

Loxahatchee River District

Water Reclamation | Environmental Education | River Restoration

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D. Albrey Arrington, Ph.D., Executive Director

MEMORANDUM

TO: Albrey Arrington, Executive Director

FROM: Tom Vaughn, Director of Operations

DATE: January 13, 2016

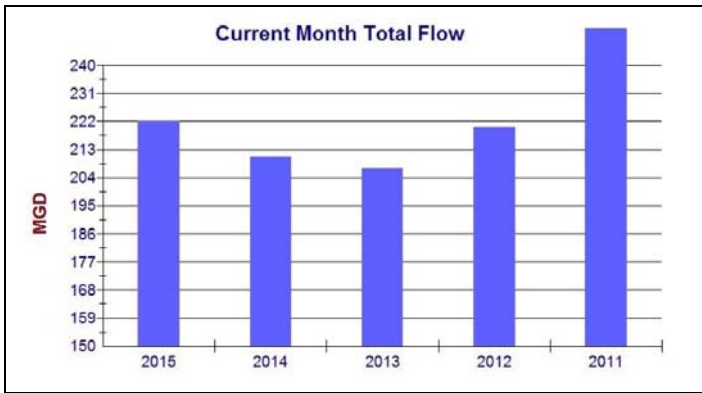
SUBJECT: Operations Department Monthly
Report for December 2015

Treatment Plant Division

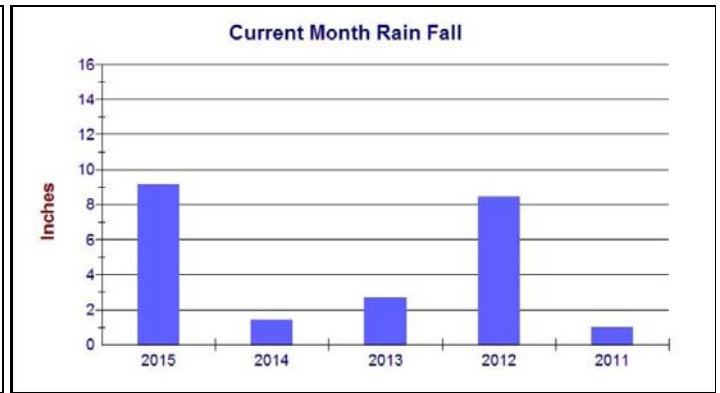
For the month of December, the treatment process ran very smoothly with no major problems. Monitoring of hydrogen sulfide levels in the dewatered bio-solids is being conducted to minimize the objectionable odors emitted from the dewatered cake. Hydrogen sulfide is a colorless gas with a rotten egg odor that is heavier than air. A concerted effort is being made to better understand and control the characteristics of our bio-solids which produce the hydrogen sulfide. The generation of hydrogen sulfide from our bio-solids becomes exponentially greater with longer holding times and warmer temperatures. Our findings indicate that the quick extraction of bio-solids from the plant site to the palletization facility decreases the emission of hydrogen sulfide gas in and around the plant site.



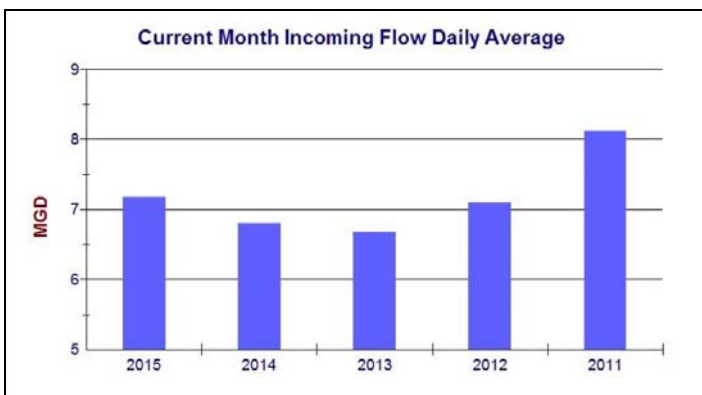
We have had another great month of no Permit exceedances.



