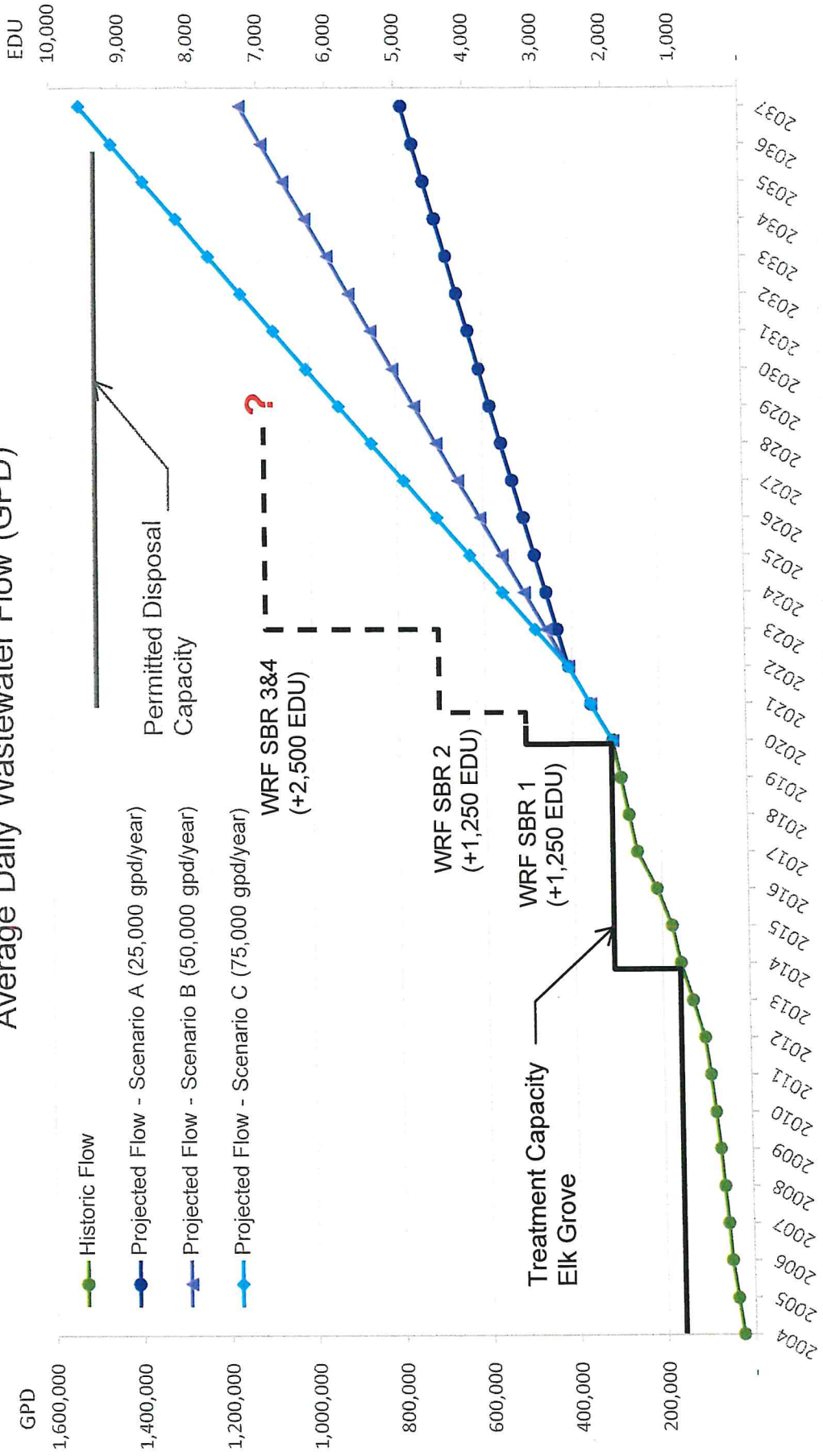


Expand Water Reclamation Facility

- Currently at Capacity
 - 50 EDU'S remain for District infill
 - Daily wastewater flow (chart)
- Build SBR 3 & 4
 - Adds 2500 EDU'S
- Design Started
 - DEQ Submittal September 2021
 - Contract Award January 2022
 - Build Complete February 2023
- Estimated Cost \$6.0M

