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

REGULAR MONTHLY BOARD MEETING

November 13, 2019

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

November 13th,2019
RUSA Board Room
4:00 p.m.

AGENDA
REGULAR MONTHLY BOARD MEETING

Board of Directors

John Dunn, Chair
David Campos
Rob Lieberman, Vice Chair
Jerry Griese
Kelsey Wood

1. **Call to Order – John Dunn, Board Chair**
2. **Roll Call**
3. **Consider Minutes**
    a. October 9th, 2019 Board Meeting
4. **Contract for Engineering Services**
    a. Review of proposal for Engineering service for the Hooker Rd rehabilitation project from Murraysmith
5. **General Managers Report**
    a. Winchester Pump Station Force Main Replacement
    b. Douglas County Landfill Leachate
    c. FEMA Application for damage claimed disaster relief
    d. Watson Street Mainline Replacement
6. **New Developments**
7. **Staff Report**
8. **Jacobs (ch2m) Plant Operations Report**
9. **Accounts Payable**
10. **Other Business**

AMERICANS WITH DISABILITIES ACT NOTICE
Please contact the Authority's Finance Department, 1297 NE Grandview Dr., Roseburg, OR 97470 or by Phone 541-672-1551 at least 48 hours prior to the scheduled meeting time if you need an accommodation.

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 Chair, John Dunn, called the regular monthly Board Meeting to order at 4:00 p.m. on October 9, 2019 at 1297 N.E. Grandview Drive.

ROLL CALL

Directors

Present: Board Chair John Dunn, Vice Chair Rob Lieberman, Jerry Griese and Kelsey Wood
Absent: David Campos

Others present: General Manager Jim Baird, Finance Director Christine Morris, Office Assistant Harmony Williams, Engineering Tech III Ryon Kershner, Collections Superintendent Steve Lusch and Jacobs Project Manager Jade Mecham.

Consideration of the minutes of the Regular Monthly Board Meeting of Wednesday, September 12, 2019.

Jerry Griese moved to approve the minutes for the Wednesday, September 12, 2019 Roseburg Urban Sanitary Authority Regular Monthly Meeting.
Kelsey Wood seconded the motion.
The motion passed unanimously.

Resolution 19-04 A Resolution Rescinding Resolution 14-04 and Adopting: A public Records Policy

Roseburg Urban Sanitary Authority is an Oregon Special District which is governed by an elected board of directors and required to fully comply with the State of Oregon Public Records Law, ORS 192.410 – 192.505. In order to fully comply with ORS 192.410 – 192.505 RUSA is rescinding Resolution 14-04 as it is outdated and adopting an updated public records policy.

Kelsey Wood moved to approve Resolution No. 19-04, as presented.
Rob Lieberman seconded the motion.

Vote By Roll Call

At this time, Chairman Dunn requested “Roll Call” for Resolution No. 19-04:

John Dunn Yes
Rob Lieberman Yes
Jerry Griese Yes
Kelsey Wood Yes
David Campos
Resolution No. 19-04 was approved with a 4/0 vote

Resolution 19-05 A Resolution Making a Budgetary Transfer of Appropriation Authority for the Fiscal Year 2019-2020

The City of Roseburg has received a proposal for Aerial Mapping Services from GeoTerra to acquire and process new stereo imagery for creating 0.5' pixel orthos and 2' contours with DTM. RUSA partnered with the City in 2013 to update the aerial map of the urban growth boundary that we use as part of our GIS and asset management programs at a great saving by sharing the cost.

Due to the timing of the invoice from the City, a transfer of $14,193.50 from General Operating Contingency to the Administration & Engineering is necessary since there are no funds currently budgeted for this project.

Kelsey Wood moved to approve Resolution No. 19-05, as presented.
Jerry Griese seconded the motion.

Vote By Roll Call

At this time, Chairman Dunn requested "Roll Call" for Resolution No. 19-05:

John Dunn Yes
Rob Lieberman Yes
Jerry Griese Yes
Kelsey Wood Yes
David Campos
Resolution No. 19-04 was approved with a 4/0 vote

General Managers Report

Winchester Pump Station Force Main Replacement Project
The Contractor experienced a failure of an exposed fitting on the force main September 18th, resulting in a sanitary sewer overflow. The overflow discharged into the North Umpqua River. RUSA and Jacobs personnel worked with the Contractor to reduce the amount of sewage that entered the river and repair the fitting. RUSA posted notice at the North Umpqua River, contacted the DEQ and Umpqua Basin Water Association regarding the release of sewage. A press release was issued to radio, TV and the newspaper. RUSA lifted the posting September 20th. A follow up press release was issued on the 20th stating that the river had returned to pre-spill conditions.
Force main construction is continuing. The Contractor has completed approximately 80% of the sanitary sewer work. The project completion is estimated to be in December 2019.

Douglas County Landfill Leachate
Staff is waiting for the results from the lab on the leachate. Once we can understand the level of the constituents of concern we will discuss with the County and the Project Engineer the potential pretreatment requirements.

FEMA Application for Damage Claimed Disaster Relief
Staff is in the process of providing FEMA with a completed application and supporting documents for RUSA's claim. Staff is having weekly meetings with the FEMA project manager for RUSA.

Watson Street Mainline Replacement
RUSA is replacing the sanitary sewer mainline on Watson Street. We are doing the project as an in-house project. The project consists of approximately 270 feet of new 8" sewer and one new manhole. As part of the project we are connecting the existing private building sewers to the new mainline. The project is approximately 80% complete.

CH2M Report

Jade Mecham reported the treatment facility averaged 98% CBOD removal and 96% Total Suspended Solids removal during September. The total Effluent flow was 79.22 million gallons, all of which went to the NTS.

Accounts Payable

The Board reviewed the Accounts Payable Report and Addendum for the October 9, 2019 Accounts Payable.

Rob Lieberman made a motion to approve the Accounts Payable and Addendum as presented.
Jerry Griese seconded the motion.
The motion passed unanimously.

Other Business

None.

Respectfully submitted,

Harmony Williams

Harmony Williams
Office Assistant

INTEROFFICE MEMORANDUM

TO: **RUSA BAORD**

FROM: **JIM BAIRD, GENERAL MANAGER**

SUBJECT: **AGREEMENT FOR ENGINEERING SERVICES – HOOKER ROAD REHAB PROJECT**

DATE: 11/08/19

CC:

Staff have reviewed the pipe line condition information and selected a series of sanitary sewer main lines that need rehabilitation or replacement. The pipe lines are located in the Hooker Road area and are showing significant degradation due to the hydrogen sulfide that has off gassed as a result of the discharge from the Winchester pump station force main.

Staff has been working to establish relationships with additional engineering firms to work with on various types of projects. Murraysmith is an Engineering firm headquartered in Portland, Oregon providing various services throughout the west. They have worked on some significant projects in the field of wastewater in the Northwest. Murraysmith has been rated in the top 50 (nationally) Trenchless Design firms for the last 10 years continuously. They bring national-level expertise with a regional emphasis to their local clients.

Staff has been working with Rob Lee, PE of Murraysmith to develop next year's collection system project. The attached proposal reflects the agreed to design effort and associated costs for the design, bidding and services during construction for the Hooker Road rehabilitation project. The "not to exceed" amount is $86,988. Staff would recommend that the Board direct the General Manager to enter into a personal services agreement for the design services for the project.

To minimize the total cost of the design, RUSA will be entering into additional personal services agreements for project surveying and geotechnical subsurface investigation with two local firms. Entering into separate agreements will eliminate the additional mark-up that the engineering firm would need to place on the subcontractor's costs.

SCOPE OF WORK
Hooker Road Sewer Project
Roseburg Urban Sanitary Authority, Roseburg, OR

Background

Roseburg Urban Sanitary Authority (RUSA) owns and operates the sanitary sewer system in the Hooker Road project area. This system is downstream of pumped wastewater flows that are impacting the structural condition of the concrete sewer pipes and manholes.

RUSA is seeking a sewer collection system consultant to develop Contract Documents and provide engineering services during bidding and construction that will address existing deficiencies and provide long-term structural integrity.

Scope of Work – Tasks, Deliverables, and Schedule

The scope of work describes services to be provided by Murraysmith. Work will be performed by major work tasks outlined as follows:

- Task 1 – Project Management
- Task 2 – Condition Assessment and Field Data Collection
- Task 3 – Public and Other Agency Coordination and Permitting
- Task 4 – Detailed Design
- Task 5 – Engineering Services During Bidding and Construction

Task 1 – Project Management and Meetings

Provide and perform project administration, management activities, and ongoing coordination for the project. This task includes technical and financial management, and liaison with City staff including the following:

- Manage the project scope, schedule, subconsultants and budget
- Coordinate with City
- Prepare and maintain a comprehensive project schedule.
- Prepare monthly progress reports to be submitted with invoices. Monthly progress reports will include task level budget status. Billings will include staff, title, hourly rate, and hours charged to the project.

- Schedule and attend project meetings at appropriate intervals based on design activities. Meetings will include a kick-off meeting and an initial site visit, a 60% design review meeting, and a Final design meeting.

Assumptions

- Project design duration approximately five months and a total project duration of 10 months (through the completion of construction)
- Half-hour monthly progress calls

Deliverables

- Monthly progress reports, invoices and schedule updates.
- Meeting agendas and minutes for meetings attended under this task.

Task 2 – Condition Assessment and Field Data Collection

Task 2 includes the review of existing data and CCTV on the condition of the pipes slated for replacement or rehabilitation and identify and conduct the field data collection needed to support the design and construction. Subtasks performed will include:

- Condition Assessment: Murraysmith will review existing data, including CCTV, staff interviews, and O&M records to determine most appropriate method of construction for each pipe.
- Field Visit: Murraysmith will conduct a field visit and manhole inspection to confirm construction methodology.
    - Pipes and manholes with a structural or hydraulic condition that requires replacement or new installation will require geotechnical investigations and full field survey from edge of ROW to edge of ROW.
    - Pipes and manholes with a structural and hydraulic condition that allows for trenchless rehabilitation will require geotechnical investigations and field survey only in the vicinity of anticipated excavation (e.g., access pits, lateral excavations, etc.).
- Geotechnical Investigation: Murraysmith will coordinate with RUSA's geotechnical firm to conduct geotechnical investigations and expected deliverables. Boring will be performed approximately once per manhole-to-manhole segment being replaced or every 500-linear feet, whichever is less. The geotechnical firm will be responsible for utility locates, notifications, and obtaining all permits needed to conduct the investigations, including traffic occupancy permits, DEQ/ORWD well permits.

- A final PE-stamped report that provides findings and recommendations concerning earthwork (slope stability and cut-and-fill slopes, anticipated groundwater and dewatering, suitability of on-site soils for fill, wet-weather work, rock excavation considerations, and trenchless feasibility analysis). The bore logs and laboratory analysis shall be a part of the final report.

- Topographic Survey: Murraysmith will coordinate with RUSA's surveyor to conduct a comprehensive field survey of existing conditions within the Project area and develop a Project topographic base map using field collected data, as-built mapping, and GIS information. All man-made and natural features necessary for Project design will be depicted with one-foot ground contours (for locations of open-cut construction) within the Project Area on the base map. Mapping shall be oriented to the Oregon State Plane NAD 1983 coordinate system and National Geodetic Vertical Datum 1929 (NGVD) and will stamped by a Professional Land Surveyor registered in the State of Oregon. Overall planimetric information collected during the field survey to be depicted and annotated on the mapping shall include, but not be limited to the following:

  - Property lot lines.

  - Right-of-way lines.

  - Property monuments found including description and condition.

  - All street and roadway features including material type, centerlines, edges of pavement, traffic control devices, striping, speed cushions, and signage.

  - Driveways, driveway let-downs, and sidewalks, landscape strips including material type.

  - Significant structures or landscaping features likely to be impacted by construction (e.g. retaining walls, patios, pathways, yard structures, lawns, planting areas, high value ornamental shrubbery or trees).

