4.00
1-May-22	20:00	2-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
2-May-22	10:00	2-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
2-May-22	20:00	3-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
3-May-22	10:00	3-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
3-May-22	20:00	4-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
4-May-22	10:00	4-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
4-May-22	20:00	5-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
5-May-22	10:00	5-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
5-May-22	20:00	6-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
6-May-22	10:00	6-May-22	14:00	Montrose/Waverly	4620 Sheriff Gener		4.00
6-May-22	14:00	6-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		6.00
6-May-22	20:00	7-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
7-May-22	10:00	7-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
7-May-22	20:00	8-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
8-May-22	10:00	8-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
8-May-22	20:00	9-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
9-May-22	10:00	9-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
9-May-22	20:00	10-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
10-May-22	10:00	10-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
10-May-22	20:00	11-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
11-May-22	10:00	11-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
11-May-22	20:00	12-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
12-May-22	10:00	12-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
12-May-22	20:00	13-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
13-May-22	10:00	13-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
13-May-22	20:00	14-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
14-May-22	10:00	14-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00
14-May-22	20:00	15-May-22	2:00	Montrose/Waverly	4630 Sheriff Gener		6.00
15-May-22	10:00	15-May-22	20:00	Montrose/Waverly	4620 Sheriff Gener		10.00

15-May-22	20:00	16-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
16-May-22	10:00	16-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
16-May-22	20:00	17-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
17-May-22	10:00	17-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
17-May-22	20:00	18-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
18-May-22	10:00	18-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
18-May-22	20:00	19-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
19-May-22	10:00	19-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
19-May-22	20:00	20-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
20-May-22	10:00	20-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
20-May-22	20:00	21-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
21-May-22	10:00	21-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
21-May-22	20:00	22-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
22-May-22	10:00	22-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
22-May-22	20:00	23-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
23-May-22	10:00	23-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
23-May-22	20:00	24-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
24-May-22	10:00	24-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
24-May-22	20:00	25-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
25-May-22	10:00	25-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
25-May-22	16:00	25-May-22	16:30 Extra Hours: Montro	4620 EOS Premium	0.50
25-May-22	20:00	26-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
25-May-22	20:00	25-May-22	23:00 Extra Hours: Montro	4620 EOS Premium	3.00
26-May-22	10:00	26-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
26-May-22	20:00	27-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
27-May-22	10:00	27-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
27-May-22	20:00	28-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
28-May-22	10:00	28-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
28-May-22	20:00	29-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
29-May-22	10:00	29-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
29-May-22	20:00	30-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
30-May-22	10:00	30-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
30-May-22	20:00	31-May-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00
31-May-22	10:00	31-May-22	20:00 Montrose/Waverly	4620 Sheriff Genera	10.00
31-May-22	20:00	1-Jun-22	2:00 Montrose/Waverly	4630 Sheriff Genera	6.00

<b>TOTAL:</b>	<b>499.50</b>
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# Monthly Activity Report Montrose Fire Department

Prepared and Presented by  
Kevin Triplett – Fire Chief



Period: 05/01/2022 thru 05/31/2022 (MAY)

## CALLS

Total Calls: 31

EMS Calls: 15

Other Calls:

# of Calls MAY 2021 = 26

2021 vs 2022 (2022 = + 5)

05/31 - #22132 – Gas Leak – Montrose  
05/31 - #22131 – Assist WCSO – Montrose  
05/30 - #22130 – Powerline Down – Marysville Township  
05/30 - #22129 – Traffic Hazard – Franklin Township  
05/30 - #22128 – Powerline Down – Woodland Township  
05/30 - #22127 – Powerline Down – Woodland Township  
05/30 - #22126 – Weather Standby – Montrose/Service Area  
05/28 - #22125 – Assist Cokato FD – Structure Fire – Stockholm Township  
05/24 - #22123 – Gas Leak – Montrose City  
05/23 - #22122 – Tree down on power lines – Montrose  
05/21 - #22120 – Motor Vehicle Accident – Montrose  
05/15 - #22114 – Mutual Aid to Delano FD – Structure Fire – Franklin Twsp  
05/12 - #22112 – Illegal burn – Montrose  
05/11 - #22111 – Weather Standby – Montrose/Service Area  
05/11 - #22110 – Weather Standby – Montrose/Service Area

Total calls to Date 2022 – 132

2021 vs 2022 ( 2022 = +16)

Total calls this time in 2021 - 116

## Call Districts

Montrose City: 21      Franklin Township: 2      Marysville Township: 5  
Woodland Township: 2      Other: 1 (Stockholm Township)

## TRAINING:

05/03/2022 – Staff Meeting/Truck Maintenance  
05/10/2022 – Building Construction/De Construction/venting - @ City owned house  
05/17/2022 – Ladders/Ropes/Knots – In House

## Other Activities, Special Mention, Etc.

Throughout month – Road construction meetings at City Hall  
05/18/2022 – Wright County Fire Chiefs Meeting (Triplett)  
05/23/2022 – Montrose City Council Meeting  
05/30/2022 – VFW Memorial Service (VonThoma/Paradeise/Johnson/Holman/DeWitte/Bauernschmitt)

## SPECIAL INFO

- Continue to monitor road construction projects throughout the city

City of Montrose  
 Planning and Zoning Commission Meeting  
 Montrose Community Center  
 200 Center Avenue South  
 Wednesday, June 8, 2022  
 7:00 P.M.

## **1. CALL TO ORDER**

Pursuant to call and notice the Montrose Planning and Zoning Commission met in Regular Session on Wednesday, June 8, 2022 at 7:00pm.

Planning and Zoning Commission Chair, Mr. Charles Smallwood, called the meeting to order at 7:00 p.m.

**No Quorum Present for Meeting – No Motions Made**

## **2. ROLL CALL**

Present: Commissioner Charles Smallwood  
 Commissioner Catherine Neiberger  
 City Council Liaison Sam Solarz

Absent: Commissioner Shawn Cuff  
 Commissioner Sylvia Henry  
 Commissioner Roger Fraumann

Staff Present: Ms. Jessica Bonniwell, City Administrator  
 Mr. Stephen Grittman, City Planner

## **3. PLEDGE OF ALLEGIENCE**

The Pledge of Allegiance was taken.

## **4. APPROVAL OF THE AGENDA**

No quorum present.

## **5. APPROVAL OF THE MINUTES**

No quorum present.

## **6. OLD BUSINESS**

A. No Old Business

## **7. NEW BUSINESS**

A. Fence Ordinance – Chapter 1020 Discussion

Mr. Grittman went over his report as follows:



There are two particular clauses that have been raised by staff as being at issue in recent fence requests as follows:

- 1) Requirements related to boundary line fences, and the provisions requiring neighbor “sign-off” on a boundary line fence less than 2 feet from the common property line. This can be burdensome for many, particularly in instances where neighbors are not getting along. Without the neighbor’s agreement, the fence-building resident effectively gives up access to 2 feet of his/her property.

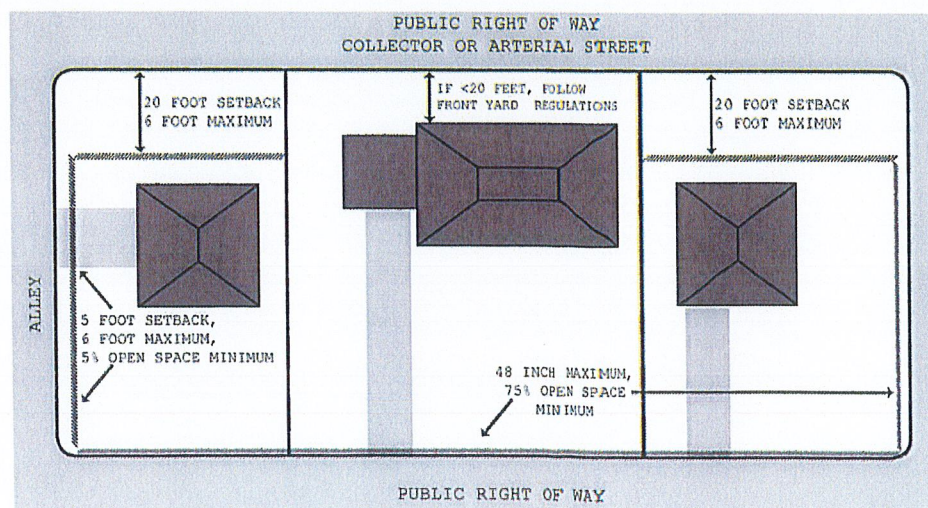
Staff would prefer a blanket change that eliminates this clause, and instead allows fences constructed of “no or low-maintenance” materials (such as coated steel, vinyl, etc.) to be built with a fence permit, and proof of property line location via surveyor’s marking. The alternative for fences that require maintenance (such as wood materials) would maintain the 2-foot setback to accommodate that maintenance.

- 2) Side yard fencing on corner lots. The current regulations require that the side yards of corner lots be treated as front yards for fence height, opacity, and setback purposes. This means that a property owner on a corner lot who wishes to enclose their rear yard with a privacy fence could only do so while leaving the 25 feet closest to the side street outside the fenced-in area. Most residents prefer to enclose as much of their back yards as possible.

A recommended text change would propose that in side yards on corner lots (or rear yards on through lots), a fence of up to 6 feet in height could be constructed so long as it meets a 10-foot setback (rather than the current 25 feet). It is noted here that an open 4-foot fence can currently be constructed up to the property/right-of-way line. This allowance would not change.

The Planning Commission asked for information on surrounding communities’ treatment of this issue.

- i. In Buffalo, where building setbacks from public right of way are generally 30 feet, the allowance for rear yard fences on through lots is 6 feet with a 20-foot setback. Buffalo does not have an allowance for taller fences adjoining side yards on corner lots. Their code makes an allowance for yards that adjoin alleys. A visual depiction of this is shown below:





- ii. In Monticello, the code permits side or rear fences abutting a public right of way to be up to 7 feet in height (exceeding their typical 4-foot-high front yard fence), with a requirement that such fences be set back at least 6 feet and include additional landscaping in that 6-foot set back area.
- iii. In Delano, the code permits side or rear fences on corner lots abutting a public right-of-way to be up to 6 feet in height, with a setback of at least 10 feet from the property/right-of-way line, and provided they are behind the front building line of the home.

As an additional comment, some communities (Monticello is an example) have increased their fence height allowances in side and rear yards to 7 feet, over the prior requirement of 6 feet. This tracks with the Building Code changes that create an exemption from building permit requirements for fences of that 7-foot height – the prior standard was 6 feet. This further avoids disputes over 6-foot fences that occasionally exceed that height due to variations in the ground level at the bottom of the fence.

In sum, the decision points on side/rear yard fences adjoining a public right-of-way are as follows:

- A. Should the City permit taller fences in these areas on corner or through lots?

**The draft materials attached include this permission.**

- B. If so, should the taller fence be located behind the rear building line of the home, or behind the front building line of the home?

**The draft materials attached suggest the rear building line.**

- C. How tall should the fence be allowed to be?

**The draft materials suggest 6 feet, consistent with the current maximum fence height in rear yards.**

- D. What setback from the public right of way should the fence maintain?

**The draft materials suggest 10 feet, reduced from the current 25 feet.**

- E. Should the rear-yard fence height be kept at 6 feet, or increased to 7 feet?

**This amendment could be made if preferred by the Planning Commission.**

The draft ordinance is as follows:

**1020-2: FENCES:** Fences shall be permitted in all yards subject to the following:

- A. Permit Required: No person except on a farm and related to agricultural uses, but not including hobby farms, shall construct any fence without first making an application for and securing an administrative permit for fences not exceeding six feet (6') in height, and a building permit for fences exceeding six feet (6') in height.

- B. Locations; Boundary Line Fences:

- 1. A fence that requires periodic maintenance shall be located no closer than two feet (2') from any side or rear yard lot line on the property of the person constructing said fence. An exception to this may be allowed by administrative fence permit provided that ~~an agreement addressing construction, maintenance, and repair responsibilities, as well as trespass rights, is established between the adjoining property owners and said agreement is determined acceptable to the City Attorney and filed with the Wright County~~



~~Reorder against the titles of the respective properties. The fence agreement shall provide for amendment or cancellation only upon written approval from the Zoning Administrator~~ the proposed fence is constructed of maintenance free materials (vinyl, vinyl-coated steel, metal with a durable finish, etc.), and is located entirely upon the property of the fence permit applicant, verified by a certificate of survey.

2. A fence that is maintenance free, such as a chain link of steel, plastic or vinyl, and is acceptable as such to the zoning administrator, may be constructed up to the side or rear yard property line, with submission of a certificate of survey to verify the location of the fence.

3. The City may require the owner of the property upon which a fence now exists, or may require any applicant for a fence permit to establish the boundary lines of the property by a survey thereof to be made by any land surveyor.

4. No fences shall be placed on or extend into public rights of way or onto public property.

#### C. Construction and Maintenance:

1. Every fence shall be constructed in a substantial, workmanlike manner and of substantial material reasonably suited for the purpose for which the fence is proposed to be used. Every fence shall be maintained in a condition of reasonable repair and shall not be allowed to become and remain in a condition of disrepair or danger, or constitute a nuisance, public or private. Any such fence which is, or has become dangerous to the public safety, health or welfare, is a public nuisance, and the Zoning Administrator shall commence proper proceedings for the abatement thereof.

2. That side of any fence considered to be its "face" (i.e., the finished side having no structural supports) shall face abutting property or street right-of-way.

3. Electric fences shall only be permitted in the UR District when related to agriculture, and on farms in other districts when related to agricultural purposes, but not as boundary fences.

4. Barbed wire fences shall only be permitted on farms related to agriculture except as provided for by Section 1020-2.H.3 of this Ordinance.

D. Solid Walls: Solid walls up to eight feet (8') in height that are not part of buildings may be constructed and maintained only within the buildable area of a lot.

E. Traffic Sight Visibility Triangle: On corner lots, no fence or screen shall be permitted within the traffic sight visibility triangle specified by Section 1016-7 of this Ordinance.

#### F. Residential Fencing and Screening:

1. Except as provided herein, fences shall be at least five percent (5%) open for passage of air, light, and drainage.

2. Except as provided herein, fences may not exceed six feet (6') in height. Montrose Zoning Ordinance 1020-2

3. Fences extending across front yards ~~and side~~ yards abutting a public right-of-way shall not exceed forty-eight inches (48") in height and shall be at least seventy five percent (75%) open space for passage of air and light and shall conform to the traffic visibility triangle requirements of Section 1016-7 of this Ordinance.

4. Fences extending across side yards adjoining a public right-of-way on corner lots, or across a rear yard on through lots, shall meet the following requirements:

a. Such fence may be constructed to a height of six feet.



- b. The fence shall be located behind the rear building line of the principal structure.
- c. The fence shall be located no closer than 10 feet from the public right-of-way line.
- d. The fence may be constructed as a solid fence for screening purposes, and shall be exempt from the open space requirements in Section 1020-2 F.3. above. Notwithstanding this exemption, the traffic visibility requirements of that Section shall continue to apply.

#### G. Swimming Pool Protection:

1. All in-ground pools regardless of capacity and all aboveground swimming pools that exceed five thousand (5,000) gallons shall require a building permit before installation.
2. Each application for a building permit (to construct a swimming pool) shall be accompanied by plans of sufficient detail to illustrate:
  - a. The proposed location of the pool and its relationship to the principal building on the lot.
  - b. The size of the pool.
  - c. Fencing and other fixtures existing and proposed on the lot, including utility location and trees.
  - d. The location, size, and types of equipment to be used in connection with the pool, including, but not limited to, filter unit, pump fencing, and the pool itself.
  - e. The requirements contained in Sections 1020.G.2 and 1020.G.3 of this Ordinance will be satisfied including submission and approval of a site plan.
3. All swimming pools for which a permit is required shall be provided with safeguards to prevent children from gaining uncontrolled access. This can be accomplished with fencing, screening or other enclosure, or any combination thereof, of sufficient density as to be impenetrable. If fences are employed, they shall be at least four feet (4') in height. The bottoms of the fences shall not be more than four inches (4") from the ground nor shall any open space in the fence be more than four inches (4"). Fences shall be of a non-corrosive material and shall be constructed as to be not easily climbable. All fence openings or points of entry into the pool enclosure shall be equipped with gates or doors. All gates or doors to swimming pools shall be equipped with self-closing and self-latching devices placed at a sufficient height so as to be inaccessible to all small children. The fencing requirements of this Section need only be provided around the means of access on aboveground pools which have four feet (4') high, vertical or outward inclined side walls. Prior to filling the pool, the Montrose Zoning Ordinance 1020-3 approved fence and/or screen shall be completely in place and inspected and approved by the City Building Official.
4. In all residential districts, swimming pools shall be set back ten feet (10') from all adjoining lots and, except for fences and pump enclosures, shall be located at least ten feet (10') away from any other building or structure on the same lot and shall not be located within a drainage or utility easement. Swimming pools shall not be permitted in a front yard or in the area between the street right-of-way and the minimum required building side yard setback line.

#### H. Business and Industrial Fencing:

1. No fence shall be allowed in the front yard of a business use except by conditional use permit.
2. Except in a required front yard, business and industrial fences may be erected up to eight feet (8') in height. Fences in excess of eight feet (8'), not located in a required front yard, shall require a conditional use permit.

3. Business and industrial fences with barbed wire security arms shall be erected a minimum of six feet (6') in height (measured without the security arm). The security arm shall be angled in such a manner that it extends only over the property of the permit holder and does not endanger the public. Security fencing shall be prohibited within a required front yard or when located along a property line abutting a residential use.

I. Special Purpose Fences: Fences for special purposes and fences differing in construction, height or setback that are not constructed within a required front yard may be permitted in any district as a conditional use permit subject to Chapter 1005 of this Ordinance.

Brief discussion was held between commission members present and staff regarding the proposed fence ordinance. Mr. Gritman suggested allowing seven-foot (7') fences since the state building code has changed and raised the threshold of needing a building to over seven feet. Mr. Gritman also stated that there would likely need to be an allowance for post caps to exceed the fence height restriction by six inches (6").

**B. Updates from City Planner**

Ms. Neiberger asked about the property at the end of Steamboat Lane that is currently for sale. Ms. Bonniwell stated that Mr. Prosch has informed the city that he is attempting to sell the land to another developer to go forward with the approved Preliminary Plat for the property at the end of Steamboat Lane. Ms. Bonniwell stated that if another developer did buy the property, they would have to submit a Final Plat proposal within one year of the Preliminary Plat approval date, or they would have to start the process from the beginning.

**8. NEXT MEETING**

A. Wednesday, July 13, 2022 to be held at the Montrose Community Center – 7:00 p.m.  
PUBLIC HEARING

**9. ADJOURNMENT**

The meeting was adjourned at 7:35 p.m.

ATTEST:

---

Charles Smallwood  
Planning and Zoning Chair  
City of Montrose

---

Jessica Bonniwell  
City Administrator  
City of Montrose





Real People. Real Solutions.

2040 Highway 12 East  
Willmar, MN 56201-5818

Ph: (320) 231-3956  
Fax: (320) 231-9710  
Bolton-Menk.com

June 7, 2022

Jessica Bonniwell  
City Administrator  
City of Montrose  
311 Buffalo Avenue South  
Montrose, MN 55363

RE: 2021 Downtown Improvement Project Phase 1  
City of Montrose, Minnesota  
Project No.: W13.120514

Dear Jessica:

Please find enclosed Payment Estimate No. 3 for the above referenced project. The estimate includes all work completed through June 1, 2022. We have reviewed the estimate and recommend approval. If you agree, please sign and date three copies and return one with payment to Kuechle Underground, Inc. and one to me for our files.

If you have any questions on the above, please call.

Sincerely,

**Bolton & Menk, Inc.**

**Spencer Johnson, P.E.**  
Project Engineer

Enclosures

## Contractor's Application for Payment

Owner:	City of Montrose		Owner's Project No.:	
Engineer:	Bolton & Menk, Inc.		Engineer's Project No.:	W13.120514
Contractor:	Kuechle Underground		Other Project No.:	
Project:	2021 Downtown Improvement Project - Phase 1			
Contract:	2021 Downtown Improvement Project - Phase 1			
Application No.:	3	Application Date:	6/3/2022	
Application Period:	From 5/12/2022	to	6/1/2022	

1. Original Contract Price	\$	5,185,007.34
2. Net change by Change Orders	\$	55,399.00
3. Current Contract Price (Line 1 + Line 2)	\$	5,240,406.34
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)	\$	984,091.95
5. Retainage		
a. 5% X \$ 984,091.95 Work Completed	\$	49,204.60
b. X \$ - Stored Materials	\$	-
c. Total Retainage (Line 5.a + Line 5.b)	\$	49,204.60
6. Amount eligible to date (Line 4 - Line 5.c)	\$	934,887.35
7. Less previous payments (Line 6 from prior application)	\$	429,961.91
8. Amount due this application	\$	504,925.44
9. Balance to finish, including retainage (Line 3 - Line 4)	\$	4,256,314.39

**Contractor's Certification**

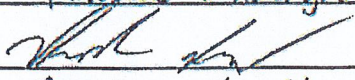
The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

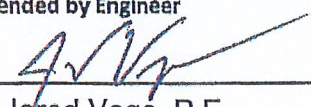
(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor:	Kuechle Underground Inc.	
Signature:		Date: 6-7-22
Name:	Brandon Kuechle	Title: Project Manager

Recommended by Engineer	Approved by Owner
By: 	By: _____
Name: Jared Voge, P.E.	Name: _____
Title: City Engineer	Title: _____
Date: 06/07/2022	Date: _____



Progress Estimate - Unit Price Work

Owner:	City of Montrose	Contractor's Application for Payment
Engineer:	Bolton & Wenk, Inc.	Owner's Project No.:
Contractor:	Kuechle Underground	Engineer's Project No.:
Project:	2021 Downtown Improvement Project - Phase 1	Contractor's Project No.:
Contract:	2021 Downtown Improvement Project - Phase 1	

Application No.: 3			Application Period: From 05/12/22 to 06/01/22			Application Date: 06/03/22									
Bid Item No.	Description	C		Contract Information		F		G		H		I	J	K	Balance to Finish (F - J) (\$)
		Item Quantity	Units	D	E	Value of Bid Item (C X E) (\$)	Work Completed		Value of Work Completed to Date (E X G) (\$)						
							Estimated Quantity Incorporated in the Work								
Original Contract															
1	MOBILIZATION	1.00	LUMP SUM			152,000.00			0.35		53,200.00		53,200.00	35%	98,800.00
2	CLEARING	71.00	TREE			200.00			36.00		7,200.00		7,200.00	51%	7,000.00
3	GRUBBING	71.00	TREE			50.00			36.00		1,800.00		1,800.00	51%	1,750.00
4	CLEARING (BUSH)	20.00	SQ YD			10.00			20.00		200.00		200.00	100%	-
5	20' WIDE TEMPORARY GRAVEL ROAD WITH GEOTEXTILE	1.00	LUMP SUM			3,800.00			-		-		-		3,800.00
6	REMOVE CURB AND GUTTER	2,654.00	LIN FT			4.00			1,484.00		5,936.00		5,936.00	56%	4,680.00
7	REMOVE BITUMINOUS PAVEMENT	25,459.00	SQ YD			2.00			17,322.00		34,644.00		34,644.00	68%	16,274.00
8	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	2,025.00	SQ YD			4.00			969.00		3,876.00		3,876.00	48%	4,224.00
9	REMOVE CONCRETE DRIVEWAY PAVEMENT	1,585.00	SQ YD			4.00			821.00		3,284.00		3,284.00	52%	3,056.00
10	REMOVE CONCRETE WALK	3,331.00	SQ YD			3.00			2,055.00		6,165.00		6,165.00	62%	3,828.00
11	REMOVE BOLLARD	14.00	EACH			150.00			2.00		300.00		300.00	14%	1,800.00
12	REMOVE GUARD RAIL	73.00	LIN FT			10.00			-		-		-		730.00
13	SALVAGE SIGN	39.00	EACH			25.00			10.00		250.00		250.00	26%	725.00
14	SALVAGE MAILBOX	7.00	EACH			125.00			7.00		875.00		875.00	100%	-
15	SALVAGE FENCE	48.00	LIN FT			10.00			-		-		-		480.00
16	SALVAGE PAVERS	65.00	SQ FT			35.00			-		-		-		2,275.00
17	SALVAGE LANDSCAPING	415.00	SQ FT			6.00			-		-		-		2,490.00
18	COMMON LABORERS	50.00	HOUR			75.00			-		-		-		3,750.00
19	3.0 CU YD SHOVEL	50.00	HOUR			180.00			-		-		-		9,000.00
20	DOZER	50.00	HOUR			125.00			-		-		-		6,250.00
21	12 CU YD TRUCK	50.00	HOUR			125.00			-		-		-		6,250.00
22	3.0 CU YD FRONT END LOADER	50.00	HOUR			150.00			-		-		-		7,500.00
23	SKID LOADER	50.00	HOUR			140.00			16.50		2,310.00		2,310.00	33%	4,690.00
24	1.5 CU YD BACKHOE	50.00	HOUR			160.00			-		-		-		8,000.00
25	COMMON EXCAVATION (P)	24,675.00	CU YD			15.00			1,121.76		16,826.40		16,826.40	5%	353,298.60
26	SUBGRADE EXCAVATION (EV)	1,970.00	CU YD			15.00			437.33		6,559.95		6,559.95	23%	22,900.05
27	RUBBLE EXCAVATION (EV)	885.00	CU YD			8.00			-		-		-		7,080.00
28	HAUL & DISPOSE OF RUBBLE (LV)	1,155.00	CU YD			7.00			-		-		-		8,085.00
29	EXCAVATION SPECIAL (EV)	885.00	CU YD			8.00			-		-		-		7,080.00
30	HAUL & DISPOSE OF CONTAMINATED MATERIAL (LV)	1,155.00	CU YD			62.00			-		-		-		1,200.00
31	TRENCH COMPACTION SPECIAL	6.00	ROAD STATION			200.00			-		-		-		1,200.00
32	SELECT GRANULAR BORROW (GV)	13,470.00	CU YD			19.00			603.52		11,466.88		11,466.88	4%	244,463.12
33	GEOTEXTILE FABRIC TYPE V	29,125.00	SQ YD			2.62			1,312.00		3,437.44		3,437.44	5%	72,870.06
34	AGGREGATE BASE (CV) CLASS 5	8,035.00	CU YD			25.00			360.80		9,020.00		9,020.00	4%	191,855.00
35	AGGREGATE SURFACING (CV) CLASS 2	101.00	CU YD			30.00			-		-		-		3,030.00
36	TYPE SP 9.5 WEARING COURSE MIX (2,B)	2,250.00	TON			68.00			-		-		-		153,000.00
37	TYPE SP 12.5 NON WEAR COURSE MIX (2,B)	3,810.00	TON			66.00			-		-		-		251,460.00
38	BITUMINOUS DRIVEWAY PAVEMENT	1,095.00	SQ YD			17.00			-		-		-		18,615.00
39	BITUMINOUS STREET PATCH	235.00	SQ YD			24.00			-		-		-		5,640.00
40	BITUMINOUS PATCH, COUNTY ROAD 12	530.00	SQ YD			24.00			-		-		-		5,640.00
41	5" CONCRETE WALK	37,950.00	SQ FT			5.75			-		-		-		218,212.50
42	6" CONCRETE WALK (PEDESTRIAN RAMPS)	3,070.00	SQ FT			9.00			-		-		-		27,630.00
43	CONCRETE CURB & GUTTER DESIGN B618	14,610.00	LIN FT			14.00			-		-		-		204,540.00
44	7" CONCRETE DRIVEWAY PAVEMENT	2,620.00	SQ YD			59.00			-		-		-		154,580.00



