

# 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: May 12, 2015

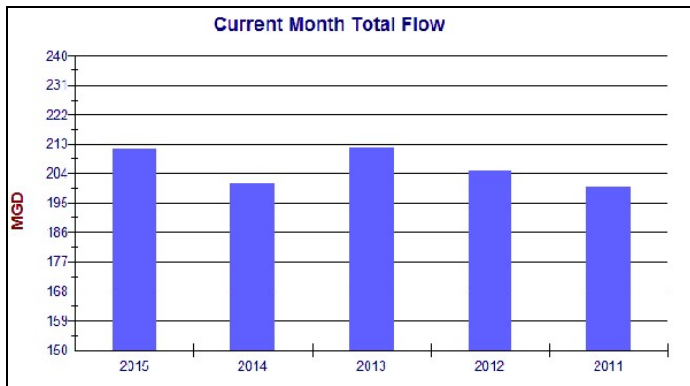
SUBJECT: Operations Department Monthly  
Report for April 2015

### **Treatment Plant Division**

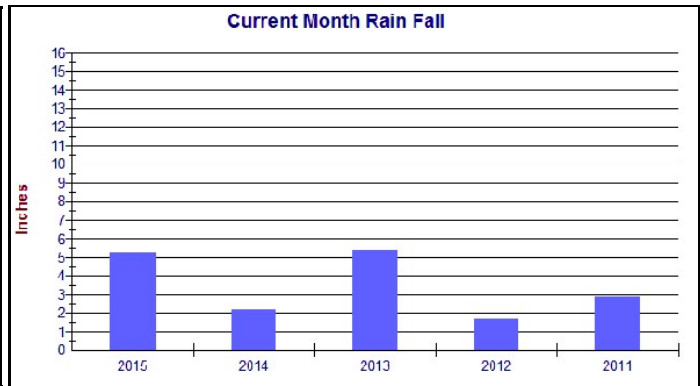
A new Conductivity/DO Probe was purchased for the Operations Lab. This portable instrument accurately measures conductivity and dissolved oxygen primarily in the Aeration Basins to verify the accuracy of our fixed mount Blower Control Probes. Dissolved oxygen is critical in maintaining accurate process control parameters.



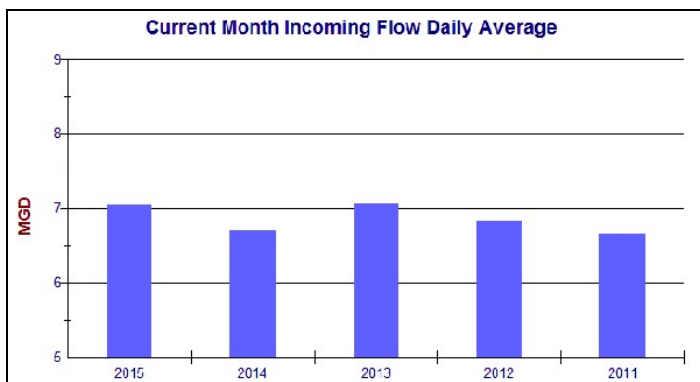
We have had another great month of no Permit exceedances.



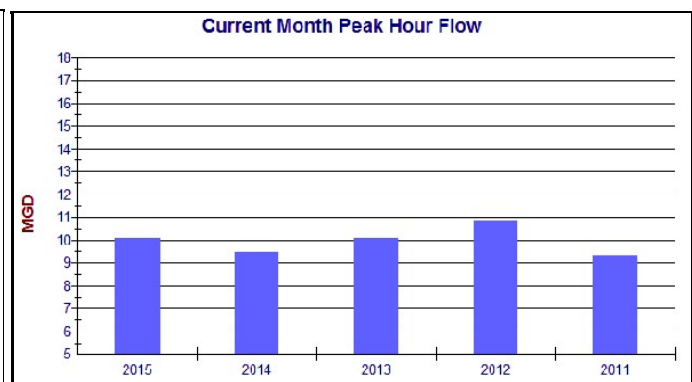
The plant total flow for the month of April was 211.53 million gallons.



