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

REGULAR MONTHLY BOARD MEETING

September 12, 2018

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Roseburg Urban Sanitary Authority
1297 N.E. Grandview Drive
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September 12th, 2018
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. August 15th, 2018 Board Meeting
4. **Mitigation Wetland Bank**
5. **General Managers Report**
   a. Back Nine Sanitary Sewer Extension Phase I
   b. NW Black Avenue Sanitary Sewer Replacement
   c. Downtown Improvements Sanitary Sewer Replacement Phase II
   d. Winchester Pump Station Force Main Replacement
   e. Loma Vista Pump Station Study
   f. Wastewater Treatment Plant Fuel Tank Removal
   g. Staff Recognition
6. **Staff Professional Development**
7. **New Developments**
8. **Staff Report**
9. **ch2m (Jacobs) Plant Operations Report**
10. **Accounts Payable**
11. **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 4:03 p.m. on August 15, 2018 at 1297 N.E. Grandview Drive.

ROLL CALL

Directors

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

Others present: General Manager Jim Baird, Supervising Engineering Tech III Ryon Kershner, Office Assistant Harmony Economou and CH2M Chief Plant Operator Randy Turner.

Consideration of the minutes of the Regular Monthly Board Meeting of Wednesday, July 11, 2018.

Rob Lieberman moved to approve the minutes, as presented, for the Wednesday, July 11th, 2018 Roseburg Urban Sanitary Authority Regular Monthly Meeting.
David Campos seconded the motion.
The motion passed unanimously.

General Mangers Report

Back Nine Sanitary Sewer Extension Phase I
The start-up and commissioning of the pump station is complete. The site work has been completed and a portable generator has been moved to the site. Jacobs staff will be exercising the pumps until the pump station receives sewer flow.

The Developer has entered into an agreement with Douglas County to secure the outstanding development improvements. The developer has provided a letter of irrevocable credit for the installation of the power for the pump station. RUSA has been given a letter of irrevocable credit for the paving of the driveway to the pump station. With these securities in place, RUSA was able to accept the sanitary sewer improvements allowing the County to finalize the subdivision plat.

NW Black Avenue Sanitary Sewer Replacement Project
The contractor, Cradar Enterprises, has started work on the project. The sanitary sewer construction is 95% complete, the remaining work will take place when the road is paved.

Downtown Improvements Phase II
The Contractor, Brown Construction, has completed the sanitary sewer construction.

Garden Valley Blvd Sewer Replacement Project
The contractor, Cradar Enterprises, has completed all the work on the Garden Valley Blvd. Sewer Replacement Project. The Engineer, i.e. Engineering, has reviewed all the inspection reports and conducted a final walk through with RUSA and the City. The Engineer has signed off on the project as completed.

RUSA has received a letter from the Project Engineer approving the payment of Pay Request #1 in the amount of $126,735.22.

Staff recommended that the Board approve Pay Request #1 in the amount of $126,735.22.

Rob Lieberman made a motion to approve Pay Request #1 in the amount of $126,735.22.
Jerry Griese seconded the motion.
The motion passed unanimously.

The Contractor has requested the release of the retainage for this project. RUSA received a release of all liens from Cradar Enterprises. The City of Roseburg has completed a final inspection and walk through of the project and closed the “Work To Do Construction Or Utility Work Within The Right-Of-Way” permit as complete.

Staff recommended that the Board approve the release of retainage request in the amount of $6,670.28.

Jerry Griese made a motion to approve the release of retainage in the amount of $6,670.28.
David Campos seconded the motion.
The motion passed unanimously.

Winchester Pump Station Force Main Replacement Project
Douglas County has re-started the design work since an agreement has been reached with the City for jurisdiction of the road after construction. i.e. Engineering is continuing the design work on the force main.

Loma Vista Pump Station Study
i.e. Engineering is working on the study. The project engineer will be providing RUSA a report on the possible relocation and upgrade of the Loma Vista Pump Station.

Wastewater Treatment Plant Fuel Tank Removal
The Contractor, First Strike, has completed the removal and fill of the underground storage tanks. There was some contaminated soil discovered around the storage tanks. A small amount

of soil that was contaminated was found below the fuel pumps. The soil was removed and treated according to the Department of Environmental Quality requirements.

Staff Recognition

The Certification Commission for Environmental Professionals of the Association of Boards of Certification confirms Steve Lusch, the Collection System Superintendent, has fulfilled prescribed standards, passed rigorous examination, pledged to uphold the Professional Operators Code of Conduct, and committed to ongoing professional development in the practice of Wastewater Collection operations. Recognizing the requirements for Professional Operator Wastewater Collection Class IV certification and designation have been satisfied, Steve has been issued the certification of Professional Operator (PO) Class IV.

The Certification Commission for Environmental Professionals is a National Organization committed to protecting health and the environment through certification and professional designation of water industry operators.

The Board would like to acknowledge this accomplishment during the September Board Meeting.

CH2M Report

Randy Turner, Chief Plant Operator, reported that the plant operated well during the month of July and was within the compliance limits stipulated in the permit. Randy advised that the NTS is continuing to receive effluent and running as expected.
Five businesses with grease interceptors where inspected and all of them were operating fine except for Albertson's. Albertson's will increase the pumping frequency from every four months to a three-month cycle.
There was a brief discussion regarding a biosolids site.

Accounts Payable

The Board reviewed the Accounts Payable Report and Addendum for the August 15, 2018 Accounts Payable. There was a short discussion regarding the details of some line items.

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

There being no further business to come before the Board, the meeting was adjourned at 4:52 p.m.

Respectfully submitted,

Harmony Economou
Office Assistant

INTEROFFICE MEMORANDUM

TO: **ROSEBURG URBAN SANITARY AUTHORITY BOARD**

FROM: **JIM BAIRD, GENERAL MANAGER**

SUBJECT: **WETLAND MIDIGATION BANK**

DATE: **FRIDAY, SEPTEMBER 07, 2018**

CC:

We have asked Jacobs Engineering to provide a scope of work and related cost to develop a wetlands mitigation bank at the Natural Treatment Facility (NTF). The benefit to RUSA would be two-fold, the wetlands credits could be banked to offset disturbance of wetland areas due to construction by RUSA. In addition, we would be able to sell the credits to the City of Roseburg or developers to offset construction in delineated wetlands. The other benefit to RUSA would be that additional wetlands constructed at the NTF will add to the tertiary treatment at the facility.

The project has been proposed with a phased implementation. The reason for this approach is that the process of developing a wetland bank has several regulatory requirements and approvals. Using a phased approach allows RUSA to evaluate each step in the project and terminate the project if the cost or benefit proves to not be in the best interest of RUSA.

Jacobs Engineering has proposed three phases:

- Phase I
  - Evaluation of the potential for development of new wetlands and preliminary coordination with regulatory agencies, at a cost of $25,000.
- Phase II
  - Prepare conceptual plan and preparation of the Oregon Mitigation Bank Prospectus, at a cost of $40,000.
- Phase III
  - Final design of the mitigation bank, completion of all documents required and submittal of the required Mitigation Banking Instrument, at a cost of $55,000.

We are proposing that RUSA will self-perform the construction and Jacobs Engineering (Operations Staff) along with Douglas County work crews will be responsible for the planting and transplanting of the wetlands plants.

The estimated value of the wetland mitigation bank is $1,020,000 with and estimated engineering and construction cost of $320,000. The approximate benefit/cost ratio for the 12 acres that are proposed is 3.2 dollars of value created for each 1 dollar of cost. Additional benefit will be realized as increased treatment of the effluent discharged to the Natural Treatment Facility.

Staff recommends that RUSA enter into an out of scope contract with Jacobs Engineering for Phase I of the project in an amount not to exceed $25,000.

Draft Feasibility Analysis for Proposed Development of Mitigation Wetlands

PREPARED FOR:	Jim Baird/Roseburg Urban Sanitary Authority
PREPARED BY:	Peggy O'Neill, Henriette Emond, Mark Madison Jade Mecham, Randy Turner
DATE:	August 21, 2018
PROJECT NUMBER:	351289.TS.00.00.00
REVIEWED BY:	David Austin

1.0 Executive Summary of Preliminary Site Investigation

RUSA is considering creating a mitigation wetland bank at the Natural Treatment System Farm that could sell credits to developers in the Roseburg area or could be used to offset RUSA projects that impact wetlands and require mitigation. Jacobs proposes the attached work scope to create the wetlands mitigation bank. Two tasks from the proposed work scope, (preliminary site investigation, and benefit /cost analysis) were performed as a first go/no-go assessment to see if mitigation wetlands banking could be a profitable business for RUSA. The 2017 statewide average selling price of wetlands mitigation credits was $85,000 per acre. The site investigation evaluated 21.3 acres and determined that natural hydrology exists on 12 acres within the top 24" of the soil profile. The depth to water of 24" was selected as a depth that would result in a cost-effective volume of earthwork required to bring the wetland bottom down to within 1' of the water table as a means to provide natural hydrology for a wetland, which is a mitigation bank requirement. Methods of wetlands construction previously performed by RUSA were considered in the estimated cost of development. RUSA currently owns the land so no cost was included for land purchase. Many plants on site could be available for transplant so the cost of plant procurement was reduced to include transplanting.

The total cost to develop the 12 acre mitigation wetlands complex and permit the area for a wetlands bank is estimated at $320,000 and the predicted value is approximately $1,000,000 at average statewide current values. It takes 5 years to permit a wetland as a bankable credit and annual maintenance and monitoring costs are included for this period. The benefit/cost ratio for the 12 acres is 3.2 with a range for different wetlands in the complex of 2.7 to 4.7. The average benefit/ cost ratio of 3.2 indicates that RUSA could earn $3.2 for each $1 invested after 5 years of plant growth, maintenance, and monitoring. Based upon this positive investment potential and the additional benefits to water quality improvement it is recommended that the remaining tasks in the wetlands banking proposal be performed.

2.0 Introduction

This draft feasibility analysis documents preliminary findings from field investigations to determine the potential to secure regulatory approvals for creation of a wetland mitigation bank at the RUSA Natural Treatment Wetlands (site) in Roseburg, Oregon. The purpose of the bank would be to serve as advance mitigation for anticipated impacts to wetlands associated with future RUSA projects and to provide mitigation credits for sale to local developers. In 2017 the average sale value of mitigation wetland credits in Oregon was $85,000 per acre. The market is variable based upon local availability and

demand and trading is usually within a local region or community. The average market value of an area of the RUSA reuse farm tentatively identified as having potential for mitigation of 10 to 12 acres indicates a potential mitigation credit value of $850,000 to $1,000,000.

Jacobs proposes to conduct the mitigation bank work in three phases:

1. Phase 1 would include evaluation of potential for development of new wetlands on the site (in select areas as shown on the Figure 1), development of a draft conceptual plan for creation of a mitigation bank, and preliminary coordination with regulatory agencies.
2. Phase 2 would include development of the final conceptual plan and preparation of the Oregon Mitigation Bank Prospectus for submittal to federal and state regulatory agencies.
3. Phase 3 would include final design of the mitigation bank and completion of all documentation for preparation and submittal of the required Mitigation Banking Instrument. Annual plant establishment and performance documentation will be performed under the existing treatment plant operations contract out-of-scope budget. Monitoring is required for at least 5 years and is estimated at approximately 24 hours per year including a site visit.