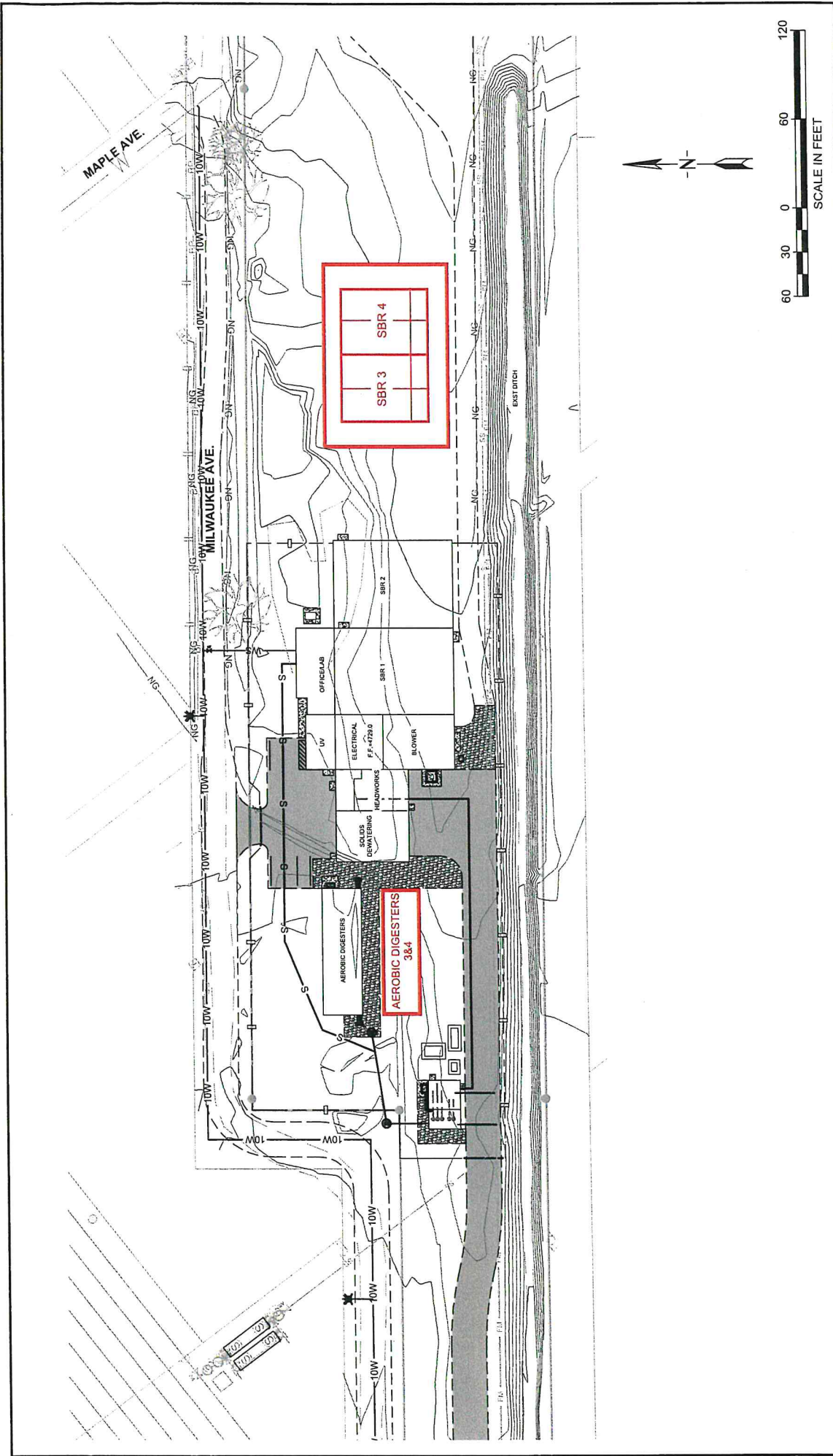
Average Daily Wastewater Flow (GPD)




Notes:

- Flow has increased by about 20,000 gpd increase per year for the last few years
- All scenarios assume 50,000 gpd increase in flow during 2021 and 2022

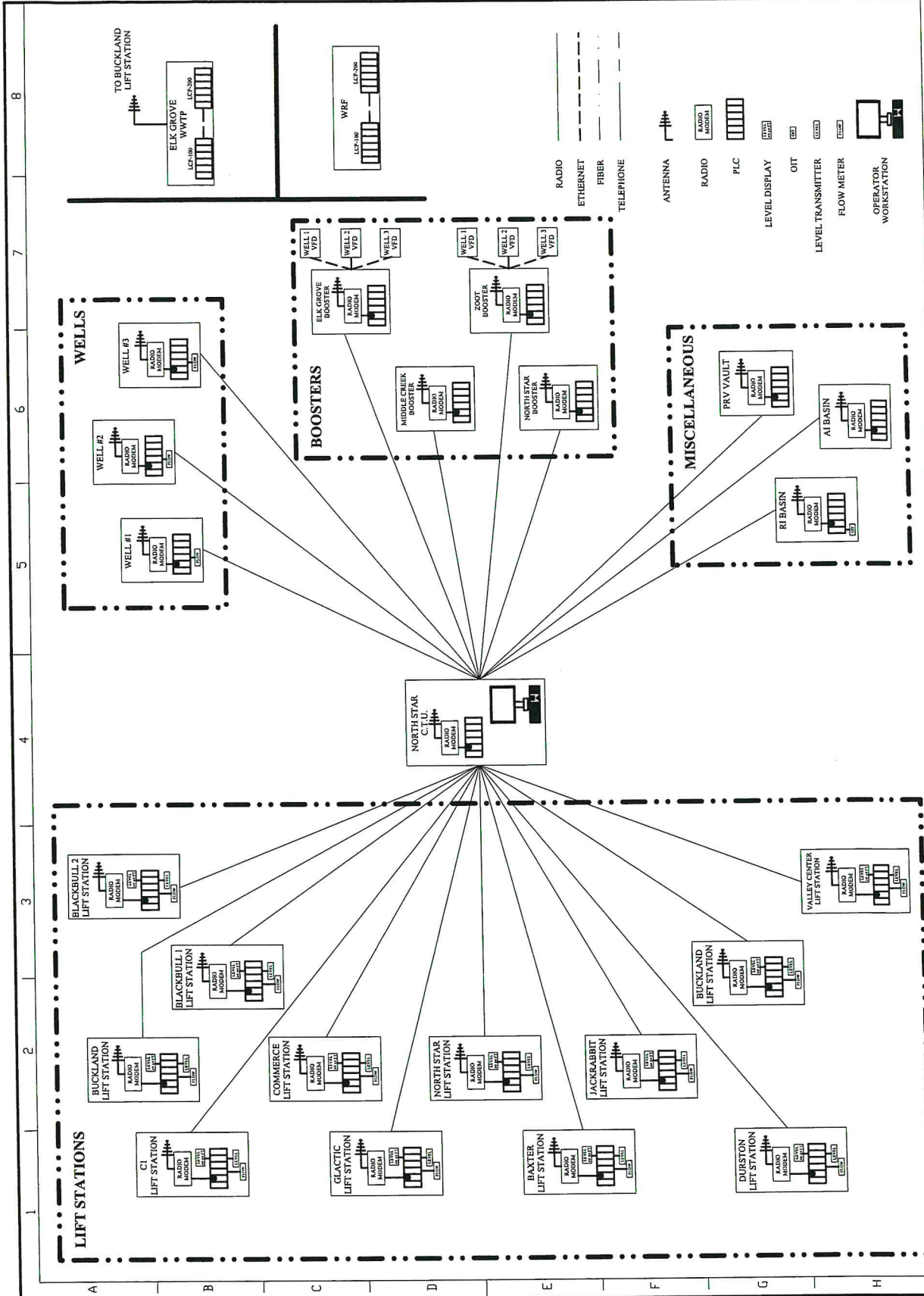
- 25,00 gpd	156 Units	- 50,000 gpd	312 Units	- 75,000 gpd	468 Units
-------------	-----------	--------------	-----------	--------------	-----------



 engineers • surveyors • planners • scientists <small>N 171.0000 ACAD/ES&P/Phase 3&4/Enbld-01.dwg Plotted by bnd.hammett on 4/17/2021</small>	DRAWN BY: <u> MET </u> DESGN BY: <u> B.J.H. </u> APPR BY: <u> B.J.H. </u> DATE: <u> 02/20/18 </u>	BOZEMAN	FOUR CORNERS WATER AND SEWER DISTRICT WATER RECLAMATION FACILITY	PROJECT NO. 4716.004.03
	2800 Technology Blvd West Bozeman, MT 59718 406.581.0721 www.m.m.ae contact: a.morrison@maierle.com	BOZEMAN	MONTANA	FIGURE NUMBER FIG. 1