  - Location and footprint configuration of all residences, buildings, or structures.

  - Lowest floor elevation of structures and presence of a basement served by sanitary and/or storm sewer lateral. Include cleanout locations if available. Structure characteristics shall be noted on mapping if discernible (i.e., full basement, half-basement, daylight basement, single level, etc.).

  - Tree Survey: Locate the drip line canopy of individual trees or grove trees within the Project Area. Provide the location, quantities, size in diameter breast height (dbh), condition, genus and species of all trees, including snags, within the Project Area that are 6-inch dbh or greater.

  - Fences by type, material, and height.

- Key landscaping features including significant shrubs or high-value ornamental trees, retaining walls, planters, lawn and landscaping areas.

- Creeks, drainages, water courses, or water bodies defined by toe and top of bank, channel configuration, and thalwegs.

- Staking established by environmental subconsultant or owner delineating specific areas of environmental concern including wetland delineations, Vegetated Corridor limits, and/or significant natural resource areas.

- Utilities, including water, gas, power, telephone and cable utility lines. Includes all valves, meters, hydrants, poles, pedestals, guy anchors, or other appurtenances associated with each system. Murraysmith's surveyor will request field utility locates prior to beginning survey field work, and tie all existing utility locations marked in the required survey area by surveying and accurately depicting them on the topographic map.

- Sanitary sewer system piping, manholes, and cleanouts including structure and pipe sizes and materials, invert and rim elevations.

- Storm sewer system piping, manholes, culverts, inlets and catch basins including structure and pipe sizes and materials, invert and rim elevations.

- All other major topographic features likely to impact or be impacted by the design or construction of this Project.

- Easements of record associated with all Project parcels.

Assumptions

- RUSA will directly contract with the geotechnical firm and field surveyor.

- Geotechnical investigation will occur within 6 weeks of the initial request, weather-permitting. The draft report will be due within 3 weeks of completion of the field work.

- Field survey will be full topographic from edge of ROW to edge of ROW in locations of full pipe and limited to a 40-foot by 40-foot area in the location of anticipated excavation needed for trenchless rehabilitation methods (e.g., access pits, isolated manhole replacement, etc.).

Task 3 – Public and Other Agency Coordination and Permitting

Murraysmith shall provide assistance to RUSA in communicating with the public and other agencies and obtaining permits needed to construct the work. Subtasks include:

- Develop content and support to assist RUSA's public coordination efforts.

- Assist RUSA with other agency coordination, including applying for and obtaining permits needed to conduct the work:

    - City of Roseburg, Street Closure Permit
    - City of Roseburg, Street Cut Permit
    - Oregon Department of Environmental Quality 1200-C Permit
    - Oregon Department of Environmental Quality Land Use Compatibility Statement

Deliverables

- Public coordination content shall include a single project mailer (informational fact sheet to reflect the design approach and include an anticipated bidding and construction schedule in addition to previous information such as the project purpose and project area map) and presentation materials for a single public meeting.

- Permit applications as listed above

Assumptions

- RUSA will lead all public outreach and other agency coordination efforts, including obtaining Permits of Entry (POEs) for all homes connected to project pipe where lateral bypassing and rehab/replacement will take place.

- All work, including work performed in easements, will be conducted via POE. No temporary construction easements are anticipated.

- RUSA will coordinate with any existing utilities that may require relocation in order to replace existing sewer infrastructure (e.g., manholes, etc.).

- The proposed project is not anticipated to trigger wetland, floodplain and/or other environmental permitting. In the event DEQ, Oregon Department of State Lands and/or US Army Corps of Engineers require additional permitting beyond the scope of this effort, RUSA will be notified immediately of potential increased level of effort.

- Murraysmith will being the process of working with the railroad but acquisition of any permits will be the responsibility of the construction contractor.

- RUSA shall submit prepared permit applications and pay for all permit fees.

Task 4 – Detailed Design

Under this task, the design of the project will be accomplished. Murraysmith will prepare the documents necessary for construction, including bidding documents, plans, specifications and construction cost estimates. RUSA will provide front-end contract documents. The detailed subtasks are as follows:

Task 4.1 – 50 Percent Design

Consultant shall prepare and submit a 50 percent design package to RUSA for review. All items listed below to support the 50 percent design shall be included:

- 50 percent plans including plans and profiles for new open-cut installation sewers and manholes and pipe bursting, and plan views for sewers slated to for cured-in-place pipe rehabilitation.
- Draft Special Provisions specification sections for sewer rehabilitation.
- Engineer's opinion of probable construction cost based on itemized quantity estimate, with appropriate contingencies.
- Utility Coordination: Locate utilities, request and obtain utility as-builts, prepare utility conflict log, and send utility notification letter to utility companies.

Task 4.2 – 75 Percent Design

Consultant shall prepare and submit a 75 percent design package to RUSA for review. The 75 percent design package will be updated to reflect RUSA's 50 percent review comments and include geotechnical information overlaid on the open-cut portions of the project. All items listed below to support the 75 percent design shall be included:

- 75 percent plans including all proposed sheets required for construction.
- RUSA's standard contract documents and front-end specifications and general requirements.
- Draft Special Provisions for sewer rehabilitation.
- Updated engineer's opinion of probable construction cost based on itemized quantity estimate, with appropriate contingencies.

Task 4.3 – 100 Percent Final Design (Bid Ready)

Consultant shall prepare and submit 100 percent final design package to RUSA for bidding. The final design package will be updated to reflect RUSA's 75 percent review comments. Items listed below to support the 100 percent final design shall be included:

- Final stamped and signed plans including all proposed plan sheets required for construction.
- RUSA's standard contract documents and front-end specifications and general requirements.

- Final Special Provisions.
- Final engineer's opinion of probable construction cost based on itemized quantity estimate, with appropriate contingencies.

Assumptions:

- Existing pipe sizes are adequate; no hydraulic or capacity modeling will be performed.
- RUSA's on-call geotech consultant will perform any potholing deemed necessary to confirm depth and material of other utilities.
- Contract Documents will utilize the 2018 Oregon Standard Specifications for Construction.
- Sewer rehabilitation design drawings will be 1"=40' scale with topographic survey data and RUSA provided GIS background in areas of complete trenchless rehabilitation.
- A single conceptual traffic control drawing will be prepared as required by the City of Roseburg.

Deliverables:

- 50%, 75%, and 100% final plans, specifications and estimates in electronic format
- Final bid package (one reproducible hard copy)
- Summary of review comments received for each submittal, with proposed Consultant response to each review comment

Task 5– Bid and Award Support Services

Under this task, the Consultant shall provide services in support of RUSA's bidding process, including the following bidding and award support services:

- Responding to questions from bidders
- Preparing addenda
- Evaluating bids and preparing a letter of recommendation of Award to RUSA's Board.
- Providing engineering support during construction, including submittal reviews, responding to Requests for Information (RFIs), and developing responses to change order requests or field directives.
- Reviewing and making recommendation for payment on Contractor's progress payments and notice of substantial completion.

Deliverables

- Responses to bidder questions
- Award recommendation letter
- Submittal response comments
- Responses to change order requests and field directives

Assumptions

- Services during bidding assumes responding to 2 requests for clarification and preparation of one addendum.
- Services during construction assumes 10 submittal reviews and responding to 2 requests for information, review of 1 change order request, review of 2 field directives, and attendance at 2 progress meetings.
- Two field visits during construction are anticipated.
- Construction is anticipated to last a maximum of 5 months.

Fee Estimate

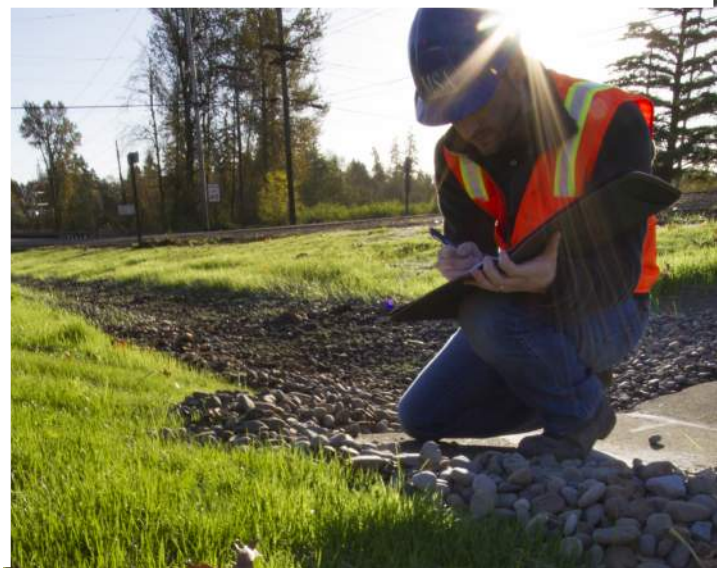
Murraysmith proposes to complete this work as detailed above on a time and expenses basis summarized on the attached Fee Spreadsheet. Agreed "not-to-exceed" amounts are to be based on the scope of work incorporated herein and will not be exceeded without approval and written authorization by RUSA.

Schedule

The proposed schedule provides for the work to commence in December 2019 with design to be completed by March 2020 and Construction to be substantially complete by October 2020.

HOOKER ROAD SEWER PROJECT
ROSEBURG URBAN SANITARY AUTHORITY, OREGON
PROPOSED FEE ESTIMATE

	LABOR CLASSIFICATION (HOURS)						Estimated Fees				
	Principal Engineer VI $257 Lee	Engineering Designer I $126 Usagawa	Professional Engineer III $149 Swartzendruber	Technician IV $148 Harjala	Admin. II $97 Pitts	Hours	Labor	Subconsultants	Expenses	CADD Units $18/hr	Total
Task 1 - Project Management											
Task 1.1 - Project Setup and Kickoff Meeting	8	8			2	18	$ 3,258		$ -	$ -	$ 3,258
Task 1.2 - Monthly invoices and progress calls	12	10			10	32	$ 5,314		$ -	$ -	$ 5,314
Task 1 Subtotal	20	18	0	0	12	50	$ 8,572	$ -	$ -	$ -	$ 8,572
Task 2 - Condition Assessment and Field Data Collection											
Task 2.1 - Review CCTV and make recommendations on tech and geotech	4	16				20	$ 3,044		$ -	$ -	$ 3,044
Task 2.2 - Field Visit	4	4				8	$ 1,532		$ 229	$ -	$ 1,761
Task 2.3 - Develop survey requirements and coordinate Survey	2	6				8	$ 1,270		$ -	$ -	$ 1,270
Task 2 Subtotal	10	26	0	0	0	36	$ 5,846	$ -	$ 229	$ -	$ 6,075
Task 3 - Public/Other Agency Coordination and Permitting											
Task 3.1 - Develop Outreach Materials	6	12				18	$ 3,054		$ -	$ -	$ 3,054
Task 3.2 - Permitting	6	22		8		36	$ 5,498		$ -	$ 144	$ 5,642
Task 3 Subtotal	12	34	0	8	0	54	$ 8,552	$ -	$ -	$ 144	$ 8,696
Task 4 - Detailed Design											
Task 4.1 - 50 Percent Design	20	52	4	46		122	$ 19,096		$ -	$ 900	$ 19,996
Task 4.2 - 75 Percent Design	12	36	2	24		74	$ 11,396		$ 229	$ 432	$ 12,057
Task 4.3 - Final Design	8	30	1	14		53	$ 8,057		$ -	$ 252	$ 8,309
Task 4 Subtotal	40	118	7	84	0	249	$ 38,549	$ -	$ 229	$ 1,584	$ 40,362
Task 5 - Engineering Services Duirng Bidding and Construction											
Task 5.1 - ESDB	2	12		2		16	$ 2,322		$ -	$ 36	$ 2,358
Task 5.2 - ESDC	43	60	8	4		115	$ 20,395		$ 458	$ 72	$ 20,925
Task 5 Subtotal	45	72	8	6	0	131	$ 22,717	$ -	$ 458	$ 108	$ 23,283
TOTAL - ALL TASKS	*127*	*268*	*15*	*98*	*12*	*520*	*$ 84,236*	*$ -*	*$ 916*	*$ 1,836*	*$ 86,988*



Wastewater

Stormwater

Wastewater & Stormwater Engineering Services

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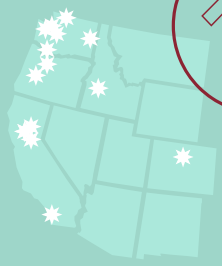
99%
of our work is for public agencies



17
Offices

EMPLOYEES
277

Our Core Focus

Crafting infrastructure to help communities prosper

WHAT WE DO →

SERVICES
- Water
- Wastewater
- Stormwater
- Transportation

1980
FOUNDED in Portland

Just the Right Size

We are large enough to employ diverse talent to solve your biggest challenges, yet small enough to genuinely care.

