

## **RESOLUTION NO. 2014-21**

### **A RESOLUTION OF THE BOARD OF DIRECTORS OF BROOKTRAILS TOWNSHIP COMMUNITY SERVICES DISTRICT DIRECTING THAT A BREACH NOTICE BE TRANSMITTED TO THE CITY OF WILLITS BECAUSE LARGE VOLUMES OF PARTIALLY TREATED SEWAGE AT THE SEWAGE TREATMENT PLANT IS PERCOLATING DIRECTLY INTO THE GROUNDWATER OF THE LITTLE LAKE VALLEY AND INADEQUATELY TREATED SEWAGE IS BEING DISCHARGED DIRECTLY INTO THE SURFACE WATERS OF THE LITTLE LAKE VALLEY**

WHEREAS, an Agreement entered into on September 11, 1967 (as amended four times) by the City of Willits (City) and the Brooktrails Township Community Services District (District) regarding the City Wastewater Treatment Plant (WWTP) provides that “City hereby sells to District ... the exclusive right to dispose of sanitary sewage in said plant ... and City will receive, treat and dispose of said sewage”; and

WHEREAS, provisions of said Agreement anticipate that in treating and disposing of said sewage the City will comply with “effluent quality requirements by State and/or Federal agencies” and “orders of State or Federal agencies, commissions and departments having jurisdiction thereover” which gives the Board of Directors of the District (Board) a reasonable right to expect the City to treat and dispose of Brooktrails sewage in a manner that protects the groundwater and surface water of the Little Lake Valley and conforms to law; and

WHEREAS, even though Section 3 of the Second Amendment of the Agreement states “the City shall have sole jurisdiction over its operation and ... any liability for malpractice in the treatment and disposal of wastewater shall not pass to District,” the Board has a reasonable right to expect City Officials to not knowingly commit malpractice in the treatment and disposal of Brooktrails sewage; and

WHEREAS, in a report on problems with the City of Willits Wastewater Treatment Plant (WWTP) dated June 28, 2001, North Coast Regional Water Quality Control Board (Regional Board) staff stated in part:

“Treated wastewater consistently meets effluent limitations set forth in waste discharge requirements; however, the volume of effluent frequently exceeds one percent of the flow in Broaddus Creek during winter months. ...The City conducted a hydrologic study of the complex receiving water system. The study concluded that the City would have to pump its wastewater effluent approximately thirteen miles downstream to the Eel River in order to consistently comply with the one- percent discharge rate limitation.

“The City submitted a document entitled *Long Term Wastewater Treatment and Effluent Management Plan for the City of Willits*, dated July 2000. The major recommendations of the report were: 1) increase the one percent discharge rate limitation to four percent (25: 1 dilution), and 2) abandon a majority of the existing WWTF and construct a facultative oxidation pond, treatment wetlands, and an enhancement wetland. The currently used chlorine disinfection system would be

replaced with an ultraviolet disinfection system. The new wastewater treatment system is being proposed because it would:

- Provide a higher degree of treatment through nutrient removal,
- Be more environmentally friendly with lower energy requirements and discontinued use of chlorine,
- Have lower operation and maintenance costs in the long-term, and
- Provide City-owned open space for walking and wildlife observation.

“Regional Water Board staff acknowledges the City's findings but takes no position at this time on the City's apparent decision to abandon most of the existing WWTF. Staff's concerns are: 1) impacts on beneficial uses of Outlet Creek from an increased discharge rate, and, 2) the proposed treatment system lies within a wetland and floodplain of the Outlet Creek system.”

and,

WHEREAS, as early as the May 2004 *Preliminary Engineering Report Wastewater Treatment Facilities Upgrade* by SHN Consulting Engineers & Geologists, Inc., with regard to treatment wetland ponds it was noted: “If required, the ponds would be lined with a 1-foot thick clay liner to protect groundwater”; and

WHEREAS, that same May 2004 *Report* with regard to ultraviolet disinfection of treatment wetland effluent noted that the 2000 *Plan* anticipated a UV dosage of 140 mWsec/cm<sup>2</sup> but instead recommended a lower 80 mWsec/cm<sup>2</sup>; and

WHEREAS, a 2010 review of the City's construction plans and specifications was performed by an engineer hired by the District and provided to the City noted:

- “Compaction requirements are a critical aspect of earthwork design. We found no compaction requirements in the Specifications.”
- “While it appears that the UV system will deliver the design dose [of 50 mWsec/cm<sup>2</sup>], there is a discrepancy between the coliform removal rate required by the permit and that in the specifications.”

and,

WHEREAS, beginning in the Summer of 2012 District Officials received anecdotal reports that WWTP treated effluent usually delivered and used for irrigation on adjacent agricultural lands was not available and a District Official on a tour of the WWTP observed that the water in the enhancement wetlands was extremely low even though the irrigation pumps were not operating; and

WHEREAS, in 2013 other information available to District Officials indicated that 70-100 million gallons per year of wastewater is being discharged into the groundwater of the Little Lake Valley; and

WHEREAS, in a letter to City of Willits Mayor Holly Madrigal dated April 12, 2013, Brooktrails Board President Tony Orth noted:

“We have learned that over a 12 month period, including all four seasons, as much as 100 million of gallons of treatment plant effluent are unaccounted for and may have directly percolated into the Little Lake Valley groundwater table in violation of your permit. Brooktrails officials did inform City officials in writing about this risk related to a design issue before any construction contracts were awarded. In contrast to a number of engineering reports, the construction documents did not provide for compaction of the enhanced wetlands ponds.”

and,

WHEREAS, subsequent to receipt of that letter an opinion letter was prepared by GHD (attached hereto as Exhibit A) for the City of Willits and submitted to the North Coast Regional Water Quality Control Board which appears to contain an egregious error derived from incorrectly calculated flow records, which error effectively hides 73.17 million gallons of wastewater that likely percolated into the groundwater table; and

WHEREAS, additional information available to District Officials indicates the UV system dosage specification of 50 mWsec/cm<sup>2</sup> instead of the 2000 *Plan* recommendation of 140 mWsec/cm<sup>2</sup> or the 2004 *Report* recommendation of 80 mWsec/cm<sup>2</sup> appears to have resulted in wastewater being discharged into the surface waters of the Little Lake Valley that does not meet permit requirements, as the District warned in 2010;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE BROOKTRAILS TOWNSHIP COMMUNITY SERVICES DISTRICT that the Board hereby makes following findings:

1. Information available to the District indicates that sewage from Brooktrails delivered to the City for treatment and disposal, after partial treatment, is being allowed by the City to percolate into the groundwater in the Little Lake Valley potentially causing serious cumulative groundwater pollution problems in violation of the Agreement between the District and the City.

