



Roseburg Urban Sanitary Authority
1297 N.E. Grandview Drive
Roseburg, OR 97470

**MINUTES OF THE REGULAR BOARD MEETING
OF THE BOARD OF DIRECTORS OF
ROSEBURG URBAN SANITARY AUTHORITY**

Board Vice-Chair, Rob Lieberman, called the regular monthly Board Meeting to order at 4:02 p.m. on December 13, 2023. The Board Meeting was held in-person and remotely broadcast by Zoom® Meeting.

ROLL CALL

Directors

Present: Board Vice-Chair Rob Lieberman, Kelsey Wood, David Campos & Tom Dole

Absent: Board Chair John Dunn

Others present: General Manager Jim Baird, Finance Director Christine Morris, Accounting Specialist Angie Allen, Collections Superintendent Steve Lusch, Jacobs Interim Project Manager Caleb Trammell

Consideration of the November 8, 2023 Board Meeting Minutes

Kelsey Wood moved to approve the minutes for the November 8, 2023 Roseburg Urban Sanitary Authority monthly Board Meeting.
David Campos seconded the motion.
The motion passed unanimously.

Customer Fees

Christine Morris, Finance Director, gave a presentation regarding late fees, certification fees for lien turnovers and tenant billing. These items are set by an Ordinance and need to be updated. The discussion included repealing and replacing the Ordinance, setting future fees by Resolution, changing the late fee structure, changing the certification fees for lien turnovers and eliminating tenant billing.

General Managers Report

North Deer Creek Trunk Rehabilitation Project

The contractor, Titan Utilities, has completed the lining portion of the work included in the contract. The Contractor has installed 564 LF of 18" liner, 1468 LF of 24" liner, and 94 LF of 6" PVC building sewer with 4 cleanouts.

The contractor has submitted pay request #3 for \$740,308.22 with \$37,015.41 in retainage for payment #3 of \$703,292.81.

The project engineer, Rylee Archuleta, Leeway Engineering Solutions, and the RUSA staff have reviewed pay request #3 and would recommend that the Board approve pay request #3 to Titan Utilities for \$703,292.81.

Kelsey Wood made a motion to approve pay request #3 to Titan Utilities for \$703,292.81.

David Campos seconded the motion.

The motion passed unanimously.

Biogas Feasibility Study – WRF:

The Biogas Feasibility Study has been completed. We are waiting for the final invoicing and payment to submit to the Energy Trust of Oregon to finalize the matching grant requirements.

Administrative Offices Reroofing Project

We have fully executed the contract with Roseburg Roofing. The contractor has completed a temporary repair to the roof of the office to stop a leak. The contractor plans on roofing the Garage and the Shop area of the office as weather permits. The remainder of the office will be completed next year in April or May as the weather permits.

The contractor is purchasing all the roofing material to ensure that we avoid any price increase not anticipated in the contract.

To date, the contractor has not been able to complete any work on the Garage and Shop areas due to the inclement weather.

Energy Service Company

Ameresco and RUSA are preparing several loan and grant applications for four projects. Additionally, there will be more grants available next year to apply for.

1. Solar array with battery storage at the Administrative Offices.
2. Solar array at the Water Reclamation Facility and the Natural Treatment System.
3. Cogeneration facility at the Water Reclamation Facility utilizing biogas as the fuel.

Waste Thickening Project

The existing gravity belt thickeners have reached their useful life. One of the two is inoperable currently. We have begun an engineering study to select the best technology to replace the thickening equipment. Jacobs Engineering is preparing the study and recommendations for new thickening equipment.

Bisulfite SCADA System

We have completed the construction of the new Chemical feed building for our bisulfite and alum seed equipment. We are in the process of designing a new SCADA node to be installed in the new building to tie in the equipment to the plant SCADA system. We hope to be ready to advertise this project in January or February.

Jacobs Plant Operations Report

Caleb Trammell advised that the treatment facility averaged 95% BOD removal and 97% Total Suspended Solids removal during October. The total Effluent flow was 112.41 million gallons.

Accounts Payable

The Board reviewed the Accounts Payable Report and Addendum for the December 2023 Accounts Payable and addressed questions.

David Campos made a motion to approve the Accounts Payable Report and Addendum as presented.

Kelsey Wood seconded the motion.

The motion passed unanimously.

Other Business

None.

The meeting was adjourned at 5:08 p.m.

Attached Additional Items Presented

Accounts Payable Addendum

Late Fee Review

Landlord-Tenant Billing

Jacobs 2022 Annual Report

Respectfully submitted,

Angie Allen

Angie Allen

Accounting Specialist

ADDENDUM TO DECEMBER 13, 2023 BOARD PACKET

Accounts Payable

Checks by Date - Detail by Check Date

User: christine
Printed: 12/13/2023 3:20 PM



Check No	Vendor No Invoice No	Vendor Name Description	Check Date Reference	Check Amount
51810	REFUND Permit 23-131	Cattle Dogs Golf Center LLC Refund for Relay 23-000131	12/13/2023	70.00
Total for Check Number 51810:				70.00
51811	WATER Nov 2023 LV Nov 2023 Winch	City of Roseburg Water service - Loma Vista Water service - Winchester Pump Station	12/13/2023	35.72 215.56
Total for Check Number 51811:				251.28
51812	GEC AIE19140	Attn: Cashier Government Ethics Commis: Gov Ethics Assessment FY24	12/13/2023	1,134.82
Total for Check Number 51812:				1,134.82
51813	Occu 24406	OccuHealth 1 Employee DOT Physical	12/13/2023	110.00
Total for Check Number 51813:				110.00
51814	SIERRASP 21794341 120923 21794341 Nov23	Sierra Springs Bottled water delivery - December Bottled water delivery - November	12/13/2023	73.69 73.69
Total for Check Number 51814:				147.38
Total for 12/13/2023:				1,713.48
Report Total (5 checks):				1,713.48