SCADA- Supervisory Control and Data Acquisition

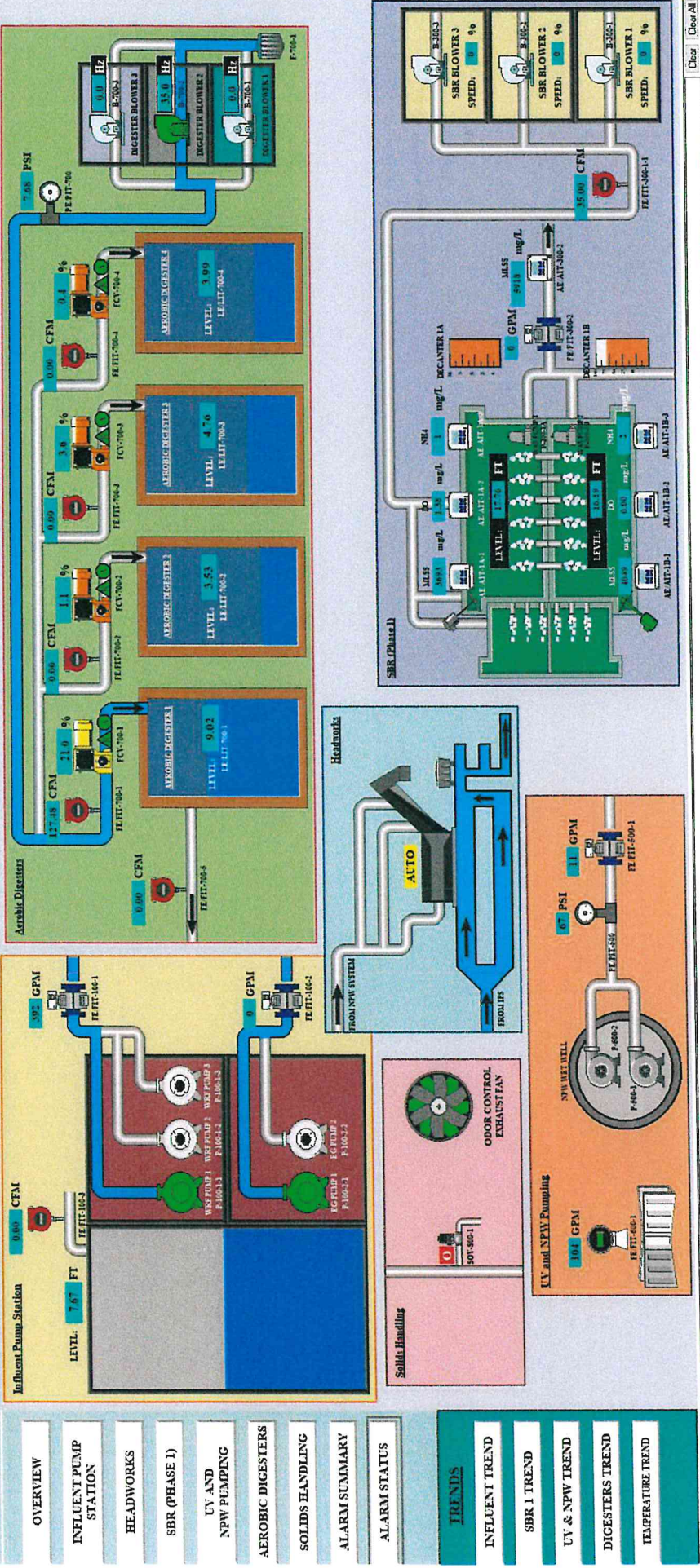
- Current System
 - Patch work of network
 - Obsolete and unavailable hardware
 - Unsupported Proprietary Software
- Developed System Architecture Design 2020
 - Implemented on New Facilities
 - Completed WRF, C1 and Elk Grove Lift
- Remaining
 - Elk Grove Treatment Plant
 - 9 Wells
 - 3 Storage Tank
 - 4 Water Booster
 - 1 PRV
 - 11 Lift Stations
 - Augmentation Basin
 - 7 Reclamation Basins
- Estimated Cost \$1.2M



NO. DWG. NO.				REFERENCES				NO.				BY				DATE				REVISION							
M.E.T. Automation & Controls 1 West Main Street East Helena, MT 59635 (406) 227-3319																Four Corners Water & Sewer District				Communications Network							
DISTRIBUTION																DATE				BY				DATE			
REV. 1																REV. 2021				REV. 2021				REV. 2021			