2. Information available to the District indicates that sewage from homes and businesses in Brooktrails delivered to the City for treatment and disposal after inadequate treatment is being discharged into the surface waters of the Little Lake Valley in violation of the Agreement between the District and the City.

AND BE IT FURTHER RESOLVED BY THE BOARD OF DIRECTORS OF THE BROOKTRAILS TOWNSHIP COMMUNITY SERVICES DISTRICT that the District, with regard to any future costs to rectify the design deficiencies and clean up environmental pollution resulting from said design deficiencies, reaffirms, and does not waive, its inherent right to indemnity arising by the contract as a whole, and by the fact that the District provided the City Manager and the City Engineer its written engineering analysis of the plans for the sewer plant project shortly before the City accepted the Overaa bid and decided to proceed with construction.

AND BE IT FURTHER RESOLVED BY THE BOARD OF DIRECTORS OF THE BROOKTRAILS TOWNSHIP COMMUNITY SERVICES DISTRICT that the General Manager transmit to the City the letter of Notice of Breach pursuant to Section 23 of the Second Amendment of the Agreement (attached as Exhibit B) along with a copy of this Resolution.

INTRODUCED and ADOPTED this 5th day of August, 2013, at a special meeting of the Board of Directors of Brooktrails Township Community Services District by the following vote:

AYES: Directors:

NOES: Directors:

ABSENT: Directors:

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RICK WILLIAMS, President

ATTEST:

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DENISE ROSE, Secretary

# EXHIBIT A



Ref: 8410679

October 29, 2013

Mr. Jim Lance  
City Attorney  
City of Willits  
300 Robinson Creek Rd  
Ukiah, CA 95482

## RE: City of Willits Wastewater Treatment Plant Water Balance

Dear Mr. Lance,

Based on our conversations and your request GHD has completed a water balance calculation to provide an accounting of the influent and effluent flows to the City of Willits Wastewater Treatment Plant (WWTP). A copy of the water balance is attached for your reference.

The water balance accounts for wastewater flows into and out of the WWTP. Influent flows consist of metered influent flows and precipitation. Effluent flows consist of metered discharge to either Outlet Creek or irrigation and evaporation from the WWTP unit processes, ponds and newly constructed wetlands and some water supplied to Caltrans for construction. In addition, the underlying soils of the wetlands will have some minor seepage due to the permeability of the structure, pond or wetland cell. The Regional Water Quality Control Board has acknowledged the potential for minor seepage in Attachment F item VI.B.9 of the WDR Order NO. R1-2010-0017 and placed effluent limitations for total nitrogen from the new mechanical secondary treatment system due to the potential for minor seepage.

The water balance calculation is based on metered influent sanitary sewer flows, metered effluent flows to Outlet Creek and irrigation, localized precipitation data, estimates of evaporation based on historical pan evaporation data and storage of treated effluent in the ponds prior to discharge. The period used for the water balance is for the 12 month period following construction of the WWTP improvement project after it was placed into operation. Data for the previous years is not accurate or reflective of the system as it currently operates and also had data flaws in the metered flows due to the ongoing construction. Based on the water balance there is an estimated unaccounted for loss of approximately 9.42 million gallons of treated wastewater over the period of record. This loss is the equivalent of approximately .03 inches/day distributed over the wetland area. This loss can be accounted and attributed to permeability as previously discussed and evapotranspiration through the plants in the wetlands. Discounting the evapotranspiration the losses would equate to a permeability of approximately  $1.0 \times 10^{-6}$  cm/sec in the underlying soils compacted beneath the constructed wetlands.

SHN Consulting Engineers & Geologists completed geotechnical studies for the WWTP improvements. They report relatively low permeability of the undisturbed underlying soils at the site in the range of  $3 \times 10^{-7}$  cm/sec to  $9 \times 10^{-9}$  cm/sec in their Geotechnical Report Stage 2 and 3 Improvements dated March 2008. The wetlands were allowed to be constructed with these on site soils by the RWQCB as permitted under WDR Order NO. R1-2010-001. The WDR Order NO. R1-2010-0017 for the City did not prescribe quantitative limits on the permeability of the soils that were used to construct the wetlands but in our experience with other projects  $1.0 \times 10^{-6}$  cm/sec has been an acceptable and prescribed permeability for clay linings of treated wastewater holding ponds for other projects. A permeability of  $1.0 \times 10^{-6}$  cm/sec is synonymous with low permeability as prescribed by the RWQCB. GHD can provide reference projects listed under the jurisdiction of the RWQCB that have specific quantitative limits and low permeability



requirements of  $1.0 \times 10^{-6}$  cm/sec for clay linings and permeability if required. In our opinion based on our review of the data and operations the City of Willits WWTP is operating within the requirements of Order No. R1-2010-0017 and is not in violation of the requirements of the Waste Discharge and Master Reclamation Permit.

If you have any questions, please feel free to contact me.

Sincerely,  
GHD Inc.

A handwritten signature in blue ink, appearing to read 'Alex Culick'.

