

Billings City Administrator Weekly Report

April 4, 2025

- 1. Legislature** – Amendment language for HB 231, HB 155 or any other bill that lowers the value of a mill has been shared between the state, city and Dorsey & Whitney LLP. We are working to lock in the language by Monday. Andy testified during the HB 155 hearing this morning. The chair indicated committee will likely take executive action next week. We continue to receive strong receptiveness to solving our problem.

SB 539 was introduced and passed through the Senate within just a couple days this week. If we understand the legislation correctly it may cause problems for our street maintenance and storm water assessments by changing the assessment methodology, who pays, and require an election for approval.

- 2. Budget** – We are getting closer to having a balanced budget. Except for remaining on course with FTE's tied to the storm water implementation plan, there are very few jobs added this year despite our growth.
- 3. Escalating Parking Ticket Update** – Please see the attached final escalating parking ticket update.
- 4. Treatment Plant Operator Magazine** – See the attached article regarding the Billings plant.
- 5. 2024 Council Meeting Schedule** – Please review the attached draft agendas and provide any feedback regarding the order of business, modification of agenda items, or other changes to the consent or regular agendas. City code requires a specific order of business as it relates to certain items on meeting agendas, e.g., placement of public hearings first on the regular agenda, so your feedback will be incorporated with those code requirements in mind. ([BMCC 2-214](#)) Work session agendas are more flexible and can also easily be modified by the mayor with the consensus of Council during those informal meetings.
- 6. Next Week's Meetings/Task Forces**
 - Budget and Finance Committee, Wednesday, April 9th 9:00 AM, Rimrock Conference Room, 316 N. 26th Street, 5th Floor.
 - Legislative and Local Affairs Committee, Wednesday, April 9th 4:00 PM, Rimrock Conference Room, 316 N. 26th Street, 5th Floor.

**ESCALATING TICKETS
REFUND AND CREDIT SUMMARY
OVERCHARGE REVIEW
REVIEW PERIOD: JULY 2022 TO MARCH 27, 2024**

As part of a comprehensive review of timed parking citations issued between **July 2, 2022**, and **March 27, 2024**, the City Parking Manager identified overcharges affecting certain customers. A total of **493 payments on citations were reviewed**.

Of those, **104 individuals were found eligible to receive a refund, a credit, or both**. The breakdown of outcomes is as follows:

- **Refunds** – 53 addresses identified for a potential total of \$2,160
 - 33 confirmed receiving refunds totaling \$1,360
- **Refund and Credit to Account** – 8 addresses identified for a potential refund total of \$230
 - 3 confirmed receiving refunds totaling \$110
 - 8 credited (included in the Credit to Account.)
- **Credit to Account** – 40 accounts were credited a total of \$1,695
- **Offer to Review and Refund Notice** – of 3 individuals who responded, 1 qualified and received a \$10 refund.

Summary of Financial Impact

- **Total Potential Refunds/Credits:** \$4,095
- **Total Actual Refunds/Credits Issued:** \$3,175
- **Percent of Funds Returned/Credited:** 77.6%

This process reflects the City's commitment to transparency, fairness, and corrective action when errors are identified.



Creative Thinking

ENGINEERS AND PLANT TEAM MEMBERS IN BILLINGS RE-IMAGINED A MAJOR FACILITY UPGRADE, IMPROVING NUTRIENT REMOVAL AND SAVING BIG MONEY

STORY: **Jim Force**

PHOTOGRAPHY: **Scott Morgan**

It's three in the morning — low-flow time.

You're at the Billings Wastewater Reclamation Facility, a 40 mgd (design) plant undergoing a major upgrade for nutrient removal on the fly. You and your team are about to take the existing clarifiers down, open a slide gate and transfer flow to a new basin. You have just four hours to get this done and you haven't tested this process before.

OPPOSITE: The team at the Billings Wastewater Reclamation Facility includes, front row, from left, Louis Engels, water quality superintendent; Ollie Robson, laboratory technician; Mike Hecker, operations supervisor; Eric Henry, operator; Samm Bauer, laboratory technician; and Tim Nelson, building services support specialist. Back row, Bruce Souder, facility manager; Dylan Siroky, electrician; Brian Soffietti, maintenance technician; Aaron Poser, maintenance electrician; Doug Studiner, operator; Shaun Emerick, maintenance supervisor; Justin Nelson and Chris Leffler, operators; and Ken Christiansen, electrical supervisor.