This preliminary report presents the findings of Task 1.1.3, review of site hydrological data. This task was performed as an initial screening to determine if site hydrology would or would not support development of a mitigation bank with natural hydrology. If site conditions are not suitable the mitigation bank would not be possible and the study should not be performed. However, the site investigation of hydrology indicates that many of the sites selected as possible mitigation bank wetland areas are suitable and it is recommended that the additional tasks should be performed to provide the detail of analysis required to develop and permit a mitigation bank. Task 1.1.5, Selection of potential wetland creation locations, was also performed in preliminary detail to determine the approximate number of acres of wetlands that could be included in a mitigation bank to provide a better estimate of the value of performing the other tasks and developing the mitigation bank. A preliminary development cost estimate and benefit/cost ratio was estimated to determine if mitigation banking could be a profitable venture for RUSA.

The proposed scope of work for the complete project is as follows:

1. Phase 1 would include the following tasks:
   - 1.1. Evaluation of selected areas on the site for potential locations for created wetlands. This evaluation will include the following:
     - 1.1.1. Review of existing site information and data gap analysis
     - 1.1.2. Evaluation of feasibility of selected locations for potential wetland creation to include the following:
     - 1.1.3. Review of site hydrological data
     - 1.1.4. Documentation of existing conditions (vegetation, soils, gradient, relationship to existing wetlands)
     - 1.1.5. Selection of potential wetland creation locations
     - 1.1.6. Preliminary wetlands type functional analysis of existing conditions of selected locations
     - 1.1.7. Preliminary eco-system functional analysis of proposed post-wetland creation conditions
     - 1.1.8. Habitat and sensitive resources analysis
   - 1.2. Development of draft conceptual wetland mitigation bank plan schematic drawings assuming construction by RUSA staff
   - 1.3. Coordination of a pre-prospectus meeting and site tour with the U.S. Army Corps of Engineers (Corps), Oregon Department of State Lands (DSL), and Oregon Department of Environmental Quality (DEQ) regulatory personnel to present and gain approval for proceeding completion of the Oregon Mitigation Bank Prospectus for development of the proposed mitigation bank.

Phase 1 deliverables:

- Technical Memorandum documenting the results of the evaluation described above, including recommendation for potential wetland creation locations on site.
- Figures/Drawings illustrating proposed conceptual wetland creation plan
- Meeting notes from agency coordination meeting
- Area of each wetland location and estimated market value based upon current state-wide average mitigation bank sales.
- Approximate earth work quantities and planting material quantities will be provided for each wetland location to assist RUSA with estimating the cost of construction utilizing operations and in-house staff.

Key Assumptions

- If RUSA determines that the regulatory requirements for proceeding with mitigation bank design are too onerous, based on results of the pre-prospectus agency meeting, this project will cease at the end of this phase.
- Surveying will be performed by RUSA as needed.

Phase 2 Preparation of Oregon Mitigation Bank Prospectus

2. Phase 2 would commence following the pre-prospectus meeting with the agencies with their approval to proceed. This phase would include the following tasks:

2.1. Preparation of the Oregon Mitigation Bank Prospectus for submittal to the Corps and DSL, to include the following subtasks:

2.2. Final Feasibility analysis

2.3. Analysis of site suitability, including the following elements:

2.4. Hydrological Analysis

2.5. Wetland Functional Analysis

2.6. Habitat Analysis

2.7. Establishment and Operation Plan, to include a brief description of initial grading, soil amendment, alteration of drainage, site preparation, planting, weed management, temporary irrigation, and other activities expected to be used to establish the bank. This plan would include a description of how the bank will be operated

2.8. Long-term management plan for site protection

2.9. Market analysis that demonstrates the general need for the mitigation bank

2.10. Description of the proposed bank service area and the ecological basis for the proposed service area for the bank.

2.11. Maps & Figures, including the conceptual mitigation Plan and proposed service area maps

2.12. Required attachments (Landowner permission, Anticipated roles for long-term stewardship, and Mailing labels for public notice.

Deliverables

- Oregon Mitigation Bank Prospectus with Attachments

Key Assumptions

No additional studies or analyses will be required. Existing site data on soils, hydrology, irrigation, and wetlands delineations are assumed to be adequate. Phase 3 Preparation of Mitigation Banking Instrument & Permitting will only proceed after RUSA approval.

3. Phase 3 would commence upon approval of the Prospectus and would involve final design of the proposed mitigation bank and acquisition of all required regulatory permits and authorizations for construction of the proposed mitigation bank. This Phase would include the following tasks:

   3.1. Final mitigation bank design drawings with specs on drawings to provide guidance for construction by RUSA staff

   3.2. Preparation of the Mitigation Banking Instrument, to include the following:

   3.3. Property Legal Description & Maps, including tax lot map & surveyed boundary map with PLS stamp
   3.4. Property Assessment and Warranty, including a preliminary title report
   3.5. Mitigation Plan
   3.6. Anticipated Credits and Credit Release Schedule
   3.7. Service Area Map and Descriptions
   3.8. Property Protection Instrument (Deed Restriction, Conservation Easement)

   3.9. Preparation of all applicable federal, state, and local permits and authorizations needed to construct and maintain the bank. These may include, but are not limited to the following:
   3.10. Federal Section 404 Permit
   3.11. Federal Section 401 Water Quality Permit
   3.12. Oregon Removal-Fill Permit

Key Assumptions

- Surveying will be performed by RUSA as needed.

Preliminary Site Investigation

Review of Site Hydrological Data

Figure 1 below shows the locations of 21 test pits dug 2 ft. deep and left for 48 hours on April 19th and 20th, 2018 to determine depth to shallow groundwater that could potentially support mitigation wetlands. The test pits were observed in April since that is before the irrigation season begins on the NTS and is the period when the groundwater level is the lowest during the growing season after a minimum of three weeks of weather that represents the growing season for most wetlands plants in Roseburg. Mitigation wetlands hydrology requires surface water or groundwater within 1 ft. of the surface during at least 3 weeks of the growing season. None of the sites had surface water when observed in April however, 9 of the 21 pits had standing water at < 24 inches. The depth of 24 inches was used to indicate hydrology within a depth that would require minimal excavation. In pits with water at 24 inches below ground surface an excavation of 12 inches would bring the ground surface down to a level 12 inches above the water table to meet the criteria for mitigation wetlands hydrology. Table 1 provides the details of field notes from the April 19th and 20th site investigation and an estimate of area and excavation volume for mitigation wetlands.

Table 1 Field notes from site investigation

			Soils		Veg			Hydrology			Description/Notes				
Wetland Label	**Sample Point**	**Depth to Water (inches)**	**Color**	**Texture**	**Species**	**Wetland Indicator Status**	**Percent Cover**	**Day 1**	**Day 2**	**Day 4**	**Notes**	**Potential Mitigation Wetlands Area**	**Mitigation Acres**	**Acres without Natural Hydrology**	**Depth of excavation to 1' above water table (In)**
A	1	0-24	10YR 3/2-3/3	clay	Schedonorus arundinaceous Juncus patens	FAC FACW	95 5	> 24"	> 24"		Headwaters of Neuner Creek but no nearby delineated wetlands. Potential inidcations of hydric conditions include presence of rushes and clumping of the Schedonorus arundinaceous.	Possible 1 - 2 acres in the lower 1/3 of this polygon but	0	2	
	2	0-24	10YR 3/2	clayey silt loam	Juncus effusus Juncus patens Schedonorus arundinaceous	FACW FACW FAC	80 10 10	> 24"	> 24"		Second pit downslope of SP1. Pre-design report, soils investigation shows saturation at 20" and water in the pit at 24" in a test pit (TP02) at the downslope end of this polygon	greater than 12" average excavation on most of it.	0	2.5	
B	3	0-24	10YR 3/2	clay	Schedonorus arundinaceous	FAC	100	saturated @ 6" water in the	water in the pit @ 16"		Headwaters of Zenor Creek at the base of steeply sloped wet meadows. Contour wetlands could wrap around the start of the incised creek channel and terrace up the slope	At least 1 acre, possibly more if terraced	1		4
D	4	0-24	10YR 3/3-3/4	clayey silt loam	Schedonorus arundinaceous Holcus lanatus	FAC FACW	95 5	> 24"	> 24"		Too dry, but could potentially work with deeper excavation	0	0	0	
	4a	0-24	10YR 3/3-3/4	clay	Schedonorus arundinaceous Holcus lanatus	FAC FACW	95 5	Saturate to the surface water in pit @ 8"			downslope of SP4 and has good hydrology	0.2 acre	0.2	0	1
	4b	0-24	10YR 3/3-3/4	clay	Schedonorus arundinaceous Holcus lanatus	FAC FACW	95 5	standing water ~			~5' downslope of SP 4a and very wet requiring minimal earthwork	0.2 acre	0.2	0	1
C	5	0-18 18-24	10YR 3/2 7.5YR 4/3	clayey silt loam	Schedonorus arundinaceous 70% Ranunculus acris 10% Toxicodendron diversiloba 5%	FAC FAC FAC	70 10 5	> 24"	> 24"		reasonbly high quality upland meadow between two drainages and two delineated wetlands. Highest value might be to preserve the meadow. Requires large cut for small wetland.		0	0	
	5a	0-16 16-24	10yr 3/3 10yr 3/2 with redox: 10YR 4/6	clayey silt loam	Schedonorus arundinaceous Ranunculus acris	FAC FAC	100 T	>24"			downslope of SP 5 at low end of polygon but still too dry.		0	0.3	

			Soils		Veg			Hydrology			Description/Notes				
Wetland Label	**Sample Point**	**Depth to Water (inches)**	**Color**	**Texture**	**Species**	**Wetland Indicator Status**	**Percent Cover**	**Day 1**	**Day 2**	**Day 4**	**Notes**	**Potential Mitigation Wetlands Area**	**Mitigation Acres**	**Acres without Natural Hydrology**	**Depth of excavation to 1' above water table (In)**
E	6	0-24	10YR 3/2-3/3	clay	Schedonorus arundinaceous	FAC	100	> 24"	water in the pit @		polygon follows base of slope of a small knoll; terraced wetland may be possible	1 acre	1	0	8
F	7	0-24	10YR 2/1	clay	Schedonorus arundinaceous	FAC	100	> 24"	water in the pit @		hillslope terrace wetlands could minimize earthwork. Good hydrology	2.8 acres	2.8	0	8
G	8	0-24	10YR 2/1	clay	Schedonorus arundinaceous	FAC	100	> 24"	water in the pit @ 20"		Base of long slope and edge of large relatively flat meadow has good hydrology. Long narrow wetland could intercept multiple shallow groundwater areas to wet a larger wetland	~ 3 acres	1.5	0	8
	9	0-20 20-24	10YR 2/1 10YR 4/2 with gley	clay	Schedonorus arundinaceous Juncus patens	FAC FACW	95 5	> 24"	water in the pit @ 18"		Good hydrology.		1.5	0	6
H	----	----	----	----	----	----	----	----	----	----	no pit; appeared very narrow between creek and dleineated wetland. Streamside berm may impound water in this area.	(possible 1.3 acres)	1.3	0	7
I	10	0-18 18-24	10YR 2/1 10YR 4/1 with gley	clay	Schedonorus arundinaceous Juncus patens	FAC FACW	95 5	> 24"	water in the pit @ 19"		Good hydrology. This area could potentially provide water to areas H and J to create a larger wetland at H, I, and J that includes groundwater and drainage flow	~ 1 acre	1	0	7
J	11	0-24	10YR 2/1	clay	Schedonorus arundinaceous	FAC	100	> 24"	saturated @ 23" > 24"		between two small drainages; possibly excated down to level the area between the two drainages.	possible 0.75 - 1.5 acres	1.5	0	11
K	12	0-24	10YR 2/1	clay	Schedonorus arundinaceous	FAC	100	> 24"	> 24"		slope break is likely location for shallow groundwater but will require more the 12" of excavation to be within 1' of water table	0	0	1.5	
L	13	0-18 18-24	10YR 2/1 7.5YR 3/3	clay	Schedonorus arundinaceous Rubus armeniacus Crataegus monogyna	FAC FAC FAC	90 5 5	> 24"	> 24"		SP is on the upslope edge of polygon; downslope portion of polygon may have sufficient hydrology	0	0	0.5	