We're Invested

We live where we work so we take project success personally.

We Keep Great Company

We take care of our people so they can take care of you.

Water

Since Murraysmith's founding, our engineers have been regional leaders in water system engineering for our communities.

WATER SERVICES

- Water supply planning and development
- Water system planning
- Hydraulic modeling and analyses
- Pipeline routing studies and design
- Reservoirs, dams, pump stations, and wells
- Water treatment
- Metering and flow control systems
- River intakes/stream diversions
- Hydroelectric feasibility
- Aquifer storage and recovery (ASR)
- Corrosion control/cathodic protection
- Water rights

Wastewater

From small diameter sewer collection systems to multi-million-dollar wastewater treatment plants, Murraysmith has assisted communities in all aspects of wastewater system planning and design.

WASTEWATER SERVICES

- Wastewater pump stations
- Comprehensive wastewater facilities planning
- Collection system/basin analysis
- Gravity sewers and force mains
- Trenchless technologies and sewer rehabilitation
- Wastewater treatment facilities
- Water reclamation and reuse
- NPDES permitting and compliance
- Biosolids handling and beneficial use
- Odor and corrosion control

Stormwater

Murraysmith provides wide-ranging stormwater services to public agencies, spanning the project's life cycle from master planning through operations and maintenance.

STORMWATER SERVICES

- Water resource management planning
- Stormwater master planning
- Permitting and regulatory compliance
- Hydrologic and hydraulic modeling
- Detention, retention, and water quality treatment design
- Low Impact Development/ Green Stormwater Infrastructure
- Fish passage and conveyances
- Wetland mitigation
- Combined sewer separation
- CSO/Pollution control
- Operations, maintenance, and asset management
- Stormwater pump stations

Transportation

Our transportation design and construction management experience ranges from small-scale city engineering and local agency assignments to multi-million-dollar, federally funded freeway projects.

TRANSPORTATION SERVICES

- Roadway and geometric design
- Pavement rehabilitation
- Safety upgrades
- Bike and pedestrian enhancements
- Trail design
- ADA compliance
- Intersection design
- Utility coordination
- Integrated road and utility designs
- Construction inspection and management

WASTEWATER

KEY EXPERTISE

- Wastewater Pump Stations
- Wastewater Treatment Facilities
- Comprehensive Wastewater Facilities Planning
- Collection System Analysis/Basin Modeling
- Gravity Sewers and Force Mains
- Trenchless Technologies and Sewer Rehabilitation
- On-site Systems and Innovative Technologies
- Water Reclamation and Reuse
- NPDES Permitting and Compliance
- Biosolids Handling and Beneficial Use
- Combined Sewer Overflow (CSO)
- Infiltration and Inflow (I&I)

We complete wastewater system facilities plans and design, permitting, and construction management services as part of many sewerage system improvement programs. Our engineers are experienced with all aspects of municipal wastewater collection, conveyance, pumping, treatment, and effluent discharge.

In addition to working for several agencies on a long-term continuing basis, we assist many local public agencies with the development of wastewater system planning and design standards. We proactively apply trenchless technologies and other innovative solutions to the design and construction of system improvements. We have engineered one of the region's largest vacuum sewer systems and have completed numerous combined sewer overflow (CSO) projects.

We place high importance on low-impact, sustainable, green alternatives, such as reclaimed water reuse, minimizing construction impacts, applying appropriate technologies with constant view to long-term value, serviceability, and sustainability.





CONVEYANCE (SEWERS/FORCE MAINS)

From small diameter sewer collection systems to large diameter major trunk sewers and interceptors, Murraysmith designers apply proven techniques for trouble-free construction, proper hydraulic performance, low maintenance, and long service life.

Whether it is new construction or existing sewer rehabilitation, our engineers overcome the most challenging conditions addressing: deep trenching requirements, rock excavations, railroad/creek/wetland crossings, utility conflicts and confined corridors.

We make certain that project designs are constructible at economical cost with minimal risk of construction problems and contractor claims. We target the best technology for infiltration and inflow (I&I) situations so as to permanently fix problems to save our public agency clients money.

"Murraysmith did a tremendous job in assisting the City with the I&I reduction project that included over 20,000 linear feet of sanitary sewer rehabilitation work and 6,000 linear feet of storm drainage improvements. Because of the timelines set forth by the ARRA program, the design schedule was extremely accelerated. Murraysmith provided exceptional performance in delivering designs on time and within the project budget."

SUE NELSON, ENGINEERING SUPERVISOR, CITY OF ST. HELENS

2013-2017 Sanitary Sewer Replacement, City of Bellevue

KEY EXPERTISE

- Condition Assessment
- Gravity Sewers & Force Mains
- Large Diameter Trunk Sewers
- Cured-in-Place Piping (CIPP)
- Pipe Bursting/Sliplining
- Horizontal Directional Drilling (HDD)
- Auger Bore/Microtunneling
- Combined Sewer Overflow (CSO)
- Infiltration & Inflow (I&I) Reduction
- Manhole Rehabilitation

WASTEWATER PUMP/LIFT STATIONS

Murraysmith is experienced with both new pump stations and the remodeling and upgrading existing stations. This work often includes pump station siting (for new stations), flow assessments, geometric design, building design, pump selection, standby power, supervisory control and data acquisition (SCADA), and the engineering and design of upstream and downstream sewer pipeline improvements and condition assessments of existing force main pipelines.

The firm has designed many projects involving the conversion of existing wet pit/dry pit style stations to wet-well-only submersible pump style stations, as is a common practice today. Building and site improvements are designed for surrounding site compatibility.

Murraysmith has assisted several public agencies with the development of design and construction standards for wastewater pump stations.

"Murraysmith's plans have exceeded my expectation for quality and have always been delivered on time…Their staff answer questions with confidence and a clear understanding of the technical details and their effects on the overall project. Their understanding of how public agencies operate and their dedication to providing well developed work products simplify my duties and boost my confidence that the project will succeed."

DON RANGER, PE, PROJECT ENGINEER, CITY OF BOTHELL

Lift Station No. 24 Replacement, City of Everett

KEY EXPERTISE

- Wet Pit/Dry Pit Station Conversions
- Submersible Pumps
- Variable Frequency Drives
- Corrosion Control Systems
- Odor Control
- Force Main Condition Assessment
- Force Main Air Release Stations
- Caisson Construction
- Excavation Support Systems
- Instrumentation & Control Systems
- Vacuum Pump Stations
- Flow Rate Evaluations
- NFPA 820 Classification
- Standby Power Systems
- Public Involvement Processes
- Permitting & Approvals
- Construction Management Services
- Operations & Maintenance Manuals
- Start-up Services

WASTEWATER TREATMENT FACILITIES

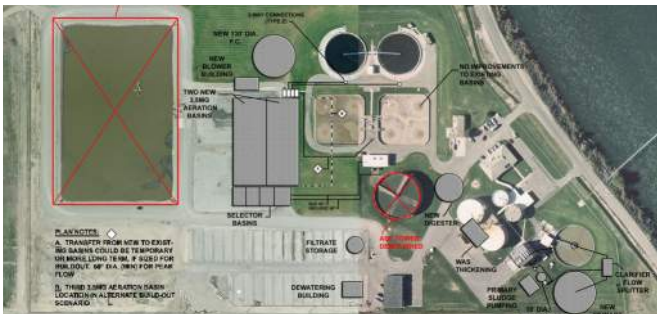
Wastewater treatment is a vital part of keeping our environment livable and healthy. Murraysmith designers implement high-value, practical, environmentally sound solutions that provide optimal treatment performance while maintaining reasonable levels of operations cost and energy usage.

Wastewater treatment facilities are designed for long service life and low maintenance requirements under the harsh conditions encountered in the various treatment processes. Extra effort is taken to be a good neighbor to the surrounding community through appropriate architecture, adequate screening and buffering, and proper noise and odor attenuation.

Thorough review of all appropriate proven technologies is accomplished to provide the best fit for each individual community while meeting current permit requirements and preparing for anticipated future regulations. Every opportunity for reuse of this valuable resource is considered in development of the overall treatment program.

"Murraysmith responded immediately and thoroughly. I was impressed with their technical competence and the speed at which they diagnosed the issue. Murraysmith developed an effective solution and easily met the deadline. I would highly recommend this firm, not only for their technical competence but also for their responsiveness."

JOHN CATON, PUBLIC WORKS MANAGER, CITY OF TWIN FALLS



Wastewater Treatment Plant Upgrades, City of Idaho Falls

KEY EXPERTISE

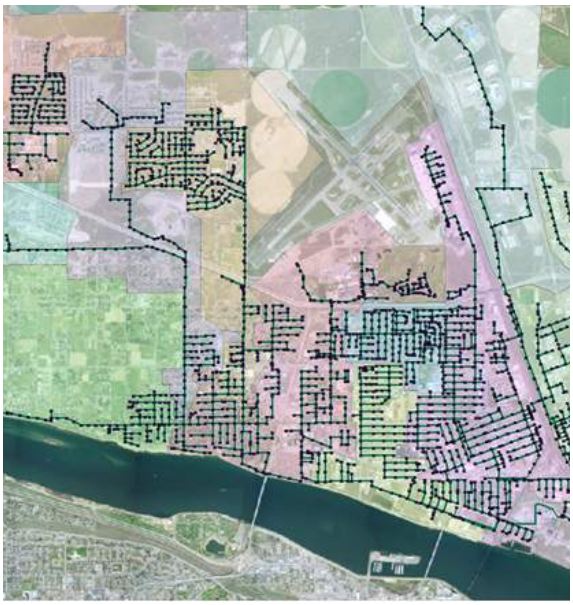
- Wastewater Comprehensive & Facilities Planning
- Plant Capacity Analysis
- Condition Assessments
- Optimization Studies
- Process Design
- Water Reclamation & Reuse
- NPDES Permitting & Compliance
- Biosolids Handling
- On-site Systems & Innovative Technologies
- Odor & Corrosion Control
- Outfalls
- Mixing Zone Studies
- Treated Effluent Disposal

COMPREHENSIVE SYSTEM PLANNING, HYDRAULIC ANALYSIS & MODELING

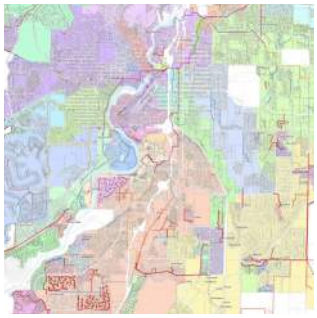
Murraysmith has completed numerous planning projects that have guided successful long-range Capital Improvements Programs (CIPs) for many public agencies. This planning often leads to the design and construction of recommended improvements. Many of these collection, conveyance, treatment and discharge/reuse projects have included complex permitting, environmental, and public involvement processes.