Alex Culick, P.E.  
Managing Principal





Water balance	Inflows		Outflows					
	From Influent Flow Meter	Monthly average values from WRCC, Willits INE station	From creek discharge flow meter	From irrigation flow meter	Based on pan evaporation data from Lake Pillsbury derated by 0.75 to account for less evaporation from an open water surface. Holding ponds are assumed to be dry in summer	Reclaimed wastewater provided to CalTrans for Willits Bypass Construction Project	All inflows to system minus all quantifiable outputs to the system	Net increase or decrease in water stored in the enhancement wetlands base on approximate volume of water stored for months when data was available assuming 27.94 acre total water surface area for all three cells of the enhancement wetlands
Notes-->								
Month	Influent (MG)	Precipitation (MG)	Discharge (MG)	Irrigation (MG)	Estimated Evaporation (MG)	Construction Water (MG)	Inflows - Outflows (MG)	Accumulated Stored Water in Enhancement Wetlands (MG)
August 2012	26.10	0.14	0.00	(8.83)	(5.50)		11.92	0 (baseline, beginning of POR)
September 2012	24.68	0.47	0.00	(7.79)	(4.07)		13.28	8.20
October 2012	20.89	2.41	0.00	(3.11)	(2.12)		18.07	5.46
November 2012	35.17	5.76	(1.14)	0.00	(0.70)		39.09	2.73
December 2012	101.64	10.06	(171.22)	0.00	(0.67)		(60.19)	24.59
January 2013	43.21	9.99	(47.32)	0.00	(0.45)		5.44	(36.42)
February 2013	38.38	8.16	(27.67)	0.00	(1.09)		17.79	(8.20)
March 2013	46.97	7.79	(39.01)	0.00	(2.31)		13.43	0.00
April 2013	34.66	3.22	(22.30)	0.00	(3.55)		12.03	0.00
May 2013	22.58	1.17	0.00	0.00	(4.36)	(0.14)	19.26	13.66
June 2013	21.32	0.31	0.00	(81.30)	(4.93)	(0.38)	(64.99)	11.84
July 2013	17.62	0.05	0.00	(10.71)	(6.06)	(0.22)	0.68	(5.46)
Totals-->	433.23	49.54	(308.66)	(111.74)	(35.81)	(0.74)	25.81	16.39
Estimated Seepage (MG) -->								9.42

Notes:

Revision Date --> 131023

- 1 The period of record (POR) for the data shown is August 1, 2012 to July 31, 2013.
- 2 According to Order No. R1-2010-0017, the active volume in the enhancement wetland is 90 ac-ft (~27MG) and the buffer storage is 90ac-ft
- 3 Evapotranspiration by vegetation in the enhancement wetlands is neglected
- 4 Evaporation and rainfall inputs/deducts from the holding ponds are seasonally accounted for (May-Nov=empty, Dec-April=full)
- 5 A storm in December 2012 is believed to have caused the discharge flow meter to operate with reduced accuracy. The value shown is the best available data

## EXHIBIT B



# BROOKTRAILS TOWNSHIP

COMMUNITY SERVICES DISTRICT  
24860 BIRCH STREET  
WILLITS, CA 95490  
Phone: 707-459-2494  
Fax: 707-459-0358  
btcsd@btcsd.org

August 5, 2014

Adrienne Moore  
City Manager of the City of Willits  
City of Willits  
111 East Commercial Street  
Willits, Ca. 95490

### **Re: Breach of Covenants**

Dear Adrienne:

This letter is a Notice of Breach pursuant to Section 23 of the Second Amendment of the Agreement by and between the District and the City related to the inadequate or improper treatment and disposal of sewage as described in the attached Resolution.

As noted in the Resolution, the groundwater pollution element of this matter was first raised in an April 12, 2013, letter to the City. Apparently the City is relying upon an October 29, 2013, opinion prepared by GHD which concluded that there was "an estimated unaccounted for loss of approximately 9.42 million gallons of treated wastewater" for the period of August 2012 through July 31, 2013. Those calculations rely upon a reported 81.30 million gallons used for irrigation in June 2013.

As indicated in the attached analysis with meter sheets originally provided by the City, the June 2013 number was calculated differently from July - October 2013 by a factor of 10, leaving 73.17 million gallons unaccounted for. Please note that the meter readings are continuous from June 1 through October 30. That GHD opinion was provided to the North Coast Regional Water Quality Control Board. Brooktrails has previously advised representatives of the City of this error, but to our knowledge that opinion letter has not been corrected.

With regard to any future costs to rectify the design deficiencies causing the inadequate or improper treatment and disposal of sewage as described in the attached Resolution and future cleanup of the environmental pollution resulting from said design deficiencies, through this Notice the District reaffirms, and does not waive, its inherent right to indemnity arising by the contract as a whole.

Apart from that, our concern is that third parties could seek to hold the District responsible for the discharge by the City of the District's sewage to the groundwater of Little Lake Valley. In that our agreement presupposes that the City will treat the sewage, not discharge it to the groundwater, this notice advises that the City is in breach of the agreement.



If the City wishes to expressly indemnify the District and its ratepayers from the potentially substantial costs of correcting this problem we would consider the breach cured.

Notwithstanding this, the District urges the City to address this issue immediately because of the broad range of possible public health issues and environmental impacts that could result from a failure to do so.

Sincerely,

Denise Rose  
General Manager, Brooktrails Township

Enclosure:     Resolution No. 2014-21  
                     Analysis with meter sheets

cc:     Board of Directors  
         Christopher J. Neary, General Counsel

## GHD Water Balance Calculation Irrigation Flow Error

The simple questions for the October 29, 2013 GHD report were: “Do the numbers indicate that flow entering the treatment plant is neither being discharged to the creek nor used for irrigation? If so is the volume not accounted for significant?” A prior review of the data available indicated that the answer to both questions was “yes.”

However, the GHD report concludes: “In our opinion based on our review of the data and operations the City of Willits WWTP is operating within the requirements of Order No. R1-2010-0017 and is not in violation of the requirements of the Waste Discharge and Master Reclamation Permit.” A skeptic might check to see if any of GHD’s numbers look anomalous.

