



City of Scotts Valley



Wastewater Reclamation Facility Annual Report 2015



CITY OF SCOTT'S VALLEY

WASTEWATER TREATMENT FACILITY

700 Lundy Lane, Scotts Valley, California 95066
Phone 831.438.0732 Facsimile 831.438.7218

January 22, 2016

Sheila Soderberg, P.G.
Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

Attn: Peter von Langen, Ph.D., P.G.

**SUBJECT: CITY OF SCOTT'S VALLEY WASTEWATER TREATMENT FACILITY
2015 ANNUAL REPORT**

Dear Mr. von Langen:

On behalf of the City of Scotts Valley, I am pleased to submit for your review the enclosed Wastewater Treatment Facility 2015 Annual Report.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any questions or require additional information, please do not hesitate to call me at (831) 438-5854.

Sincerely,

Scott Hamby
Public Works Director

Table of Contents

List of Tables	ii
List of Figures	iii
Process Diagram	iv
Staffing	v
Plant Summary and Compliance	1
Laboratory	1
Lift Stations	2
Collection System	3
Source Control Program	3
Maintenance and Repairs	5
O & M Manual	5
Training	5
Public Outreach/Education	6
Compliance History	9
Tabular Summary of Monitoring Data	10-17
Graphical Presentation of Data	18-27
Environmental Laboratory Accreditation (ELAP) Registration	28
Appendix	
• Annual Biosolids Monitoring	

List of Tables

Table	Description	Page
1	Plant Flow and Rainfall	10
2	Influent & Effluent Suspended Solids	11
3	Influent & Effluent BOD & cBOD	12
4	Tertiary Effluent Nitrogen	13
5	pH, Turbidity, Settleable Solids and Oil & Grease	14
6	Effluent Chlorine Residual and Bacteriological Quality	15
7	Sludge Wasting	16
8	Plant Operating Parameters	17

List of Figures

Figure	Description	Page
1	Rainfall and Monthly Plant Flow	18
2	Plant Flow	18
3	Influent & Effluent Suspended Solids	19
4	TSS, BOD & cBOD Removal Rates	19
5	Influent & Effluent BOD	20
6	Influent & Effluent cBOD	20
7	Tertiary Plant Nitrogen	21
8	Tertiary Plant Nitrogen Removal	21
9	Influent & Effluent pH	22
10	Effluent Turbidity & Settleable Solids	22
11	Effluent Oil & Grease	23
12	Chlorine Residual (at Santa Cruz)	23
13	Effluent Bacterial Quality	24
14	Waste Activated Sludge	24
15	Plant Solids Inventory	25
16	Plant Solids Concentration	25
17	Plant 7-Day MCRT & F/M	26
18	Rainfall & Plant Flow 1984-2014	26
19	Reclaimed Water Delivered 2002-2012	27

CITY OF SCOTTS VALLEY
WASTEWATER DIVISION STAFF - 2015

Scott Hamby	Public Works Director	Grade IV # 6692
Troy Adams	Wastewater Division Manager	OIT I
Carlos Flores	Acting Chief Operator	Grade III # 35726
Tony Alvarez	Operator II	Grade II # 10839
Arthur Soto	Operator II	Grade II # 10607
Jason Daniels	Operator In Training	OIT I
Kathleen King	Senior Laboratory Analyst	Grade III # 111032001

CITY OF SCOTTS VALLEY WASTEWATER TREATMENT FACILITY ANNUAL REPORT 2015

Plant Summary and Compliance

A total 68.35 million gallons of recycled water was used in 2015. This is an increase of over 7.02 million gallons compared to 2014. As 2015 was another drought year for our area, the addition of new end users for irrigation and construction has increased the demand.

Effluent suspended solids averaged 10.0 mg/L (a 97.8% removal rate), effluent cBOD's averaged 4 mg/L (a 98.2% removal rate), and effluent BOD's averaged 7 mg/L (a 97.8% removal rate). Many thanks to a very knowledgeable and dedicated treatment plant staff. Without them, the continued high standards the City has become accustomed to would not be possible.

On March 25 we violated our Total Suspended Solids weekly average of 45 mg/L when we recorded a TSS of 47.2 mg/L. The efficiency of the new blower for the plant's aeration system increased the dissolved oxygen levels to higher than normal. Adjustments were made to the operational parameters of the new blower to compensate for the additional oxygen levels. Corrective actions were reviewed with the operation's staff.

As we said goodbye to 2015, we also said goodbye to longtime Plant Operator, Ted Domingos. Ted worked at the Scotts Valley plant for 23 years; he was a master fabricator, always willing to help and quick with a smile. Ted will be missed. We also had the pleasure of welcoming two new additions to the plant, OIT Jason Daniels, and new Division Manager Troy Adams. Troy comes to us with more than 20 years of experience working at the Scotts Valley plant and has a background in water as the former Operation's Supervisor with the Scotts Valley Water District. Troy is looking forward to his new position and challenges it brings.

Laboratory

The lab had its biennial inspection from the California State Environmental Lab Accreditation Program, and successfully completed on-site inspection and proficiency testing studies to maintain its accreditation. The lab added another method to its list of accredited fields of testing: Microbiology of Drinking Water presence absence. This will aide in helping Scotts Valley Water District to easily ensure that bacteria testing on drinking water is of the highest standard.

Pilot studies were performed at the plant this year to test different recycled water treatment methods. This kept the lab busy this year with additional testing and monitoring of the studies to gauge the success of the new treatment. Lab staff was excited to work on the pilot studies with hopes of increasing the recycled water usage and reducing our ocean discharge.

Laboratories used during 2014 were:

Inorganic Chemistry and Microbiology:
City of Scotts Valley
700 Lundy Lane
Scotts Valley, CA 95066
ELAP Certificate No. CA 1062

Bioassay Testing:
Aquatic Bioassay & Consulting Labs
29 N. Olive Street
Ventura, CA 93001
ELAP Certificate No. 1907

HVWS, Biosolid TCDD:
Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado Hills, CA 95762
ELAP Certificate No. CA 02113

Metals/Inorganic & Organic Chemistry:
BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
ELAP Certification No. 1186

California Department of Fish and Game
2005 Nimbus Road
Rancho Cordova, CA 95670
ELAP Certification No. CA 1622

Lift Stations

The City of Scotts Valley owns and operates seven lift stations at various locations throughout the City. All stations are inspected three times each week. During these routine inspections, hour readings are taken to verify normal running times and flow throughput. Each pump is individually started and stopped to ensure proper operation, and wet-wells are visually inspected to confirm water levels with digital level reading on automatic pump controllers. Once each week, stations equipped with permanent emergency generators are tested on emergency power to ensure proper operation. Five stations are equipped with permanent emergency stand-by power. At this time, no other stations require permanent on-site emergency power, as limited flows allow ample time for City staff to respond to alarm conditions and provide portable generator power prior to overflows occurring.

All of the City's seven stations have back-up pumps and alarm systems that automatically call 24-hour emergency personnel in case of a power outage or high-level conditions.

Collection System

Following is a summary of the two collection system overflows reported by the City in 2015:

- October 3 – 282 Grace Way: 5 gallons spilled from a manhole due to root and misc. debris blockage. SSO Event ID 818568.
- December 20 – 4303 Scotts Valley Drive: 150 gallons spilled from a manhole due to grease, roots and debris. SSO Event ID 820294.

The City's sanitary sewer collection system is made up of approximately 40 miles of gravity pipeline and 7 miles of force main. City crews spend an average of two days each week performing preventative maintenance using a combination vacuum/hydro-jet truck to clean the lines.

Source Control Program

Industrial

There is currently only one, significant industrial user (SIU) remaining in the City of Scotts Valley: ThermoFisher, a categorical metal finishing industry (40 CFR 433.15). ThermoFisher self reports on a biannual basis and all analyte levels were below regulatory limits. The overall volume of discharge from the brewery is not large, but the high Biological Oxygen Demand (BOD) of the wastewater has the potential to adversely affect the facility's tertiary treatment operations, which supply recycled water to the City and others for landscaping irrigation. A new business, the Steel Bonnet Brewery, has been asked to discharge no more than 7 gallons per day at a rate no higher than 2 gallons per hour. They have also been asked to submit monthly discharge logs, which will be compared to levels of BOD measured at the facility. The discharge volume may need to be adjusted for dry weather flows, which constitute half the volume together with a high demand for recycled water.

Groundwater Remediation: There are currently three groundwater pump and treat sites discharging to the sewer in the City of Scotts Valley, one being the Mañana Woods Groundwater Well, owned by the San Lorenzo Valley Water District. The District started discharging filter backwash water on August 1, 2011. The backwash is treated as necessary to remove pollutants to concentrations below the City of Scotts Valley Sanitary Sewer discharge limits. This site has met all permit conditions to date. The Scotts Valley Water District is the responsible party for the last two sites, which were added in 2013. These sites are El Pueblo Water Treatment Plant, and Well #10 Water Treatment Plant. The discharger has submitted prior analytical results indicating that the filter backwash water meets the discharge requirements. In addition, the discharger is

responsible for submitting analytical results annually to ensure compliance with this permit. A Self-Monitoring Report must be submitted each year by January 31st for all groundwater pump and treat sites.

Grease Trap Installation and Maintenance

The last few years of thorough and consistent annual inspections of local food service facilities has proven to be highly effective as most facilities are operating in compliance with the local fats, oils, and greases (FOG) program and with local ordinances. A few restaurants had minor violations regarding the FOG program that were correctly immediately following inspection. The most common area of correction with food service facilities was regarding businesses that clean their own grease traps. These businesses were not maintaining proper cleaning logs to verify cleanings were conducted with proper frequency. To address this issue, the source control inspector provided these businesses with another Best Environmental Management Practices Pamphlet specific to Food Service Facilities, which includes a self-cleaning log. The source control inspector will follow up with these businesses to ensure that self-cleaning logs are maintained and with proper frequency. Business managers/owners were notified that they must hire a service rather than continue to self-clean the grease traps if a proper cleaning log cannot be maintained.

Environmental Compliance

All industrial businesses that have the potential to discharge industrial wastes to the sewer in the City of Scotts Valley have been inspected on a yearly basis since 2013 by the source control inspector. Most businesses are in compliance with local ordinances and implementing best environmental management practices. However food service facilities and auto body and repair shops remain are sometimes asked to make minor changes to their operations in order to better comply with Best Management Practices (BMP).

A common area of correction for was exterior washing of equipment or discharge of janitorial wastewater down storm drains. In most instances the problem wasn't remedied without talking to the property owner or manager. A BMP guide was created for Property Managers. A list of all the Property Managers in town was obtained and the BMP guide was shared with all of them.