Late Fee Review Board Meeting 12/13/23

	# of Accounts 6/30/2023	# of EDUs 6/30/2023	Current Rates	EDU x \$5	Current Late Fee	Current % Late fee/ Rate
Bare Lot	173.00	356.60	\$ 5.00	\$ 1,783.00	\$5	100.0%
Residential/Commercial	9,074.00	13,638.01	\$ 40.00	\$ 68,190.05	\$5	12.5%
Commercial	1,263.00	3,603.79	\$ 40.00	\$ 18,018.95	\$5	12.5%
Restaurant/Tavern	159.00	435.74	\$ 97.29	\$ 2,178.70	\$5	5.1%
Markets & Mortuaries	5.00	23.16	\$ 94.88	\$ 115.80	\$5	5.3%
Craft Brewery	5.00	6.03	\$ 362.87	\$ 30.15	\$5	1.4%
Other-No analysis	8.00					
	10,687.00			\$ 90,316.65		

More than 5 accts - 8/1/23	# of Accounts	# of EDUs	Current Rates	EDU x 10% or \$4 minimum	Current Late Fee	10% or \$4 min	8% or \$4 min	6% or \$4 min
Bare Lot	173.00	356.60	\$ 5.00	\$ 1,426.40	\$5	\$ 4.00	\$ 4.00	\$ 4.00
Residential/Commercial	9,074.00	13,638.01	\$ 40.00	\$ 54,552.04	\$5	\$ 4.00	\$ 4.00	\$ 4.00
Commercial	1,263.00	3,603.79	\$ 40.00	\$ 14,415.16	\$5	\$ 4.00	\$ 4.00	\$ 4.00
Restaurant/Tavern	159.00	435.74	\$ 97.29	\$ 4,239.31	\$5	\$ 9.73	\$ 7.78	\$ 5.84
Markets & Mortuaries	5.00	23.16	\$ 94.88	\$ 219.74	\$5	\$ 9.49	\$ 7.59	\$ 5.69
Craft Brewery	5.00	6.03	\$ 362.87	\$ 218.81	\$5	\$ 36.29	\$ 29.03	\$ 21.77
				\$ 75,071.47				

-AVERAGE APPROXIMATELY 1420 PAST DUE ACCOUNTS A MONTH OR 13.3% OF ALL ACCOUNTS

-AVERAGE APPROXIMATELY 520 CUSTOMERS OR 5% HAVE 6 MONTHS OR OLDER BALANCES AT TURNOVER TIME

97% OF ACCOUNTS ARE

RESIDENTIAL/COMMERCIAL		10% or	6% or				
\$40 Monthly Billing		\$4 min	End Balance	\$4 min	End Balance	Current	End Balance
January		\$4.00	\$44.00	\$4.00	\$44.00	\$ 5.00	\$ 45.00
February		\$4.40	\$88.40	\$4.00	\$88.00	\$ 5.00	\$ 90.00
March		\$8.84	\$137.24	\$5.28	\$133.28	\$ 5.00	\$ 135.00
April		\$13.72	\$190.96	\$8.00	\$181.28	\$ 5.00	\$ 180.00
May		\$19.10	\$250.06	\$10.88	\$232.15	\$ 5.00	\$ 225.00
June		\$25.01	\$315.07	\$13.93	\$286.08	\$ 5.00	\$ 270.00
July		\$31.51	\$386.57	\$17.16	\$343.25	\$ 5.00	\$ 315.00
August		\$38.66	\$465.23	\$20.59	\$403.84	\$ 5.00	\$ 360.00
September		\$46.52	\$551.75	\$24.23	\$468.07	\$ 5.00	\$ 405.00
October		\$0.00	\$646.93	\$28.08	\$536.16	\$ 5.00	\$ 450.00
November		\$64.69	\$751.62	\$32.17	\$608.33	\$ 5.00	\$ 495.00
December		\$75.16	\$866.78	\$36.50	\$684.83	\$ 5.00	\$ 540.00
Late Fee Totals		\$386.78		\$204.83		\$ 60.00	