## Contractor's Application for Payment

Owner: City of Montrose		Engineer: Bolton & Menk, Inc.		Contractor: Kuehle Underground		Project: 2021 Downtown Improvement Project - Phase 1		Contract: 2021 Downtown Improvement Project - Phase 1		Owner's Project No.: W13.120514		Engineer's Project No.:		Contractor's Project No.:	
Application No.: 3										Application Period: From 05/12/22 to 06/01/22			Application Date: 06/03/22		
A	B	C	D	Contract Information		E	F	G	H		I	J	K	L	
				Item Quantity	Units				Unit Price (\$)	Value of Bid Item (C X E)					Estimated Quantity Incorporated in the Work
Bid Item No.	Description														
45	8" CONCRETE DRIVEWAY PAVEMENT	625.00	SQ YD	66.00	41,250.00	-	-	-	-	-	-	-	-	41,250.00	
46	TRUNCATED DOMES	400.00	SQ FT	50.00	20,000.00	-	-	-	-	-	-	-	-	20,000.00	
47	4" PVC EDGE DRAIN	13,960.00	LIN FT	8.00	111,680.00	656.00	5,248.00	5,248.00	5,248.00	5,248.00	5,248.00	5%	5%	106,432.00	
48	4" DRAIN CLEANOUT (ONE WAY)	13.00	EACH	117.00	1,521.00	2.00	234.00	234.00	234.00	234.00	234.00	15%	15%	1,287.00	
49	4" DRAIN CLEANOUT (TWO WAY)	13.00	EACH	250.00	3,250.00	-	-	-	-	-	-	-	-	3,250.00	
50	4" PRECAST CONCRETE HEADWALL	2.00	EACH	290.00	580.00	-	-	-	-	-	-	-	-	580.00	
51	SUMP PUMP DRAINLINE SERVICE	21.00	EACH	138.00	2,898.00	1.00	138.00	138.00	138.00	138.00	138.00	5%	5%	2,760.00	
52	TRAFFIC CONTROL	1.00	LUMP SUM	12,000.00	12,000.00	0.35	4,200.00	4,200.00	4,200.00	4,200.00	4,200.00	35%	35%	7,800.00	
53	REMOVE EXISTING PAVEMENT MARKING	126.00	SQ FT	3.00	378.00	-	-	-	-	-	-	-	-	378.00	
54	PEDESTRIAN CROSS WALK MARKING	1,746.00	SQ FT	3.90	5,809.40	-	-	-	-	-	-	-	-	6,809.40	
55	4" PAVEMENT MARKING STRIPING (MULTICOMPONENT)	280.00	LIN FT	1.00	280.00	-	-	-	-	-	-	-	-	280.00	
56	CONCRETE BOLLARD	22.00	EACH	130.00	2,860.00	-	-	-	-	-	-	-	-	2,860.00	
57	FURNISH & INSTALL SIGN TYPE C	19.00	EACH	380.00	7,220.00	-	-	-	-	-	-	-	-	7,220.00	
58	FURNISH & INSTALL SIGN (STREET NAME)	15.00	EACH	400.00	6,000.00	-	-	-	-	-	-	-	-	6,000.00	
59	REINSTALL SIGN	2.00	EACH	200.00	400.00	-	-	-	-	-	-	-	-	400.00	
60	REINSTALL MAILBOX	7.00	EACH	250.00	1,750.00	-	-	-	-	-	-	-	-	1,750.00	
61	REINSTALL FENCE	48.00	LIN FT	20.00	960.00	-	-	-	-	-	-	-	-	960.00	
62	REINSTALL PAVERS	65.00	SQ FT	50.00	3,250.00	-	-	-	-	-	-	-	-	3,250.00	
63	REINSTALL LANDSCAPING	415.00	SQ FT	6.00	2,490.00	-	-	-	-	-	-	-	-	2,490.00	
64	SEDIMENT CONTROL LOG, TYPE WOOD CHIP	100.00	LIN FT	3.00	300.00	200.00	600.00	600.00	600.00	600.00	600.00	200%	200%	300.00	
65	SEDIMENT CONTROL LOG, TYPE ROCK	100.00	LIN FT	10.00	1,000.00	-	-	-	-	-	-	-	-	1,000.00	
66	SILT FENCE, TYPE MS	4,655.00	LIN FT	1.50	6,982.50	60.00	90.00	90.00	90.00	90.00	90.00	1%	1%	6,892.50	
67	EROSION CONTROL BLANKET, CAT 3N	2,300.00	SQ YD	1.35	3,105.00	-	-	-	-	-	-	-	-	3,105.00	
68	STORM DRAIN INLET PROTECTION	82.00	EACH	250.00	20,500.00	-	-	-	-	-	-	-	-	20,500.00	
69	STABILIZED CONSTRUCTION EXIT	7.00	EACH	750.00	5,250.00	-	-	-	-	-	-	-	-	5,250.00	
70	SALVAGE, SCREEN, RESPREAD EXISTING TOPSOIL	1.00	LUMP SUM	97,000.00	97,000.00	-	-	-	-	-	-	-	-	97,000.00	
71	COMMON TOPSOIL BORROW (LV)	2,764.00	CU YD	0.01	27.64	-	-	-	-	-	-	-	-	27.64	
72	TEMPORARY MULCH, HYDROMULCH	11,065.00	SQ YD	0.90	9,958.50	-	-	-	-	-	-	-	-	9,958.50	
73	TURF ESTABLISHMENT (SOD)	3,525.00	SQ YD	9.00	31,725.00	-	-	-	-	-	-	-	-	31,725.00	
74	TURF ESTABLISHMENT (SEED)	2.28	ACRE	7,000.00	15,960.00	-	-	-	-	-	-	-	-	15,960.00	
75	REMOVE STORM SEWER PIPE (12" & LARGER)	3,088.00	LIN FT	9.00	27,792.00	775.00	6,975.00	6,975.00	6,975.00	6,975.00	6,975.00	25%	25%	20,817.00	
76	REMOVE STORM MANHOLE OR CATCH BASIN	24.00	EACH	230.00	5,520.00	7.00	1,610.00	1,610.00	1,610.00	1,610.00	1,610.00	29%	29%	3,910.00	
77	CONNECT TO EXISTING STORM STRUCTURE	5.00	EACH	1,600.00	8,000.00	3.00	4,800.00	4,800.00	4,800.00	4,800.00	4,800.00	60%	60%	3,200.00	
78	CONNECT TO EXISTING STORM PIPE	4.00	EACH	780.00	3,120.00	2.00	1,560.00	1,560.00	1,560.00	1,560.00	1,560.00	50%	50%	1,560.00	
79	8" PVC PIPE SEWER, SDR 26	20.00	LIN FT	38.00	760.00	-	-	-	-	-	-	-	-	760.00	
80	8" DIP PIPE SEWER	28.00	LIN FT	62.00	1,736.00	20.00	1,240.00	1,240.00	1,240.00	1,240.00	1,240.00	71%	71%	496.00	
81	12" RC PIPE SEWER CLASS V	1,151.00	LIN FT	48.00	55,248.00	100.00	4,800.00	4,800.00	4,800.00	4,800.00	4,800.00	9%	9%	50,448.00	
82	15" RC PIPE SEWER CLASS V	1,459.00	LIN FT	53.00	77,327.00	246.00	13,038.00	13,038.00	13,038.00	13,038.00	13,038.00	17%	17%	64,289.00	
83	18" RC PIPE SEWER CLASS III	126.00	LIN FT	57.00	7,182.00	-	-	-	-	-	-	-	-	7,182.00	
84	21" RC PIPE SEWER CLASS III	661.00	LIN FT	66.00	43,626.00	-	-	-	-	-	-	-	-	43,626.00	
85	24" RC PIPE SEWER CLASS III	349.00	LIN FT	73.00	25,477.00	65.00	4,745.00	4,745.00	4,745.00	4,745.00	4,745.00	19%	19%	20,732.00	
86	27" RC PIPE SEWER CLASS III	679.00	LIN FT	89.00	60,431.00	679.00	60,431.00	60,431.00	60,431.00	60,431.00	60,431.00	100%	100%	-	
87	30" RC PIPE SEWER CLASS III	69.00	LIN FT	101.00	6,969.00	-	-	-	-	-	-	-	-	6,969.00	
88	12" RCP APRON	3.00	EACH	880.00	2,640.00	-	-	-	-	-	-	-	-	2,640.00	
89	15" RCP APRON	2.00	EACH	950.00	1,900.00	-	-	-	-	-	-	-	-	1,900.00	



Progress Estimate - Unit Price Work

Owner:	City of Montrose
Engineer:	Bolton & Menk, Inc.
Contractor:	Kueschle Underground
Project:	2021 Downtown Improvement Project - Phase 1
Contract:	2021 Downtown Improvement Project - Phase 1

Contractor's Application for Payment

Owner's Project No.:	W13-120514
Engineer's Project No.:	
Contractor's Project No.:	

Application No.: 3		Application Period: From 05/12/22 to 06/01/22			Application Date: 06/03/22						
A	B	C	D	E	F	G	H	I	J	K	L
Bid Item No.	Description	Contract Information		Value of Bid Item (C X E)		Work Completed		Materials Currently Stored (not in G)	Work Completed and Materials Stored to Date (H + I)	% of Value of Item (J / F)	Balance to Finish (F - J) (\$)
		Item Quantity	Units	Unit Price (\$)	Value (\$)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) (\$)				
90	24" RCP APRON	1.00	EACH	1,200.00	1,200.00	-	-	-	1,300.00	100%	1,200.00
91	27" RCP APRON	1.00	EACH	1,300.00	1,300.00	1.00	1,300.00	-	-	-	1,500.00
92	30" RCP APRON	1.00	EACH	1,500.00	1,500.00	-	-	-	-	-	960.00
93	TRASH GUARD FOR 15" PIPE APRON	2.00	EACH	480.00	960.00	-	-	-	-	-	1,100.00
94	TRASH GUARD FOR 24" PIPE APRON	1.00	EACH	1,100.00	1,100.00	-	-	-	-	-	-
95	TRASH GUARD FOR 27" PIPE APRON	1.00	EACH	1,200.00	1,200.00	1.00	1,200.00	-	1,200.00	100%	1,300.00
96	TRASH GUARD FOR 30" PIPE APRON	1.00	EACH	1,300.00	1,300.00	-	-	-	-	-	7,110.00
97	RIP RAP, CLASS III	90.00	CU YD	79.00	7,110.00	-	-	-	-	-	2,100.00
98	CONSTRUCT DRAINAGE STRUCTURE, DES SPECIAL-1	1.00	EACH	2,100.00	2,100.00	-	-	-	-	-	27,374.60
99	CONSTRUCT DRAINAGE STRUCTURE, DES H	75.70	LIN FT	460.00	34,822.00	16.19	7,447.40	-	7,447.40	21%	5,623.60
100	CONSTRUCT DRAINAGE STRUCTURE, DES 48-4020	20.20	LIN FT	680.00	13,736.00	11.93	8,112.40	-	8,112.40	59%	43,356.60
101	CONSTRUCT DRAINAGE STRUCTURE, DES 48-4022	78.20	LIN FT	620.00	48,484.00	8.27	5,127.40	-	5,127.40	11%	11,081.00
102	CONSTRUCT DRAINAGE STRUCTURE, DES 60-4020	27.40	LIN FT	700.00	19,180.00	11.57	8,099.00	-	8,099.00	42%	10,908.00
103	CONSTRUCT DRAINAGE STRUCTURE, DES 60-4022	39.30	LIN FT	720.00	28,296.00	24.15	17,388.00	-	17,388.00	61%	15,200.00
104	CONSTRUCT DRAINAGE STRUCTURE, DES 84-4022	9.50	LIN FT	1,600.00	15,200.00	-	-	-	-	-	40,500.00
105	INTERIOR LINING OF CATCH BASIN RINGS	50.00	EACH	810.00	40,500.00	-	-	-	-	-	28,500.00
106	CASTING ASSEMBLY (STORM)	57.00	EACH	500.00	28,500.00	-	-	-	-	-	1,650.00
107	ADJUST FRAME AND RING CASTING (STORM)	5.00	EACH	330.00	1,650.00	-	-	-	-	-	(1,424.43)
108	TELEWISE EXISTING SANITARY SEWER	4,395.00	LIN FT	2.55	11,207.25	4,953.60	12,631.68	-	12,631.68	113%	580.00
109	TELEWISE EXISTING SANITARY SEWER SERVICE FOR LOCATION & DEPTH	67.00	EACH	290.00	19,430.00	65.00	18,850.00	-	18,850.00	97%	16,830.55
110	ABANDON & SAND FILL SANITARY SEWER PIPE	2,155.00	LIN FT	7.81	16,830.55	-	-	-	-	-	2,850.00
111	ABANDON & SAND FILL SANITARY SEWER MANHOLE	3.00	EACH	950.00	2,850.00	-	-	-	-	-	2,337.50
112	REMOVE SANITARY SEWER PIPE	2,195.00	LIN FT	2.50	5,487.50	1,260.00	3,150.00	-	3,150.00	57%	2,400.00
113	REMOVE SANITARY MANHOLE	18.00	EACH	200.00	3,600.00	6.00	1,200.00	-	1,200.00	33%	2,800.00
114	CONNECT TO EXISTING SANITARY SEWER MAIN	5.00	EACH	4,000.00	20,000.00	3.00	12,000.00	-	4,200.00	60%	10,400.00
115	CONNECT TO EXISTING SANITARY SEWER MANHOLE	3.00	EACH	3,600.00	10,800.00	-	-	-	-	-	52,800.00
116	8" X6" PVC WYE, SDR 26	74.00	EACH	1,200.00	88,800.00	30.00	36,000.00	-	36,000.00	41%	32,177.00
117	6" PVC SANITARY SERVICE PIPE, SDR 26	2,309.00	LIN FT	23.00	53,107.00	910.00	20,930.00	-	20,930.00	39%	880.00
118	6" SANITARY CLEAN OUT	1.00	EACH	880.00	880.00	-	-	-	-	-	326,349.00
119	8" PVC PIPE SEWER, SDR 35	5,824.00	LIN FT	81.00	471,744.00	1,795.00	145,395.00	-	145,395.00	31%	65,872.30
120	CONSTRUCT SANITARY SEWER MANHOLE, DES 4007C	335.70	LIN FT	310.00	105,307.00	127.37	39,484.70	-	39,484.70	37%	7,200.00
121	CONSTRUCT OUTSIDE DROP	10.10	LIN FT	1,200.00	12,120.00	4.10	4,920.00	-	4,920.00	41%	19,680.00
122	CASTING ASSEMBLY (SANITARY)	24.00	EACH	820.00	19,680.00	-	-	-	-	-	250.00
123	CASTING ASSEMBLY SPECIAL - CLEANOUT	1.00	EACH	250.00	250.00	-	-	-	-	-	9,570.00
124	ADJUST FRAME AND RING CASTING (SANITARY)	29.00	EACH	330.00	9,570.00	-	-	-	-	-	776.00
125	REMOVE WATERMAIN	2,450.00	LIN FT	2.00	4,900.00	2,062.00	4,124.00	-	4,124.00	84%	350.00
126	REMOVE HYDRANT	13.00	EACH	50.00	650.00	6.00	300.00	-	300.00	46%	22,500.00
127	TEMPORARY WATER SERVICE	1.00	LUMP SUM	45,000.00	45,000.00	0.50	22,500.00	-	22,500.00	50%	16,200.00
128	CONNECT TO EXISTING WATERMAIN	14.00	EACH	1,800.00	25,200.00	5.00	9,000.00	-	9,000.00	36%	48,600.00
129	HYDRANT (8.5" BURY)	16.00	EACH	5,400.00	86,400.00	7.00	37,800.00	-	37,800.00	44%	27,300.00
130	6" GATE VALVE AND BOX	21.00	EACH	2,100.00	44,100.00	8.00	16,800.00	-	16,800.00	38%	31,200.00
131	8" GATE VALVE AND BOX	23.00	EACH	2,600.00	59,800.00	11.00	28,600.00	-	28,600.00	48%	28,800.00
132	10" GATE VALVE AND BOX	8.00	EACH	3,600.00	28,800.00	-	-	-	-	-	880.00
133	CASTING ASSEMBLY SPECIAL - CURB STOP	4.00	EACH	220.00	880.00	-	-	-	-	-	27,720.00
134	1" CORPORATION STOP & SADDLE	67.00	EACH	630.00	42,210.00	23.00	14,490.00	-	14,490.00	34%	-



## Progress Estimate - Unit Price Work

Owner:	City of Montrose
Engineer:	Bolton & Menk, Inc.
Contractor:	Kuechle Underground
Project:	2021 Downtown Improvement
Contract:	2021 Downtown Improvement

## Contractor's Application for Payment

Owner's Project No.:  
Engineer's Project No.:  
Contractor's Project No.:

[illegible]





Real People. Real Solutions.

2040 Highway 12 East  
Willmar, MN 56201-5818

Ph: (320) 231-3956  
Fax: (320) 231-9710  
Bolton-Menk.com

June 7, 2022

Jessica Bonniwell  
City Administrator  
City of Montrose  
311 Buffalo Avenue South  
Montrose, MN 55363

RE: 2021 Downtown Improvement Project Phase 2  
City of Montrose, Minnesota  
Project No.: W13.120514

Dear Jessica:

Please find enclosed Payment Estimate No. 2 for the above referenced project. The estimate includes all work completed through June 1, 2022. We have reviewed the estimate and recommend approval. If you agree, please sign and date three copies and return one with payment to Northdale Construction Company, Inc. and one to me for our files.

If you have any questions on the above, please call.

Sincerely,

**Bolton & Menk, Inc.**

**Spencer Johnson, P.E.**  
Project Engineer

Enclosures

## Contractor's Application for Payment

Owner:	City of Montrose		Owner's Project No.:	
Engineer:	Bolton & Menk, Inc.		Engineer's Project No.:	W13.120514
Contractor:	Northdale Construction Company, Inc.		Agency's Project No.:	
Project:	2021 Downtown Improvement Project Phase 2			
Contract:	2021 Downtown Improvement Project Phase 2			
Application No.:	2	Application Date:	6/3/2022	
Application Period:	From	5/12/2022	to	6/1/2022

1. Original Contract Price	\$	2,588,459.79
2. Net change by Change Orders	\$	
3. Current Contract Price (Line 1 + Line 2)	\$	2,588,459.79
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)	\$	629,845.88
5. Retainage		
a. 5% X \$ 629,845.88 Work Completed	\$	31,492.29
b. X \$ Stored Materials	\$	
c. Total Retainage (Line 5.a + Line 5.b)	\$	31,492.29
6. Amount eligible to date (Line 4 - Line 5.c)	\$	598,353.59
7. Less previous payments	\$	328,736.78
8. Amount due this application	\$	269,616.81
9. Balance to finish, including retainage (Line 3 - Line 4)	\$	1,958,613.91

## Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

- (1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;
- (2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and
- (3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor: Northdale Construction Company, Inc.

Signature: Sheila Goeb  
 Name: Sheila Goeb

Date: 6-7-2022

Title: Controller

## Recommended by Engineer

By: Jared Voge  
 Name: Jared Voge, P.E.  
 Title: City Engineer  
 Date: 06/07/2022

## Approved by Owner

By: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_



Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner:	City of Montrose	Owner's Project No.:	W13.120514
Engineer:	Bolton & Menk, Inc.	Engineer's Project No.:	W13.120514
Contractor:	Northdale Construction Company, Inc.	Agency's Project No.:	
Project:	2021 Downtown Improvement Project Phase 2		
Contract:	2021 Downtown Improvement Project Phase 2		

Application No.: 2 Application Period: From 05/12/22 to 06/01/22 Application Dates: 06/03/22																
Bid Item No.	Description	C	D	Contract Information		F	F1	F2	G		I	J	K	L		
				E	Units				Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E x G)					Materials Currently Stored (not in g) (\$)	Work Completed and Materials Stored to Date (H + I) (\$)
Original Contract																
1	MOBILIZATION	1.00	LUMP SUM	32,152.50		32,152.50			0.25	8,038.13		8,038.13	25%	24,114.37		
2	CLEARING	9.00	TREE	735.00		6,615.00			9.00	6,615.00		6,615.00	100%	-		
3	GRUBBING	9.00	TREE	131.25		1,181.25			9.00	1,181.25		1,181.25	100%	-		
4	REMOVE CURB AND GUTTER	1,060.00	LIN FT	5.00		5,300.00			607.00	3,035.00		3,035.00	57%	2,265.00		
5	1.5" MILL BITUMINOUS PAVEMENT	12,870.00	SQ YD	1.05		13,513.50			-	-		-	100%	13,513.50		
6	REMOVE BITUMINOUS PAVEMENT	13,625.00	SQ YD	2.47		33,653.75			13,625.00	33,653.75		33,653.75	119%	(150.00)		
7	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	105.00	SQ YD	7.50		787.50			125.00	937.50		937.50	47%	2,090.00		
8	REMOVE CONCRETE DRIVEWAY PAVEMENT	395.00	SQ YD	10.00		3,950.00			186.00	1,860.00		1,860.00	98%	260.00		
9	REMOVE CONCRETE WALK	1,503.00	SQ YD	10.00		15,030.00			1,477.00	14,770.00		14,770.00	-	547.80		
10	REMOVE BOLLARD	4.00	EACH	136.95		547.80			-	-		-	-	700.00		
11	REMOVE GUARD RAIL	28.00	LIN FT	25.00		700.00			-	-		-	-	484.20		
12	REMOVE FENCE	90.00	LIN FT	5.38		484.20			-	-		-	-	756.00		
13	SALVAGE SIGN	18.00	EACH	42.00		756.00			-	-		-	-	-		
14	SALVAGE MAILBOX	29.00	EACH	78.75		2,283.75			29.00	2,283.75		2,283.75	100%	2,424.51		
15	SALVAGE FENCE	279.00	LIN FT	8.69		2,424.51			-	-		-	-	2,100.00		
16	COMMON LABORERS	20.00	HR	105.00		2,100.00			-	-		-	-	4,838.70		
17	3.0 CU YD SHOVEL	10.00	HR	483.87		4,838.70			-	-		-	-	1,369.50		
18	DOZER	10.00	HR	310.47		3,104.70			-	-		-	-	3,116.70		
19	12 CU YD TRUCK	10.00	HR	136.95		1,369.50			-	-		-	-	1,880.70		
20	3.0 CU YD FRONT END LOADER	10.00	HR	311.67		3,116.70			-	-		-	-	3,652.20		
21	SKID LOADER	10.00	HR	188.07		1,880.70			-	-		-	-	3,412.50		
22	1.5 CU YD BACKHOE	10.00	HR	365.22		3,652.20			-	-		-	-	179,036.34		
23	STREET SWEEPING	25.00	HR	136.50		3,412.50			881.69	12,343.66		12,343.66	6%	14,910.00		
24	COMMON EXCAVATION (P)	13,670.00	CU YD	14.00		191,380.00			-	-		-	-	122,828.64		
25	SUBGRADE EXCAVATION (EV)	1,065.00	CU YD	14.00		14,910.00			766.80	16,854.26		16,854.26	12%	22,522.12		
26	SELECT GRANULAR BORROW (CV)	6,355.00	CU YD	21.98		139,682.90			423.89	618.88		618.88	3%	136,401.03		
27	SELECT GRANULAR BORROW (CV)	15,850.00	SQ YD	1.46		23,141.00			442.53	15,369.07		15,369.07	10%	1,248.16		
28	GEOTEXTILE FABRIC TYPE V	4,370.00	CU YD	34.73		151,270.10			-	-		-	-	208,700.00		
29	AGGREGATE BASE (CV) CLASS 5	29.00	CU YD	43.04		1,248.16			-	-		-	-	179,441.20		
30	TYPE SP 9.5 WEARING COURSE MIX (2.B)	2,500.00	TON	83.48		208,700.00			-	-		-	-	2,100.00		
31	TYPE SP 12.5 NON WEAR COURSE MIX (2.B)	2,390.00	TON	75.08		179,441.20			-	-		-	-	114,177.90		
32	BITUMINOUS PATCH, MILL & OVERLAY AREA	50.00	SQ YD	42.00		2,100.00			-	-		-	-	13,933.74		
33	5" CONCRETE WALK	17,702.00	SQ FT	6.45		114,177.90			-	-		-	-	8,064.00		
34	6" CONCRETE WALK (PEDESTRIAN RAMPS)	883.00	SQ FT	15.78		13,933.74			-	-		-	-	104,443.50		
35	TRUNCATED DOMES	128.00	SQ FT	63.00		8,064.00			-	-		-	-	16,868.25		
36	CONCRETE CURB & GUTTER DESIGN B618	2,105.00	LIN FT	14.70		30,943.50			-	-		-	-	59,890.00		
37	CONCRETE CURB & GUTTER DESIGN B418	945.00	LIN FT	17.85		16,868.25			-	-		-	-	8,745.00		
38	7" CONCRETE DRIVEWAY PAVEMENT	600.00	SQ YD	98.15		58,890.00			-	-		-	-	99,932.00		
39	BITUMINOUS DRIVEWAY PAVEMENT	165.00	SQ YD	53.00		8,745.00			528.00	7,428.96		7,428.96	7%	93,734.34		
40	4" PVC EDGE DRAIN	7,190.00	LIN FT	14.07		101,163.30			-	-		-	-	999.32		
41	4" DRAIN CLEANOUT (ONE WAY)	4.00	EACH	249.83		999.32			-	-		-	-	3,103.28		
42	4" DRAIN CLEANOUT (TWO WAY)	9.00	EACH	387.91		3,491.19			1.00	387.91		387.91	11%	572.26		
43	4" CONCRETE HEADWALL	1.00	EACH	572.26		572.26			-	-		-	-	1,080.48		
44	CASTING ASSEMBLY SPECIAL - EDGE DRAIN CLEAN OUT	3.00	EACH	360.16		1,080.48			-	-		-	-	3,797.70		
45	SUMP PUMP DRAINLINE SERVICE	10.00	EACH	379.77		3,797.70			0.25	1,181.25		1,181.25	25%	3,543.75		
46	TRAFFIC CONTROL	1.00	LUMP SUM	4,725.00		4,725.00			-	-		-	-	3,815.50		
47	4" DOUBLE YELLOW PAVEMENT MARKING STRIPING	5,870.00	LIN FT	0.65		3,815.50			-	-		-	-	2,721.60		
48	PEDESTRIAN CROSS WALK MARKING	540.00	SQ FT	5.04		2,721.60			-	-		-	-	1,095.66		
49	CONCRETE BOLLARD	3.00	EACH	365.22		1,095.66			-	-		-	-	-		



