

Wednesday, July 5, 2017
ACTION MINUTES

AGENDA ITEM 6

1. **CALL TO ORDER:** The meeting was called to order by Chairman Landgraf at 5:34 p.m.
2. **ROLL CALL/MEMBERS PRESENT:**

Candi Bingham, General Manager

Director Cathy Landgraf
Director Rene' Walden-Qualls
Director Anita Ebbinghausen
Director Michael Gardner
Director Richard Miller

3. **PLEDGE OF ALLEGIANCE:** Chairman Landgraf led the Pledge of Allegiance.

4. **AGENDA:**

GM asked the Board of Directors to add Item 11(f) – Resolution 2017-03

M/S Gardner/Ebbinghausen to approve Agenda as amended with the following vote:

Motion carried 5-0 with the following vote:

AYES: Landgraf, Ebbinghausen, Gardner, Walden-Qualls, Miller.
NOES: None.
ABSTAIN: None.
ABSENT: None

5. **CLOSED MEETING July 5, 2017** – Board Chair Landgraf reported that there were no actions taken.
6. **PUBLIC COMMENT FOR MATTERS NOT ON THE AGENDA:**
Nell Raymond – reminded everyone about the upcoming “River Pines Clean-Up Day” and asked for volunteers.
Nancy Endy – Asked for clarification on the 6-million-dollar grant.
Steve Pongratz – inquired if grant talks were being held in open meetings. Board of Directors confirmed that they were.
Steve Pongratz – asked which grants were currently being sought after by the District. Board of Directors stated that just a construction grant for the Distribution project.

7. **MINUTES:**

Director Walden-Qualls – Correction:
Item J – change to 4:45

M/S Ebbinghausen/Gardner approve minutes as corrected with following vote:

Motion carried 5-0 with the mentioned change as follows:

AYES: Landgraf, Ebbinghausen, Gardner, Walden-Qualls, Miller.
NOES: None.
ABSTAIN: None.
ABSENT: None

8. Monthly Financial Report: M/S Walden-Qualls/Ebbinghausen as submitted with the following vote:

Motion Carried 5-0 with the following Vote:

AYES: Landgraf, Ebbinghausen, Gardner, Walden-Qualls, Miller
NOES: None
ABSTAIN: None
ABSENT: None

9. EXPENDITURE REPORT: Director Walden-Qualls stated she is tabling comments until the August Board Meeting following reconciliation of the account.

M/S Gardner/Ebbinghausen approve with following vote:

Motion carried 5-0 with the following vote:

AYES: Landgraf, Ebbinghausen, Gardner, Walden-Qualls, Miller.
NOES: None.
ABSTAIN: None.
ABSENT: None.

10. MONTHLY OPERATIONS REPORT.

- A. Monthly Operations Report – See Report.
- B. Monthly General Manager Report – See Report

11. BOARD MATTERS:

- A. **Land and Water Usage to River Pines Garden Club – Discussion and Possible Action**
Chairman Landgraf asked to carry to the next Board Meeting to gather more information on how to structure the land and water usage to the River Pines Garden Club.
- B. **Resolution No. 2017-02 – Establish Capital Reserves Account – Discussion and Possible Action**
It was moved by Ebbinghausen, seconded by Walden-Qualls and unanimously carried to approve Resolution No. 2017-02 to establish a Capital Reserves Account.
- C. **Charles Roll – Discussion and Possible Action**
Board of Directors assured Mr. Roll that the reporting for the water rights is being completed annually as required by the state.
- D. **Hire District Board Clerk – Discussion and Possible Action**
It was moved by Gardner, seconded by Ebbinghausen and unanimously carried to approve the hiring of a Board Clerk at a rate to be no more than \$300 per meeting.
- E. **Bylaws and Administrative Policies – Discussion and Possible Action**
Director Walden-Qualls distributed to the Board Members edited Bylaws for their input and review. The public was assured that before final acceptance of the new Bylaws, copies would be available for their review and input as well.
- F. **Resolution 2017-03 – Resolution of Consolidation and Request of Consolidation with the November 7, 2017 Election – Discussion and Possible Action**
It was moved by Gardner, seconded by Ebbinghausen and unanimously carried to approve Resolution 2017-03.

12. BOARD OF DIRECTORS COMMENTS/REPORTS:

A. Capital Improvements and general repairs necessary at the District. Continued Item.
None now

13. COMMITTEE COMMENTS/REPORTS: None.

14. FUTURE AGENDA TOPICS:

15. ADJOURNMENT: The meeting adjourned at 6:59 p.m.

Respectively submitted,
Candi Bingham, Acting Board Clerk

DRAFT

River Pines Public Utility District
Profit & Loss Prev Year Comparison
 July 2016 through June 2017

AGENDA ITEM 7

	Jul '16 - Jun 17	Jul '15 - Jun 16	\$ Change
Ordinary Income/Expense			
Income			
Amador County Auditor's Warrant			
HO & Timber Tax	49.65	106.52	-56.87
Homeowners Exemption	115.16	57.25	57.91
Secured Appointment	6,341.00	6,069.14	271.86
Secured Direct Charges	194.11	0.00	194.11
Secured Taxes	6,376.07	6,033.71	342.36
Unitary Tax	489.47	473.16	16.31
Unsecured Appointment	200.97	252.05	-51.08
Total Amador County Auditor's Warrant	13,766.43	12,991.83	774.60
Base Fee Income			
Sewer	117,766.79	120,116.37	-2,349.58
Stanby	9,894.86	8,716.71	1,178.15
Voluntary Lock-Off	394.61	2,485.00	-2,090.39
Water	125,521.73	114,808.68	10,713.05
Total Base Fee Income	253,577.99	246,126.76	7,451.23
Equipment Rentals	0.00	90.00	-90.00
Interest Income	28.35	1,409.31	-1,380.96
Repair Labor	0.00	177.50	-177.50
Town Hall Rental	565.00	580.00	-15.00
Variable Income			
Broken Locks	75.00	225.00	-150.00
Call-Out	0.00	370.24	-370.24
Customer Reports	0.00	10.00	-10.00
Door Hanger Fee	1,309.00	1,232.50	76.50
Late Fees	2,818.11	10,655.20	-7,837.09
Reconnection Fee	1,080.00	1,380.00	-300.00
Returned Check Fee	203.00	87.00	116.00
Service Connection Fee	394.50	1,051.25	-656.75
Water - Usage	30,048.08	23,854.64	6,193.44
Total Variable Income	35,927.69	38,865.83	-2,938.14
49900 · Uncategorized Income	0.00	15.00	-15.00
Total Income	303,865.46	300,256.23	3,609.23
Gross Profit	303,865.46	300,256.23	3,609.23
Expense			
Amador Water - Routine/Samples	3,597.55	0.00	3,597.55
Bank Charges			
Collection Fees	0.00	96.69	-96.69
Loan Service Charge	180.00	180.00	0.00
Retirement Fee	0.00	69.47	-69.47
Tax Roll Fees	408.73	16.00	392.73
60400 · Bank Service Charges	152.36	10.00	142.36
Total Bank Charges	741.09	372.16	368.93
Board Members			
Stipends	4,875.00	4,125.00	750.00
Total Board Members	4,875.00	4,125.00	750.00
Contracted Expenses			
Amador Water Agency	0.00	236.95	-236.95
Board Clerk	0.00	875.00	-875.00
CALFIRE - Culverts	0.00	549.75	-549.75
Contracted Project Personal Manager	55,666.71	50,804.92	-5,301.80
Total Contracted Expenses	55,666.71	57,768.42	-2,101.71
Depreciation Expense			

River Pines Public Utility District
Profit & Loss Prev Year Comparison
July 2016 through June 2017

	Jul '16 - Jun 17	Jul '15 - Jun 16	\$ Change
Sewer	0.00	14,472.00	-14,472.00
Water	0.00	22,636.00	-22,636.00
Total Depreciation Expense	0.00	37,108.00	-37,108.00
ECWAG Expenses			
Postage/Shipping	0.00	1.90	-1.90
Total ECWAG Expenses	0.00	1.90	-1.90
Employees			
Amador Water - Weekend Coverage	5,405.83	3,564.00	1,841.83
Amador Water -Vacation Coverag	13,605.57	1,677.76	11,927.81
District Sub-Contractor	431.48	0.00	431.48
Medical Insurance			
Field	9,625.86	9,527.58	98.28
Total Medical Insurance	9,625.86	9,527.58	98.28
Payroll Expense			
Field Payroll	44,094.86	73,536.35	-29,441.49
Payroll Taxes - Employer's	4,547.41	4,496.94	50.47
Total Payroll Expense	48,642.27	78,033.29	-29,391.02
Reimbursements			
Phone	432.00	1,024.00	-592.00
Total Reimbursements	432.00	1,024.00	-592.00
Retirement - Field	2,880.29	2,748.49	131.80
Uniform	0.00	223.45	-223.45
Total Employees	81,023.30	96,798.57	-15,775.27
Sewer Expenses			
Alarm Monitoring	7,321.50	3,377.50	3,944.00
Amador Water - Routine Service	2,458.98	0.00	2,458.98
Amador Water Agency - Repairs	2,620.23	819.30	1,800.93
Certification	0.00	170.00	-170.00
Chemicals	494.94	0.00	494.94
Consulting - Engineer	3,832.50	0.00	3,832.50
Electricity - Sewer	20,278.30	13,266.30	7,012.00
Excavating	237.50	0.00	237.50
Inspections	0.00	4,600.00	-4,600.00
Jetting	880.00	0.00	880.00
Permit/Fees	80.60	0.00	80.60
Repairs/Maintenance	5,784.05	3,029.27	2,754.78
Sewage - Pump Service	490.00	2,120.00	-1,630.00
Sewer - Parts/Supplies	581.68	1,211.37	-629.69
Sm. Tools	274.22	417.00	-142.78
Storm Damage/Repair	4,007.89	0.00	4,007.89
Storm Work - 2017	4,360.02	0.00	4,360.02
Telephone - Sewer	933.52	699.53	233.99
Testing - Sewer	2,236.00	180.00	2,056.00
Total Sewer Expenses	56,871.93	29,890.27	26,981.66
Town Hall Expenses			
Janitorial	3,120.00	2,940.00	180.00
Repairs/Maintenance	240.63	202.80	37.83
Supplies	145.79	262.82	-117.03
Total Town Hall Expenses	3,506.42	3,405.62	100.80
Void	0.00	0.00	0.00
Void - Misprint	0.00	0.00	0.00
Water Expenses			
Alarm Monitoring	2,803.50	1,447.50	1,356.00
Amador Water Agency - Repairs	5,497.22	2,698.21	2,799.01

River Pines Public Utility District
Profit & Loss Prev Year Comparison
July 2016 through June 2017

	Jul '16 - Jun 17	Jul '15 - Jun 16	\$ Change
Amador Water Agency - Training	0.00	404.45	-404.45
Certification Fees	66.65	0.00	66.65
Chlorine	1,448.23	2,253.57	-805.34
Consulting - Engineer	0.00	910.00	-910.00
Electricity - Water	15,609.86	15,238.02	371.84
Excavating	237.50	0.00	237.50
ICE - Sample Delivery	30.59	0.00	30.59
Permit Fees	6,410.14	6,277.65	132.49
Repair/Maintenance	1,379.87	624.75	755.12
Sm. Tools	984.72	530.80	453.92
Supplies	1,760.31	3,886.99	-2,126.68
Telephone - Water	944.08	862.97	81.11
Water Testing	7,078.00	12,686.00	-5,608.00
Total Water Expenses	44,250.67	47,820.91	-3,570.24
60200 · Automobile Expense			
District Vehicle - GPS	276.00	69.00	207.00
Gasoline	1,208.90	2,211.06	-1,002.16
Insurance	800.00	0.00	800.00
John Deere - Tractor	0.00	1,316.05	-1,316.05
Repairs/Maintenance	1,235.93	5,298.05	-4,062.12
Total 60200 · Automobile Expense	3,520.83	8,894.16	-5,373.33
63300 · Insurance Expense			
Insurance - Property/Liability	4,559.00	5,117.99	-558.99
Workers' Compensation	269.27	8,498.73	-8,229.46
Total 63300 · Insurance Expense	4,828.27	13,616.72	-8,788.45
64900 · Office Expenses			
Admin Cost - Tax Roll	0.00	808.80	-808.80
Equipment	0.00	503.29	-503.29
Filing Fees	0.00	145.66	-145.66
License/Certifications	250.00	412.60	-162.60
Maintenace/Improvements	62.50	0.00	62.50
Membership Dues	1,243.12	1,637.19	-394.07
Postage/Shipping	2,082.32	2,247.35	-165.03
Printing	715.95	309.67	406.28
Software	324.80	993.35	-668.55
Supplies	1,931.36	1,982.12	-50.76
Website Service	600.00	500.00	100.00
61700 · Computer and Internet Expenses	150.00	0.00	150.00
Total 64900 · Office Expenses	7,360.05	9,540.03	-2,179.98
66000 · Payroll Expenses	0.00	3,646.00	-3,646.00
66700 · Professional Fees			
CDBG Planning Grant - Engineer	0.00	5,000.00	-5,000.00
Legal Fees	3,273.80	2,922.60	351.20
Payroll - Intuit	0.00	6.00	-6.00
Property Surveying	2,470.00	0.00	2,470.00
Security Service/Maintenance	4,411.50	1,960.00	2,451.50
Yearly Audit	3,700.00	3,650.00	50.00
Total 66700 · Professional Fees	13,855.30	13,538.60	316.70
68600 · Utilities			
Disposal	965.22	996.79	-31.57
Electricity - Office	338.26	411.00	-72.74
Electricity - Town Hall	287.44	197.62	89.82
Electricity - Street Lights	2,024.22	1,973.81	50.41
Internet	2,040.00	1,700.00	340.00
68100 · Telephone - Office	719.47	715.18	4.29
Total 68600 · Utilities	6,374.61	5,994.40	380.21