1.5% OF ACCOUNTS ARE

RESTAURANT		10% or	6% or				
On a \$97.29/EDU Monthly Billing		\$4 min	End Balance	\$4 min	End Balance	Current	End Balance
January		\$9.73	\$107.02	\$5.84	\$103.13	\$ 5.00	\$ 102.29
February		\$10.70	\$215.01	\$6.19	\$206.61	\$ 5.00	\$ 204.58
March		\$21.50	\$333.80	\$12.40	\$316.29	\$ 5.00	\$ 306.87
April		\$33.38	\$464.47	\$18.98	\$432.56	\$ 5.00	\$ 409.16
May		\$46.45	\$608.21	\$25.95	\$555.80	\$ 5.00	\$ 511.45
June		\$60.82	\$766.32	\$33.35	\$686.44	\$ 5.00	\$ 613.74
July		\$76.63	\$940.24	\$41.19	\$824.92	\$ 5.00	\$ 716.03
August		\$94.02	\$1,131.56	\$49.50	\$971.70	\$ 5.00	\$ 818.32
September		\$113.16	\$1,342.00	\$58.30	\$1,127.29	\$ 5.00	\$ 920.61
October		\$134.20	\$1,573.49	\$67.64	\$1,292.22	\$ 5.00	\$ 1,022.90
November		\$157.35	\$1,828.13	\$77.53	\$1,467.05	\$ 5.00	\$ 1,125.19
December		\$182.81	\$2,108.23	\$88.02	\$1,652.36	\$ 5.00	\$ 1,227.48
Late Fee Totals		\$940.75		\$484.88		\$ 60.00	

Totals for a year

\$4 Minimum Late fee	10% Late fee	Balance	6% Late fee	Balance	Current	Balance	
Bare Lot	\$ 75.13	\$ 135.13	55.6%	\$ 52.77	\$ 112.77	46.8%	\$ 60.00 \$ 120.00 50.0%
Residential/Commercial	\$ 386.78	\$ 866.78	44.6%	\$ 204.83	\$ 684.83	29.9%	\$ 60.00 \$ 540.00 11.1%
Restaurant/Tavern	\$ 940.75	\$ 2,108.23	44.6%	\$ 484.88	\$ 1,652.36	29.3%	\$ 60.00 \$ 1,227.48 4.9%
Markets/Mortuaries	\$ 917.45	\$ 2,056.01	44.6%	\$ 475.03	\$ 1,616.00	29.4%	\$ 60.00 \$ 1,198.56 5.0%
Craft Brewery	\$ 3,508.81	\$ 7,863.25	44.6%	\$ 1,876.32	\$ 6,306.28	29.8%	\$ 60.00 \$ 4,414.44 1.4%

LANDLORD – TENANT BILLING

History

- RUSA provided a service to landlords by billing the tenant for service.
- Around 1994, legislation required that the landlord be kept informed of the status of the utility bill.
- In the paper age RUSA chose to send a duplicate bill for a fee.

Looking Ahead

- RUSA currently bills out approximately 10,700 accounts and sends out 220 duplicate bills to tenants.
- RUSA is moving to a new improved system that will allow every customer to see their account status at any time online.
- The landlord has a variety of sharing the utility bill with their tenant.

RUSA Staff would recommend that we do not continue to offer duplicate billing to our landlord customers as we have several ways for the landlord/tenant business to be transacted without RUSA being involved.



Challenging today.
Reinventing tomorrow.



Operations Management
and Facilities Services

Roseburg, Oregon

2022
Annual Report



Letter from Project Manager Caleb Trammell

Dear Roseburg Urban Sanitary Authority (RUSA) leaders and staff,

It is with great pleasure we present Jacobs' annual report for the 2022-2023 contract year. Our journey together has been marked by a commitment to excellence, cost-efficiency and the unwavering dedication of our passionate team.

One of the highlights of the past year was the exciting news of RUSA unanimously approving an 8-year contract renewal with Jacobs. The success of this renewal is a result of the collective efforts and commitment of our entire teams. It underscores the collaborative spirit and expertise that define our partnership. As we embark on this extended journey together, I want to express my gratitude to each member of the RUSA and Jacobs teams for their dedication and contributions.

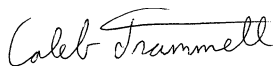
Our ability to secure an 8-year renewal, speaks volumes about the trust and confidence RUSA places in our capabilities. This extended partnership is a testament to the consistent high-quality service, innovative solutions and reliability that define our relationship.

As we enter the next chapter of our journey, we are raising our own expectations for service delivery. In 2024, we have set our sights on several projects, including improving energy efficiency and equipment upgrades.

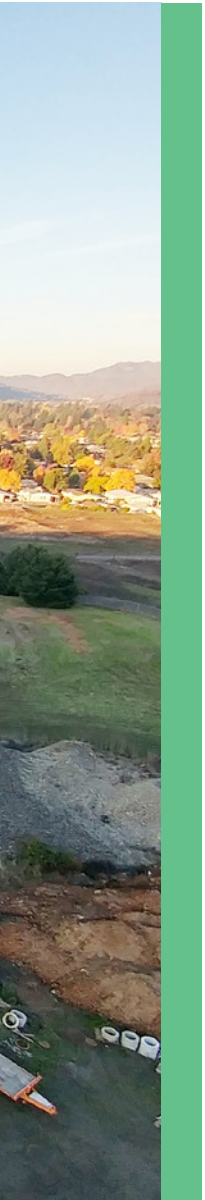
We are driven by a passion for excellence, a commitment to our environment and the empowerment of our people. Our dedication to being a trusted partner to RUSA and the community remains unwavering as we embark on the next chapter of our journey together.