Progress Estimate - Unit Price Work

City of Montrose			Owner's Project No.:		
Bolton & Menk, Inc.			W13.120514		
Northdale Construction Company, Inc.			Agency's Project No.:		
2021 Downtown Improvement Project Phase 2					
2021 Downtown Improvement Project Phase 2					
Contract:					
Contract:					
Application No.:			Application Date:		
2			06/03/22		
Application Period:			06/01/22		
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05/12/22			06/01/22		
Contract Information			Contract Information		
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Progress Estimate - Unit Price Work

Contractor's Application for Payment

Progress Estimate - Unit Price Work																
Owner: City of Montrose																
Engineer: Bolton & Menk, Inc.																
Contractor: Northdale Construction Company, Inc.																
Project: 2021 Downtown Improvement Project Phase 2																
Contract: 2021 Downtown Improvement Project Phase 2																
Owner's Project No.:																
Engineer's Project No.: W13.120514																
Agency's Project No.:																
Application No.: 2 Application Period: From 05/12/22 to 06/01/22 Application Date: 06/03/22																
A	B	C	D	E	F	G		H	I	J	K	L				
Bid Item No.	Description	Item Quantity	Units	Unit Price (\$)	Value of Bid Item (C X E) (\$)	F1	F2	Value of Work Completed to Date (E X G)		Materials Currently Stored (not in G) (\$)	Work Completed and Materials Stored to Date (H + I) (\$)	% of Item (J / F) (%)	Balance to Finish (F - J) (\$)			
								Quantity Previous Estimate	Value Previous Estimate					Estimated Quantity Incorporated in the Work	Work Completed	
100	4" POLYSTYRENE INSULATION	20.00	SQ YD	58.78	1,175.60						646.58	55%	529.02			
101	TEMPORARY WATER SERVICE	1.00	LUMP SUM	18,260.87							9,130.44	50%	9,130.43			
102	CONNECT TO EXISTING WATERMAIN	7.00	EACH	1,438.81	10,071.67	3.00		4,316.43			4,316.43	43%	5,755.24			
103	HYDRANT (8.5' BURY)	7.00	EACH	5,894.31	41,260.17	5.00		29,471.55			29,471.55	71%	11,788.62			
104	6" GATE VALVE AND BOX	7.00	EACH	2,068.72	14,481.04	5.00		10,343.60			10,343.60	71%	4,137.44			
105	8" GATE VALVE AND BOX	12.00	EACH	2,819.25	33,831.00	6.00		16,915.50			16,915.50	50%	16,915.50			
106	CASTING ASSEMBLY SPECIAL	2.00	EACH	360.16	720.32								720.32			
107	1" CORPORATION STOP	9.00	EACH	349.33	3,143.97						1,047.99	33%	2,095.98			
108	1" CURB STOP & BOX	9.00	EACH	699.61	6,296.49						2,098.83	33%	4,197.66			
109	1" PE WATER SERVICE PIPE	205.00	LIN FT	42.91	8,796.55						4,333.91	49%	4,462.64			
110	6" C900 PVC WATERMAIN	170.00	LIN FT	56.04	9,526.80						8,462.04	89%	1,064.76			
111	8" C900 PVC WATERMAIN	2,060.00	LIN FT	54.91	113,114.60						62,817.04	56%	50,297.56			
112	12" C900 PVC RAW WATERMAIN	2,605.00	LIN FT	83.04	215,319.20						215,654.88	100%	664.32			
113	WATERMAIN FITTINGS	1,640.00	POUND	13.59	22,287.60						15,682.86	70%	6,604.74			
114	REPLACE VALVE BOX	4.00	EACH	817.72	3,270.88						817.72	25%	2,453.16			
115	ADJUST VALVE BOX	14.00	EACH	228.26	3,195.64								3,195.64			
116	LANDSCAPING ALLOWANCE	1.00	ALLOWANCE	7,500.00	7,500.00								7,500.00			
					Original Contract Totals \$	2,588,459.79		\$			629,845.88		\$	629,845.88	24%	\$ 1,958,613.91




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## MEMORANDUM

**Date:** May 20, 2022  
**To:** Honorable Mayor Moynagh  
Members of the City Council  
**From:**  Jared Voge, P.E.  
City Engineer  
**Subject:** Forest Creek Trail Repairs Quotes  
2021 Downtown Improvement Project  
Montrose, Minnesota  
Project No.: W13.120514

---

The Forest Creek Trail is in need of repairs. At the request of Council, Bolton and Menk staff requested quotes to complete this work from the Downtown Improvement Project contractors. The enclosed plan sheet and estimated quantities were provided to both contractors. Kuechle Underground submitted the enclosed low quote of \$25,810 and Northdale Construction submitted the enclosed quote of \$41,769.20.

If Council desires to proceed with the Forest Creek Trail Repairs, we recommend that council pass a motion authorizing the preparation and execution of a change order to the Downtown Improvement Project Phase 1 contract with Kuechle Underground for the Forest Creek Trail Repairs.

If you have any questions on the above, please call.

JAV/sjj

Enclosures



**ESTIMATED QUANTITIES**

ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITY
<b>BRECKENRIDGE TRAIL</b>			
1	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	10
2	REMOVE BITUMINOUS TRAIL PAVEMENT	SQ YD	315
3	REMOVE CONCRETE WALK	SQ YD	24
4	6" CONCRETE WALK	SQ FT	210
5	TRUNCATED DOMES	SQ FT	32
6	CURB AND GUTTER	LIN FT	40
7	TYPE 12.5 WEARING COURSE - TRAIL	TON	50
8	AGGREGATE BASE CLASS 5 (CV)	CU YD	65
9	COMMON EXCAVATION (P) (CV)	CU YD	150
10	TURF ESTABLISHMENT	SQ YD	70
11	TOPSOIL	CU YD	10
12	SILT FENCE TYPE HAND INSTALLED	LIN FT	130

**NOTES:**

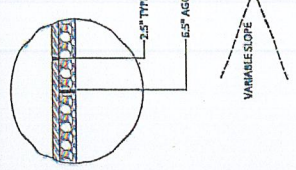
- (P) PLANNED QUANTITY BASIS OF MEASUREMENT
- (CV) CUBIC YARDS, COMPACTED VOLUME (MEASURED IN PLACE)
- (EV) CUBIC YARDS, EXCAVATED VOLUME (MEASURED IN PLACE)
- (LV) CUBIC YARDS, LOOSE VOLUME



- LEGEND
- BITUMINOUS TRAIL
  - CONCRETE PED RAMP
  - TRUNCATED DOWNS
  - CURB AND GUTTER



TYPICAL TRAIL SECTION



INSTALL PED RAMPS, CURB AND GUTTER, AND SIDEWALK  
ACCORDING TO  
MIN DOT STANDARD PLANS 5-297.250

<b>BOLTON &amp; MENK</b> 2000 HIGHWAY 22 EAST WILSON, MN 55394 Phone: (820) 541-1845 Email: bolton@boltonmenk.com www.boltonmenk.com		SHEET 1 OF 1
CITY OF MONTROSE, MINNESOTA 2021 DOWNTOWN IMPROVEMENTS FOREST CREEK TRAIL REHABILITATION PROJECT		DATE 04/20/2022



Kuechle Underground Forest Creek Trail Repairs Quote  
Downtown Improvement Project Phase 1 Change Order

			Unit Price	Total Price
SAW BIT PAVEMENT	10	LF	\$ 11.00	\$ 110.00
REM BIT TRAIL PAVEMENT	315	SY	\$ 9.00	\$ 2,835.00
REM CONC WALK	24	SY	\$ 11.00	\$ 264.00
6" CONC WALK	210	SF	\$ 16.00	\$ 3,360.00
TRUNCATED DOMES	32	SF	\$ 53.00	\$ 1,696.00
CURB & GUTTER	40	LF	\$ 37.00	\$ 1,480.00
12.5 WEAR COURSE TRAIL	50	TN	\$ 137.00	\$ 6,850.00
AGG BASE CLASS 5 CV	65	CY	\$ 47.00	\$ 3,055.00
COMMON EX P CV	150	CY	\$ 29.00	\$ 4,350.00
TURF ESTABLISHMENT	70	SY	\$ 9.00	\$ 630.00
TOPSOIL	10	CY	\$ 53.00	\$ 530.00
SILT FENCE HAND INSTALLED	130	LF	\$ 5.00	\$ 650.00
TOTAL BRECKENRIDGE TRAIL				\$ 25,810.00

NORTHDALE CONSTRUCTION COMPANY, INC.  
 9760 71ST STREET NE  
 ALBERTVILLE, MN 55301  
 Office: 763-428-4868 Fax: 763-428-4997

PROJECT: Forest Creek Trail Rehabilitation Project  
 CITY: Montrose  
 ENGINEER: Bolton & Menk  
 QUEST #  
 BID DATE:  
 ADD. #1 ADD 1 - DATE  
 ADD. #2 ADD 2 - DATE  
 ADD. #3 ADD 3 - DATE

QUOTED BY:  
 Nick Ostlie

CELL #  
 763-428-4868

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRC	UP TOTAL
1	Sawing Bit Pavement (Full Depth)	LF	10	\$10.00	\$100.00
2	Remove Bituminous Trail Pavement	SY	315	\$25.00	\$7,875.00
3	Remove Concrete Walk	SY	24	\$30.00	\$720.00
4	6" Concrete Walk	SF	210	\$35.85	\$7,528.50
5	Truncated Domes	SF	32	\$85.20	\$2,726.40
6	Curb and Gutter	LF	40	\$131.25	\$5,250.00
7	Type 12.5 Wearing Course - Trail	TON	50	\$157.50	\$7,875.00
8	Aggregate Base Class 5 (CV)	CY	65	\$41.88	\$2,722.20
9	Common Excavation (P) (CV)	CY	150	\$34.97	\$5,245.50
10	Turf Establishment	SY	70	\$8.88	\$621.60
11	Topsoil	CY	10	\$42.25	\$422.50
12	Silt Fence Type Hand Installed	LF	130	\$5.25	\$682.50
	<b>TOTAL BID</b>				<b>\$41,769.20</b>



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2040 Highway 12 East  
Willmar, MN 56201-5818

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Bolton-Menk.com

## MEMORANDUM

Date: June 8, 2022

To: Honorable Mayor Moynagh and Members of the City Council  
City of Montrose, Minnesota

From:  Jared Voge, P.E.  
City Engineer

Subject: Wastewater Treatment Facility Plan  
City of Montrose  
Project No.: W13.120188

The City of Montrose's Wastewater Treatment Facility (WWTF) is in the process of a Minnesota Pollution Control Agency (MPCA) and National Pollutant Discharge Elimination System (NPDES) 5-year permit renewal. Staff has determined that the WWTF is operating at 83% capacity and expected to exceed 100% capacity within the next 2-3 years. The future needs of the WWTF depend on projected growth and emerging limits throughout the permit renewal process.

The City of Montrose's WWTF was upgraded in 2004 with a design life of 20 years. The process includes a fine screen, high intensity aeration ponds, polishing ponds, final clarifiers, and a UV disinfection system. A facility plan is necessary to help the City determine its needs and the most suitable, cost-effective alternatives for the next 20 years of development. It is the first step in pursuing funding for improvements.

The facility planning process is summarized below:

- A project kickoff meeting will be held at the WWTF with City and wastewater treatment operations staff to identify, discuss, and gather information necessary for the preparation of the report.
- The existing wastewater flow and loading data will be reviewed and projections updated for the 20-year planning period. Based on the population and wastewater data projections, the design criteria will be developed which will be used for the treatment alternative evaluation. Population projects are critical to the facility planning process and will require City Council input and approval. The City Planner will also need to be involved in the process.
- Evaluate the existing system and identify any deficiencies.
- Review treatment and disposal alternatives to address current needs and proposed changes.
- Provide estimated operational and construction costs.
- Provide discussion on financing alternatives.
- Provide environmental review worksheet to MPCA.



Honorable Mayor Moynagh and Members of the City Council  
 June 8, 2022  
 Page 2

- Bolton & Menk, Inc. will attend a meeting with the City of Montrose to review the completed report and discuss recommendations with staff and council members.
- Bolton & Menk, Inc. will attend a public hearing for presentation of the facility plan to Montrose's residents as required by MPCA, if funding is pursued.
- Assist the City in submitting the report to MPCA for Clean Water Revolving Fund (CWRF) financing and any grant opportunities through the Minnesota Public Facilities Authority (PFA).

A preliminary schedule has been identified below and is subject to change based on MPCA permit renewal effluent limits.

June 2022	Data Collection and Kickoff Meeting Preparation
July 2022	Kickoff Meeting
October 2022	Draft Report
November 2022	Review Report with City
January 2023	Finalize Report
February 2023	Public Hearing
March 2023	Submit Facility Plan to MPCA

Should council desire to proceed with the Facility Planning process, we recommend adoption of the enclosed Resolution.

During the planning process and into potential construction, it will be important to review future development proposals with respect to existing WWTF capacity.

If you have any questions, please call.

Enc.



**CITY OF MONTROSE  
COUNTY OF WRIGHT  
STATE OF MINNESOTA**

**EXTRACT OF MINUTES OF MEETING OF THE CITY COUNCIL OF THE CITY  
OF MONTROSE, MINNESOTA**

Pursuant to due call and notice thereof, a regular meeting of the City Council of the City of Montrose, Wright County, Minnesota, was duly held in the Council Chambers of Montrose in said City on the 13th day of June 2022, at 7:00 o'clock p.m.

The following members were present: \_\_\_\_\_ and the following were absent: \_\_\_\_\_. Member \_\_\_\_\_ introduced the following resolution and moved its adoption.

**RESOLUTION NO. 2022 - 24  
RESOLUTION ORDERING PREPARATION OF REPORT ON IMPROVEMENT**

**WHEREAS**, The city is in the process of a Minnesota Pollution Control Agency (MPCA) and National Pollutant Discharge Elimination System (NPDES) 5- year permit renewal,

**AND WHEREAS**, the city's Wastewater Treatment Facility is operating at 83% capacity,

**THEREFORE BE IT RESOLVED**, that the Facility Planning process be referred to the City Engineer for study and that he is instructed to prepare a Facility Plan for the council with all convenient speed advising the council in a preliminary way as to whether the proposed improvements are feasible and as to whether they should best be made as proposed or in connection with some other improvement, and the estimated cost of the improvements as recommended.

Adopted and approved by the City Council this \_\_\_\_\_ day of \_\_\_\_\_, 2022.

By: \_\_\_\_\_  
Mayor

Attest:

\_\_\_\_\_  
City Clerk

STATE OF MINNESOTA  
CITY OF MONTROSE  
COUNTY OF WRIGHT

I, the undersigned, being the duly qualified and acting Clerk of the City of Montrose, Minnesota, DO HEREBY CERTIFY that I have compared the attached and foregoing extract of minutes with the original thereof on file in my office, and that the same is a full, true complete transcript of the minutes of a meeting of the City Council of said City, duly called and held on the date therein indicated, insofar as such minutes ordering the preparation of a report for an improvement.

WITNESS my hand and the seal of said City this \_\_\_\_\_ day of \_\_\_\_\_ 2022.  
2020

\_\_\_\_\_  
City Clerk

(SEAL)



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2040 Highway 12 East  
Willmar, MN 56201-5818

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Fax: (320) 231-9710  
Bolton-Menk.com

## MEMORANDUM

Date: June 8, 2022

To: Honorable Mayor Moynagh  
Members of the City Council  
City of Montrose

From:  Jared Voge, P.E.  
City Engineer

Subject: Water Treatment System Study  
Montrose, Minnesota  
Project No.: OW1.123744

To address the city's manganese levels within the water system which exist above the MDH recommended Health Based Values, council authorized the preparation of a Water Treatment System Study. Please see the enclosed report.

The report evaluates the city's water system including:

- Historical water demands
- Conservatively low population projection
- Future water demands
- Existing water supply
- Existing water storage
- Existing water quality

This information led to three options for removing manganese:

1. Construct a new treatment facility using gravity filtration
2. Construct a new treatment facility using filtration and lime softening
3. Construct a new treatment facility using filtration and reverse osmosis

The design process will be a minimum of 36-months working from preliminary engineering through project completion. This preliminary schedule is approximate due to specific funding deadlines, plan approval deadlines, and construction delivery unknowns.

Please find enclosed the Water Treatment Report. A presentation will be provided at the June council meeting.

If you have any questions, please call.





**BOLTON  
& MENK**

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June 8, 2022

# Water System Study City of Montrose, MN

OW1.123744

**Submitted by:**

Bolton & Menk, Inc.  
1960 Premier Drive  
Mankato, MN 56001  
P: 507-625-4171  
F: 507-625-4177





# Certification

Water System Study

For

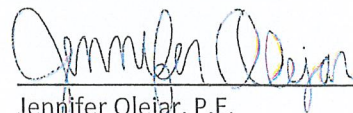
City of Montrose, MN

OW1.125362

June 2022

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By:



Jennifer Olejar, P.E.

License No. 59177

Date: 6-8-2022

# Table of Contents

I.	INTRODUCTION.....	1
A.	Background.....	1
B.	Purpose and Scope .....	1
C.	Water Demand Projection.....	1
D.	Source, Supply, and Capacity Evaluation.....	1
E.	Existing Water Quality .....	1
F.	Water Treatment Options .....	1
G.	Water Storage.....	2
H.	Water Distribution.....	2
I.	Water Treatment Plant and Water Source Wells.....	2
J.	Staffing Review and Analysis .....	2
II.	WATER DEMAND PROJECTION .....	3
A.	Population Review.....	3
B.	Water Supplied .....	5
C.	Future Water Requirements.....	8
III.	WATER SOURCE, TREATMENT, AND CAPACITY EVALUATION .....	11
A.	Water Supply .....	11
B.	Raw Water Sources.....	11
C.	Water Quality .....	12
D.	Distribution System .....	12
E.	Existing Treatment Evaluation.....	13
F.	Finished Water Storage Evaluation .....	13
IV.	EVALUATION OF WATER QUALITY .....	16
A.	Introduction .....	16
B.	Existing Raw Water Quality .....	16
C.	Federal and State Rules Summary.....	16
D.	Recommended Treatment Objectives.....	19
V.	WATER TREATMENT OPTIONS.....	20
A.	Treatment Process Screening.....	20
B.	Improvement Items Common to All Alternatives.....	22
C.	Treatment Alternatives.....	23
D.	Future Capital Improvement Items .....	39
VI.	STAFFING REVIEW AND ANALYSIS .....	40
VII.	RECOMMENDATIONS AND CONCLUSIONS.....	41

A. Treatment Alternatives Evaluation Discussion .....	41
B. Alternative Recommendation .....	42
C. User Rate Analysis .....	42
D. Financing Options .....	42
E. Implementation .....	43

## Figures

Figure 2.1 Montrose Watermain .....	4
Figure 2.2: City of Montrose Population Trend and Projections .....	5
Figure 3.1: Well Pumpage Analysis .....	12
Figure 3.2 Photo of tower No. 1 on the left.....	14
Figure 3.3 Photo of tower No. 2 on the right.....	14
Figure 3.4 Average Day Demand versus Storage .....	15
Figure 5.1 Inclined Lamella Plate Gravity Settler .....	23
Figure 5.2 Gravity Filtration Process Flow .....	24
Figure 5.3 Gravity Filtration Layout Option 1 .....	27
Figure: 5.4 Gravity Filtration Layout Option 2 .....	28
Figure 5.5 Lime Softening Process Flow.....	30
Figure 5.6 Lime Softening Layout Option 1.....	31
Figure 5.7 Lime Softening Layout Option 2.....	32
Figure 5.8 Reverse Osmosis Process Flow .....	35
Figure 5.9 Reverse Osmosis Layout Option 1 .....	36
Figure 5.10 Reverse Osmosis Layout Option 2 .....	37

## Tables

Table 2.1: Population Projections .....	5
Table 2.2: Historical Total Yearly Pumpage .....	6
Table 2.3: Historical Maximum Daily Well Pumpage .....	6
Table 2.4: Average Daily Water Pumpage (gallons per day).....	7
Table 2.5: Historical Annual Peak Water Pumpage .....	7
Table 2.6: Average Per Capita Water Consumption .....	8
Table 2.7: Max Per Capita Water Consumption .....	8
Table 3.1: Raw Water.....	11
Table 3.2: Raw Water Well Manganese Concentrations .....	12
Table 3.3: Water Storage Tanks .....	15



Table 4.1: Raw Water Well Manganese Concentrations .....	16
Table 4.2 - MCLGs and MCLs for Disinfection Byproducts.....	18
Table 5.1 - Alternative Treatment Technology Summary.....	20
Table 7.1 - Decision Matrix .....	41
Table 7.2 - Estimated Project Cost.....	41
Table 7.3 - Sample Implementation Schedule .....	44

## Appendix

Appendix A: Raw Water Quality

Appendix B: National Primary and Secondary Drinking Water Regulations Summary

## I. INTRODUCTION

### A. Background

The water supply and treatment system in Montrose consists of two elevated storage tanks and three municipal wells, No. 4, No. 5, and No. 6. The raw water is currently treated by chlorine disinfection, fluoridation, and polyphosphate. Raw water from all three wells exceeds the Minnesota Department of Health (MDH) health-based recommended value of 0.1 mg/L of manganese or less.

### B. Purpose and Scope

The City of Montrose has engaged Bolton & Menk to evaluate the existing water supply and explore treatment options for the high level of manganese present in the water.

The purpose of this Drinking Water Study is to provide the City of Montrose with necessary information regarding existing water supply, storage, and treatment. The City of Montrose can utilize the information gathered here to establish priorities, plan, fund, and implement future water system improvements. This report will look at the current and projected future water supply, demand, treatment, and distribution. This report will review the current and potential future drinking water standards and evaluate the options which the city can utilize to continue to meet those standards. This report will provide a roadmap of how the city has provided safe drinking water to its customers, and how it can continue to do so in the future.

### C. Water Demand Projection

Drinking water demand projections are based on historical population and historical water data. An estimate of average day and maximum day water demand will be 276,000 gpd and 607,000 gpd respectively in 2045.

### D. Source, Supply, and Capacity Evaluation

The existing water supply and treatment system in Montrose consists municipal wells No. 4, No. 5, and No. 6. Wells No. 4 and No. 5 are located in well house No. 2, while well No. 6 in well house No. 3.

All the wells draw from the Quaternary Buried Artesian aquifer to provide the city with drinking water. The total well capacity is 1,560,000 gpd. Firm well capacity is 960,000 gpd. Firm well capacity is considered as the total available delivery rate with the largest well out of service. Capacity is expected to be sufficient through 2045.

Section III provides an evaluation of the existing system capacity.

### E. Existing Water Quality

The raw water drawn from the existing wells is of poor quality but does not violate EPA primary drinking water standards. High concentrations of manganese are the main concern, with measured values averaging over 0.8 mg/L. Manganese occurs naturally in rocks and soils across Minnesota and is commonly found in Minnesota ground and surface water. Manganese can stain plumbing black and may pose a health risk to sensitive populations.

Section IV evaluates the existing water quality.

### F. Water Treatment Options

Manganese removal is the priority contaminant for removal in this analysis due to MDH 2020 health-based guidance. The new guidance sets a secondary maximum concentration level of 0.05 mg/L. This guidance was implemented because of the potential adverse health effects due to chronic exposure of Manganese from drinking water.

Further discussion on the current treatment of drinking water can be found in Section V.

**G. Water Storage**

The city has 300,000 gallons of storage which is split between the two elevated storage tanks, tank No. 1 is 50,000 gallons and tank No. 2 is 250,000 gallons. Tank No. 1. was built in 1930 and maintenance is expected to be expensive since the tower coating is suspected to be lead based. Therefore, replacement of Tower No.1 with a new 250,000-gallon storage tank should be considered to compensate for future demands. Tank No. 2 was constructed in 1967.

**H. Water Distribution**

Water mains in the City of Montrose range in size from 4" to 12" diameter. The current distribution system provides adequate pressure for everyday demand but would have a difficult time moving the large amounts of water required for a fire emergency. All future constructed mains should be at least 8 inches in diameter to account for fire emergencies.

**I. Water Treatment Plant and Water Source Wells**

Montrose does not currently have a water treatment facility. The city performs chemical addition to the raw well water before it is pumped to the distribution system. To adequately remove manganese from the raw water, the City of Montrose will need to construct a water treatment facility. The treatment plant would allow for manganese removal and the ability to improve other secondary standards such as iron and hardness.

**J. Staffing Review and Analysis**

Staffing for the current water system includes three employees. Each employee works part time on the water system. Total time allocated from the employees for the water system is equivalent to one full time employee.



## II. WATER DEMAND PROJECTION

A reliable estimate of the quantity of water required for residential, commercial, and industrial uses within the city water system service area must be made before the system can be designed to transport, treat, and distribute these flows. The development of future water requirements is based on several factors including past population trends, future population projections, water use trends, water quality, and water system capacity. These factors are reviewed to develop and estimate future water requirements. City documents and records provided the primary data for the evaluation.

### A. Population Review

There is a close relationship between the population of a community and total water consumption volumes. Future water sales can be expected to generally reflect future changes in the service area population. Similarly, commercial, public, and industrial water consumption will also tend to vary proportionately with the observed population growth of the city.

#### 1. Service Area

The City of Montrose is located 35 miles west of Minneapolis along US highway 12 in Wright County. The city has an area of 3.2 square miles (2054 acres) and a 2020 population of 3,775 people.

The existing water system is shown in Figure 2.1.

#### 2. Planning Period

It is generally not feasible to make frequent changes to the capacity of supply, storage, treatment, or distribution of water for a municipality. Typically, infrastructure and facilities are designed for a 20-year period. The planning period used in this study ends the year 2045. Population is the primary basis of determining future municipal flows.

#### 3. Population Trends and Projections

The population of Montrose has grown over the last 10 years. The Minnesota State Demographer provides population estimates for counties, cities, and townships between the decennial census years. Although the State Demographer does not provide projections for cities or townships, projections can be extrapolated to the city level using the U.S. Census State Demographer data. Using the Wright County population projections and the historical percentage represented by Montrose, a linear regression was used to estimate the future population of Montrose through the design year. This method aligns with the Montrose Comprehensive Plan's conservatively low population estimate.