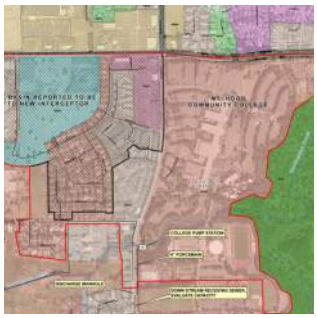
We are leaders in the application of innovative and sustainable solutions to meet wastewater system needs. This includes evaluating energy recovery potential, water reclamation/reuse possibilities, and other opportunities that not only consider wastewater management, but the management of water as a precious resource.

Murraysmith is experienced with the commonly used computer modeling software for hydrologic and hydraulic analysis of wastewater systems, including; EPASWMM, InfoSWMM, XPSWMM, PCSWMM, HYDRA, SEWERCAD and a variety of other programs. We also employ cutting edge optimization techniques to minimize capital and operational costs associated with sewer collection systems.



Comprehensive Sewer Plan, City of Pasco





KEY EXPERTISE

- Wastewater Comprehensive & Facilities Planning
- Collection System Analysis/Basin Modeling
- Capital Improvements Program (CIP) Development
- Geographical Information System (GIS) Development
- Rate and SDC Studies
- Improvement Implementation
- System Mapping
- Facility Condition Assessment
- I&I Studies

"I'll be showing him a copy of your WW pump station report as example of how things should be done (in other words, I thought you did a great job)... Thanks again to you, Brian and Shelby for the great job and the professionalism."

BILL HEUBACH, WATER SYSTEM SEISMIC PROGRAM MANAGER, SEATTLE PUBLIC UTILITIES

TRENCHLESS TECHNOLOGY

Murraysmith brings state-of-the-art expertise in trenchless technologies to the public works field. With recent developments in the industry, expanded choices are provided to engineers, construction contractors and public agencies that make the application of trenchless technologies more affordable than ever before.

In the Pacific Northwest, the drivers for trenchless technology are often conflicts with other utilities, poor soil conditions, disturbance avoidance of environmentally sensitive areas or other high value surface features, constructability challenges and cost.

Murraysmith has successfully completed over 25,000 feet of pipe installation using HDD technology. Murraysmith has successfully completed the installation of over 65,000 feet of CIPP and 45,000 of pipe bursting for pipe ranging 6-inch to 42-inch in diameter.

"They have done a wonderful job for us on a highly complex project and continue to do so on current work. They are highly responsive, they keep us well-informed, and overall Murraysmith performs at an exceptional level. I highly recommend Murraysmith to anyone that is looking for a firm that quickly responds to the needs of a municipality or public utility."

JUSTIN RUSH, ENGINEERING PROJECT MANAGER,
CITY OF ST. HELENS

East 1st Street Sewer Extension, City of Arlington

KEY EXPERTISE

- Horizontal Directionally Drilled (HDD) HDPE and Steel Pipe
- Pipe Bursting
- Cured-in-Place Pipe (CIPP)
- Sliplining
- Auger Boring
- Pipe/Casing Jacking
- Microtunneling

2011 ▪ 2012 ▪ 2013 ▪ 2014 ▪ 2015 ▪ 2016

TOP 50 TRENCHLESS DESIGN FIRMS

CONSTRUCTION ADMINISTRATION & MANAGEMENT

Murraysmith believes it is important for the design engineer to take an active role in the construction phase of the project. Our goal is to provide optimal value in the delivery of a constructed project to meet expectations at final completion as well as anticipated costs and long-term operational and performance objectives, all with minimal exposure to expensive and disruptive contractor claims.

We can provide maximum value by taking on the lead role in construction contract administration, field observation and construction management. Since our designs are developed with a keen sense of the construction process, we can help foresee and avoid potential construction issues. We have developed standardized procedures that are systematically proven in the field and constantly updated to reflect changes in state public contracting law and regional trends in the construction industry.

"I am impressed with Murraysmith's experience, competence, and flexibility. They have made my life easier, and I look forward to working with them on infrastructure projects in the future."

ANNA CRICKMER, PE, PROJECT MANAGER, STATE OF WASHINGTON DEPARTMENT OF CORRECTIONS

Monroe Correction Complex 12-inch Diameter Water Line, Washington State Department of Corrections

KEY EXPERTISE

- Bidding & Award Services
- Pre-bid Site Tours
- Pre-construction Conference
- Shop Drawings & Submittals
- Monthly Pay Requests
- Clarifications & Change Orders
- Project Meetings
- On-site Construction Observation
- Monthly Project Status Reports & Project Files
- Final Inspection & Warranty Inspections
- Avoiding/Reducing Claims & Protests
- Contractor Negotiations
- Regulatory Agency Coordination
- Quantity Tracking
- Testing, Start-up & Training
- Operation & Maintenance Manuals
- Project Close-out
- Record Drawings

STORMWATER

KEY EXPERTISE

- Water Resource Management Planning
- Stormwater Master Planning
- Permitting and Regulatory Compliance
- Hydrologic and Hydraulic Modeling
- Detention, Retention, and Water Quality Treatment Design
- Low Impact Development/Green Stormwater Infrastructure
- Fish Passage and Conveyances
- Wetland Mitigation
- Combined Sewer Separation
- CSO/Pollution Control
- Operations, Maintenance, and Asset Management
- Stormwater Pump Stations

We complete stormwater system facilities plans for Northwest public agencies, performing design, permitting and construction management services as part of many stormwater system improvement programs. Our engineers perform all aspects of municipal stormwater collection, conveyance and treatment, and with overall stormwater program management.

Murraysmith serves several agencies on a long-term continuing services basis with City and District Engineering services. This work has involved a wide variety of stormwater management interests, as well as plan reviews and inspections associated with private development. We routinely applies Low Impact Development (LID), green theme stormwater management concepts to our planning and design work, and have completed numerous successful fish friendly culvert designs and fish passage restoration projects. We are experienced in the practical application of all state-of-the-art, innovative technologies for stormwater management.





DRAINAGE CONVEYANCE & CULVERT DESIGN

Murraysmith has completed numerous storm conveyance piping and culverts designs ranging from large, multi-faceted highway drainage projects, to storm drainage systems for local streets. We use our strong stormwater master planning ability to bring long-term value to our projects by applying a broad view of stormwater systems and how individual parts relate to the entire system. We perform basin analyses routinely to assess pipe and culvert capacities and deficiencies, and are experts at overall conveyance analysis and upstream and downstream effects when analyzing existing and future conditions.

Our experience with open trench and trenchless construction methods includes the most challenging conditions including deep pipes, hard rock construction, railroad crossings, wetland and creek crossings, and work in highly confined and utility congested corridors. We routinely design project-tailored hydraulic structures, particularly for large diameter piping, including flow splitting, pipe junctions, and energy dissipation systems, etc. We have also completed numerous successful fish-friendly culvert designs and fish passage restorations.

"Murraysmith worked closely with the City's engineering department and with members of the utility to ensure the infrastructure improvements met the project objective, were designed in accordance with current City standards, and were in compliance with other state and environmental regulations."

JIM KELLY, UTILITY MANAGER, CITY OF ARLINGTON

Prairie Creek Culvert Replacement, City of Arlington

KEY EXPERTISE

- Basin Hydrologic Analysis
- Master Planning/Comprehensive System Planning
- Capital Improvement Plans
- Storm Drainage Design
- Pipe and Culvert Rehabilitation
- Trenchless Construction and Rehabilitation
- Stream/River Hydraulics
- Stream Flow Analysis
- Fish Passage
- Fish Habitat Restoration
- Intergovernmental Agreements
- Interagency Facilitation
- Environmental Assessments
- Permitting/Regulatory Approvals
- Construction Management

STORMWATER MODELING

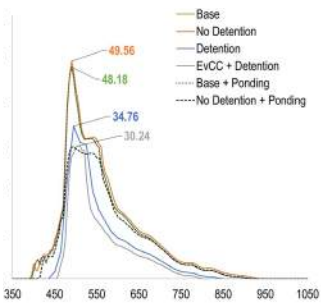
Murraysmith has extensive modeling experience for stormwater planning, conveyance capacity analysis and watershed studies. Using industry standard hydraulic engines such as SWMM in the ArcGIS environment, HEC-RAS, and HSPF, Murraysmith has assisted public works clients throughout the Northwest to identify cost-effective solutions for infrastructure improvements. We routinely perform master planning with hydrologic and hydraulic analysis of drainage basins to identify system deficiencies, flooding studies, and improvement alternatives. We provide comprehensive modeling of existing and proposed improvements and present the findings in a clear and easy to understand format.

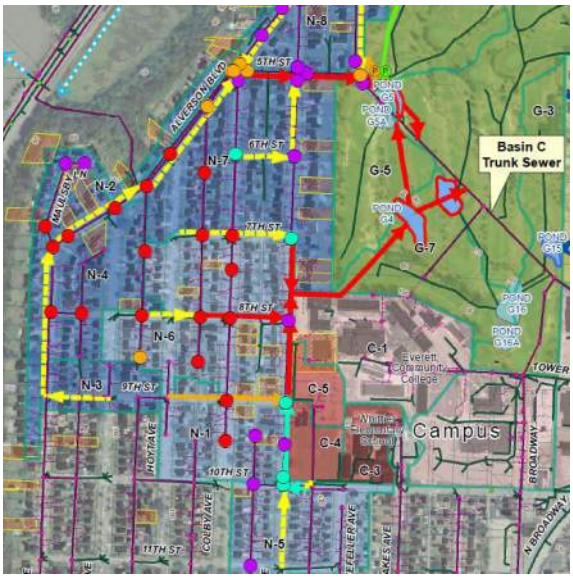
Murraysmith models Low Impact Development (LID) and green theme stormwater management concepts from planning level through final design. We have successfully completed numerous fish passage restoration projects evaluating sediment transport, scour, and peak flow velocities. We provide practical application and modeling of innovative technologies for stormwater management and water quality treatment.

We regularly incorporate trenchless methods into design in the process of modeling and evaluating solutions. In addition to hydrologic and hydraulic modeling, we provide evaluations of site-specific water quality modeling using state-of-the-art modeling software, such as US EPA's SUSTAIN, Biotic Ligand Model (BLM), CE-QUAL-W2 (for temperature and water quality), and others.

"The Region Environmental review of the stormwater management plan is complete and has been found to be satisfactory. Several people, including myself, wanted to compliment the consultant for writing an especially clear and concise report, and for incorporating infiltration and low-impact designs. Nice work!"

STEVE GISLER, OREGON DEPARTMENT OF TRANSPORTATION





Northwest Stormwater Separation Project, City of Everett

KEY EXPERTISE

- Stormwater collection and conveyance system modeling
- Land use analysis
- Hydrologic, hydraulic, and water quality modeling
- Data collection and QA/QC
- Model calibration
- Capacity analysis
- Future improvement identification
- Capital improvement plan development
- GIS/model database integration and maintenance
- Model training
- Low Impact Development modeling
- Infiltration modeling
- Detention/Retention flow routing
- River and Stream 1- and 2-Dimensional modeling
- Floodplain and Flood Insurance Studies
- Trenchless Technology CIP Solutions

ON-SITE AND REGIONAL DETENTION, RETENTION, & WATER QUALITY ANALYSIS & DESIGN

Murraysmith provides up-to-date expertise in all facets of stormwater detention, retention and water quality analysis and design. Murraysmith stays abreast of the latest Low Impact Development (LID) techniques and Best Management Practices (BMPs) and regularly incorporates these techniques cost effectively into projects to manage stormwater. These LID techniques and BMPs include bioretention, biofiltration swales and slopes, compost amended vegetated filter strips, flow-through planters, infiltration, pervious pavement and both underground and open-surface detention. Murraysmith routinely performs basin hydrologic analysis and models flows to analyze various scenarios for stormwater collection, conveyance, detention, and water quality.

We provide a high level of service by applying the right balance of traditional and innovative stormwater management approaches to address changing stormwater management guidelines. Murraysmith collaborates closely with our clients, the regulatory agencies and other key stakeholders so that the stormwater goals of projects can cost effectively be met and the project permitting can move forward without delay to the project schedule.