Thank you for your continued trust and partnership. We look forward to achieving new milestones and setting new standards in the years to come.

Sincerely,



Caleb Trammell
Project Manager



The Roseburg crew: Fresh faces; same commitment to excellence

Our dedicated team, consisting of 11 highly skilled members, assumes responsibility for the efficient operation of RUSA's 7.9-million-gallons-per-day (mgd) water resource recovery facility (WRRF). At the helm of this accomplished team is Project Manager Caleb Trammell, with a penchant for innovative leadership.

Our team is defined by its collective expertise, amassing 146 years of combined experience in wastewater utilities. Jacobs takes immense pride in our ability to attract and retain exceptionally talented individuals who are committed to serving RUSA.

Exhibit 1 provides a comprehensive overview of our team, shedding light on their respective roles within the project; the valuable skills they contribute and their licenses and certifications, all of which play pivotal roles in our ongoing success.

Exhibit 1

Our experienced and dedicated team

Name and title	Years of experience	Licenses/certifications
Caleb Trammell Project Manager	3	Oregon Wastewater Treatment Grade I Jacobs Sustainability Champion Commercial Pesticide Applicator (CPA)
Randy Turner Operations Supervisor	39	Oregon Wastewater Treatment Grade IV Wastewater Collections Grade II
Zack Stefanich Lead Maintenance Mechanic	2	Journeyman Electrician License
Dakota Cavens Maintenance Mechanic	1	
Randy Brown Laboratory Analyst	40	
Rusty Marples Lead Operator	30	Oregon Wastewater Treatment Grade III
Brian Anderson Operator	28	Oregon Wastewater Treatment Grade IV Jacobs Project Safety Champion Pesticide apprentice license
Branden Montgomery Operator	4	Oregon Wastewater Treatment Grade II Wastewater Collections Grade I Oregon Commercial Driver License (CDL)
Marcus Brenden Operator	8	Oregon Wastewater Treatment Grade IV Pesticide apprentice license
Jacob Haga Operator-in-Training	0.25	



Back row left to right: Zack Stefanich, Brian Anderson, Rusty Marples, Caleb Trammell and Dakota Cavens. Front row: left to right: Marcus Brenden, Randy Turner, Branden Montgomery and Randy Brown. Front and center: Zuko our project ambassador.

Training opportunities

Encouraging our team members to cultivate their professional skills and aim higher is what Jacobs is all about. We reward aspiration, and we value kindness, creating a workplace people enjoy and an environment where respect is the norm.

Jacobs' commitment to excellence starts with continuous improvement in training and personnel development. All members of our team are supported and encouraged to take advantage of the internal and external training opportunities to learn new skills and advance their careers.

Our employee career development assistance includes access to an internal library of training materials, certification and license exam fees reimbursement and monetary incentives for training participation and advanced certifications. Staff training takes many forms—from online courses to hands-on learning.

Operator Branden Montgomery earned his Oregon CDL to haul biosolids during the summer months. The following team members are actively pursuing additional certifications, including:

- Project Manager Caleb Trammell is pursuing a Wastewater Grade III certification
- Rusty Marples is studying for his Wastewater Grade IV
- Jacob Haga, the newest addition to the team, is enrolled in a Sacramento State online course to assist with studying for his Wastewater Grade I certification
- Dakota Cravens is exploring earning a limited maintenance electrician license

All project personnel participate in specialized and practical training in safety, operations, laboratory, process control and maintenance to continuously improve our team skills and competency. Well-trained and knowledgeable operators, technicians and specialists manage facilities more efficiently, sustain compliance and maximize the useful life of vital equipment. One of the immediate initiatives pushed by the new project manager was hiring a full staff and to improve cross-training. Experienced operators are in short supply, so it is critical for newer staff to learn as much as possible from the legacy crew members before they retire.



Zuko serves as the team's ambassador. He is a three-year-old golden retriever and his owner is Project Manager Caleb Trammell. Zuko spends every Wednesday at the WRRF and is spoiled rotten by the team.

Access to regional and nationwide support resources

One of the invaluable advantages of partnering with Jacobs lies in our extensive pool of resources, encompassing thousands of professionals who specialize in crucial technical, managerial and practical disciplines. This wealth of expertise is readily available to RUSA and is a testament to our commitment to the municipality's success.

In the Northwest alone, Jacobs boasts a remarkable workforce of 2,258 skilled professionals who stand ready to provide dedicated support, ensuring RUSA has access to highly qualified resources when you need them most.

Our regional operations and maintenance(O&M) specialists made an impressive impact by contributing a total of 933.29 hours (about 1 and a half months) of support to the WWRF. This support spanned a wide array of critical areas of expertise:

Compliance: Our regulatory compliance specialists played a pivotal role in assessing permits, guiding permit renewal processes, assisting with compliance plans and addressing compliance and regulatory challenges head-on.

Safety: Safety is paramount, and our experts excelled in providing safety training, conducting job safety analyses, meticulously tracking performance data and ensuring rigorous regulatory reporting to maintain a secure working environment.