			Soils		Veg			Hydrology			Description/Notes				
Wetland Label	**Sample Point**	**Depth to Water (inches)**	**Color**	**Texture**	**Species**	**Wetland Indicator Status**	**Percent Cover**	**Day 1**	**Day 2**	**Day 4**	**Notes**	**Potential Mitigation Wetlands Area**	**Mitigation Acres**	**Acres without Natural Hydrology**	**Depth of excavation to 1' above water table (In)**
M	14	0-18 18-24	10YR 2/1 10YR 2/1 with gley & redox: 7.5YR 4/6	clay	Schedonorus arundinaceous Juncus patens	FAC FACW	70 30	> 24"		> 24"	area downslope of polygon probably wetland now as a result of RUSA manipulation, possible as additional wetland creation area with greater than 12" excavation in trenches to access water similar to downslope area terraced wetlands	~ 1 acre (area east of Area M)	0	1	
N	15	0-24	10YR 2/2	gravelly clay loam	Schedonorus arundinaceous	FAC	100	> 24"		> 24"	just upslope of dense willow wetland (enhancemnt area), slopes up fairly steeply, predominatley Schedonorus arundinaceous with scattered rush.		0	1	
P	16	0-17 >17	10YR 3/2 Refusal	clayey silt loam	Schedonorus arundinaceous Daucus carota Vicia sativa Agrostis sp.	FAC FACU UPL FAC	80 10 5 5	> 17"	> 17"		refusal @ 17" upslope of delineated wetland, very dry, rocky		0	0	
	17	0-20 20-24	10YR 2/2 10YR 4/6	clayey silt loam	Schedonorus arundinaceous Daucus carota Agrostis sp.	FAC FACU FAC	60 10 30	> 24"	> 24"		upslope of delineated wetland, very dry, rocky		0	0	
O	18	0-15 15-24	10YR 2/1 10YR 2/1 with redox: 10YR 4/6	clay sandy clay	Festuca sp.	FAC	100	> 24"	> 24"	> 24"	groundwater level, based on water level in small drainage connecting south side of the road pond with S creek appears to be approximately 3 feet below ground surface level at sampl pit possibly ecavate and create a swale with creek meandering through; add riparian trees on either side of swale. Swale is between the road and the creek	approximately 1/2 acre with greater than 12" excavation	0	0.5	
Total													12	9.3	
Total Area														21.3	

Approximately 21.3 acres were represented in the area investigated for site hydrology and 12 acres were determined to be suitable for mitigation wetlands with an average excavation of less than 12 inches average over the area. Most of the areas investigated are at the slope break at the bottom of a long-sloped area with shallow rock. The natural shallow groundwater hydrology in the RUSA farm basin is generally created by winter rain infiltration that moves downgradient along the soil/rock interface and discharges to jurisdictional wetlands at the bottom of the slopes or directly to Sylman creek. Areas adjacent to jurisdictional wetlands and upslope could access shallow groundwater by removal of soil over the entire target mitigation wetland footprint to make the soil surface lower and closer to shallow groundwater. Alternatively, a trench could be excavated through the soil lens to bed rock parallel to the contours upgradient of the target mitigation wetland footprint to intercept shallow groundwater flow. The trench could be located upslope enough that the water level in the trench would be at an elevation that would allow gravity flow into the target mitigation wetland area. The mitigation wetland would infiltrate water back to shallow groundwater or have overland flow into the downslope wetlands and wet meadows. This alternative would require much less earthwork than level grading of wetlands and would not disturb topsoil over most of the wetland area. Some ponding could be created with low contour berms to reduce short circuiting of flow through the newly created mitigation wetlands. The existing “eyebrow” wetlands created across the creek from the observation deck are an example of low contour berms and shallow excavations with minimal topsoil disturbance.

The total volume of earthwork to level 12 acres to about one foot above the water table is about 12,000 cubic yards. At a cost of $10/cubic yard for grading with a small bulldozer and small excavator, the earthwork would cost about $120,000. Most of the potential mitigation wetlands areas could have wetlands created with partial excavation and low contour berms since they are on side slopes and excavating into the slopes may intercept groundwater that could flow over the surface of the area downslope. Therefore, an average excavation of 12 inches is likely to be 24 inches on the upslope area and no excavation on the downslope area with excavated soil used to build low wide berms at the downslope edge.