The June 2013 irrigation flow is anomalous as it appears to be reported higher than expected. By doing a quick check of the meter reading charts (attached) for June 2013 through October 2013, it is very clear that the method of calculating the daily irrigation flow from meter readings was different in June compared to the other months by a factor of 10. If true that means that 73 million gallons were reported as used for irrigation that were not so used, are not accounted for, and are missing. If the June method is correct then the flow used for irrigation for the five months was remarkably high, what is “mystery water” used for irrigation.

### THE JUNE 2013 IRRIGATION OUTFLOW NUMBER PROBLEM

*2013 Math Consistency Check Using Meter Readings for 10th of Each Month:*

Date	End	Begin	Use	Chart	Factor	
6/10/2013	498625	- 498226 =	399 ÷	0.399 =	0.001	????
7/10/2013	560967	- 555755 =	5212 ÷	0.5212 =	0.0001	
8/10/2013	692800	- 687346 =	5454 ÷	0.5454 =	0.0001	
9/10/2013	875569	- 868577 =	6992 ÷	0.6992 =	0.0001	
10/10/2013	913595	- 913556 =	39 ÷	0.0039 =	0.0001	

*Assuming the error is in June:*

Month	End	Begin	Use	Factor	Used	Report	Error
Jun-13	553826	- 472522 =	81304 X	0.0001 =	8.130	81.30	(73.17) million gallons
Jul-13	660937	- 553826 =	107111 X	0.0001 =	10.710	10.71	0.00 million gallons

*Assuming the error is in July - October:*

Month	End	Begin	Use	Factor	Used
Jun-13	553826	- 472522 =	81304 X	0.001 =	81.30 million gallons
Jul-13	660937	- 553826 =	107111 X	0.001 =	107.11 million gallons
Aug-13	815121	- 660937 =	154184 X	0.001 =	154.18 million gallons
Sep-13	912940	- 815121 =	97819 X	0.001 =	97.82 million gallons
Oct-13	928976	- 912940 =	16036 X	0.001 =	16.04 million gallons
TOTAL					456.45 million gallons
<i>Reported Influent:</i>					93.60 million gallons
<i>GHD Report Water in Wetlands at the end of May</i>					13.66 million gallons
<i>Mystery water used for irrigation</i>					349.19 million gallons

**Willits Water Quality Control Plant - Daily Meter Readings**

**Month and Year      Jun-13**

Day	Init.	Influent		RAS		WAS		Effluent		Discharge	
		Totalizer	Flow, MGD	Totalizer	Flow, MGD	Totalizer	Flow, MGD	Totalizer	Flow, MGD	Irrigation	Flow, MGD
1	jw	5123183	0.721	310648	0.000	6170	0	339351	0.653	472522	0.828
2	jw	5123904	0.817	310648	0.000	6170	0	340004	0.728	473350	5.222
3	jw	5124721	0.741	310648	0.000	6170	0	340732	0.702	478572	4.367
4	nc	5125462	0.672	310648	0.000	6170	0	341434	0.685	482939	5.022
5	nc	5126134	0.687	310648	0.000	6170	0	342119	0.705	487961	3.792
6	nc	5126821	0.760	310648	0.000	6170	2	342824	0.712	491753	0.584
7	nc	5127581	0.642	310648	0.000	6172	6	343536	0.605	492337	0.878
8	je	5128223	0.714	310648	0.000	6178	8	344141	0.668	493215	4.750
9	je	5128937	0.750	310648	0.000	6186	6	344809	0.694	497965	0.261
10	nc	5129687	0.713	310648	0.000	6192	8	345503	0.659	498226	0.399
11	nc	5130400	0.624	310648	0.000	6200	6	346162	0.576	498625	2.338
12	nc	5131024	0.731	310648	0.000	6206	7	346738	0.604	500963	3.388
13	nc	5131755	0.663	310648	0.000	6213	5	347342	0.598	504351	2.692
14	nc	5132418	0.691	310648	0.000	6218	5	347940	0.601	507043	2.160
15	pf	5133109	0.701	310648	0.000	6223	7	348541	0.636	509203	2.258
16	pf	5133810	0.713	310648	0.000	6230	5	349177	0.636	511461	4.964
17	je	5134523	0.644	310648	0.000	6235	6	349813	0.608	516425	2.568
18	nc	5135167	0.641	310648	0.000	6241	9	350421	0.626	518993	4.212
19	nc	5135808	0.649	310648	0.000	6250	8	351047	0.668	523205	6.033
20	je	5136457	0.624	310648	0.000	6258	6	351715	0.593	529238	5.124
21	nc	5137081	0.581	310648	0.000	6264	7	352308	0.634	534362	5.438
22	jw	5137662	0.550	310648	0.000	6271	8	352942	0.601	539800	4.317
23	jw	5138212	0.585	310648	0.000	6279	21	353543	0.610	544117	0.225
24	je	5138797	0.766	310648	0.000	6300	0	354153	0.783	544342	9.481
25	je	5139563	1.146	310648	0.000	6300	21	354936	1.133	553823	0.003
26	nc	5140709	0.866	310648	0.000	6321	13	356069	0.842	553826	0.000
27	nc	5141575	0.756	310648	0.000	6334	3	356911	0.775	553826	0.000
28	nc	5142331	0.756	310648	0.000	6337	1	357686	0.740	553826	0.000
29	je	5143087	0.682	310648	0.000	6338	14	358426	0.680	553826	0.000
30	je	5143769	0.730	310648	0.000	6352	11	359106	0.705	553826	0.000
1		5144499	0.000	310648	0.000	6363	0	359811	0.000	553826	0.000
0			0.000		0.000						0.000
Average			0.69		0.000		193.000		0.660		2.623
Maximum			1.146		0.000		21.000		1.133		9.481
Minimum			0.730		0.000		0.000		0.653		0.000