Maintenance and Asset Management: Leveraging innovative proprietary software, our team conducted comprehensive condition assessments. This allowed us to determine the operating longevity of plant assets; assess life-cycle costs and associated risks and estimate repair, replacement and capital costs.

Technical Services and Information Systems: Our dedicated support extended to maintenance data management, data collection and assessment, enabling in-depth risk analysis. Additionally, our experts helped manage treatment process control systems and track performance trends.

General Regional Support: We provided vital operations support and optimization services, excelling in process control, troubleshooting, repairs, performance testing, quality management and system improvement. These initiatives aimed to reduce variable costs, benchmark against a vast database of over 100 similar facilities and develop and communicate process data for client review and input.

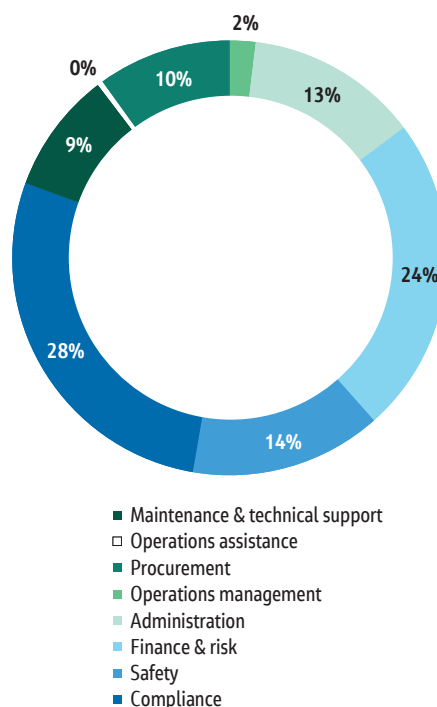
Financial, Management and Business Systems: Our team includes analysts, project controls personnel and contracts and financial specialists. They play a pivotal role in maintaining cost stability, managing financial data, assessing risk and developing operating budgets.

Procurement: Our purchasing and supply-chain specialists assisted RUSA staff in efficiently managing essential supplies of chemicals, personal protective equipment (PPE), equipment parts, tools and related items, ensuring uninterrupted operations.

Exhibit 2 serves as a visual representation, highlighting the impressive 933.29 hours of regional assistance provided to the RUSA WWRF.

Exhibit 2

RUSA regional support assistance hours received





Value-added services and/or strategic investments

Our unwavering commitment to delivering the highest quality of service is most notably exemplified through our strategic investments and value-added services. These initiatives directly benefit RUSA both financially and operationally. Examples include:

- Design and construction of the bisulfite building controls and feed system
- Creation of the Natural Treatment System (NTS) herbicide application program, operated under Oregon Department of Agriculture (ODA) licensure, to assist with control of blackberries
- Implemented facility appearance improvement projects at the WWRF and lift stations, including pressure washing, exterior painting, and upgrading landscaping and creating a pollinator garden
- Participated in the COVID-19 wastewater surveillance program with Oregon State University (OSU)
- Tying in the stormwater drains to the headworks, eliminating costs associated with quarterly testing with the stormwater permit



Engineering support highlights through OneJacobs

Examples of OneJacobs professional assistance include:

- Design and construction of the bisulfite building controls and feed system
- Analysis of the digester gas co-gen project
- Performing a technology assessment for the gravity belt thickener replacement project

Our support to RUSA reaches far beyond the O&M of the wastewater systems by assisting with technical assistance and municipal services through our unique network of OneJacobs professionals.

As your partner, OneJacobs service includes access to our consulting engineering team based out of our local Corvallis office that provides on-call services to the O&M team. We have more than 242 professionals assigned to the Corvallis office, and we supplement their expertise with a deep bench of subject matter experts across the company, providing the O&M team with rapid responses to any engineering challenge.



O&M overview

Our 11-member team is responsible for operating and maintaining the 7.9-mgd WWRF and nine lift stations. Apart from working full-time hours our operations staff also rotate carrying an on-call phone to provide support 24 hours per day, 7 days per week.

This facility plays a crucial role in safeguarding environmental integrity by discharging treated effluent directly into the South Umpqua River from November 1 to April 30. During the remainder of the calendar year, May 1 to October 31, the effluent is pumped to a holding pond at the NTS. From there, it is irrigated over approximately 340 acres of land where the plant life and soil microorganisms work to remove phosphorus.

Our unwavering commitment to wastewater quality is underscored by our 99.81-percent compliance with our National Pollution Discharge Elimination System (NPDES) permit and regulatory requirements. We remain dedicated to providing the community with the highest quality water while proactively adapting to evolving demands and maintaining operational excellence.

The facility is operating, on average, at 34-percent of its permitted hydraulic capacity. The total volume of wastewater treated last year was 1.44 billion gallons (bg).