River Pines Public Utility District
Profit & Loss Prev Year Comparison
July 2016 through June 2017

	Jul '16 - Jun 17	Jul '15 - Jun 16	\$ Change
69800 · Uncategorized Expenses	0.00	94.40	-94.40
Total Expense	286,471.73	332,615.16	-46,143.43
Net Ordinary Income	17,393.73	-32,358.93	49,752.66
Other Income/Expense			
Other Income			
CDBG Grant Income	0.00	94,952.90	-94,952.90
CDBG Planning Grant - Engineer	0.00	-94,952.90	94,952.90
Donations - Town Hall	0.00	100.00	-100.00
Grant - SRAFPF(CAL FIRE)	103,864.57	0.00	103,864.57
Grant Income - DWSRF	165,749.00	0.00	165,749.00
Grant Income - ECWAG	0.00	25,800.00	-25,800.00
Other Income	12,367.62	5,000.00	7,367.62
Wireless Site Lease	3,000.00	0.00	3,000.00
Total Other Income	284,981.19	30,900.00	254,081.19
Other Expense			
Curb Side Chipping (CalFire)	30,226.79	0.00	30,226.79
DWSRF - Environmental Study	6,152.50	0.00	6,152.50
DWSRF Grant - Surveying	159,595.78	0.00	159,595.78
Forester - Erik Jensen(CalFire)	14,479.43	0.00	14,479.43
Mastication Project(CalFire)	59,163.24	0.00	59,163.24
Write-Off Accounts	6,462.37	0.00	6,462.37
Total Other Expense	276,080.11	0.00	276,080.11
Net Other Income	8,901.08	30,900.00	-21,998.92
Net Income	26,294.81	-1,458.93	27,753.74

River Pines Public Utility District
Profit & Loss by Class
July 2017

	Sewer	Water	TOTAL
Ordinary Income/Expense			
Income			
Amador County Auditor's Warrant			
Secured Taxes	76.63	76.64	153.27
Total Amador County Auditor's Warrant	76.63	76.64	153.27
Base Fee Income			
Sewer	10,774.92	0.00	10,774.92
Stanby	355.00	355.00	710.00
Voluntary Lock-Off	140.00	140.00	280.00
Water	0.00	10,776.90	10,776.90
Total Base Fee Income	11,269.92	11,271.90	22,541.82
Interest Income	0.73	0.62	1.35
Town Hall Rental	20.00	20.00	40.00
Variable Income			
Door Hanger Fee	0.00	136.00	136.00
Late Fees	182.81	182.81	365.62
Water - Usage	0.00	5,646.44	5,646.44
Total Variable Income	182.81	5,965.25	6,148.06
Total Income	11,550.09	17,334.41	28,884.50
Gross Profit	11,550.09	17,334.41	28,884.50
Expense			
Board Members			
Stipends	37.50	37.50	75.00
Total Board Members	37.50	37.50	75.00
Contracted Expenses			
Manager	2,416.66	2,416.68	4,833.34
State Reporting	111.50	111.51	223.01
Total Contracted Expenses	2,528.16	2,528.19	5,056.35
Employees			
Amador Water - Weekend Coverage	456.00	456.00	912.00
Medical Insurance			
Field	463.89	463.89	927.78
Total Medical Insurance	463.89	463.89	927.78
Total Employees	919.89	919.89	1,839.78
Sewer Expenses			
Alarm Monitoring	700.00	0.00	700.00
Amador Water - Routine Service	2,640.02	0.00	2,640.02
Amador Water Agency - Repairs	3,898.93	0.00	3,898.93
Consulting - Engineer	3,982.50	0.00	3,982.50
Electricity - Sewer	1,317.20	0.00	1,317.20
Sewer - Parts/Supplies	8,023.33	0.00	8,023.33
Telephone - Sewer	164.98	0.00	164.98
Testing - Sewer	130.00	0.00	130.00
Total Sewer Expenses	20,856.96	0.00	20,856.96
Town Hall Expenses			
Janitorial	120.00	120.00	240.00
Total Town Hall Expenses	120.00	120.00	240.00
Void - Misprint	0.00	0.00	0.00
Water Expenses			
Alarm Monitoring	0.00	300.00	300.00
Amador Water Agency-Electrical	0.00	3,740.86	3,740.86
Amador Water Agency-Meter Read	0.00	299.19	299.19

River Pines Public Utility District
Profit & Loss by Class
July 2017

	Sewer	Water	TOTAL
Amador Water Agency-Routine	0.00	5,375.78	5,375.78
Amador Water Agency - Repairs	0.00	1,135.00	1,135.00
Electricity - Water	0.00	1,436.60	1,436.60
Supplies	0.00	593.08	593.08
Telephone - Water	0.00	169.79	169.79
Water Testing	0.00	1,486.00	1,486.00
Total Water Expenses	0.00	14,536.30	14,536.30
60200 · Automobile Expense			
Insurance	409.50	409.50	819.00
Total 60200 · Automobile Expense	409.50	409.50	819.00
63300 · Insurance Expense			
Insurance - Property/Liability	2,367.00	2,367.00	4,734.00
Workers' Compensation	1,856.92	1,856.92	3,713.84
Total 63300 · Insurance Expense	4,223.92	4,223.92	8,447.84
64900 · Office Expenses			
Membership Dues	0.00	155.60	155.60
Postage/Shipping	73.50	73.50	147.00
Printing	0.00	75.92	75.92
Software	7.49	7.50	14.99
Supplies	11.56	11.56	23.12
Website Service	25.00	25.00	50.00
Total 64900 · Office Expenses	117.55	349.08	466.63
66700 · Professional Fees			
Legal Fees	99.50	99.50	199.00
Security Service/Maintenance	140.00	140.00	280.00
Total 66700 · Professional Fees	239.50	239.50	479.00
68600 · Utilities			
Disposal	40.06	40.06	80.12
Electricity - Office	0.00	23.76	23.76
Electricity - Town Hall	23.76	0.00	23.76
Electricity - Street Lights	84.65	84.65	169.30
Internet	85.00	85.00	170.00
68100 · Telephone - Office	30.18	30.19	60.37
Total 68600 · Utilities	263.65	263.66	527.31
Total Expense	29,716.63	23,627.54	53,344.17
Net Ordinary Income	-18,166.54	-6,293.13	-24,459.67
Other Income/Expense			
Other Income			
Grant Income - DWSRF	0.00	25,333.00	25,333.00
Wireless Site Lease	250.00	250.00	500.00
Total Other Income	250.00	25,583.00	25,833.00
Other Expense			
DWSRF - Environmental Study	0.00	3,348.50	3,348.50
DWSRF Grant - Surveying	0.00	21,983.55	21,983.55
Total Other Expense	0.00	25,332.05	25,332.05
Net Other Income	250.00	250.95	500.95
Net Income	-17,916.54	-6,042.18	-23,958.72

River Pines Public Utility District
Account QuickReport-Board Meetings
 As of July 31, 2017

AGENDA ITEM 8

Type	Date	Num	Name	Memo	Amount	Balance
Bank Accounts						
El Dorado Checking						
Deposit	06/28/2017			Deposit		52,842.98
Transfer	06/29/2017			Funds Transfer	72.14	52,842.98
Deposit	06/29/2017			Deposit	-12,000.00	52,915.12
Deposit	06/30/2017			Interest	250.00	40,915.12
Bill Pmt -Check	07/01/2017	12724	Candi Bingham	July 2017	0.84	41,165.96
Bill Pmt -Check	07/01/2017	12728	Anita Ebbinghausen	Stipend - July 2017	-2,416.67	38,749.29
Bill Pmt -Check	07/01/2017	12729	Cathy Landgraf	Stipend - July 2017	-75.00	38,674.29
Bill Pmt -Check	07/01/2017	12730	Michael Gardner	Stipend - July 2017	-75.00	38,599.29
Bill Pmt -Check	07/01/2017	12732	Rene Walden-Qualls	Stipend - July 2017	-75.00	38,524.29
Bill Pmt -Check	07/01/2017	12733	Richard Miller	Stipend - July 2017	-75.00	38,449.29
Check	07/03/2017	eft	Tax Impound - State	Stipend - July 2017	-816.04	38,374.29
Check	07/03/2017	eft	Tax Impound - State		-237.90	37,558.25
Check	07/03/2017	eft	Tax Impound - State		-26.16	37,320.35
Bill Pmt -Check	07/05/2017	12736	Amador Water Agency	30018	-912.00	36,382.19
Bill Pmt -Check	07/05/2017	12737	AT&T - Water	209 245-4011 722 0	-84.22	36,297.97
Bill Pmt -Check	07/05/2017	12738	Mission IT Solutions	Security Services	-280.00	36,017.97
Bill Pmt -Check	07/05/2017	12739	SDRMA	Worker's Comp Insurance - 2017/2018	-3,713.84	32,304.13
Bill Pmt -Check	07/05/2017	12740	AT&T - Sewer	209 245-3984 701 9	-81.90	32,222.23
Deposit	07/05/2017			Deposit	5,810.70	38,032.93
Deposit	07/05/2017			Deposit	172.87	38,205.80
Check	07/05/2017	eft	Tax Impound - Federal		-4,086.54	34,119.26
Check	07/05/2017	eft	Tax Impound - Federal		-983.81	33,135.45
Check	07/05/2017	eft	Tax Impound - State		-195.26	32,940.19
Deposit	07/06/2017			Deposit	123.31	33,063.50
Deposit	07/07/2017			Deposit	138.53	33,202.03
Deposit	07/07/2017			Deposit	922.34	34,124.37
Check	07/07/2017			Deposit	-14.99	34,109.38
Check	07/11/2017		Adobe PDF		-170.00	33,939.38
Check	07/11/2017		Rocky Ridge Wireless		129.75	34,069.13
Deposit	07/12/2017			Deposit	-2,416.67	31,652.46
Bill Pmt -Check	07/14/2017	12735	Candi Bingham	July 2017	-50.00	31,602.46
Check	07/19/2017	debit	Digital Deployment	District Website	202.78	31,805.24
Deposit	07/19/2017			Deposit	130.00	31,935.24
Deposit	07/19/2017			Deposit	257.56	32,192.80
Deposit	07/19/2017			1175	-80.12	32,112.68
Bill Pmt -Check	07/20/2017	12741	Aces Waste Services, Inc.	30018	-8,248.57	23,864.11
Bill Pmt -Check	07/20/2017	12742	Amador Water Agency	Water/Sewer Testing	-1,616.00	22,248.11
Bill Pmt -Check	07/20/2017	12743	california Laboratory Services	Liability Insurance - 2017/2018	-4,734.00	17,514.11
Bill Pmt -Check	07/20/2017	12744	Leavitt United	8721806002-5	-1,317.20	16,196.91
Bill Pmt -Check	07/20/2017	12745	PG&E - Sewer	2 Sewer Pond Pumps	-8,023.33	8,173.58
Bill Pmt -Check	07/20/2017	12746	Slakey Brothers	3357284549-4	-490.96	7,682.62
Bill Pmt -Check	07/20/2017	12747	PG&E - Water	2458584137-2	-945.64	6,736.98
Bill Pmt -Check	07/20/2017	12748	PG&E - Water 2	6898952032-2	-47.52	6,689.46
Bill Pmt -Check	07/20/2017	12749	PG&E - Office/Town Hall	Vehicle Insurance 2017/2018	-819.00	5,870.46
Bill Pmt -Check	07/20/2017	12750	Leavitt United		13,945.81	19,816.27
Deposit	07/20/2017			Deposit	497.28	20,313.55
Deposit	07/20/2017			Deposit	419.36	20,732.91

River Pines Public Utility District
Account QuickReport-Board Meetings
 As of July 31, 2017

Type	Date	Num	Name	Memo	Amount	Balance
Deposit	07/24/2017			Deposit	372.85	21,105.76
Check	07/25/2017			Postage	-147.00	20,958.76
Check	07/26/2017		USPS	Office Telephone	-60.37	20,898.39
Deposit	07/26/2017		RingCentral	Deposit	156.24	21,054.63
Deposit	07/26/2017			Deposit	34.93	21,089.56
Deposit	07/27/2017			Deposit	9,306.44	30,396.00
Deposit	07/28/2017			Deposit	117.69	30,513.69
Bill Pmt -Check	07/31/2017	12753	AT&T - Sewer	209 245-3984 701 9	-83.08	30,430.61
Bill Pmt -Check	07/31/2017	12754	Brent Stewart, P.E.	Alarm Monitoring	-1,000.00	29,430.61
Bill Pmt -Check	07/31/2017	12755	California Bank & Trust	1030264749	-890.00	28,540.61
Bill Pmt -Check	07/31/2017	12759	Olivarez Madrugá Lemieux...	June - Legal	-199.00	28,341.61
Bill Pmt -Check	07/31/2017	12760	PG&E - Street Lights	7368064062-7	-169.30	28,172.31
Bill Pmt -Check	07/31/2017	12761	Ragg Mopp Janitorial	July - Town Hall Services	-240.00	27,932.31
Bill Pmt -Check	07/31/2017	12764	Staples	Print - Consumer Confidence Report; ...	-99.04	27,833.27
Bill Pmt -Check	07/31/2017	12765	USA North 811	811 Dig	-155.60	27,677.67
Bill Pmt -Check	07/31/2017	12765	AT&T - Water	209 245-4011 722 0	-85.57	27,592.10
Check	07/31/2017	12767	Anthem Blue Cross	208217 - Plant Operator Health Insura...	-927.78	26,664.32
Deposit	07/31/2017			Interest	0.62	26,664.94
Total EI Dorado Checking					-26,178.04	26,664.94
Total Bank Accounts					-26,178.04	26,664.94
TOTAL					-26,178.04	26,664.94

River Pines Dept Report

July Water Production/Sold

Well 2- 722,000 gallons	Total Produced – 1,490,266 gallons
Well 3R- 737,800 gallons	Total Sold – 1,060,011 gallons
Well 6R – 30,466 gallons	Total Lost -28.9%

Damon-

- Continued to work with General Manager, Candi and AWA Electrical Supervisor, Pat on developing AWA SCADA access to facilities.
- Worked with RPPUD Engineering consultant on water balance for the wastewater treatment facility.