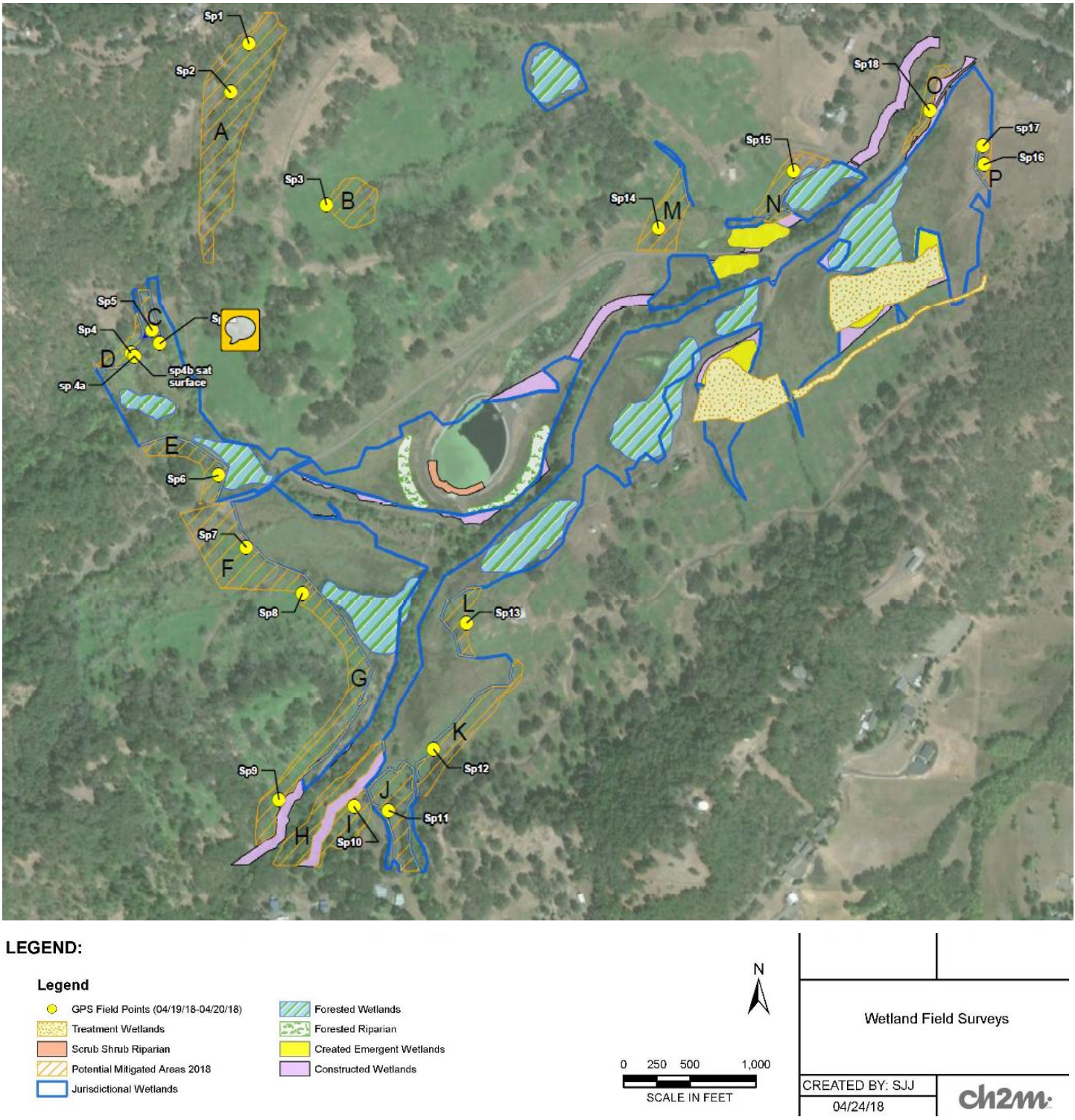


Figure 1 Locations of Potential Mitigation Wetlands and Test Pits

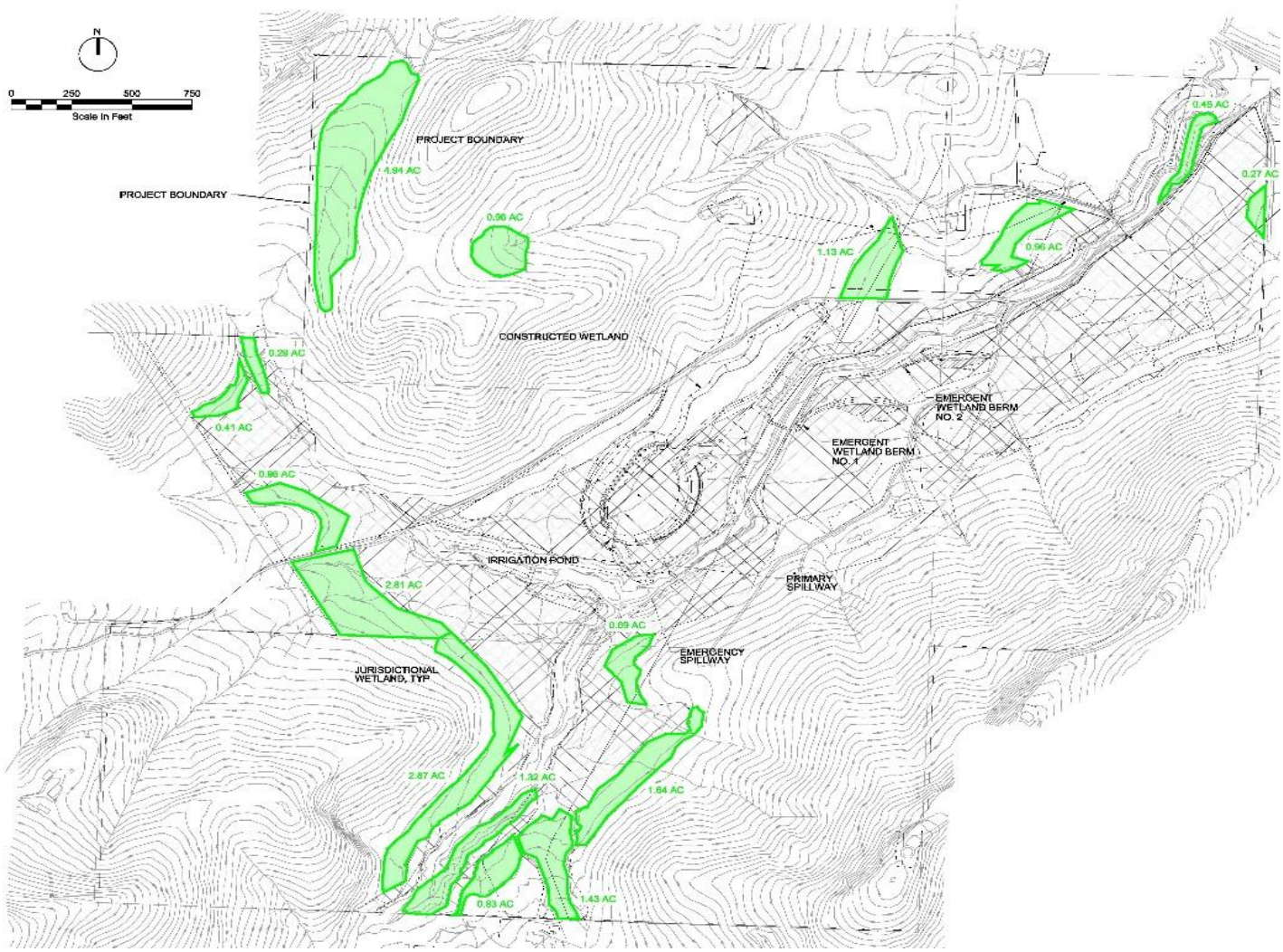


Figure 2 Location and Area of Potential Mitigation Wetlands on Topographic Base
Legend: Green Shading – Potential Area for Mitigation Wetlands (with acres)

Selection of Potential Wetland Creation Locations

The areas selected for potential wetlands creation for mitigation are based upon the natural hydrology that was confirmed with test pits. Other locations may also be suitable but will require more excavation and have more risk of not providing mitigation function because of lack of water or poorer soils at depth. It should be noted that all wetlands created will improve water quality discharging at SW5 and will provide improved habitat with or without mitigation. The wetlands areas that meet the criteria of shallow groundwater as indicated with the 24" deep test pits are: B, D, E, F, G, H, I, and J which are shaded in red in Figure 3.

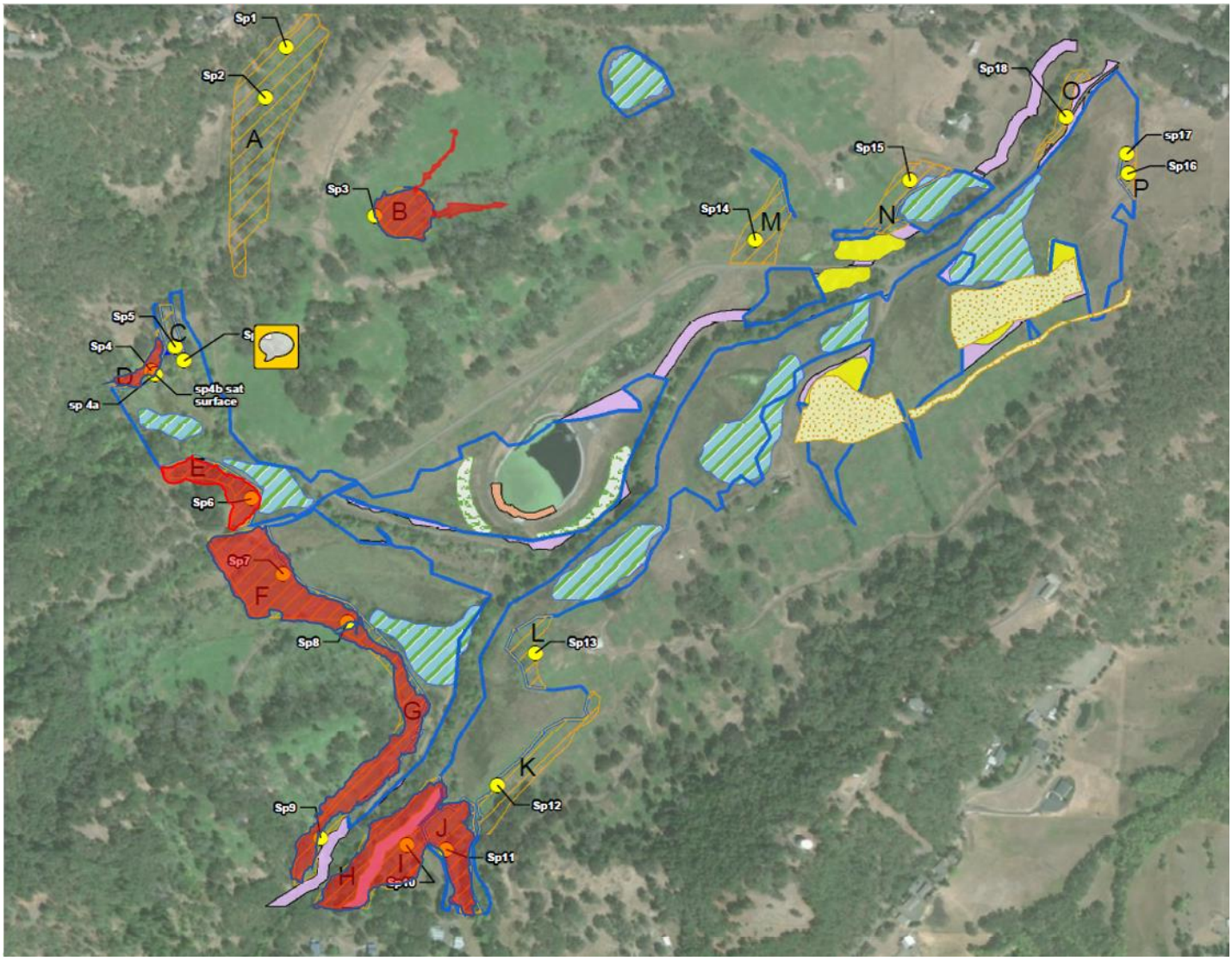


Figure 3 Red shading highlights mitigation wetlands with natural hydrology

It is beneficial to prioritize the sequence of construction, assuming that the wetlands would be built in series maybe over several years. One criteria to prioritize construction could be to build the wetlands that provide the greatest water quality benefit first. Another ranking criterion could be to build the wetlands with the easiest access and constructability first. Using these criteria, the construction sequence priority for the mitigation wetlands would be as follows:

1. Wetland F would be the first priority. It has natural hydrology that is near surface and could intercept and treat surface runoff from area 2H which currently has one of the highest phosphorus runoff concentrations. Wetland F has an adjacent all-weather access road and covers about 2.8 acres of relatively level area.

2. Wetland G is similar in size and covers a similar topography as Wetland F but has more limited access for part of the area. Wetland G also intercepts flow from Area 2H and would provide a good water quality improvement.

3. The third highest priority for water quality improvement is Wetland B at the headwaters of Zenor Creek in area 3H which consistently has turbidity and phosphorus discharge because of the steep slopes and lack of good locations for treatment wetlands or settling ponds. This site

has shallow groundwater and requires minimal excavation to achieve natural hydrology. A terraced wetland in a horseshoe shape just upstream of the beginning of the incised channel of Zenor Creek would intercept shallow groundwater and surface flow from a large area of the box canyon that the creek originates in. Adding a narrow but deep excavation channel on the contour on both sides of this wetland could allow it to intercept surface flow from a much larger area and provide even greater water quality improvement. Excavating the contour channels in a manner similar to the "eyebrow" wetlands near the lower end of Zenor Creek will allow them to become densely vegetated to help stabilize soil and provide shade and nutrient uptake. The shape is generally shown on Figure 3 which has the proposed mitigation wetlands highlighted in red.

4. Areas H, I, and J would be combined into a wetland complex that would be built as the forth priority. This area intercepts water from 2 surface drainages at the upper end of Area 1H and 1L. Area 1 consistently has the highest water quality but intercepting the flow from these drainages and shallow groundwater will provide settling and treatment in wetlands in a large area of the farm that currently does not have wetlands.

5. The fifth priority for construction would be wetlands D and E since they are on the upper edge of the NTS and would not intercept any surface flow to provide additional treatment. However, natural hydrology exists near the surface at area D and only minimal soil shaping would be required to create a mitigation wetland so the cost for development would be the lowest of all areas. If creating low cost mitigation wetlands is the primary goal this area will be the least cost to develop and should be the first priority for construction.

6. All of the other areas investigated as potential sites for mitigation wetlands do not present natural hydrology in the upper 24" but are good sites for constructed treatment wetlands except wetland P which has shallow rock and is on a knoll on the east property line. It is possible that during construction of these additional areas that groundwater will be intercepted and natural hydrology that could support mitigation wetlands will be discovered at depths greater than the 24" depth of the initial investigation test pits. If natural hydrology can be established the area of mitigation wetlands could be expanded to include areas with shallow groundwater or deep excavation.

Approximate Cost to Develop Mitigation Wetlands at the Selected Sites based upon preliminary assessment

There are multiple ways to develop the mitigation sites ranging from contracting all earthwork and all plant material and installation, to self-performing all earthwork, using mostly existing plant material, and augmenting staff with temporary labor to provide planting. For a preliminary cost estimate it is assumed that RUSA will self-perform the work. RUSA has excellent stands of native wetlands vegetation in many wetlands locations across the farm and has established a good record of seed establishment and transplant success in vegetating new areas with on-site plant material. It is assumed that most plant material for development of the mitigation wetlands would come from on-site transplants plus seeding. RUSA has used county corrections labor forces for transplants each year and could arrange to have most of the planting work done by corrections labor or temporary labor with operations staff oversite. Earthwork is assumed to be performed by RUSA operators with a rented small bulldozer and small excavator augmented with the RUSA owned loader and dump truck as needed. RUSA can provide survey and construction oversight. Jacobs engineering, biologists, and operation staff can provide design, planting supervision, procurement of additional plants as needed, and operations for startup. Jacobs can provide annual monitoring and regulatory reporting.

The approximate cost to develop mitigation wetlands is presented in Table 2.