Contract parameters

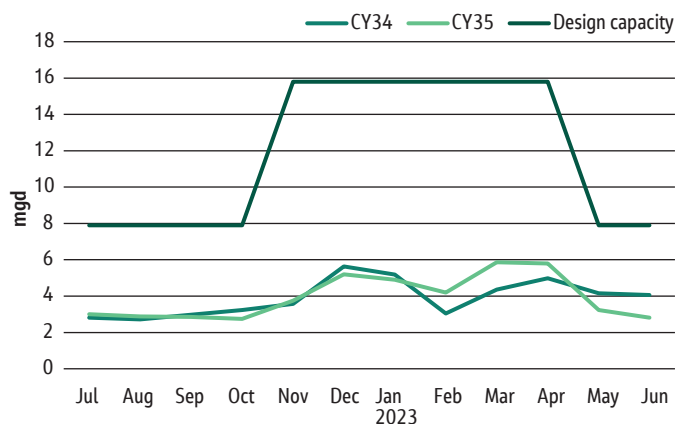
RUSA's agreement with Jacobs for wastewater treatment specifies three parameters for incoming flow:

- Flow of 7.9 mgd dry weather
- Biochemical oxygen demand (BOD) of 11,900 pounds per day
- Total suspended solids (TSS) of 12,400 pounds per day

If these parameters are exceeded by 10 percent, based on a 12-month moving average, the excess constitutes a change in scope. These limits have not been exceeded. Exhibits 3 - 5 detail each contract parameter.

Exhibit 3

Wastewater flow versus permit limit



O&M overview

Exhibit 4
Wastewater TSS versus permit limit

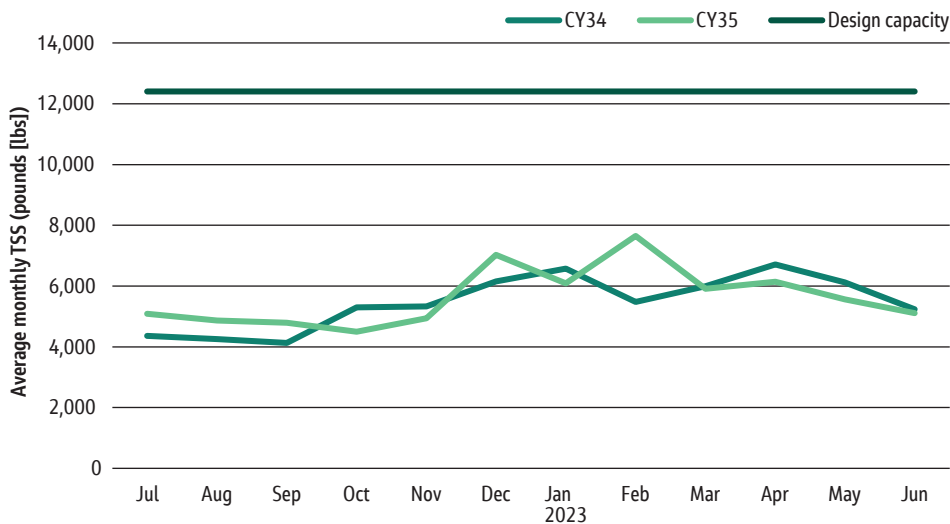
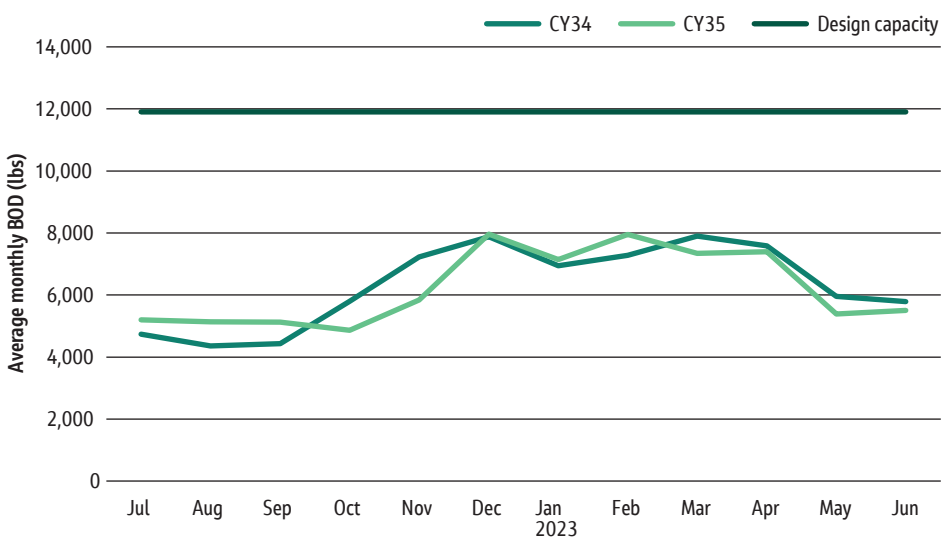


Exhibit 5
Wastewater BOD versus permit limit



During the 2022-2023 contract year, we performed the following tasks to better operate/maintain the facilities and equipment.

WWRF

- The WWRF's storm drain system was completely tied-in to the headworks. This allowed the termination of the facility's stormwater permit, eliminating the risk of exceeding permit parameters and reducing annual testing fees.
- The secondary sludge digester was drained and cleaned. Over time, grit accumulates in the bottom of the digesters. Removing this inert material allows additional space for actual treatment to occur.
- The anammox system surface was cleaned. Periodically, as the anammox basin is fed, solids blind its surface. This reduces ammonia removal by preventing proper infiltration.
- The bottom of aeration basin number one was cleaned. Grit, particularly snail shells, can build up in the bottom of the aeration basins. If not removed, it reduces the treatment volume and could also cover the diffusers. This was a joint venture between Jacobs and RUSA.
- In-line filters were added to the chlorine feed system. The chlorine pumps had issues in the past pulling scale from the interior of the storage tank. This material can clog the pump, cutting off the chlorine feed.
- Several facility surfaces were pressure washed and re-painted, improving the WWRF's appearance.