WIN-911 TEST ALARMS
ACKNOWLEDGE ALARMS

0 2 1 0 1



Display Overview

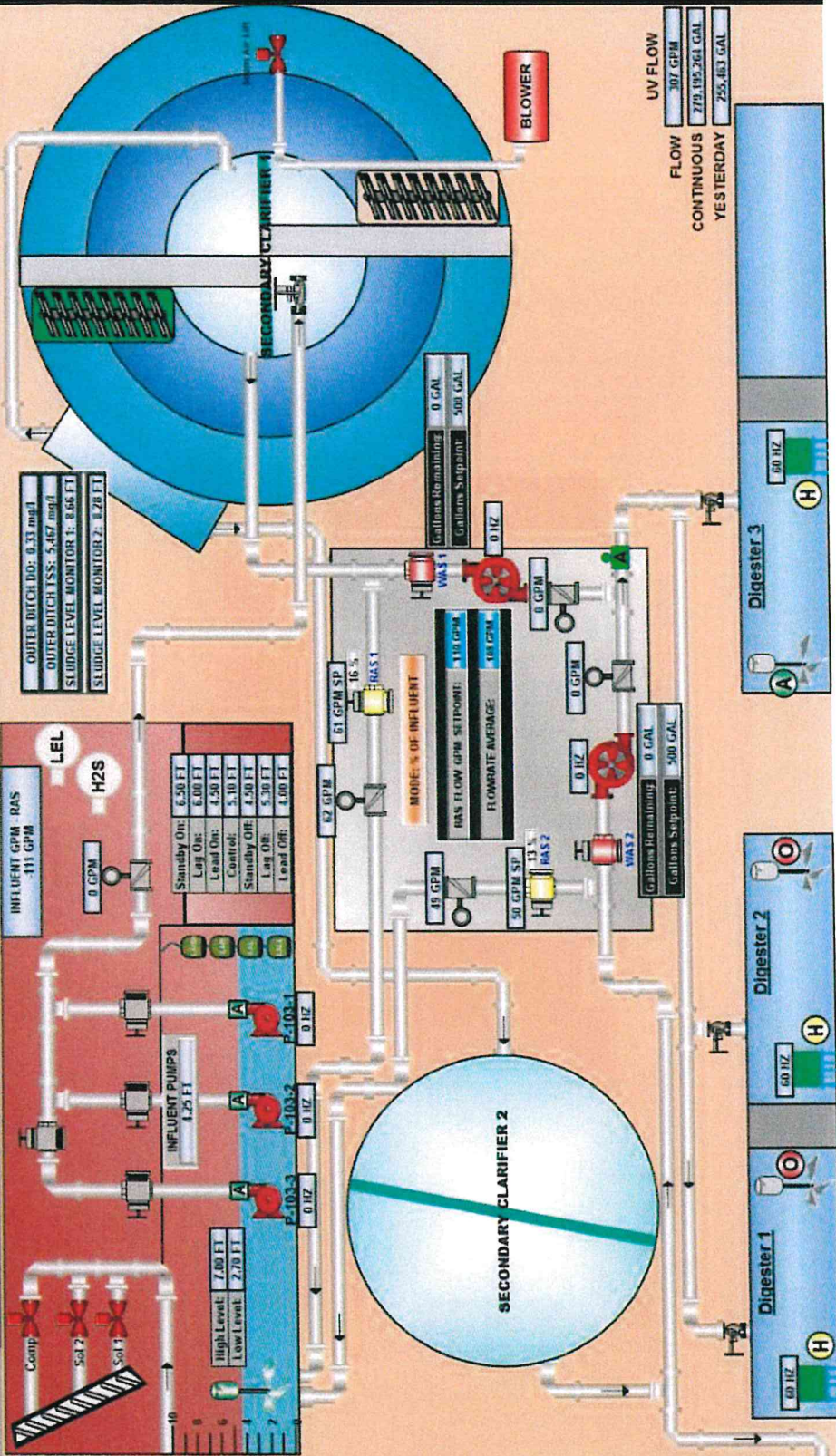
Message

Tag Name Type State Activation Time

06/25/2021
10:54:16 AM

ALARMS

OVERVIEW
SCREEN



OUTER DITCH D0: 0.33 mg/l
OUTER DITCH LSS: 5.487 mg/l
SLUDGE LEVEL MONITOR 1: 8.66 FT
SLUDGE LEVEL MONITOR 2: 8.28 FT

INFLUENT PUMPS - RAS -111 GPM

Standby On:	6.50 FT
Lead On:	6.00 FT
Lead Off:	4.50 FT
Control:	5.10 FT
Standby Off:	4.50 FT
Lead Off:	5.30 FT
Lead On:	4.00 FT

MODE % OF INFLUENT

RAS FLOW GPM SETPOINT:	110 GPM
FLOWRATE AVERAGE:	108 GPM

UV FLOW

FLOW	307 GPM
CONTINUOUS	279,192,261 GAL
YESTERDAY	255,483 GAL

- SYSTEM STATUS**
- INFLUENT PUMPS
 - SLUDGE PIPING VAULT
 - SECONDARY CLARIFIER
 - ELK GROVE LIFT STATION
 - BUCKLAND LIFT STATION
 - DIGESTER RUNNING TIMES
 - ALARM STATUS

- TRENDS**
- INFLUENT LEVEL TREND
 - INFLUENT FLOW TREND
 - RAS FLOW TREND
 - SENSOR(S) TREND
 - WAS FLOW TREND
 - GENERATOR TREND