"I like working with consultants who communicate well, are responsible and accountable. I like having my questions answered promptly, issues dealt with right away, deadlines met and budgets not exceeded. That's been my experience with Murraysmith and that's why we will continue to use Murraysmith."

RICHARD HEFTI, PE, SENIOR ENGINEER, CITY OF EVERETT

Northwest Stormwater Separation Project, City of Everett

KEY EXPERTISE

- Basin Hydrologic Analysis
- Regional Facilities Design
- Low Impact Development Technologies
- Best Management Practices Selection and Design
- Lift Station Design
- Gravity and Force Main Design
- Stream/River Hydraulics
- Fish Habitat Restoration
- Intergovernmental Agreements
- Interagency Facilitation
- Environmental Assessments
- Permitting/Regulatory Approvals
- Construction Management

GENERAL MANAGERS REPORT

Date: 11/08/19

To: Roseburg Urban Sanitary Authority, Board of Directors

From: James V. Baird, General Manager

Re: General Managers Informational Report to the Board

Winchester Pump Station Force Main Replacement Project

The Contractor has installed the meter vault and valve vault adjacent the pump station. The contractor is continuing to install the dual force main.

The Contractor has completed approximately 25% of the sanitary sewer work. The project completion is estimated to be in December 2019.

Douglas County Landfill Leachate

Staff is waiting for the results from the lab on the leachate. Once we can understand the level of the constituents of concern we will discuss with the County and the Project Engineer the potential pretreatment requirements.

FEMA Application for Damage Claimed Disaster Relief

Staff is in the process of providing FEMA with a completed application and supporting documents for RUSA's claim. Staff is having weekly meetings with the FEMA project manager for RUSA.

Watson Street Mainline Replacement

RUSA is replacing the sanitary sewer mainline on Watson Street. We are doing the project as an in-house project. The project consists of approximately 290 feet of new 8" sewer and one new manhole. As part of the project we are connecting the existing private building sewers to the new mainline. The project is approximately 95% complete.

Bio Solids Building Expansion Project

The contractor is approximately 56% complete on the project. The site grading, concrete floor and walls have been completed.

The contractor has submitted the first pay request in the amount of $163,571.29 with 5% retainage withheld for $8,164.71. The total request for this pay request is $155,129.53. The project Engineer and staff have reviewed the documentation and would recommend that the Board approve payment of pay estimate #1 in the amount of $155,129.53.

ROSEBURG URBAN SANITARY AUTHORITY
NEW DEVELOPMENTS AND PROJECTS

DEVELOPMENTS:

- Oakridge Court Apartments
    - The plans and specifications have been approved. This project is on hold.
- Harvard West Phase II – short mainline extension to serve a new commercial building - under review
- Townsend Lane Subdivision - This project seems to be on hold

PRELIMINARY DESIGN:

- Loma Vista Pump Station Improvement Study
- Tabor – Military Avenue partition
- Kenwood Tabor PUD
- Neighborworks Apartment -preliminary design for a mainline extension
- Rosemary Subdivision
- Thyme Subdivision
- Hanna Heritage Plaza

PROJECTS:

- Oak Springs Apartments Beginning on Pomona Street
- Winchester Pump Station Pressure Line Replacement- Approximately 75 percent of the pipe is now installed. Drilling has begun for the southern 2500 feet of the pressure mains.

ROSEBURG URBAN SANITARY AUTHORITY
OCTOBER 2019 STAFF REPORTS

COLLECTION DEPARTMENT:

- Completed 10 work orders.
- Completed CCTV of 10,702 feet or 2.03 miles of mainline.
- Completed root treatment of 2,524 feet of mainline.
- Installed approximately 64 feet of mainline and installed one manhole on Watson St.

ENGINEERING DEPARTMENT:

- Completed 234 underground utility locate requests.
- Issued 10 permits and completed 13 inspections.
- Back Nine Sanitary Sewer Extension project. The lift station is now operational.
- Hwy 99 pressure main project is underway, currently 25 percent of the project work has been completed.
- FOG inspections: Sizzler-OK, Taco Bell-OK, Follow Up with Del Taco.

FINANCE DEPARTMENT:

- Vacancy Credits: 20 were processed for a total of $1,800.00 in October.
- Credit cards/eChecks: 802 payments totaling $36,912.94 were collected in October. 54 payments received at the counter, 41 by voice response system, and 707 on-line.
- Automatic Payments: 2,043 customer accounts are signed up. Received $80,704.79 or approximately 14.7% of monthly billing.

JACOBS

TO: Jim Baird, General Manager-RUSA
FROM: Jade Mecham, Project Manager
DATE: November 6, 2019
SUBJECT: October 2019 Monthly Report

OPERATIONAL ACTIVITIES

- The treatment facility averaged 99% CBOD removal and 97% Total Suspended Solids Removal during the month with a requirement of no less than 85% removal for each.
- The facility electrical consumption (based on meter readings) for October 2019, was 233,000 KWHRS with a total Effluent flow of 87.36 million gallons all of which went to Outfall 002 (Natural Treatment System). The October 2018 electrical consumption was 228,000 with a total Effluent flow of 82.27 million gallons all of which went to Outfall 002 (Natural Treatment System).
- This was the last month for biosolids application for the year.
- There was one odor complaint, in these low wind evenings.
- The trees in the yard by the influent building were removed.
- A tour was given to the Roseburg Junior Academy, 13 people.

PRETREATMENT ACTIVITIES

The following pretreatment inspections were completed in October:

- *Umpqua Dairy:* This was the semi-annual inspection, they were within the limits for pH. Their flow is up higher than past averages.
- *Seven Thai:* Their discharge line was found to have a lot of FOG at the manhole, it was die tested to verify. The manager was notified.
- *Tino's Mexican Food:* Their discharge line was checked and found to be in acceptable condition.
- *Del Taco:* This was a follow up inspection and there was no change to the full interceptor after being notified a month earlier. RUSA was notified for follow up.
- *Dutch Bros Garden Vlly Blvd:* The interceptor was full and losing FOG, the manager was notified.
- *Mariachi Loco:* The inspection from the clean out showed considerable FOG, several calls were made for the manager, no response, will continue calling.

NATURAL TREATMENT SYSTEM (NTS)

- Met with FEMA representatives to do a site review of tree damage on all zones.
- Installed 4 test sprinklers (different brand) as an option to the Nelson sprinklers.
- Irrigation sprinkler maintenance.

MAINTENANCE ACTIVITIES

LIFT STATIONS

- Total Flow from all Lift Stations for the month – 48 Million Gallons
- Average Daily Flow from all Lift Stations per day - 1.7 Million Gallons

MAINTENANCE

- Replaced the temperature controller for the hot water return line.
- Reconnected the marker lights on the Chevy 4X4 truck.
- Replaced the strainer body for the Grit pump.
- Replaced the motor for the fill lid valve actuator on the International sludge truck.
- Replaced the light switch for the lower level of the Digester building.
- Repaired the Emergency light for the Heat exchanger room
- Replaced the Drying oven in the Lab with a new one.
- Cleaned and applied a protective coating to the new #3 Biofilter pump.

LABORATORY ACTIVITIES

- We are in our normal summer testing which requires: CBOD's 3 times a week, TSS 3 times a week, pH daily, Chlorine Residual Daily average, Ammonia 3 times week, E. Coli 3 times a week, Nitrate once a week, TKN once a week, and Total Phosphorus once a week.
- The Eureka probes are placed in SW1, SW5, and SW6, to continuously monitor pH, Temp., and D.O.
- Also included for the summer is Total Phosphorus (PO4) for the NTS, which is sampled at SW1, SW5, and SW6 once a week and once a month at MW1.
- When discharging from the pond we sample daily for PO4 at SW5.
- Number of Tests for permit: 137

15 CBOD's	31 pH	14 Fecal/E. Coli	4 TKN	4 Nitrate
15 TSS	31 Cl2 Res.	14 Ammonia	9 Total Phosphorus	

- Precision results:
  In control: 133
  Out of control: 4
  Accuracy Results:
  In Control: 123
  Out of Control: 0
- Eureka probes were downloaded, calibrated and deployed at SW1, SW6, and SW5, on 10/1/19 and 10/17/19.
- Lab water was sampled on 10/15/19 and sent to NRC for testing.

PERSONNEL/COMMUNITY SERVICE ACTIVITIES

- Kevin Bruton spent 8 days in Crescent City and one day in Brookings.
- Chad Snyder spent 3 days in Coos Bay.

UPCOMING EVENTS

OPERATIONS/NTS:

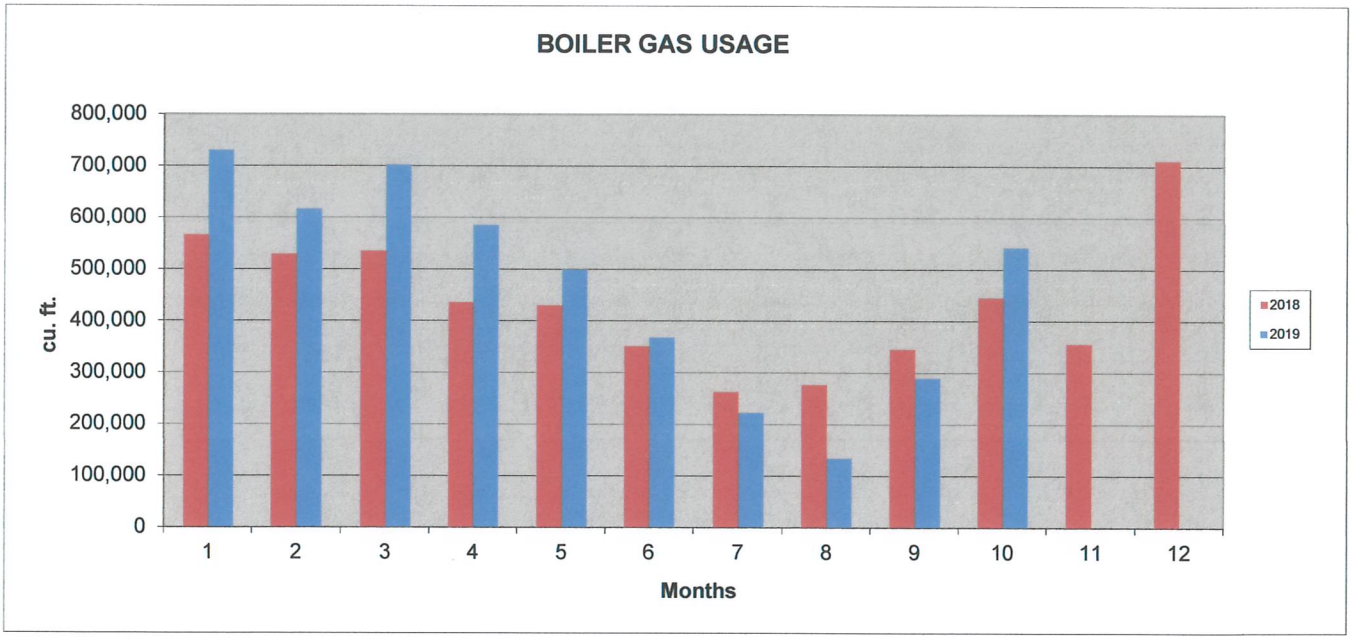
- Clean out the sludge and sand from the #1 secondary clarifier.
- Winterize the NTS pump station and irrigation system.

MAINTENANCE:

- Install new generator on a cement pad at the new lift Station out Del Rio area.
- Replace the VFDs for both Sludge Transfer pumps.
- Finish installing Surcharge floats at the remaining Lift stations.