BIOSOLIDS

- Bench testing was performed on our liquid polymer. A new formulation was selected to optimize screw press dewatering. The new polymer is less expensive, saving money.
- The biosolids storage pond was siphoned empty to prepare for a potential paving project that will assist us with handling stored solids in the future.
- A new liquid polymer pump and motor were installed to replace a broken unit and to improve chemical use efficiency.

NATURAL TREATMENT SYSTEM

- A shaft on a low pressure, low zone irrigation pump at the NTS was replaced and the motor was conditioned.
- An aeration grate was added at the outfall of the NTS to introduce additional dissolved oxygen (DO) before the effluent enters the river.
- New sprinkler heads with longer estimated lifespans are being tested.

- The facility achieved a Commercial Pesticide Operators license through the ODA.
- Caleb received his CPA licenses through the ODA and Brian and Marcus received their pesticide apprentice license.
- A spray tank for the tractor was purchased and installed to allow chemical control of the invasive blackberries.
- Alum feed was increased to 75 gallons per day (gpd) to allow for improved chemical capture of phosphorus.
- The solids blanket depth in the pond was measured. It was found to be about one foot in depth measured and was about one foot deep..
- The NTS pond was drained to examine the walls for any damage and it passed inspection.
- Jacobs and RUSA worked together to install new level control gate valves on the NTS pond outfall structure.

LIFT STATIONS

- A faulty voltage regulator on the back-up generator at the Winchester station was replaced.
- A new gantry crane system was installed at Winchester to assist in pulling pumps for repairs.
- A chopper pump was installed at the Highland station, dramatically reducing the amount of time spent de-ragging.
- New pressure gauges were installed on all three pumps at the Highland lift station.
- A new air compressor was installed at the Winchester station.
- The coolant was changed on all lift station generators.
- Load bank testing was performed on all lift station generators.
- Missions' antenna and control card were replaced at the Wilbur #2 lift station.

PRETREATMENT

- Five inspections were conducted monthly. Results were communicated to RUSA.
- An annual pretreatment report was submitted to the Department of Environmental Quality (DEQ).
- Umpqua Dairy pH was monitored semi-annually.
- An application letter was sent to Umpqua Dairy notifying them of their permit renewal.
- Jack Pollock's permit to haul domestic waste to the facility was renewed.

O&M overview

Laboratory

From November 1 to April 30, we perform winter testing which requires BOD three times a week, TSS three times a week, pH daily, chlorine residual daily average, ammonia once a week and E. coli three times a week.

From May 1, through October 31, we perform summer testing which requires carbonaceous biochemical oxygen demand (CBOD) three times a week, TSS three times a week, pH daily, chlorine residual daily average, ammonia three times a week, E. coli three times a week, nitrate once a week, total Kjeldahl nitrogen (TKN) once a week and total phosphorus once a week.

Natural Treatment System laboratory

During our summer permit (May 1 to October 31) we send our effluent to the NTS. The water enters an artificial wetland before being stored in a pond. An irrigation system featuring three large pumps is used to distribute the stored water over the 340-acre plot. As the effluent percolates through the soil, phosphorous is removed by bacteria and plants.

When the South Umpqua River level is still high enough, we can discharge the water directly from the pond into the river. During this time, we sample daily for total phosphorous, flow and continuous probe data for pH, DO and temperature at sample point SW5.

During the entire compliance period (May 1 to October 31), continuous probes are placed at sample points SW1 (upstream from the NTS), SW5 (the NTS Outfall) and SW6 (downstream of the NTS). These units are retrieved every two weeks, and the data is downloaded, summarized and submitted to the DEQ. They measure pH, DO and temperature. By comparing the data, we can better understand how the NTS discharge is affecting the river beyond its background levels. Currently, we also sample total phosphorous weekly. At sample point MW1 (a wetland well) we take monthly samples for pH, DO, temperature and total phosphorous.

In the last contract year, our laboratory performed 1,406 quality control tests. Only two results were out of control; both were E. coli tests, for a compliance rate of 99.81-percent.





Community engagement

As the world continues to recover from the impacts of COVID-19, we are committed to revitalizing community engagement programs that were pushed to the wayside by the pandemic. During the last year, we took on the following community engagement opportunities:

- Represented the WWRF at an annual tradeshow hosted by Umpqua Community College
- Delivered a tour to a homeschool group focusing on wastewater chemistry
- Hosted a one-day class for operators for part of the Oregon Operators Conference; 15 operators attended
- Project Manager Caleb Trammell is a part-time, online instructor at Umpqua Community College. The coursework covers wastewater treatment and will be administered to future operators across the state. Caleb teaches this course in his spare time outside of work.

Safety

Jacobs places an unwavering emphasis on safety and the well-being of our workforce, a commitment epitomized by our BeyondZero™ initiative. This initiative empowers our employees to champion a positive, secure and healthy work environment for themselves and their colleagues.

