

To: Mayor Jacque and City Council Members
Cc: Mick Michel, City Administrator
From: John F. Wandsnider, PE – Public Works Director/City Engineer
Date: October 12, 2023
Subject: Public Works Report: September 14 – October 11, 2023

Things have been operating well, for the most part, over the last month or so in the Public Works Department.

Operation and Maintenance of Fleet, Highways, Streets, Alleys, Parks, Trails, Rivers, Creeks, etc.

Crack-sealing of several blocks of streets will be completed in October. It is very important to keep moisture from getting into the pavement base and subgrades to extend the life of our pavements. Higher moisture content in the soils below the pavements causes greater frost-heave action in winter which takes away from the life of the pavement.

We have started sweeping leaves this month and will continue sweeping until a majority of the leaves have fallen, expected sometime in November. As usual, we are reminding citizens that they are not allowed to rake or blow leaves to the streets.

Public Works staff have begun preparing for the upcoming winter season. We have been busy changing oil, wiper blades, checking tires and tire-pressures and other essentials that are involved in preparing the equipment for the upcoming winter months. The two plow/spreader trucks, two plow/dump trucks, the front-end loader, and the skid-loader are all being made ready for the heavier work-load they are needed for over the winter months. Our goal every year is to have everything ready by October 15.

Operation and Maintenance of Drinking Water Delivery and Wastewater Disposal Systems

The drinking water source, storage, treatment, and distribution systems are serving the city well. We have been working to maintain the system, including flushing fire hydrants and exercising water valves. Please refer to the below report from water operations.

The wastewater collection, pumping, treatment, and disposal systems are also operating well. Please refer to the below reports for August and September from wastewater operations.

Status of Improvement Projects – ‘In-House Design’

Downtown Streetscape Rehabilitation (Added 4/23)

A majority of the downtown streetscape will be 20 years old next year! We intend to perform the rehabilitation out of our operations budget, and phase it over about 5 years. **The first phase of the project is the streetscape portion (behind the curb to the building line) of the 3rd and the 4th Street intersections and the block between them.** All 6 limestone medallions will be reset, this time on concrete, and the cracked and deteriorating buff-colored handicap panels will be replaced with black powder-coated cast-iron panels. **A small portion of the colored and stamped concrete will need to be replaced due to excessive cracking and settling. Work will be done this FY, possibly this fall, depending on contractor’s schedule.**

5th Avenue NE - Dyersville East Rd (Added 2/23)

Shoulder-stone was placed this week, completing the project.

Wayfinding Signs Project (Added 12/22, though in-progress for years)

The final signs will be delivered Friday. We hope to be able to get them installed yet this fall. This will depend on weather and work-load, of course.

Hwy 52 Manhole Replacement at 2nd Avenue (Added 11/21)

Due to the need for a detour across the 1st Avenue West bridge (under rehab construction), this will be done next year.

Downtown Businesses Accessibility – (Added June, 2021)

Working toward including recommendations into the sidewalk program.

Legacy Square – Stage (Added Spring 2021)

We received the lights and equipment for the stage lights. Installation is planned for the coming weeks.

Status of Improvement Projects – ‘Outside Design’

20 West Industrial Park, Phase III Rise Grant App. (Added August, 2022)

The Contract C double-box-culvert has been awarded and construction is planned to begin this month. Contract D (also RISE eligible) including roadway storm sewer, concrete paving, and lighting will be bid this year and should be substantially complete by June 30, 2024. Origin will provide and administer construction admin and observation as required during construction.

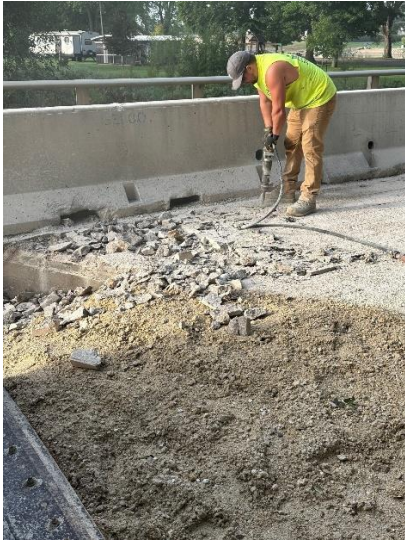
1st Avenue W. Bridge Over Bear Creek – Deck Overlay (Added May, 2022)

Contractor is making good progress and appears to be pretty close to the schedule. Contractor is planning to change the traffic over to the north side by about mid-week next week, weather permitting (though it is raining as I write this...).