Population projections for the City of Montrose are summarized in Table 2.1 and presented graphically in Figure 2.2.



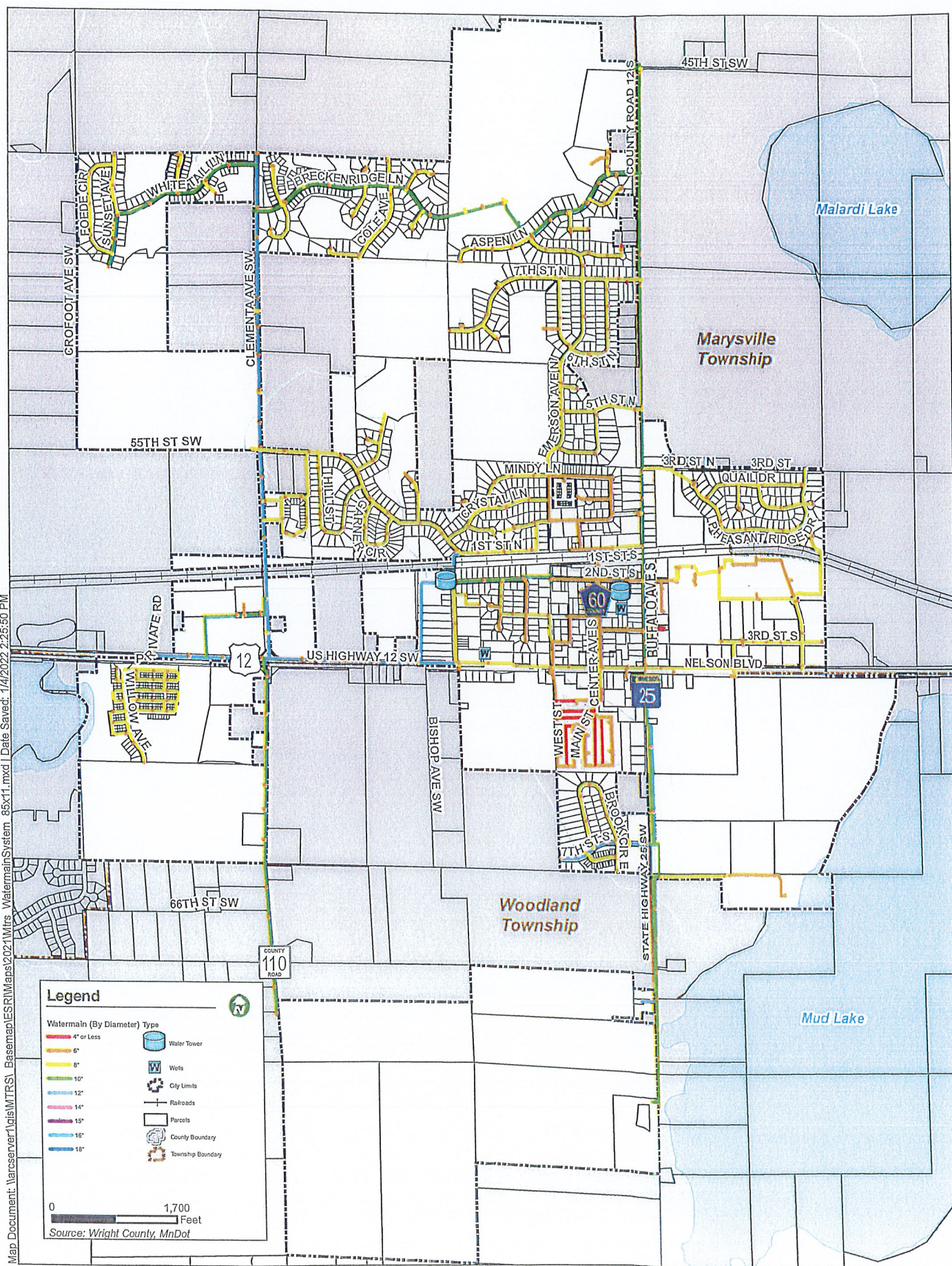




Table 2.1: Population Projections	
Year	City of Montrose
2010	2,847
2015	3,110
2020	3,775
2025	3,963*
2030	4,148*
2035	4,320*
2040	4,479*
2045	4,626*
*Population projected as % of County	

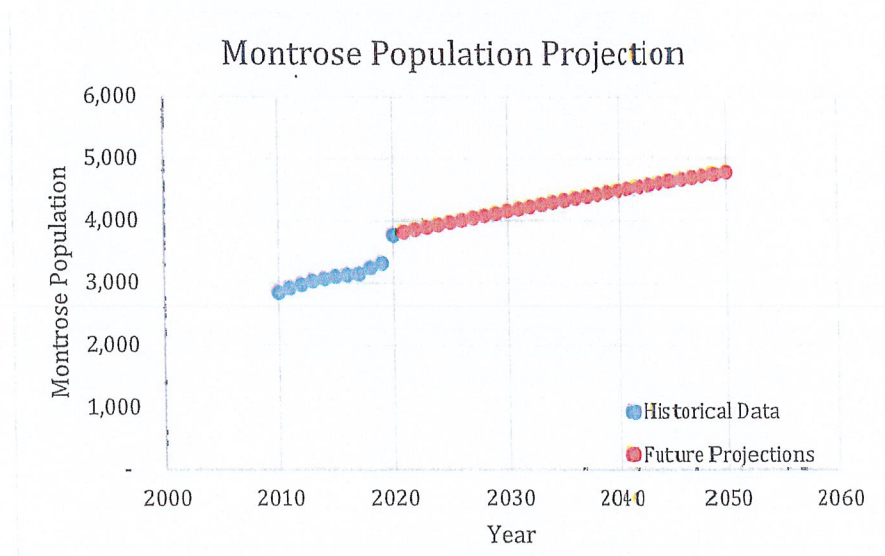


Figure 2.2: City of Montrose Population Trend and Projections

## B. Water Supplied

A water pumpage and consumption review can provide insight into the past development of a water system and water utilization trends. Pumpage represents the quantity of water which is appropriated from the supply source and delivered into the production and distribution facilities. Consumption represents the quantity of water utilized by utility customers. In the following subsection, the material, pumpage, and consumption information is reviewed and evaluated to aid in estimating future water requirements.

### 1. Water Pumped History

Pumping data was obtained from Montrose Monthly Operating Reports (MORs) and the DNR Permit and Reporting System (MPARS) for the public water supply Appropriations Permit Number 1984-3186.

Table 2.2 and 2.3 summarize historical raw water pumpage for Montrose on a total



yearly and maximum daily basis. Table 2.4 summarizes average historical raw water pumpage for the city on a monthly and yearly basis. An average of 72.3 million gallons (MG) per year or about 0.40 million gallons per day (MGD) was pumped by the city. The maximum raw water pumped in one day was 0.46 MGD on July 5, 2020.

<b>Table 2.2: Historical Total Yearly Pumpage</b>						
Year	Total Water Pumped to the City (gallons per year)					
	Well 2	Well 3	Well 4	Well 5	Well 6	Total
2016	24,725,000	-	22,206,000	21,883,000	N/a	68,814,000
2017	27,111,000	-	22,035,000	23,136,000	N/a	72,282,000
2018	23,653,000	-	21,379,000	27,255,000	N/a	72,287,000
2019	24,565,000	-	19,935,000	23,856,000	N/a	68,356,000
2020	5,427,000	-	34,698,000	33,495,000	5,950,130	79,570,130
<b>Average</b>	<b>21,096,200</b>	<b>-</b>	<b>24,050,600</b>	<b>25,925,000</b>	<b>5,950,130</b>	<b>72,261,826</b>

<b>Table 2.3: Historical Maximum Daily Well Pumpage</b>					
Year	Max Day (Gallons per day)				
	Well House 1 (Wells 2 and 3)	Well House 2 (Wells 4 and 5)	Well House 3 (Well 6)	Total	Peak Day Date
2016	232,000	143,000	0*	375,000	July 3rd
2017	211,000	198,000	0*	409,000	June 4th
2018	269,000	171,000	0*	440,000	June 7th
2019	143,000	166,000	0*	309,000	June 16th
2020	0*	455,000	172,720	455,000	July 5th
<b>5-yr Max Day</b>				<b>455,000</b>	
* Well house 1 demolished in October 2020. Well house 3 began operation in October 2020.					

Table 2.4: Average Daily Water Pumpage (gallons per day)					
Month	2016	2017	2018	2019	2020
January	166,355	166,355	174,258	164,226	167,323
February	161,000	161,679	160,429	164,893	165,724
March	160,806	160,806	169,355	162,387	171,161
April	173,100	174,900	173,000	167,733	198,333
May	209,613	215,226	247,387	219,581	244,323
June	221,467	267,400	223,933	226,933	312,767
July	261,161	300,903	259,129	217,452	309,161
August	219,548	221,097	267,387	218,516	280,935
September	180,733	211,633	208,567	193,433	225,433
October	169,355	169,839	166,097	174,613	188,644
November	162,867	156,833	160,233	168,400	171,720
December	168,000	166,806	162,290	167,226	171,245
<b>Annual Average</b>	<b>188,016</b>	<b>198,033</b>	<b>198,047</b>	<b>187,277</b>	<b>217,405</b>
<b>5-yr Average</b>	<b>197,756</b>				

## 2. Historical Peaking Factor

A maximum day peaking factor for a water system is the ratio of the peak-day water demand to the average-day water demand. Peaking factors are a useful way to help determine an actual temporal change in water demand. If water usage increases during a specific time of year, for example because of summer irrigation, then peaking factors will be similarly large each year. However, if there are watermain breaks or other distribution issues, peaking factors may vary significantly from year to year and may not occur during the same season. Typical maximum day peaking factors range from 1.5 to 3.0. Smaller cities tend to have higher peaking factors due to summer peaks when irrigation and recreational activities increase water usage and there are no large industrial users to balance the summer peaks.

Table 2.5 presents the historical peaking factor for Montrose between the years 2016-2020. The peak days occurred in June and July which is a good indication the peaking factors are seasonal due to summer irrigation and recreation.

Table 2.5: Historical Annual Peak Water Pumpage			
Year	Average Day Pumpage (gpd)	Peak Day (gpd)	Peaking Factor
2016	188,016	375,000	1.99
2017	198,033	409,000	2.07
2018	198,047	440,000	2.22
2019	187,277	309,000	1.65
2020	217,405	455,000	2.09
<b>Average</b>	<b>197,756</b>	---	<b>2.22</b>
<b>Maximum</b>	---	<b>455,000</b>	



### 3. Per Capita Water Usage

The historical per capita water usage can be derived from previous information about population and water usage. The historical per capita water usage for Montrose has ranged from 56.4 to 135.5 gallons per capita per day (gpcd), with a five-year average of 59.6 gpcd, as can be seen in Table 2.6 and 2.7. Per capita values will be used to project future water usage.

<b>Table 2.6: Average Per Capita Water Consumption</b>			
<b>Year</b>	<b>Montrose Population</b>	<b>Average Raw Water Demand (gpd)</b>	<b>Average Gallons per Capita per Day</b>
2016	3,136	188,016	60.0
2017	3,151	198,033	62.8
2018	3,247	198,047	61.0
2019	3,320	187,277	56.4
2020	3,775	217,405	57.6
<b>Average</b>		<b>197,756</b>	<b>59.6</b>

<b>Table 2.7: Max Per Capita Water Consumption</b>			
<b>Year</b>	<b>Montrose Population</b>	<b>Peak Raw Water Demand (gpd)</b>	<b>Gallons per Capita per Day</b>
2016	3,136	375,000	119.6
2017	3,151	409,000	129.8
2018	3,247	440,000	135.5
2019	3,320	309,000	93.1
2020	3,775	455,000	120.5
<b>Average</b>		<b>397,000</b>	<b>119.7</b>

### 4. Waverly Water Usage

Waverly is a neighboring community with similar water quality concerns as Montrose. The population of Waverly was 1,609 people in 2019 and is expected to pump 30 million gallons in 2021. The two cities may benefit from regionalization.

### C. Future Water Requirements

Average day demand and peak day demand are important to the design of water treatment facilities. Maximum hour demand seldom lasts longer than a few hours, and the impact is primarily felt in the distribution and storage systems. Using the 2045 population projections and the current per capita usage, the predicted average demand in 2045 would be 276,000 gpd. Using the 2.2 peaking factor gives an estimated maximum demand of 607,000 gpd for 2045.

#### 1. Demand Distribution

Water demands at any potable water facility are variable. Demands vary throughout the day and throughout the year. Annually in Minnesota and other midwestern states, heaviest water demand occurs during the summer months when irrigation increases and recreational activities like swimming increase water usage.

Water demand varies by season and fluctuates throughout the day. Commercial and industrial users are typically more consistent and predictable regarding daily uses since industries follow strict operating hours. Residential demands are less predictable and do not naturally follow strict schedules. Typical residential demands increase after daybreak, often peaks by late afternoon when lawn watering, meal preparation, and laundering occurs, then decreases during the evening hours.

Due to the variability in demand, a minimum firm capacity of water supply should be equal to the peak day demand. This is a recommendation of the Great Lakes – Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers in the Recommended Standards for Water Works (commonly referred to as Ten States Standards). The Minnesota Department of Natural Resources (DNR) requires water supply design meet these standards. The City of Montrose has a current firm well capacity greater than the predicated maximum demand in 2045, so the city currently meets the recommendations.

Storage tanks are used to help supplement the water supply during peak demand. Potable water storage is also useful to supply water during a fire. When water demand is low, typically early morning, excess water is produced and stored. If demand exceeds the production rate, the stored water can make up the supply deficit. The storage tank will again fill once demand lowers, and the storage cycle continues.

## 2. Average Day Demand

Average day demand is the total quantity of water required annually divided by 365 days. The average day demand for the City of Montrose was computed by the design year population and the historic per capita water usage.

$$\begin{aligned}\text{Montrose 2045 Average Day Demand} &= \text{Design Year Population} \cdot \text{Design Year Usage} \\ &= 4,626 \text{ persons} \cdot 59.6 \text{ gallons/person} \\ &= 275,750 \text{ gallons per day (gpd)}\end{aligned}$$

## 3. Maximum Day Demand

Seasonal fluctuations in water usage are important factors in designing and sizing water supply and storage facilities. Maximum (peak) daily water demands usually occur during the summer months during hot days and when additional water is used for lawn irrigation, gardening, bathing, and industrial cooling. The maximum day demand is the amount of water pumped during a single day of the year with the highest water usage and is often expressed as a ratio of the annual average day pumpage. This ratio is known as a peaking factor. The maximum day pumpage is of particular importance to water system planning because water supply facilities are sized to meet this demand.

Yearly peaking factors for Montrose are presented in Table 2.5. From 2016-2020, the maximum peaking factor (ratio of maximum day to average day pumpage) was 2.2 (220%). This study projected future demand variations would resemble the variations observed over the historical analysis period. To evaluate future water supply and storage needs, a peaking factor of 2.2 was used for this study.



$$\begin{aligned}\text{Montrose 2045 Maximum Day Demand} &= \text{Design Year Population} \cdot \text{Design Year Usage} \cdot PF \\ &= 4,626 \text{ persons} \cdot 59.6 \text{ gallons/person} \cdot 2.2 \\ &= 607,000 \text{ gallons per day (gpd)}\end{aligned}$$

### III. WATER SOURCE, TREATMENT, AND CAPACITY EVALUATION

#### A. Water Supply

The City of Montrose currently obtains raw water from three active wells. Water sources, supply capacity, quality, distribution, treatment, and storage will be evaluated in this section. In Section II the average day and maximum day demand for the city water supply system is projected to be 275,750 gpd and 607,000 gpd by the year 2045, which is capable of being met with the existing wells.

#### B. Raw Water Sources

The well depths range from 150-200 feet, drawing from the Quaternary Buried Artesian aquifer of the North Fork Crow River watershed. The raw water sources are summarized in Table 3.1.

Table 3.1: Raw Water					
Well Name	Unique Well #	Year Installed	Aquifer	Pumping Capacity (gpm)	Depth (ft)
Well 2	235853	1975/sealed 2020	Quaternary Buried Artesian Aquifer	290	184
Well 3	149692	1978/converted to environmental well in 2020	Quaternary Buried Artesian Aquifer	300	181
Well 4	700302	2003	Quaternary Buried Artesian Aquifer	400	175
Well 5	700301	2003	Quaternary Buried Artesian Aquifer	400	175
Well 6	843402	2019	Quaternary Buried Artesian Aquifer	500	165
Rated Total Capacity (wells 4, 5, and 6)				1,560,000 gpd	
Rated Firm Capacity (wells 4, 5, and 6)				960,000 gpd	

#### 1. Summary of Existing Supply Capacity

The design water supply capacity of the potable water system is about 1,300 gpm (1,560,000 gpd). The average historical pumping rate is about 198,000 gpd with a historical peak pumping rate of approximately 455,000 gpd. Total cumulative runtimes for the well pumps to achieve the average day demand is estimated to be 7.6 hours, and the total runtime for the well pumps to supply for peak day demand is an estimated 17.5 hours. It is occasionally necessary to take a pump out of service for periods of several days to several weeks for maintenance. Firm capacity is considered as the total available delivery rate with the largest pumping unit out of service. Thus, firm pumping capacity of the system is 800 gpm (960,000 gpd).

- Estimated Total Well Capacity: 1,200 gpm (1,440,000 gpd)
- Estimated Firm Capacity: 800 gpm (960,000 gpd)



The existing pumping capacity is expected to be sufficient through 2045 as both, the design year average day demand and maximum day demand, are below the firm capacity at 275,750 gpd and 607,000 gpd, respectively.

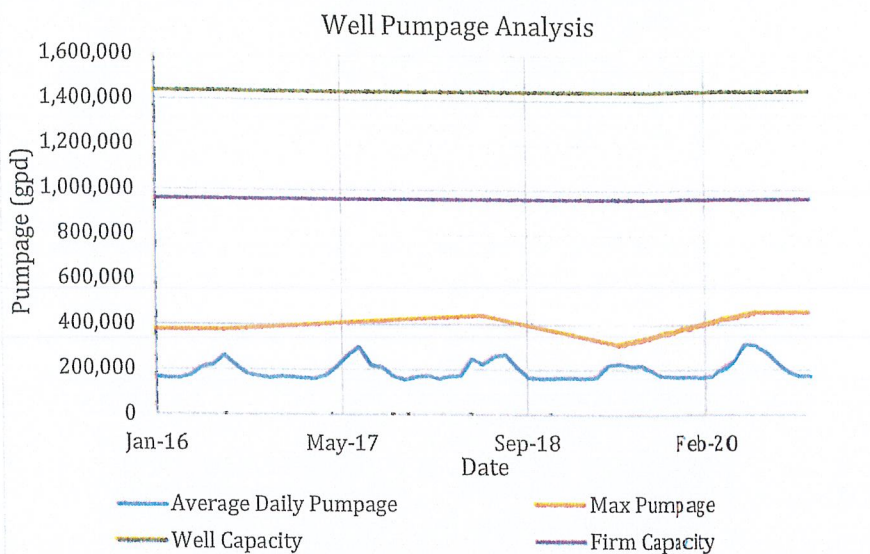


Figure 3.1: Well Pumpage Analysis

#### C. Water Quality

The raw water quality meets all EPA primary water standards but exceeds the MDH health-based value for concentration of manganese. Manganese is the main water quality concern; concentrations of manganese are listed in Table 3.2.

Table 3.2: Raw Water Well Manganese Concentrations

Well Name	Unique Well #	Aquifer	Average Manganese Concentration, mg/L
Well 4	700302	Quaternary Buried Artesian Aquifer	1.070
Well 5	700301	Quaternary Buried Artesian Aquifer	0.810
Well 6	843402	Quaternary Buried Artesian Aquifer	0.423

\*Data from historical water testing for City of Montrose 2-5-2021

The manganese concentrations present in wells No. 4, 5, and 6 are high. The EPA has a secondary maximum contaminant level (SMCL) guideline for Manganese of 0.050 mg/L. The average concentration of manganese in all the city supply wells exceed the EPA SMCL.

#### D. Distribution System

Water mains in the City of Montrose range in size from 4 to 12 in diameter. The current distribution system provides adequate pressure for everyday demand but would have a difficult time moving the large amounts of water required for a fire emergency. As the system is improved, the city should upgrade water mains to a minimum of 8" to provide better fire protection.

The trunk watermain in the City of Montrose are in good locations, such as the 10" line on Buffalo Ave. As growth in the city occurs, it is recommended to loop the trunk watermain. This practice will minimize pressure loss during extreme events, such as fires and watermain breaks and provide excellent service to the citizens of Montrose.

#### E. Existing Treatment Evaluation

##### 1. Capacity

Based on experience and historical demand, Montrose can pump sufficient water to residents through the design year 2045. The chemical feed system and well house facilities provide sufficient capacity to produce enough finished water.

##### 2. Chemical Feed

Although the city can maintain current treatment, manganese concentrations are a problem for the existing treatment system. Manganese concentrations in each well exceed the EPA recommended standard of 0.05 mg/L. A centralized water treatment facility would allow the city to remove manganese prior to distribution, see Section IV for further details.

The chemical feed systems are maintained by the city and are repaired as needed. Chlorine, polyphosphate, and fluoride are added at the well houses before storage and distribution. Parts of the chemical systems should be replaced as necessary, including feed tubing, metering pumps or pump wear parts, and accessories. The city conducts pump inspections on a rotating basis. Chemical feed inspections should be conducted in conjunction with pump inspections.

##### 3. Well Houses

The City of Montrose has two operational well houses. Well house No. 3 was constructed in 2020 followed by the demolition of well house 1. Both, well house No. 2 and 3, are currently in good condition.

##### 4. Electrical and Controls

The electrical SCADA system is anticipated to remain operating for the design period. The existing SCADA system would be fully integrated and updated as part of the new water treatment facility.

#### F. Finished Water Storage Evaluation

Water storage is used to provide a constant supply of water and pressure during variable demand conditions. During high demand periods, part of the demand can be met by storage reserves. During low demand conditions the high service pumps continue to operate, pumping the excess supply to the storage tanks for future demands. Storage is also used as an emergency water source in the case of supply failure such as power outage, intake repair, or raw water transmission main breaks or during a fire.

The total storage capacity for the City of Montrose is 300,000 gallons and is split between a 50,000-gallon elevated storage tank and a 250,000-gallon elevated storage tank. Additional storage may be needed to compensate for future demand and account for periods of high demand such as a fire emergency.

##### 1. Condition

Tank No. 1 is in poor condition and is coated with lead based paint. The tank was constructed in 1930 and is rusting. This tank should be taken out of service and replaced with a higher capacity storage tank. Despite being built in 1967, tank No. 2 is



in good condition and will continue to serve the community. The city should maintain inspections of water towers every 5 years and budget for a repaint every 20 years.

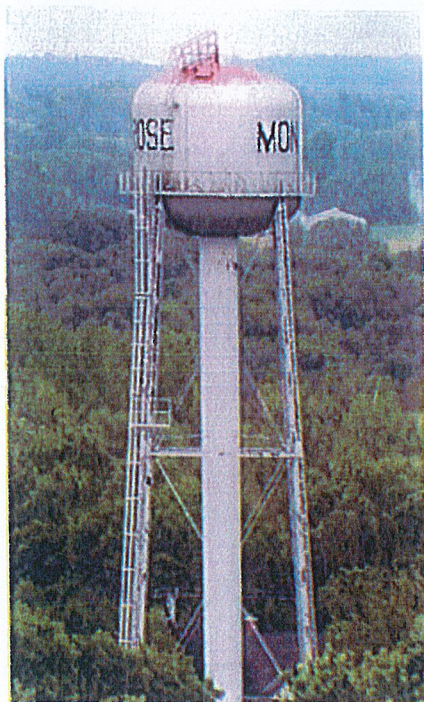


Figure 3.2 Photo of tower No. 1 on the left.

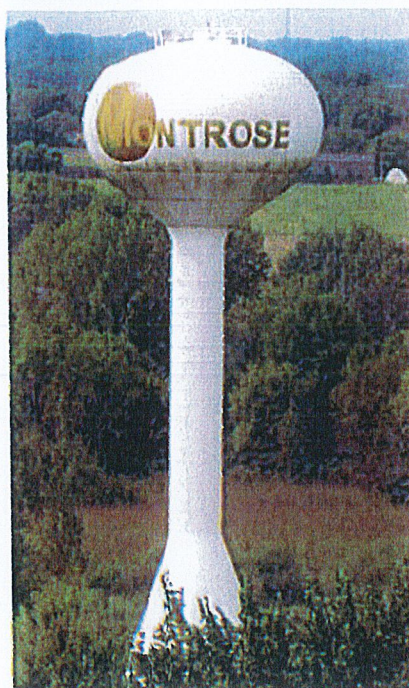


Figure 3.3 Photo of tower No. 2 on the right.

## 2. Capacity

The existing towers supply Montrose with 300,000 gallons of storage. Several criteria are used to determine the storage requirements for the system. The Ten States Standards has the following recommendations:

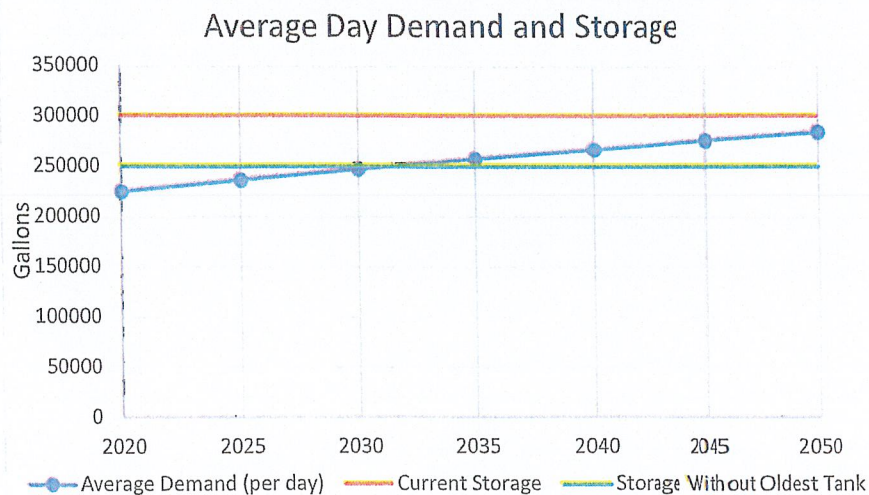
“Storage facilities should have sufficient capacity, as determined from engineering studies, to meet domestic demands, and where fire protection is provided, fire flow demands.