Enclosures: Boiler/Flare Gas Usage graphs
Influent TSS/CBOD and Effluent Flow Graphs
12 Month Moving Avg.
Violation Sum-Limit Report

Jade Mecham
Project Manager
Jacobs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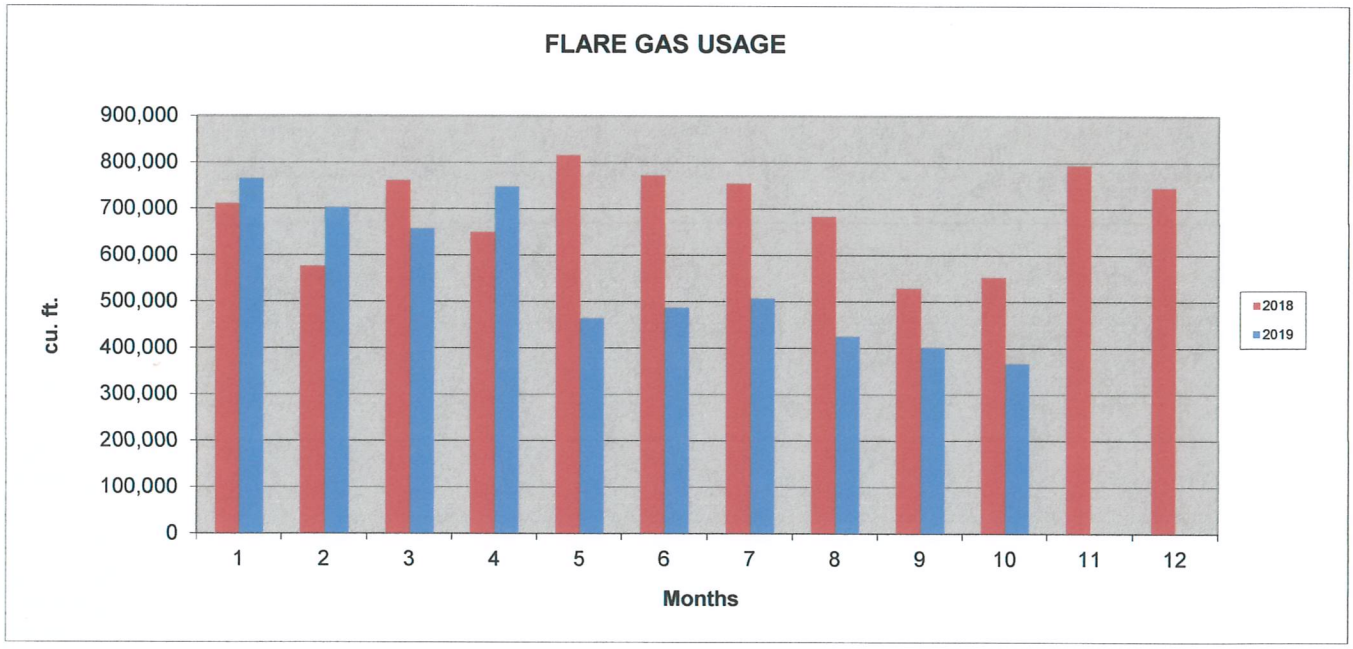
2019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2018
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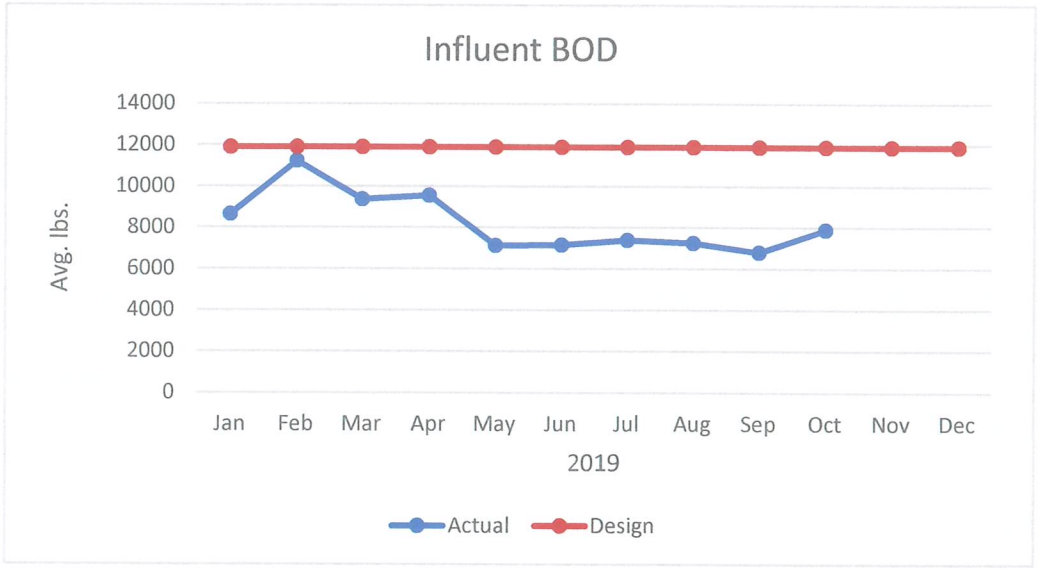
Influent BOD
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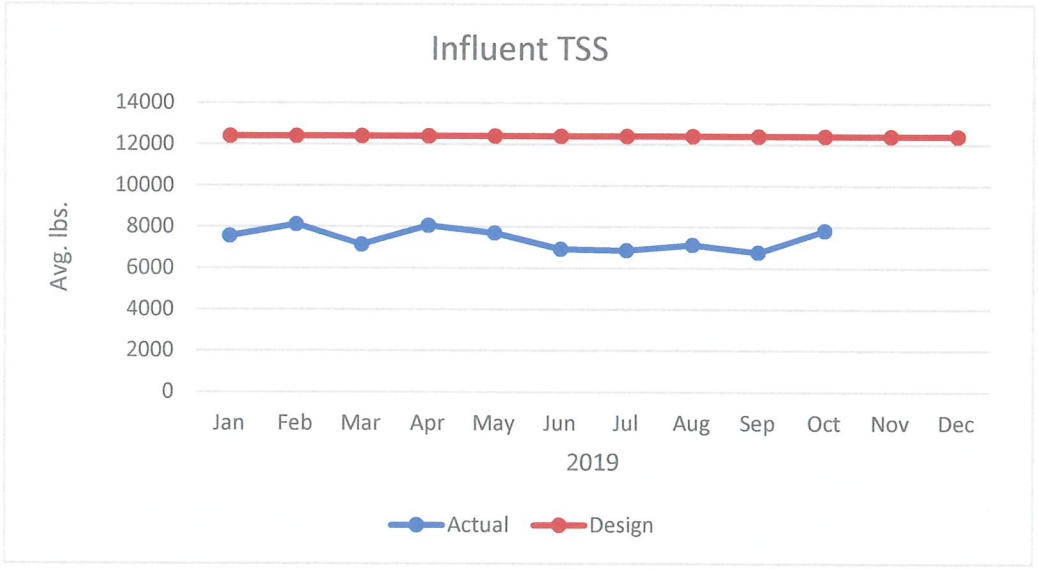
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2019
Actual
Design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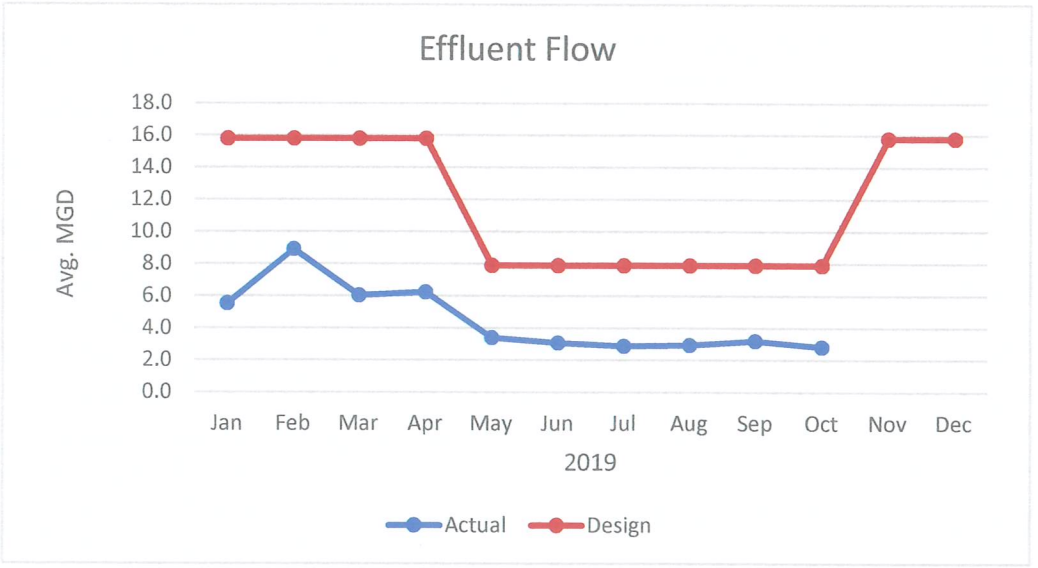
2019
Actual
Design


Effluent Flow
Avg. MGD
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2019
Actual
Design

12 MONTH MOVING AVERAGES

Month/Year	Plnt Inf Q Average MGD	Plnt Inf Average lbs/day CBOD/BOD	Plnt Inf Average lbs/day TSS
Nov-18	3.13	8615	6288
Dec-18	4.83	8939	7443
Jan-19	5.55	8653	7574
Feb-19	8.92	11233	8133
Mar-19	6.05	9369	7158
Apr-19	6.25	9562	8065
May-19	3.41	7137	7717
Jun-19	3.08	7167	6931
Jul-19	2.90	7405	6865
Aug-19	2.94	7257	7133
Sep-19	3.20	6804	6772
Oct-19	2.83	6455	6594

SUM	53.09	98596	86671
AVE	4.42	8216	7223
MAX	8.92	11233	8133
MIN	2.83	6455	6288

Violation Sum-Limit Report
Roseburg WWTP
3485 W. Goedeck
Roseburg, OR 97470

October, 2019
Print Date: 11/6/2019

Limit Summary: (** designates values exceeding limit)
No values exceeding limit.

Location/Parameter	Units	Limit	Actual
Plnt Ef - C BOD			
BOD Nit Inh 5 - BOD Nitrogen Inhib Tot 5 Day			
Average	MG/L	10.00	4.53
Max Weekly Avg (Wed Rule) , 9/29/2019	MG/L	15.00	5.67
Average Loading	lb/day	660.00	
Max Weekly Avg (Wed Rule) Loading	lb/day	990.00	
Plnt Ef - Effluent			
BOD Nit Inh 5 - BOD Nitrogen Inhib Tot 5 Day			
Maximum Loading	lb/day	1300	
Plnt Ef - C BOD			
pH Lab - pH Lab Standard Units			
Minimum , 10/7/2019	S.U.	6.30	6.89
Maximum , 10/30/2019	S.U.	8.50	7.38
Plnt Ef - C BOD			
Solids TSS - Total Suspended Solids TSS			
Average	MG/L	10.00	8.33
Max Weekly Avg (Wed Rule) , 9/29/2019	MG/L	15.00	9.67
Average Loading	lb/day	660.00	
Max Weekly Avg (Wed Rule) Loading	lb/day	990.00	
Plnt Ef - Effluent			
Solids TSS - Total Suspended Solids TSS			
Maximum Loading	lb/day	1300	
Plnt Ef - C BOD			
Cl2 Residual - Chlorine Total Residual			
Average	MG/L	NA	
Efncy Pr - Plant Efficiency Process			
CBOD Removal - % Removal Efficiency			
CBOD % Rem	%	<85	99
Efncy Pr - Plant Efficiency Process			
TSS Removal - % Removal Efficiency			
TSS % Rem	%	<85	97
Plnt Ef - Effluent			
Nh3 N Ammonia - Nitrogen Ammonia Total As N			
Average	MG/L	NA	15
Maximum , 10/23/2019	MG/L	na	26
Plnt Ef - Effluent			
E Coli - E Coli			
Average	MPN	126	4
Maximum , 10/17/2019	MPN	406	24
Plnt Ef - Effluent			
XS Therms - Excess Thermal Load			
Maximum	MKCal	na	

We are in summer mode of oprations with the flow being sent to Outfall 002 (Natural Treatment System).