A few vehicle service facilities had a change in management this year and the attention to BMPs in those shops declined. The annual inspections provided a good opportunity to educate and remind. A few businesses were written violation notices on the spot. For instance, a rockery where significant sediment was leaving the property and entering a storm drain inlet was required to install a filter on the inlet and a property owner was asked to remove a large pile lose dirt from a property directly adjacent to the creek.

Maintenance and Repairs

- Load tested all of the generators in the system
- Repaired the variable drive (VFD) unit at effluent pump station
- Installed new effluent flow meter
- Replaced bearing and seal on influent pump station washer/compactor
- Replaced the chlorine analyzer at the outflow
- Replaced the dissolved oxygen analyzer and probes at aeration basin
- Installed a new 911 scada alarm system
- Installed new Nueros VFD blower at aeration
- Repaired the VFD's for the flow equalization basin blowers
- Many other pump and equipment repairs were performed as required

O & M Manual

The plant's main operations and maintenance manual (O&M) was not changed during 2015; however, the plant's O&M manual library was updated to include new equipment that was placed into service over the past year. Updating the plant's O&M manual takes place on an ongoing basis. We have one O&M manual that is used for operational guidelines and minor service to plant equipment. We also catalog individual O&M's for every piece of equipment in place at the treatment plant, collection system, and lift stations.

Training

- All staff was retrained in the biannual Scotts Valley Fire Protection District Adult CPR and Standard First Aid Certification Program.
- All staff participates in the plant's in-house safety/training meetings that are conducted every other Wednesday throughout the year.
- All Operations and Laboratory staff participated in several one-day training classes and seminars related to wastewater treatment, laboratory, sampling, and maintenance.
- All staff attended a USA locates class for procedures and notification.
- All staff attended a Cla-Valve class for valve maintenance, repair, and troubleshooting.

Public Education/Outreach

Green Schools: The Scotts Valley Green Schools Program was developed in 2010 to provide environmental education to Scotts Valley students and to encourage the introduction of best environmental practices at the schools, following the model of the Green Business Program. The Green Schools Program was funded by the City of Scotts Valley, and offered free to the area schools. It was offered to the ninth graders at Scotts Valley High School, and the fifth graders at Vine hill elementary School and

Baymonte Christian School, the two grade levels in which ecology concepts are taught. In 2010-2011, two series of presentations and three community service events were offered at Scotts Valley High School. Two series of presentations were also offered at Vine Hill Elementary, along with a Save Our Shores presentation. In addition, an Environmental Leadership Council was formed at Vine Hill Elementary. In 2012, due to a cutback in funds, only one set of presentations on water issues was given at Vine Hill Elementary. In both 2013 and 2014, the Green Schools Program was able to return to Scotts Valley High School with a two-day program for the ninth graders.

The 2014 Scotts Valley High School ninth grade program occurred on May 5 and 6, and focused on water issues. The program consisted of two parts: groundwater and water conservation, by LeAnne Ravinale from Scotts Valley Water District, and the sewer system, storm water system, watersheds, and storm drain pollution by Sheila Peck, from the Green Schools Program. Ravinale explained the functions of the Scotts Valley Water District, described local aquifers and wells, and demonstrated Scotts Valley's dependence on groundwater. She covered methods of water conservation, the use of recycled water on campus for irrigation, and the link between energy and water use. Peck described the difference between the sewer and storm drain systems, how the storm drain system carries pollutants as well as water, and the increased use of bioretention. The students also sampled local creek water for various pollutants. The program was well-received by both the students and their biology teachers. Now in its third year, it serves as an extension of the ninth grade ecology curriculum.

The Coastal Watershed Council (CWC) led 12 lessons in Scotts Valley Schools during the 2014-2015 school year. CWC taught lessons in trash reduction, stormwater runoff, and water pollution prevention to students in 4th-9th grade. Lessons were taught in class during the school day. At Scotts Valley HS, students tested three different sets of mystery water to determine which would be safe for aquatic organisms and which were unsafe for aquatic organisms. Students also learned about where Scotts Valley gets its drinking water and how they can help protect that supply by conserving water. Information about drinking water was presented by LeAnne Ravinale, Water Use Efficiency Coordinator for the Scotts Valley Water District.

Green Business: Scotts Valley continues to support the Monterey Bay Area Green Business Program. Goals of the Green Business Program include promoting pollution prevention, waste minimization, and implementing best management practices that go above and beyond the regulatory standards. Since its launch in July 2004, the program has developed nineteen different business certification sectors, including: restaurants, plumbers, office/retail facilities, hotels/hospitality services, custodial companies, beauty salons, laundromats, wineries, painters, and landscapers, property management/multi-family dwellings, schools, medical facilities, garment cleaners, vehicle service facilities, auto body shops, printers, contractors/remodelers, and pharmacies. A significant portion of the program for restaurants, hotels, and plumbers is dedicated to minimizing discharges of fats, oils, and greases (FOG) into the sanitary sewer. The program is supported by a database launched in 2010, which allows it to collect metrics on water

and energy savings, and pollution and waste reduction, and so assess the program's impacts.

Fourteen businesses are presently certified through the Green Business Program in Scotts Valley. During the past fiscal year, two new businesses applied to the program and will be certified shortly.

Sharp Solutions for Home Medicines: The City of Scotts Valley staff members, in collaboration with the County of Santa Cruz and other city agencies, were successful in obtaining a grant in 2008 from the California Integrated Waste Management Board (CIWMB) to implement a pharmaceutical and sharps disposal program. Since that time, the Sharp Solutions for Home Medicines Program has provided a convenient and permanent system to dispose of home-generated used sharps and unwanted pharmaceuticals in the County of Santa Cruz. The County has established 43 convenient and well-publicized drop-off locations, primarily at pharmacies, throughout the region.

The County of Santa Cruz collected over 10,606 pounds of pharmaceuticals and 5,920 pounds of sharps in 2015. Of this amount, 1,762 pounds of pharmaceuticals and 1,654 pounds of sharps, or 21% of the total, came from the City of Scotts Valley's four collection sites. The four sites include Walgreens, CVS, the Palo Alto Foundation Clinic, and the Scotts Valley Clinic. The Scotts Valley Wastewater Treatment Facility contributed \$5,000 out of a \$45,000 program budget.

Electronic Waste: On Saturday, September 19, 2015, the City of Scotts Valley conducted its 13th annual e-waste collection event. The City collected 20,000 pounds of electronics, mostly in the form of computers, monitors and television sets, from 200 participants. These items are now banned from landfill disposal because of their hazardous material content of lead, mercury, and other heavy metals.

On an annual basis, the treatment plant staff provides a number of ongoing public outreach/education services. Some of those services include:

- **Oil Recycling:** As a member of the County's regional oil recycling program, the City distributes oil recycling containers to local automotive supply stores where they are distributed to residents at no cost. The 2.5 gallon used oil containers have labels containing information on proper disposal practices and can be used throughout the county in any curbside collection program as part of the integrated regional program.
- As always, plant tours are encouraged and given upon request to any person or group wishing to learn about the treatment process. Several individual and group tours were given in 2015.

NPDES PERMIT EFFLUENT VIOLATIONS 2006-2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
January	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0	1
April	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	1	0	0
June	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0
August	0	0	1*	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	4	0	0	0
Total	0	0	1	0	0	0	4	1	0	1

*TCDD

Eff. Weekly
Avg.BOD
CBOD,TSS
sett.solid

Cl2

Eff.
Weekly
TSS Avg.

TABLE 1

2015 PLANT FLOW AND RAINFALL

	Total Plant Flow Eff.+Rec.MGD Mo. Total	Effluent Daily Flow MGD Mo. Total	Effluent Inst. Max. MGD (peak)	Recycled Total Flow Million Gallons Mo. Total	Rainfall Inches (Total)
January	23.151	22.410	1.62	0.741	0.00
February	22.923	21.148	1.74	1.775	3.82
March	21.978	16.925	1.50	5.053	0.36
April	20.696	16.008	1.96	4.688	2.08
May	21.657	14.623	1.58	7.034	0.21
June	21.160	13.643	1.68	7.517	0.01
July	20.973	10.719	1.39	10.254	0.00
August	21.184	10.190	1.49	10.994	0.01
September	19.453	10.058	1.19	9.395	0.03
October	19.778	12.856	1.11	6.922	0.11
November	19.802	17.103	1.36	2.699	2.96
December	22.669	21.394	1.44	1.275	5.83
Total	255.42	187.08		68.35	15.42
Average	21.29	15.59	1.51	5.70	1.29
Maximum	23.15	22.41	1.96	10.99	5.83
Minimum	19.45	10.06	1.11	0.74	0.00

ADDWF, MGD	0.683
Eff + Recycle	

TABLE 2**2015 Influent & Effluent Suspended Solids**

	Influent mg/L	Effluent mg/L	Effluent lb/day	Percent Removal
January	218	15	96	97.0%
February	213	11	71	98.0%
March	222	19	103	97.2%
April	231	19	60	97.3%
May	211	8	31	97.9%
June	192	7	33	97.6%
July	240	8	25	97.6%
August	285	3	8	98.2%
September	201	5	18	97.7%
October	250	6	27	98.0%
November	226	5	23	98.7%
December	223	8	54	98.2%
Average	226	10	46	97.8%
Maximum	285	19	103	98.7%
Minimum	192	3	8	97.0%

TABLE 3**2015 Influent & Effluent BOD & cBOD**

	Influent BOD mg/L	Effluent BOD mg/L	Effluent BOD lb/day	BOD Percent Removal	Influent cBOD mg/L	Effluent cBOD mg/L	Effluent cBOD lb/day	cBOD Percent Removal
January	308	9	51	97.0%	220	7	40	96.9%
February	266	5	30	98.0%	205	4	23	98.0%
March	290	8	48	97.2%	210	5	28	97.7%
April	350	9	7	97.3%	236	7	5	97.0%
May	310	6	38	97.9%	213	4	21	98.3%
June	248	6	33	97.6%	178	3	20	98.1%
July	268	6	38	97.6%	214	3	16	98.7%
August	348	6	36	98.2%	253	2	11	99.2%
September	282	6	37	97.7%	224	3	18	98.6%
October	303	6	35	98.0%	238	3	20	98.6%
November	333	4	25	98.7%	260	3	20	98.7%
December	326	6	35	98.2%	266	4	26	98.3%
Average	302	7	34	97.8%	226	4	21	98.2%
Maximum	350	9	51	98.7%	266	7	40	99.2%
Minimum	248	4	7	97.0%	178	2	5	96.9%