To Collection

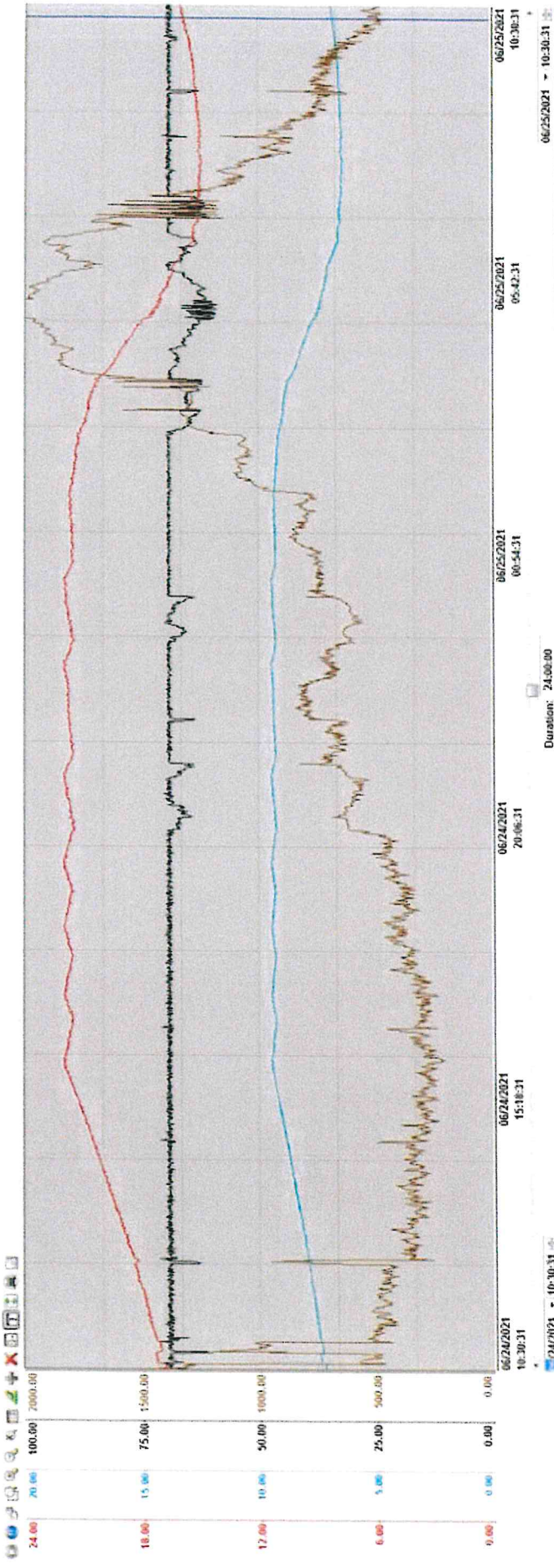


06/25/2021
10:30:31 AM

ALARMS
OVERVIEW SCREEN

BOOSTER GENERAL
Tank Level / Suction Pressure

Time at Cursor: 06/25/2021 10:17:14



Label	Current	Cursor	Average	Min Value	Max Value
BOOSTER STATION TANK LEVEL (FEET)	15.97	15.78	19.58	14.83	22.01
BOOSTER STATION SUCTION PRESSURE (PSI)	6.83	6.75	8.35	6.33	9.44
BOOSTER STATION DISCHARGE PRESSURE (PSI)	68.79	68.94	68.15	58.50	71.13
BOOSTER TOTAL FLOW (GPM)	472.12	458.51	777.69	202.47	2337.48

TANK LEVEL / SUCTION PRESSURE

INLET FLOWS

DISCHARGE TOTAL FLOW

DISCHARGE PUMP FLOWS

DISCHARGE CHLORINE

BOOSTER SCREEN

**FOUR CORNERS
WATER & SEWER DISTRICT**



1 6/24/2021 6:04:31 AM 500 L LSL_ALMID TRIP
 1 6/25/2021 10:10:40 AM BIA_High_Flow_High_Flow_Petum TRIP

NPW WET WELL LOW LEVEL ALARM
 SBR 1A HIGH FLOW HIGH FLOW

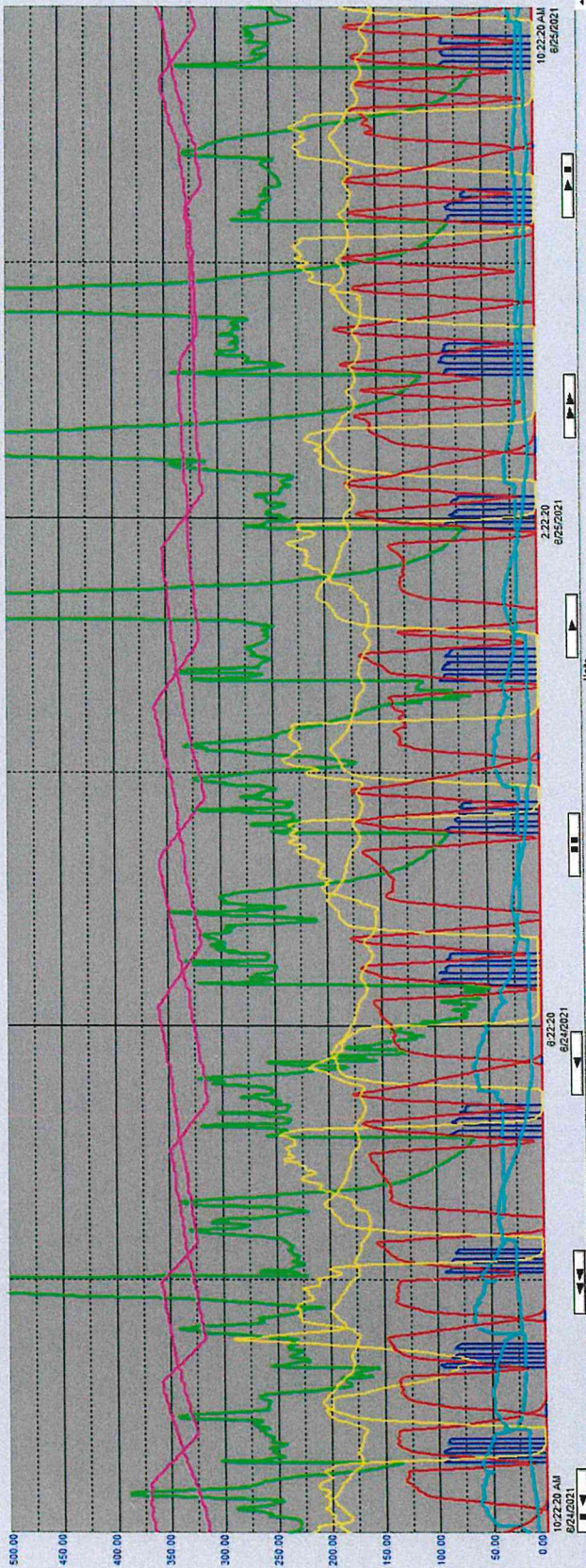
Friday, June 25, 2021 10:22:20 AM

VIEW TEST ALARMS

ACKNOWLEDGE ALARMS



Xylem Thursday, June 24, 2021 - Friday, June 25, 2021



Caption	Value	Min	Max	Units
SBR 1 WAS Flow	0.00	0.00	500.00	GPM
SBR 1 WAS MLSS	0.00	0.00	12,000.00	mg/L
SBR 1A DO	0.00	0.00	15.00	mg/L
SBR 1A Level	0.00	0.00	25.00	FT
SBR 1A MLSS	0.00	0.00	12,000.00	mg/L
SBR 1A IIR4	0.00	0.00	50.00	mg/L