**Willits Water Quality Control Plant - Daily Meter Readings**  
**Month and Year** **JUL-13**

**Willits Water Q**  
**Month and Year**

Day	Init.	Influent Totalizer	Influent Flow, MGD	RAS 1 Totalizer	RAS Flow, MGD	RAS 2 Totalizer	RAS Flow, MGD	WAS 1 Totalizer	WAS Flow, MGD	WAS 2 Totalizer	WAS Flow, MGD	Effluent Totalizer	Effluent Flow, MGD	Discharge Flow, MGD	Creek Height
														Irrigation	
1	je	5144499	0.706	310648	0.000	159553	0.214	6363	0.027	12461	0.034	359811	0.481	553826	0.0000
2	nc	5145205	0.643	310648	0.000	159767	0.107	6390	0.024	12495	0	360292	0.849	553826	0.0000
3	nc	5145848	0.610	310648	0.000	159874	0.063	6414	0.012	12495	0	361141	0.728	553826	0.0000
4	pf	5146458	0.573	310648	0.000	159937	0.010	6426	0	12495	0	361869	0.575	553826	0.0000
5	nc	5147031	0.639	310648	0.000	159947	0.273	6426	0.002	12495	0	362444	0.714	553826	0.0000
6	pf	5147670	0.609	310648	0.000	160220	0.139	6428	0.009	12495	0	363158	0.621	553826	0.0000
7	pf	5148279	0.692	310648	0.000	160359	0.147	6437	0.01	12495	0	363779	0.661	553826	0.0000
8	nc	5148971	0.648	310648	0.000	160506	0.210	6447	0.007	12495	0	364440	0.592	553826	0.0412
9	jw	5149619	0.616	310648	0.000	160716	0.186	6454	0	12495	0	365032	0.607	554238	0.1517
10	nc	5150235	0.627	310648	0.000	160902	0.223	6454	0.015	12495	0	365639	0.656	555755	0.5212
11	sm	5150862	0.529	310648	0.000	161125	0.203	6469	0.012	12495	0.003	366295	0.613	560967	0.2524
12	je	5151391	0.579	310648	0.000	161328	0.211	6481	0	12498	0.004	366908	0.628	563491	0.1437
13	jw	5151970	0.577	310648	0.000	161539	0.216	6481	0	12502	0.008	367536	0.628	564928	0.2702
14	jw	5152547	0.611	310648	0.000	161755	0.215	6481	0	12510	0.009	368164	0.641	567630	0.3486
15	nc	5153158	0.581	310648	0.000	161970	0.214	6481	0	12519	0.012	368805	0.606	571116	0.2681
16	pf	5153739	0.525	310648	0.000	162184	0.215	6481	0	12531	0.009	369411	0.594	573797	0.3260
17	nc	5154264	0.543	310648	0.000	162399	0.215	6481	0	12540	0.011	370005	0.588	577057	0.3054
18	nc	5154807	0.517	310648	0.000	162614	0.214	6481	0	12551	0.022	370593	0.611	580111	0.5603
19	nc	5155324	0.518	310648	0.000	162828	0.214	6481	0	12573	0	371204	0.621	585714	0.6393
20	je	5155842	0.515	310648	0.000	163042	0.220	6481	0	12573	0.017	371825	1.112	592107	0.4761
21	je	5156357	0.542	310648	0.000	163262	0.213	6481	0	12590	0.012	372937	0.115	596868	0.2969
22	je	5156899	0.529	310648	0.000	163475	0.214	6481	0	12602	0.022	373052	0.619	599837	0.6591
23	sm	5157428	0.520	310648	0.000	163689	0.214	6481	0	12624	0.01	373671	0.620	606428	0.4334
24	sm	5157948	0.513	310648	0.000	163903	0.216	6481	0	12634	0.007	374291	0.650	610762	0.3628
25	pf	5158461	0.527	310648	0.000	164119	0.215	6481	0	12641	0.036	374941	0.588	614390	0.7398
26	sm	5158988	0.501	310648	0.000	164334	0.217	6481	0	12677	0.007	375529	0.625	621788	0.6870
27	pf	5159489	0.509	310648	0.000	164551	0.185	6481	0	12684	0.011	376154	0.588	628658	0.6878
28	pf	5159998	0.536	310648	0.000	164736	0.244	6481	0	12695	0.008	376742	0.592	635536	0.5962
29	nc	5160534	0.509	310648	0.000	164980	0.211	6481	0	12703	0.02	377334	0.579	641498	0.6624
30	nc	5161043	0.509	310648	0.000	165191	0.217	6481	0	12723	0.018	377913	0.572	648122	0.7095
31	nc	5161552	0.568	310648	0.000	165408	0.224	6481	0	12741	0.023	378485	0.604	655217	0.5720
1		5162120	0.000	310648	0.000	165632	0.000	6481	0	12764	0	379089		660937	0.0000
Average			0.57		0.000		0.196		0.118		0.303		0.622		0.346
Maximum			0.706		0.000		0.273		0.027		0.036		1.112		0.740
Minimum			0.509		0.000		0.010		0.000		0.000		0.481		0.710