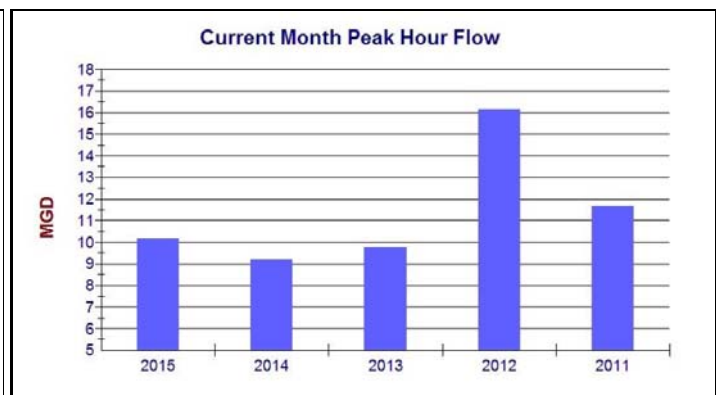
The plant total flow for the month of December was 222.19 million gallons.



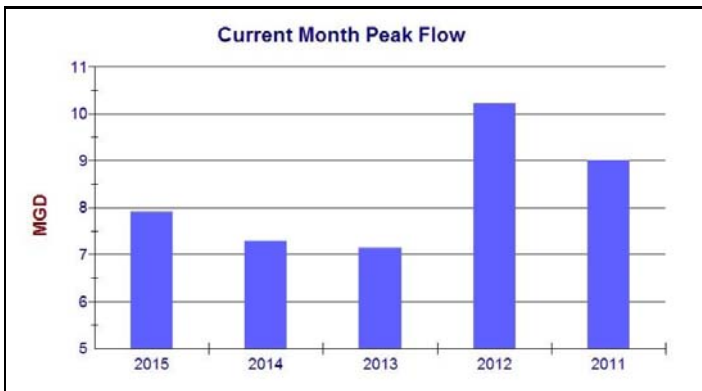
9.14 inches of rainfall were recorded at the plant site during the month of December.



The treatment plant incoming flow for the month of December averaged 7.17 MGD compared to 6.79 MGD one year ago for the same month.