TABLE 4**2015 Tertiary Effluent Nitrogen**

	Tertiary Ammonia mg/L as N	Tertiary Organic N mg/L as N	Tertiary Nitrate mg/L as N	Tertiary Nitrite mg/L as N	Influent Total N mg/L as N	Tertiary Nitrogen Removal Percent
January	0.07	1.2	3.0	< 0.01	78.00	94.9
February	0.08	1.2	5.0	< 0.01	78.00	92.1
March	0.04	1.2	4.0	< 0.01	75.00	93.4
April	0.07	1.2	6.0	< 0.01	78.00	89.9
May	4.12	0.8	1.0	0.05	78.00	97.5
June	1.22	0.7	2.0	0.01	68.00	96.9
July	3.15	1.1	2.0	< 0.01	82.00	96.0
August	2.23	1.1	4.0	0.08	74.00	94.4
September	1.21	1.1	5.5	< 0.10	90.00	92.0
October	0.41	1.6	5.3	< 0.10	91.00	93.3
November	0.06	1.2	2.5	< 0.10	90.00	94.5
December	1.81	0.9	1.8	0.03	74.00	95.6
Average	1.21	1.1	3.5	< 0.04	79.7	94.2
Maximum	4.12	1.6	6.0	0.08	91.0	97.5
Minimum	0.04	0.7	1.0	< 0.01	68.0	89.9

TABLE 5

2015 Influent & Effluent pH and Effluent Turbidity, Settleable Solids, and Oil & Grease

	Influent pH Std Units	Effluent pH Std Units	Effluent Turbidity NTU	Effluent Settleable Solids m/L	Effluent Oil & Grease mg/L	Effluent Oil & Grease lb/day
January	8.2	7.0	5.4	< 0.1	< 5	< 29
February	8.2	7.1	4.4	< 0.1	< 5	< 29
March	8.3	7.2	6.3	< 0.1	< 5	< 29
April	8.2	7.2	4.1	< 0.1	< 5	< 29
May	8.3	7.3	5.4	< 0.1	< 5	< 29
June	8.0	7.2	2.3	< 0.1	< 5	< 29
July	8.1	7.2	2.9	< 0.1	< 5	< 29
August	8.1	7.2	2.1	< 0.1	< 5	< 29
September	8.2	7.2	3.5	< 0.1	< 5	< 29
October	8.2	7.1	5.9	< 0.1	< 5	< 29
November	8.2	7.1	2.5	< 0.1	< 5	< 29
December	8.2	7.3	2.3	< 0.1	< 5	< 29
Average	8.2	7.2	3.9	< 0.1	< 5.0	< 29
Maximum	8.3	7.3	6.3	< 0.1	< 5.0	< 29
Minimum	8.0	7.0	2.1	< 0.1	< 5.0	< 29

TABLE 6**2015 Effluent Chlorine Residual and Bacteriological Quality**

	Chlorine Residual mg/L @Santa Cruz	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Enterococcus MPN/100mL
January	< 0.01	11230	480	132
February	< 0.01	6770	420	63
March	< 0.01	3880	< 330	61
April	0.12	12442	783	163
May	< 0.07	4350	< 370	141
June	< 0.02	4880	< 500	63
July	< 0.01	1820	1160	18
August	< 0.01	950	< 220	33
September	< 0.01	1110	< 240	23
October	< 0.01	5220	760	102
November	0.17	1160	< 420	43
December	< 0.02	2570	< 300	61
Geometric	< 0.04	3,393	< 443	61
Maximum	0.17	12,442	1,160	163
Minimum	< 0.01	950	< 220	18

TABLE 7**2015 Sludge Wasting**

	WAS Flow MGD	WAS Percent Solids	Sludge Hauled Tons/mnth (dry wt)	Hours Press or Aeromod per/mnth	Sludge % Solids
January	0.8642	0.76	20.2	158	12.5
February	0.8394	0.76	24.6	155	13.7
March	0.8870	0.73	25.7	152	13.6
April	0.9967	0.76	16.9	180	10.6
May	0.8109	0.82	18.1	150	12.1
June	0.9022	0.83	23.1	160	12.7
July	0.8420	0.89	18.8	150	11.7
August	0.8481	0.78	18.3	149	13.2
September	0.8740	0.73	12.4	149	10.5
October	1.2566	0.69	16.9	152	11.5
November	0.8371	0.74	14.7	139	10.7
December	0.9911	0.79	27.8	177	13.4
Total	10.949		237.5	1,871	
Average	0.912	0.77	19.8	156	12.2
Maximum	1.257	0.89	27.8	180	13.7
Minimum	0.811	0.69	12.4	139	10.5

TABLE 8**2015 Plant Operating Parameters**

	Aerator lbs	Clarifier lbs	Total lbs	RAS mg/L	MLSS mg/L	Clar. SS mg/L	MCRT 7-day	F/M 7-day	SVI Ratio
January	13188	11116	24,304	7897	5243	2627	10.0	0.19	182
February	11972	12314	24,286	7400	4760	2910	8.8	0.23	203
March	12125	13676	25,801	7937	4820	3232	9.9	0.21	201
April	8917	6304	15,221	6982	3545	1490	9.2	0.32	201
May	10516	5379	15,895	7951	4181	1271	10.6	0.25	203
June	11259	6467	17,726	7919	4476	1528	12.2	0.21	177
July	12112	4845	16,957	8167	4815	1145	10.3	0.20	181
August	11737	6718	18,455	7032	4666	1588	10.7	0.21	185
September	11816	6245	18,061	6925	4698	1476	11.7	0.20	188
October	11156	5794	16,950	6601	4435	1369	11.2	0.20	181
November	12181	6541	18,721	7610	4843	1546	11.9	0.20	188
December	13381	7365	20,746	7986	5320	1741	11.3	0.20	173
Average	11,697	7,730	19,427	7,534	4,650	1,827	10.6	0.22	189
Maximum	13,381	13,676	25,801	8,167	5,320	3,232	12.2	0.32	203
Minimum	8,917	4,845	15,221	6,601	3,545	1,145	8.8	0.19	173