CASH DISBURSEMENT RECAP
BOARD MEETING NOVEMER 13, 2019

Cash Disbursements Since the Last Board Meeting

All Funds:		
	Total of Prepaid Checks & ACH Transactions	97,919.02
	Total of Regular Checks & ACH Transactions	440,603.18
	Total Expenditures (not including Payroll)	538,522.20
Payroll:		
	Net Payroll - October 2019	60,334.30
All Checks & ACH Transactions since the Board Meeting of October 9, 2019		598,856.50

Accounts Payable

Checks by Date - Detail by Check Date

User: christine
Printed: 11/8/2019 10:59 AM

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
ACH	ASIFLEX	ASIFlex	10/10/2019	
	A000325899099Be	FSA Fees-September		52.50
			Total for this ACH Check for Vendor ASIFLEX:	52.50
			Total for 10/10/2019:	52.50
ACH	02669	PERS Deposit	10/11/2019	
	SEPT 19 PR	PR Batch 00001.09.2019 PERS W/Held	PR Batch 00001.09.2019 PER	4,695.31
	SEPT 19 PR	PR Batch 00001.09.2019 PERS - Not W/Held	PR Batch 00001.09.2019 PER	8,020.27
	SEPT 19 PR	PR Batch 00001.09.2019 PERS Pick-Up	PR Batch 00001.09.2019 PER	736.38
	SEPT 19 PR	PR Batch 00001.09.2019 OPSRP-Not W/Held	PR Batch 00001.09.2019 OPS	7,566.72
			Total for this ACH Check for Vendor 02669:	21,018.68
			Total for 10/11/2019:	21,018.68
ACH	ASIFLEX	ASIFlex	10/31/2019	
	OCT 19 PR	PR Batch 00001.10.2019 Flexible Spending Acc	PR Batch 00001.10.2019 Flex	1,479.13
	OCT 19 PR	PR Batch 00001.10.2019 Dependent Care FSA	PR Batch 00001.10.2019 Dep	83.33
			Total for this ACH Check for Vendor ASIFLEX:	1,562.46
ACH	DNB	Internal Revenue Service	10/31/2019	
	OCT 19 PR	PR Batch 00001.10.2019 Medicare - Employee	PR Batch 00001.10.2019 Med	1,291.76
	OCT 19 PR	PR Batch 00001.10.2019 FICA - Employer	PR Batch 00001.10.2019 FIC	5,523.40
	OCT 19 PR	PR Batch 00001.10.2019 FICA - Employee	PR Batch 00001.10.2019 FIC	5,523.40
	OCT 19 PR	PR Batch 00001.10.2019 Medicare - Employer	PR Batch 00001.10.2019 Med	1,291.76
	OCT 19 PR	PR Batch 00001.10.2019 Federal Income Tax	PR Batch 00001.10.2019 Fed	6,317.62
			Total for this ACH Check for Vendor DNB:	19,947.94
ACH	OR-Rev	Oregon Dept. of Revenue	10/31/2019	
	OCT 19 PR	PR Batch 00001.10.2019 Oregon W/Held	PR Batch 00001.10.2019 Oreg	5,124.77
			Total for this ACH Check for Vendor OR-Rev:	5,124.77
ACH	OR-REV	Oregon Dept. of Revenue	10/31/2019	
	3rd Qtr OQ	3rd Qtr OR Qtrly State Unemployment		1,013.71
	3rd Qtr OQ WC	3rd Qtr OR Qtrly Workers Comp		189.04
			Total for this ACH Check for Vendor OR-REV:	1,202.75
49275	CIS INS	CIS Trust	10/31/2019	
	OCT 19 PR	PR Batch 00001.10.2019 Dental & Vision	PR Batch 00001.10.2019 Den	3,341.00
	OCT 19 PR	PR Batch 00001.10.2019 CCIS Insurance AD&I	PR Batch 00001.10.2019 CCI	22.43
	OCT 19 PR	PR Batch 00001.10.2019 Short-Term Disability	PR Batch 00001.10.2019 Sho	124.51
	OCT 19 PR	PR Batch 00001.10.2019 Voluntary Dependent I	PR Batch 00001.10.2019 Volu	31.92

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
	OCT 19 PR	PR Batch 00001.10.2019 Voluntary Life Insuran	PR Batch 00001.10.2019 Volu	249.50
	OCT 19 PR	PR Batch 00001.10.2019 Life Insurance - er	PR Batch 00001.10.2019 Life	106.55
	OCT 19 PR	PR Batch 00001.10.2019 Life Insurance - Spous	PR Batch 00001.10.2019 Life	138.77
	OCT 19 PR	PR Batch 00001.10.2019 CCIS Insurance Long-'	PR Batch 00001.10.2019 CCI	233.74
	OCT 19 PR	PR Batch 00001.10.2019 Medical Ins w/RX	PR Batch 00001.10.2019 Med	28,591.10
			Total for Check Number 49275:	32,839.52
49276	PEBSCO	Nationwide Retirement Solutions	10/31/2019	
	OCT 19 PR	PR Batch 00001.10.2019 Nationwide-Deferred C	PR Batch 00001.10.2019 Nati	5,105.00
			Total for Check Number 49276:	5,105.00
49277	CENTURY	CenturyLink	10/31/2019	
	Oct 2019	Analog phone service for fax and fire system		118.69
	Oct 2019	Analog phone service for gate at NTS		52.63
			Total for Check Number 49277:	171.32
49278	DELL	Dell Marketing LP	10/31/2019	
	10345673751	Two 34" Dell Ultrawide Displays		1,583.98
			Total for Check Number 49278:	1,583.98
49279	GNTW	Great Northern Trailer Works Inc	10/31/2019	
	S28355	10K Tiltbed Trailer		5,675.00
			Total for Check Number 49279:	5,675.00
49280	SHRED-IT	Shred-It USA	10/31/2019	
	8128364838	Monthly document shredding service		99.22
			Total for Check Number 49280:	99.22
49281	USPS	US Postal Service	10/31/2019	
	Oct 2019	Postage for UB Bills - November		2,448.32
			Total for Check Number 49281:	2,448.32
49282	VERIZON	Verizon Wireless	10/31/2019	
	9840120726	Wireless phone service		651.10
	9840120726 Eq	Wireless phone equipment upgrades - 11 phones		344.94
	9840120734	Wireless service for TV Van		39.02
			Total for Check Number 49282:	1,035.06
			Total for 10/31/2019:	76,795.34
ACH	ASIFLEX	ASIFlex	11/10/2019	
	A00032589A0A9TN	FSA Fees-October		52.50
			Total for this ACH Check for Vendor ASIFLEX:	52.50
			Total for 11/10/2019:	52.50
			Report Total (15 checks):	97,919.02

Accounts Payable

Checks by Date - Detail by Check Date

User: christine
Printed: 11/8/2019 11:11 AM

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
ACH	02669	PERS Deposit	11/13/2019	
	OCT 19 PR	PR Batch 00001.10.2019 PERS - Not W/Held	PR Batch 00001.10.2019 PER	8,020.27
	OCT 19 PR	PR Batch 00001.10.2019 PERS W/Held	PR Batch 00001.10.2019 PER	4,667.18
	OCT 19 PR	PR Batch 00001.10.2019 PERS Pick-Up	PR Batch 00001.10.2019 PER	736.38
	OCT 19 PR	PR Batch 00001.10.2019 OPSRP-Not W/Held	PR Batch 00001.10.2019 OPS	7,498.43
	Oct Rounding	October Rounding Adjustment		0.02
			Total for this ACH Check for Vendor 02669:	20,922.28
ACH	PBPP	Pitney Bowes Purchase Power	11/13/2019	
	Oct 2019	Postage machine refill		150.00
			Total for this ACH Check for Vendor PBPP:	150.00
ACH	STAPLES	Staples Credit Plan	11/13/2019	
	2369874111	Misc office supplies		127.64
	2369909471	Misc office supplies		20.70
	2371973961	Paid stamp		28.18
			Total for this ACH Check for Vendor STAPLES:	176.52
49283	WP	Avista Utilities	11/13/2019	
	OCT 2019	Natural gas service		50.57
			Total for Check Number 49283:	50.57
49284	BANNERMC	BANNER BANK	11/13/2019	
	AA 100719	Pitney Bowes - Postage machine quarterly lease		81.00
	AA 102919	Costco - Kitchen and office supplies		194.93
	CM 102819	OGFOA Fall Conference - Christine		355.00
	CM 102919	OGFOA Fall Conference - Parking - Christine		12.00
	DF 100319	Avangate - Program for use with FTP sites		19.99
	DF 100819	Amazon - Sound card for Christine's computer tc		59.99
	DF 100919	2Co.com - Microsoft outlook training		179.00
	DF 100919 fee	International transaction fee - Microsoft training		1.61
	DF 101319	Network Solutions - Domain registration for rusa		81.96
	DF 101619	Network Solutions - Email for admin of rusa-or.i		11.39
	DF 102219	Amazon - Monitor cable for Greg's new PC		8.99
	DF 102419	Newegg - HDD to backup the backup files		159.99
	DF 102819	Dell - Replacement monitor		791.99
	HW 100919	Safeway - Board meeting snacks		12.99
	JJB 0930	Execucar - Shuttle airport to hotel - John - Lucity		33.00
	JJB 100119	McFaddens-Dinner-John-Lucity Conf		11.20
	JJB 100219	Uber Eats - Dinner - John - Lucity Conf		23.64
	JJB 100319	Yard House - Dinner - John - Lucity Conf		22.09
	JJB 100419	Hotel Phillips - Lodging - John - Lucity Conf		735.93
	JJB 100419 park	PDX - Airport economy parking - John - Lucity (		72.00
	JJB 101119	Flury Supply - survey marking whiskers		7.50
	KB 100419	Little Caesars - Coll crew team building lunch		32.00
	KB 100919	Roseburg Urgent Care - CDL Physical		118.00

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
	MC 100419	Medic First Aid Int'l - Student handbooks for CP		129.81
	MC 100819	Roseburg Urgent Care - CDL physical		118.00
	MC 101619	Walmart - Phone case		44.97
	MC 102919	Home Depot - Drill bits for service trucks		15.94
	RC 100219	Home Depot - Tape for trucks		33.92
	RC 100919a	Safeway - Staff meeting snacks		17.97
	RC 100919b	Roseburg Urgent Care - CDL physical		118.00
	RC 101419	Si Casa Flores - UBOS lunch- JJB, HW, RC, MC		96.50
	RC 101819a	U-Haul - Hitch for 2014		28.44
	RC 101819b	U-Haul - Pintle Hitch for 2014		134.90
	RK 100119	Ten Down - DCUCC lunch - Ryon		16.00
	RK 101619	Elmers - Douglas Cty Safety Assoc Mtg lunch -		18.18
	SL 092919	Mallory Safety Supply - Hard hats		660.14
	SL 100319	WEF - WEF manuals		43.55
	SL 101419	DMV - Register 10K trailer		107.00
			Total for Check Number 49284:	4,609.51
49285	BHEC	Bassett-Hyland Energy Company	11/13/2019	
	CL85372-IN	Vehicle fuel		960.24
	CL85708-IN	Vehicle fuel		1,209.08
			Total for Check Number 49285:	2,169.32
49286	BATT PLU	Batteries Plus #208	11/13/2019	
	P20079662	Battery for alarm system		25.99
	P20381867	Battery for pipe laser remote		7.00
			Total for Check Number 49286:	32.99
49287	BENTLEYW	Bentley Welding	11/13/2019	
	59798	Repair equipment trailer		126.00
			Total for Check Number 49287:	126.00
49288	BUTLERAU	Butler Automotive Inc	11/13/2019	
	528476	F150		30,813.32
			Total for Check Number 49288:	30,813.32
49289	OMI	CH2MHill OMI	11/13/2019	
	351289-023	Contract Service-per agreement		123,850.66
			Total for Check Number 49289:	123,850.66
49290	Chytka	Chytka Pest Control LLC	11/13/2019	
	132682	Monthly pest control service		40.00
			Total for Check Number 49290:	40.00
49291	WATER	City of Roseburg	11/13/2019	
	INV09289	Bulk water usage-October		94.66
	Oct 2019 Keady	Water usage - Keady lift station		47.14
			Total for Check Number 49291:	141.80
49292	CRADAR	Cradar Enterprises, Inc	11/13/2019	
	003036	Saw Van and slurry control		525.00
			Total for Check Number 49292:	525.00
49293	DRAUTO	D & R Auto & Truck Supply Corp	11/13/2019	