# Willits Water Quality Control Plant - Daily Meter Readings

Month and Year **JUL-13**

Day	Init.	Influent Totalizer	Influent Flow, MGD	RAS 1 Totalizer	RAS Flow, MGD	RAS 2 Totalizer	RAS Flow, MGD	WAS 1 Totalizer	WAS Flow, MGD	WAS 2 Totalizer	WAS Flow, MGD	Effluent Totalizer	Effluent Flow, MGD	Discharge Flow, MGD
1	je	5144499	0.706	310648	0.000	159553	0.214	6363	0.027	12461	0.034	359811	0.481	553826
2	nc	5145205	0.643	310648	0.000	159767	0.107	6390	0.024	12495	0	360292	0.849	553826
3	nc	5145848	0.610	310648	0.000	159874	0.063	6414	0.012	12495	0	361141	0.728	553826
4	pf	5146458	0.573	310648	0.000	159937	0.010	6426	0	12495	0	361869	0.575	553826
5	nc	5147031	0.639	310648	0.000	159947	0.273	6426	0.002	12495	0	362444	0.714	553826
6	pf	5147670	0.609	310648	0.000	160220	0.139	6428	0.009	12495	0	363158	0.621	553826
7	pf	5148279	0.692	310648	0.000	160359	0.147	6437	0.01	12495	0	363779	0.661	553826
8	nc	5148971	0.648	310648	0.000	160506	0.210	6447	0.007	12495	0	364440	0.592	553826
9	jw	5149619	0.616	310648	0.000	160716	0.186	6454	0	12495	0	365032	0.607	554238
10	nc	5150235	0.627	310648	0.000	160902	0.223	6454	0.015	12495	0	365639	0.656	555755
11	sm	5150862	0.529	310648	0.000	161125	0.203	6469	0.012	12495	0.003	366295	0.613	560967
12	je	5151391	0.579	310648	0.000	161328	0.211	6481	0	12498	0.004	366908	0.628	563491
13	jw	5151970	0.577	310648	0.000	161539	0.216	6481	0	12502	0.008	367536	0.628	564928
14	jw	5152547	0.611	310648	0.000	161755	0.215	6481	0	12510	0.009	368164	0.641	567630
15	nc	5153158	0.581	310648	0.000	161970	0.214	6481	0	12519	0.012	368805	0.606	571116
16	pf	5153739	0.525	310648	0.000	162184	0.215	6481	0	12531	0.009	369411	0.594	573797
17	nc	5154264	0.543	310648	0.000	162399	0.215	6481	0	12540	0.011	370005	0.588	577057
18	nc	5154807	0.517	310648	0.000	162614	0.214	6481	0	12551	0.022	370593	0.611	580111
19	nc	5155324	0.518	310648	0.000	162828	0.214	6481	0	12573	0	371204	0.621	585714
20	je	5155842	0.515	310648	0.000	163042	0.220	6481	0	12573	0.017	371825	1.112	592107
21	je	5156357	0.542	310648	0.000	163262	0.213	6481	0	12590	0.012	372937	0.115	596868
22	je	5156899	0.529	310648	0.000	163475	0.214	6481	0	12602	0.022	373052	0.619	599837
23	sm	5157428	0.520	310648	0.000	163689	0.214	6481	0	12624	0.01	373671	0.620	606428
24	sm	5157948	0.513	310648	0.000	163903	0.216	6481	0	12634	0.007	374291	0.650	610762
25	pf	5158461	0.527	310648	0.000	164119	0.215	6481	0	12641	0.036	374941	0.588	614390
26	sm	5158988	0.501	310648	0.000	164334	0.217	6481	0	12677	0.007	375529	0.625	621788
27	pf	5159489	0.509	310648	0.000	164551	0.185	6481	0	12684	0.011	376154	0.588	628658
28	pf	5159998	0.536	310648	0.000	164736	0.244	6481	0	12695	0.008	376742	0.592	635536
29	nc	5160534	0.509	310648	0.000	164980	0.211	6481	0	12703	0.02	377334	0.579	641498
30	nc	5161043	0.509	310648	0.000	165191	0.217	6481	0	12723	0.018	377913	0.572	648122
31	nc	5161552	0.568	310648	0.000	165408	0.224	6481	0	12741	0.023	378485	0.604	655217
1		5162120	0.000	310648	0.000	165632	0.000	6481	0	12764	0	379089		660937
Average			0.57		0.000		0.196		0.118		0.303		0.622	0.346
Maximum			0.706		0.000		0.273		0.027		0.036		1.112	0.740
Minimum			0.509		0.000		0.010		0.000		0.000		0.481	0.710