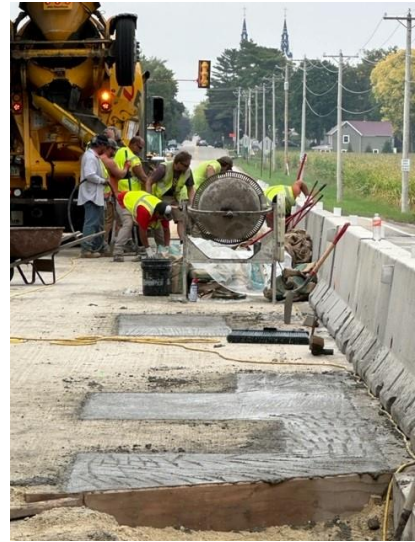
Below are some photographs showing construction progress:

Removing Loose or Weak Concrete From the Deck Surface





Filling Removal Areas With New Concrete



Placing the New 1-1/2-inch Concrete Overlay



3rd Avenue SW Bridge (Added to list in February, 2022)
Needs further evaluation

Field of Dreams Stormwater Wetland and Mitigation (Added to list in April, 2020)

Project substantially complete. Temporary erosion control seeding has been placed. Permanent bluegrass seeding has been completed both north and south of Beltline Rd. Native seeding was performed in late November 2022. A live streaming camera of the site is available for viewing at:

<https://video.nest.com/live/G4AGPm8tkR>

Dyersville East Road Water and Sewer Extension 2020 (Added to list March, 2020)

Most of the linear projects are nearly finished. Work continues on the wastewater lift station and the water booster station. The additional change order work to provide utilities to the existing FOD facilities is in front of the contractor to provide a price. This work will likely take place in November.

Heritage Trail Pavement Extension (Added to list January 2020)

DOT audit and acceptance is complete, pending contractor uploading the rest of the certified payrolls. Once those are uploaded and reviewed, the semi-final payment will be submitted to the City for payment.

Bear Creek Restoration (SRF Sponsored Project)

Construction for this project is complete. The contractor will perform mowing and vegetation management in 2023 for maintenance on the wetland prairie. Typical prairie seeding takes 3 years to be fully established with intended growth of flowers and grasses. The project performed well to capture sediment without significant channel erosion in the 2023 spring flood. A video camera is mounted near 3rd St. with a public video link for anyone to monitor. <https://www.senserasystems.com/public/embed/M78018326A93>

Respectfully submitted,

John F. Wandsnider, PE - Public Works Director / City Engineer

Email: jwandsnider@cityofdyersville.com cell: 563-587-9131

Memorandum

To: Mayor, City Council Members and City Administrator
From: Terry Recker, Water Operator
Date: October 6th, 2023
Subject: **Water Operation September 2023 Report**

Water Pumped

Total Water Pumped for Month	13,453,000 Gallons
Average Pumped per Day	448,000 Gallons
Maximum Daily Pumped	970,000 Gallons

Chlorine Testing

Average Free Chlorine in the System –	1.18 mg/l
Average total Chlorine in the System -	1.36 mg/l

Polyphosphate

Average Residual at Well #4	1.33 mg/l
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Water Call Outs

0 for the month
Total for the year – 4

Water Main Breaks

2 for the month
Total for the year – 4

Water Activities

96- Line Locates Completed
19- Water Work Orders Completed

Operations and Maintenance

Bacteria samples were taken, and the results were negative. The monthly operating report was completed and sent to the DNR. Preventative maintenance was completed at Well#4 and #5, including exercising water valves and doing well draw down at both wells. Daily rounds were completed for the month at both wells. Meter reading was also completed this month. The last week in September Joe and I did the yearly flushing of all the water hydrants in the city. There are now about 325 hydrants throughout town, up from the 300 we did in years past. The extra hydrants are from the new addition in the 20 West Industrial Park (8) and the water main going out to the Field of Dreams site (17). Next year looks like there will be an additional 12 hydrants inside the FOD property that will have to be maintained by the water department. With all the flushing we ended up with 2 water main breaks. One was discovered on September 28th on 1st Street SW and the second surfaced on September 29th on 3rd Street SW by Westside Park. Krapfl Construction was able to repair both breaks quickly with minimum interruption of service to the homeowners.

Water Operator,
Terry Recker



Main break corner of 3rd Street and 10th Avenue SW.