Andrea-

- Completed 2nd quarter and June monthly reporting for water and wastewater.
- On-going work with regulator, Dave Remick on scheduling his final inspection
- Citation response for failed backflow testing

Construction-

- 7/5/17 finished tractor clearing and ditching in WW sprayfield and around ponds
- 7/27/17 Service line leak repair

Wastewater-

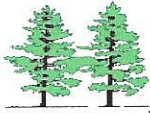
- Continued to keep sprayfields running
- Installed new irrigation pump
- Clearing sprayfields to gain access to solenoid valves
- Monitoring all liftstations
- Replaced O-rings at irrigation meter
- Cleaning around plant area.
- Influent flow: 684,500 gallons Effluent Discharged: 630,000 gallons

Water-

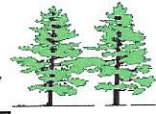
- Provided system coverage and coordinated with fire personnel during the Mt Aukum fire on 7/26. Investigated a leak at this time and operated Well 6R in emergency situation to provide additional water to replenish tanks.
- Investigated leak on Emigrant Trail and met with customer.
- Provided customer service contact on taste and odor calls on Pine Ave and Pigeon Trail
- Attended meeting with Kasl Engineering and D&N regarding circle tank replacement and relocation.
- Completed all routine well and distribution system sampling for July.

Electrical/Instrumentation-

- Wastewater plant:
 - Direct cable wires exposed. Repairs made to wires and cable.
 - Submersible motor installed
 - Sprayfield flow meter failed. Realigned meter head on top of gear assembly. Tested. All good.
- Wide Area Network (WAN) security issues- Currently in progress. Preliminary redesign and installation of new WAN with system connectivity to AWA systems behind SonicWALL firewall.



RIVER PINES PUBLIC UTILITY DISTRICT



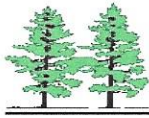
22900 Canyon Ave., PO BOX 70, River Pines, CA 95675
Phone: (209) 245-6723 Fax: (209) 245-5710 Email: RPPUD@RPPUD.org

AGENDA ITEM 9B

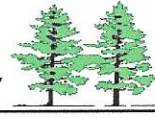
GENERAL MANAGER'S REPORT

For the Month of: July 2017

1. Submitted monthly payment request for DWSRF Grant
2. Income Survey Update – Conference Call (July 25) with: Dave Remick, Bhupinder, Pete Stamos (State Water Resource Board), Kim Strong, Diana Conkle (RCAC) - Pete Stamos urged Kim to submit income survey request as “high priority.” Hoping for a response from RCAC within three weeks.
3. Submitted a request for an extension on DWSRF Grant – Pete Stamos submitted request and asked for a 6-month extension.
4. Meeting with Patrick and Damon from AWA – discussed future SCADA options and ongoing concerns with operations. Current SCADA situation is not conducive to the needs of the District or AWA. (Agenda Item)
5. Received \$13,672.75 from Tax Roll
6. Sprinklers in the waste plant spray fields all need to be replaced. They are plugged (beyond unplugging, broken, leaking etc.) There are approx. 100. AWA is replacing in approx. 50 increments – approximate cost for all \$1,600.
7. Central Valley Water Board is requiring the District to install Monitoring Wells in the spray fields
8. Weekly Bank Deposits
9. Monthly Service Billing
10. Monthly Late Notices
11. Monthly 48 Hour Notices
12. Minutes
13. Agenda & Packets



RIVER PINES PUBLIC UTILITY DISTRICT



MEETING DATE: August 9, 2017
FROM: Candi Bingham, General Manager
SUBJECT: River Pines Lighting
AGENDA TYPE: Regular Meeting
ATTACHMENTS: Yes

AGENDA ITEM 10B

RECOMMENDATION: Looking for resident's recommendations

BACKGROUND: PG&E owns and maintains the lighting in River Pines. River Pines Public Utility District pays the cost of the electricity for the lighting.

DISCUSSION: PG&E has contacted me to upgrade the lights from cobra-head high pressure sodium vapor streetlights to more efficient LED fixtures. They are asking:

1. Do we wish to take advantage of the "no cost" upgrade?
2. If so, would we like to upgrade all locations or just specific locations?

BUDGET IMPACT: \$0 – could possibly reduce electricity cost to the District.



Streetlight Upgrades in River Pines PUD

1 message

Silva, Kristen <K1Cp@pge.com>
To: "rppud@rppud.org" <rppud@rppud.org>
Cc: "Silva, Kristen" <K1Cp@pge.com>

Mon, Jul 24, 2017 at 2:47 PM

Hi Candi,

Thank you for taking the time to speak with me today.

As per our conversation, PG&E would like to bring new energy efficient LED streetlights to your community. Under this program, PG&E will replace company-owned (LS1) cobra-head high pressure sodium vapor (HPSV) streetlights with more efficient LED fixtures. Further details are available at www.PGE.com/streetlightupgrade and the attached flyer. This is an opt in/opt out program, in which you have to option to keep the wattage at a similar LED equivalent, or change the wattage.

Prior to rolling this program out, we completed an inventory of all streetlights in the service territory. Within the next couple of weeks I anticipate having a fresh inventory list & map to all your lights ready for you to review. As soon as I have it ready, I will be in contact to schedule a meeting to discuss the program and the opt in process in further detail. In the mean time, if you would like to get a head start, you can start thinking about area which have existing LS1 cobra head fixtures, in which you would like to see the wattage increased or decreased.

Some highlights from this program are:

- No cost to upgrade
- Less than 10 minutes to upgrade each fixture
- Reduced streetlight energy bill
- Reduced greenhouse gas emissions
- Clear bright white light, with better visibility
- Directional lighting and no up light or glare

If you have any questions please let me know, my contact information is listed below.

Kristen Silva

LCE Electric Outreach | Service Solutions Specialist

☎ (925)459-6143 ☎ (925)586-4417 | ✉ k1cp@pge.com

Learn more about the LED Streetlight Program at www.PGE.com/streetlightupgrade

Questions? Email streetlightupgrade@pge.com

We respect your privacy. Please review our privacy policy for more information.
<http://www.pge.com/en/about/company/privacy/customer/index.page>



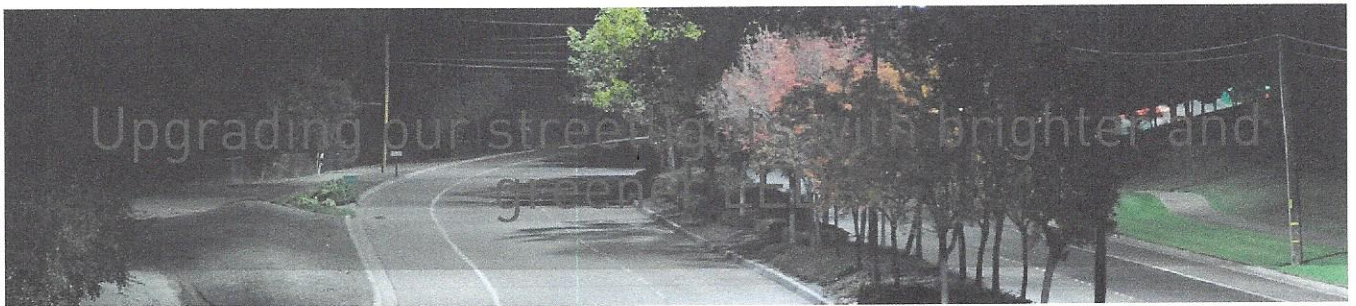
EMERGENCIES



BUSINESS SOLUTIONS & REBATES
REPLACEMENT PROGRAM

LED STREET LIGHT LIGHTING

LED STREETLIGHT



Saving energy and reducing costs with LED streetlights

PG&E is committed to providing you with safe, reliable, affordable service. That's why we're replacing 160,000 high-pressure-sodium-vapor (HPSV) bulbs with efficient, long-lasting light-emitting diode (LED) fixtures over the next three years, in collaboration with cities and counties across our service territory.

Reducing our carbon footprint and improving cost-efficiency

LED fixtures use less energy than HPSV bulbs. Together, we plan to save more than 50 million kWh per year with the LED Streetlight Replacement Program.

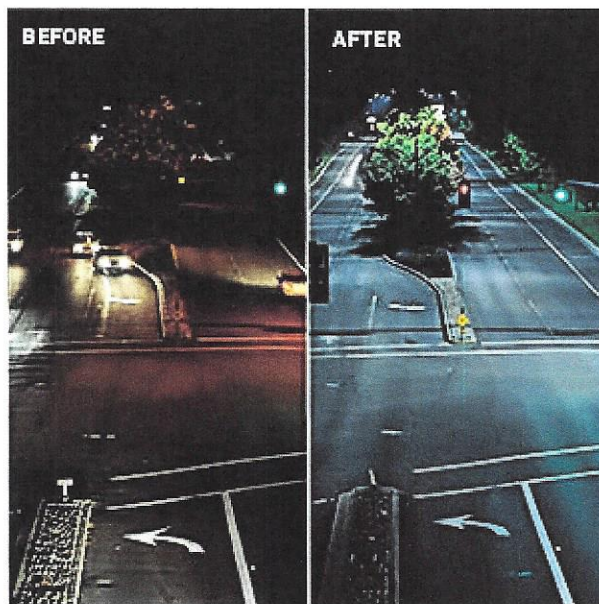
Replacing HPSV bulbs with LED fixtures of the same wattage can help reduce monthly energy costs significantly. Also, using less energy per light reduces greenhouse gas emissions and helps cities reach their long-term energy goals.

Gaining reliability and reducing maintenance

LED technology maintains most of its light output up to four times longer than HPSV bulbs. Because we're replacing all PG&E owned city streetlights at the same time, the new LED lights should last up to 20 years without replacement.

Improving safety

LEDs provide more natural-looking, evenly distributed light. This improved lighting can help both drivers and pedestrians.



Understand that the LED streetlight upgrade won't disrupt your life

Installing the new LED streetlights takes about 10 minutes per fixture. There will be no disruption to electric service in your neighborhood.

Learn how LED streetlights help make your community's future brighter

Play the following video for information about the benefits of LED streetlights.



Streetlight Replacement Program

Learn about the benefits of LED streetlight upgrades in your community.

Audio description and transcript also available for this video.

[Access an audio descriptive version](#)

[Download a transcript](#) (PDF, 21 KB)

[PLAY VIDEO](#)



Report a streetlight problem

PG&E owns and maintains more than 33% of the streetlights in our service area. The rest are owned by cities, counties and other entities. Find out what to do when you find a streetlight that's burned out or not working right.

Visit [Report a Streetlight Outage or Problem](#).

Business solutions for upgrading customer-owned streetlights

Find out about rebates and more for installing LED fixtures in streetlights that are not owned or serviced by PG&E.

Visit [LED Streetlight Rebates](#).

If you have questions about the LED streetlight upgrade program, send an email to streetlightupgrade@pge.com.

About PG&E

Company Information

Workshops & Events

Sitemap

PG&E Newsroom

For Our Business Partners

Environment

Careers

RIVER PINES COMMUNITY GARDEN – RULES & RESPONSIBILITIES

An enjoyable gardening experience for everyone is the primary goal of the rules and responsibilities. Everyone is asked to observe the rules and be a good neighbor. We would like our garden to be a happy, enjoyable place where participants can garden and socialize peacefully in a neighborly manner.

The River Pines Public Utility District will assign garden plots. Plots will be assigned only to residents of River Pines or a youth/civic organization that serves the River Pines community.

Gardeners will meet and select a committee to review and update rules as necessary.

1. Garden committee has the duty of enforcing the rules and making decisions for the garden.
2. Once assigned a space, cultivate and plant it. Commit to garden year-round – weather permitting.
3. Each gardener is responsible for conserving water. Unattended/uncontrolled watering is not allowed. Anyone witnessing unattended/uncontrolled watering is authorized to turn water off.
4. Irrigation can be by hand or with battery operated timers and drip line, emitters or sprinklers.
5. Each gardener will teach their children to respect others plots and not to waste water. Children are not allowed without parents.
6. Friends can come with you but not by themselves. You would be responsible for the behavior of your guests.
7. If you are unable to take care of your garden because of illness or vacation, ask a fellow gardener or resident for assistance.
8. Visit your garden weekly or more often if needed to maintain you garden. Weeds need to be removed.
9. Please do not plant anything that could be considered invasive or illegal.
10. Do not pick from your neighbor's garden even if you think they have neglected their plot.
11. Gardens are not for commercial use; extra produce can be donated to others.
12. Maintain the area around your garden, keep area trash free, do not put/leave anything in walkways between gardens. Take trash home to dispose of.
13. Everyone is responsible for their garden tools; bring them and take them home. District is not responsible for lost tools
14. Herbicides (week killers) and pesticides are discouraged.
15. No pets in the garden.
16. No smoking, alcoholic beverages or illegal drugs in the gardens.
17. If you decide to give up your garden spot, please notify the River Pines Public Utility District or Committee member so that it can be re-assigned to someone else.

RIVER PINES COMMUNITY GARDEN

LOCATION: Near the children's park behind the River Pines Town Hall

MISSION: The River Pines Community Garden has several purposes. It will provide a space for River Pines residents to grow a portion of their own healthy food and introduce/educate River Pines residents to gardening. It is intended to provide a source of fresh vegetables for the gardeners/plot holders, their families and friends.

ADMINISTRATION: The plots will be assigned on a first come, first serve basis. Only one plot per household. The plots will be issued by the Garden Committee and River Pines Public Utility District. Plots are assigned on a year-to-year basis. If there are no vacant garden plots, prospective gardeners may add their names to the community garden waiting list.