The Billings facility's bioreactor pools remove phosphorus (left pool) and nitrogen (right pool).



Are the hydraulics right? Will it work? Will the slide gate enable you to switch back to the old system if necessary?

But it did work! And so did all of the other changes and improvements in an award-winning project that enabled Billings to meet new standards for nitrogen and phosphorus removal and — employing an innovative sequencing process — convert the aeration basins and secondary clarifiers into new bioreactors.

By limiting new construction, the plan saved the city nearly \$200 million. All modifications were completed on time to meet the restrictive nutrient regulations recently imposed in the state of Montana. That was critical, since the receiving stream is the Yellowstone River, one of the most pristine rivers in the United States and the city's source of drinking water.

"We had to operate in ways we'd never operated before," says Louis Engels, P.E., water quality superintendent. "You don't meet these kinds of challenges without an incredible operations and maintenance staff. They are our unsung heroes."

The project won the 2023 National Engineering Excellence Award from the American Council of Engineering Companies, and other honors including:

- 2023 Montana ACEC Engineering Excellence Grand Project Award
- 2023 Water Environment Federation Project Excellence Award
- 2023 International Federation of Consulting Engineers Award of Merit

OLD TIMES

The first efforts to treat Billings wastewater date to 1945, when the city built a 15 mgd primary treatment facility, starting it up in 1950 to serve a population of 31,000. As the population grew and treatment requirements increased,

Billings (Montana) Wastewater Reclamation Facility

billingsmt.gov

BUILT:
1950; upgraded 1970s and 2020

POPULATION SERVED:
122,000

FLOWS:
40 mgd design, 26 mgd average

TREATMENT LEVEL:
Secondary

TREATMENT PROCESS:
Activated sludge with biological nutrient removal

RECEIVING STREAM:
Yellowstone River

BIOSOLIDS USE:
Composting or landfill cover

ANNUAL BUDGET:
\$7.4 million (operations)

“ You don’t meet these kinds of challenges without an incredible operations and maintenance staff. They are our unsung heroes.”

LOUIS ENGELS, P.E.

the city enlarged the facility in the 1970s, adding activated sludge secondary treatment. Average flow increased to 26 mgd, with a maximum of 40 mgd.

Population has kept increasing, and today with 122,000 residents, Billings is the largest city in the Big Sky State. It's surrounded by seven mountain ranges including the Beartooths and the Big Horns.

The new expansion and improvement project was driven by efforts to ensure continued protection of the Yellowstone as well as meet new state standards for effluent nitrogen and phosphorus. It was one of the largest public works projects in the city's history.

The original concept involved constructing all new secondary treatment facilities at a projected cost of \$250 million. Then, working with its engineering consultant, HDR, the city decided to use biology instead of chemicals to remove nutrients. That led to an alternative plan to convert the existing activated sludge basins and secondary clarifiers to bioreactors and build three new secondaries. That cost was \$64 million, including all change orders.



Louis Engels, P.E.,
water quality
superintendent



Mike Hecker, operations supervisor at the plant, which treats an average flow of 26 mgd.

MANY MODIFICATIONS

The plan was creative and challenging in that it required extensive reconfiguration of existing facilities, along with a sequenced construction plan to keep the plant running and meeting effluent limits throughout the project.

The A2O process, consisting of an anaerobic zone followed by anoxic and aerobic zones, was selected for the upgrade. Enviromix provided the mixing system and AERZEN supplied the blowers. The sequence first called for construction of new secondary clarifiers followed by repurposing of the existing clarifiers and activated sludge basins.

Billings Wastewater Reclamation Facility PERMIT AND PERFORMANCE

	INFLUENT	EFFLUENT	PERMIT
CBOD	86.2 mg/L	1.06 mg/L	25 mg/L monthly avg.
TSS	86.2 mg/L	2.5 mg/L	30 mg/L monthly avg.
Ammonia	18.4 mg/L	<0.1 mg/L	4 mg/L monthly avg.
Total nitrogen	28.5 mg/L	8 mg/L (1,526 lbs/day)	2,517 lbs/day monthly limit
Total phosphorus	2.9 mg/L	0.37 mg/L (71.46 lbs/day)	343 lbs/day monthly limit

The old clarifiers were converted to the aerobic zones of the first two bioreactors. After these were started up, the anaerobic and anoxic zones in the first two bioreactors were completed and started up, commencing the process of nutrient removal. Lastly, the third and fourth bioreactors were completed and put into operation.