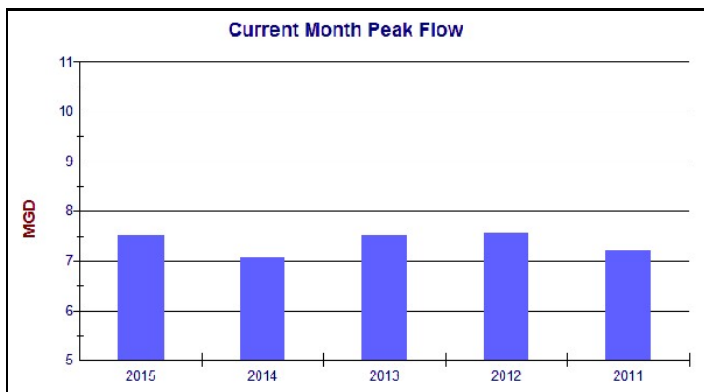
5.25 inches of rainfall were recorded at the plant site during the month of April.



The treatment plant incoming flow for the month of April averaged 7.05 MGD compared to 6.70 MGD one year ago for the same month.

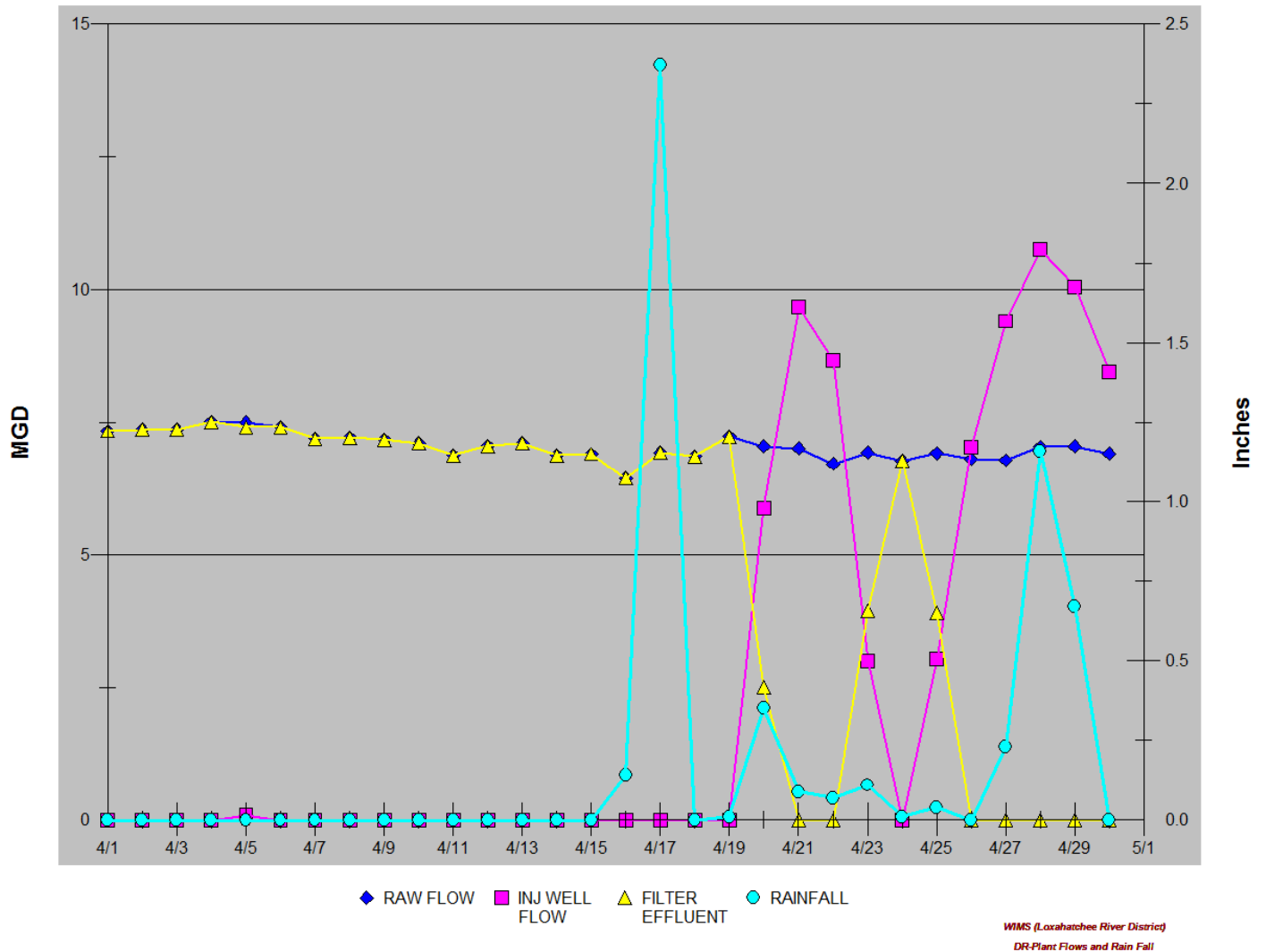


The peak hourly flow rate in April was 10.06 MGD.