PARTICIPANTS: Gardeners/plot holders are limited to residents who live within the River Pines city limits or youth/civic organizations that serve the River Pines community.

The River Pines Public Utility District is provided this garden space as a courtesy to the public and all gardeners use this space at their own risk. The River Pines Public Utility District assumes no responsibility or liability for use of this space and is not responsible for vandalism or theft.

The set of rules and regulations have been designed for the following reasons:

- To ensure that community garden is safe
- To ensure that community gardens are pleasant places to be and to look at for: gardeners, neighbors and the public
- To establish fairness and equity among community gardeners
- To prevent damage to the land and groundwater
- To protect the future of community gardens in River Pines

HEALTH AND SAFETY IN THE COMMUNITY GARDEN

As you head to your community garden plot, take the following personal health and safety considerations into account:

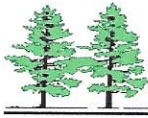
- Avoid Isolation. Share information with other gardeners. Know who has chronic medical conditions, who is allergic to insect stings, which elders might need shelter from extreme heat or cold, etc.
- Be sure to bring adequate amounts of drinking water. It is important to keep hydrated especially for youth and elders.
- Avoid gardening during the heat of the day, generally between 2 p.m. and 6 p.m.
- Use sunscreen and gardening hats to protect skin from harmful rays.
- Use insect repellent as need warrants. To prevent mosquito populations from developing rid of any standing water that is in or near the gardening area. Check for ticks on your clothing and person during and after gardening.
- Avoid unnecessary blisters and scrapes by wearing proper gardening gloves and footwear while doing heavy work in the garden.
- Treat scrapes and skin abrasions. Keep the bacteria and contaminants out of your body; wash abrasions thoroughly with soap and water.
- Avoid injury by using the proper gardening tools. Avoid weak or damaged tools. To avoid unnecessary stress or injury, use proper body mechanics when lifting, shoveling and doing other heavy physical labor.
- Have Fun!

TEN BASIC GARDEN RULES

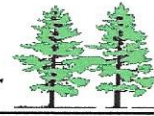
1. Participate in spring and fall cleanups
2. Plant your plot by June 1, or lose it.
3. Keep your plot clean and help maintain common areas, paths and fence lines
4. Conserve water. Don't waste.
5. Avoid chemical pesticides.
6. No herbicides
7. Prepare your plot for winter by November 30th. Clean up. Protect your soil from erosion.
8. No pets in the garden.
9. Children must be supervised in the garden.
10. Discourage theft – harvest promptly. Do not pick from others plots.

ESSENTIAL COMPONENTS OF A SUCCESSFUL COMMUNITY GARDEN

- Active Coordinators
- Spring Sign-Up Meeting
- Fall Wrap-Up Meeting
- Dues
- Written Rules
- List of Gardeners, Addresses, Phone Numbers
- Sign Identifying Garden
- Written Waiting List
- Periodic Cleanups
- Garden Presence/Care Taker Plan
- Task Assignments/Work Requirements
- Coordinator/Rotating Coordinator
- Garden Winterizing Plan
- Written Enforcement Policy
- Planned Social Events (Farmers Market)
- Neighborhood Outreach (Newsletter/Word of Mouth)



RIVER PINES PUBLIC UTILITY DISTRICT



AGENDA ITEM 10F

MEETING DATE: August 9, 2017
FROM: Candi Bingham, General Manager
SUBJECT: Waste plant – Water Balance Study
AGENDA TYPE: Regular Meeting
ATTACHMENTS: Yes

BACKGROUND: RPPUD received a citation following the 2017 winter storms due to excessive discharge from the sewer ponds. The excessive discharge took place because 1. Sewer ponds were not lowered to proper levels prior to November 2016 as required by the WDR's; 2. Rainfall was more than usual.

Part of the Citation required that RPPUD hire an engineer to conduct a Balance Water Report.

DISCUSSION: Following the submission of the Balance Water Report, Central Valley Regional Water Quality Control Board is requiring that the District install monitoring wells. They are currently only requiring a "Written Plan" on how the District is going to go about completing this task.

I spoke with Damon Wyckoff with Amador Water Agency (AWA) and he explained to me that AWA and Jesse Shaw (the hired Engineer) will be working together to create this plan and submit it to the Central Valley Regional Water Control Board.

Damon stated that the plan will most likely be written to have once monitoring well installed yearly over the next five years or so. Damon is thinking that there will need to be approximately 3-4 monitoring wells installed at a cost of approximately \$20,000 per well. An engineer will be needed to conduct a study as to how many wells and their locations.

BUDGET IMPACT: \$60,000 - \$90,000 over approximately a five-year period

From: Jesse Shaw [mailto:jbs@jacksonca.net]
Sent: Monday, July 24, 2017 1:55 PM
To: Hold, Howard@Waterboards; Croyle, Kenny@Waterboards
Cc: 'Damon Wyckoff'; 'Gene Mancebo'; 'Mike Israel'
Subject:

Hi Guys

This email is in response to your letter dated 7/11 to River Pines regarding the pilot study.

First – the pilot study is a good idea. I am currently working with the AWA and River Pines to set up the testing and monitoring. I am more than confident that this is the key to the long term success of their disposal system. Thank you for helping get this initiated.

Second – This letter also included the future requirement of monitoring wells. We understand this normally is a part of many WDR's, but it seems a bit onerous and unreasonable to require them be installed right now. Let me explain our thinking:

1

1) The water balance they will generally be following is irrigation at strictly agronomic rates from May until October. In other words-nothing to percolation, (no impact to groundwater during the main irrigation season). Under existing flows and average rainfall, they would have to irrigate 1 day per month at a rate of .25"/day during the winter. This amounts to an *average* of 220 gal/day per acre over the winter in an average year. This is of negligible impact to underlying water resources.

Under existing flows, during the 100 year event, we are projecting irrigation 5 days a month for November to April, at a rate of .25" per day on those 5 days, or 1.25" for the month. This would be an average of about 1100 gpd/acre during the 100 year rainfall event. Still very lightly loaded hydraulically, but constituent levels may be a bit higher. It is unlikely significant though, because the monthly rain during the 100 year rain would be around 8-10", thus diluting constituents like N by a factor of around 8:1 for anything sprayed in the winter. So for example, if total N came out of their ponds at 10 mg/l, it would enter the groundwater at 1-1.5 mg/l on the average. Again – this would seem negligible. The dilution factor would actually be even greater when you consider the sprayfield is 17 acres, but the total River Pines parcel is 38 acres, so the increase in total N might be even less than 1 mg/l. Likely the same would follow for other constituents.

2) As can be seen on the attached – the River Pines disposal area is surrounded by 40-70 acre parcels and larger. It appears the nearest well is about 2000' from the nearest River Pines spray field. I realize your concerns also lie in the overall impact to local groundwater resources, but impacts to any nearby wells is most likely non-existent.

3) The existing WDR's – either as written or interpreted – do not work on paper, nor did they work on the ground. River Pines pointed this discrepancy in their water balance report, and we are attempting to remedy it (with your help), but at the same time we get hit with the monitoring wells. As outlined in detail in earlier correspondence – if River Pines had their effluent storage pond (15 AF) full at the end of April, and had the design flow of 35,000 gpd coming into their WWTP, and they were limited by the regional board to the existing WDR's to 35000 gpd disposal – the system would not work. It never would have if limited by 35000 gpd to disposal. The pond would only lose volume through evaporation. Clearly this was not the intent of the original WDRs – there is plenty of sprayfield to make this system work as originally designed. The point is that we see part of the problem being how the existing WDR's are written/interpreted, and not really the fault of River Pines or how they were operating their disposal system.

4) With the improvements recommended in the recent water balance report and the follow up work plan for improvements to runoff controls, their system will clearly be operated more efficiently and will be far less likely to be of impact to ground or surface waters. For example – the storage pond will now routinely be drawn down relatively quickly, so the pond will be emptied earlier, and stay empty (or emptier) longer. Since unlined storage ponds like this can be sources of unwanted leaks or percolation, these possibilities would be minimized and likewise will minimize any potential negative impacts (showing up in a monitoring well) of their storage pond. It would seem reasonable to allow the District to operate within the improvements they will be making for awhile before (if ever) requiring the monitoring wells.

5) We think a reasonable compromise here would be to first allow River Pines to get through the pilot study and set up what will hopefully be an improved long term operating curve for their pond and disposal system, and demonstrate to the Regional Board that the loading rates and impacts will indeed be as outlined above. Which for by far the majority of the time – and gallonage - there will be absolutely no effluent even percolating into the groundwater. It is very likely we can demonstrate that in most years - there will be 0 gallons to percolation. And when there is some effluent to percolation, it will be very minor, very diluted, and of negligible impact to the groundwater resources in the area.

So to sum up, we are asking the regional board to hold the monitoring well requirement in abeyance for 2 or 3 years until we can demonstrate what on paper seems to make sense. Which is to prove through our monitoring efforts that the monitoring wells aren't really needed. And will be an unnecessary expense to install and test and report on.

Respectfully submitted,

Jesse Shaw

From: Croyle, Kenny@Waterboards [mailto:Kenny.Croyle@Waterboards.ca.gov]

Sent: Monday, July 24, 2017 2:36 PM

To: Jesse Shaw <jbs@jacksonca.net>; Hold, Howard@Waterboards <Howard.Hold@waterboards.ca.gov>

Cc: Damon Wyckoff <dwyckoff@amadorwater.org>; Gene Mancebo <gmancebo@amadorwater.org>; 'Mike Israel' <misrael@amadorgov.org>

Subject: RE:

Jesse,

Thanks for the response. I appreciate all the detail you put into it. We understand that the increased flows in the pilot study for this short amount of time are unlikely to cause groundwater impacts. However, the requirement for the Monitoring Well Installation Plan, while related to the Pilot Study, is more closely tied to the issues with the current permit. As you said, the permit is no longer effective for this facility. It needs to be updated to reflect changes in the treatment train and operations. However, it is also outdated in terms of minimum requirements for permits. We no longer approve any land application without groundwater monitoring. The reason the workplan was required is that, regardless of the pilot study, there will need to be wells installed at the facility prior to the new permit being adopted. That process can be long, but management felt that they needed to get the wheels turning on that so it would be completed by the time a new permit could be adopted.

I spoke with my senior about your request and he felt that at this point the requirement for the workplan must stand. However, you may propose your schedule in that workplan to meet whatever date you choose. When I review that workplan I will speak with our permitting department before we comment on that schedule and come up with a response.

Please give me a call if you have any questions. Thanks

Kenny Croyle

Water Resources Control Engineer

WDRs and Title 27 Compliance and Enforcement Unit


Central Valley Regional Water Quality Control Board

11020 Sun Center Drive, Suite 200

Rancho Cordova, CA 95670

1-916-464-4676 (direct)

Kenny.Croyle@waterboards.ca.gov

Save 

H

Water Balance Report

for

River Pines PUD

Per CVRWQCB Notice of Violation dated 4/13/17

Amador County, CA

June 2017

By: Jesse Shaw, PE
Toma and Associates
Engineering, Surveying and Planning
41 Summit St
Jackson, CA 95642



River Pines PUD - Water Balance Report

Per CVRWQCB Notice of Violation dated 4/13/17

1. Background: This report and the attached comprises the required response to the CVRWQCB's 4/13/17 Notice of Violation to the RPPUD (see page 3 item 3).

2. Water Balances: The constructed water balance was run under 4 different scenarios. They were:

Scenario 1 – Existing Flows, 100 year annual rain event, pond start 6AF, 35000 gpd disposal

Scenario 2 – Same as Scenario 1, but with disposal rates increased to actual agronomic rates

Scenario 3 – Same as Scenario 2, but no "rogue" runoff, and start with pond empty

Scenario 4 – Same as S3, but increase ADWF to permit max of 35,000 gpd

Scenario 4A – Same as S4, but increased days irrigate to perc from 5 days to 8 days

Scenario 1 (S1) was used to simulate last year's heavy rain (which were coincidentally about a 100 year event in this area) and calibrate the water balance. As S1 demonstrates, the RP pond did indeed "spill" under this scenario – even though not actually "spilling", there was heavy irrigation during the heavy rains of January 2017. Important points to note under S1, the pond started with +6AF of effluent, and there was some "rogue" surface runoff into the treatment ponds. Both were considerable contributing factors to the problems of January. S1 confirms what actually occurred in January – that without the irrigation they done during January – freeboard violations and possible spilling could have taken place. Also to note on S1, 5 days per month of irrigation was done during winter. During 2016-2017, there were 71 days of rain, or about 10/month on the average. That means no irrigation on those days or 10 follow up days – so 10 days per month potentially available for winter irrigation. Water balance assumed 5 – except on S4A, which assumed 8. See attached soils information for soils data with respect to potential loading rates.

S1 also shows that the pond will not empty by 10/1 if limited by a 35,000 gpd disposal rate. This means irrigation rates must increase this summer to empty their storage pond before the next rainy season.

S2 is the same as S1, except disposal rates are kicked up to what this disposal area can actually take. Based on ET rates for this area, total ET from May-September would total about 45". Over 17 acres, that's well over 120,000 gpd. Even if they only irrigated 6" per month, (+92,000 gpd) that's well under the estimated agronomic rate, but way above what's currently being allowed. So S2 demonstrates that at very realistic disposal rates, their pond could easily be empty by 10/1. The original designed irrigation pumps for the River Pines system could pump 150 gpm at 130', but currently the pump being used can do only about 73 gpm – way below what is needed to efficiently disperse effluent over the entire disposal field. Their irrigation pumping rates and pressures would have to improve over what occurs currently to dispose of effluent properly.

S3 is the same as S2, but 2 "improvements" are made. One – all "rogue" runoff is eliminated, and two – the pond starts empty, instead of 5-6 AF. Rogue runoff appears to be about 4.5 acres of surface runoff entering the southeasterly treatment pond – which should be diverted around this pond. It clearly increases water to the system that shouldn't be there, and will need to be eliminated. Under this

scenario, the pond will not spill under the 100 year rainfall event. This scenario is important, as it demonstrates that there is clearly enough disposal capacity in their existing system to handle existing flows and the 100 year event.