Table 2 Benefit/Cost Ratio for Mitigation Wetlands Development

Wetland Label	Mitigation Acres	Depth of excavation to 1' above water table (In)	Cu Yds of Excavation	Cost of Excavation at $10/cu yd	Cost for Transplants for first year at $2,000/ac	Cost for New Plants and Seed Planting at $2,000/ac	Cost of Design, Permitting, Monitoring and Reporting for first year at $10,000/ac	Total Estimated Cost/ Wetland Area in first year	Annual transplanting for 4 additional years at $200/ac/yr	Annual Monitoring and Reporting for 4 additional years at $500/ac/yr	Total Cost for 5 years to Enter Mitigation Bank per Wetland	Total Value of Wetland in Mitigation Bank at $85,000/ac	Benefit/Cost Ratio per Wetland
B	1	4	538	$ 5,378	2000	2000	10,000.00	$ 19,378	800	2000	$ 22,178	$ 85,000.00	3.8
D	0.2	1	27	$ 269	$ 400	$ 400	$ 2,000	$ 3,069	$ 160	$ 400	$ 3,629	$ 17,000.00	4.7
	0.2	1	27	$ 270	$ 400	$ 400	$ 2,000	$ 3,070	$ 160	$ 400	$ 3,630	$ 17,000.00	4.7
E	1	8	1076	$ 10,756	$ 2,000	$ 2,000	$ 10,000	$ 24,756	$ 800	$ 2,000	$ 27,556	$ 85,000.00	3.1
F	2.8	8	3012	$ 30,116	$ 5,600	$ 5,600	$ 28,000	$ 69,316	$ 2,240	$ 5,600	$ 77,156	$ 238,000.00	3.1
G	1.5	8	1613	$ 16,133	$ 3,000	$ 3,000	$ 15,000	$ 37,133	$ 1,200	$ 3,000	$ 41,333	$ 127,500.00	3.1
	1.5	6	1210	$ 12,100	$ 3,000	$ 3,000	$ 15,000	$ 33,100	$ 1,200	$ 3,000	$ 37,300	$ 127,500.00	3.4
H	1.3	7	1223	$ 12,234	$ 2,600	$ 2,600	$ 13,000	$ 30,434	$ 1,040	$ 2,600	$ 34,074	$ 110,500.00	3.2
I	1	7	941	$ 9,411	$ 2,000	$ 2,000	$ 10,000	$ 23,411	$ 800	$ 2,000	$ 26,211	$ 85,000.00	3.2
J	1.5	11	2218	$ 22,183	$ 3,000	$ 3,000	$ 15,000	$ 43,183	$ 1,200	$ 3,000	$ 47,383	$ 127,500.00	2.7
Total	12		11,885	$ 118,850	$ 24,000	$ 24,000	$ 120,000	$ 286,850	$ 9,600	$ 24,000	$ 320,450	$ 1,020,000.00	3.2

Table 2 summarizes the cost of development of mitigation wetlands and compares that cost to the statewide average value of mitigation wetlands. The approximate benefit/cost ratio for the 12 acres that are proposed is 3.2 dollars of value creation for each 1 dollar of cost. This analysis does not include land purchase since the land is owned and the change in use does not have a land value change. The creation of additional wetlands will improve the water quality discharged from the farm and will have an additional benefit and value that is not included in the benefit/cost ratio.

GENERAL MANAGERS REPORT

Date: 9/7/18

To: Roseburg Urban Sanitary Authority, Board of Directors

From: James V. Baird, General Manager

Re: General Managers Informational Report to the Board

Back Nine Sanitary Sewer Extension Phase I

The construction and start-up for the project has been completed. The As-built plans, Operation and Maintenance Manual, Engineer's letter of certification of completion, easement document and transfer of ownership of the property associated with the pump station are still pending.

RUSA has requested that the water meter located at 425 Longmeadow Lane be relocated to serve 310 Bourbon Street the new pump station location.

NW Black Avenue Sanitary Sewer Replacement Project

The contractor, Cradar Enterprises, has started work on the project. The sanitary sewer construction is 95% complete, the remaining work will take place when the road is paved.

Downtown Improvements Phase II

The Contractor, Brown Construction, has completed the sanitary sewer construction.

Winchester Pump Station Force Main Replacement Project

i.e. Engineering had completed 90% plans for the new dual forcemain that will be constructed as part of Douglas County's Highway 99 North construction project. RUSA is reviewing the plans and will be forwarding the plans with our comments to Jacobs Engineering for review and comment.

Loma Vista Pump Station Study

i.e. Engineering is working on the study. The project engineer will be providing RUSA a report on the possible relocation and upgrade of the Loma Vista Pump Station.

Wastewater Treatment Plant Fuel Tank Removal

The removal of the fuel tanks at the WWTP have been removed and the site filled and paved. All the reports and forms have been completed and sent to the DEQ. The DEQ has given preliminary approval and we expect to receive final approval soon.

Staff Recognition

The Certification Commission for Environmental Professionals of the Association of Boards of Certification confirms Steve Lusch, the Collection System Superintendent, has fulfilled prescribed standards, passed rigorous examination, pledged to uphold the Professional Operators Code of Conduct, and committed to ongoing professional development in the practice of Wastewater Collection operations. Recognizing the requirements for Professional Operator Wastewater Collection Class IV certification and

designation have been satisfied, Steve has been issued the certification of Professional Operator (OP) Class IV.

The Certification Commission for Environmental Professionals is a National Organization committed to protecting health and the environment through certification and professional designation of water industry operators.

Collection Operator of the Year

Matthew Chasteen has been awarded the Collection Operator of the Year for Umpqua Basin Operator Section of the Pacific Northwest Clean Water Association (PNCWA). The local section submitted Matt's nomination to the Oregon Region of the PNCWA and subsequently was chosen by the presidents of the five sections in the Oregon Region as Oregon's Collection Operators of the year. Matt will be recognized during the Annual Conference and Awards Banquet as the Oregon Operator of the Year.

Treatment Plant Operator of the Year

Jade Mecham has been awarded the Treatment Plant Operator of the Year for the Umpqua Basin Operator Section of the Pacific Northwest Clean Water Association (PNCWA). The local section submitted Jade's nomination to the Oregon Region of the PNCWA and subsequently was chosen by the presidents of the five sections in the Oregon Region as Oregon's Treatment Plant Operator of the year. Jade will be recognized during the Annual Conference and Awards Banquet as the Oregon Treatment Plant Operator of the year.

INTEROFFICE MEMORANDUM

TO: **ROSEBURG URBAN SANITARY AUTHORITY BOARD**

FROM: **JAMES V. BAIRD, GENERAL MANAGER**

SUBJECT: **STAFF PROFESSIONAL DEVELOPMENT**

DATE: **FRIDAY, SEPTEMBER 07, 2018**

CC:

The Oregon Operators Conference was held August 14th – 16th in Canyonville, OR. The conference is hosted by the Umpqua Basin Operator Section of the PNCWA. This conference provides the opportunity for our staff and others to attend a training event locally to obtain their required continuing education credits to maintain their State certification.

The RUSA staff that attended the conference were:
Jim Baird
Steve Lusch
Matt Chasteen
Kyle Bartlett
Rick Cox
Kyle Vatland
Leland Miller
Greg O'Neill
John Bastianelli

The Pacific Northwest Clean Water Association's Annual Conference will be held October 20th – 24th in Boise, ID. This conference provides our staff with training on the latest technical information for wastewater collection and treatment systems. The courses that our staff attend during the conference provide continuing educational credits as well as helping us keep up to date with the technical issues related to our industry as well as networking with leading professionals in the region.

The RUSA staff the will attend the conference are:
Jim Baird
Steve Lusch
Ryon Kershner
Matt Chasteen

ROSEBURG URBAN SANITARY AUTHORITY
NEW DEVELOPMENTS AND PROJECTS

DEVELOPMENTS:

- Edenbower sewer main extension
  - Pinnacle Western Engineering is designing a sewer main extension to provide service to property east of Stephens street. This project is on hold.
- Oakridge Court Apartments
  - The plans and specifications have been approved. This project is on hold.
- Newton Creek Manor
  - This project is 98 percent complete. The mainline and manholes are in place.
- Umpqua Health Newton Creek Campus
  - Mainline and sanitary service line are complete. Testing has not taken place at this time.
- Woodside Village is 98 percent complete we are waiting on testing. This Subdivision is being held up by PP&L.

PRELIMINARY DESIGN:

- Loma Vista Pump Station Improvement Study
- Tabor – Military Avenue partition
- Townsend Lane – Lookingglass subdivision

PROJECTS:

- Cascade Court main line extension – Joint City-RUSA project
  - Cradar Enterprises has completed the work on this project. The punch list items have been completed. Engineers certification and as-built drawings are still pending.
- Back Nine
  - Construction continues with the Back Nine Sanitary Sewer Extension project. The lift station is now complete and is waiting power to operate. The testing was completed using generator power.
- NW Black Avenue Sanitary Sewer Improvement
  - Black Street is 98 percent complete the remaining work will take place when the surface has been placed on the road.
- Downtown Intersection Improvements Phase II.
  - This project is 98 percent complete pending final testing
- Garden Valley Sewer Repair
  - complete.
- Winchester Pump Station Pressure Line Replacement
  - Initial engineering underway

ROSEBURG URBAN SANITARY AUTHORITY

August 2018 STAFF REPORTS

COLLECTION DEPARTMENT:

- Completed 32 work orders.
- Completed CCTV of 19,707 feet of mainline.
- Completed cleaning of 29,900 feet of mainline.
- Completed cleaning the Fairgrounds Collection System.
- Conducted draw-down tests and cleaned 8 lift stations.
- Completed 73 manhole inspections.
- Lined 1 manhole.
- All Collections department employees attended the Oregon Operators Conference in August.

ENGINEERING DEPARTMENT:

- Completed 203 underground utility locate requests.
- Issued 5 permits and completed 7 inspections.
- Construction continues with the Back Nine Sanitary Sewer Extension project. The lift station is now complete and is waiting power to operate. The testing was completed using generator power.
- Construction on the Cascade Court Project is complete. The City is finalizing negotiation with a home owner. The As-Built drawings and Engineer's letter of certification is pending.
- Black Avenue sewer replacement is 98 percent complete.
- Downtown Phase II sewer replacement Construction should be complete they have finished all construction and abandonment of sewer facilities. They have yet final testing left.
- Newton Creek Manor mainline extension is now complete.
- Woodside Village mainline extension is 95 percent done. There is only testing left.
- Umpqua Health mainline extension is 98 percent done. Waiting on paving to complete testing.
- Cradar is installing a slot drain at the waste water treatment plant. The drain is installed and paving will happen the 13th of September.

FINANCE DEPARTMENT:

- Vacancy Credits: 11 were processed for a total of $675.00 in August.
- Credit cards/eChecks: 666 payments totaling $35,513.89 were collected in August. 59 payments received at the counter, 34 by voice response system, and 573 on-line.
- Automatic Payments: 1,960 customer accounts are signed up. Received $78,410.51 or approximately 14.13% of monthly billing.

TO: Jim Baird, General Manager-RUSA
FROM: Jade Mecham, Project Manager
DATE: September 5, 2018
SUBJECT: August 2018 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 August 2018, was 236,000 KWHRS with a total Effluent flow of 85.16 million gallons, all of which went to Outfall 002 (NTS). The August 2017 electrical consumption was 252,000 KWHRS with a total Effluent flow of 90.60 million gallons, all of which went to Outfall 002 (NTS).
- Three days of sampling for metals and cyanide were completed and samples sent out to the lab for analysis as part of the semi-annual event.
- Land application of both liquid and dewatered biosolids continued throughout the month at 3 different sites.
- Alum continues to be added to the effluent being pumped to the NTS to assist with settling.

PRETREATMENT ACTIVITIES

The following pretreatment inspections were completed in August:

- *China Buffet:* Their outfall was in satisfactory condition with little noticeable grease build up.
- *Sherm's:* Pumping of their interceptor tank was completed this month.
- *McDonalds on G.V:* Their interceptor was full, a call was placed to the management, we are waiting for a response.
- *Safeway:* Their interceptor was in good condition.
- *Abby's on NE Stephens:* Their outfall showed no signs of grease build-up..
- *Wendy's:* Their outfall downstream was Ok, very little grease build-up.
- *Carl's Jr:* Their interceptor was full, contacted their manager who will contact the district manager to see about pumping the tank.