- a) The minimum storage capacity (or equivalent capacity) for systems not providing fire protection shall be equal to the average daily consumption. This requirement may be reduced when the source and treatment facilities have sufficient capacity with standby power to supplement peak demands of the system.
- b) Excess storage capacity should be avoided to prevent potential water quality deterioration problems.
- c) Fire flow requirements established by the appropriate state Insurance Services Office should be satisfied where fire protection is provided.”



Table 3.3: Water Storage Tanks			
Tank	Constructed	Capacity (gallons)	Material
Elevated Storage 1	1930	50,000	Steel
Elevated Storage 2	1967	250,000	Steel
Total Storage Capacity		300,000	

The Ten States Standards recommends having a minimum storage capacity of the average day demand. The current storage of 300,000 gallons is greater than current and projected average day demand. However, with the recommendation to decommission the 1930 tank, the city would only have 250,000 gallons. Average day demand is expected to exceed this by 2032. In this situation the water supply would be supplemented by drawing from additional wells or utilizing emergency connections. It is also recommended to have sufficient storage for fire needs. Fighting a fire at 3,000 gpm for 3 hours would require an additional 540,000 gallons of storage for a total of approximately 800,000 gallons of storage. A larger storage structure is needed for future growth and fire flow demands



**Figure 3.4 Average Day Demand versus Storage**

### 3. Emergency Power

The new treatment plant will need emergency power from an appropriately sized generator.



## IV. EVALUATION OF WATER QUALITY

### A. Introduction

Due to the concern for safe drinking water, many federal and state agencies have instituted statutes which regulate drinking water quality. Finished water must be acceptable to the local community regarding taste, odor, hardness, and color. The Environmental Protection Agency (EPA) has recently been restricting the concentrations of contaminant such as nitrogen and phosphorus. The United States EPA provides guidelines for producing and supplying safe drinking water.

Included in this section are discussions related to raw water quality as well as water treatment rules and regulations. These treatment regulations assist in identifying water treatment objectives which are used in evaluating water treatment. Discussions are presented to evaluate the existing raw water quality and the state and federal regulations impacting the Montrose Water Treatment Facility.

### B. Existing Raw Water Quality

The raw water of City of Montrose is supplied by three wells. The water quality from these wells meets all primary EPA drinking water standards but does have high levels of Manganese. Manganese can cause adverse health effects, especially in infants.

Table 4.1: Raw Water Well Manganese Concentrations			
Well Name	Unique Well #	Aquifer	Average Manganese Concentration, mg/L
Well 4	700302	Quaternary Buried Artesian Aquifer	1.070
Well 5	700301	Quaternary Buried Artesian Aquifer	0.810
Well 6	843402	Quaternary Buried Artesian Aquifer	0.423

### C. Federal and State Rules Summary

The United States Environmental Protection Agency (EPA) has established basic water quality rules to protect public health. The Minnesota Department of Health is used to enforce the water quality rules.

Relevant rules and regulations include:

- Safe Drinking Water Act (SDWA)
- National Primary Drinking Water Regulations (NPDWRs)
- Stage 1 and Stage 2 Disinfectants and Disinfection By-Products Rules (DBPRs)
- Revised Total Coliform Rule (RTCR)
- Radionuclide Rule
- Drinking Water Contaminant Candidate List (CCL)
- Secondary Drinking Water Standards

This report focuses on evaluating the water quality as it pertains to the primary and secondary drinking water standards.

## 1. Safe Drinking Water Act (SDWA)

Through the passage of the Safe Drinking Water Act (SDWA) in 1974, the U.S. Congress authorized the United States Environmental Protection Agency (EPA) to establish drinking water regulations which apply to all public water systems in the United States. State governments are responsible for implementing and enforcing the Act's provisions through the health departments and environmental agencies.

Under the SDWA, the EPA initially proposed the National Interim Primary Drinking Water Regulations (NIPDWR). The regulations were referred to as "interim" because the regulations were to be revised upon further research and special studies. The interim regulations were adopted as the National Primary Drinking Water Regulations (NPDWRs) upon the passage of the 1986 Amendments to the SDWA. There were 83 contaminants to be regulated at that time.

Changes were made to the SDWA by the 1996 amendments. These amendments retained most of what the NPDWRs previously enacted. The 1996 amendments did change the process for selecting contaminants to be regulated and did mandate new rules regarding arsenic, uranium, radon, and groundwater disinfection. The 1996 amendments placed an increasing emphasis on ensuring all new and existing water systems have the technical, managerial, and financial capacity to comply with NPDWRs. Systems which do not commit the resources required to comply with these rules may not be eligible for Drinking Water State Revolving Fund (DWSRF) loans and may be vulnerable to enforcement actions. There are currently over 90 parameters regulated by the SDWA.

The regulations discussed below fall under the Safe Drinking Water Act, as the SDWA provides the process the EPA must follow to create drinking water regulations.

## 2. National Primary Drinking Water Regulations (NPDWRs)

National Primary Drinking Water Regulations (NPDWRs) are the enforceable standards (maximum contaminant levels and treatment techniques) with which water suppliers must comply. Currently, there are standards for more than 90 contaminants, including turbidity, 6 other microorganism indicators, 4 disinfection byproducts, 3 disinfectants, 4 radionuclides, 16 inorganic contaminants, and 53 organic contaminants. The EPA is required to review and revise, as appropriate, each NPDWR every six years. The most recent review was completed in December 2016. Another review is currently in progress and is expected to be completed in 2023. Based upon the 2016 review, the EPA has identified Chlorite, *Cryptosporidium*, *Giardia lamblia*, and Haloacetic Acids (HAA5) rules as candidates for revision. Appendix B includes a summary of all standards for regulated contaminants.

## 3. Stage 1 and Stage 2 Disinfectants and Disinfection By-products Rules (DBPRs)

In December 1998, the EPA established maximum residual disinfectant levels for water systems which use a chemical disinfectant under the Stage 1 Disinfectants and Disinfection Byproducts Rule (DBPR). The Stage 2 DBPR added to the Stage 1 Rule by increasing compliance monitoring requirements for Trihalomethanes (TTHM) and Haloacetic acids (HAA5). The maximum residual disinfectant level is 4.0 mg/L of chlorine as free chlorine. The compliance date for groundwater systems was November 2003. Maximum limits have been established to limit the health effects of disinfectant byproducts.

Table 4.2 shows EPA Exhibit II-I, which identifies the Maximum Contaminant Limits (MCL) and Maximum Contaminant Limit Goals (MCLG) for disinfection byproducts.



**Table 4.2 - MCLGs and MCLs for Disinfection Byproducts**

Disinfection Byproduct	MCLG (mg/L)	MCL (mg/L)
<b>Total Trihalomethanes (TTHM), consisting of:</b>	<b>ND</b>	<b>0.080</b>
Chloroform	ND	ND
Bromodichloromethane	0	ND
Bromoform	0	ND
Dibromochloromethane	0.06	ND
<b>Five Halo Acetic Acids (HAA5), consisting of:</b>	<b>ND</b>	<b>0.060</b>
Monochloroacetic Acid	ND	ND
Dichloroacetic Acid	0	ND
Trichloroacetic Acid	0.3	ND
Monobromoacetic Acid	ND	ND
Dibromoacetic Acid	ND	ND
<b>Chlorite</b>	<b>0.8</b>	<b>1.0</b>
<b>Bromate</b>	<b>0</b>	<b>0.010</b>

ND – not determined

These limits should not be an issue for the City of Montrose provided disinfection control systems are adequately maintained and operated.

#### 4. Revised Total Coliform Rule (RTCR)

EPA promulgated a Total Coliform Rule on June 29, 1989, and revised the Rule on February 13, 2013. This Rule applies to both surface water supplies and groundwater supplies. The Revised Total Coliform Rule became effective on April 1, 2016. The revised Rule establishes a maximum containment level for *E. coli* and uses *E. coli* and total coliforms to initiate a "find and fix" approach to address fecal contamination which could enter the distribution system. It requires public waste systems (PWSs) to perform assessments to identify sanitary defects and subsequently take action to correct any defects.

Recommended guidelines for total coliform control are:

- Maintenance of detectable disinfectant residual throughout the distribution system.
- Proper repair/replacement/maintenance of the distribution system

#### 5. Radionuclide Rule

The EPA Radionuclide Rule went into effect in 1977 and was revised in 2000. This regulation requires monitoring and sets maximum contaminant levels for combined Radium 226 and Radium 228, Uranium, gross Alpha particles, and Beta/photon emitters. The overall goal of the rule is to protect customers from radionuclides.

#### 6. Drinking Water Contaminant Candidate List (CCL)

The EPA has drinking water regulations for more than 90 contaminants, and the complete list is presented in Appendix B. The SDWA includes a process which the agency follows to identify new contaminants which may require regulation in the future. The EPA periodically releases a Contaminant Candidate List (CCL) with contaminants which need to be evaluated to determine if future regulation is necessary.

The first list was published in March 1998 and had 60 unregulated contaminants. The fourth version of the list was published on November 17, 2016 and contains 97 chemicals or chemical groups and 12 microbial contaminants. This list includes, among others, chemicals used in commerce, pesticides, biological toxins, disinfection byproducts, pharmaceuticals, and waterborne pathogens.

#### 7. Secondary Drinking Water Standards

In addition to the National Primary Drinking Water Regulations, which cover the contaminants that affect public health, EPA recommends Secondary Drinking Water Standards with recommended limits on contaminants that affect the aesthetic qualities of drinking water. The secondary regulations are intended to serve as guidelines and are not federally enforceable. Although water utilities are not required to treat to Secondary Drinking Water Standards, keeping the quality of drinking water within these guidelines makes it more acceptable to consumers, thereby decreasing customer complaints. EPA Secondary Drinking Water Standards can be found in Appendix B.

#### D. Recommended Treatment Objectives

The raw water quality for the City of Montrose can be treated through conventional means. It is recommended the city reduce manganese levels below the Secondary Drinking Water Standards. Treatment of manganese can be accomplished in the following ways:

- Gravity filtration
- Pressure filtration
- Lime softening with filtration
- Gravity filtration followed by reverse osmosis

It is recommended the city construct a new water treatment facility for the removal of manganese. All four options can achieve the objective of removing arsenic, manganese, and iron. The city may also choose to soften the water and remove hardness.

Treatment alternatives are discussed in Section V.



## V. WATER TREATMENT OPTIONS

### A. Treatment Process Screening

The water treatment objectives for the City of Montrose are to provide residents with safe and palatable water fit for domestic and commercial uses, while wasting minimal water in the process. This section summarizes alternative treatment processes and the benefits of each process. From this analysis, treatment trains were developed for detailed comparison. A summary of the ability of each treatment process to meet or aid in meeting the water quality objectives is given in Table 5.1.

Centralized water softening limits the treatment options for the city to reverse osmosis or lime softening. Home water softeners can remove hardness if residents choose to operate one. The issue with home water softeners is the cost to consumers and the increase in chloride load to the wastewater system, which can negatively impact the environment and is costly to remove.

Table 5.1 - Alternative Treatment Technology Summary				
Contaminant	Primary Treatment (Removal)			
	Gravity Filtration	Pressure Filtration	Lime and Soda Ash Softening with Filtration	Gravity Filtration and Reverse Osmosis (RO)
Iron and Manganese Removal	X	X	X	X
Hardness Removal			X	X
Chloride Production to WWTF	Residential Waste	Residential Waste	Some Waste (mostly removed as sludge to offsite)	Blended Concentrate Waste
Note: X = Process will achieve or aid in achieving the treatment goal for the indicated parameter				

#### 1. Gravity Filtration

Filtration is a proven water treatment technology which has been used since the early 19th century and is commonly used to remove iron and manganese. Since water from underground aquifers is in direct contact with rock and ground layers, the water has higher concentrations of iron, manganese, and hardness. Gravity filtration is one of the primary treatment techniques used to remove iron and manganese from ground water. Hardness is not removed using gravity filtration, so further treatment would be necessary to reduce hardness. Filters can be constructed out of concrete or steel.

Steel filters are less expensive and are a competitive option for small facilities, while concrete filters are more economical for larger facilities. Steel filters will need maintenance and recoating in 15-20 years, whereas concrete filters would service the community for the next 40 to 60 years. The life cycle analysis makes concrete filters more economical than steel filters for plants designed for a maximum day demand of approximately one million gallons.

#### 2. Pressure Filtration

Pressure filters are another common way to remove iron and manganese. Pressure filters are enclosed vessels which force pressurized water through the filter media, usually sand. Like gravity filters, pressure filters do not soften water so additional treatment would be needed to reduce hardness. While pressure filters have a low initial cost, there are many disadvantages which come with pressure filters. The inability to observe the pressure filters while in operation and possible premature breakthrough of contaminants. Due to these concerns pressure filters are not recommended and were not investigated further.

### 3. Lime and Soda Ash Softening with Filtration

Hard water is defined as water containing the sum of calcium, magnesium, and other divalent cations. The raw water for Montrose has a hardness of approximately 420 mg/L  $\text{CaCO}_3$ . The raw water falls in the "very hard" classification based on the American Water Works Association (AWWA) definition. Centralized softening eliminates the need for home water softening units. Without the use of individual water softeners, the amount of chloride discharged into the wastewater system is greatly reduced. This can also help the City of Montrose stay ahead of any potential future chloride discharge limits.

Lime softening can also remove iron and manganese from drinking water. In the presence of oxygen, the oxygen will react with these compounds to create ferric and manganic hydroxide. Lime reacts with iron and manganese to precipitate as ferric hydroxide and manganic oxide which are then captured using filtration. The oxidation reaction rates for iron and manganese are accelerated by the high pH levels present in lime softening.

Lime softening is a process which requires an understanding of the chemical reactions occurring, additional testing, monitoring, and a significant amount of equipment, resources, and time. The lime softening process involves creating a lime slurry using water and a powdered lime source, feeding the slurry into a clarifier, allowing the chemical reactions to occur, and allowing the solids to settle out. The lime clarifier effluent water has a high pH which will need to be lowered through re-carbonation to stabilize the water and prevent scale deposits on the subsequent filter media. Lime softening will require additional staffing to operate the treatment system, treat the lime sludge, and will require additional staffing compared to typical gravity filtration facilities without softening.

### 4. Reverse Osmosis Membrane Filtration

Reverse Osmosis (RO) is another type of treatment process which offers the finest level of filtration available. The membrane acts as a barrier to all dissolved salts and inorganic molecules as well as most organic molecules with a molecular weight greater than 100. Water molecules can pass freely through the membrane which creates a purified effluent stream. The dissolved salts and molecules which remain on the opposite side of the membrane barrier flow out of the system as a concentrate or reject stream of water. The amount of water used for the concentrate stream varies from 5 to 30 percent of the total water supplied to the RO system but is generally in the 20 to 25 percent range.

### 5. Chlorine Disinfection

Primary disinfection by the City of Montrose is currently accomplished by free chlorination. Free chlorine is applied using chlorine gas injection. The inactivation of microorganisms such as *Giardia lamblia*, *Cryptosporidium*, and viruses is based on contact time multiplied by the chlorine residual (CT). The required CT is a function of



other water treatment parameters, such as the organism being inactivated, water temperature, and pH. Chlorine is applied not only to perform disinfection as part of the treatment process but also to provide residual disinfection in the distribution system. The free chlorine method of disinfection is relatively simple to use but can lead to the formation of disinfection by-products such as TTHMs or HAAs.

Chlorine could also be used for disinfection by chloramination. Chlorine is added to the water along with small amounts of ammonia, which react together to form chloramines. Chloramine is a long-lasting disinfectant and is relatively stable.

Chlorination requires a specific balance between chlorine and ammonia in the water supply. Sufficient chlorine must be added to react with the ammonia in the water supply and form chloramines for disinfection. However, if too much chlorine is added, monochloramines begin to breakdown dichloramines resulting in taste and odor issues. If chlorine levels are even higher, breakpoint chlorination can be reached, when all of the ammonia in the water is broken down and a free chlorine residual is left, which can lead to the formation of DBP. Chloramination also has a greater space and storage requirement than chlorination.

## B. Improvement Items Common to All Alternatives

### 1. Additional Water Storage

As previously discussed, the 50,000-gallon storage tank built in 1930 should be decommissioned due to the age and condition. The Ten States Standards recommend having a minimum storage capacity of the average day demand. While 250,000 gallons of storage is sufficient for the current demand, the project demand is expected to exceed the finished water storage capacity around 2032. It is recommended the city install an additional 250,000-gallon elevated storage tower with a clearwell at the proposed WTP to meet necessary usage and fire flow demands.

A new elevated tank would serve as an additional pressure equalizer in the distribution system. However, if the projected growth of the city will not develop areas of low service pressure, ground storage may be sufficient. The economics of ground storage make it the most practical if it is built in conjunction with a new treatment plant.

### 2. New Water and Wastewater Piping

The source water wells, water storage structures, and the distribution system will need to be connected to the new WTF. The existing wastewater collection system should be adequate for any future WTF. However, sanitary sewer system improvements may be needed for the reverse osmosis option due to the amount and concentration of reject water.

### 3. Plate Settlers for Water Reclaim

The City of Montrose should consider installing a package plate settling system in addition to the backwash tanks. Plate settlers are used to increase the amount of water reused and can be sent back to the treatment process instead of wasting it to the sewer. The plate settling system would have a smaller area footprint than a standard sedimentation basin due to the layers of plates which create additional surface area for settling within the unit. The plate settler is able to return about 98 percent of water, whereas about 85-90 percent is returned without the use of plate settling. See Figure 5.1.

## Lamella Gravity Settler

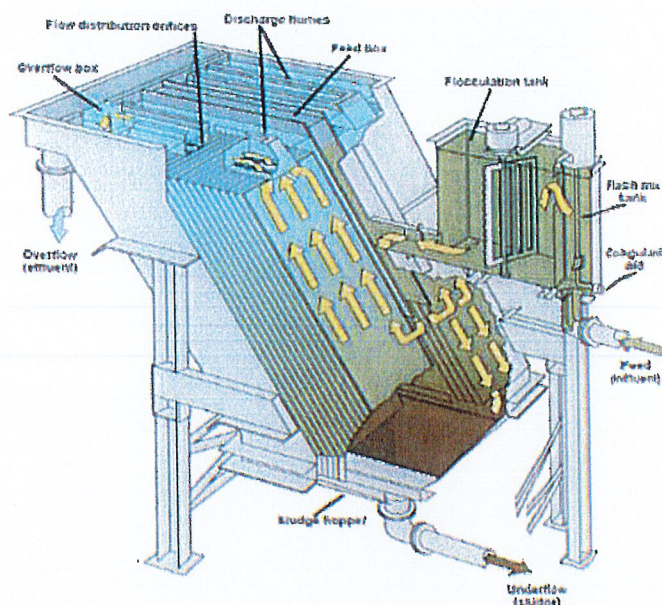


Figure 5.1 Inclined Lamella Plate Gravity Settler

### C. Treatment Alternatives

After considering the treatment goals and process alternatives, three specific treatment alternatives were developed. Pressure filter systems were not considered due to the previously mentioned disadvantages. These alternatives are as follows:

1. Construct a new treatment facility using the gravity filtration
2. Construct new treatment facility using filtration and lime softening
3. Construct new treatment facility using filtration and reverse osmosis

The treatment process recommended for each alternative begins similarly — aeration and detention for iron oxidation, use of potassium permanganate for manganese oxidation, filtration for iron and manganese removal, followed by softening technology, chlorine for disinfection, the addition of fluoride, and addition of a corrosion inhibitor. The average and peak facility flows in 2045 are predicted to be 276,000 gpd (192 gpm) and 607,000 gpd (422 gpm) respectively.

All alternatives will include new water treatment buildings to house the treatment equipment and materials. Potential locations will be analyzed during a future water model study. Building and structure layout and sizing would be finalized during the design process.

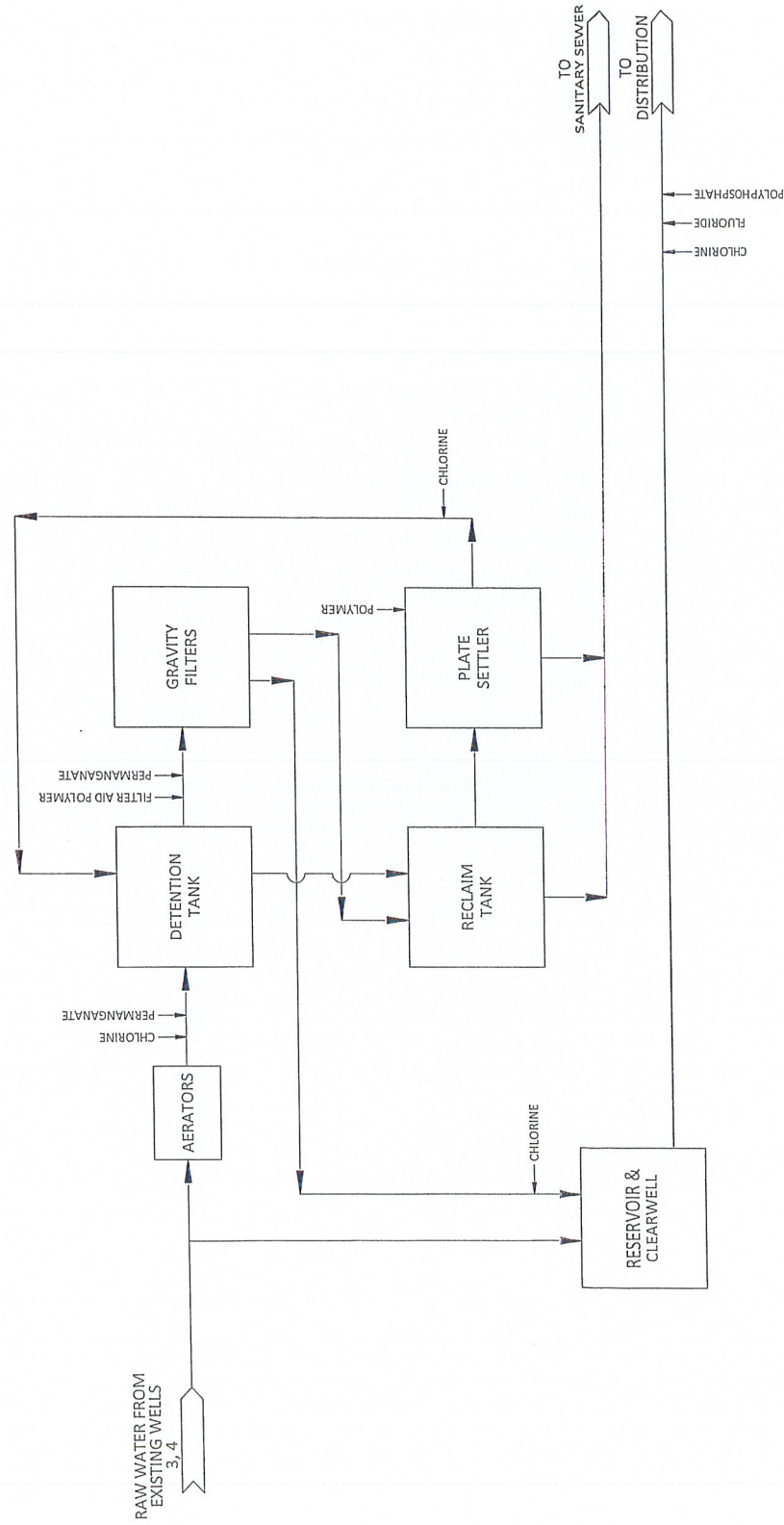
#### 1. Construct a New Gravity Filtration Process

This method includes the construction of a new gravity filtration process designed to remove iron and manganese as well as provide disinfection. The process flow for a gravity filtration process is shown in Figure 5.2.

The existing wells are expected to provide sufficient water for current and future demands. A water treatment facility would be constructed to enclose the treatment processes and associated equipment and provide room for expansion.



FIGURE 5.2 - GRAVITY FILTRATION



The process begins with the aerator. The aerator would be an induced draft aerator constructed of aluminum with PVC internal components and designed for the maximum flow rate. Water cascades downward through the aerator, releasing gases in the water, while oxygen is provided from the upward flowing of air which is drawn through the aerator by fans located on top of the structure. This type of aeration provides the most efficient oxidation and gas stripping, providing the greatest treatment flexibility. The water flows from the aerator to the detention basin.

The detention basin allows complete oxidation of the iron and would be sized for 40-minutes of detention time. Detention time provides iron additional time to form floc, resulting in more thorough and efficient filtration.

Water flows to newly constructed filter cells located in the treatment building. The filter cells would consist of filter backwash troughs, gravel underdrains, support media, a Greensand Plus (or silica sand) layer, and an anthracite layer on top. The water treatment facility would be constructed to enclose the filters and associated equipment and provide room for expansion.

The filters would be designed in multiple units to allow taking a unit off-line for maintenance. The optimal design filtration rate is 2.0 gpm/sq. ft. The filter system would consist of four rectangular filters, each with approximate dimensions of up to 10-feet by 10-feet. This design would be able to process 600 gpm with three of the filters operating.

The underdrain system would be designed to prevent scaling on the surface due to the extreme hard water. The backwash system would incorporate both air and water wash. The use of air in the backwashing system reduces the time and water volume required for backwashing. It also improves the cleaning of the media, reducing mud balls and extending media life. A dedicated backwash pump would be used to provide water for backwashing and a dedicated blower would be used to provide air.

To minimize the amount of backwash water wasted and discharged, a backwash water plate settler reclamation system would be installed. The system would consist of a steel tank with inclined lamella settling plates, as previously described, to receive backwash water as it is discharged from the filters. After settling, the clarified water would be recycled and blended with the raw water. Solids from the bottom of the tank would be discharged to the sanitary sewer. Polymer can be used increase the amount of solids removed by the plate settler.

Water flows to the newly constructed filter cells located in the treatment building. The concrete filter cells would consist of filter backwash troughs, underdrains, support media, and a Greensand Plus (or silica sand) layer and an anthracite layer on top.

A new two-chamber baffled clearwell could be constructed to provide the appropriate contact time per chamber and to provide finished water storage. High service pumps would be used to pump water from the clearwell to the distribution system and elevated storage tanks. Each will be provided with a variable frequency drive for flow adjustment. The clearwell will provide storage for finished water and for backwashing.

Chemical feed systems will be installed. Potassium or sodium permanganate will be used for oxidation of metal ions present in the raw water. Chlorine will provide disinfection and residual disinfection in the distribution system. Fluoride will be added for dental health. Polyphosphate can be added to the effluent so residual iron and manganese might be sequestered after treatment or during bypasses.