S4 is the same as S3, but with inflow kicked up to the permitted 35,000 gpd. This scenario demonstrates that the existing River Pines disposal system – using 5 days per month of winter irrigation – could actually spill if dry weather flows were 35,000 gpd, (an increase of about 40% over what is happening today). Clearly, River Pines will have to use some level of winter irrigation to properly store and dispose of 35,000 gpd. This is significant, as it demonstrates that River Pines must confirm this winter what winter loading levels are actually possible within the constraints of the WDRs.

S4A assumes 8 days per month of winter irrigation instead of 5 as assumed in S1-S4. (Theoretically 10 days are allowed). This was done, because with only 5 days, there was some spilling in S4 at the permitted ADWF of 35,000 gpd. This scenario is significant, as it demonstrates that 8 days per month of irrigating (at .25"/day) are necessary to avoid spilling. (Or that more than .25"/day could be applied).

3. Discussion: Clearly – there are issues with the River Pines effluent storage and disposal system which lead up to the disposal problems they experienced last January and February 2017. The above 4 water balances document this and demonstrate the changes necessary to bring the system into a fully compliant operating mode. Part of the issue is with the current operating assumption of no more than 35,000 gpd can go to disposal, and part of the problem is with the River Pines system itself. Both need to be addressed to allow the system to operate 100% as originally designed.

4. Changes Required to Existing System: Below are the changes required – with brief descriptions – of what improvements are needed to bring the River Pines disposal system into full compliance.

a) Disposal capacity currently allowed (35,000 gpd) by the WDR's/Regional Board simply will not work for this system. This is the single biggest issue, and needs to be changed immediately. The water balances attached demonstrate this and also demonstrate much higher disposal rates are justified. If system inflow was actually at 35,000 gpd (which their permit allows) and the disposal max was 35,000 gpd, how would they empty a 15 AF pond between May and September? (Besides what is evaporated).

The water balances demonstrate that the River Pines spray field system could actually take over 120,000 gpd. It is suggested that River Pines be allowed to increase disposal rates this summer to somewhere in this ballpark, and monitor as necessary to establish the fact that this disposal rate actually works without creating any nuisance conditions or runoff. This information could then be used to increase what River Pines is allowed by permit.

It is important to note here that they will not be able to empty their storage pond at rates currently allowed.

b) It appears that there are +4.5 acres of surface runoff getting into the east side of their most southerly treatment pond, (see Figure 1). River Pines needs to look at and improve the ditching system used to convey surface runoff around this treatment pond. Otherwise, this excess flow will need to be treated, stored, and disposed of.

c) River Pines needs to upgrade/replace their existing irrigation pump(s) to one that is capable of around 150 gpm at 130 ft of head. The existing pump puts out around 70 gpm at a lower head. This is inadequate to fully dispose of their wastewater to their existing fields. They also need to confirm that the current suction line inlet level is capable of emptying the pond.

d) The spray fields were inspected on 6/22/17 with AWA personnel. It was clear that treated effluent wasn't getting evenly distributed – and the majority of the area didn't seem to be getting any effluent. At least two things need to be done immediately to improve this situation. One is to check all the spray field control valves to make sure they are opening and shutting fully as directed by the system controller-which did not appear to be the case. If a control valve will not open – the problem is obvious. If a control valve will not shut – as appears to be the case with field 4 – it may actually take a lot more effluent than it is designed for, especially if it is one of the lower fields. If a control valve is not working - it needs to be repaired or replaced.

Second – once the control valves are operating properly, all spray heads need to be inspected and confirmed they aren't clogged. Several were clogged on the recent inspection.

Finally – it is also recommended to eventually add soil moisture tensiometers to control all 7 irrigation control valves – one sensor for each field/control valve. Very simple moisture sensors (Rain Bird makes a cheap one I think) can help both in summer and winter. In summer – it will help adjust a field to take more or less flow depending on the field's soil mantle ability to take water. If soil moisture is consistently low in one field-it may be a signal to give that field proportionally more water. For example – one field may be able to only take 4,000 gpd per acre, whereas another field might take 8,000 gpd per acre. The sensors will help making the adjustments necessary to maximize loadings without runoff. In the winter – the sensor would work in reverse. If soil moisture level is above a certain threshold – it would not allow a control valve to open. This control-in tandem with no watering within 24 hours after rain anyways, would almost eliminate the possibility of effluent runoff. The moisture levels are adjustable, so wet/dry threshold levels could be adjusted as required, depending on operator experience and a certain field's ability to take water.

5. Conclusions: With the improvements/changes noted in section 4 above, the River Pines system will be able to fully handle the currently permitted design inflows to their system under the 100 year annual rainfall event. Item 4a needs to happen immediately to insure the storage pond is empty by 10/1. Likewise – the tensiometers can probably wait a bit if necessary. All of the other recommended items are very straightforward and should be easily implemented by 10/1 as required by the Regional Board.

In addition to the summer time testing noted in section 4a above, the RPPUD also needs to confirm allowable winter loading rates also. Meaning that within the constraint of no irrigation 24 hours after a rain event, how much can their system dispose of without runoff or creating nuisance conditions, or violating any portion of their WDR's. This information would then be used to operate the system most efficiently in the future and not violate their WDR's with respect to storage or disposal.

River Pines Effluent Storage Water Balance
 Scenario 1 - Existing Flows; 100 year Rainfall; Pond start 6 AF; 35,000 gpd disposal max; Regue RO Included

Toma & Associates
 Date 6/28/2017

Assumptions:
 ADWF = 24,799 gpd
 AWWF = 26,257 gpd
 Rainfall = 64.2 inches/100 year at Fiddletown
 Pond Direct Catch Ac = 2.65 acres
 Pond Indirect Catch = 0.42 acres
 Indirect Catch RO fact = 0.40
 Evap Area = 2.20 acres
 Acres of Regue RO = 4.5 acres
 % RO for regue RO = 0.2

Irrigation Eff =
 0.8 inches/day during available days (oct-april)
 Irrig to perc = 17 acres
 Disposal area = 5 days/mo during 100 year rainfall season
 Irrig days in winter = 6 af
 Start Storage = 1.00 (range can be 1.0-1.2)
 Kc (woodlands) = 1.10
 Kc (pond surface) = 1.10
 Pond(s) Full Volume = 15 af

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Days	Avg mon flow(gal)	Rainfall (inches)	Pond Dir Rain Catch (gal)	Pond Indir Rain Catch (gal)	Reference Area Eto(in)	Reference Area ET(in)	Pond Evap (in)	Pond Evap (in)	Pond Evap (gals)	Regue RO (inches)	Regue RO (gallons)	Net Inflow(AF)	Pond Evap (AF)	Net Irr Demand(AF)	Actual Irrig AF/mo	Winter days available to irrigate (days/mo)	Additional Irrigation to perc (af/mo)	Netto Storage (af/mo)	EOM Storage (af)	"Spill" (af)	
October	31	768,769	3.34	240,211	15,228	3.96	3.96	4.36	260,207	0.67	81,381	2.6	0.80	0.88	3.3	0	0.0	0.0	-0.7	5.3	0.0
November	30	743,970	7.50	540,012	84,225	1.95	1.95	2.15	128,132	1.50	183,400	4.2	0.39	0.00	0.0	5	1.8	1.8	2.4	7.7	0.0
December	31	813,967	10.21	734,491	46,564	1.27	1.27	1.40	83,450	2.04	249,450	5.4	0.26	0.00	0.0	5	1.8	1.8	3.6	11.3	0.0
January	31	813,967	12.07	868,454	55,057	1.56	1.56	1.72	102,506	2.41	294,947	5.9	0.41	0.00	0.0	5	1.8	1.8	4.2	15.0	0.5
February	28	735,196	11.17	803,782	50,957	2.01	2.01	2.21	132,075	2.23	272,983	5.3	0.41	0.00	0.0	5	1.8	1.8	3.5	15.0	3.5
March	31	813,967	10.53	757,588	48,028	3.31	3.31	3.64	217,496	1.07	330,216	3.1	0.67	0.00	0.0	5	1.8	1.8	3.3	15.0	3.3
April	30	787,710	5.33	383,413	24,307	4.59	4.59	5.05	301,603	1.07	130,216	3.2	1.27	5.59	3.2	0	0.0	0.0	-1.4	14.9	0.0
May	31	813,967	2.38	170,919	10,836	6.32	6.32	6.95	415,280	0.48	58,048	2.0	1.27	10.27	3.2	0	0.0	0.0	-2.3	11.2	0.0
June	30	743,970	0.58	41,575	2,636	7.83	7.83	8.61	514,500	0.01	1,533	0.9	1.79	12.52	3.3	0	0.0	0.0	-2.7	8.5	0.0
July	31	768,769	0.06	4,573	290	8.9	8.9	9.79	584,008	0.03	3,138	0.7	1.66	11.45	3.3	0	0.0	0.0	-2.6	5.9	0.0
August	31	768,769	0.13	9,239	586	8.21	8.21	9.03	539,469	0.18	21,964	1.3	1.23	7.35	3.2	0	0.0	0.0	-1.9	4.0	0.0
September	30	743,970	0.90	64,672	4,100	6.09	6.09	6.70	400,167	0.18	21,964	1.3	1.23	7.35	3.2	0	0.0	0.0	-1.9	4.0	0.0
Totals		5,316,991	64.19	4,618,950		35.0	35.0	37.2	400,167	11.2	1,568,693	37.2	11.29	48.06	22.99						

Column No

- 1 Days in month
- 2 Col2 = col 1 * AWWF (Dec-May) or ADWF (June-Nov)
- 3 Rainfall from Fiddletown gaging station (elev 2160')
- 4 Direct pond catch = pond(s) top area * rain (100% catch)
- 5 Indirect Pond Catch = additional pond catch for 10 strip around all ponds (40% catch)
- 6 Reference Eto = CIMIS evapotranspiration data from Camino station
- 7 ET = Eto * Kc. Kc from "Irrigation with Reclaimed Municipal Wastewater - A Guidance Manual"
- 8 same as 7
- 9 Col 9 = col 8/12*evap area * 43560^7.48
- 10 Regue runoff is currently some surface runoff area that should be diverted around ponds - but isn't happening right now.
- 11 Regue RO = area * col 9 * % RO
- 12 Col 12 = (col 2 * col 4 + col 5 * col 11 - col 9)/7.48/43560
- 13 Col 13 = col 9/7.48/43560
- 14 col 14 = if rain greater than ET, then col 14=0; if rain less than ET, col 14=disposal acres*(ET-precip)/12
- 15 col 15 = col 14/irrig eff (or 3,000 gpd for Scenario 1)
- 16 col 16 based on days available to irrig during 100 year annual event; during 2016/2017=71 rain days=10/month. Assume 3 - 5 days/mo could irrigate
- 17 col 17 = col 15 * potential irrig to perc (assumed .25 /day); Scenario 1 = 0
- 18 col 18= col 12- col 13- col 15- col 17
- 19 col 19 = prior month EOS * col 18; max=15, min=0
- 20 col 20= any (net to storage = end of previous month storage) over 15

Other: ADWF = flows from RPPUD daily records 2014 - Spring 2017
 AWWF = average flows from October 2016 to March 2017

River Pine Efficient Storage Water Balance
 Scenario 2 - Same as Scenario 1, but increase disposal rates to actual agronomic values

Toma & Associates
 Date 6/28/2017

Assumptions:
 ADWF = 24,789 gpd
 AWWF = 26,257 gpd
 Rainfall = 64.2 inches/100 year at Fiddletown
 Pond Direct Catch = 2.65 acres
 Pond Indirect Catch = 0.42 acres
 Indirect Catch RO Fact = 0.40
 Evp Area = 2.20 acres
 Acres of rogue RO = 4.5 acres
 % RO for rogue RO = 0.2

Other:
 Irrigation Eff = 0.8
 Irrig to perc = 0.25 inches/day during available days (oct-april)
 Disposal area = 17 acres
 Irrig days in winter = 5 days/mo during 100 year rainfall season
 Start Storage = 6 af
 Kc (woodlands) = 1.00 (range can be 1.0-1.2)
 Kc (pond surface) = 1.10
 Pond(s) Full Volume = 13 af

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Days	31	28	31	30	31	30	31	30	31	30	31	30	31	30	31	30	31	30	31	30
Avg mon flow (gal)	765,769	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970	743,970
Rainfall (inches)	3.34	7.50	10.21	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17
Pond Dir Rain Catch (gal)	240,211	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212	340,212
Pond Indir Rain Catch (gal)	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228	15,228
Reference Area ET (in)	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95
Disposal Area ET (in)	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Pond Evap (in)	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
Pond Evap (gal)	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336	4,336
Pond Evap (af)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Pond Evap (AF/mo)	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Net Inflow (AF)	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
Rogue RO (gallons)	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381	81,381
Rogue RO (inches)	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Rogue RO (af)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Rogue RO (AF/mo)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Actual Irrig (AF/mo)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Irrig Demand (AF)	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Winter days available to irrigate (days/mo)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Additional irrigation to perc (af/mo)	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Net Storage (af/mo)	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
EOM Storage (af)	-0.3	2.4	3.6	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
"Spill" (af)	5.7	8.2	11.8	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Totals	9,316,991	64,119	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930	4,618,930