NATURAL TREATMENT SYSTEM (NTS)

- The upstream river probe that measures pH, temperature and dissolved oxygen was removed from the river by someone and thrown onto the embankment, so two weeks of data was not collected for the month of July. DEQ was notified.
- The County work crew was at the NTS to spray blackberries and thistles.
- Continue to work the zones for sprinklers that are not working properly.
- The #3 Amiad Filter was reassembled and nearly ready to be put back into operations.

MAINTENANCE ACTIVITIES

- Worked on repairing Amiad Filter at the NTS.
- Installed fuel tank on shop truck.
- Repaired water leak in Chlorine Room.
- Built cement foundation and placed WAS Pump #3.
- Auxiliary fuel tank hooked up for left over unleaded fuel.
- Replaced screw press conveyor gearbox.

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: 135

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

- Precision results:
  In control: 135
  Out of control: 0
  Accuracy Results:
  In Control: 121
  Out of Control: 0
- On 8/2/18, removed probes from river and NTS, downloaded data, recalibrated and relaunched.
- On 8/15/18, sampled Lab water and shipped to NRC for testing.
- On August 27th, 28th, and 29th we collected samples for Semi-annual Metals and Cyanide. Samples were shipped to NRC on the 30th.

PERSONNEL/COMMUNITY SERVICE ACTIVITIES

- Chad Snyder and Terry Robeson are out due to surgeries.
- Daniel Isenberger, trainee, here for two days to train in operations and NTS.

UPCOMING EVENTS

OPERATIONS/NTS:

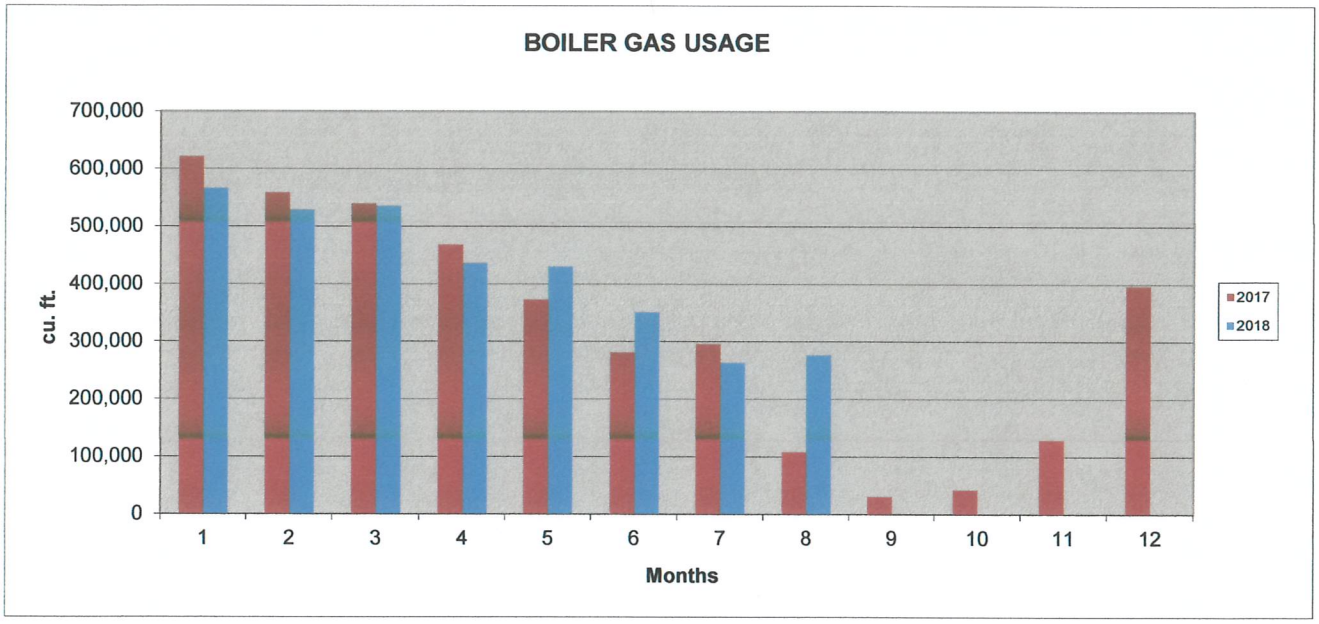
- Continue with the spraying of blackberries at the NTS as the work crew comes available to spray.
- Repairs of sprinklers throughout the zones at the NTS.

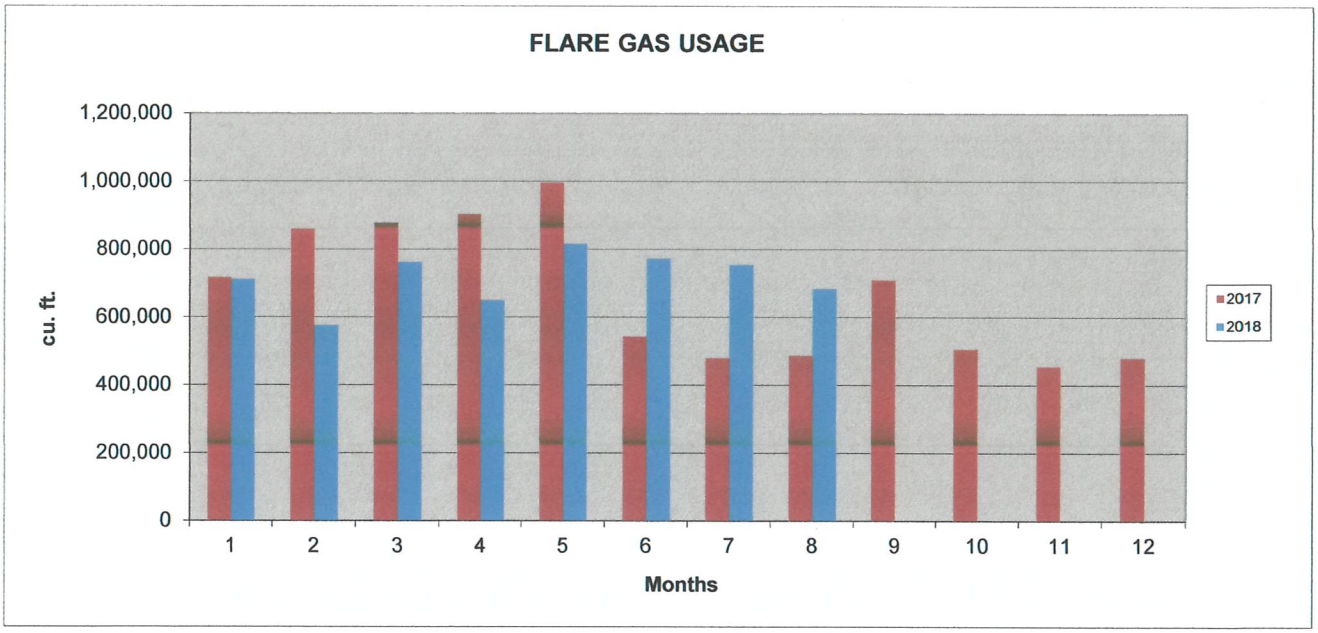
MAINTENANCE:

- Complete WAS Pump #3 installation.
- Install fuel tank on 4x4 shop truck.

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


BOILER GAS USAGE
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
cu. ft.
1
2
3
4
5
6
7
8
9
10
11
12
Months
2017
2018


FLARE GAS USAGE
1,200,000
1,000,000
800,000
600,000
400,000
200,000
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cu. ft.
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2
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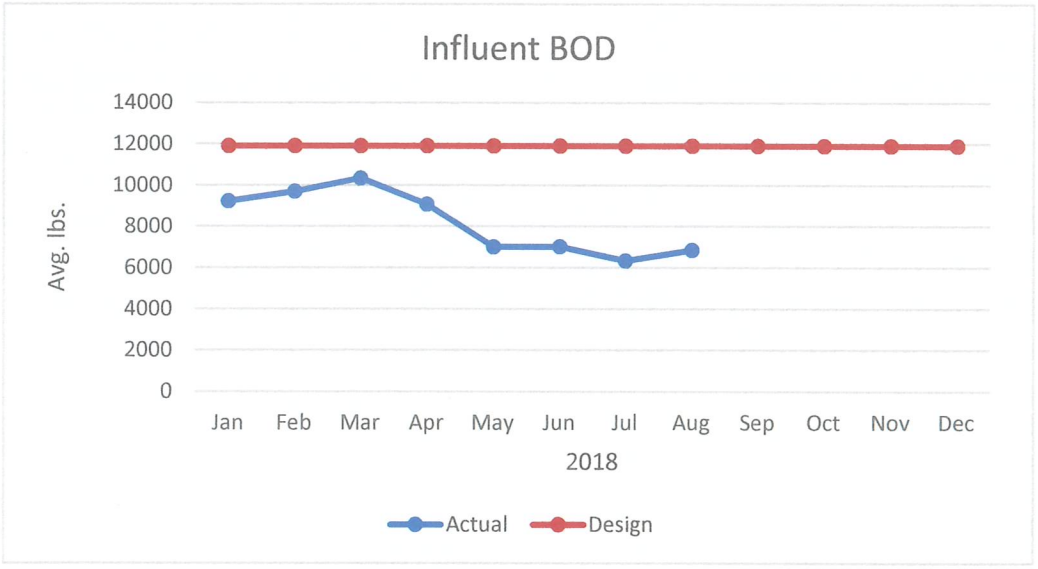
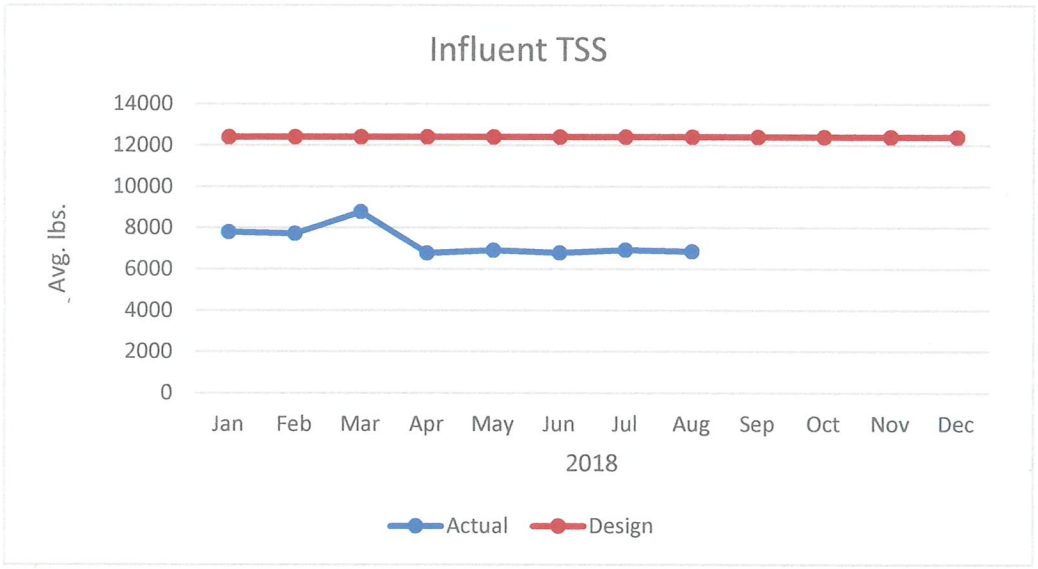
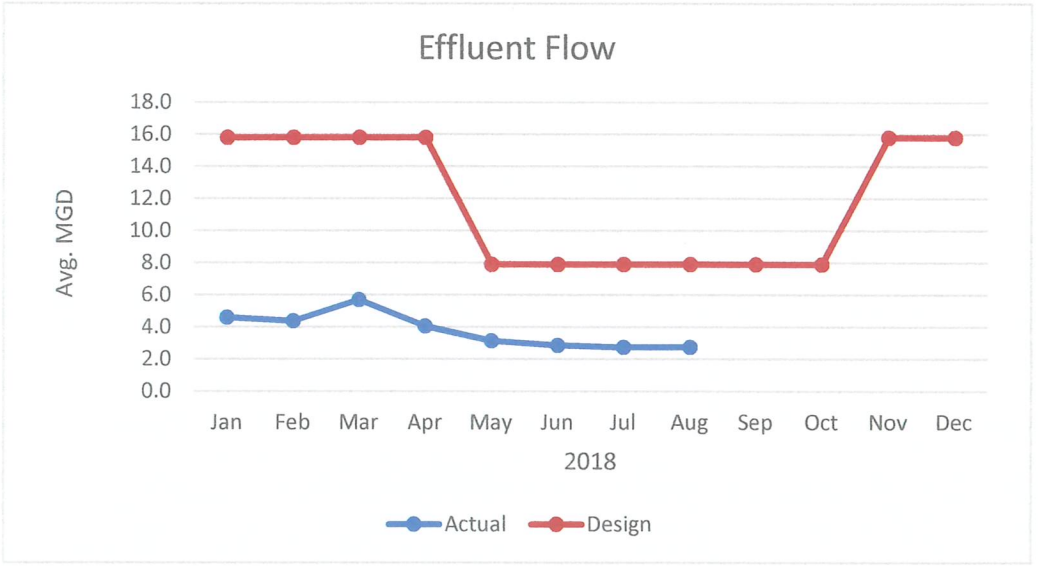
Months
2017
2018