Memorandum

To: Mayor, City Council Members and City Administrator

From: Wastewater Operator

Date: 9/6/23

Subject: **Wastewater Operations –**

Influent Flows

Total Treated for Month 13,701,000 Gallons

Average Flow per Day 442,000 Gallons

Maximum Daily Flow 621,000 Gallons

Average Influent Biochemical Oxygen Demand 135 mg/l

Plant loading pounds per day of 536 lbs. plant design loading 2400 lbs. per day

Average Influent Total Suspended Solids 96 mg/l.

Plant loading pounds per day 381 lbs. plant design loading 3600 lbs. per day.

Average Influent Total Nitrogen 33 mg/l

Plant loading pounds per day 142 lbs.

Average Influent Phosphorous 6.3 mg/l.

Plant loading pounds per day 27 lbs.

Effluent Testing

C.B.O.D. Monthly Average	0 mg/l	Limit - 25 mg/l
T.S.S. Monthly Average	0 mg/l	Limit - 30 mg/l
Ammonia Monthly Average	.02 mg/l	Limit – 13 mg/l
Total Nitrogen	3.35 lbs per day	Yearly Average 88lbs per day
Phosphorus	1.32 lbs per day	Yearly Average 24lbs per day
E-coli	Not Required this month	mg/l Limit 126 MPN

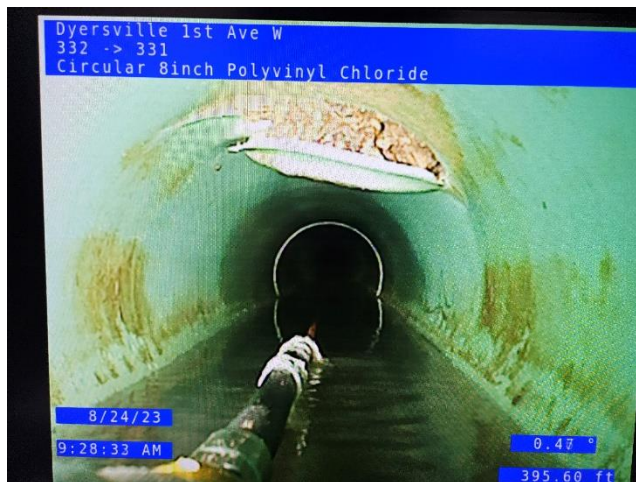
Sewer Call Outs – 0 for the month at the Treatment Plant.

Total for the year – 7

Things have been running well at the plant, so with that I have been busy with the camera trailer out doing inspections on the mains we just finished jetting. And recently I came across the reason why we do the inspections we do.



We found that our sewer main on 1st Ave W had been hit by a directional drilling company. This is inspecting down the line and found this bulge in the top of the main.



This is looking out the rear of the camera showing the crack with exposed soil and gravel. The cable you see in the pipe is the cord for the camera.



A close look at the damage to our pipe.



By Finding this and check locate tickets we were able to find out who hit it and then we had Krapfls come in and dig it up and make the proper repairs before more damage was done. With a hole like that we could have a massive back up with that being a main sewer run and could have caused the road to undermine and collapse causing more damage and possible injury.



This is an example of a pipe we had found earlier this year that the soil and gravel that had leaked into a sewer pipe through a hole found in our manhole. Popping the lid on the manhole you wouldn't have been able to catch it cause it was backing up down stream of the sewer main.

Memorandum

To: Mayor, City Council Members and City Administrator
From: Wastewater Operator
Date: 10/11/2023
Subject: **Wastewater Operations –**

Influent Flows

Total Treated for Month 12,309,000 Gallons
Average Flow per Day 410,000 Gallons
Maximum Daily Flow 512,000 Gallons
Average Influent Biochemical Oxygen Demand 194 mg/l
Plant loading pounds per day of 763 lbs. plant design loading 2400 lbs. per day
Average Influent Total Suspended Solids 143 mg/l.
Plant loading pounds per day 584 lbs. plant design loading 3600 lbs. per day.
Average Influent Total Nitrogen 40.2 mg/l
Plant loading pounds per day 170 lbs.
Average Influent Phosphorous 11 mg/l.
Plant loading pounds per day 48 lbs.

Effluent Testing

C.B.O.D. Monthly Average	.75 mg/l	Limit - 25 mg/l
T.S.S. Monthly Average	0 mg/l	Limit - 30 mg/l
Ammonia Monthly Average	0 mg/l	Limit – 13 mg/l
Total Nitrogen	3.8 lbs per day	Yearly Average 88lbs per day
Phosphorus	11 lbs per day	Yearly Average 24lbs per day E-coli
(Didn't have all the results.) mg/l Limit 126 MPN		

Sewer Call Outs – 1 for the month at the Treatment Plant.
Total for the year – 8

Everything is running like a well-oiled machine.