Column No Description

- Days in month
- Col 2 = col 1 * AWWF (Dec-May) or ADWF (June-Nov)
- Rainfall from Fiddletown gauging station (elev 2160')
- Direct pond catch = pond(s) top area * rain (100% catch)
- Indirect Pond Catch = additional pond catch for 30' strip around all ponds (40% catch)
- Reference Eto = CIMIS evapotranspiration data from Carmine station
- ET = Eto * Kc from "Irrigation with Reclaimed Municipal Wastewater - A Guidance Manual"
- same as 7
- Col 9 = col 6 / 12 * evap area * 43560 * 7.48
- "Rogue" runoff is currently some surface runoff area that should be diverted around ponds - but isn't happening right now.
- Col 12 = (col 2 + col 4 + col 5 * col 3) * % RO
- Col 13 = col 9 / 7.48 / 43560
- Col 14 = if rain greater than ET, then col 14 = 0; if rain less than ET, col 14 = disposal acres * (ET - precip) / 12
- Col 15 = col 14 / (irrig eff) (or 35,000 gpd for Scenario 1)
- Col 16 based on days available to irrig during 100 year annual event; during 2016/2017 = 71 rain days = 10/month. Assume 3 - 5 days/mo could irrigate
- Col 17 = col 16 * potential irrig to perc (assumed .25"/day); Scenario 1 = 0
- Col 18 = col 12 - col 13 - col 15 - col 17
- Col 19 = prev month EOM + col 18; max = 15 min = 0
- Col 20 = any (net to storage + end of previous month storage) over 15

ADWF = flows from RPPUD daily records 2014 - Spring 2017
 AWWF = average flows from October 2016 to March 2017

River Pines Effluent Storage Water Balance
 Scenario 4 - Same as Scenario 3, but increase flows to permitted level of 35,000 gpd
 Toma & Associates
 Date 6/28/2017

Assumptions:
 ADWF = 35,000 gpd
 AWWF = 37,500 gpd
 Rainfall = 64.2 inches/100 year at Fiddletown)
 Pond Direct Catch Ac= 2.65 acres
 Pond Indirect Catch = 0.42 acres
 Indirect Catch RO fact = 0.40
 Evap Area = 2.20 acres
 Acres of rogue RO = 0 acres
 % RO for rogue RO= 0.2

Irrigation Eff = 0.8
 Irrig to perc = 0.25 inches/day during available days (oct-april)
 Disposal area = 17 acres
 Irrig days in winter = 5 days/mo during 100 year rainfall season
 Start Storage = 0 af
 Kc (woodlands) = 1.00 (range can be 1.0-1.2)
 Kc (pond surface) = 1.10
 Pond(s) Full Volume = 13 af

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
October	31	1,085,000	3.34	240,211	15,228	3,96	3,96	4,36	260,207	0.67	0	3.3	0.80	0.88	1.1	5	1.8	0.4	0.4	0.0
November	30	1,050,000	7.50	940,012	94,235	1,95	1,95	2,15	128,132	1.50	0	4.6	0.39	0.00	0.00	5	1.8	2.8	3.3	0.0
December	31	1,162,500	10.21	734,491	46,564	1.27	1.27	1.40	83,450	2.04	0	5.7	0.26	0.00	0.00	5	1.8	3.9	7.2	0.0
January	31	1,162,500	12.07	868,454	55,057	1.56	1.56	1.72	102,506	2.41	0	6.1	0.31	0.00	0.00	5	1.8	4.3	11.5	0.0
February	28	1,050,000	11.17	808,782	50,957	2.01	2.01	2.21	132,075	2.23	0	5.4	0.41	0.00	0.00	5	1.8	3.7	15.0	0.2
March	31	1,162,500	10.53	757,588	48,028	3.31	3.31	3.64	217,496	2.11	0	5.4	0.67	0.00	0.00	5	1.8	3.6	15.0	3.6
April	30	1,135,000	5.33	383,413	24,307	4.59	4.59	5.05	301,603	1.07	0	3.8	0.93	0.00	0.00	5	1.8	2.0	15.0	2.0
May	31	1,162,500	2.38	170,919	10,836	6.32	6.32	6.95	415,280	0.48	0	2.9	1.27	5.59	12.8	0	0.0	-4.1	10.9	0.0
June	30	1,050,000	0.58	41,575	2,656	7.83	7.83	8.61	514,500	0.12	0	1.8	1.58	10.27	12.8	0	0.0	-11.1	0.0	0.0
July	31	1,085,000	0.06	4,573	280	8.9	8.90	9.79	584,508	0.01	0	1.6	1.79	12.52	15.6	0	0.0	-14.1	0.0	0.0
August	31	1,085,000	0.13	9,239	586	8.21	8.21	9.03	559,669	0.03	0	1.7	1.66	11.45	14.3	0	0.0	-12.6	0.0	0.0
September	30	1,050,000	0.90	64,672	4,100	6.09	6.09	6.70	400,167	0.18	0	2.2	1.23	7.35	9.2	0	0.0	-7.0	0.0	0.0
Totals		13,230,000	64.19	4,618,930		56.0	56.0	61.6		12.8	0	44.4	11.29	48.06	60.06					

- Column No Description**
- 1 Days in month
 - 2 Col 2 = col 1 * AWWF (Dec-May) or ADWF (June-Nov)
 - 3 Rainfall from Fiddletown gaging station (elev 2160')
 - 4 Direct pond catch = pond(s) top area * rain (100% catch)
 - 5 Indirect Pond Catch = additional pond catch for 10' strip around all ponds (40% catch)
 - 6 Reference Eto = CIMIS evapotranspiration data from Camino station
 - 7 ET = Eto * Kc from "Irrigation with Reclaimed Municipal Wastewater - A Guidance Manual"
 - 8 same as 7
 - 9 Col 9 = col 8/12*evap area * 43560*7.48
 - 10 "Rogue" runoff is currently some surface runoff area that should be diverted around ponds - but isn't happening right now.
 - 11 Rogue RO = area * col 3 * % RO
 - 12 Col 12 = (col 2 + col 4 + col 5 + col 11 - col 9)/7.48/43560
 - 13 Col 13 = col 9/7.48/43560
 - 14 Col 14 = if rain greater than ET, then col 14 = 0; if rain less than ET, col 14 = disposal acres * (ET - precip)/12
 - 15 Col 15 = col 14 / Irrig eff (or 35,000 gpd for Scenario 1)
 - 16 Col 16 based on days available to irrig during 100 year annual event; during 2016/2017=71 rain days=10/month. Assume 3-5 days/mo could irrigate
 - 17 Col 17 = col 15 * potential irrig to perc (assumed .25 / (in)); Scenario 1=0
 - 18 Col 18= col 12 - col 15 - col 13 - col 11
 - 19 Col 19 = prev month EOS + col 18; max=15, min=0
 - 20 Col 20= any (net to storage + end of previous month storage) over 15

Other: ADWF = flows from RPPUD daily records 2014 - Spring 2017
 AWWF = average flows from October 2016 to March 2017

River Phases Effluent Storage Water Balance
 Scenario AA - same as Scenario 4, but increase winter irrigation days to 8/mo instead of 5/mo

Terra & Associates
 Date 6/28/2017

Assumptions:

- ADWF = 35,000 gpd
- AWWF = 37,500 gpd
- Rainfall = 64.2 inches/100 year at Fiddlecrown)
- Pond Direct Catch Ac= 2.65 acres
- Pond Indirect Catch = 0.42 acres
- Indirect Catch RO fact = 0.40
- Evap Area = 2.20 acres
- Acres of rogue RO = 0 acres
- % RO for rogue RO = 0.2
- Irrigation Eff = 0.8
- Irrig to perc = 0.25 inches/day during available days (oct-april)
- Disposal area = 17 acres
- Irrig days in winter = 8 days/mo during 100 year rainfall season
- Start Storage = 0 af
- Kc (woodlands) = 1.00 (range can be 1.0-1.2)
- Kc (pond surface) = 1.10
- Pond(s) Full Volume = 1.5 af

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Days	31	30	31	31	28	31	31	30	31	30	31	31	30	31	30	31	31	30	31	30
Avg mon flow(gal)	1,085,000	1,050,000	1,162,500	1,162,500	1,050,000	1,162,500	1,162,500	1,050,000	1,162,500	1,162,500	1,050,000	1,162,500	1,162,500	1,050,000	1,162,500	1,162,500	1,050,000	1,162,500	1,162,500	1,050,000
Rainfall (inches)	3.34	7.50	10.21	10.21	11.17	11.17	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59
Pond Dir Rain Catch (gal)	240,211	540,012	734,491	734,491	803,782	803,782	757,568	757,568	757,568	757,568	757,568	757,568	757,568	757,568	757,568	757,568	757,568	757,568	757,568	757,568
Pond Indir Rain Catch (gal)	15,228	34,135	46,564	46,564	50,957	50,957	48,028	48,028	48,028	48,028	48,028	48,028	48,028	48,028	48,028	48,028	48,028	48,028	48,028	48,028
Disposal Area ET (in)	3.96	1.95	1.27	1.27	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56
Pond Evap (in)	4.36	2.15	1.40	1.40	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72
Pond Evap (gal)	260,207	126,132	83,450	83,450	102,506	102,506	102,506	102,506	102,506	102,506	102,506	102,506	102,506	102,506	102,506	102,506	102,506	102,506	102,506	102,506
Rogue RO (inches)	0.67	1.50	2.04	2.04	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41
Rogue RO (gallons)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Inflow(A/F)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pond Evap (A/F)	3.3	4.6	5.7	5.7	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Net Irr Demand(A/F)	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Actual Irrig (AF/mo)	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Winter days available to irrigate (days/mo)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Additional Irrigation to perc (sf/mo)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Net to Storage (sf/mo)	-0.6	1.8	2.9	2.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
EDM Storage (sf)	0.0	1.8	4.6	4.6	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
"Spill" (sf)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	15,230,000	64,19	4,518,930	4,518,930	4,100	4,100	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0

Column No

- 1 Days in month
- 2 Col 2 = col 1 * AWWF (Dec-Nov) or ADWF (June-Nov)
- 3 Rainfall from Fiddlecrown gaging station (feet/2160)
- 4 Direct pond catch = pond(s) top area * rain * 100% catch
- 5 Indirect Pond Catch = additional pond catch for 10' strip around all ponds (40% catch)
- 6 Reference Eto = CIMIS evapotranspiration data from Camino station
- 7 ET = Eto * Kc. Kc from "Irrigation with Reclaimed Municipal Wastewater - A Guidance Manual"
- 8 same as 7
- 9 Col 9 = col 8 / 12 * evap area * 43560 * 7.48
- 10 "Rogue" runoff is currently some surface runoff area that should be diverted around ponds - but isn't happening right now.
- 11 Rogue RO = area * col 3 * 1/4 RO
- 12 Col 12 = (col 2 - col 4 + col 5 + col 11 - col 9) / 7.48 / 43560
- 13 Col 13 = col 9 / 7.48 / 43560
- 14 Col 14 = if rain greater than ET, then col 14 = 0; if rain less than ET, col 14 = disposal acres * (ET - precip) / 12
- 15 Col 15 = col 14 / Irrig eff for 35,000 gpd for Scenario 1)
- 16 Col 16 based on days available to irrig during 100 year annual event, during 2016/2017 = 71 rain days = 10/month. Assume 3 - 5 days/mo could irrigate
- 17 Col 17 = col 16 * potential irrig to perc (assumed .25"/day). Scenario 1 = 0
- 18 col 18 = col 12 - col 13 - col 15 - col 17
- 19 col 19 = prev month FOS + col 18, max=15, min=0
- 20 col 20 = any net to storage + end of previous month storage over 15

Other: ADWF = flows from RPPUD daily records 2014 - Spring 2017
 AWWF = average flows from October 2016 to March 2017

River Pines WW Flows

Date:

Month	Q (gal)	2011		EOM		ADWF (June-Nov) =	AWWF (Dec-May)=
		rain (in)	Disp (gal)	Pond H	Pond gal		
Jan	660,700	0.8	1015000	9.8			
Feb	609400	2.8	700000	10.4			
Mar	555400	5.1	455000	12.1		712283 gpd	
Apr	665000	0.4	665000	11.8			647750 gpd
May	701900	2.2	875000	10.5			
Jun	671600	1	945000	9.4			
Jul	740300	0	1085000	7.9			
Aug	766800	0	1085000	6.5			
Sep	728600	0	840000	6.3			
Oct	768900	1	720000	6.5			
Nov	597500	0.9	570000	6.8			
Dec	694100	0	682000	7			
Avg			803083.3				

2012	Q (gal)	rain (in)	Disp (gal)	EOM		ADWF (June-Nov) =	AWWF (Dec-May)=
				Pond H	Pond gal		
Jan	784600	3.2	565000	8.5			
Feb	598400	1.3	480000	8.6			
Mar	663600	5.3	360000	10.5		747517 gpd	
Apr	684400	2.8	660000	10.8			705017 gpd
May	720900	0.2	810000	9.6			
Jun	701400	0	900000	8.1			
Jul	770500	0	780000	7.4			
Aug	793700	0	810000	7.1			
Sep	738300	0.1	680000	7.1			
Oct	739400	1.4	696000	7.6			
Nov	741800	2.5	450000	9			
Dec	778200	6.4	450000	10.7			
Avg			636750				

2013	Q (gal)	rain (in)	Disp (gal)	EOM		ADWF (June-Nov) =	AWWF (Dec-May)=
				Pond H	Pond gal		
Jan	647600	0.5	750000	9.9			
Feb							
Mar	711100	0.5	720000	9.5		772117 gpd	
Apr	660600	0.4	660000	9			701380 gpd
May	737000	0.8	690000	8.5			
Jun	809800	0	840000	7.6			
Jul	822800	0	840000	7.5			
Aug	887900	0	840000	7.5			
Sep	733000	0	840000	7			
Oct	628400	0	620000	7			
Nov	750800	0	540000	7.1			
Dec	750600	0	570000	7.3			

659166.7

	2014 Q (gal)	rain (in)	Disp (gal)	EOM Pond H	EOM Pond gal
Jan	608200	0	180000		8.3
Feb	603300	6.9	300000		10
Mar	627100	4	420000		10.5
Apr	762500	0.4	720000		9
May					
Jun	838700	0	840000		7.3
Jul	809100	0	0		7.3
Aug	838300	0	0		8.3
Sep	717200	0.6	0		8.5
Oct	663300	1.8	0		9
Nov					
Dec					