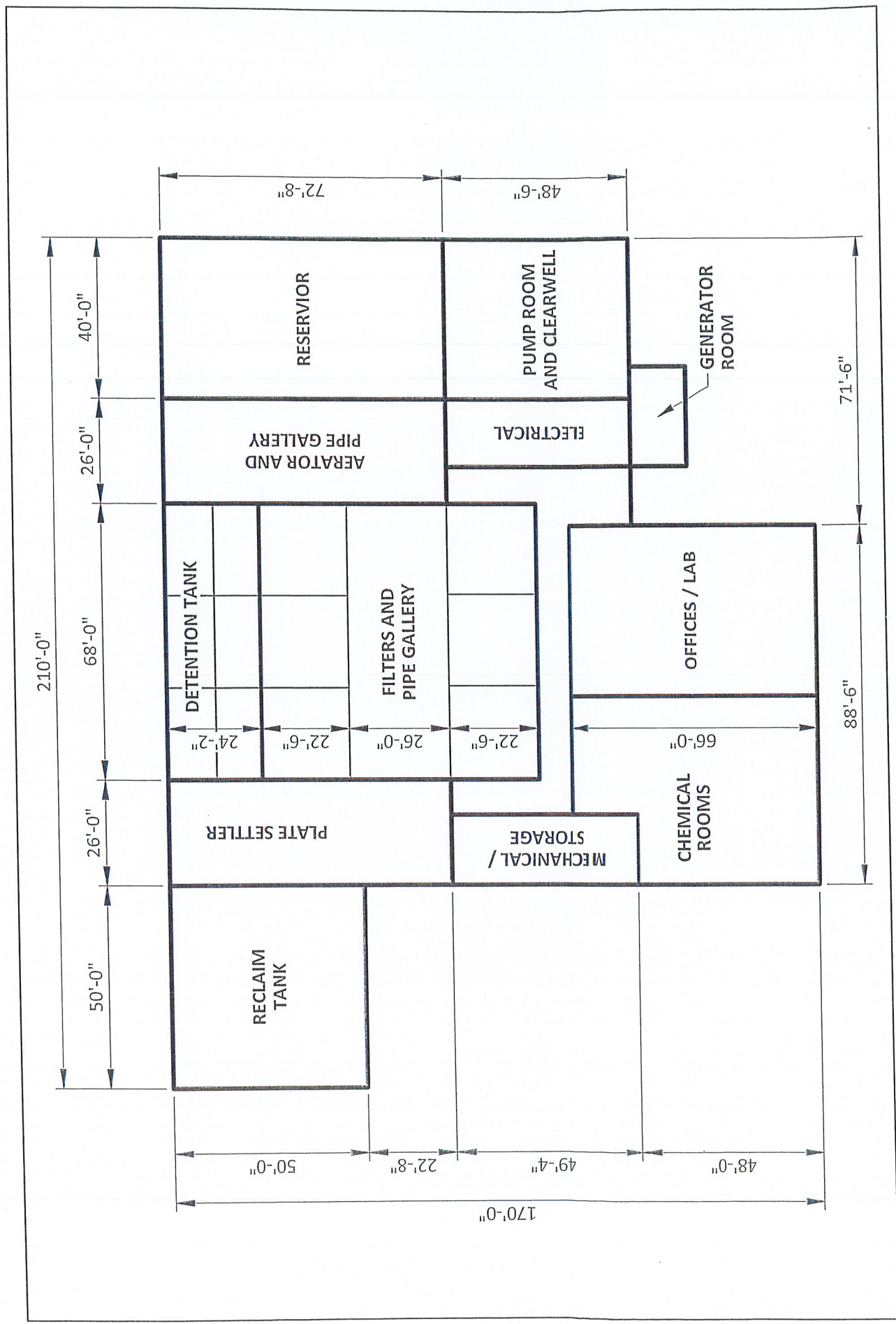
A new SCADA system will be installed as part of the new facility and integrated with the existing SCADA system to provide for one fully functional system. Emergency



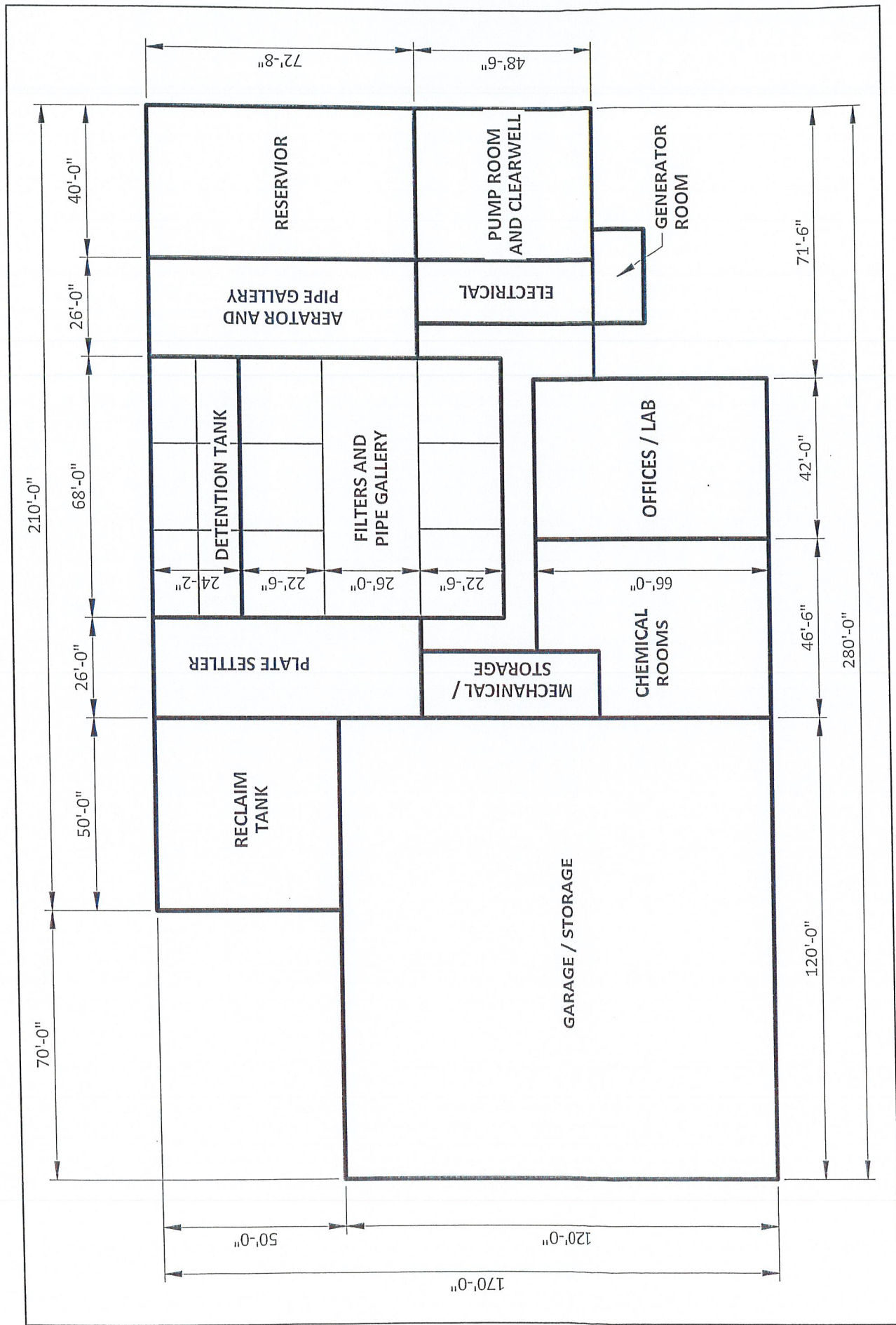
power will be added at the facility for backup use.

The facility will be designed with a common office/lab area to allow water sample analysis and record keeping. There will also be an operations control room and a restroom. A garage and work area could be constructed as part of the treatment building to allow the operators a place to park trucks and work on equipment.

Figures 5.3 and 5.4 shows potential layout for the new treatment facility; the exact sizing of the layout would change once the design is determined. There are multiple layouts to consider, and the building and structure layout and sizing would be finalized during the design process and in consultation with the city.







## 2. Construct a New Lime Softening and Gravity Filtration Treatment process

Alternative 2 consists of constructing a new treatment facility with a lime softening treatment with two solids contact clarifiers. The two solids contact clarifiers provide operational flexibility and allow for maintenance on one clarifier while maintaining treatment.

The process flow diagram is shown in Figure 5.5, and the potential plant layouts are shown in Figures 5.6 and 5.7. The building structure, layout, and sizing would be finalized during the design process and in consultation with the city.

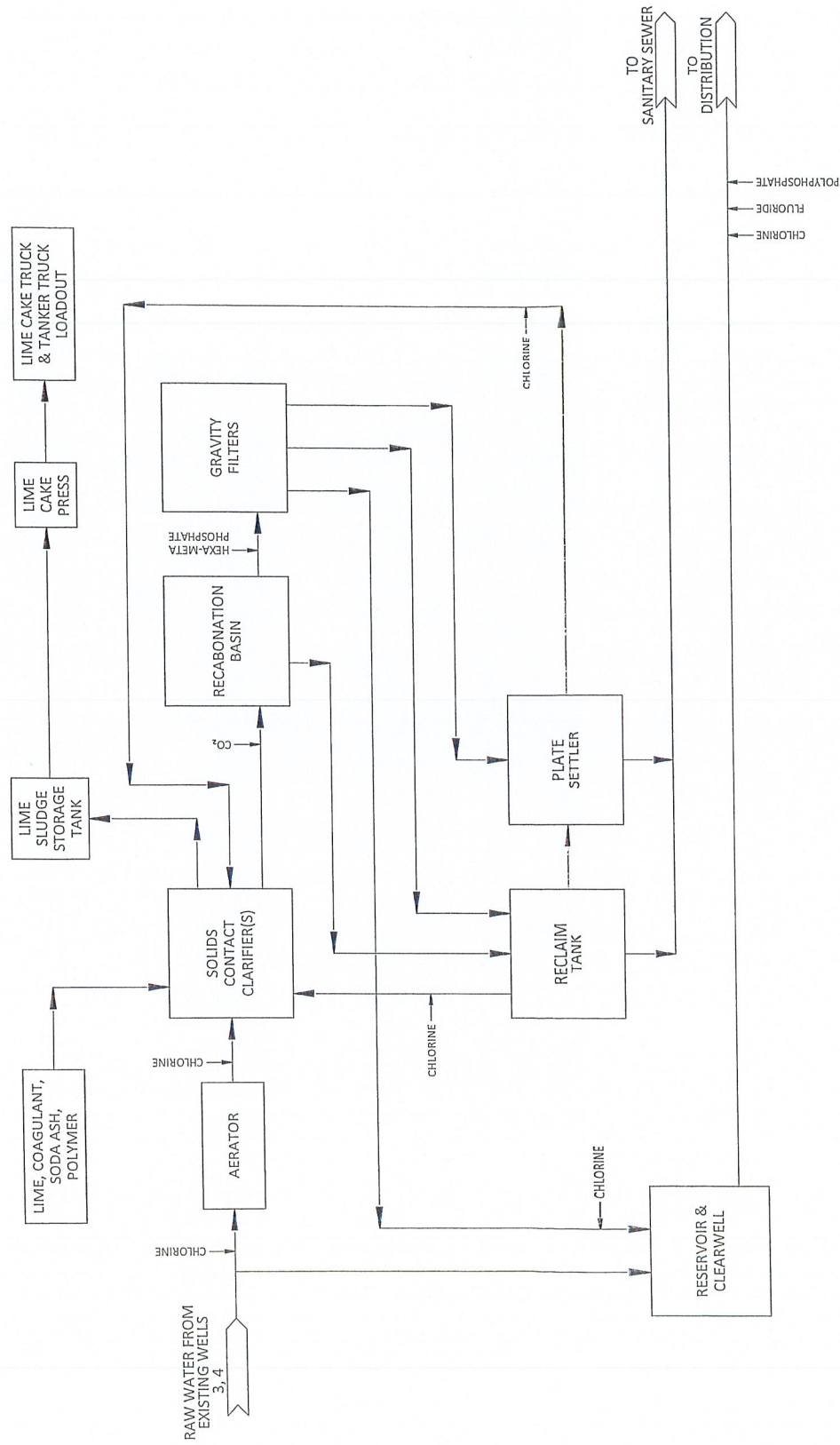
The existing wells are expected to provide sufficient water for current and future demands. A water treatment facility would be constructed to enclose the treatment processes and associated equipment and provide room for expansion.

The aerator would be an induced draft aerator constructed of aluminum with PVC internal components and designed for the maximum flow rate. Water cascades downward through the aerator, releasing gases in the water, while oxygen is provided from the upward flowing of air which is drawn through the aerator by fans located on top of the structure. This type of aeration provides the most efficient oxidation and gas stripping, providing the greatest treatment flexibility.

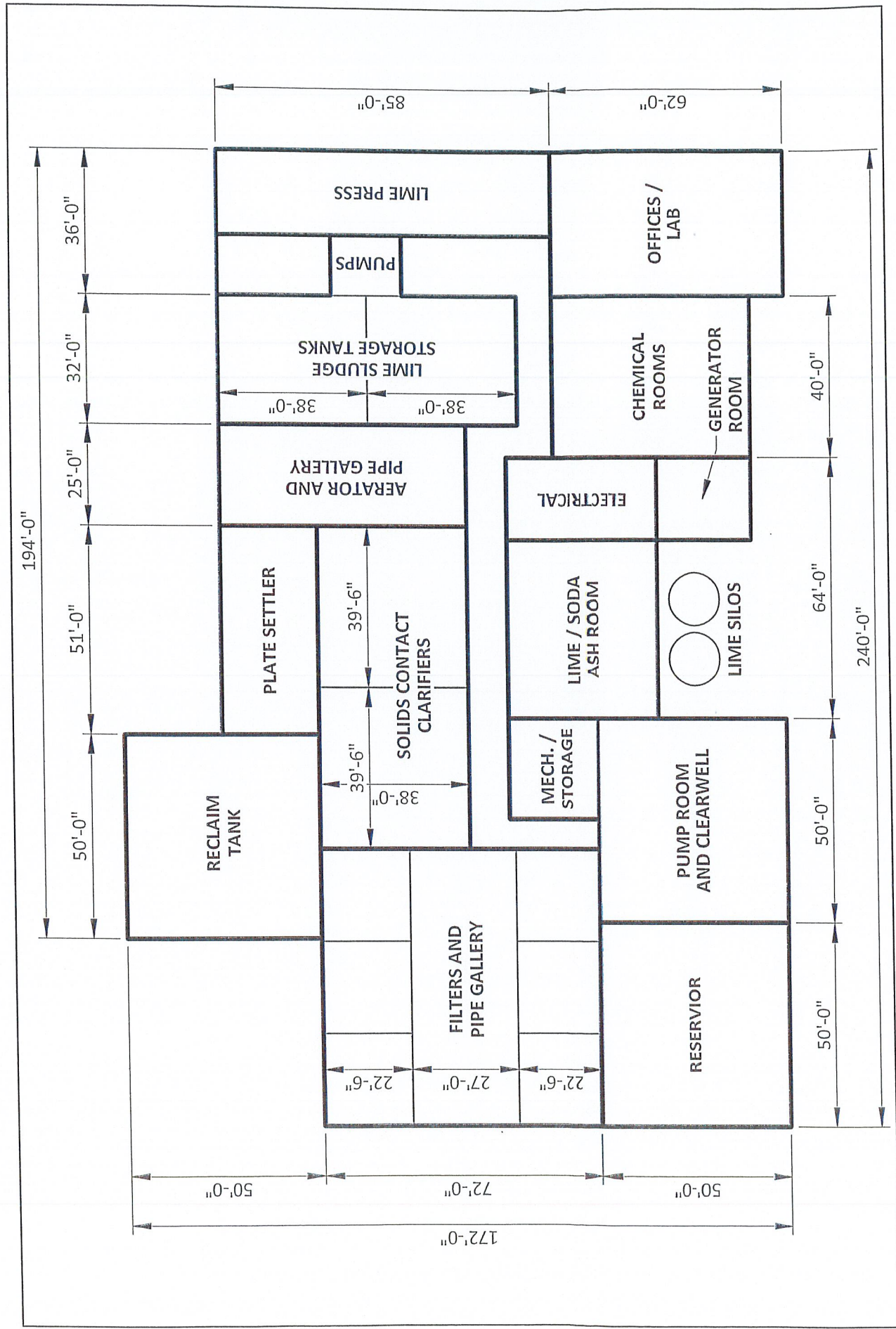
Lime soda ash softening is a system which causes chemical precipitation of hardness ions to soften the water. Lime (calcium hydroxide) is used to remove chemicals which cause carbonate hardness and soda ash (sodium carbonate) is used to remove chemicals which cause non-carbonate hardness. Many municipal water systems use lime softening only and remove primarily carbonate hardness. However, the raw water contains both calcium and magnesium hardness, which indicates a combined system will be the most effective.

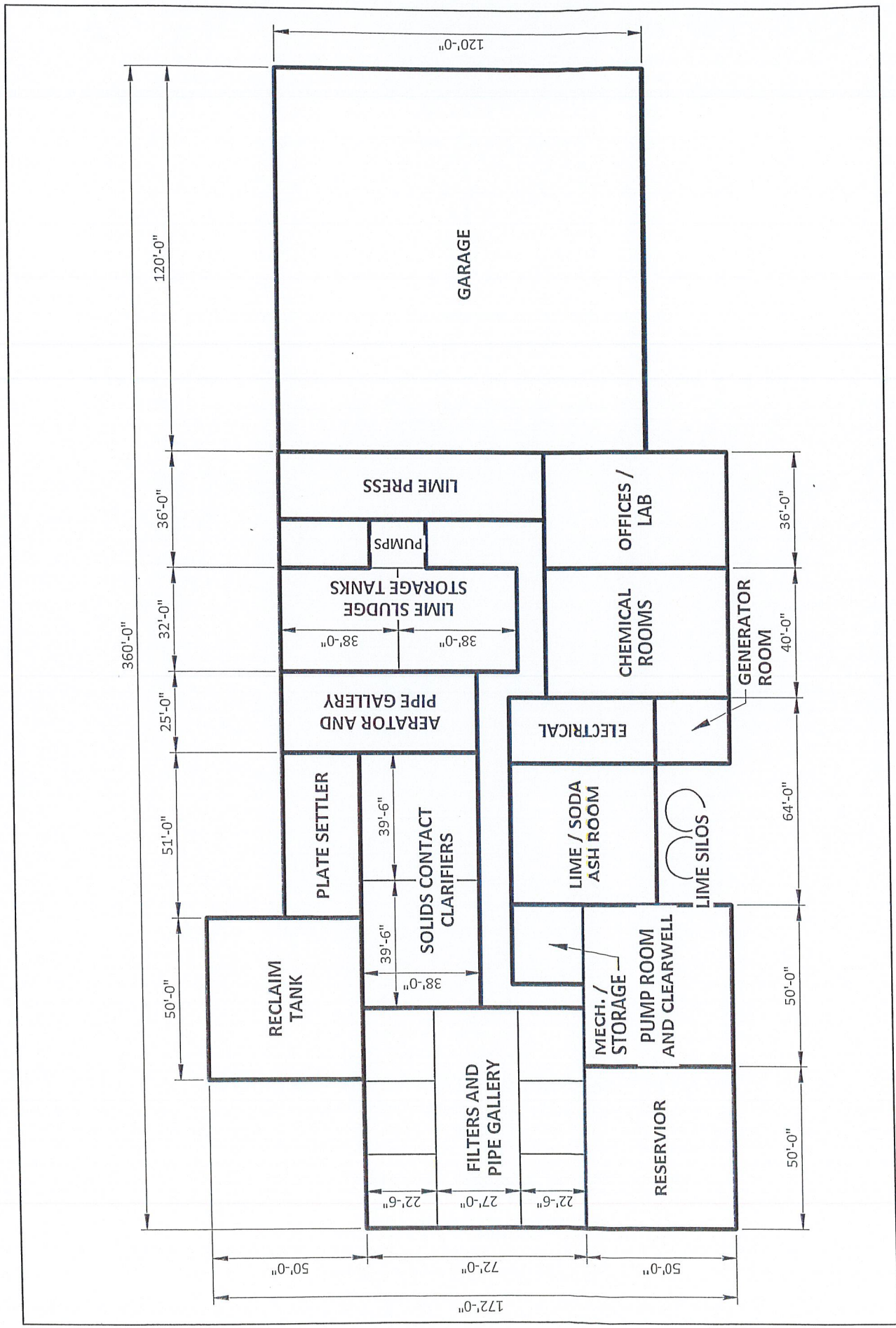
The softening system would be provided with hydrated lime and soda ash storage, feeding equipment, upflow clarifiers for water softening, carbonic acid feed system, a basin for recarbonization, and lime sludge storage and disposal. Water is pumped into the lime clarifiers where it is mixed with hydrated lime and soda ash. The softened water then flows to a recarbonation basin where it receives a pH adjustment by liquid carbonic acid and is then pumped into the filtration system. This system requires a large building footprint and the storage of both raw lime and lime sludge on-site. This

FIGURE S.5 - GRAVITY FILTRATION AND LIME SOFTENING









system could reasonably reduce hardness to less than 100 mg/L of hardness as  $\text{CaCO}_3$ .

The filters would be designed in multiple units to allow taking a unit off-line for maintenance. The design filtration rate is 2.0 gpm/sq. ft. The filter system would consist of four rectangular filters, each with approximate dimensions of up to 10-feet by 10-feet. Filter media is proposed to be a combination of anthracite and greensand, with a gravel underdrain system. The use of air in the backwashing system reduces the time and water volume required for backwashing. It also improves the cleaning of the media, reducing mud balls and extending media life. A dedicated backwash pump would be used to provide water for backwashing and a dedicated blower would be used to provide air.

To minimize the amount of backwash water wasted and discharged, a backwash water plate settler reclamation system would be installed. This would allow for multiple filters to be backwashed immediately in series. The system would consist of a reclaim tank and a steel tank with inclined lamella settling plates to receive backwash water from the filters. Plate settlers increase the amount of water reused from about 85-90 percent, to about 98 percent. After settling, the clarified water would be recycled back to the detention tank to be blended with the raw water. Solids from the bottom of the tank would be discharged to the sanitary sewer. Polymer can be used increase the amount of solids removed by the plate settler.

A new chemical feed area would be incorporated into this alternative. A chemical room would be provided for the potassium permanganate and corrosion inhibitor with room for future chemicals. The softening chemicals would be located in dedicated rooms. The fluoride would also be located in a dedicated room, as the fluoride vapors are very corrosive and are isolated to reduce corrosion damage. The chlorination would be stored as required by current building codes. Chlorine will provide disinfection and a residual in the distribution system.

Lime soda ash softening generates a significant amount of sludge. There are two options for disposal: lagoons, or storage and contracting a disposal agency. Lime sludge can be stored in a lagoon and the water allowed to evaporate or infiltrate until a thickened sludge remains. This sludge would need to be dredged from the lagoon every 3 to 5 years and then either land applied or landfilled. Alternately, lime sludge can be stored in a minimum of two dedicated storage tanks and then dewatered to approximately 60 percent solids and then land applied. A minimum of two presses are proposed for this system to allow for operational flexibility and the ability to press sludge while maintenance is performed on the other press. The dewatered sludge would be discharged into a truck and then land applied. The city would need to source appropriate sites for land application.

A new SCADA control system would be added with the new facility. The remaining control features will be replaced, and all systems will be integrated to provide for one fully functional system. The system would allow control of the facility from multiple sites and would provide secure communications.

Emergency power will be provided by a new generator onsite.

The facility will be designed with a common office/lab area to allow water sample analysis and record keeping. There will be an operations control room and a restroom. A garage and work area would be constructed as part of the treatment building to allow the operators a place to park trucks and work on equipment.



### 3. Construct a New Treatment Facility with Gravity Filtration and Reverse Osmosis

The improvements for this alternative include gravity filtration, plate settling, and reverse osmosis membrane filtration with recovery. With Reverse Osmosis (RO), 20 to 25 percent of the raw water pumped is discharged as reject water. The average influent flow to an RO facility would need to be 327,000 gpd for a finished water demand of 261,000 gpd and the maximum flow would need to be approximately 759,000 gpd rather than 607,000 gpd. This reject water would be roughly 66,000 gallons for average day use in 2045. The reject water would then be wasted to the sanitary sewer.

Depending on location of the new treatment facility, a larger diameter sewer line may be required to handle the additional flow from the RO process. It is also important to consider whether the current wastewater system can handle this larger incoming flow.

The process flow for this alternative is shown in Figure 5.8. Figures 5.9 and 5.10 shows potential layouts for the new treatment facility. There are multiple layouts to consider, and the building and structure layout and sizing would be finalized during the design process.

The existing wells are expected to provide sufficient water for current and future demands and would continue to be used to supply raw water for treatment even with the increased raw water demand from an RO system. A water treatment facility would be constructed to enclose the treatment processes and associated equipment and provide room for expansion.

The aerator would be an induced draft aerator constructed of aluminum with PVC internal components and designed for a maximum flow rate of 759,000 gpd. Water cascades downward through the aerator, releasing gases in the water, while oxygen is provided from the upward air flow drawn through the aerator by fans located on top of the structure. This type of aeration provides the most efficient oxidation and gas stripping, providing the greatest treatment flexibility.