**Willits Water Quality Control Plant - Daily Meter Readings**  
**Month and Year** Aug-13

Day	Init.	Influent		RAS		RAS 2		WAS 1		WAS 2		Effluent		Discharge	
		Influent Totalizer	Flow, MGD	RAS 1 Totalizer	Flow, MGD	RAS 2 Totalizer	Flow, MGD	WAS 1 Totalizer	Flow, MGD	WAS 2 Totalizer	Flow, MGD	Effluent Totalizer	Flow, MGD	Irrigation	Flow, MGD
1	sm	5162120	0.492	360244	0.420	165632	0.203	6481	0	12764	0.013	379089	0.554	660937	0.3324
2	nc	5162612	0.549	360664	0.218	165835	0.218	6481	0	12777	0.029	379643	0.660	664261	0.3694
3	jw	5163161	0.525	360882	0.219	166053	0.215	6481	0	12806	0.012	380303	0.366	667955	0.3649
4	jw	5163686	0.582	361101	0.212	166268	0.214	6481	0	12818	0.016	380669	0.388	671604	0.0000
5	nc	5164268	0.583	361313	0.169	166482	0.243	6481	0	12834	0	381057	0.613	671604	0.2242
6	je	5164851	0.599	310817	0.221	166725	0.233	6481	0	12834	0.018	381670	0.697	673846	0.4051
7	nc	5165450	0.588	311038	0.215	166958	0.226	6481	0	12852	0.023	382367	0.659	677897	0.0000
8	nc	5166038	0.571	311253	0.210	167184	0.215	6481	0	12875	0	383026	0.668	677897	0.5843
9	je	5166609	0.587	311463	0.219	167399	0.232	6481	0	12875	0	383694	0.684	683740	0.3606
10	je	5167196	0.572	311682	0.212	167631	0.215	6481	0	12875	0	384378	0.694	687346	0.5454
11	je	5167768	0.626	311894	0.219	167846	0.226	6481	0	12875	0	385072	0.653	692800	0.5340
12	nc	5168394	0.533	312113	0.214	168072	0.226	6481	0	12875	0	385725	0.630	698140	0.5279
13	nc	5168927	0.552	312327	0.214	168298	0.228	6481	0	12875	0.021	386355	0.619	703419	0.5353
14	nc	5169479	0.565	312541	0.217	168526	0.217	6481	0	12896	0.043	386974	0.609	708772	0.5353
15	nc	5170044	0.550	312758	0.212	168743	0.247	6481	0	12939	0.04	387583	0.591	714125	0.5342
16	nc	5170594	0.585	312970	0.217	168990	0.258	6481	0	12979	0.01	388174	0.603	719467	0.7249
17	pf	5171179	0.608	313187	0.227	169248	0.275	6481	0	12989	0.013	388777	0.606	726716	0.0809
18	pf	5171787	0.587	313414	0.208	169523	0.267	6481	0	13002	0.019	389383	0.617	727525	0.0200
19	nc	5172374	0.535	313622	0.066	169790	0.244	6481	0	13021	0.025	390000	0.369	727725	1.0652
20	jw	5172909	0.631	313688	0.000	170034	0.232	6481	0	13046	0.027	390369	0.689	738377	1.1618
21	jw	5173540	0.499	313688	0.000	170266	0.204	6481	0	13073	0.012	391058	0.608	749995	0.7841
22	nc	5174039	0.574	313688	0.000	170470	0.219	6481	0	13085	0.012	391666	0.683	757836	0.8502
23	nc	5174613	0.507	313688	0.000	170689	0.209	6481	0	13097	0.011	392349	0.567	766338	0.8825
24	jw	5175120	0.526	313688	0.000	170898	0.216	6481	0	13108	0.016	392916	0.564	775163	0.1008
25	jw	5175646	0.597	313688	0.000	171114	0.221	6481	0	13124	0	393480	0.635	776171	0.0000
26	nc	5176243	0.555	313688	0.000	171335	0.213	6481	0	13124	0.001	394115	0.603	776171	0.7162
27	nc	5176798	0.555	313688	0.000	171548	0.218	6481	0	13125	0.016	394718	0.588	783333	0.7416
28	nc	5177353	0.540	313688	0.000	171766	0.213	6481	0	13141	0.01	395306	0.616	790749	0.5595
29	je	5177893	0.558	313688	0.000	171979	0.214	6481	0	13151	0.032	395922	0.567	796344	0.7007
30	nc	5178451	0.525	313688	0.000	172193	0.221	6481	0	13183	0	396489	0.633	803351	0.6019
31	je	5178976	0.540	313688	0.000	172414	0.213	6481	0	13183	0.016	397122	0.551	809370	0.5751
1	je	5179516		313688		172627		6481		13199		397673		815121	
Average			0.56		0.133		0.226		0.000		0.435		0.599		0.497
Maximum			0.631		0.420		0.275		0.000		0.043		0.697		1.162
Minimum			0.525		0.000		0.203		0.000		0.000		0.554		0.602



**Willits Water Quality Control Plant - Daily Meter Readings**  
**Month and Year** Sept. 2013

Day	Init.	Influent Totalizer	Influent Flow, MGD	RAS Totalizer	RAS Flow, MGD	RAS 2 Totalizer	RAS Flow, MGD	WAS 1 Totalizer	WAS Flow, MGD	WAS 2 Totalizer	WAS Flow, MGD	Effluent Totalizer	Effluent Flow, MGD	Discharge	
														Irrigation	Flow, MGD
1	je	5179516	0.551	313688	0.000	172627	0.217	6481	0	13199	0.017	397673	0.554	815121	0.0000
2	je	5180067	0.641	313688	0.000	172844	0.216	6481	0	13216	0.018	398227	0.615	815121	0.5925
3	sm	5180708	0.559	313688	0.000	173060	0.218	6481	0	13234	0.02	398842	0.563	821046	0.6255
4	nc	5181267	0.553	313688	0.000	173278	0.214	6481	0	13254	0.015	399405	0.546	827301	0.6897
5	nc	5181820	0.571	313688	0.169	173492	0.218	6481	0	13269	0.017	399951	0.646	834198	0.5304
6	nc	5182391	0.502	313688	0.000	173710	0.209	6481	0	13286	0.017	400597	0.536	839502	0.6078
7	pf	5182893	0.552	313688	0.000	173919	0.219	6481	0	13303	0.017	401133	0.564	845580	0.5214
8	pf	5183445	0.632	313688	0.000	174138	0.216	6481	0	13320	0.019	401697	0.615	850794	0.9430
9	nc	5184077	0.571	313688	0.000	174354	0.218	6481	0	13339	0.008	402312	0.595	860224	0.8353
10	nc	5184648	0.566	313688	0.000	174572	0.214	6481	0	13347	0.008	402907	0.651	868577	0.6992
11	nc	5185214	0.525	313688	0.000	174786	0.215	6481	0	13355	0.014	403558	0.588	875569	0.6674
12	nc	5185739	0.546	313688	0.000	175001	0.216	6481	0	13369	0.043	404146	0.554	882243	0.4716
13	nc	5186285	0.534	313688	0.000	175217	0.206	6481	0	13412	0.012	404700	0.619	886959	0.1749
14	jw	5186819	0.557	313688	0.000	175423	0.161	6481	0	13424	0.04	405319	0.515	888708	0.3717
15	jw	5187376	0.594	313688	0.000	175584	0.158	6481	0	13464	0.034	405834	0.546	892425	0.5538
16	nc	5187970	0.605	313688	0.000	175742	0.218	6481	0	13498	0.02	406380	0.559	897963	0.3296
17	je	5188575	0.771	313688	0.000	175960	0.221	6481	0	13518	0.013	406939	0.579	901259	0.0000
18	nc	5189346	0.851	313688	0.000	176181	0.183	6481	0	13531	0.012	407518	0.619	901259	0.2578
19	nc	5190197	0.786	313688	0.000	176364	0.014	6481	0	13543	0.069	408137	0.516	903837	0.4956
20	nc	5190983	0.558	313688	0.000	176378	0.217	6481	0	13612	0	408653	0.605	908793	0.4147
21	je	5191541	0.622	313688	0.000	176595	0.215	6481	0	13612	0	409258	0.705	912940	0.0000
22	je	5192163	0.596	313688	0.000	176810	0.214	6481	0	13612	0	409963	0.626	912940	0.0000
23	nc	5192759	0.564	313688	0.000	177024	0.220	6481	0	13612	0	410589	0.616	912940	0.0000
24	nc	5193323	0.543	313688	0.000	177244	0.216	6481	0	13612	0	411205	0.621	912940	0.0000
25	nc	5193866	0.531	313688	0.000	177460	0.214	6481	0	13612	0.009	411826	0.603	912940	0.0000
26	je	5194397	0.799	313688	0.000	177674	0.138	6481	0	13621	0.071	412429	0.739	912940	0.0000
27	je	5195196	0.383	313688	0.000	177812	0.156	6481	0	13692	0.02	413168	0.389	912940	0.0000
28	pf	5195579	0.574	313688	0.000	177968	0.213	6481	0	13712	0.032	413557	0.585	912940	0.0000
29	pf	5196153	0.968	313688	0.000	178181	0.220	6481	0	13744	0.013	414142	0.945	912940	0.0000
30	nc	5197121	0.780	313688	0.000	178401	0.199	6481	0	13757	0.012	415087	0.792	912940	0.0000
		5197901		313688		178600		6481		13769		415879		912940	
Average			0.61		0.01		0.20		0.00		0.02		0.61		0.33
Maximum			0.968		0.169		0.221		0.000		0.071		0.945		0.943
Minimum			0.383		0.000		0.014		0.000		0.000		0.389		0.000