- 1 HOUR
- 1 DAY
- 1 Week
- Display SBR 1A
- Display SBR 1B
- Display All Points

Clear

Clear All

- OVERVIEW
- INFLUENT PUMP STATION
- HEADWORKS
- SBR (PHASE 1)
- UV AND NPW PUMPING
- AEROBIC DIGESTERS
- SOLIDS HANDLING
- ALARM SUMMARY
- ALARM STATUS

TRENDS

- INFLUENT TRENDS
- SBR 1 TRENDS
- UV & NPW TRENDS
- DIGESTERS TRENDS
- TEMPERATURE TRENDS



Operation & Maintenance Report. August 14, 2021

1. SBR 2 completion and commissioning was set back a week, should be operational the second week of September. EGWWTP will be shut down for a complete overhaul as soon as SBR #2 is operational.
2. Meter vaults for Commerce and Northstar Lift Stations have been installed, final electrical installation is planned for mid-August.
3. Northstar Well #1 electric power conditioning improvements have been completed and the well is back in service.
4. Temporary improvements to the odor control at the WRF have been completed, permanent upgrades are in design.
5. Tank Maintenance
 - July 2016- Inspection, Cleaning and Repair
 - October 2019- Inspection, Cleaning and Repair
 - August 2020- Inspection, Installed Passive Anodes
6. Elk Grove Water System
 - Taped in Pressure Sensor
 - Replaced VFD (control RM)
 - Installed 3 VFD (Pumps)
 - Replaced Power Distribution
 - Replaced Blow off

 - Preventative Maintenance
 - o Filters, grease, cleaning and resupply



August 17, 2021

General Administration Actives and Issues:

1. Wolfguard It- Underway
2. ARPA- Submitted
3. New Fleet Truck
4. Audit- Started
5. Water and Grease inserts

Current Stip

Bond \$780,068

Water \$ 2,068,505

Sewer \$ 3,926,851



What can you do?

The average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day (and this average does not consider irrigation)! Luckily, there are low-cost and no-cost ways to conserve water (and cash).

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath!
- Shut off water while brushing your teeth, washing your hair, and shaving. You may save up to 500 gallons a month!
- Use water-efficient showerheads. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month!

- Water plants only when necessary and adjust sprinklers so only your lawn is being watered (not the streets or the sidewalk). Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.



Mushrooms growing in your lawn? Then you're likely overwatering! Keep a closer look at your lawn and get to know your sprinkler system and schedule!

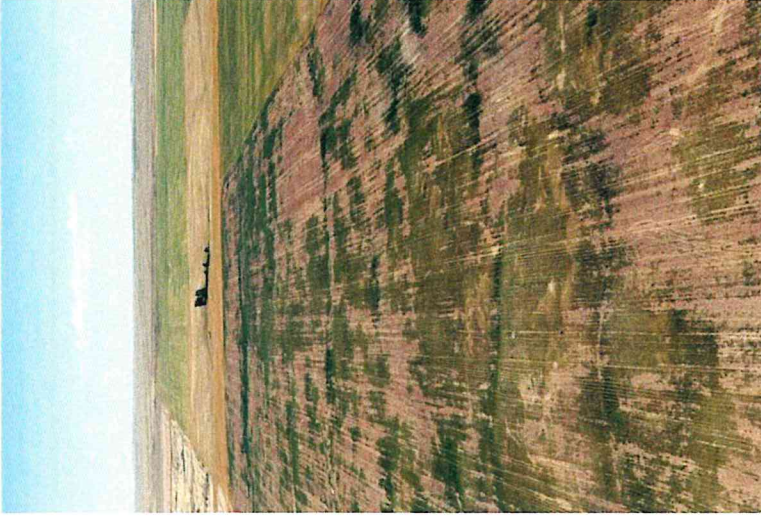


Sidewalks do not need to be watered! That's literally sending gallons of water down the drain. And you're paying for it!

Conserving water year-round is our best defense against drought. Try to do one thing each day that will result in a savings of water. Don't worry if it's minimal. Every drop counts. And every person can make a difference. Your individual action(s) can go a long way!

Don't take our water for granted. It is time for Montanans to also be WATER AWARE!

FOUR CORNERS
Water & Sewer District
495 Quail Run Road
Bozeman, MT 59718

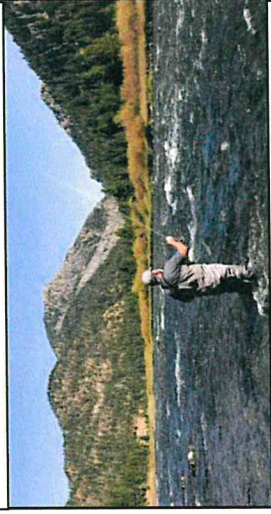


DROUGHT SEASON IS HERE!

Understand the problem and get to know what can be done so that our district (and you!) doesn't have to suffer the consequences!



Summer is here....



So is the drought!

Understanding the Problem...

It's summer, and it's hot! We all want to enjoy some river time, get our gardens flourishing and our lawns green. But with summer comes the risk of droughts and fires! Therefore, we at Four Corners Water and Sewer District wanted to provide you some insight and knowledge of the situation, as well as giving you tips to help us conserve water, and probably save some cash in the process!

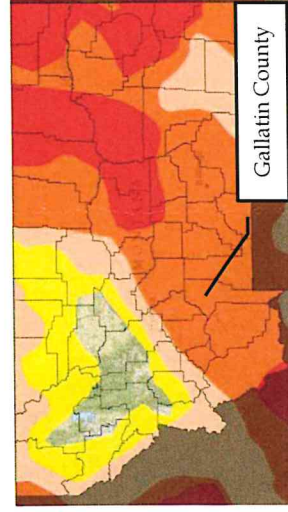
As lucky as Montanans are for having the best recreational rivers at our backyards, that doesn't mean that water shortage and drought doesn't affect us.