BeyondZero revolves around the core principles of safety: preventing injuries, safeguarding others from harm and eliminating unsafe practices, behaviors, or conditions. It is about nurturing a culture of care, actively involving and engaging employees and shaping their beliefs and behaviors towards safety.

At our project site, our safety culture is upheld by dedicated leaders, ensuring zero recordable incidents remains our goal. Safety is everyone's responsibility, and this culture is endorsed not only by Jacobs' leadership but by every individual at the project site.

The unwavering commitment to safety within our team is exemplified by a remarkable milestone — we have completed 6,900 days, almost 19 years, without a single recordable incident, equivalent to an astounding 55,200 hours (about 6 and a half years) of safe and secure work. This outstanding achievement reflects our collective dedication to creating and maintaining a workplace that prioritizes the well-being of every team member. It stands as a testament to our unwavering commitment to fostering a culture where safety is paramount and where each member actively contributes to ensuring everyone returns home safely every day.

**RUSA has worked more than
6,900 days, almost 19 years,
without a recordable incident.**

Sustainability

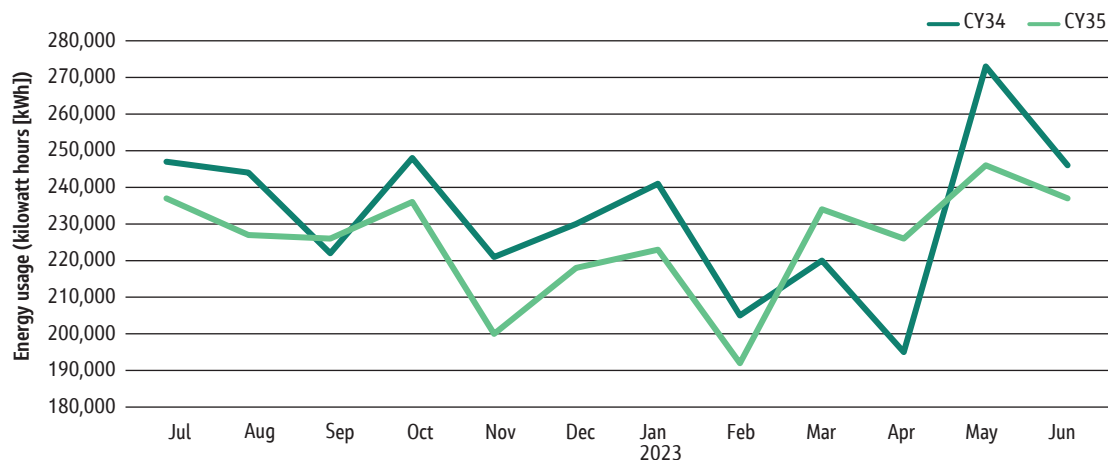
At Jacobs, we recognize that sustainable business practices contribute to the future resilience of the communities we operate in. Wastewater treatment is a very energy intensive process. Finding ways to improve process efficiency means lessening the impact on the environment as well as reducing costs to our client; everyone wins. This last year we created a pollinator garden onsite. Our team tilled, seeded and installed in-ground irrigation on a quarter acre parcel of land with native wildflowers. The garden is irrigated with recycled water, and is enjoyed by employees and visitors to the project site.

Dawn Lesley, Jacobs' newly appointed head of sustainability, visited our site in June and provided additional insight into opportunities to improve process efficiency.

During the last contract year, the WWRF reduced energy use by 3 percent, resulting in \$7,215 in energy savings (Exhibit 6).

Exhibit 6

Reduction in energy usage at the WWRF



To reduce facility waste, we are committed to several recycling programs. This year we recycled:

- **150 pounds** of steel
- **14 pounds** of nitrile gloves
- **330 pounds** of batteries





Looking forward

As Jacobs proudly celebrates 38 years of dedicated service to RUSA, we hold steadfast in our belief our partnership has consistently delivered effectiveness, cost-efficiency and rewarding opportunities for every member of our team, many of whom reside and work within this vibrant community. Our overarching objectives remain centered on delivering excellent service, enhancing our environment and empowering our people.

Looking ahead, Jacobs remains resolute in its focus on enhancing our partnership with RUSA. We are unwavering in raising our own expectations for service delivery, consistently aiming to surpass performance standards. This unwavering focus has consistently yielded successful, efficient and cost-effective O&M of the WWRF. As evidenced by the findings in this report, our commitment to service excellence continues to drive our achievements.

Heading into 2024, the following projects have been targeted:

- Upgrading the aeration channel to enable the trickling filter solids contact operational strategy for energy savings
- Installing new solids thickening equipment. Options are being evaluated by Jacobs' engineering
- Upgrading the W3 water system to improve energy efficiency and water straining
- Replacing the gearboxes and motors on all four clarifiers
- Creating a plan for odor control on the biofilter. A passive system involving a bed of wood chips has been recommended
- Upgrading the aeration channel to allow for trickling filter solids contact in the winter months

We are focused on providing nothing less than excellence to RUSA. Our dedication to being a trusted partner to RUSA and the community remains unwavering as we embark on the next chapter of our journey together.

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