Influent BOD
Avg. lbs.
14000
12000
10000
8000
6000
4000
2000
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2018
Actual
Design


Influent TSS
Avg. lbs.
14000
12000
10000
8000
6000
4000
2000
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2018
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
2018
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
Sep-17	2.86	6750	5176
Oct-17	3.30	7816	6550
Nov-17	4.45	9093	7534
Dec-17	3.61	8340	6804
Jan-18	4.61	9227	7805
Feb-18	4.39	9702	7725
Mar-18	5.72	10343	8779
Apr-18	4.08	9078	6784
May-18	3.15	7012	6919
Jun-18	2.87	7027	6826
Jul-18	2.76	6345	6937
Aug-18	2.76	6849	6849

SUM	44.56	97581	84688
AVE	3.71	8132	7057
MAX	5.72	10343	8779
MIN	2.76	6345	5176

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

August, 2018
Print Date: 9/5/2018

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	3.57
Max Weekly Avg (Wed Rule) , 8/26/2018	MG/L	15.00	4.00
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 , 8/6/2018	S.U.	6.30	6.52
Maximum , 8/1/2018	S.U.	8.50	6.99
Plnt Ef - C BOD			
Solids TSS - Total Suspended Solids TSS			
Average	MG/L	10.00	7.43
Max Weekly Avg (Wed Rule) , 7/29/2018	MG/L	15.00	8.00
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	6
Maximum , 8/14/2018	MG/L	na	11
Plnt Ef - Effluent			
E Coli - E Coli			
Average	MPN	126	8
Maximum , 8/2/2018	MPN	406	29
Plnt Ef - Effluent			
XS Therms - Excess Thermal Load			
Maximum	MKCal	na	

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

CASH DISBURSEMENT RECAP
BOARD MEETING SEPTEMBER 12, 2018

Cash Disbursements Since the Last Board Meeting

All Funds:		
	Total of Prepaid Checks & ACH Transactions	61,311.32
	Total of Regular Checks & ACH Transactions	242,036.13
	Total Expenditures (not including Payroll)	303,347.45
Payroll:		
	Net Payroll - August 2018	56,322.71
All Checks & ACH Transactions since the Board Meeting of August 15, 2018		359,670.16

Accounts Payable

Checks by Date - Detail by Check Date

User: christine
Printed: 9/7/2018 1:07 PM

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
ACH	ASIFLEX	ASIFlex	08/31/2018	
	Aug 18 PR	PR Batch 00001.08.2018 Flexible Spending Acc	PR Batch 00001.08.2018 Flex	1,303.85
	Aug 18 PR	PR Batch 00001.08.2018 Dependent Care FSA	PR Batch 00001.08.2018 Dep	83.33
			Total for this ACH Check for Vendor ASIFLEX:	1,387.18
ACH	DNB	Internal Revenue Service	08/31/2018	
	Aug 18 PR	PR Batch 00001.08.2018 FICA - Employee	PR Batch 00001.08.2018 FIC	5,016.45
	Aug 18 PR	PR Batch 00001.08.2018 FICA - Employer	PR Batch 00001.08.2018 FIC	5,016.45
	Aug 18 PR	PR Batch 00001.08.2018 Medicare - Employer	PR Batch 00001.08.2018 Med	1,173.19
	Aug 18 PR	PR Batch 00001.08.2018 Medicare - Employee	PR Batch 00001.08.2018 Med	1,173.19
	Aug 18 PR	PR Batch 00001.08.2018 Federal Income Tax	PR Batch 00001.08.2018 Fed	5,589.28
			Total for this ACH Check for Vendor DNB:	17,968.56
ACH	OR-Rev	Oregon Dept. of Revenue	08/31/2018	
	Aug 18 PR	PR Batch 00001.08.2018 Oregon W/Held	PR Batch 00001.08.2018 Oreg	4,610.91
			Total for this ACH Check for Vendor OR-Rev:	4,610.91
ACH	PBPP	Pitney Bowes Purchase Power	08/31/2018	
	July 2018	Refill postage meter		150.00
			Total for this ACH Check for Vendor PBPP:	150.00
48519	CIS INS	CIS Trust	08/31/2018	
	Aug 18 PR	PR Batch 00001.08.2018 Medical Ins w/RX	PR Batch 00001.08.2018 Med	25,996.69
	Aug 18 PR	PR Batch 00001.08.2018 Voluntary Life Insuran	PR Batch 00001.08.2018 Volu	263.11
	Aug 18 PR	PR Batch 00001.08.2018 Life Insurance - Spous	PR Batch 00001.08.2018 Life	129.68
	Aug 18 PR	PR Batch 00001.08.2018 CCIS Insurance Long-'	PR Batch 00001.08.2018 CCI	240.96
	Aug 18 PR	PR Batch 00001.08.2018 Short-Term Disability	PR Batch 00001.08.2018 Sho	107.31
	Aug 18 PR	PR Batch 00001.08.2018 CCIS Insurance AD&I	PR Batch 00001.08.2018 CCI	20.54
	Aug 18 PR	PR Batch 00001.08.2018 Dental & Vision	PR Batch 00001.08.2018 Den	3,314.64
	Aug 18 PR	PR Batch 00001.08.2018 Voluntary Dependent L	PR Batch 00001.08.2018 Volu	32.56
	Aug 18 PR	PR Batch 00001.08.2018 Life Insurance - er	PR Batch 00001.08.2018 Life	115.70
			Total for Check Number 48519:	30,221.19
48520	PEBSCO	Nationwide Retirement Solutions	08/31/2018	
	Aug 18 PR	PR Batch 00001.08.2018 Nationwide-Deferred C	PR Batch 00001.08.2018 Nati	3,700.00
			Total for Check Number 48520:	3,700.00
48521	SHRED-IT	Shred-It USA	08/31/2018	
	8125386841	Shred Services-August		85.02
			Total for Check Number 48521:	85.02
48522	USPS	US Postal Service	08/31/2018	
	Aug 2018	Postage for September UB Bills		2,454.76

Check No	Vendor No Invoice No	Vendor Name Description	Check Date Reference	Check Amount
			Total for Check Number 48522:	2,454.76
48523	VERIZON	Verizon Wireless	08/31/2018	
	9812791977	Wireless phone service plus 1 new phone		694.68
	9812791985	Wireless for TV Van		39.02
			Total for Check Number 48523:	733.70
			Total for 8/31/2018:	61,311.32
			Report Total (9 checks):	61,311.32

Accounts Payable

Checks by Date - Detail by Check Date

User: christine
Printed: 9/7/2018 1:31 PM

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
ACH	02669	PERS Deposit	09/12/2018	
	Aug 18 PR	PR Batch 00001.08.2018 PERS - Not W/Held	PR Batch 00001.08.2018 PER	6,673.07
	Aug 18 PR	PR Batch 00001.08.2018 PERS Pick-Up	PR Batch 00001.08.2018 PER	677.28
	Aug 18 PR	PR Batch 00001.08.2018 OPSRP-Not W/Held	PR Batch 00001.08.2018 OPS	4,093.06
	Aug 18 PR	PR Batch 00001.08.2018 PERS W/Held	PR Batch 00001.08.2018 PER	3,796.98
	Aug 18 Rounding	PERS Rounding Adjustment		0.04
			Total for this ACH Check for Vendor 02669:	15,240.43
ACH	ASIFLEX	ASIFlex	09/12/2018	
	A00032588808AY9	FSA Admin fees-Aug 2018		45.00
			Total for this ACH Check for Vendor ASIFLEX:	45.00
ACH	STAPLES	Staples Credit Plan	09/12/2018	
	2131897761	File folder labels		46.48
	2133643111	File drawer frames for hanging folders		106.17
	2134519601	File drawer frames for hanging folders		70.78
	2136559601	Box of gel roller ball pens		35.70
	2137213651	Display port adapter for Jim's computer		14.28
	2137229651	New speakers for Jim's computer		249.99
	2138625221	Ergonomic mouse for Dave		79.99
	2141406721	Display port adapters for additional new comput		79.96
	2147648691	Display port extension cord for Jim		12.25
	2148145231	Kitchen and office supplies		81.37
	2148680241	Kitchen and office supplies		15.30
	9556	Ethernet patch cord, surge suppressor - Jim, wris		66.47
			Total for this ACH Check for Vendor STAPLES:	858.74
48524	APEX	Apex/Ace Home Center	09/12/2018	
	328853	Parts to repair camel		10.07
	328945	Repair air compressor		3.29
	329231	PVC Primer for '14 Service truck		11.49
			Total for Check Number 48524:	24.85
48525	WP	Avista Utilities	09/12/2018	
	Aug 2018	Natural Gas usage-August 2018		29.21
			Total for Check Number 48525:	29.21
48526	BANNERMC	BANNER BANK	09/12/2018	
	AA 073118	Staples-Business cards		99.91
	AA 080918	The Knox Co-Knox Box for Keys for Fire Dept		362.00
	AA 082418	Microsoft-Office 365 Business Essentials subscr		40.00
	CM 082418	Microsoft-11 Office 365 Business Premium subs		137.50
	DF 082018a	Newegg-Cooling for Asus Clone PC		104.15
	DF 082018b	Newegg-Cooling for Asus Clone PC		14.17
	DF 082018c	Amazon-Stand for Jim's office		35.31