As of July 1st, Gallatin County was under severe drought conditions. Since July and August are usually the hottest and driest months of the year, we know water demand is only going to soar from now on. On top of that, our District is experiencing great expansion, which adds more demand to our distribution system. If we don't work together, we all suffer the consequences of having an expensive water bill.

Four Corner's drinking water comes from wells, and a rise in demand could negatively impact our water supply. In order to protect our water sources, new fees and water rates could be put in place. No one wants that, but that will happen if we keep being reckless with our water usage!

The U.S. Drought Monitor (USDM) uses a five-category system, from Abnormally Dry (D0) conditions to Exceptional Drought (D4). Currently, 98.26% of Gallatin County is under a D2 - Severe Drought conditions.

Our crops, livestock, and water sources are already stressed, but with a couple, simple actions, you can help us save water while helping yourself save some cash, since your water bill will likely decrease.



Drought map of Montana. The orange layer indicates that Gallatin County is currently under a D2 - Severe Drought classification | Drought.gov | Retrieved on Jul 01st 2021

D0 - Abnormally Dry

- Soil moisture is low; dryland crop germination is poor; pastures are dry
- Fire danger increases
- Streamflow is low, affecting recreational fishing



D1 - Moderate Drought

- Producers feed livestock supplemental hay; crops are stressed, and growth is poor
- Fire restrictions are implemented



D2 - Severe Drought

- Hay and crop yields are low; hay quality is poor; subsoil moisture is nonexistent
- Fire count and danger are high; air quality is poor, with dust and smoke
- Livestock ponds are low or dry; water quality is monitored; wells are stressed



D3 - Extreme Drought

- Crops are not harvestable; winter pasture is opened for grazing; soil has large cracks; fields are bare
- Cattle have very little water; producers are hauling water and buying supplemental feed, culling cattle, and selling early
- Fire restrictions increase



D4 - Exceptional Drought

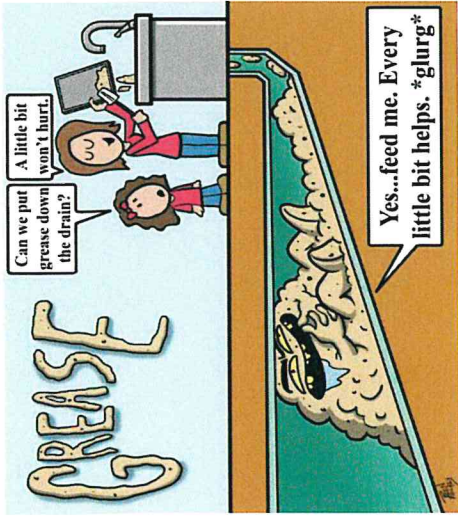
- Pasture loss is widespread; crops are destroyed
- Property is closed for hunting
- Fire risk is extremely high; fires are widespread



The five-category system used to classify drought intensity | Drought.gov | Retrieved on Jul 01st 2021



Drought conditions for Gallatin County | Drought.gov | Retrieved on Jul 01st 2021



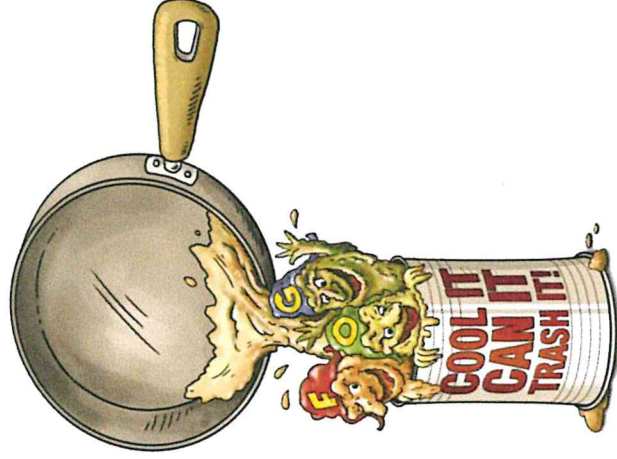
Don't be this person! There's no "acceptable" amount of grease that can be poured down the drain. Remember that if every house dispose "a little bit", then all the little bits combined becomes a big problem!

Keep drains clear!

- Pour or scrape greasy or oily food waste into an empty can or jar. Do not pour fats, oil or grease down drains or garbage disposals. Be creative on your container selection! Empty mayo, peanut butter, sauces, dressings, jelly jars, milk carton, etc; can all be used as a FOG dispenser.
- **Allow grease to cool** or freeze in the container before throwing it in the trash (freezing is optional but makes the disposal of FOGs less messy).
- Mix liquid vegetable oil with an absorbent material such as cat litter, paper towels, or coffee grounds in a sealable container before throwing it in the trash.
- Place your cooking grease containers and greasy towels in a plastic bag before you put them in your trash (great use for those supermarket plastic bags, who usually end up in the trash anyways).

- Wipe grease of cookware, utensils, dishes or surfaces with a paper towel before washing. Do not rinse off with hot water.
- Scrape food scraps from dishes and pans directly into your trash. Use baskets or strainers in your sinks to catch food scraps, then empty them in your trash. Home garbage disposals do not keep grease out of the plumbing system. These units only shred solid materials into smaller pieces and do not prevent grease from going down the drain.

- Put your fat trimmings and meat drippings in your trash.



Proper disposal of FOGs is the key for a healthy sewer system and treatment plant. Be part of the solution and not the problem!



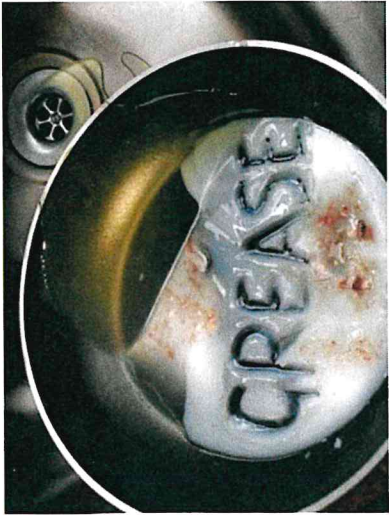
FOUR CORNERS
Water & Sewer District
495 Quail Run Road
Bozeman, MT 59718

GREASE IS YOUR DRAIN'S WORST ENEMY!