According to the award application materials prepared by the city and HDR, process modeling and hydraulic analysis indicated that the existing basin volume wasn't adequate, so the existing secondary clarifier wall height was increased by three and one-half feet. The aeration basins' top walls were stiffened with a concrete beam to allow the water level to be increased.

“The staff rose to the challenge for the residents of Billings and protection of the Yellowstone River.”

LOUIS ENGELS, P.E.

Additional facilities were also repurposed, saving more money. The main tunnel of the secondary treatment basins now houses the new blowers, and the old blower room stores dewatering and feed chemicals. That eliminated the need for a new chemical building. Instead of constructing a separate pump station, the secondary pump station was used to send return activated sludge to the new bioreactors.

Following the new secondary clarifiers, effluent is passed through UV channels (Trojan Technologies) for disinfection before release to the river. Odors are controlled by passing air from the primary clarifiers, gravity thickeners and dewatering processes through a packed bed-scrubber containing wood chips from a local composting company.

The upgrade meant changes to the plant's control system as well. The SCADA system was reprogrammed so that the computer screens in the control room are muted, meaning only key operational parameters are highlighted and nonessential details are kept in the background. “It's less bothersome to the operators,” says Bruce Souder, facility manager. “Only the information beneficial to the operator is shown.”

The project began in March 2017, and the staff had two of the new bioreactors up and running by August of 2019. The entire project was substan-



Chris Leffler in the plant control room, which features a reprogrammed SCADA system with screens that highlight key operational parameters.

“There were long days and a lot of frustrations.

There was constant construction all around us. You had to stay on your toes.”

MIKE HECKER

tially complete by September 2020. Engels and his team proudly point out that the plant began meeting the more stringent limits for nitrogen and phosphorus in the first month after the new permit became effective.

The staff includes 12 in operations and maintenance, two in the plant's fully certified laboratory, and three electricians shared with the city's drinking water treatment operation. In addition to Engels and Souder, Mike Hecker is operations supervisor and Shaun Emerick is maintenance supervisor.

They are supported by certified operators Bruce O'Banion, Doug Studiner, Chris Leffler, Curtis Timmons, Scott Thomas, Grant Brewer, Justin Nelson, Clifford Olsen, Brandon Corey, Eric Henry and Tom Darbe.

Harold Wagner, Aaron Poser, Charles Brownlee, Chris Rush and Newell LaBolle are plant maintenance electricians; Ollie Robson and Samm Bauer are laboratory technicians, and Tim Nelson is a building services support specialist.

Engels and his management team can't say enough about the dedication of the staff. “There were long days and a lot of frustrations,” says Hecker. “We were running both the activated sludge system and the new BNR process at the same time. There was constant construction all around us. You had to stay on your toes.”

Souder remembers having only one tank available for aeration: “We had to reduce aerobic capacity from 4 million gallons to 1.6 million gallons. It was barely enough, but it was all we could do.”

STAYING INFORMED

A well-thought-out communications plan helped the team overcome many challenges. The staff took part in weekly construction meetings with the contractors. The complicated, but critical sequencing plan was closely reviewed with the design engineer.

But there are always unforeseen developments. “Wastewater is a harsh environment,” says Engels. “Things don't always work as designed, and sometimes they fail to meet expectations. You might have a pump that doesn't meet the designed flow, and you have to rethink that. It was not an easy task.”

Emerick adds, “We have such better knowledge of the system now. We know what we can and can't do. It's running flawlessly now, and it's fun to see.”

Engels say the adaption to the new processes by the staff and the successful completion of the project are the proudest moments of his 16-year career in the industry: “During the battle of bringing the plant online, our staff never quit. We met the deadline. We made it work.”