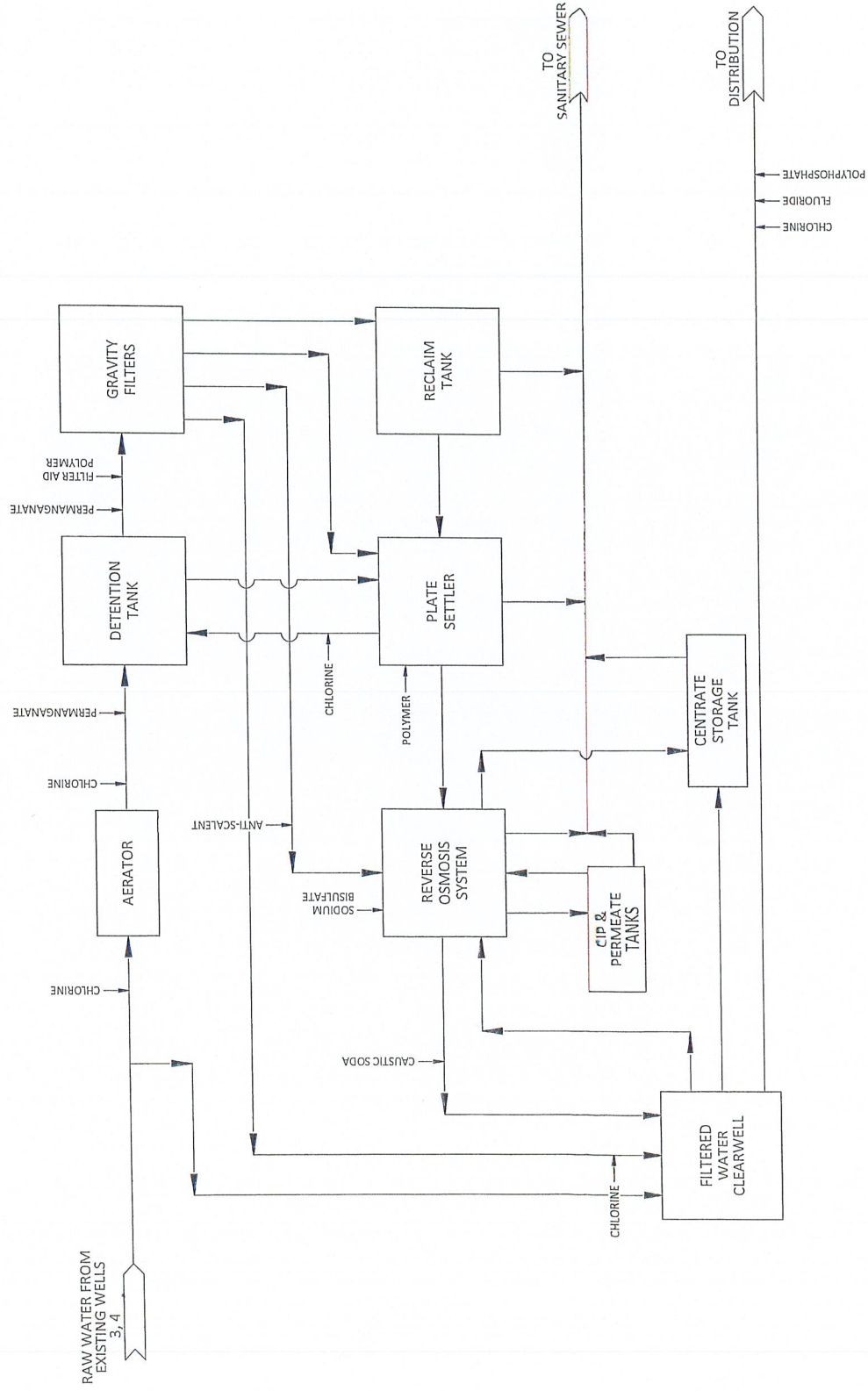
The detention basin would be provided to allow complete oxidation of the iron. The tank would be sized to allow 40-minutes of detention time. This detention time allows the iron additional time to form floc, allowing more thorough and efficient filtration.

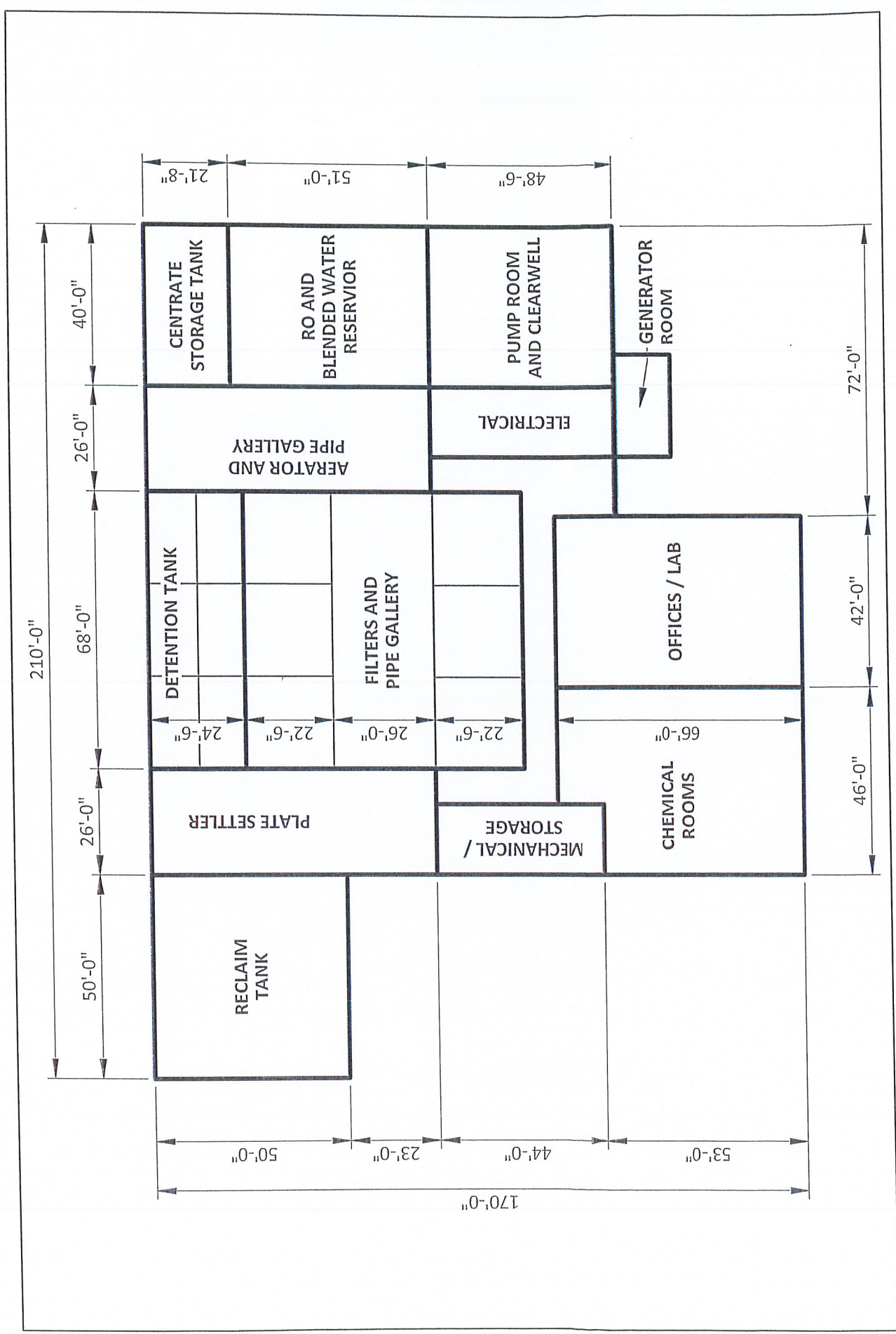
The filters would be sized to treat 759,000 gpd of water, total. The filters would be designed in multiple units to allow taking a unit off-line for maintenance. The design filtration rate is 2.0 gpm/sq. ft. The filter system would consist of four rectangular filters, each with an approximate dimension of up to 10.5-feet by 10.5-feet. Filter media is proposed to be a combination of anthracite and greensand, with a gravel underdrain system. The underdrain system would be designed to prevent scaling on the surface due to the extreme hard water. The backwash system would incorporate both air and water wash. The use of air in the backwashing system reduces the time and water volume required for backwashing. It also improves the cleaning of the media, reducing mud balls and extending media life. A dedicated backwash pump would be used to provide water for backwashing and a dedicated blower would be used to provide air.

To minimize the amount of backwash water wasted and discharged, a backwash water plate settler reclamation system would be installed. The system would consist of a steel tank with inclined lamella settling plates, as previously described, to receive backwash water as it is discharged from the filters. After settling, the clarified water would be recycled to the filters to be blended with the raw water. Solids from the bottom of the tank would be discharged to the sanitary sewer.

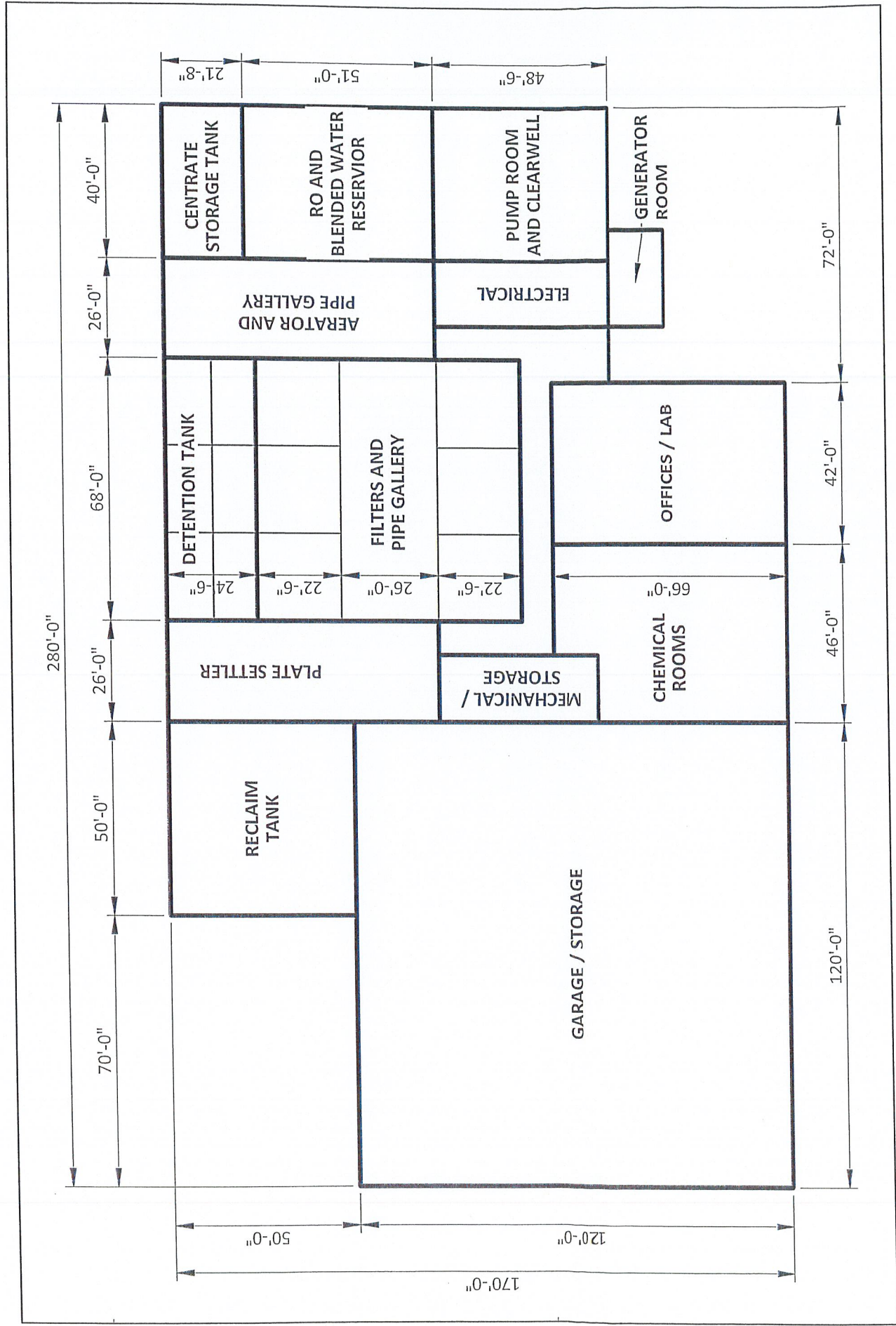
It is estimated lamella plate settling process will recover about 98 percent, and

FIGURE 5.8 - GRAVITY FILTRATION AND REVERSE OSMOSIS









the RO process is estimated to have an 80 percent recovery rate of water from the settler. The plate filters and plate settler will provide excellent pre-treatment for the RO system and will likely result in greater membrane longevity. Polymer can be used to increase the amount of solids removed by the plate settler.

After gravity filtration and plate settling, the water would flow into the reverse osmosis membrane system. This system would reduce the hardness of the water by approximately 70-75 percent.

Reverse osmosis treatment uses pressure to drive water through an artificial membrane and effectively remove nearly all contaminants in the water. The membrane divides the water into two parts: the concentrate stream or reject water, and the permeate or product water. The concentrate stream is water and other constituents rejected by the membrane. The permeate stream is the water which has passed through the membrane and is nearly 100 percent pure water. This pure water is extremely soft and corrosive which may cause problems in the distribution system. Corrosion is combated in two ways: the permeate stream is blended with the filter effluent and the final product is treated to a pH adjustment to make it less corrosive. The blending process mixes the permeate stream with 15 to 30 percent of the filter effluent not passed through the RO system. Blending filtered water with the permeate adds a portion of the hardness-causing minerals back into the water, reducing the corrosivity and helping to reduce taste concerns for customers.

The reject stream typically consists of 20 to 25 percent of the water directed through the RO system, or 15 to 25 percent of the total water flow, and is discharged into the sanitary sewer system. The reject stream is highly concentrated; however, most of the water originally pumped is ultimately discharged to the sanitary sewer system, meaning the final waste stream does not have significantly higher concentration of contaminants than the raw water. Additionally, reverse osmosis removes many impurities and provides added protection for any potential future drinking water standards or well contamination. Reverse osmosis is a time-tested membrane technology which has been used in various communities in Minnesota for these purposes.

The volume of water filtered through the RO process can be chosen based on desired finished water quality and capacity. The RO process would soften the water, remove manganese, and allow the city to treat many additional contaminants.

It is possible the sewer mains may have to be replaced with larger diameter mains, or the facility would need to install its own sewer line. The Montrose wastewater treatment facility should also evaluate the impact of additional flow to the facility from the additional water used for RO treatment.

Filtered water would gravity flow to a baffled concrete clearwell (size to be determined). After the filtered water and RO permeate are blended in the blended clearwell, the water will be chlorinated, and high service pumps would be used to pump water from the clearwell to the distribution system and elevated storage tank. Each pump will be provided with a variable frequency drive for flow adjustment. The clearwell will provide storage for pumping and backwashing.

A chemical feed area would be incorporated into this alternative. Chemical feed systems will include permanganate, sodium bisulfate, antiscalant, liquid hypochlorite, fluoride, and potentially polymer. Sodium bisulfate will be provided for cleaning RO membranes and antiscalant for preventing scale build-up on the membranes during and between treatment. Chlorine will provide disinfection and a residual in the distribution system.

A new SCADA control system will be added with the new treatment facility. The remaining control features will be replaced, and all systems will be integrated to provide for one fully functional system. The system would allow control of the facility from multiple sites and would provide secure communications.

Emergency power will be provided by a new generator onsite.

The facility will be designed with a common office/lab area to allow water sample analysis and record keeping. There will also be an operations control room and a restroom. A garage and work area could be constructed as part of the treatment building to allow the operators a place to park trucks and work on equipment.

#### **D. Future Capital Improvement Items**

In addition to the recommended treatment improvements described in the various alternatives, there are some recommended capital improvement projects the City of Montrose should consider keeping or adding to the capital improvement plan during the design period.

1. Construct new water storage structure(s) to ensure demand and fire flow requirements are less than or equal to finished water storage capacity. As mentioned previously, the city should replace the 50,000-gallon elevated storage tower with a new 250,000-gallon elevated storage tower. Tower No. 1 is past its design life and the additional storage would help the city meet increasing demand and provide adequate water pressure.

A clearwell is another storage option for the city to consider. Clearwells are very economical and are very easy to maintain. This can be accomplished by adding a concrete clearwell to any of the options outlined earlier in this report.

2. As the City continues to expand and grow, additional distribution system improvements are needed such as trunk watermain and the addition of new booster stations. The timing for the watermain extensions and booster stations all depend on timing for growth and expansion of the city. These improvements will be dictated by growth.






## VI. STAFFING REVIEW AND ANALYSIS

This section will look at the existing staffing and evaluate needs for future staffing based on whether a treatment facility is constructed.

The current staffing for the water system is led by a few staff members, totaling one full time employee. If a new water treatment facility is added (Alternative No. 1 – Iron and Manganese removal), it is suggested that two utilities operators are staffed to allow for additional time required to operate and maintain the facility. If Alternative No. 3, Reverse Osmosis, is selected, one additional staff operator is recommended in conjunction with the two needed for Alternative 1. This is due to the additional operation and maintenance for the reverse osmosis membranes, chemical feed, and associated equipment. For Alternative No. 2, the lime softening plant, two additional staff members are recommended in conjunction with the two needed for Alternative No. 1, thereby requiring a total four staff. A lime softening plant will require additional labor to handle the lime feed and equipment and disposal of the solids waste product.

A summary of the staffing requirements for each option are noted below:

- Gravity Filtration – 
- Lime Softening with Gravity Filtration – 
- Gravity Filtration with Reverse Osmosis – 

When a treatment facility is constructed, it is suggested to move the Utilities staff to the new facility to centralize operations. This requires adequate office space to be included at the new facility.

## VII. RECOMMENDATIONS AND CONCLUSIONS

### A. Treatment Alternatives Evaluation Discussion

All three alternatives described in Section VI will provide quality water for the City of Montrose.

Alternatives No. 2 and No. 3 will provide the most improved water quality over the existing process and reduce the high levels of manganese and hardness in the raw groundwater. Residents and businesses which currently use point-of-use water softening systems will be able to reduce or eliminate softener usage. This can result in reduced chloride discharge in wastewater.

Table 7.1 - Decision Matrix			
Item	Primary Treatment (Removal)		
	Gravity Filtration	Lime and Soda Ash Softening with Filtration	Gravity Filtration and Reverse Osmosis (RO)
Ability to Meet Water Quality Goals	Good	Excellent	Excellent
Expandability Potential	Excellent	Excellent	Excellent
Ability to Meet Future Average and Peak Demand	Excellent	Excellent	Excellent
Ease of Operation	Excellent	Moderate	Moderate

Table 7.2 - Estimated Project Cost			
Item	Option 1 Gravity Filtration	Option 2 Lime and Soda Ash and Filtration	Option 3 Filtration and RO
WTF Cost	\$8,000,000	\$11,000,000	\$9,500,000
New Water Tower	\$2,000,000	\$2,000,000	\$2,000,000
Added Site Work, Land Costs, etc.	\$200,000	\$200,000	\$200,000
<b>Total Construction Cost</b>	<b>\$10,200,000</b>	<b>\$13,200,000</b>	<b>\$11,700,000</b>
Contingencies (20%)	\$2,050,000	\$2,650,000	\$2,350,000
Engineering/Legal/Admin (20%)	\$2,050,000	\$2,650,000	\$2,350,000
<b>Total Project Cost</b>	<b>\$14,300,000</b>	<b>\$18,500,000</b>	<b>\$16,400,000</b>
<b>Project Range (+/-15%)</b>	<b>\$11.4M - \$17.2M</b>	<b>\$14.8M - \$22.2M</b>	<b>\$13.1M - \$19.7M</b>
Estimated Annual OM&R Cost	\$250,000	\$325,000	\$300,000

## B. Alternative Recommendation

Each of the three options will achieve lower manganese concentrations and comply with the current health recommendations. Alternatives No. 2 and No. 3 have the added benefit of softening the water. Alternative No. 2 wastes the least amount of water, however, solids from the lime treatment system must be disposed of via land application or landfill. Alternative 3 does utilize the most water, however, reverse osmosis does remove many impurities and provides added protection for any potential future drinking water standards or well contamination.

A gravity filter plant can be designed to allow for future addition of lime softening or RO treatment. However, to do this, the city would need to select a softening option before construction to allow for the most efficient initial design of the facility for future expansions.

## C. User Rate Analysis

One way to structure user water utility rates is to include a monthly service charge on top of usage rate. The monthly service charge does not include any water use and is intended to pay for the portions of the system costs which are required no matter how much water is produced. These costs include the distribution system, overhead and administration expenses, loan payments, some maintenance and repair costs, and some utilities. The usage rate is charged to the customer for any amount of water usage and is intended to pay for the system costs which vary depending on demand. These variable costs include chemical costs, some maintenance and repair costs, and some utilities. Often times, municipalities will have different rates for residential customers, commercial customers, and industrial customers.

The existing rate system for Montrose is structured with variable rates and a monthly service charge. Residential rates get a monthly flat base charge of \$5.10, and additional charges based on quantity of water used. Increasing the base charge or usage rates is one way Montrose could raise additional funds for its water treatment facility.

## D. Financing Options

There are several funding options the City of Montrose can explore to help finance these improvements. A brief review of these options is included in this section.

### 1. Bonding

The City of Montrose could sell general obligation bonds, local improvement, or revenue bonds to raise the capital costs to fund the proposed project. The proceeds of the bonds would need to be repaid through property taxes, assessments, or user charges to the system.

### 2. Drinking Water Revolving Fund (DWRF) Loans

The Clean Water Revolving Fund (CWRF) is a loan program operated by the State of Minnesota that was created under the Clean Water Act. This fund is intended to help communities build or upgrade water infrastructure. The program is not meant to fund new development and will only fund the part of the treatment facility for existing users.

The Drinking Water State Revolving Fund (DWSRF) is a loan program operated by the State of Minnesota that was created under the Clean Water Act. The Minnesota revolving loan program provides below market rate loans to public water system improvements. The Minnesota MN Department of Health (MDH) administers the environmental and permitting aspects of a project to prepare it for financing, while the MN Public Funding Authority (PFA) provides and administers the financial aspects of the loan review and disbursements. Funds are provided from sources including US



EPA, state matching funds, loan repayments, and the PFA revenue bond proceeds. To be eligible for funding, the City of Montrose must submit a proposal to be put on the Project Priority List (PPL). The project funding priority is ranked based on different categories including public health, adequate water supply, and financial need. A project must be listed on the PPL to be eligible for a loan through the DWSRF. A city must then submit a Preliminary Engineering Report (PER) to the MDH for approval, complete an Intended Use Plan (IUP) application to request inclusion on the quarterly IUP list, and also submit an Environmental Review Checklist for environmental review. Once an application is on the list, the city is eligible to apply for an DWSRF construction loan.

The standard loan term for all applicants is a 20-year loan period at a low-interest rate. Interest rates have historically been around 1.08 percent but vary based on the current market. The DWSRF also offers extended loan terms of 30 years, with different interest rates based on the financial need of the community. A loan secured through the DWSRF program may be repaid through local property tax rates, user fees, or assessments.

### 3. USDA Rural Development Loan or Grant

The City of Montrose may be eligible to secure a loan or grant through the USDA Office of Rural Development to help finance water and wastewater system improvements. Repayment could be through an increase in local property tax rates, user fees, or assessments. A portion of the project costs may be eligible for grant funding as part of this program, depending on the city customers' economic status. Based on the initial analysis, the recommended alternative would likely cause user rates that are considered affordable by USDA RD and are not likely to allow the project to be eligible for some grant funding.

To be considered for Rural Development monies, a Preliminary Engineering Report (PER) and Environmental Report (ER) must be completed and submitted to RD for their review and approval. Upon approval, RD would allocate a low-interest, fixed-rate loan and/or grant to be used to help finance the project. Loan rates are typically a low fixed-rate interest for up to 40-year terms. Depending on economic status, grants may be available for up to 49 percent of the project cost.

Rural Development uses an Equivalent Dwelling Unit (EDU) calculation determining the amount and type of funding for which a community is eligible. Although a 40-year loan term is favorable from an annual cost basis, water treatment facilities typically require a significant upgrade after 20 years. Since the facility is designed for shorter than the loan term, it is generally not advisable to consider paying for water treatment facilities with this method (i.e., The City might be in perpetual debt for the WTF).

The construction phasing of the project will depend on what the city decides to do. All the alternatives will have similar construction staging where the new buildings and equipment are installed. Some phasing will be needed as wells are converted to pump to the new treatment facility instead of directly to the system. However, this phasing should result in minimal impact to existing users and allow the system to still meet all water demands.

This section will be finalized after the city chooses how to proceed.

### E. Implementation

The implementation schedule for a WTF construction project will depend on how the city chooses to proceed. A sample implementation schedule is shown in Table 7.3, and this shows the quickest schedule to move forward with water treatment improvements. This schedule will be updated as the city moves through this process. Next steps would include meeting

with the City Council, conducting a public engagement process, a meeting with City Council, and then final adoption of the report.

<b>Table 7.3 - Sample Implementation Schedule</b>	
<b>Task</b>	<b>Month #</b>
Initiate Preliminary Design	0
Initiate Final Design	6
Submit Plans/Specs to MDH	10
Council Approval of Plans and Specs for Bidding	14
Advertisement for Bids	15
Bid Project	16
Award Contract	17
Start Construction	18
Project Completion	36
Note: Month each activity is shown to occur is approximate	

## Appendix A: Raw Water Quality



# Montrose

## 2017 DRINKING WATER REPORT

### Making Safe Drinking Water

Your drinking water comes from a groundwater source: three wells ranging from 175 to 184 feet deep, that draw water from the Quaternary Buried Artesian aquifer.

Montrose works hard to provide you with safe and reliable drinking water that meets federal and state water quality requirements. The purpose of this report is to provide you with information on your drinking water and how to protect our precious water resources.

Contact Daniel Remer, Water Operator, at 763-238-2389 or [wwtp@montrose-mn.com](mailto:wwtp@montrose-mn.com) if you have questions about Montrose's drinking water. You can also ask for information about how you can take part in decisions that may affect water quality.

The U.S. Environmental Protection Agency sets safe drinking water standards. These standards limit the amounts of specific contaminants allowed in drinking water. This ensures that tap water is safe to drink for most people. The U.S. Food and Drug Administration regulates the amount of certain contaminants in bottled water. Bottled water must provide the same public health protection as public tap water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

### Montrose Monitoring Results

This report contains our monitoring results from January 1 to December 31, 2017.

We work with the Minnesota Department of Health to test drinking water for more than 100 contaminants. It is not unusual to detect contaminants in small amounts. No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health.

Learn more by visiting the Minnesota Department of Health's webpage [Basics of Monitoring and Testing of Drinking Water in Minnesota \(http://www.health.state.mn.us/divs/eh/water/factsheet/com/sampling.html\)](http://www.health.state.mn.us/divs/eh/water/factsheet/com/sampling.html).

### How to Read the Water Quality Data Tables

The tables below show the contaminants we found last year or the most recent time we sampled for that contaminant. They also show the levels of those contaminants and the Environmental Protection Agency's limits. Substances that we tested for but did not find are not included in the tables.

We sample for some contaminants less than once a year because their levels in water are not expected to change from year to year. If we found any of these contaminants the last time we sampled for them, we included them in the tables below with the detection date.

We may have done additional monitoring for contaminants that are not included in the Safe Drinking Water Act. To request a copy of these results, call the Minnesota Department of Health at 651-201-4700 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

### Definitions

- **AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **EPA:** Environmental Protection Agency



## CONSUMER CONFIDENCE REPORT

- **MCL (Maximum contaminant level):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **MCLG (Maximum contaminant level goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Level 1 Assessment:** A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- **Level 2 Assessment:** A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
- **MRDL (Maximum residual disinfectant level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG (Maximum residual disinfectant level goal):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **NA (Not applicable):** Does not apply.
- **NTU (Nephelometric Turbidity Units):** A measure of the cloudiness of the water (turbidity).
- **pCi/l (picocuries per liter):** A measure of radioactivity.
- **ppb (parts per billion):** One part per billion in water is like one drop in one billion drops of water, or about one drop in a swimming pool. ppb is the same as micrograms per liter ( $\mu\text{g/l}$ ).
- **ppm (parts per million):** One part per million is like one drop in one million drops of water, or about one cup in a swimming pool. ppm is the same as milligrams per liter ( $\text{mg/l}$ ).
- **PWSID:** Public water system identification.
- **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.
- **Variances and Exemptions:** State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

## Water Quality Data Tables

**LEAD AND COPPER – Tested at customer taps.**

Contaminant (Date, if sampled in previous year)	EPA's Action Level	EPA's Ideal Goal (MCLG)	90% of Results Were Less Than	Number of Homes with High Levels	Violation	Typical Sources
<b>Copper (06/21/17)</b>	90% of homes less than 1.3 ppm	0 ppm	1.01 ppm	1 out of 10	NO	Corrosion of household plumbing.
<b>Lead (06/21/17)</b>	90% of homes less than 15 ppb	0 ppb	1.5 ppb	0 out of 10	NO	Corrosion of household plumbing.