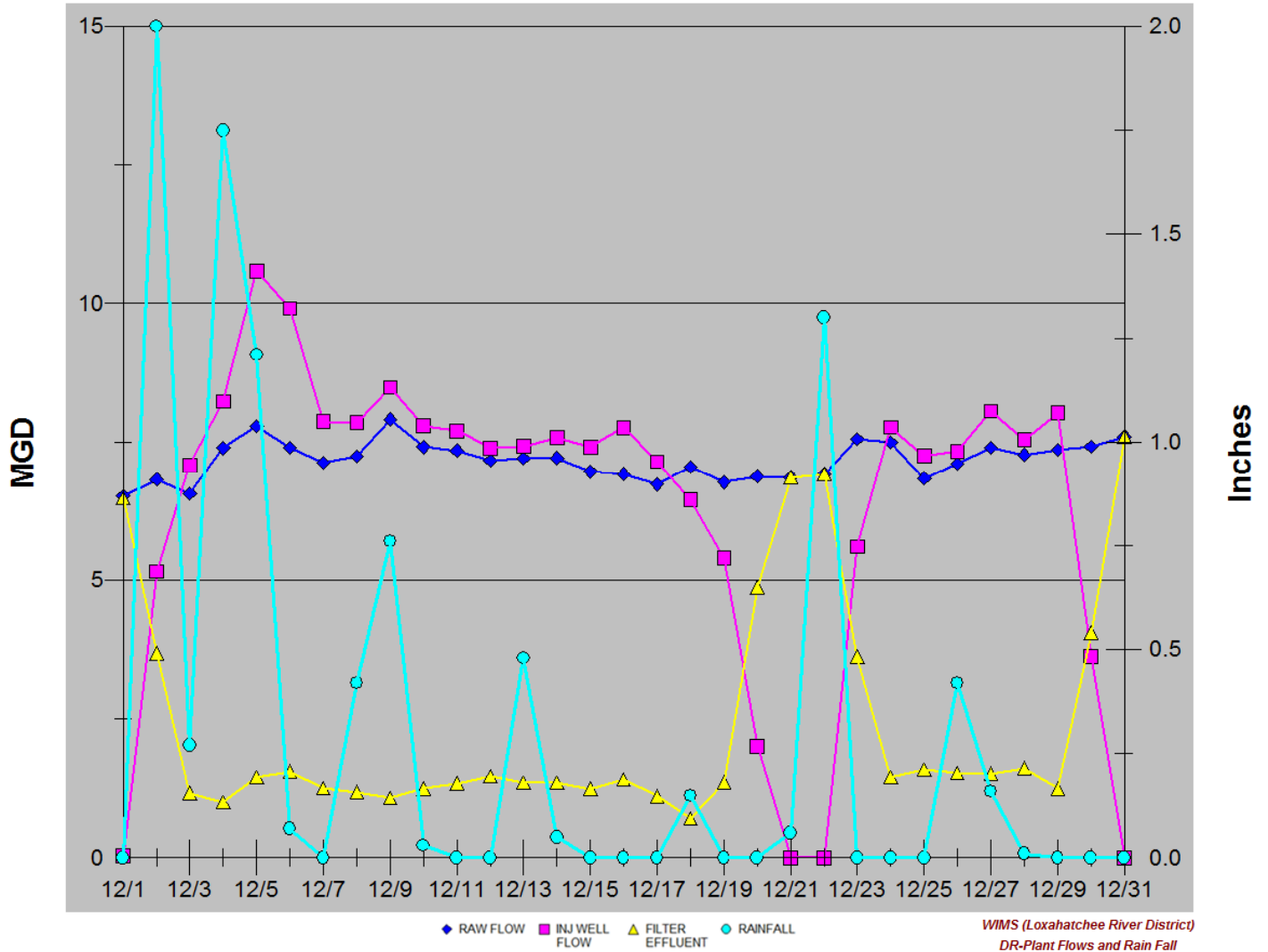


The peak hourly flow rate in December was 10.16 MGD.



The greatest single day average flow in December was 7.91 MGD.

The plant received 222.19 MG of influent flow of which 74.37 million gallons were sent to the IQ storage system where they were dispersed as needed to the various golf courses and the Abacoa development sites. Due to wet weather conditions and 9.14 inches of rain during the month, 194.54 million gallons of blended effluent was diverted to the Injection Well. Overall, 33.47% of incoming flows was recycled for IQ use and the plant delivered 54.08 million gallons of IQ water to the Reuse customers.



For the year 2015, the plant recycled 68.10% of all incoming flow and the total amount of IQ water delivered to reuse customers stands at 1754 million gallons.

All required monthly reporting has been submitted on time.



TRAINING. Training for the month of December reviewed Fall Protection requirements.

Many locations require that District employees conduct maintenance throughout the day using specific forms of fall protection devices.

The Collections crews may find themselves working over open manholes or lift stations where the risk of falling into an unprotected opening is the immediate hazard.

Maintenance personnel may encounter work requiring a person to be in an elevated position above the ground.

A fall protection system may involve different types of equipment for different types of hazardous locations, but all systems follow four identical steps.

We call these steps the A, B, C's, AND D's of fall protection.

A – Anchorage is a secure point of attachment.

B – Body Support requires a harness to safely support a person in the event of a fall.

C – Connectors are devices used to connect a worker's harness to an anchor point.

Last but not least.

D – Descent or Rescue is the ability to retrieve a fallen worker.

Fall protection equipment used by District employees provides the safety factor required when working in areas where falls are a possibility.