FIGURE 1

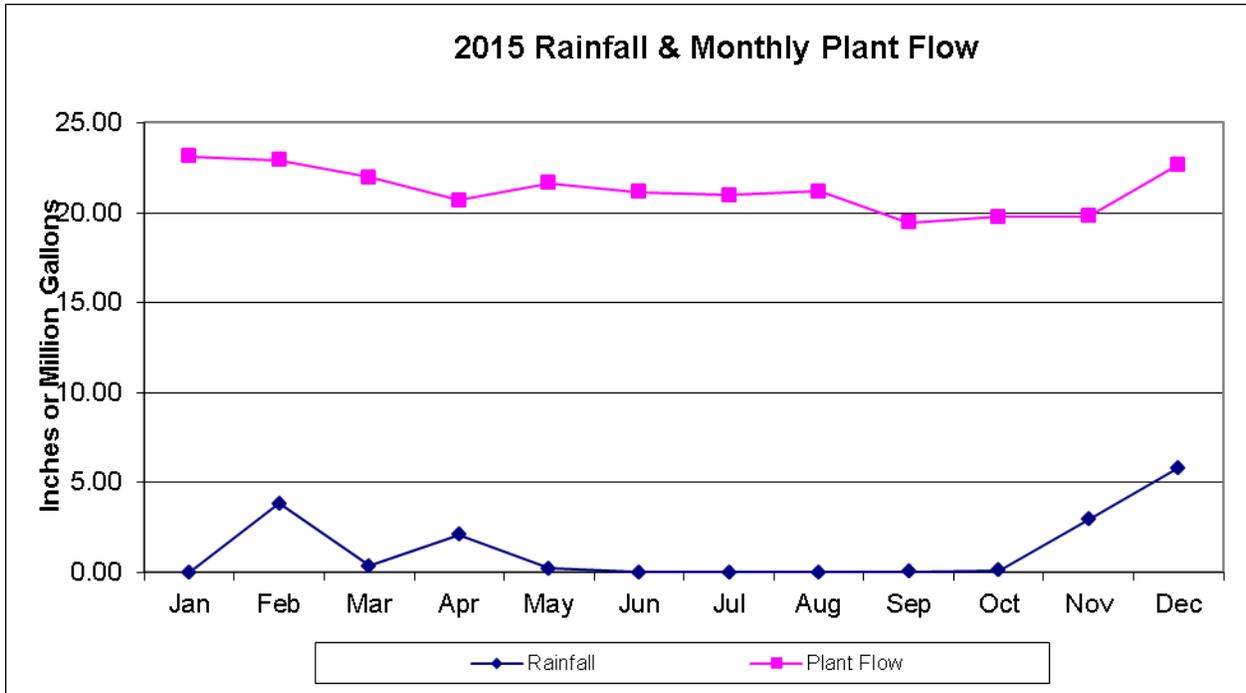


FIGURE 2

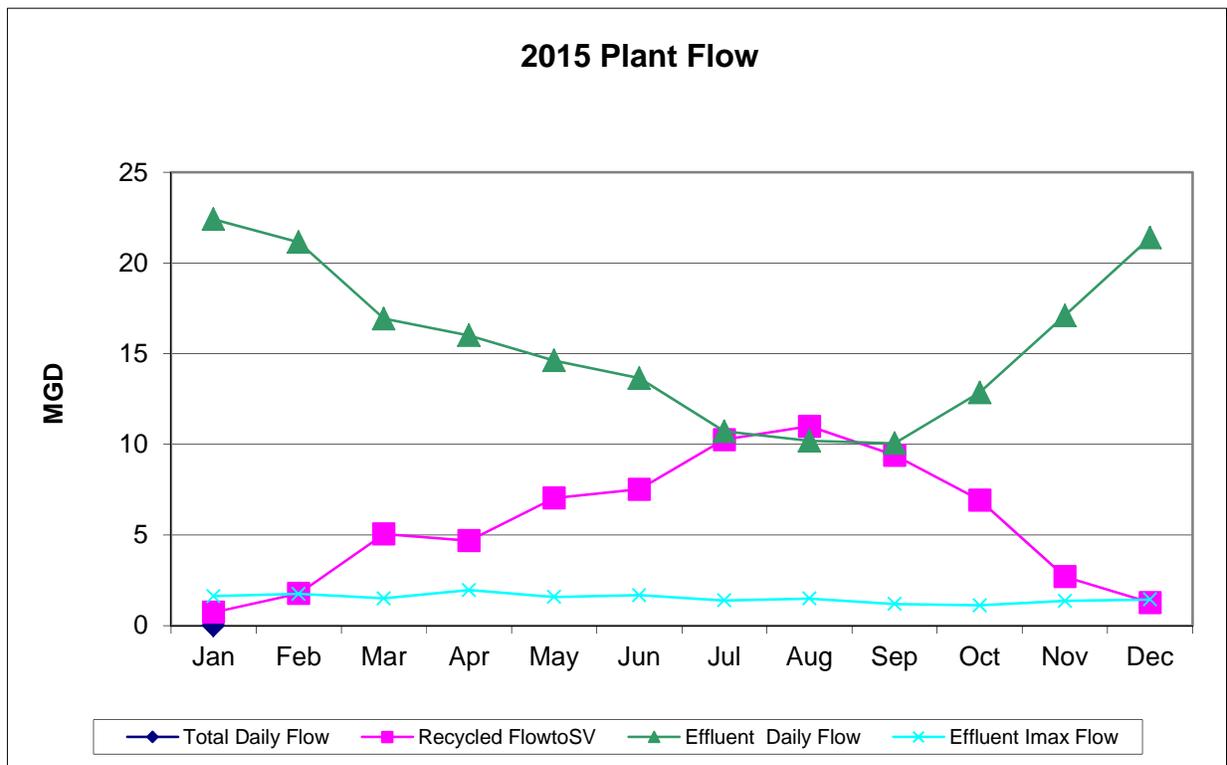


FIGURE 3

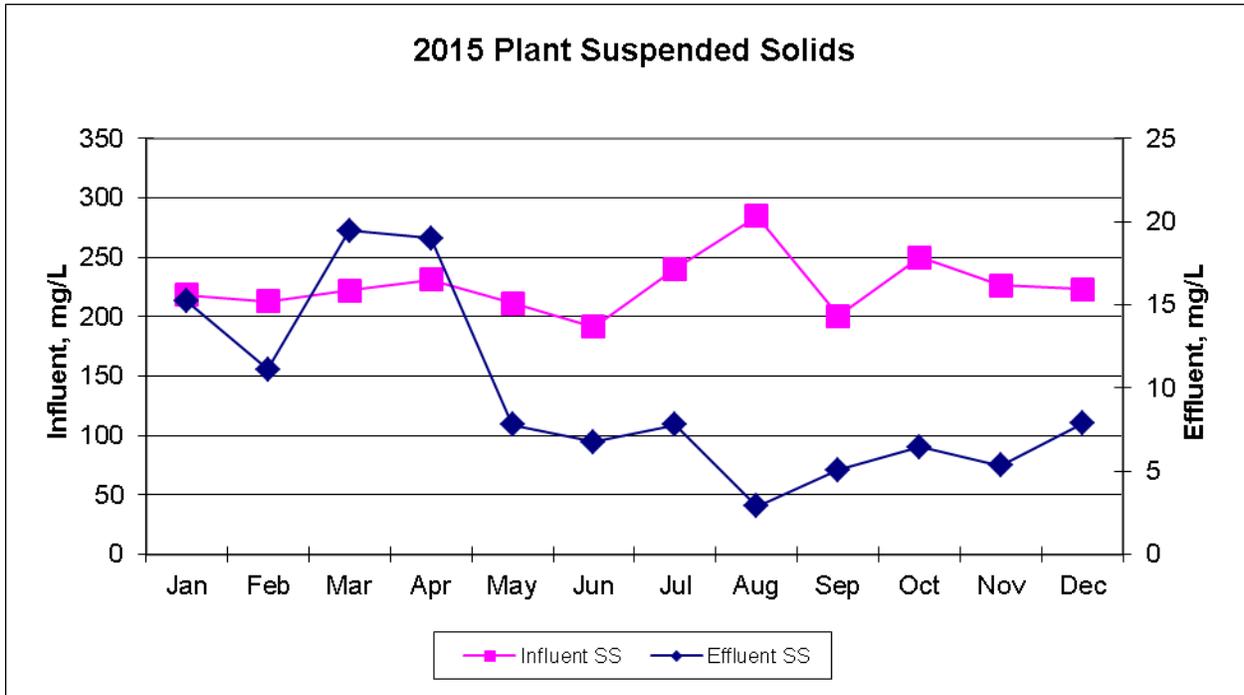


FIGURE 4

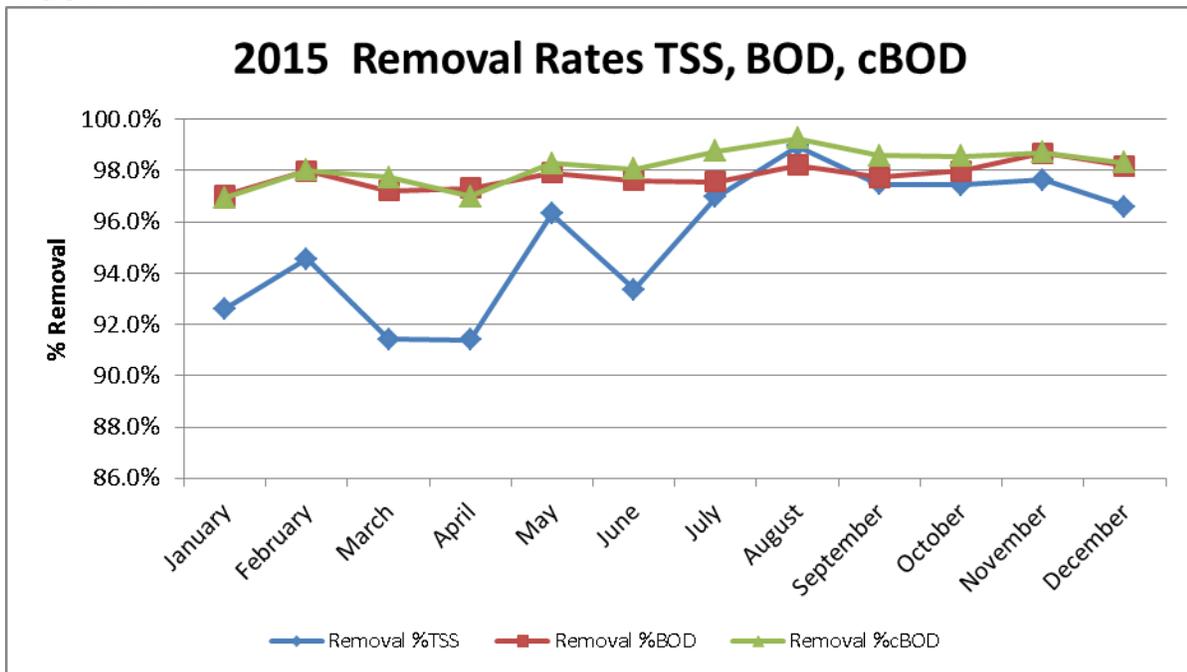


FIGURE 5

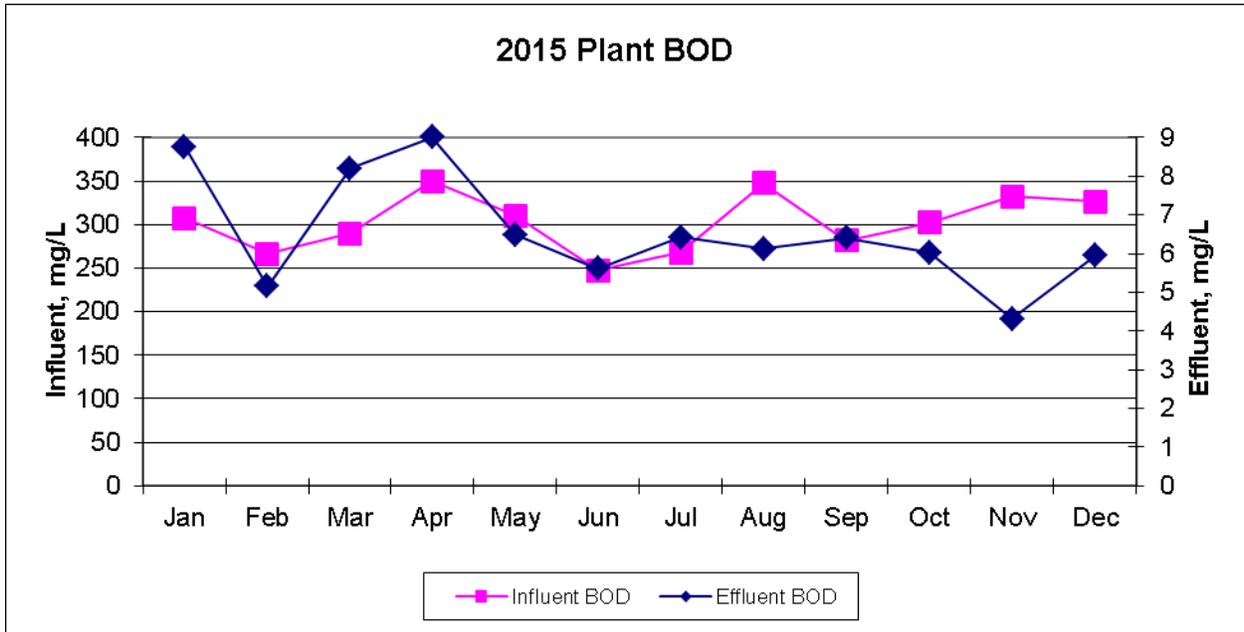


FIGURE 6

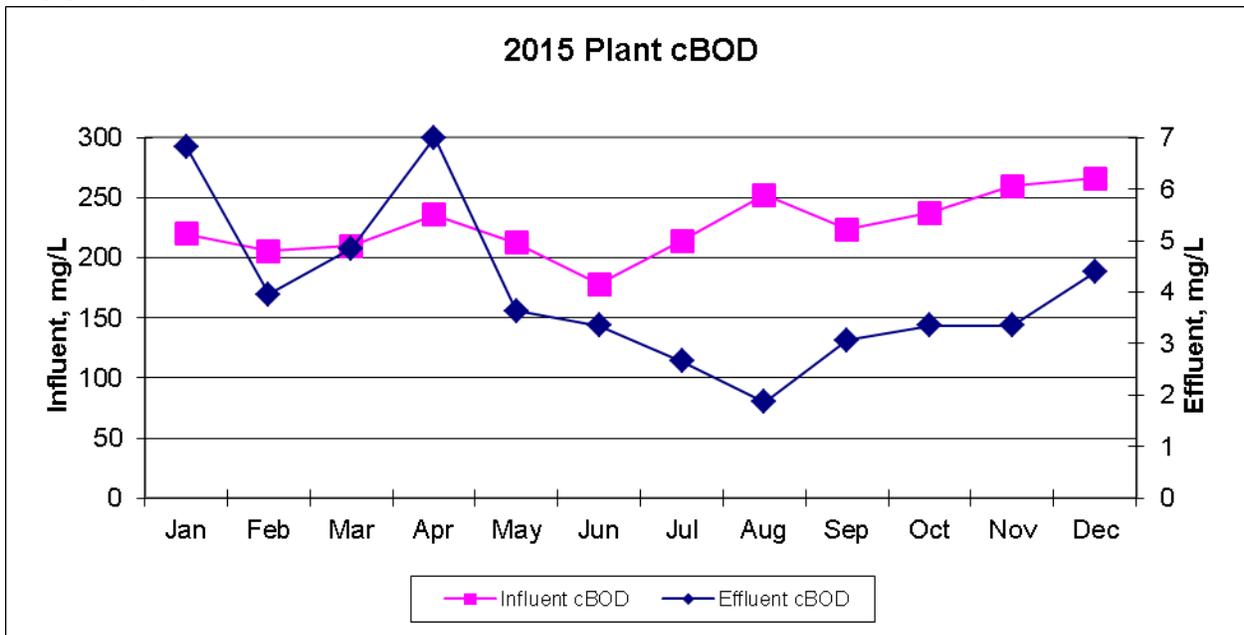


FIGURE 7

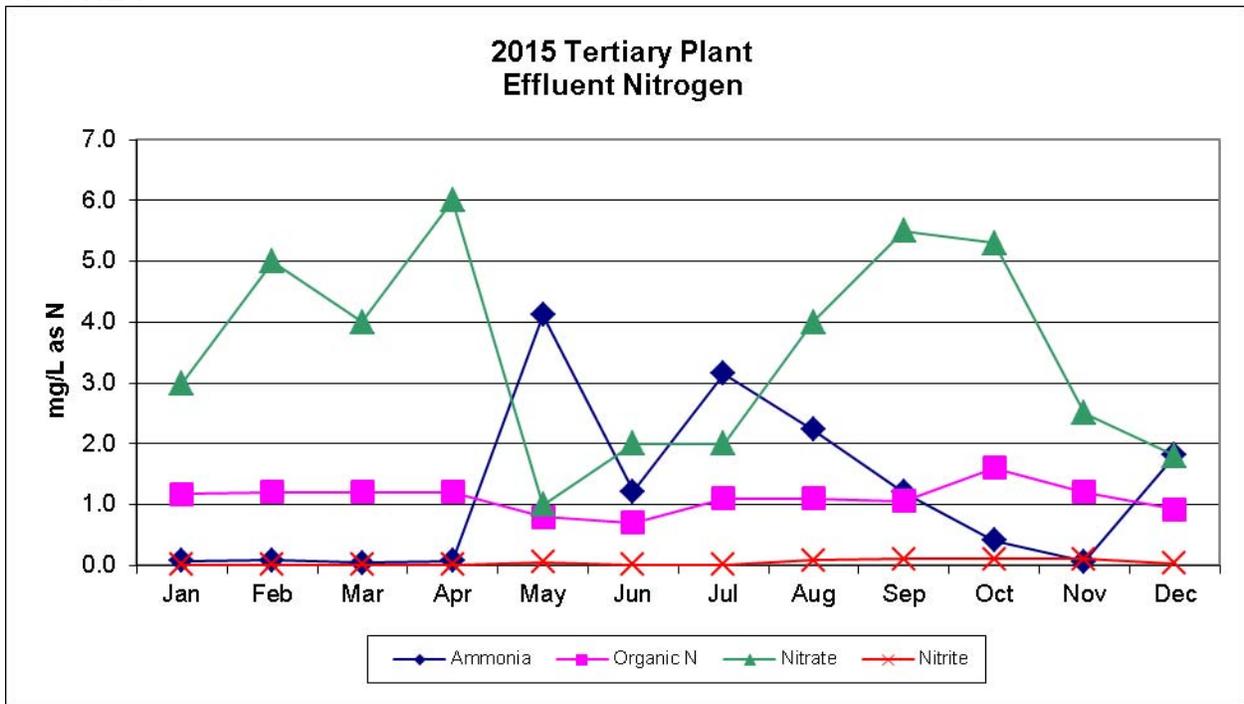


FIGURE 8

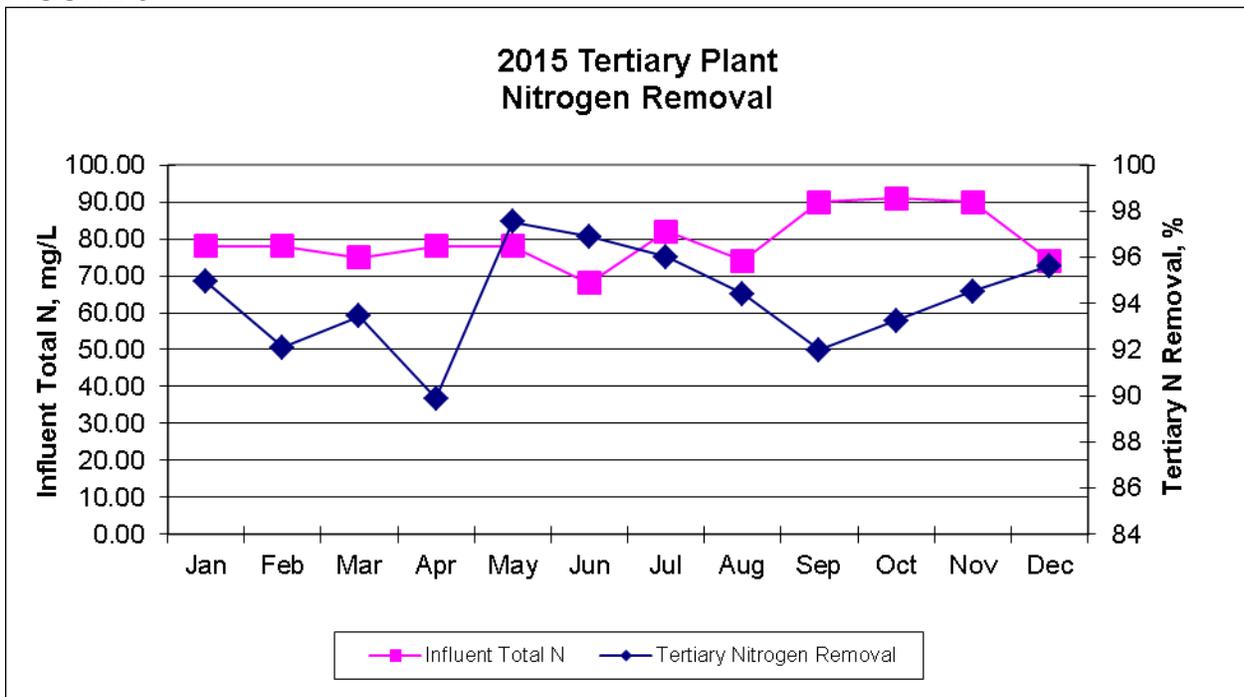


FIGURE 9

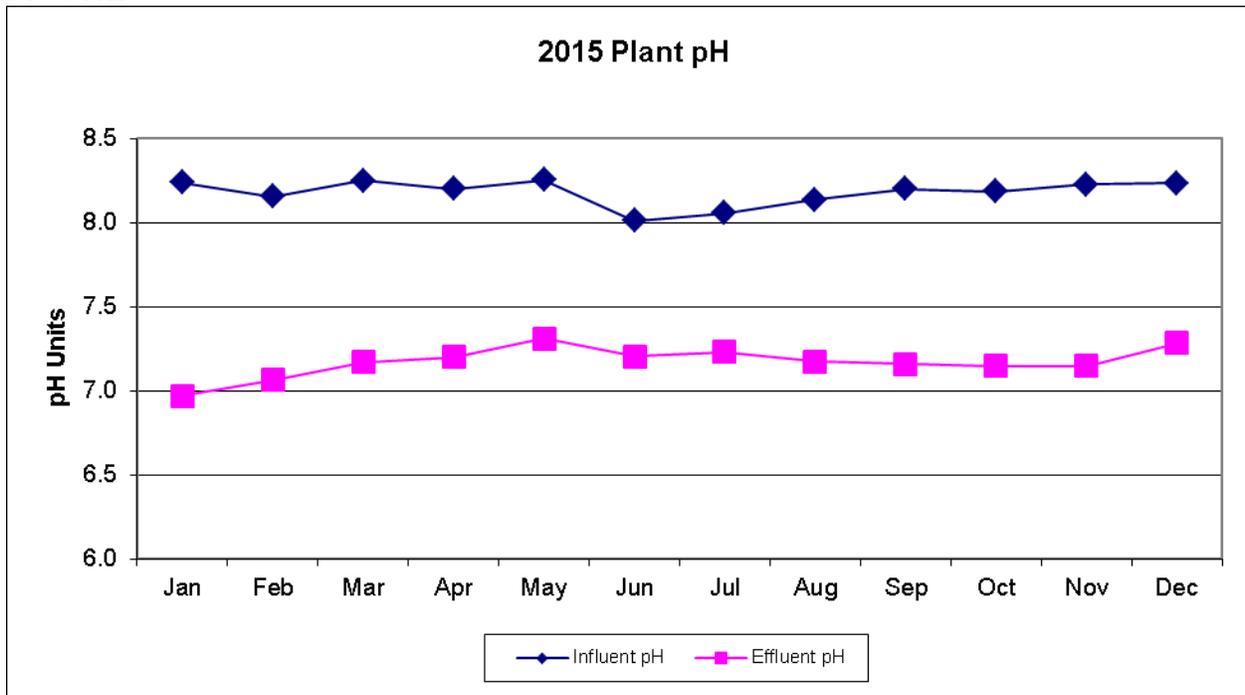


FIGURE 10

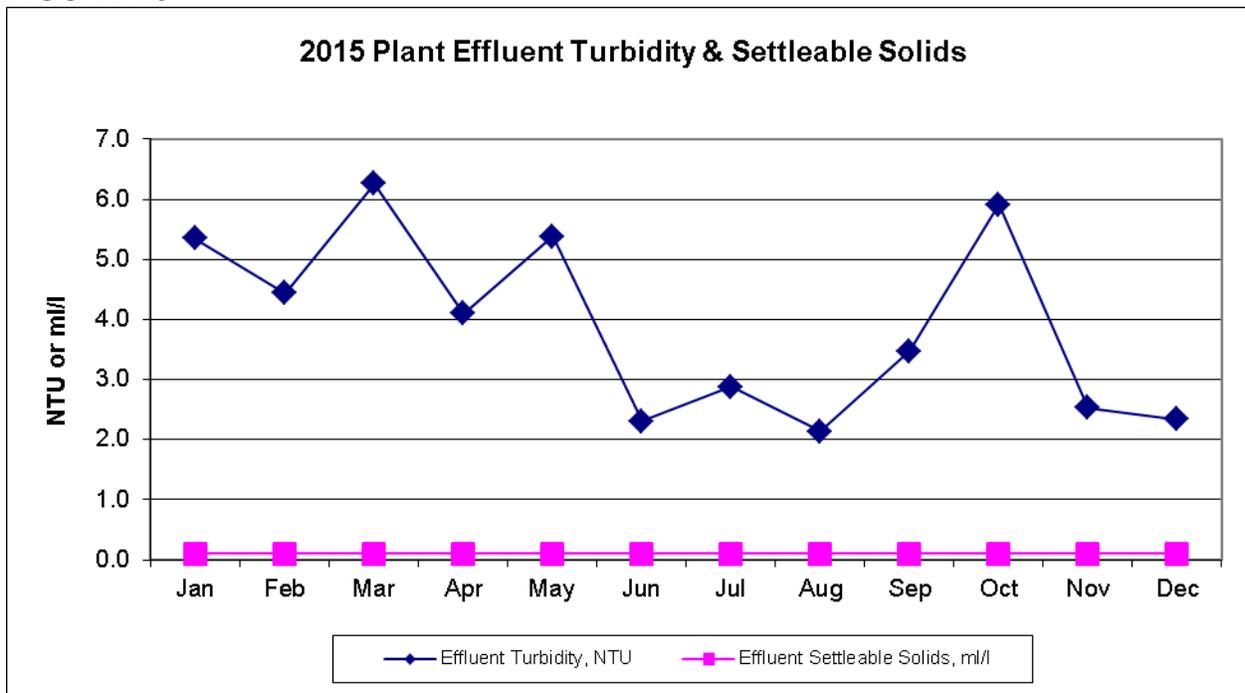


FIGURE 11

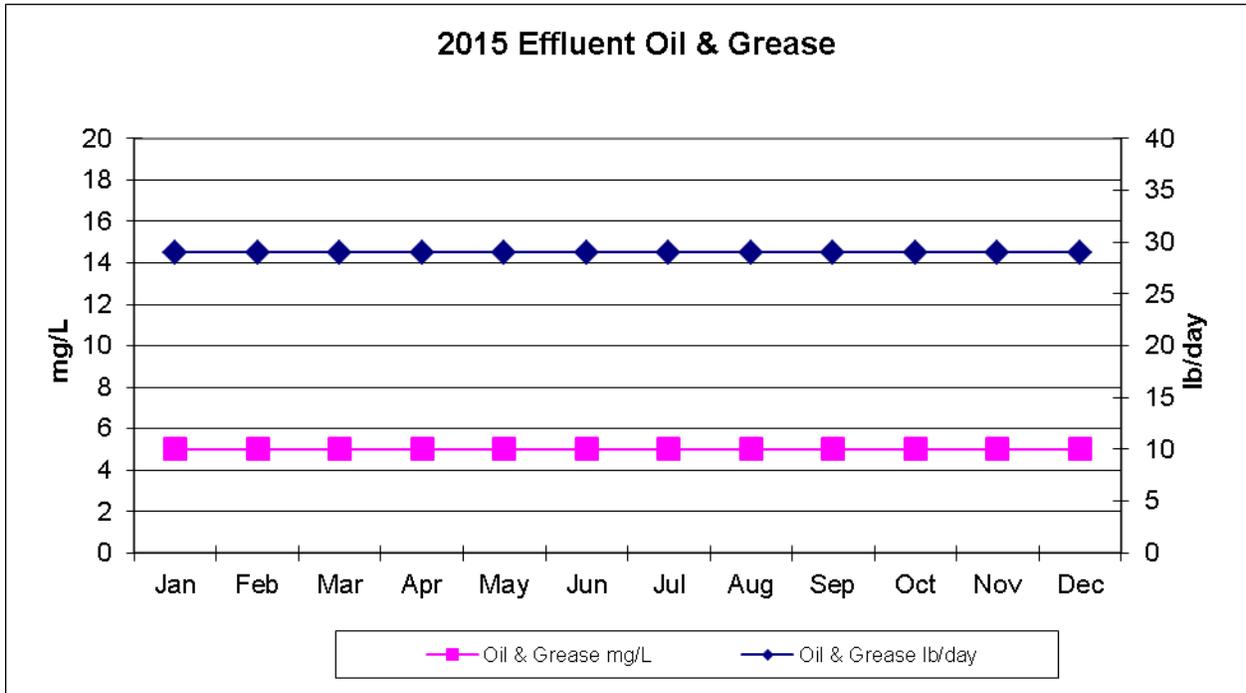


FIGURE 12

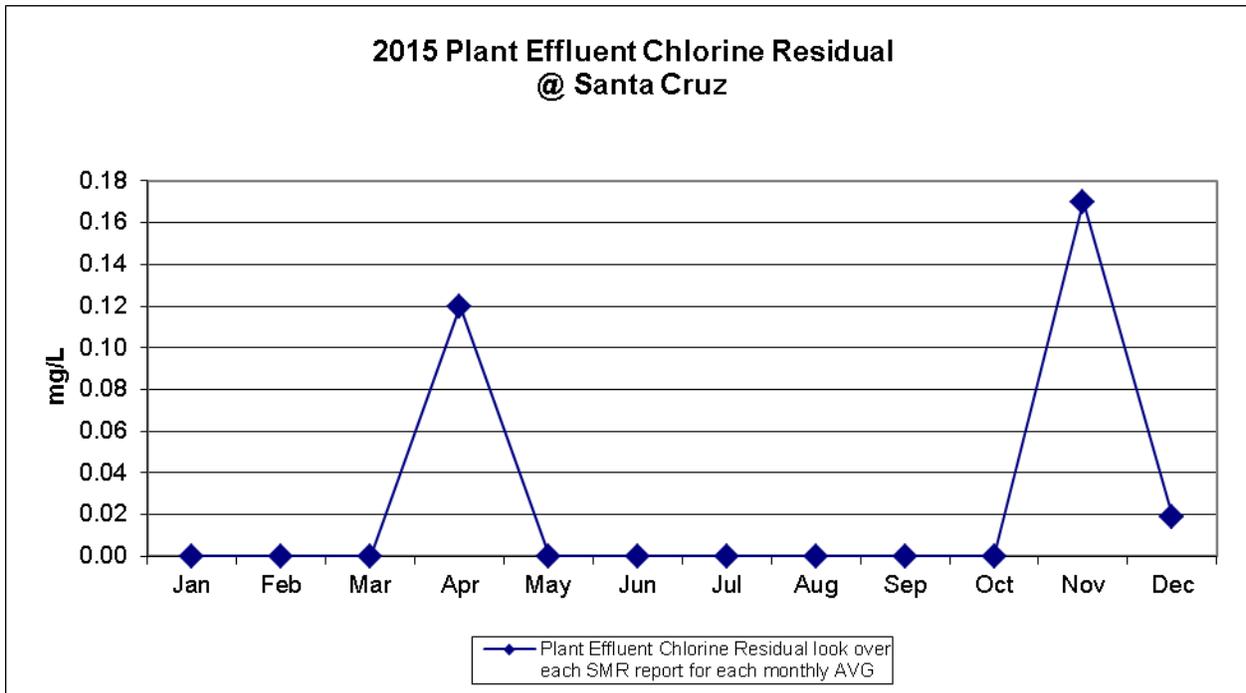


FIGURE 13

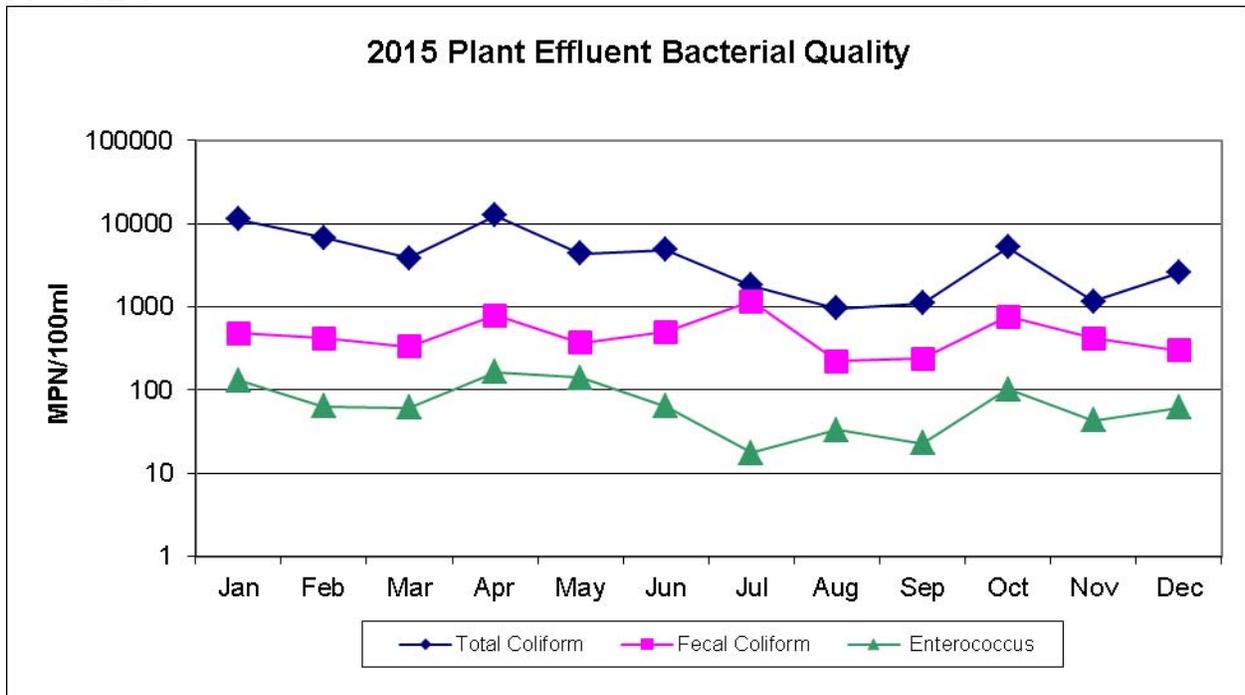


FIGURE 14

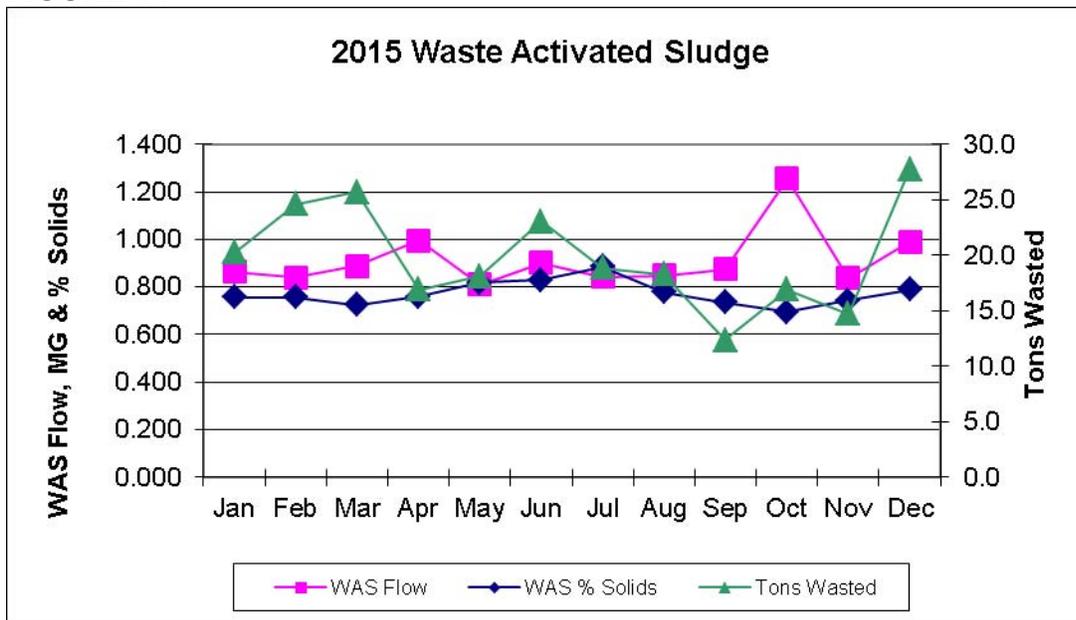


FIGURE 15

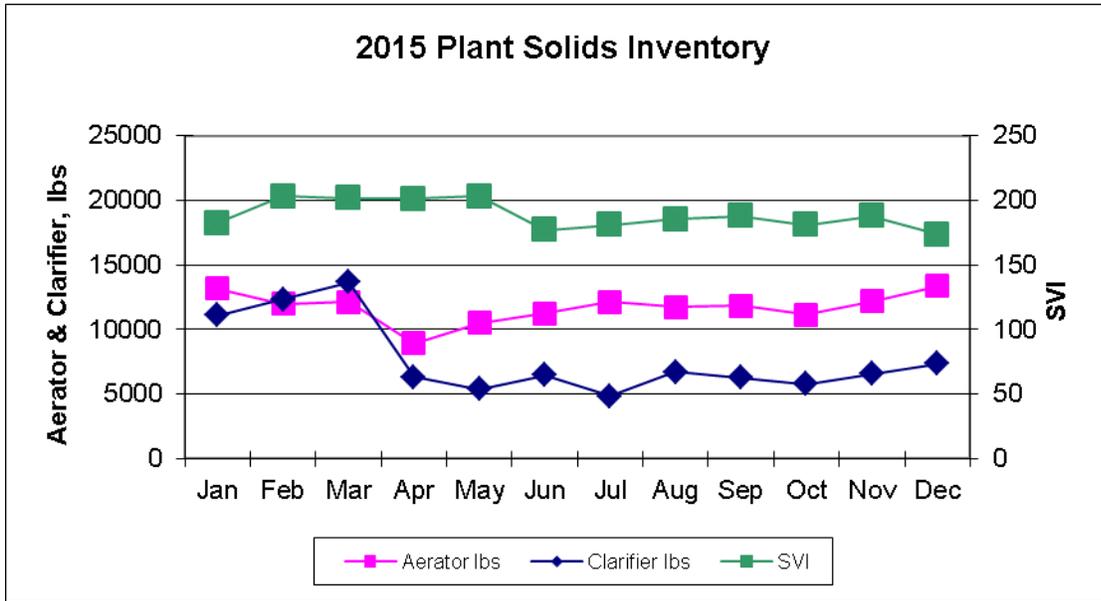


FIGURE 16

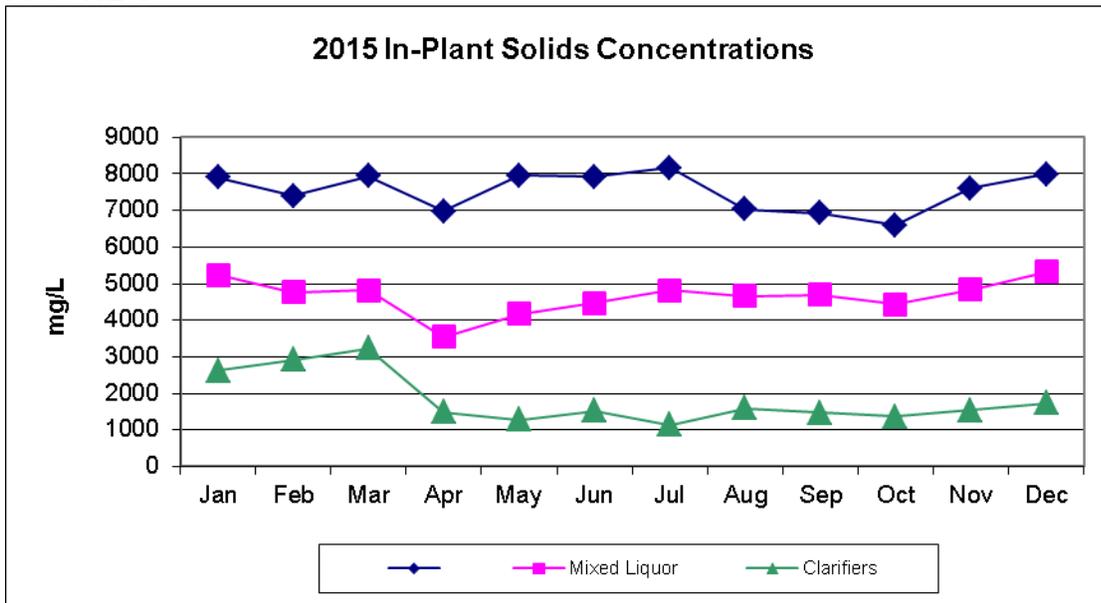


FIGURE 17

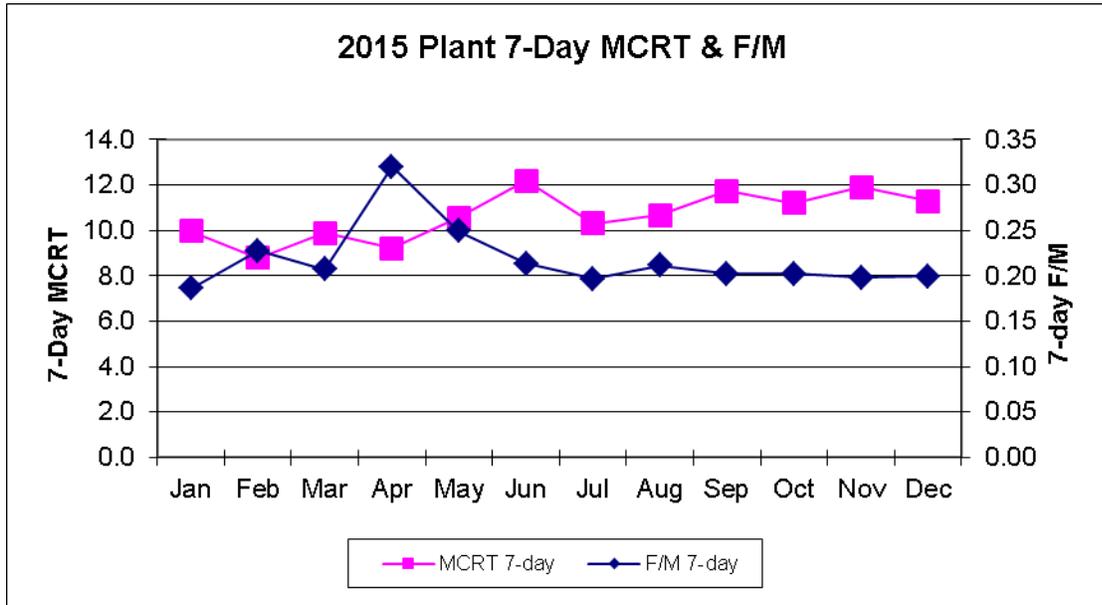


FIGURE 18

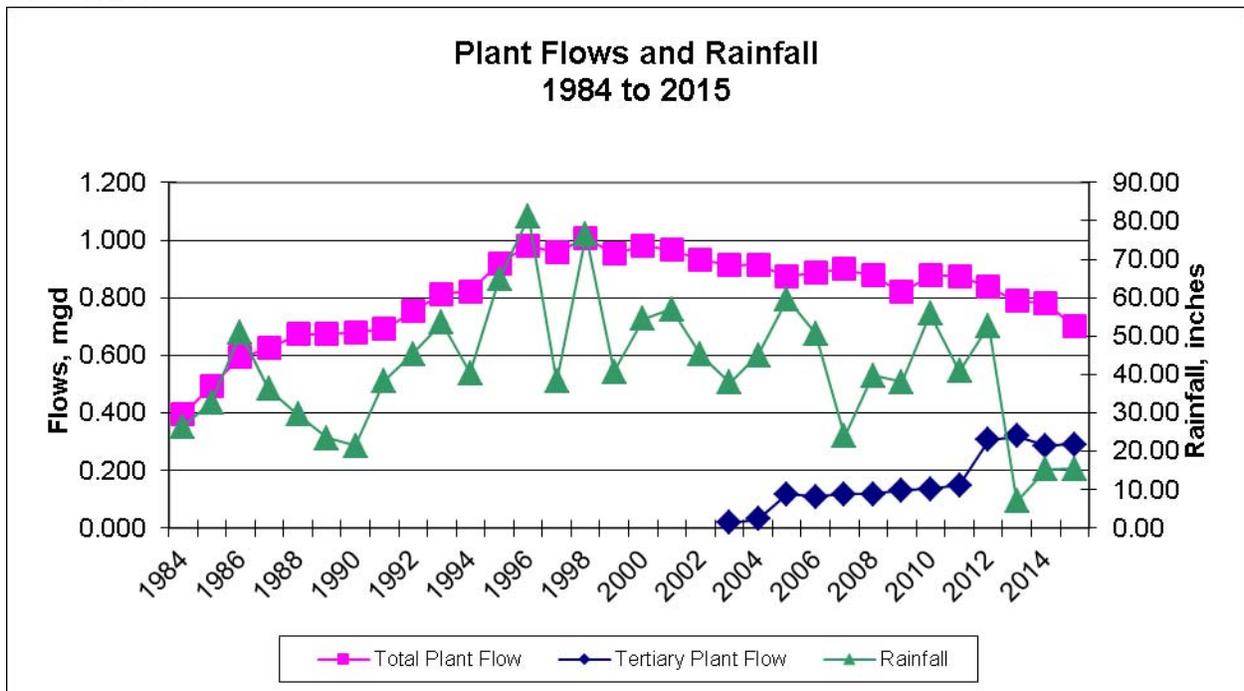
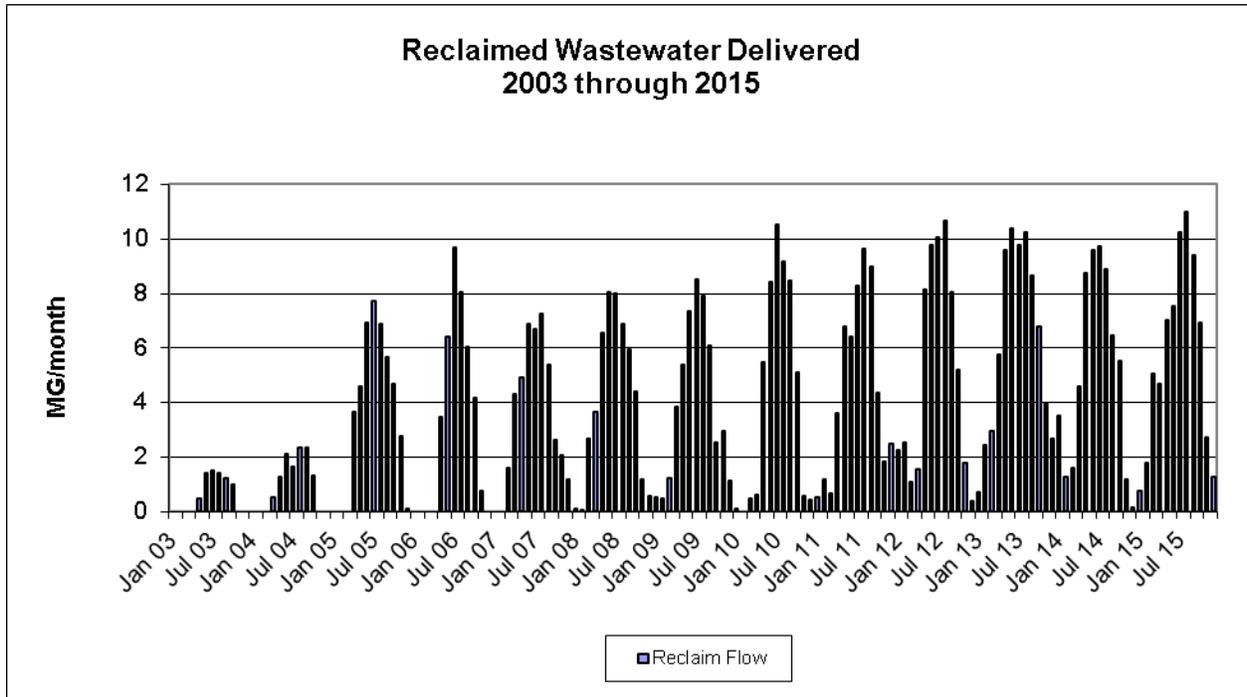


FIGURE 19



City of Scotts Valley Discharger Self Monitoring Report

Annual Biosolids Hazardous Waste Determination