## CONSUMER CONFIDENCE REPORT

**INORGANIC & ORGANIC CONTAMINANTS – Tested in drinking water.**

Contaminant (Date, if sampled in previous year)	EPA's Limit (MCL)	EPA's Ideal Goal (MCLG)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
<b>Barium (06/27/13)</b>	2 ppm	2 ppm	0.09 ppm	N/A	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposit.

**CONTAMINANTS RELATED TO DISINFECTION – Tested in drinking water.**

Substance (Date, if sampled in previous year)	EPA's Limit (MCL or MRDL)	EPA's Ideal Goal (MCLG or MRDLG)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
<b>Total Trihalomethanes (TTHMs)</b>	80 ppb	N/A	1.6 ppb	N/A	NO	By-product of drinking water disinfection.
<b>Total Haloacetic Acids (HAA)</b>	60 ppb	N/A	1.6 ppb	N/A	NO	By-product of drinking water disinfection.
<b>Total Chlorine</b>	4.0 ppm	4.0 ppm	1.53 ppm	0.84 - 2.08 ppm	NO	Water additive used to control microbes.

Total HAA refers to HAA5



**OTHER SUBSTANCES – Tested in drinking water.**

Substance (Date, if sampled in previous year)	EPA's Limit (MCL)	EPA's Ideal Goal (MCLG)	Highest Average or Highest Single Test Result	Range of Detected Test Results	Violation	Typical Sources
Fluoride	4.0 ppm	4.0 ppm	0.77 ppm	0.73 – 0.78 ppm	NO	Erosion of natural deposits; Water additive to promote strong teeth.

**Potential Health Effects and Corrective Actions (If Applicable)**

**Fluoride:** Fluoride is nature's cavity fighter, with small amounts present naturally in many drinking water sources. There is an overwhelming weight of credible, peer-reviewed, scientific evidence that fluoridation reduces tooth decay and cavities in children and adults, even when there is availability of fluoride from other sources, such as fluoride toothpaste and mouth rinses. Since studies show that optimal fluoride levels in drinking water benefit public health, municipal community water systems adjust the level of fluoride in the water to a concentration between 0.5 to 1.5 parts per million (ppm), with an optimal fluoridation goal between 0.7 and 1.2 ppm to protect your teeth. Fluoride levels below 2.0 ppm are not expected to increase the risk of a cosmetic condition known as enamel fluorosis.

**Some People Are More Vulnerable to Contaminants in Drinking Water**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. The developing fetus and therefore pregnant women may also be more vulnerable to contaminants in drinking water. These people or their caregivers should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

**Learn More about Your Drinking Water****Drinking Water Sources**

Minnesota's primary drinking water sources are groundwater and surface water. Groundwater is the water found in aquifers beneath the surface of the land. Groundwater supplies 75 percent of Minnesota's drinking water. Surface water is the water in lakes, rivers, and streams above the surface of the land. Surface water supplies 25 percent of Minnesota's drinking water.

Contaminants can get in drinking water sources from the natural environment and from people's daily activities. There are five main types of contaminants in drinking water sources.

- **Microbial contaminants**, such as viruses, bacteria, and parasites. Sources include sewage treatment plants, septic systems, agricultural livestock operations, pets, and wildlife.
- **Inorganic contaminants** include salts and metals from natural sources (e.g. rock and soil), oil and gas production, mining and farming operations, urban stormwater runoff, and wastewater discharges.



## CONSUMER CONFIDENCE REPORT

- **Pesticides and herbicides** are chemicals used to reduce or kill unwanted plants and pests. Sources include agriculture, urban stormwater runoff, and commercial and residential properties.
- **Organic chemical contaminants** include synthetic and volatile organic compounds. Sources include industrial processes and petroleum production, gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants** such as radium, thorium, and uranium isotopes come from natural sources (e.g. radon gas from soils and rock), mining operations, and oil and gas production.

The Minnesota Department of Health provides information about your drinking water source(s) in a source water assessment, including:

- How Montrose is protecting your drinking water source(s);
- Nearby threats to your drinking water sources;
- How easily water and pollution can move from the surface of the land into drinking water sources, based on natural geology and the way wells are constructed.

Find your source water assessment at [Source Water Assessments](http://www.health.state.mn.us/divs/eh/water/swp/swa/) (www.health.state.mn.us/divs/eh/water/swp/swa/) or call 651-201-4700 or 1-800-818-9318 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

### Lead in Drinking Water

You may be in contact with lead through paint, water, dust, soil, food, hobbies, or your job. Coming in contact with lead can cause serious health problems for everyone. There is no safe level of lead. Babies, children under six years, and pregnant women are at the highest risk.

Lead is rarely in a drinking water source, but it can get in your drinking water as it passes through lead service lines and your household plumbing system. Montrose provides high quality drinking water, but it cannot control the plumbing materials used in private buildings.

Read below to learn how you can protect yourself from lead in drinking water.

1. **Let the water run** for 30-60 seconds before using it for drinking or cooking if the water has not been turned on in over six hours. If you have a lead service line, you may need to let the water run longer. A service line is the underground pipe that brings water from the main water pipe under the street to your home.
  - You can find out if you have a lead service line by contacting your public water system, or you can check by following the steps at: [Are your pipes made of lead? Here's a quick way to find out](https://www.mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home) (https://www.mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home).
  - The only way to know if lead has been reduced by letting it run is to check with a test. If letting the water run does not reduce lead, consider other options to reduce your exposure.
2. **Use cold water** for drinking, making food, and making baby formula. Hot water releases more lead from pipes than cold water.
3. **Test your water.** In most cases, letting the water run and using cold water for drinking and cooking should keep lead levels low in your drinking water. If you are still concerned about lead, arrange with a laboratory to test your tap water. Testing your water is important if young children or pregnant women drink your tap water.
  - Contact a Minnesota Department of Health accredited laboratory to get a sample container and instructions on how to submit a sample:  
[Environmental Laboratory Accreditation Program](https://apps.health.state.mn.us/eldo/public/accreditedlabs/labsearch.seam)  
 (https://apps.health.state.mn.us/eldo/public/accreditedlabs/labsearch.seam)  
 The Minnesota Department of Health can help you understand your test results.
4. **Treat your water** if a test shows your water has high levels of lead after you let the water run.
  - Read about water treatment units:  
[Point-of-Use Water Treatment Units for Lead Reduction](http://www.health.state.mn.us/divs/eh/water/factsheet/com/poulead.html)  
 (http://www.health.state.mn.us/divs/eh/water/factsheet/com/poulead.html)

Learn more:

## CONSUMER CONFIDENCE REPORT

- Visit Lead in Drinking Water (<http://www.health.state.mn.us/divs/eh/water/contaminants/lead.html#Protect>)
- Visit Basic Information about Lead in Drinking Water (<http://www.epa.gov/safewater/lead>)
- Call the EPA Safe Drinking Water Hotline at 1-800-426-4791. To learn about how to reduce your contact with lead from sources other than your drinking water, visit Lead Poisoning Prevention: Common Sources (<http://www.health.state.mn.us/divs/eh/lead/sources.html>).
- This report is not being mailed to all customers but is available upon request. Please contact this City of Montrose at 763-575-7422.













## Appendix B: National Primary and Secondary Drinking Water Regulations Summary

## Appendix B: National Primary and Secondary Drinking Water Regulations Summary

# National Primary Drinking Water Regulations



Contaminant	MCL or TT <sup>1</sup> (mg/L) <sup>2</sup>	Potential health effects from long-term <sup>3</sup> exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) <sup>2</sup>
 Acrylamide	TT <sup>4</sup>	Nervous system or blood problems; increased risk of cancer	Added to water during sewage/ wastewater treatment	zero
 Alachlor	0.002	Eye, liver, kidney, or spleen problems; anemia; increased risk of cancer	Runoff from herbicide used on row crops	zero
 Alpha/photon emitters	15 picocuries per Liter (pCi/L)	Increased risk of cancer	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	zero
 Antimony	0.006	Increase in blood cholesterol; decrease in blood sugar	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	0.006
 Arsenic	0.010	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production wastes	0
 Asbestos (fibers >10 micrometers)	7 million fibers per Liter (MFL)	Increased risk of developing benign intestinal polyps	Decay of asbestos cement in water mains; erosion of natural deposits	7 MFL
 Atrazine	0.003	Cardiovascular system or reproductive problems	Runoff from herbicide used on row crops	0.003
 Barium	2	Increase in blood pressure	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	2
 Benzene	0.005	Anemia; decrease in blood platelets; increased risk of cancer	Discharge from factories; leaching from gas storage tanks and landfills	zero
 Benzo(a)pyrene (PAHs)	0.0002	Reproductive difficulties; increased risk of cancer	Leaching from linings of water storage tanks and distribution lines	zero
 Beryllium	0.004	Intestinal lesions	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	0.004
 Beta photon emitters	4 millirems per year	Increased risk of cancer	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation	zero
 Bromate	0.010	Increased risk of cancer	Byproduct of drinking water disinfection	zero
 Cadmium	0.005	Kidney damage	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	0.005
 Carbofuran	0.04	Problems with blood, nervous system, or reproductive system	Leaching of soil fumigant used on rice and alfalfa	0.04

## LEGEND



DISINFECTANT















DISINFECTION  
BYPRODUCTINORGANIC  
CHEMICAL

MICROORGANISM

ORGANIC  
CHEMICAL

RADIONUCLIDES



Contaminant	MCL or TT <sup>1</sup> (mg/L) <sup>2</sup>	Potential health effects from long-term <sup>1</sup> exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) <sup>2</sup>
 Carbon tetrachloride	0.005	Liver problems; increased risk of cancer	Discharge from chemical plants and other industrial activities	zero
 Chloramines (as Cl <sub>2</sub> )	MRDL=4.0 <sup>1</sup>	Eye/nose irritation; stomach discomfort; anemia	Water additive used to control microbes	MRDLG=4 <sup>1</sup>
 Chlordane	0.002	Liver or nervous system problems; increased risk of cancer	Residue of banned termiticide	zero
 Chlorine (as Cl <sub>2</sub> )	MRDL=4.0 <sup>1</sup>	Eye/nose irritation; stomach discomfort	Water additive used to control microbes	MRDLG=4 <sup>1</sup>
 Chlorine dioxide (as ClO <sub>2</sub> )	MRDL=0.8 <sup>1</sup>	Anemia; infants, young children, and fetuses of pregnant women: nervous system effects	Water additive used to control microbes	MRDLG=0.8 <sup>1</sup>
 Chlorite	1.0	Anemia; infants, young children, and fetuses of pregnant women: nervous system effects	Byproduct of drinking water disinfection	0.8
 Chlorobenzene	0.1	Liver or kidney problems	Discharge from chemical and agricultural chemical factories	0.1
 Chromium (total)	0.1	Allergic dermatitis	Discharge from steel and pulp mills; erosion of natural deposits	0.1
 Copper	TT <sup>5</sup> ; Action Level=1.3	Short-term exposure: Gastrointestinal distress. Long-term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits	1.3
 <i>Cryptosporidium</i>	TT <sup>7</sup>	Short-term exposure: Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
 Cyanide (as free cyanide)	0.2	Nerve damage or thyroid problems	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	0.2
 2,4-D	0.07	Kidney, liver, or adrenal gland problems	Runoff from herbicide used on row crops	0.07
 Dalapon	0.2	Minor kidney changes	Runoff from herbicide used on rights of way	0.2
 1,2-Dibromo-3-chloropropane (DBCP)	0.0002	Reproductive difficulties; increased risk of cancer	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	zero
 o-Dichlorobenzene	0.6	Liver, kidney, or circulatory system problems	Discharge from industrial chemical factories	0.6
 p-Dichlorobenzene	0.075	Anemia; liver, kidney, or spleen damage; changes in blood	Discharge from industrial chemical factories	0.075
 1,2-Dichloroethane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero

## LEGEND



DISINFECTANT



DISINFECTION  
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MICROORGANISM

ORGANIC  
CHEMICAL

RADIONUCLIDES



Contaminant	MCL or TT <sup>1</sup> (mg/L) <sup>2</sup>	Potential health effects from long-term <sup>3</sup> exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) <sup>2</sup>
 1,1-Dichloroethylene	0.007	Liver problems	Discharge from industrial chemical factories	0.007
 cis-1,2-Dichloroethylene	0.07	Liver problems	Discharge from industrial chemical factories	0.07
 trans-1,2-Dichloroethylene	0.1	Liver problems	Discharge from industrial chemical factories	0.1
 Dichloromethane	0.005	Liver problems; increased risk of cancer	Discharge from industrial chemical factories	zero
 1,2-Dichloropropane	0.005	Increased risk of cancer	Discharge from industrial chemical factories	zero
 Di(2-ethylhexyl) adipate	0.4	Weight loss, liver problems, or possible reproductive difficulties	Discharge from chemical factories	0.4
 Di(2-ethylhexyl) phthalate	0.006	Reproductive difficulties; liver problems; increased risk of cancer	Discharge from rubber and chemical factories	zero
 Dinoseb	0.007	Reproductive difficulties	Runoff from herbicide used on soybeans and vegetables	0.007
 Dioxin (2,3,7,8-TCDD)	0.00000003	Reproductive difficulties; increased risk of cancer	Emissions from waste incineration and other combustion; discharge from chemical factories	zero
 Diquat	0.02	Cataracts	Runoff from herbicide use	0.02
 Endothall	0.1	Stomach and intestinal problems	Runoff from herbicide use	0.1
 Endrin	0.002	Liver problems	Residue of banned insecticide	0.002
 Epichlorohydrin	TT <sup>4</sup>	Increased cancer risk; stomach problems	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	zero
 Ethylbenzene	0.7	Liver or kidney problems	Discharge from petroleum refineries	0.7
 Ethylene dibromide	0.00005	Problems with liver, stomach, reproductive system, or kidneys; increased risk of cancer	Discharge from petroleum refineries	zero
 Fecal coliform and <i>E. coli</i>	MCL <sup>6</sup>	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes may cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.	Human and animal fecal waste	zero <sup>5</sup>

## LEGEND



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DISINFECTION  
BYPRODUCTINORGANIC  
CHEMICAL

MICROORGANISM

ORGANIC  
CHEMICAL

RADIONUCLIDES



Contaminant	MCL or TT <sup>1</sup> (mg/L) <sup>2</sup>	Potential health effects from long-term <sup>3</sup> exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) <sup>2</sup>
 Fluoride	4.0	Bone disease (pain and tenderness of the bones); children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories	4.0
 <i>Giardia lamblia</i>	TT <sup>7</sup>	Short-term exposure: Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
 Glyphosate	0.7	Kidney problems; reproductive difficulties	Runoff from herbicide use	0.7
 Haloacetic acids (HAA5)	0.060	Increased risk of cancer	Byproduct of drinking water disinfection	n/a <sup>9</sup>
 Heptachlor	0.0004	Liver damage; increased risk of cancer	Residue of banned termiticide	zero
 Heptachlor epoxide	0.0002	Liver damage; increased risk of cancer	Breakdown of heptachlor	zero
 Heterotrophic plate count (HPC)	TT <sup>7</sup>	HPC has no health effects; it is an analytic method used to measure the variety of bacteria that are common in water. The lower the concentration of bacteria in drinking water, the better maintained the water system is.	HPC measures a range of bacteria that are naturally present in the environment	n/a
 Hexachlorobenzene	0.001	Liver or kidney problems; reproductive difficulties; increased risk of cancer	Discharge from metal refineries and agricultural chemical factories	zero
 Hexachloro-cyclopentadiene	0.05	Kidney or stomach problems	Discharge from chemical factories	0.05
 Lead	TT <sup>5</sup> ; Action Level=0.015	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities; Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits	zero
 <i>Legionella</i>	TT <sup>7</sup>	Legionnaire's Disease, a type of pneumonia	Found naturally in water; multiplies in heating systems	zero
 Lindane	0.0002	Liver or kidney problems	Runoff/leaching from insecticide used on cattle, lumber, and gardens	0.0002
 Mercury (inorganic)	0.002	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands	0.002
 Methoxychlor	0.04	Reproductive difficulties	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, and livestock	0.04
 Nitrate (measured as Nitrogen)	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	10

## LEGEND



DISINFECTANT



DISINFECTION  
BYPRODUCTINORGANIC  
CHEMICAL

MICROORGANISM

ORGANIC  
CHEMICAL

RADIONUCLIDES



Contaminant	MCL or TT <sup>1</sup> (mg/L) <sup>2</sup>	Potential health effects from long-term <sup>3</sup> exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) <sup>2</sup>
 Nitrite (measured as Nitrogen)	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	1
 Oxamyl (Vydate)	0.2	Slight nervous system effects	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes	0.2
 Pentachlorophenol	0.001	Liver or kidney problems; increased cancer risk	Discharge from wood-preserving factories	zero
 Picloram	0.5	Liver problems	Herbicide runoff	0.5
 Polychlorinated biphenyls (PCBs)	0.0005	Skin changes; thymus gland problems; immune deficiencies; reproductive or nervous system difficulties; increased risk of cancer	Runoff from landfills; discharge of waste chemicals	zero
 Radium 226 and Radium 228 (combined)	5 pCi/L	Increased risk of cancer	Erosion of natural deposits	zero
 Selenium	0.05	Hair or fingernail loss; numbness in fingers or toes; circulatory problems	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	0.05
 Simazine	0.004	Problems with blood	Herbicide runoff	0.004
 Styrene	0.1	Liver, kidney, or circulatory system problems	Discharge from rubber and plastic factories; leaching from landfills	0.1
 Tetrachloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from factories and dry cleaners	zero
 Thallium	0.002	Hair loss; changes in blood; kidney, intestine, or liver problems	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	0.0005
 Toluene	1	Nervous system, kidney, or liver problems	Discharge from petroleum factories	1
 Total Coliforms	5.0 percent <sup>8</sup>	Coliforms are bacteria that indicate that other, potentially harmful bacteria may be present. See fecal coliforms and <i>E. coli</i>	Naturally present in the environment	zero
 Total Trihalomethanes (TTHMs)	0.080	Liver, kidney, or central nervous system problems; increased risk of cancer	Byproduct of drinking water disinfection	n/a <sup>9</sup>
 Toxaphene	0.003	Kidney, liver, or thyroid problems; increased risk of cancer	Runoff/leaching from insecticide used on cotton and cattle	zero
 2,4,5-TP (Silvex)	0.05	Liver problems	Residue of banned herbicide	0.05
 1,2,4- Trichlorobenzene	0.07	Changes in adrenal glands	Discharge from textile finishing factories	0.07

## LEGEND



DISINFECTANT
















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CHEMICAL

MICROORGANISM

ORGANIC  
CHEMICAL

RADIONUCLIDES



Contaminant	MCL or TT <sup>1</sup> (mg/L) <sup>2</sup>	Potential health effects from long-term <sup>3</sup> exposure above the MCL	Common sources of contaminant in drinking water	Public Health Goal (mg/L) <sup>2</sup>
 1,1,1-Trichloroethane	0.2	Liver, nervous system, or circulatory problems	Discharge from metal degreasing sites and other factories	0.2
 1,1,2-Trichloroethane	0.005	Liver, kidney, or immune system problems	Discharge from industrial chemical factories	0.003
 Trichloroethylene	0.005	Liver problems; increased risk of cancer	Discharge from metal degreasing sites and other factories	zero
 Turbidity	TT <sup>7</sup>	Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (e.g., whether disease-causing organisms are present). Higher turbidity levels are often associated with higher levels of disease-causing microorganisms such as viruses, parasites, and some bacteria. These organisms can cause short term symptoms such as nausea, cramps, diarrhea, and associated headaches.	Soil runoff	n/a
 Uranium	30µg/L	Increased risk of cancer, kidney toxicity	Erosion of natural deposits	zero
 Vinyl chloride	0.002	Increased risk of cancer	Leaching from PVC pipes; discharge from plastic factories	zero
 Viruses (enteric)	TT <sup>7</sup>	Short-term exposure: Gastrointestinal illness (e.g., diarrhea, vomiting, cramps)	Human and animal fecal waste	zero
 Xylenes (total)	10	Nervous system damage	Discharge from petroleum factories; discharge from chemical factories	10
<div> <div>  <b>LEGEND</b> </div> <div>  <b>DISINFECTANT</b> </div> <div>  <b>DISINFECTION BYPRODUCT</b> </div> <div>  <b>INORGANIC CHEMICAL</b> </div> <div>  <b>MICROORGANISM</b> </div> <div>  <b>ORGANIC CHEMICAL</b> </div> <div>  <b>RADIONUCLIDES</b> </div> </div>				

## NOTES

### 1 Definitions

- Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.
- Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.
- Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

2 Units are in milligrams per liter (mg/L) unless otherwise noted. Milligrams per liter are equivalent to parts per million (ppm).

3 Health effects are from long-term exposure unless specified as short-term exposure.

4 Each water system must certify annually, in writing, to the state (using third-party or manufacturers certification) that when it uses acrylamide and/or epichlorohydrin to treat water, the combination (or product) of dose and monomer level does not exceed the levels specified, as follows: Acrylamide = 0.05 percent dosed at 1 mg/L (or equivalent); Epichlorohydrin = 0.01 percent dosed at 20 mg/L (or equivalent).

5 Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10 percent of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L, and for lead is 0.015 mg/L.

6 A routine sample that is fecal coliform-positive or E. coli-positive triggers repeat samples--if any repeat sample is total coliform-positive, the system has an acute MCL violation. A routine sample that is total coliform-positive and fecal coliform-negative or E. coli-negative triggers repeat samples--if any repeat sample is fecal coliform-positive or E. coli-positive, the system has an acute MCL violation. See also Total Coliforms.

7 EPA's surface water treatment rules require systems using surface water or ground water under the direct influence of surface water to (1) disinfect their water, and (2) filter their water or meet criteria for avoiding filtration so that the following contaminants are controlled at the following levels:

- Cryptosporidium:** 99 percent removal for systems that filter. Unfiltered systems are required to include Cryptosporidium in their existing watershed control provisions.

- Giardia lamblia:** 99.9 percent removal/inactivation
- Viruses:** 99.9 percent removal/inactivation
- Legionella:** No limit, but EPA believes that if *Giardia* and viruses are removed/inactivated, according to the treatment techniques in the surface water treatment rule, *Legionella* will also be controlled.
- Turbidity:** For systems that use conventional or direct filtration, at no time can turbidity (cloudiness of water) go higher than 1 nephelometric turbidity unit (NTU), and samples for turbidity must be less than or equal to 0.3 NTU in at least 95 percent of the samples in any month. Systems that use filtration other than the conventional or direct filtration must follow state limits, which must include turbidity at no time exceeding 5 NTU.
- HPC:** No more than 500 bacterial colonies per milliliter
- Long Term 1 Enhanced Surface Water Treatment:** Surface water systems or ground water systems under the direct influence of surface water serving fewer than 10,000 people must comply with the applicable Long Term 1 Enhanced Surface Water Treatment Rule provisions (e.g., turbidity standards, individual filter monitoring, *Cryptosporidium* removal requirements, updated watershed control requirements for unfiltered systems).
- Long Term 2 Enhanced Surface Water Treatment:** This rule applies to all surface water systems or ground water systems under the direct influence of surface water. The rule targets additional *Cryptosporidium* treatment requirements for higher risk systems and includes provisions to reduce risks from uncovered finished water storage facilities and to ensure that the systems maintain microbial protection as they take steps to reduce the formation of disinfection byproducts. (Monitoring start dates are staggered by system size. The largest systems (serving at least 100,000 people) will begin monitoring in October 2006 and the smallest systems (serving fewer than 10,000 people) will not begin monitoring until October 2008. After completing monitoring and determining their treatment, bin, systems generally have three years to comply with any additional treatment requirements.)
- Filter Backwash Recycling:** The Filter Backwash Recycling Rule requires systems that recycle to return specific cycle flows through all processes of the system's existing conventional or direct filtration system or at an alternate location approved by the state.

8 No more than 5.0 percent samples total coliform-positive in a month. (For water systems that collect fewer than 40 routine samples per month, no more than one sample can be total coliform-positive per month.) Every sample that has total coliform must be analyzed for either fecal coliforms or E. coli. If two consecutive TC-positive samples, and one is also positive for E. coli or fecal coliforms, system has an acute MCL violation.

9 Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:

- Haloacetic acids:** dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L)
- Trihalomethanes:** bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L)



## NATIONAL SECONDARY DRINKING WATER REGULATION

National Secondary Drinking Water Regulations are non-enforceable guidelines regarding contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. However, some states may choose to adopt them as enforceable standards.

Contaminant	Secondary Maximum Contaminant Level
Aluminum	0.05 to 0.2 mg/L
Chloride	250 mg/L
Color	15 (color units)
Copper	1.0 mg/L
Corrosivity	Noncorrosive
Fluoride	2.0 mg/L
Foaming Agents	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Odor	3 threshold odor number
pH	6.5-8.5
Silver	0.10 mg/L
Sulfate	250 mg/L
Total Dissolved Solids	500 mg/L
Zinc	5 mg/L

FOR MORE INFORMATION ON EPA'S  
SAFE DRINKING WATER:



visit: [epa.gov/safewater](http://epa.gov/safewater)



call: (800) 426-4791

### ADDITIONAL INFORMATION:

To order additional posters or other ground water and drinking water publications, please contact the National Service Center for Environmental Publications at: (800) 490-9198, or email: [nscep@bpa-lmit.com](mailto:nscep@bpa-lmit.com).



OFFICE OF GROUND WATER  
AND DRINKING WATER





**REQUEST FOR COUNCIL ACTION**  
**MEETING DATE** June 13<sup>th</sup> 2022

**NAME:** Caprice's Smallwood

**ADDRESS:** 200 Crystal Lane

**Please write a brief paragraph listing the item you wish to present to the council:**

*update for traffic issues from  
Block Captain of the Crystal Lane  
Neighborhood watch group.*

**Council Action: Motion By:** \_\_\_\_\_ **Second By:** \_\_\_\_\_ **To:** \_\_\_\_\_