There's a saying in Billings, the management team points out: “We will win.” That mantra highlights the team's never-give-up attitude. Engels concludes, “The staff rose to the challenge for the residents of Billings and protection of the Yellowstone River. And we did indeed win.” **tpo**

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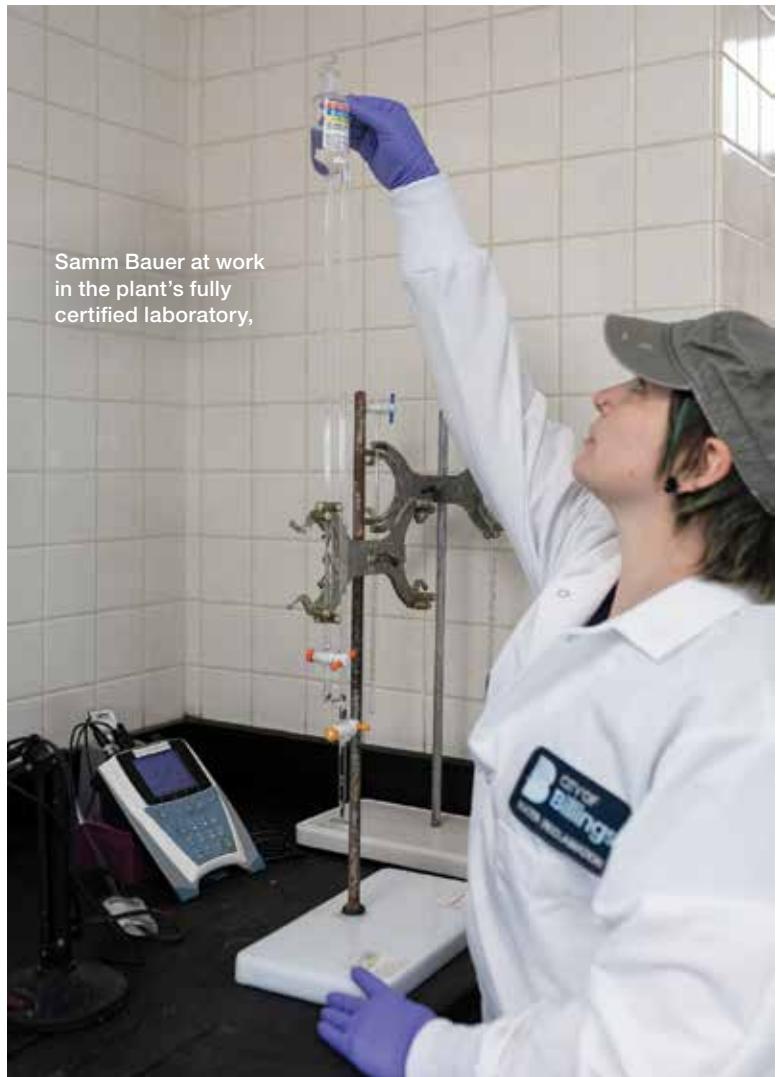
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Samm Bauer at work in the plant's fully certified laboratory,

NEW SOLIDS HANDLING APPROACHES

Innovations at Billings don't stop at the effluent channel. The water reclamation facility team has also taken a different approach to solids handling, with positive results.

Louis Engels, water quality supervisor, says the changes increase the removal and beneficial reuse of phosphorus and improve the performance of the secondary clarifiers. First, plant staff changed the waste activated sludge procedure, sending thickened WAS directly to dewatering and avoiding anaerobic digestion. The WAS, containing phosphorus, is sent to new presses (Multi-Disk Screw Press MDQ by Esmil). Ultimately, the cake is sent to a composting site.

“This enables us get better phosphorus removal than is called for in the permit,” says Engels.

A second innovation is called surface wasting. Staff members skim foam and poorly settling sludge from the mixed liquor flowing from the bioreactor units, reducing their effect on the biological process. That leads to a better settling sludge and better solids performance in the secondary clarifiers.

The changes were developed by operational staff members, who made several adjustments to the new plant to optimize the system and enhance performance. Say Engels, “We've been using these innovative methods since 2019.