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
	870123	Tone wire		49.00
	870124	Tone wire		390.00
	872647	Fuse		4.84
	872648	Fuses for 2014 Service truck		29.04
	872825	Battery and battery carrier for 2 yard dump		158.42
	873090	Tie downs for service trucks		14.99
			Total for Check Number 49293:	646.29
49294	SHAUN	DC Precision Lube & Tune	11/13/2019	
	38689	Oil change 2012 Ford F550		35.99
	40678	Oil change 2018 Ford F150		54.35
			Total for Check Number 49294:	90.34
49295	DELL	Dell Marketing LP	11/13/2019	
	10349753617	Dell Laptop Mobile Precision 7740, for board ro		2,251.50
	10350022378	Replacement computer for Steve		2,881.92
			Total for Check Number 49295:	5,133.42
49296	DEQ	Dept of Environmental Quality	11/13/2019	
	Kyle P Bartlett	Collection III - 13449, Treatment I - 12872 - Rer		160.00
			Total for Check Number 49296:	160.00
49297	DCPW	Douglas County Solid Waste	11/13/2019	
	527839	Grit Pit Material Disposal		412.45
			Total for Check Number 49297:	412.45
49298	DCTax	Douglas County Tax Collector	11/13/2019	
	R18529	Property Taxes R18529 - 0 Long Meadows		154.72
	R18545	Property Taxes R18545 - 605 Long Meadows		123.56
	R18553	Property Taxes R18553 - 411 Long Meadows		118.19
	R18593	Property Taxes R18593-0 Long Meadows Ln		18.19
	R19041	Property Taxes R19041 - 0 Long Meadows		26.11
			Total for Check Number 49298:	440.77
49299	DFN	Douglas Fast Net	11/13/2019	
	Nov 2019 Admin	Internet Services-Admin	Service: 14806	213.49
	Nov 2019 Cams	Phones/Security Cams	Service: 141784	98.01
	Nov 2019 High	Internet Services-Highland PS	Service: 105797	74.91
	Nov 2019 Host	Admin Hosting		10.28
	Nov 2019 Keady	Internet Services-Keady Ct	Service: 106289	74.91
	Nov 2019 NBank	Internet Services-No. Bank PS	Service: 105793	71.91
	Nov 2019 NTS	Internet Services-NTS	Service: 23920	56.36
	Nov 2019 Wilb1	Internet Services-Wilbur 1 PS	Service: 105796	74.91
	Nov 2019 Wilb2	Internet Services-Wilbur 2 PS	Service: 105794	71.91
	Nov 2019 Winch	Internet Services-Winchester P	Service: 105795	74.91
			Total for Check Number 49299:	821.60
49300	EARTH	EARTH20	11/13/2019	
	076732	Bottled water delivery		84.99
			Total for Check Number 49300:	84.99
49301	FLURY	Flury Supply Company	11/13/2019	
	E 2935	Fill hose for flusher		142.04

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
			Total for Check Number 49301:	142.04
49302	GRAPHDIM	Graphic Dimensions, Inc.	11/13/2019	
	2339	Cut bills to mailing size		37.60
			Total for Check Number 49302:	37.60
49303	HANDY	Handyman Hardware	11/13/2019	
	110172	Mason nails for field use		9.99
			Total for Check Number 49303:	9.99
49304	HOGENTOG	Hogentogler & Co INC	11/13/2019	
	0260560-IN	Mechanical Convection Oven (Lab equipment)		1,949.00
			Total for Check Number 49304:	1,949.00
49305	ICONIX	ICONIX WATERWORKS INC	11/13/2019	
	17913045309	Parts for Watson project		168.36
	17913046339	Parts for Watson project		244.18
			Total for Check Number 49305:	412.54
49306	INSERTA	Inserta Tee	11/13/2019	
	18933231	Inserta Fittings		1,931.28
			Total for Check Number 49306:	1,931.28
49307	COASTAL	John Deere Financial f.s.b.	11/13/2019	
	A20580	Roundup and sprayer		48.98
	A25374	Work boots for Kyle B & Andy		239.98
	A25577	Work boots for Kyle V		119.99
			Total for Check Number 49307:	408.95
49308	LTM	Knife River Materials	11/13/2019	
	14205	Stewart Park Bridge Access Project		22,392.88
	535726	Crushed rock - move backflow device at Back 9		78.51
	536397	Crushed rock - Watson project		81.19
	537013	Crushed rock - Pressure line project		75.82
	538134	Crushed rock - Watson project		35.22
			Total for Check Number 49308:	22,663.62
49309	LOWES	Lowes	11/13/2019	
	901174	Supplies to move backflow device at Back 9 LS		126.63
			Total for Check Number 49309:	126.63
49310	MSTRCR	MasterCare Cleaning Co Inc	11/13/2019	
	9597-J	Monthly janitorial services		390.00
			Total for Check Number 49310:	390.00
49311	NEXNET	Nexcom, LLC	11/13/2019	
	9515	Digital phone service		332.80
			Total for Check Number 49311:	332.80
49312	REFUND	Oak Springs LLC	11/13/2019	
	Permit Refund	New connect permit refund, paid for 2 and only i		25.00

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
			Total for Check Number 49312:	25.00
49313	Occu	OccuHealth	11/13/2019	
	189	Titers for KV		61.00
			Total for Check Number 49313:	61.00
49314	OLDCASTL	Oldcastle Infrastructure	11/13/2019	
	020197879	Manhole base - Watson Project		498.00
			Total for Check Number 49314:	498.00
49315	OR-LIN	Oregon Linen, Inc.	11/13/2019	
	406405	Laundry service		35.30
	412167	Laundry & mat service		51.62
	418493	Laundry service		35.30
			Total for Check Number 49315:	122.22
49316	OR-TOOL	Oregon Tool & Supply	11/13/2019	
	431526	Bits for MH monitor		71.80
	792609	String line		14.95
	792617	Roto hammer bit		79.90
	793093	Shop truck supplies		159.60
			Total for Check Number 49316:	326.25
49317	OHDoor	Overhead Door Co. of Roseburg	11/13/2019	
	109509	Service bay door		85.00
			Total for Check Number 49317:	85.00
49318	PAC AIR	Pacific Air Comfort, Inc.	11/13/2019	
	81086	HVAC filter change		175.00
			Total for Check Number 49318:	175.00
49319	PPL	Pacific Power	11/13/2019	
	Oct 2019 411LM	Usage-411 LM-Storage Bldg		28.27
	Oct 2019 425LM	Power Usage-425 Long Meadow		10.48
	Oct 2019 Admin	Power Usage-Admin Bldg		450.14
	Oct 2019 Back9	Power usage - Back Nine LS		51.25
	Oct 2019 Back9C	Contract - Back Nine LS		70.74
	Oct 2019 High	Power Usage-Highland PS		1,186.93
	Oct 2019 Keady	Contract Min&Usage-Keady Ct PS		51.98
	Oct 2019 LV	Power Usage-Loma Vista PS		126.17
	Oct 2019 NBank	Power Usage-North Bank PS		85.57
	Oct 2019 NTS	Contract/Power Usage-NTS PS		11,328.07
	Oct 2019 NTSGat	Power Usage-140 LM-NTS Gate		20.30
	Oct 2019 SBank	Power Usage-South Bank PS		1,678.28
	Oct 2019 Wilb1	Power Usage-Wilbur 1 PS		88.98
	Oct 2019 Wilb2	Power Usage-Wilbur 2 PS		145.10
	Oct 2019 WWTP	Power Usage-WWTP 1		18,696.88
	Oct 2019 WWTP2	Power Usage-WWTP 2		28.10
			Total for Check Number 49319:	34,047.24
49320	PAPEKEN	Pape Kenworth	11/13/2019	
	577590	Repair steering axle - Camel		1,390.43

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
			Total for Check Number 49320:	1,390.43
49321	Premium	Premium Landscape, Inc.	11/13/2019	
	22719	Monthly landscape maintenance		180.25
			Total for Check Number 49321:	180.25
49322	ROCKYS	Rocky's Auto Repair	11/13/2019	
	11810	Oil change for CCTV Van		208.35
			Total for Check Number 49322:	208.35
49323	ROGERS E	Rogers Engineering, Inc.	11/13/2019	
	2997	Biosolids Bldg Expansion Proj-Engineering		9,650.00
			Total for Check Number 49323:	9,650.00
49324	Stratton	Stratton Brothers, Inc.	11/13/2019	
	2018-373	Asphalt patching for Watson project		4,353.12
	2018-378	Asphalt patching for potholes on Pressure line pr		1,065.00
			Total for Check Number 49324:	5,418.12
49325	TEKMAN	TEKMANAGEMENT, INC.	11/13/2019	
	61455	Backup & Recovery Services		565.00
	61455	Office 365 Premium-Crew		87.50
	61455	O365 Visio Subscription		15.00
	61455	Office 365 Premium-Engineering		75.00
	61455	Server Maint & monitoring		1,328.00
	61455	Office 365 Premium-Finance		37.50
	61455	Office 365 Premium-811 user		12.50
			Total for Check Number 49325:	2,120.50
49326	UBWA	Umpqua Basin Water Association	11/13/2019	
	Oct 2019 310Brb	Water service - 310 Bourbon		20.00
	Oct 2019 411 LM	Water service - 411 Long Meadows		20.10
	Oct 2019 606 LM	Water service - 606 Long Meadows		20.00
			Total for Check Number 49326:	60.10
49327	UMPQUARF	Umpqua Quarries, LLC	11/13/2019	
	32582	Crushed rock for Watson project		77.14
	32905	Crushed rock for Watson project		145.74
	32940	Crushed rock for Watson project		68.02
	33089	Crushed rock for Watson project		152.86
	33118	Crushed rock for Watson project		92.54
			Total for Check Number 49327:	536.30
49328	UMP-SAND	Umpqua Sand & Gravel	11/13/2019	
	70407	Excavated material disposal - Watson project		15.69
	70841	Excavated material - For stock		66.56
			Total for Check Number 49328:	82.25
49329	UNITED	UNITED RENTALS (NORTH AMERICA)	11/13/2019	
	173901265-001	Mini excavator rental for Watson project		4,296.06
	173929187-001	Skid steer track loader rental for Watson project		2,022.80
			Total for Check Number 49329:	6,318.86

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
49330	USPS	US Postal Service	11/13/2019	
	CY 2020	Bulk Mail Permit 52 - First Class Persort		235.00
			Total for Check Number 49330:	235.00
49331	usablueb	USABLUEBOOK	11/13/2019	
	042961	Precision Model 815 BOD Incubator		4,121.50
			Total for Check Number 49331:	4,121.50
49332	EDURED1	Aaron Vaughn	11/13/2019	
	R17157	EDU reduction from 2 to 1 at 1448 SE Micelli		10.00
			Total for Check Number 49332:	10.00
49333	Zerbach	Zerbach Construction, Inc.	11/13/2019	
	1	Biosolids Building Addition		163,294.24
	1 retainage	Biosolids Building Addition retainage		-8,164.71
			Total for Check Number 49333:	155,129.53
			Total for 11/13/2019:	440,603.18
			Report Total (54 checks):	440,603.18