 NPDES#: 0048828 FAC ID: 3440103001

700 Lundy Lane
 Scotts Valley, CA 95066

Date of Report:		SLUDGE CAKE Annual hazardous waste determination				
		Wet weight reporting in mg/kg				
2015 Annual	CONSTITUENT	Detection Limit (ML) & Units mg/kg	Result mg/L	TTLc mg/L	TTLc Times Exceeded	Sample Date
Remarks:						
	Arsenic/ Arsenic Compounds	8.30E-02	ND	5.0	0	1/13/2015
	Barium	1.00E-01	4.00E-02	100.0	0	1/13/2015
	Benzene	8.30E-05	ND	0.5	0	1/13/2015
	Cadmium	5.10E-03	ND	1.0	0	1/13/2015
	Carbon tetrachloride	1.80E-04	ND	0.5	0	1/13/2015
	Chlordane	3.80E-04	ND	0.03	0	1/13/2015
	Chlorobenzene	9.30E-05	ND	100.0	0	1/13/2015
	Chloroform	5.00E-03	2.50E-03	6.0	0	1/13/2015
Conclusion:	Chromium	1.00E-01	9.40E-03	5.0	0	1/13/2015
Not	o-Cresol	1.00E-02	ND	200.0	0	1/13/2015
Hazardous	m-Cresol	2.00E-02	1.90	200.0	0	1/13/2015
Material	p-Cresol	2.50E-02	1.90	200.0	0	1/13/2015
	2,4-D	6.30E-04	ND	10	0	1/13/2015
	1,4-Dichlorobenzene	5.00E-04	8.E-05	7.5	0	1/13/2015
	1,2-Dichloroethane	1.70E-04	ND	0.5	0	1/13/2015
	1,1-Dichloroethylene	1.80E-04	ND	0.7	0	1/13/2015
	2,4-Dinitrotoluene	2.60E-03	ND	0.13	0	1/13/2015