Loxahatchee River District - Annual Audubon Society Florida Christmas Bird Count

Report compiled by: James Howe

December 27, 2015:

Accompanied by the Safety and Compliance Officer. We went to areas which are off-limits to the public, for both operational and safety concerns.

These figures will be submitted as part of the Audubon Society Florida's Christmas Bird Count.

46 species:

Black-bellied Whistling-Duck (<i>Dendrocygna autumnalis</i>) 41	Bald Eagle (<i>Haliaeetus leucocephalus</i>) 2 One white-headed adult; the other a juvenile, which unsuccessfully chased an osprey in attempt to steal its fish.
Egyptian Goose (<i>Alopochen aegyptiaca</i>) 2	Red-shouldered Hawk (<i>Buteo lineatus</i>) 3
Wood Duck (<i>Aix sponsa</i>) 16	Common Gallinule (<i>Gallinula galeata</i>) 120 I suspect two more for each I saw and there were lots of them.
Mottled Duck (<i>Anas fulvigula</i>) 8	American Coot (<i>Fulica americana</i>) 50
Blue-winged Teal (<i>Anas discors</i>) 4	Rock Pigeon (Feral Pigeon) (<i>Columba livia</i> (Feral Pigeon)) 4
Green-winged Teal (<i>Anas crecca</i>) 4	Mourning Dove (<i>Zenaida macroura</i>) 16
Pied-billed Grebe (<i>Podilymbus podiceps</i>) 18	Red-bellied Woodpecker (<i>Melanerpes carolinus</i>) 6
Wood Stork (<i>Mycteria americana</i>) 4	American Kestrel (<i>Falco sparverius</i>) 1
Double-crested Cormorant (<i>Phalacrocorax auritus</i>) 32	Eastern Phoebe (<i>Sayornis phoebe</i>) 1
Anhinga (<i>Anhinga anhinga</i>) 27	Loggerhead Shrike (<i>Lanius ludovicianus</i>) 1
Great Blue Heron (<i>Ardea herodias</i>) 14	Blue Jay (<i>Cyanocitta cristata</i>) 3
Great Egret (<i>Ardea alba</i>) 4	Fish Crow (<i>Corvus ossifragus</i>) 75
Snowy Egret (<i>Egretta thula</i>) 22	Blue-gray Gnatcatcher (<i>Poliophtila caerulea</i>) 1
Little Blue Heron (<i>Egretta caerulea</i>) 12	Northern Mockingbird (<i>Mimus polyglottos</i>) 3
Tricolored Heron (<i>Egretta tricolor</i>) 10	European Starling (<i>Sturnus vulgaris</i>) 45
Cattle Egret (<i>Bubulcus ibis</i>) 9	Black-and-white Warbler (<i>Mniotilta varia</i>) 2
Green Heron (<i>Butorides virescens</i>) 8	Palm Warbler (<i>Setophaga palmarum</i>) 22
Black-crowned Night-Heron (<i>Nycticorax nycticorax</i>) 5	Pine Warbler (<i>Setophaga pinus</i>) 2
White Ibis (<i>Eudocimus albus</i>) 8	Yellow-rumped Warbler (<i>Setophaga coronata</i>) 29
Glossy Ibis (<i>Plegadis falcinellus</i>) 2	Northern Cardinal (<i>Cardinalis cardinalis</i>) 2
Black Vulture (<i>Coragyps atratus</i>) 55	Red-winged Blackbird (<i>Agelaius phoeniceus</i>) 45 Flock of all females.
Turkey Vulture (<i>Cathartes aura</i>) 30	Common Grackle (<i>Quiscalus quiscula</i>) 6
Osprey (<i>Pandion haliaetus</i>) 2	Boat-tailed Grackle (<i>Quiscalus major</i>) 95