**Willits Water Quality Control Plant - Daily Meter Readings**  
**Month and Year** Oct. 2013

V

Day	Init.	Influent Totalizer	Influent Flow, MGD	RAS 1 Totalizer	RAS Flow, MGD	RAS 2 Totalizer	RAS Flow, MGD	WAS 1 Totalizer	WAS Flow, MGD	WAS 2 Totalizer	WAS Flow, MGD	Effluent Totalizer	Effluent Flow, MGD	Discharge Flow, MGD
														Irrigation
1		5197901	0.731	313688	0.000	178600	0.182	6481	0	13769	0.009	415879	0.703	912940
2	nc	5198632	0.636	313688	0.000	178782	0.147	6481	0	13778	0.021	416582	0.607	912940
3	jw	5199268	0.625	313688	0.000	178929	0.000	6481	0	13799	0.069	417189	0.556	912940
4	nc	5199893	0.580	313688	0.000	178929	0.163	6481	0	13868	0.025	417745	0.576	912940
5	jw	5200473	0.611	313688	0.169	179092	0.220	6481	0	13893	0	418321	0.627	912940
6	jw	5201084	0.664	313688	0.000	179312	0.174	6481	0	13893	0.026	418948	0.638	912940
7	nc	5201748	0.617	313688	0.000	179486	0.158	6481	0	13919	0.04	419586	0.570	912940
8	nc	5202365	0.626	313688	0.000	179644	0.210	6481	0	13959	0.006	420156	0.641	912940
9	nc	5202991	0.602	313688	0.000	179854	0.114	6481	0	13965	0.053	420797	0.541	913384
10	nc	5203593	0.581	313688	0.000	179968	0.218	6481	0	14018	0.028	421338	0.574	913556
11	nc	5204174	0.604	313688	0.000	180186	0.220	6481	0	14046	0.018	421912	0.620	913595
12	je	5204778	0.623	313688	0.000	180406	0.217	6481	0	14064	0	422532	0.601	914671
13	je	5205401	0.645	313688	0.000	180623	0.211	6481	0	14064	0	423133	0.627	914729
14	nc	5206046	0.610	313688	0.000	180834	0.217	6481	0	14064	0	423760	0.599	914731
15	nc	5206656	0.626	313688	0.000	181051	0.218	6481	0	14064	0	424359	0.644	914774
16	nc	5207282	0.598	313688	0.000	181269	0.179	6481	0	14064	0.012	425003	0.628	915492
17	nc	5207880	0.608	313688	0.000	181448	0.008	6481	0	14076	0.047	425631	0.586	915546
18	nc	5208488	0.591	313688	0.000	181456	0.154	6481	0.001	14123	0.068	426217	0.541	919641
19	je	5209079	0.582	313688	0.000	181610	0.216	6482	0.008	14191	0	426758	0.616	923494
20	je	5209661	0.652	313688	0.000	181826	0.202	6490	0.007	14191	0.01	427374	0.680	927368
21	nc	5210313	0.585	313688	0.000	182028	0.148	6497	0.001	14201	0.035	428054	0.601	928925
22	nc	5210898	0.595	313688	0.000	182176	0.158	6498	0.001	14236	0.02	428655	0.612	928926
23	nc	5211493	0.575	313688	0.000	182334	0.214	6499	0.007	14256	0	429267	0.609	928926
24	nc	5212068	0.581	313688	0.000	182548	0.215	6506	0.009	14256	0	429876	0.652	928926
25	nc	5212649	0.552	313688	0.000	182763	0.220	6515	0.004	14256	0	430528	0.631	928926
26	jw	5213201	0.582	313688	0.000	182983	0.221	6519	0.009	14256	0	431159	0.617	928926
27	jw	5213783	0.633	313688	0.000	183204	0.213	6528	0.006	14256	0	431776	0.648	928926
28	nc	5214416	0.583	313688	0.000	183417	0.215	6534	0.004	14256	0	432424	0.607	928926
29	nc	5214999	0.601	313688	0.000	183632	0.183	6538	0.001	14256	0.022	433031	0.577	928926
30	nc	5215600	0.607	313688	0.000	183815	0.176	6539	0.001	14278	0.024	433608	0.584	928926
31	nc	5216207	0.573	313688	0.000	183991	0.196	6540	0.008	14302	0.009	434192	0.547	928926
1	sm	5216780		313688		184187		6548		14311		434739		928926
Average			0.61		0.01		0.18		0.00		0.02		0.61	0.05
Maximum			0.731		0.169		0.221		0.009		0.069		0.703	0.410
Minimum			0.552		0.000		0.000		0.000		0.000		0.541	0.000