	Endrin	8.20E-07	ND	0.02	0	1/13/2015
	Heptachlor(and its epoxide)	9.90E-07	ND	0.008	0	1/13/2015
	Hexachlorobenzene	9.30E-06	ND	0.13	0	1/13/2015
	Hexachlorobutadiene	1.70E-04	ND	0.5	0	1/13/2015
	Hexachloroethane	3.20E-03	ND	3.0	0	1/13/2015
	Lead	3.00E-02	ND	5.0	0	1/13/2015
	Lindane	9.40E-07	ND	0.4	0	1/13/2015
	Mercury	3.00E-04	ND	0.2	0	1/13/2015
	Methoxychlor	1.10E-06	ND	10.0	0	1/13/2015
	Methyl ethyl ketone	1.00E-02	1.2	200.0	0	1/13/2015
	Nitrobenzene	0.0026	ND	2.0	0	1/13/2015
	Pentachlorophenol	7.90E-03	ND	100.0	0	1/13/2015
	Pyridine	2.70E-03	ND	5.0	0	1/13/2015
	Selenium	1.10E-01	ND	1.0	0	1/13/2015
	Silver	8.30E-03	ND	5.0	0	1/13/2015
	Tetrachloroethylene	1.30E-04	2.90E-04	0.5	0	1/13/2015
	Toxaphene	4.20E-04	ND	0.5	0	1/13/2015
	Trichloroethylene	8.50E-05	ND	0.5	0	1/13/2015
	2,4,5-Trichlorophenol	3.10E-03	ND	400.0	0	1/13/2015
	2,4,6-Trichlorophenol	6.00E-03	ND	2.0	0	1/13/2015
	2,4,5-TP (Silvex)	5.30E-04	ND	1.0	0	1/13/2015
	Vinyl Chloride	5.00E-04	ND	0.2	0	1/13/2015
	Conclusion: Not Hazardous Material					
	Data submitted as required by monitoring report program 40 CFR 261 Hazardous Waste Determination of Sludge					