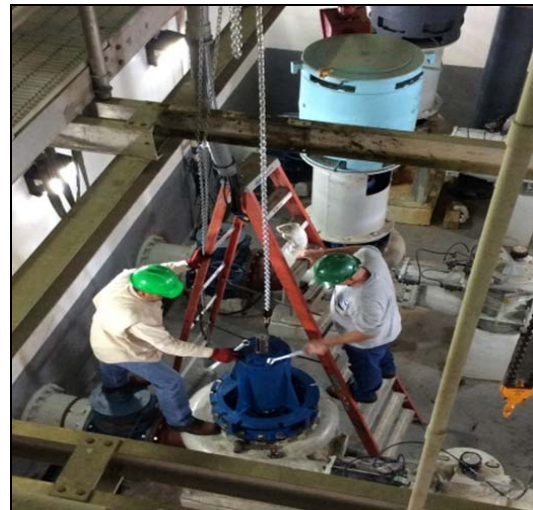
View this checklist online at <http://ebird.org/ebird/view/checklist?subID=S26471100>

Collections and Transmissions Division



LEFT. Operation's personnel replaced a hydraulic/electrical clay valve at the Abacoa (#518) Master Reclaimed Pump Station with a new valve from District stock. The Solenoid Controlled Valve is a critical part of the 4,100 gallon hydromantic system pressure vessel in the Abacoa Reuse Water System.

RIGHT. At the Master Lift Station, Operation's personnel completed the reinstallation of the 200 H.P. pump and motor. This was a scheduled maintenance project to rebuild the motor, pump, impeller reconditioning, a new 5 inch shaft, and Chesterton split seal. The project was performed by Operation's personnel and a contracted pump repair facility.



BELOW. The Master Pump Station annual maintenance and cleaning of the 6,500 gallon enhanced alkalinity tank for the chemical injection system used for station and plant process was performed during the reporting month. This was accomplished while keeping the injection system online with a standby tank. Maintenance was performed by Evoqua Water Technologies.



RIGHT. At the Plant Site (#511) Master Reclaimed Water Pump Station, fruit trees were planted through a project with the Jupiter High School Agricultural Department.

An irrigation system (low volume drip/weep at the base of the tree) was installed utilizing District Reclaimed water.



BELOW. For the reporting month, five (5) new low pressure systems came online in the Low Pressure Pump Station System.

The District's Vac Con Crew cleaned the following lift stations in December 2015: # 21, 9, 34, 76, 97, 153, 21, 133, 88, 15, 16, 114, 155, 90, 22, and 170.



During the reporting month, there were no major systems or equipment failures in the Collection/Transmission Systems that caused emergency or for systems to not operate normally.

Maintenance

RIGHT. In-house repairs to the existing sand filters is necessary to keep them operational until the new Deep Bed Filters are constructed and put into operation.



LEFT. The sand and the broken porous plates are removed. The new plates are then cut and installed and sealed. After the sealing material has dried, the sand is then reinstalled with new sand added as needed and the filter is put back into service.

RIGHT. A routine inspection and repair on the western bar screen was completed. The screening components on the conveyor wear out and can be changed individually. Operation's personnel are being used to assist in the maintenance work to expand their knowledge of the plant's operating systems.



Tidbits from Tom

December, 2015 – Happy Holidays

When opportunity knocks, don't be afraid to open the door.



When the dream is big enough, the facts just don't count.

Cross training teams simply means improving employees' proficiency levels in roles outside their current responsibilities. Cross-training ensures that all of the team members learn how to perform the production processes from start to finish. It leverages the District's talent within its current workforce. It helps employees acquire new skills instead of recruiting candidates from the outside. Shifting employee roles and assigning duties to an existing workforce is always more beneficial than conducting an external recruitment campaign.

Cross-training not only adds value to the District, but also to the employee. When an employee acquires more knowledge and is given more responsibilities, doors that were once locked are now unlocked and waiting to be opened.

Every problem is comprised of opportunities.

See ya' at the Top – (That's near Cheese Station "N")

**Tom Vaughn
Director of Operations**