UPCOMING DRAFT AGENDAS FOR COUNCIL / LEADERSHIP

Please review the draft agendas below and provide any feedback regarding the order of business, modification of agenda items, or other changes to the consent or regular agendas. City code requires a specific order of business as it relates to certain items on meeting agendas, e.g., placement of public hearings first on the regular agenda, so your feedback will be incorporated with those code requirements in mind. [\(BMCC 2-214\)](#) Work session agendas are more flexible and can also easily be modified by the Mayor with the consensus of Council during those informal meetings.

Thank you for your feedback!

April 7, 2025– WORK SESSION

Executive Session 4:30 P.M. – 5:30 P.M.

1. BIRD Reorganization Discussion (BIRD Board Members)
2. Federal Funding Priority – Grand Avenue
3. Transportation Improvement Program (TIP) Amendment 2 – Lora Mattox
4. Police Annual Report (Attachments)
5. Fire Annual Report (Attachments)
6. Airport Authority
7. Legislative updates

April 14, 2025 REGULAR BUSINESS

CONSENT:

1. BID AWARD: Dehler Park Protective Netting
2. BID AWARD: Airport Overlook Drive Overlay
3. BID AWARD: WO 25-08: Rose Park Trail
4. BID AWARD: WO 25-25: Culvert Replacement
5. West end hangar lease w/ TFES 1167
6. MOU w/ Yellowstone County – Law Enforcement data processing
7. Request to MDT for Local Federal Funding Priority – Grand Avenue
8. Amendment 2 2024-2028 Transportation Improvement Program (TIP)
9. Amendment 5 to PSA for old City Hall w/Honaker Realty, LLC & JWT Capital, LLC
10. Donation to Parks from TrailNet
11. Donation to Planning from TrailNet
12. Donation to Police Department from various donors
13. Final Plat - Ridgeview Subdivision
14. Resolution Notifying Election Administrator of Mail Ballot
15. Resolution for South Tax Increment Bond
16. 2nd Final/Rdg. ORD – Ward Boundary Expansion Annexation 25-01 – Wilson Park
17. 2nd Final/Rdg. ORD – ZC 1060 - Text Housekeeping Amendments
18. 2nd Final/Rdg. ORD – ZC 1061 – Wilson Park
19. 2nd Final/Rdg. ORD - ZC 1062 – Missions United
20. 2nd Final/Rdg. ORD – ZC 1063 – 4500 Block – King Ave. W

REGULAR:

1. PH and approval of Consolidated Plan Findings
2. PH and Resolution approving tax benefits - Rocky Vista University LLC
3. Resolution to Adopt Eastern Montana Region Hazard Mitigation Plan and Yellowstone County Annex
4. EBURD Tax Increment Assistance - 2115 2nd Avenue North - Air Controls Billings, Inc.
5. SBBURD Tax Increment Assistance – Amend Park Ice Rink – Yellowstone Ice
6. SBBURD Tax Increment Assistance - Torgerson's LLC - 3508 South Frontage Road

April 21, 2025 - WORK SESSION

1. Amend Rec. Center Updates
2. Water and Sewer Rates
3. Aspenlieder's Initiative RFP/RFQ
4. Legislative updates

April 28, 2025 REGULAR BUSINESS

CONSENT:

1. BID AWARD: 1302 Parkhill Drive Housing Rehabilitation Project
2. BID AWARD: WO 25-26: WTP Sediment Hauling
3. BID AWARD: WO 25-11: 10th and Broadwater (Not submitted)
4. Petition for Renewal of BID 0001
5. Amendment 27 with Morrison-Maierle, Inc. to Expand and Remodel the Airline Ticketing Area & Baggage Belt System
6. State Farm Grant to Fire Dept. for Rescue Technician Training
7. Compensation Agreement with LC Properties, LLC
8. Billings MPO FY25 UPWP Amendment 1
9. Public Sidewalk Easement from Tanner Bennion - Rim Pointe Subdivision
10. Perpetual Right-of-Way Easement for Multi-Use Trail from Griffin Automotive Enterprises, Inc.
11. Acknowledge Receipt of Petition to Vacate Carriage Lane in Annafeld Subdivision, 5th Filing
12. Preliminary Plat - Annafeld Subdivision, 7th Filing

REGULAR:

1. PH and 1st Rdg Zone Change 1064 - Buffalo Crossing Drive
2. PH for Land Use Contrary to Zoning for Orchard School, 120 Jackson St.- Electronic Message Display Sign
3. Curb Cut Ordinance Update (Mac)
4. Transportation Corridor Plan (Debi)

May 5, 2025 - WORK SESSION (BUDGET ONLY)

1. Facilities Budget, include Org chart

May 6, 2025 - WORK SESSION Tues. (BUDGET ONLY)

May 12, 2025 (Tues.) REGULAR BUSINESS

CONSENT:

1. Bid Award: 1302 Parkhill Drive Housing Rehabilitation Project
2. Preliminary Minor Plat - Yellowstone Valley Subdivision

REGULAR:

2. PH for LB Lofts Affordable Housing Development Project
3. PH and RES – Annexation 25-03, Mirco Circle

May 19, 2025 - WORK SESSION (BUDGET ONLY)

May 20, 2025 - WORK SESSION Tues. (BUDGET ONLY)

May 27, 2025 (Tues.) REGULAR BUSINESS

CONSENT:

- 1.

REGULAR:

June 2, 2025 – WORK SESSION

1. Bicycle and Pedestrian Advisory Committee Annual Presentation (Elyse Monat)
2. Hazard Mitigation Plan (Debi)
3. Big Sky Senior Services – Adult Resource Alliance (Erika Purington)
4. Public Art Policy (Elyse Monat)

June 9, 2025 REGULAR BUSINESS

CONSENT:

- 1.

REGULAR:

2. Budget Adoption

June 16, 2025 – WORK SESSION

Executive Session 4:30 P.M. – 5:30 P.M.

1. Snow Plowing Update

June 23, 2025 REGULAR BUSINESS

CONSENT:

- 1.

REGULAR:

2. Budget adoption

July 7, 2025– WORK SESSION

July 14, 2025 REGULAR BUSINESS

CONSENT:

- 1.

REGULAR:

2. RES Establishing a Procedure for the Disposition of Unclaimed Property (Has not be submitted into routing in AQ)

July 21, 2025– WORK SESSION

July 28, 2025 REGULAR BUSINESS

CONSENT:

- 1.

REGULAR:

August 4, 2025– WORK SESSION

August 11, 2025 REGULAR BUSINESS

CONSENT:

- 1.

REGULAR:

August 18, 2025– WORK SESSION

August 25, 2025 REGULAR BUSINESS

CONSENT:

- 1.

REGULAR:

September 2, 2025 (Tues.) – WORK SESSION

September 8, 2025 REGULAR BUSINESS

CONSENT:

1.

REGULAR:

September 15, 2025– WORK SESSION

Executive Session 4:30 P.M. – 5:30 P.M.

September 22, 2025 REGULAR BUSINESS

CONSENT:

1.

REGULAR:

October 6, 2025– WORK SESSION

October 13, 2025 REGULAR BUSINESS

CONSENT:

1.

REGULAR:

October 20, 2025– WORK SESSION

October 27, 2025 REGULAR BUSINESS

CONSENT:

1. *Council Meeting Schedule for December

REGULAR:

November 3, 2025– WORK SESSION

November 10, 2025 REGULAR BUSINESS

CONSENT:

1.

REGULAR:

November 17, 2025– WORK SESSION

November 24, 2025 REGULAR BUSINESS

CONSENT:

1.

REGULAR:

December 1, 2025– WORK SESSION

Executive Session 4:30 P.M. – 5:30 P.M.

December 8, 2025 REGULAR BUSINESS

CONSENT:

REGULAR:

December 15, 2025– WORK SESSION

December 22, 2025 REGULAR BUSINESS

CONSENT:

1.

REGULAR:

CLERK'S NOTES

*Annual Items shown in Blue

January (First Work Session) after an election: Swearing in of new Councilmembers and Nominations and Elections of Deputy Mayor Pro Tempore

January: Amend Park Development Council Proposed Budget

January: Beartooth RC&D MOU

February or March: Legislative Updates (ODD years only)

March: Budget Calendar

March: Council Priorities

September: City Administrator's Annual Review

October: TRP, ERP and CIP

October: Council Holiday Schedule for December

November (First Regular Business Meeting) after an election: Nominations and Elections of Deputy Mayor

DRAFT