City of Scotts Valley Discharger Self Monitoring Report

Annual Biosolids Monitoring

700 Lundy Lane

NPDES#: 0048828 FAC ID: 3440103001

Scotts Valley, CA 95066

Date of Report:		SLUDGE CAKE, TABLE 6 --Annual and First Quarter Biosolids Monitoring				Times Exceeded
2015 1st Quarter		1/13/2015				
Remarks:	CONSTITUENT	Detection Limit (ML) & Units		Result dry weight mg/kg	Table 3 Limit	
	TotalQuantity (Annual)	1.00	Tons	238		
	Moisture	0.05	%	86.3		
	pH		std. units	6.62		0
	Boron	5.0	mg/kg	100.0		0
	Cadmium	0.50	mg/kg	0.92	39.0	0
	Copper	1.0	mg/kg	210	1500.0	0
	Chromium Total	1.0	mg/kg	3.20		0
	Lead	2.5	mg/kg	6.30	300.0	0
	Mercury	0.16	mg/kg	0.66	17.0	0
	Nickel	0.5	mg/kg	10.0	420.0	0
	Silver	0.5	mg/kg	7.70		0
	Zinc	2.5	mg/kg	430	2800.0	0
	Total Kjeldahl nitrogen	2000	mg/kg	97,000		0
	Ammonia (as N)	200	mg/kg	10,000		0
	Nitrate (as N)	2.0	mg/kg	53		0
	Total Phosphorus	200	mg/kg	38,000		0
	Grease & Oil (petroleum)	50	mg/kg	1,100		0
	Potassium	50	mg/kg	11,000		0
	Paint Filter Test	pass/fail		pass		0
	Disposal Location	Monterey Peninsula Landfill and Recycling Facility 14201 Del Monte Boulevard Marina, CA 93933-1670			2015	