	2015 Q (gal)	rain (in)	Disp (gal)	EOM Pond H	EOM Pond gal
Jan	696300	0	930000		9
Feb	623200	5.79	630000		8.5
Mar	765600	0	0		9.2
Apr	745200	0.75	0		10
May	597300	0.4	0		10.5
Jun	663800	0.13	0		10.2
Jul	589700	0.1	0		10
Aug	601500	0.1	450000		9.2
Sep	601700	0	900000		8.2
Oct	675300	1	780000		8
Nov	654400	5.5	570000		8.7
Dec	706800	7.75	450000		9.8

	2016 Q (gal)	rain (in)	Disp (gal)	EOM Pond H	EOM Pond gal
Jan	692800	7.25	390000		11
Feb	625100	7.25	810000		11
Mar	692000	8	450000		12.1
Apr	745200	0.75	510000		11.8
May	647800	0.3	510000		11.9
Jun	659600	0	900000		9.5
Jul	782500	0	900000		8.5
Aug	783200	0	900000		7.4
Sep	703700	0	900000		6.7
Oct	764300	10.1	21000		8.7
Nov	779800	2.55	630000		9.5
Dec	739900	5.8	390000		11.1

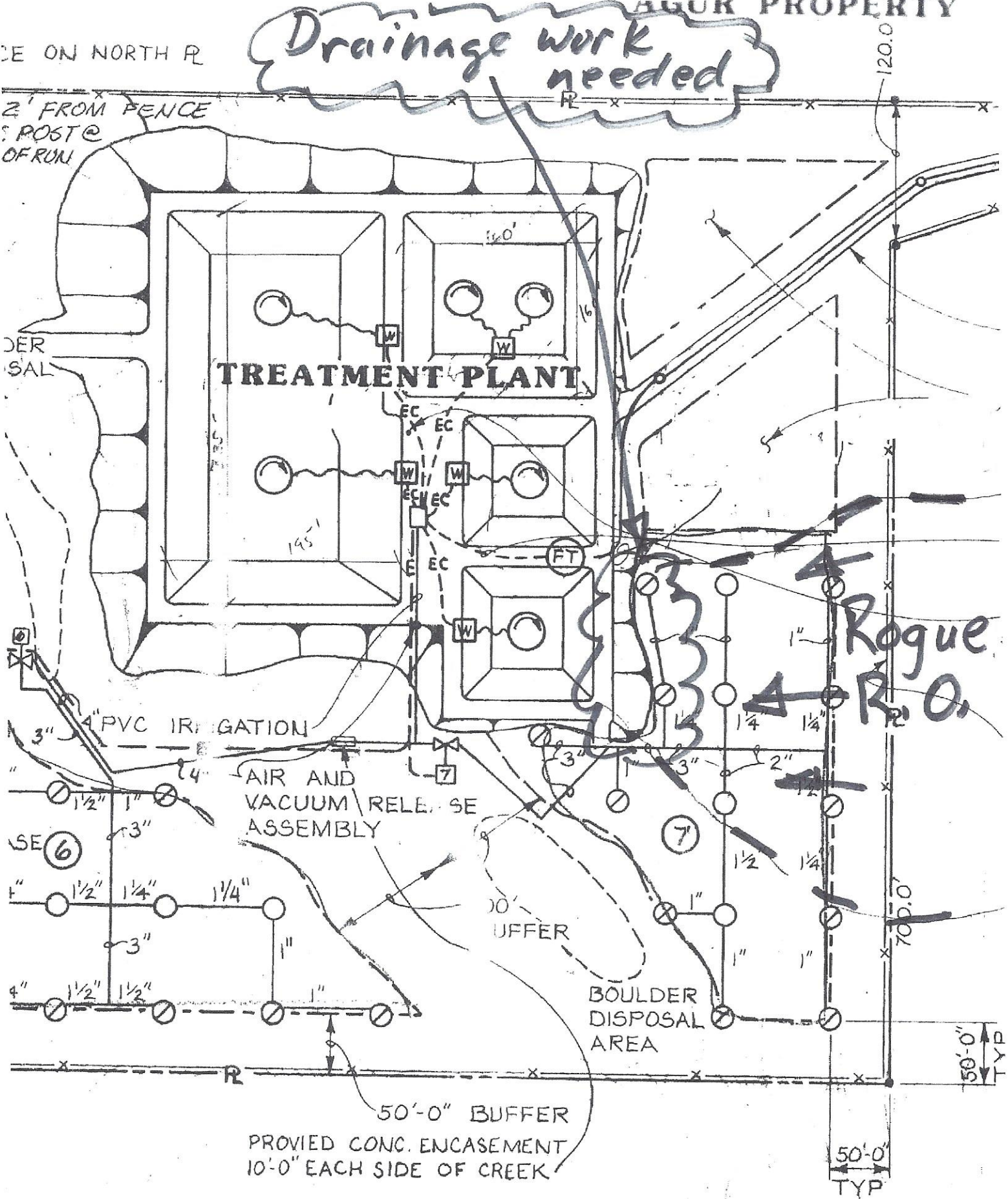
			EOM	EOM	
	2017 Q (gal)	rain (in)	Disp (gal)	Pond H	Pond gal
Jan	941000	24	1797700	13.7	
Feb	804300	19.8	1921300	14	
Mar	696900	4.86	1546100		
Apr					
May					
Jun					
Jul					
Aug					
Sep					
Oct					
Nov					
<u>Dec</u>					

LINE ON NORTH R

2' FROM FENCE
POST @
OF RUN

DER
SAL

TREATMENT PLANT



50'-0" BUFFER
PROVIDED CONC. ENCASEMENT
10'-0" EACH SIDE OF CREEK

Figure 1

River Pines PUD – Water Balance Report

Soils data relating to effluent disposal

1. The soils in the area of the RPPUD disposal system are classified as Sierra very rocky coarse sandy loam, (SkD). Some shovel work in their disposal field area and review of nearby cut slopes generally confirmed this. This classification can then be used to translate estimated permeabilities into actual loading rates for estimating some amount of effluent disposal to deep percolation (on days allowed to irrigate per the WDRs).
2. Within this SkD classification, surface soil permeabilities (“moderate”) are estimated to be .8” to 2.5”/hour, and subsurface permeabilities (“moderately slow”) are estimated to be .2”-.8” per hour per the Amador County SCS Soil Survey. The slower of these (say .5”/hour) would control any potential deep percolation disposal on the River Pines site.
3. Allowable daily percolation rates can be estimated by taking 4%-6% of the above rates (per “Irrigation with Reclaimed Municipal Wastewater – A Guidance Manual”, page 8-15). If 5% was assumed:

$$\text{Allowable deep perc} = .05 \times .5"/\text{hour} \times 24 \text{ hours/day}$$

$$= .6"/\text{day to deep perc (on days ok to irrigate)}$$

For water balance – use .25”/day on allowable days (conservative)

Work Plan and Operations & Maintenance Plan

For

Improved Runoff Controls at the River Pines WWTP Sprayfield

Per CVRWQCB Letter dated 6/18/2017

July 14, 2017

Amador County, CA



River Pines PUD

July 13, 2017

(Report in response to CVRWQCB letter of 6/16/2017 regarding a Workplan and O&M plan for implementing improved runoff controls on the RPPUD existing sprayfield)

1. Per the CVRWQCB letter of 6/17/17, the River Pines PUD is required to submit the following to the Regional Board by 7/15/17:

"A workplan to install runoff controls in the land application areas to comply with Discharge Specification B.3 of the WDRs which requires: 'The discharge shall remain within the designated disposal areas at all times.' These improvements may also include measures to prevent run on and inundation of the sprayfields."

"An Operations and Maintenance Plan for the runoff controls in the workplan required above."

2. The only sure fire method of keeping any effluent from leaving the disposal area would be to never irrigate during the rainy season. As demonstrated within the June 2017 water balance report however, it is not possible to do this-some winter irrigation needs to take place to keep the storage pond from spilling or encroaching into its freeboard. So assuming that River Pines has to irrigate during the winter – the question then becomes how to best insure that no effluent leaves the disposal area as required by the WDR's. Several alternatives were considered.

3. Given the location of their storage pond (vertically and horizontally), it's not feasible to have a tailwater return system as many effluent disposal areas have. It might be possible (but highly impractical and difficult to operate and maintain) to have a tailwater collection system below the sprayfields, but it would collect to a spot that would need to be pumped back to the storage pond. And there's the added possibility that a down gradient ditch, check dam and return pump would collect unwanted runoff or perched groundwater that would only add unwanted water to the storage pond. This option is not recommended.

4. Currently, there is a 100' buffer along Little Indian Creek between the creek and the edge of their disposal fields. The spray heads at the 100 foot line are supposed to be half circle heads spraying away from the creek. The District needs to do several things here to be sure this area is operating as designed. One-they need to make sure all these heads are indeed half circle heads and spray away from the creek. Two-they need to make sure all the heads in the fields along the creek are operating properly, as a clogged head or a partially clogged head would force more effluent to other heads and may tend to overload certain areas and lead to saturated conditions or runoff. Three – they need to be sure the control valves to the 3 fields along the creek all open fully and shut fully. If a control valve did not shut fully – in these lower fields – the field would get water every time their irrigation pump went

on. In fact – this may be occurring now. If this was occurring – a field with a valve not fully shutting would for sure get overloaded and run off. Four – all sprayheads in RPPUD disposal area need to be checked and repaired or replaced as necessary.

5. The possibility of installing upgradient surface water diversion ditches around the disposal field was considered-but the topography just doesn't work for this idea. It would not only not work – it may create more problems than it was intended to solve. This option is not recommended.

6. The next option considered to improve sprayfield operation would be to install soil moisture tensiometer(s) in the sprayfield area. Normally, tensiometers assist farmers on when to irrigate crops, but they can also be used in reverse. As seen on the attached, Rainbird makes a tensiometer that can have an upper setting (saturated conditions) that will prevent a control valve from opening if soil moisture is above a preset level. Intuitively, it would be likely the tensiometers in the lower fields (closer to the creek) would likely experience more frequent conditions not conducive to irrigating, and thus those valves would not open. Also, a simple series of inspection wells (maybe 1 or 2 per field - like those utilized for monitoring certain individual onsite disposal systems) be installed. A sample detail of this inspection well is attached, and it makes it real quick and easy to see where water perched groundwater may or may not be. It is recommended both of these improvements be done soon. What these simple “wells” do is a double check on the tensiometers. If you take a cap off and water is at the surface – not a good time to irrigate, so hopefully the tensiometer is saying the same thing.

7. It is recommended that the River Pines operator make regular inspections (at least bi-monthly) of the disposal field in the winter to insure all is operating as it is designed. Because of the heavy trees and brush – it's difficult to see any of this without walking/driving through the disposal areas. Things like checking that all fields are getting water, there are no saturated areas that may lead to runoff, noting which fields may be taking water better than another field and making loading adjustments as necessary. It would be recommended that detailed records are kept of weekly flows to each field, as this will help adjust flows to most efficiently dispose of effluent.

8. The RPPUD will shortly be conducting a “pilot study” to determine the extent they are able to increase flows to their disposal field. The results of this study will help the District more efficiently drain their storage pond fully in a timely manner. This in turn will allow the District to operate their sprayfields in the most efficient manner and not get into “panic mode”, which can lead to runoff situations.

9. The RPPUD needs to keep vegetation in the sprayfield down to a level where all spray heads can distribute as they are designed to, and it's easy to get around the disposal field in a pickup. This will improve inspections and make maintenance way easier. Heavy vegetation is good to a point for ET purposes, but if gets too thick, it can definitely lead to saturated and nuisance conditions.

Workplan:

- a) Install soil moisture tensiometer(s) and simple inspection wells in each of the 7 fields as recommended above and as attached. Work with engineer and manufacturer to install in locations that make sense for River Pines and to be most effective in controlling flow to each field. Start up and trouble shoot tensiometer settings to the point that it all seems to be working logically.
- b) Check all spray heads and control valves to insure all operating as original designed. Replace or repair anything that isn't working at 100%.
- c) Work with results of upcoming "pilot study" to adjust flows up from current settings. This will have to be coordinated between the SCADA system operator, the River Pines WW operator and the engineer.
- d) Get vegetation under control as noted above and improve access for a pickup truck.

Operations and Maintenance Plan:

- a) Set up sheets to record daily flows to each disposal field. This should be doable with current SCADA system setup.
- b) Also on these sheets, have a spot to note levels in inspection tubes; (dry, 2' down, water at surface, etc).
- c) On same sheets, note tensiometer settings, and if they have prevented a field from getting flow. If a field is getting flow and seems too wet-adjust set point.
- d) Make bi-monthly inspections for items noted above and record all on one sheet. Also note any unusual or nuisance conditions, and pass this information along as required.

SMRT-Y Soil Moisture Sensor Kit

The SMRT-Y Soil Moisture Sensor kit adds closed-loop feedback to irrigation systems, conserving water through digital measurement of the soil's volumetric water content. The sensor takes soil moisture readings every 10 minutes. When the sensor detects dry conditions prior to the normal watering cycle, that cycle is allowed. When the soil is above the set moisture threshold, the watering cycle is suspended to avoid overwatering.