LET'S TALK ABOUT GREASE!

And why you should stop pouring it down the drain!



When fats, oils, and grease (FOGs) are washed down the drain, they stick to pipes and may lead to sewer system problems!

Understanding the Problem...

Facing a kitchen full of dirty pots, pans, and dishes is likely everyone's least favorite part of preparing a meal. As tempting as it is to dispose of that bacon fat, cooking oil, or leftover food scraps down the sink, this habit of convenience leads to problems in the pipes inside your home and our sewer system. Fats, oils, and grease (also known as FOGs) are found in food scraps, meat fats, lard, cooking oil, butter, margarine, shortening, dressings, sauces, and dairy products.

Wastewater from your home is just beginning its journey through our sewer system, carrying everything you send down the drain with it. Fats, oils, and grease (FOGs) stick to the inside of sewer pipes, building up overtime in your home's plumbing and the public sewer system. This build up decreases pipe capacity and therefore requires that piping systems be cleaned more often and/or some piping to be replaced sooner than otherwise expected.

In extreme cases, the buildup may be so severe that it can clog the entire pipe and cause sewer backups – out of manholes into streets and rivers, or up floor drains into homes. **YUCK!**

FOGs also hamper effective treatment at the wastewater treatment plant. We at Four Corners Water and Sewer know **A LOT** about this, as we've been working diligently to mitigate and control the amount of FOGs that have been arriving at our treatment plants.

Residents can help control the problem by properly disposing of FOG to keep sewers clear. One resident's habits can impact an entire neighborhood. Everyone is part of the solution.



FROM POTS AND PANS...



TO PIPES!

FOG

FAT • OIL • GREASE
contain it, don't drain it

We at Four Corners Water and Sewer District would be very thankful if you joined us in an effort to reduce the amount of FOGs in our sewer system. It is never pleasant to deal with sewer problems.

FOGs build up demands more from our operators and maintenance team. When we invest into new technology to deal with FOGs, or we have to send people out to clear sewer blockages, this cost is passed down to users like you! So, become our ally! It is in your best interest, and we all benefit from it.

And don't transfer the problem from our sewer pipes to the environment. Dumping FOGs into parking lots and the environment is very much illegal!



Definitively do not be this individual! The disposal of FOGs into parking lots and open areas isn't only illegal, but it is damaging to the environment. At the next rain or snow melt, water will push those FOGs ultimately into our rivers.



Month End YTD Budget vs. Actual

July 2021

Shared Expenses

	<u>July 2021</u>	<u>Budget</u>
Income/Expense		
Expense		
500-Shared General Admin Expenses		
510- Board Members	0	1,000
520- Personnel Expenses	63,907	70,833
530- Office Expenses	4,083	5,000
540- Vehicle Expenses	10,418	5,000
550- Professional Services (Shared)	23,138	22,333
560- Other Expenses (Shared)	2,591	6,666
Total	104,137	110,832



Month End YTD Budget vs. Actual

July 2021

Water

	<u>July 2021</u>	<u>Budget</u>
Income/Expense		
Income		
400- Operating Revenues		
410- Water Revenues	276,843	145,833
Expense		
600- Water O&M Expenses		
610- System Operating Exp (Water)	10,632	15,000
620- Repairs/ Maintenance Expenses	1,370	5,833
630- Professional Services (Water)	0	416
Total 600- Water O&M Expenses	12,002	21,249
Half of Shared Expenses	52,068	55,416
Total Expenses	64,070	76,665

* Revenue Bond yearly payment \$268,560



Month End YTD Budget vs. Actual

July 2021

Sewer

	<u>July 2021</u>	<u>Budget</u>
Income/Expense		
Income		
400- Operating Revenues		
420- Sewer Revenues	133,440	143,750
Expense		
700- Sewer O&M Expenses		
710- System Operating Exp (Sewer)	18,792	27,083
720- Repairs/ Maintenance Expenses	14,940	7,916
730- Professional Services (Sewer)	0	416
Total 700- Sewer O&M Expenses	33,912	35,415
Half of Shared Expenses	52,068	55,416
Total Expenses	85,980	90,831

* Revenue Bond yearly payment \$204,536



FOUR CORNERS

Water & Sewer District

August 2021

Sewer Status

Current Processing	EDU'S	2229
Current Obligations	EDU'S	2032
Total		4261

Capacity	Gal/Day	EDU'S @160
- Elk Grove	300,000	1875
- WRF Phase A	200,000	1250
- WRF Phase B	200,000	1250
Total		EDU= 4375

Remainder for Sale 114

Inquires

- Silo LLC	Annexed- Phase 2	200
- TP	Annexed	10
- YS	Annexed	5
- 3Peaks	Annexed- Phase 3	183
- Dykstra	Annexed	20
- T&C	Annexed	104
		522
- HG		10



FOUR CORNERS

Water & Sewer District

Sewer Obligations- July 2021

- Elk Grove Comm	100
- APK	74
- Summit and Sky	220
- White Horse	104
- Galactic Park Residential	9
- Galactic Park Commercial	68
- Lily 2	10
- Northstar Blk 1	7
- Northstar Blk 2	3
- Gallatin Heights Residential	21
- Gallatin Heights Commercial	28
- Bozeman Hot Springs	60
- Thrift Store	12
- Gallatin Gateway	43
- Black Bull	60
- Middle Creek Residential	7
- Middle Creek Condos	24
- Huska	3
- RJ	71
- Kennedy Lot 4 & 5	2
- Kennedy Fire Lot	16
- Steve A	4
- Rick	8
- Maxwell	4
- Ski Tip	1
- Dysktra S	25
- RDO	1
- Nelson	2
- Haggerty	3
- Circle F	30
- MVGR	128
- McLoed	148
- Creekside	96
- Silo LLC	200
- Jamison	45
- 3 Peaks	215
- GG	63

- PRC, LLC	14
- Childre	1.5
- Brooks/Lennon	1
- M&M Hosp.	1
- BB PH 2	100
Total	2032

Sewer Obligations- September 2023

SBR 3&4- 2500

- Black Bull Ph 2	100
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