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
	DF 082218	Network Solutions-email tied to new domain (ru		11.39
	DF 082318	Amazon-mouse for Jim		79.99
	DF 082418	Microsoft-MS Visio subscription for Dave		15.00
	DF 082718	Autozone-supplies for Jim's desk		15.47
	GO 080318	DC Precision Lube-Oil change & tire rotation-'14		56.13
	GO 080618	Ricks Medical Supply-sharps containers		84.16
	GO 080618b	Staples-mouse for Daniels computer		19.99
	GO 080718	Ten Down Bowling-DCUCC lunch		13.50
	HE 081518	Safeway-Board mtg snacks		12.00
	JB 080118	Varidesk-Adjustable desk for GM office		1,385.00
	JB 080718	Ten Down Bowling-DCUCC lunch-John B		13.50
	JB 081018	Coastal Farm-Ammo for pest control NTS		37.98
	JB 081318	Stix Sports Bar-Dinner Jim & Cordell (WEF Rep		43.00
	KB 080618	Engineering Supply-Grade rods for CCTV		379.98
	MC 080618a	American Wireless-Antenna for radio		15.50
	MC 080618b	Home Depot-Concrete trowel		42.97
	MC 081318	Sportsman Warehouse-2 flashlights for crew veh		59.98
	MC 082418	Home Depot-Bathroom spray & screwdrivers		4.87
	MC 0830318	Amazon-Reel sto pfor compressor		17.00
	RC 080918	DC Co-op - Bag of Lime		7.49
	RK 081518	Seven Feathers-Gas for Jims Truck		67.47
	SL 080418	Adobe-annual license		179.88
	SL 081018	Rigid Tools-Chain for pipe snap cutter		319.30
	SL 082118a	USA Blue Book-smoke candles for smoke testing		632.26
	SL 082118b	USA Blue Book-Door hanger cards		92.12
	SL 082118c	USA Blue Book-Door hanger cards		72.75
			Total for Check Number 48526:	4,471.72
48527	BIOMED	bio-MED Testing Services Inc	09/12/2018	
	65532	MVR for Engineering Intern		18.00
			Total for Check Number 48527:	18.00
48528	OMI	CH2MHill OMI	09/12/2018	
	67746	Professional services per agreement		121,072.75
	67793	Out of Scope - Add'l Services for Monitoring &		694.52
			Total for Check Number 48528:	121,767.27
48529	Chytka	Chytka Pest Control LLC	09/12/2018	
	127828	Monthly pest control service		40.00
			Total for Check Number 48529:	40.00
48530	CORIX	Corix Water Products (US) Inc.	09/12/2018	
	17813024711	PVC Green Pipe 14'		266.00
			Total for Check Number 48530:	266.00
48531	SHAUN	DC Precisions Lube & Tune	09/12/2018	
	00002-63673	Tire rotation-'14 Ford Pickup		36.13
	2173	Oil change-'14 Ford F-450 Service truck		33.29
	2177	Oil change & air filter-'11 Ford F-450 Service tru		53.98
	2183	Oil Change-'11 Ford F-550 2 Yard		33.29
			Total for Check Number 48531:	156.69
48532	DLT SOLU	DLT Solutions, LLC	09/12/2018	
	S1402629	Civil 3D 2019 Government New Single-User EL		1,974.94

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
			Total for Check Number 48532:	1,974.94
48533	DCPW	Douglas County Public Works	09/12/2018	
	03416	Disposal fees		12.00
	468711	Grit pit disposal		297.84
			Total for Check Number 48533:	309.84
48534	DFN	Douglas Fast Net	09/12/2018	
	Sept 2018 Admin	Internet Services-Admin	Service: 14806	202.71
	Sept 2018 High	Internet Services-Highland PS	Service: 105797	64.14
	Sept 2018 Host	Admin Hosting		10.28
	Sept 2018 Keady	Internet Services-Keady Ct	Service: 106289	64.14
	Sept 2018 NBank	Internet Services-No. Bank PS	Service: 105793	61.64
	Sept 2018 NTS	Internet Services-NTS	Service: 23920	51.37
	Sept 2018 Ph/Ca	Internet for phones/security cameras		107.24
	Sept 2018 Wilb1	Internet Services-Wilbur 1 PS	Service: 105796	64.14
	Sept 2018 Wilb2	Internet Services-Wilbur 2 PS	Service: 105794	61.64
	Sept 2018 Winch	Internet Services-Winchester P	Service: 105795	64.14
			Total for Check Number 48534:	751.44
48535	EARTH	EARTH20	09/12/2018	
	073046	Bottled water		47.29
	172636	Bottled water		32.19
	263983	Bottled water		39.74
			Total for Check Number 48535:	119.22
48536	FASTENAL	Fastenal Company	09/12/2018	
	ORROS193066	Lo/To kit		232.92
	ORROS193358	Gloves		128.71
			Total for Check Number 48536:	361.63
48537	1Strike	First Strike Environmental Co.	09/12/2018	
	8323	Decommission (3) Three Underground Storage T		21,490.50
	8323	Change order		2,500.00
			Total for Check Number 48537:	23,990.50
48538	GENES	Gene's Brake & Aligenment. Inc	09/12/2018	
	158173	U Bolts for Air compressor		18.00
			Total for Check Number 48538:	18.00
48539	GENEQ	General Equipment Company	09/12/2018	
	66867	Rubber intake tube, reducer,hose shank, swivel r		1,377.68
	66944	Root Cutter		7,722.00
			Total for Check Number 48539:	9,099.68
48540	GEC	c/o DAS EGS-Shared Financial Services G	09/12/2018	
	AIE08519	Gov Ethics Assessment FY19		570.14
			Total for Check Number 48540:	570.14
48541	GRAPHDIM	Graphic Dimensions, Inc.	09/12/2018	
	1554	Cut August UB Bills		32.30
			Total for Check Number 48541:	32.30

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
48542	PUGH	Jeffrey L. Pugh, Attorney at Law	09/12/2018	
	July 25, 2018	Legal services - Back Nine agreement		824.00
			Total for Check Number 48542:	824.00
48543	TYCO	Johson Controls Security Solutions	09/12/2018	
	31024441	Service call		111.65
			Total for Check Number 48543:	111.65
48544	LTM	Knife River Materials	09/12/2018	
	484445	Crushed rock-Vine street project		310.07
			Total for Check Number 48544:	310.07
48545	LINN BEN	LINN BENTON TRACTOR COMPANY	09/12/2018	
	E05511	Tractor Mounted Flail Mower		6,300.00
			Total for Check Number 48545:	6,300.00
48546	MSTRCR	MasterCare Cleaning Co Inc	09/12/2018	
	81090J	Janitorial Services-August 2018		390.00
			Total for Check Number 48546:	390.00
48547	MUNISUP	Municipal Supply Company	09/12/2018	
	80786	Smoke testing supplies		420.00
			Total for Check Number 48547:	420.00
48548	NEXNET	Nexcom Networks	09/12/2018	
	2897P	Monthly digital telephone service		332.80
			Total for Check Number 48548:	332.80
48549	NORLAB	Norlab, Inc.	09/12/2018	
	80331	100 dye strips-red		132.00
			Total for Check Number 48549:	132.00
48550	OR-LIN	Oregon Linen, Inc.	09/12/2018	
	229564	Laundry services		32.51
	235356	Jeans - Miller		74.94
	235356	Laundry services		47.63
			Total for Check Number 48550:	155.08
48551	OR-TOOL	Oregon Tool & Supply	09/12/2018	
	422951	Black eraser paint		9.90
	423130	Fittings for smoke blower		1.10
	776846	Gauge for air testing inspection		39.80
	777634	Hose reel for compressor trailer		443.95
	777678	Shop parts		129.20
	777893	80 Gallon Shop Air Compressor		1,399.00
			Total for Check Number 48551:	2,022.95
48552	PPL	Pacific Power	09/12/2018	
	Aug 18 140LMG	Power Usage-140 LM-NTS Gate		20.15
	Aug 18 411C	Contract-411 LM-Storage Bldg		12.76
	Aug 18 411U	Usage-411 LM-Storage Bldg		28.44
	Aug 18 425LM	Power Usage-425 Long Meadow		10.48

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
	Aug 18 Admin	Power Usage-Admin Bldg		879.83
	Aug 18 High	Power Usage-Highland PS		1,025.72
	Aug 18 Keady	Contract Min&Usage-Keady Ct PS		189.97
	Aug 18 LV	Power Usage-Loma Vista PS		131.44
	Aug 18 NBank	Power Usage-North Bank PS		136.34
	Aug 18 NTS	Contract/Power Usage-NTS PS		10,965.10
	Aug 18 SBank	Power Usage-South Bank PS		1,283.87
	Aug 18 Wilb1	Power Usage-Wilbur 1 PS		80.84
	Aug 18 Wilb2	Power Usage-Wilbur 2 PS		138.71
	Aug 18 WWTP1	Power Usage-WWTP 1		17,969.31
	Aug 18 WWTP2	Power Usage-WWTP 2		28.10
			Total for Check Number 48552:	32,901.06
48553	Premium	Premium Landscape, Inc.	09/12/2018	
	21674	Landscaping Services-August		180.25
			Total for Check Number 48553:	180.25
48554	GENCHEM	RootX	09/12/2018	
	53707	40 40lb. boxes of RootX.		13,819.65
			Total for Check Number 48554:	13,819.65
48555	A&I	Roseburg Auto & Truck Supply	09/12/2018	
	800520	Coolant for sign truck		33.98
	803761	wire wrap/tools-office		25.49
	803796	Detail brush		12.89
	805390	Sparkplugs for echo backpack blower		5.02
	805391	Bulb for Echo leaf blower		4.92
			Total for Check Number 48555:	82.30
48556	RSBG-DIS	Roseburg Disposal Company	09/12/2018	
	1037598	Garbage Service-August		56.50
			Total for Check Number 48556:	56.50
48557	TECHUNL	Technology Unlimited, Inc	09/12/2018	
	326860	Annual License Fee for Aquracy Ck processing s		450.00
			Total for Check Number 48557:	450.00
48558	UBWA	Umpqua Basin Water Association	09/12/2018	
	Aug 18 411LM	Water Base Rate-411 LM		20.30
	Aug 18 425LM	Water Base Rate-425 LM		20.00
	Aug 18 606LM	Water Base Rate-606 LM		20.00
			Total for Check Number 48558:	60.30
48559	UNITED	UNITED RENTALS (NORTH AMERICA)	09/12/2018	
	160062666-001	Mini Excavator rental-In-House GV Sewer Proje		208.68
			Total for Check Number 48559:	208.68
48560	WECO	WECO	09/12/2018	
	CP-00041208	Fuel Usage-August		1,385.24
			Total for Check Number 48560:	1,385.24
48561	WinCan	WinCan LLC	09/12/2018	
	2272	Annual Maintenance-WinCan		1,748.00

Check No	Vendor No / Invoice No	Vendor Name / Description	Check Date / Reference	Check Amount
			Total for Check Number 48561:	1,748.00
			Total for 9/12/2018:	242,036.13
			Report Total (41 checks):	242,036.13