Key Benefits

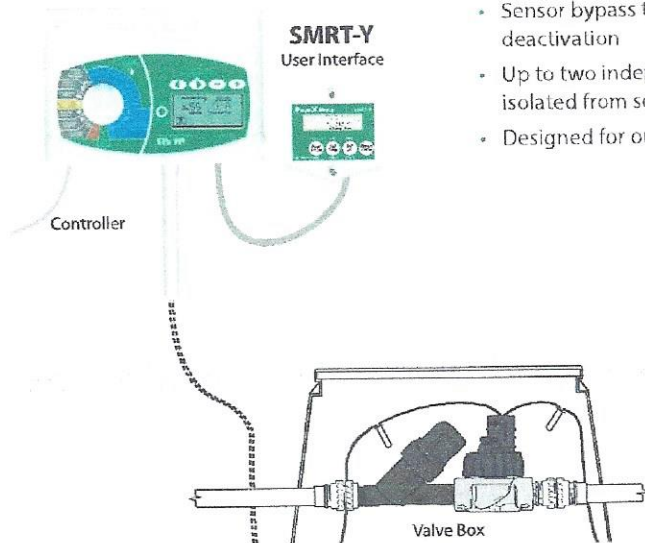
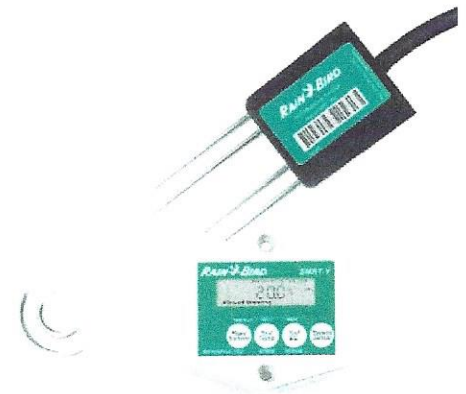
- Turns any controller into a water saving smart controller
- Healthier landscapes less prone to nutrient depletion, fungus and shallow root growth
- Typical water savings exceed 40%
- Primary components (sold as kit):
 - In-Ground Soil Moisture Sensor
 - Sensor User Interface
- TDT digital sensor enables highly accurate readings that are independent of soil temperature and electrical conductivity (EC)
- Displays soil moisture content, soil temperature and EC

Advanced TDT Digital Soil Moisture Sensor

- Sensor uses Time Domain Transmissometry (TDT) and digital signal processing to measure soil moisture content accurately and consistently
- Corrosion-resistant in-ground sensor - made of high-grade 304 stainless steel
- No maintenance sensor - just bury and forget
- Reads absolute - rather than relative - Volumetric Water Content (0-100%)
- Moisture readings remain stable as soil salinity and temperature change
- Sensor never needs calibration

User Interface with LCD Readout

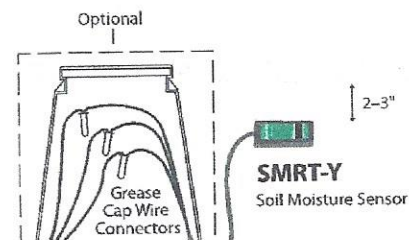
- Touchpad keys with digital LCD readout displays:
 - Absolute Volumetric Water Content, 0-100%
 - Soil temperature in Fahrenheit or Celsius
 - Soil conductivity in dS/m
 - Seven-cycle irrigation history
 - Suspended/allowed watering indicator
 - Bypass mode indicator
- Automatic moisture threshold setting with increase/decrease adjustment
- Sensor bypass touchpad key for easy deactivation
- Up to two independent zones can be isolated from sensor
- Designed for outdoor installation



How To Specify

SMRT-Y

- Model
- SMRT-Y Soil Moisture Sensor Kit
 - SMRT-YI International Soil Moisture Sensor Kit



Operating Specifications

- 25 Volts AC at 12W
- Operating temperature range: -4°F to 158°F (-20°C to 70°C)
- Survival temperature range: -40°F to 185°F (-40°C to 85°C)
- UL, CUL, C-TICK certifications

Dimensions

Sensor Control

- Overall Width: 3.0" (76mm)
- Overall Height: 3.0" (76mm)
- Overall Depth: 0.75" (19mm)

In-Ground Soil Moisture Sensor (without wires)

- Overall Width: 2.0" (50mm)
- Overall Length: 8.0" (200mm)
- Overall Depth: 0.5" (12mm)

SMRT-Y Kit

Includes

- Controller User Interface
- In-Ground Soil Moisture Sensor
- Anodized, rust-proof screws, 1.5" (two per package)
- Wire nuts – 5 blue, 2 gray, 1 yellow
- Multilingual instruction manual, "Quick Start" Guide and sticker that reads: "This controller is connected to a Rain Bird Soil Moisture Sensor"



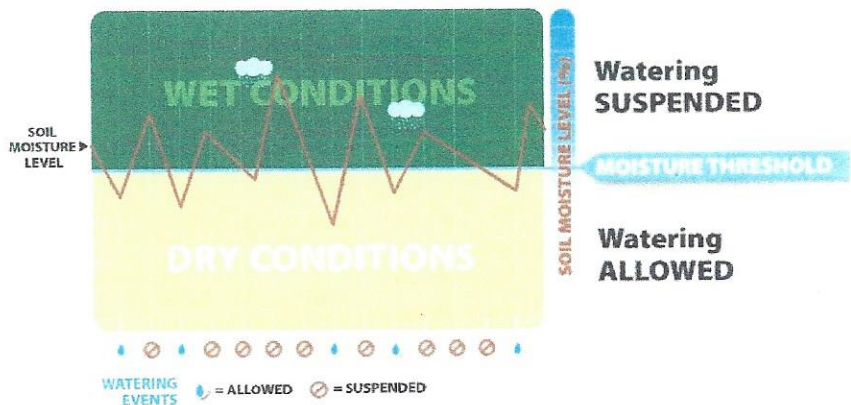
Technical Specifications

The SMRT-Y Soil Moisture Sensor shall be a watering control device for use with a standard 24-Volt AC irrigation controller. It shall take digital readings every 10 minutes of soil Volumetric Water Content (VWC) utilizing advanced Time Domain Transmissometry (TDT) digital signal processing that delivers accurate readings independent of soil temperature and electrical conductivity.

It shall consist of a 304 stainless steel digital Soil Moisture Sensor and a User Interface. In operation, the SMRT-Y Soil Moisture Sensor shall only allow a programmed watering cycle when the soil moisture drops below a set moisture threshold. When the moisture

is above that threshold, the SMRT-Y Soil Moisture Sensor shall suspend the normal watering cycle by interrupting the common line to the valve solenoids.

Features shall include automatic setting of soil moisture threshold with increase/decrease adjustment as well as bypass mode. User interface shall enable instant readings of soil moisture, temperature and electrical conductivity plus review of 7-cycle watering history. The SMRT-Y Soil Moisture Sensor shall be sold by Rain Bird Corporation.



Operating Principle

When soil moisture is above the preset threshold, the irrigation cycle is suspended. When moisture falls below that level, the regular watering cycle is allowed.

Rain Bird Corporation
6991 East Southpoint Road
Tucson, AZ 85756
Phone: (520) 741-6100
Fax: (520) 741-6522

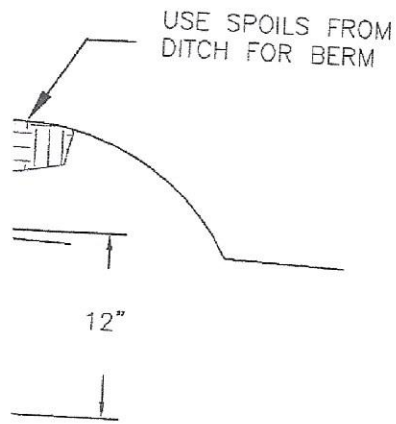
Rain Bird Technical Service
(800) RAINBIRD (1-800-724-6247)
(U.S. and Canada)

Rain Bird Corporation
970 West Sierra Madre Avenue
Azusa, CA 91702
Phone: (626) 812-3400
Fax: (626) 812-3411

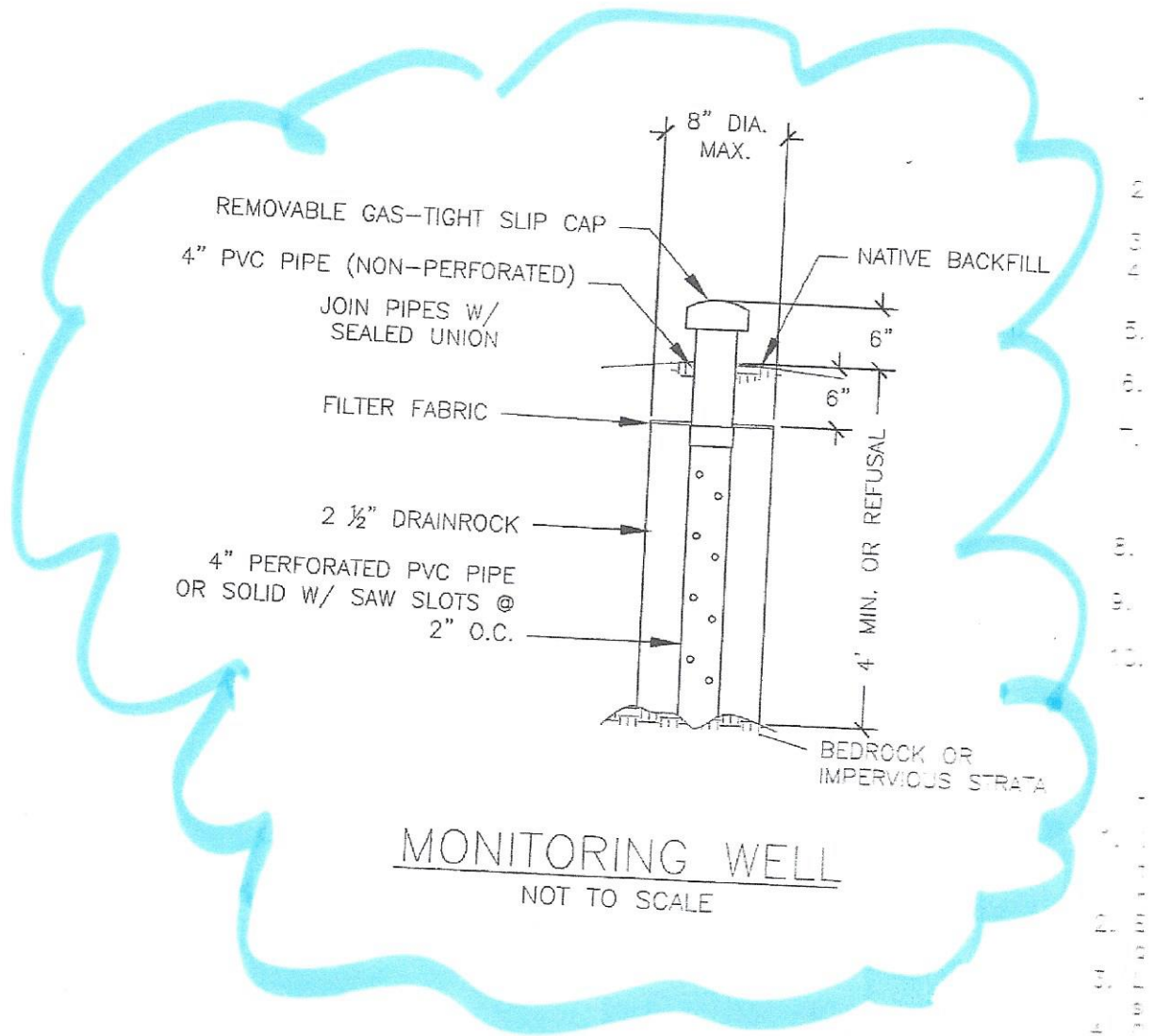
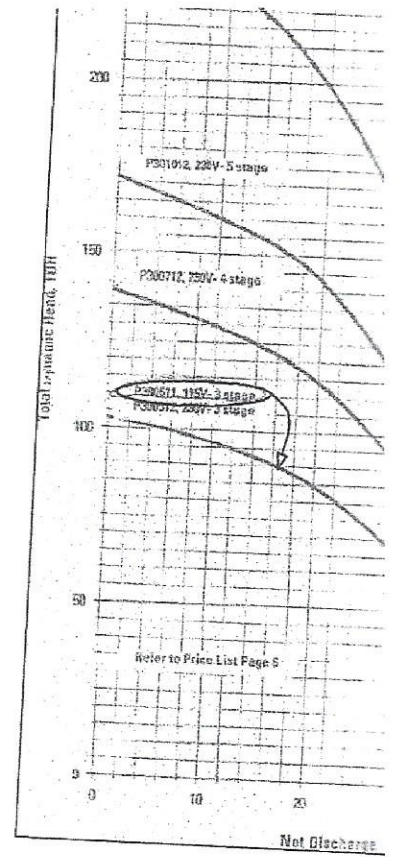
Specification Hotline
800-458-3005 (U.S. and Canada)

Rain Bird International, Inc.
1000 West Sierra Madre Ave.
Azusa, CA 91702
Phone: (626) 963-9311
Fax: (626) 852-7343

The Intelligent Use of Water™
www.rainbird.com



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River Pines Public Utility District
AGENDA ITEM 10H

All Transaction
All T

Type	Num	Date	Account	Amount
Invoice	66871	07/31/2017	11000 · Accounts Re...	132.19
Invoice	66543	06/30/2017	11000 · Accounts Re...	112.87
Payment	visa	06/27/2017	12000 · Undeposited ...	250.00
Invoice	66289	06/21/2017	11000 · Accounts Re...	7.96
Invoice	66184	05/31/2017	11000 · Accounts Re...	112.64
Payment	visa	05/04/2017	12000 · Undeposited ...	250.00
Invoice	65793	04/30/2017	11000 · Accounts Re...	112.77
Invoice	65564	04/21/2017	11000 · Accounts Re...	9.48
Invoice	65478	03/31/2017	11000 · Accounts Re...	112.67
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Invoice	64881	02/21/2017	11000 · Accounts Re...	10.84
Invoice	64764	01/31/2017	11000 · Accounts Re...	112.70
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Invoice	62974	08/31/2016	11000 · Accounts Re...	109.84
Invoice	62614	07/31/2016	11000 · Accounts Re...	107.68
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Invoice	61892	05/31/2016	11000 · Accounts Re...	107.65
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Invoice	24137	10/21/2015	11000 · Accounts Re...	12.82
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