	Slurry Hauled and Sold to Santa Cruz Wastewater Facility 110 California St. Santa Cruz, CA 95060					

City of Scotts Valley Discharger Self Monitoring Report

Annual Biosolids Monitoring
 NPDES#: 0048828 FAC ID: 3440103001

700 Lundy Lane
 Scotts Valley, CA 95066

2015	SLUDGE/SLURRY, TABLE 6 -- 4th Quarter Biosolids Monitoring					
2015 4th Quarter	CONSTITUENT	Detection Limit (ML) & Units	Result dry weight mg/kg	Table 3 Limit mg/kg	Times Exceeded	
Remarks:						
	Moisture	0.05 %	87.2		0	
	Arsenic	0.4 mg/kg	ND	41	0	
	Cadmium	0.5 mg/kg	0.7	39	0	
	Chromium	0.5 mg/kg	8		0	
	Copper	1 mg/kg	210	1500	0	
	Lead	2.5 mg/kg	6.90	300	0	
	Mercury	0.16 mg/kg	0.32	17	0	
	Molybdenum	2.5 mg/kg	7.40	75	0	
	Nickel	0.5 mg/kg	11.0	420	0	
	Selenium	1.0 mg/kg	ND	100	0	
	Zinc	2.5 mg/kg	500	2800	0	
	Press Paint Filter Test	pass/fail	pass		0	
	pH	std. units	6.61		0	
	Disposal Location	Monterey Peninsula Landfill and Recycling Facility 14201 Del Monte Boulevard Marina, CA 93933-1670		2015		
	Slurry Hauled and Sold to Santa Cruz Wastewater Facility 110 California St. Santa Cruz, CA 95060					