The greatest single day average flow in April was 7.52 MGD.

The plant received 211.53 MG of influent flow of which 152.55 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 5.25 inches of rain during the month, 76.05 million gallons of blended effluent was diverted to the Injection Well. Overall, 72.12% of incoming flows was recycled for IQ use and the plant delivered 165.31 million gallons of IQ water to the Reuse customers.



For the year 2015, the plant recycled 62.85% of all incoming flow and the total amount of IQ water delivered to reuse customers stands at 595.77 million gallons.

All required monthly reporting has been submitted on time.

## Safety / Compliance

**TRAINING.** DEP certification testing continues to be a great success for people looking to advance their Water and Wastewater certifications in the southeast region.

The testing dates for the month of April were held here in the Operations building Education Room on two consecutive days.

Morning and afternoon sessions hosted approximately seventy five attendees.

Testing dates have been scheduled for May and June continuing our educational partnership with the DEP and other Utilities in our region.

**S.E.R.C.** The Palm Beach County Division of Emergency Management conducted a review of our facility, including the chlorine storage building and the Tier II chemical inventory records.

All infrastructures related to chemical storage and record keeping was found to be in good order.

Additional information was reviewed for accuracy to keep the Emergency Planning Committee and our local first responders up to date.



Required training for the month of April focused on avoiding back injuries.

The topics of using proper lifting techniques and knowing when you may need a little help from your friends were discussed.



**PLANT TOUR.** The Loxahatchee River District hosted a facility tour for the employees of Florida Organic Aquaculture LLC. This innovative company located in Fellsmere, has engineered a very unique process of inland shrimp farming. Using a closed loop, zero exchange recirculating aquaculture system it is one of the first of its kind located right here in Florida.

This farm is comprised of enclosed structures using solar power to reduce energy costs and prevent pollutants and contaminants from entering the process. The tour group was interested in our water conservation methods and hoped to come up with new ideas which may help them in the future.

**The month of April was injury and accident free.**

**Thank You to all the District employees who take the time to do it right!**

## Collections and Transmissions Division



**LEFT.** The District Construction crew performed the scheduled replacement of the 8 inch plug valve at IQ site 505 (Turtle Creek) metering station.

The valve had malfunctioned and was attached to an electric actuator for opening/closing in the normal daily operation of carrying reuse water to the golf course storage pond.

The Field Electrician assisted in reattaching the electric actuator and performing a system check before putting the site back online.

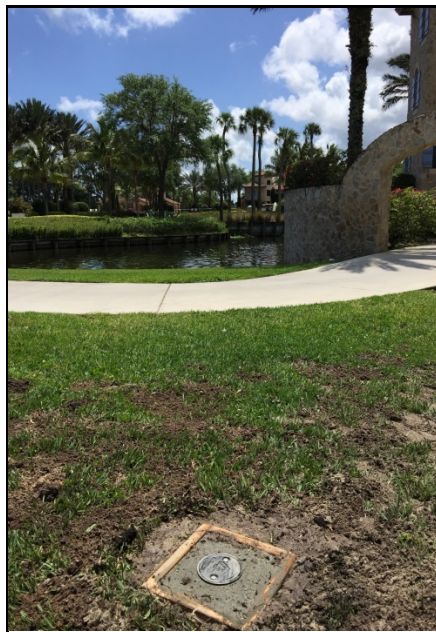
**BELOW.** New field golf course monitoring wells required per FDEP permitting were completed by contractor “ALL Webb’s Enterprises, Inc.”.

The total number of new wells is 11. The 33 existing wells were abandoned by the contractor per FDEP approval.

Hazen and Sawyer performed inspections, resolved issues and completed all pertinent paperwork. After all permitting applications and clarifications during the review process were settled, the process went very well.

Final paperwork is in progress for FDEP. The District Wild pine Manager and outside laboratory PACE are to be given a tour of the new well sites. GPS coordinates will be collected for District and FDEP data base.

District Reuse Technicians were very instrumental in working with the drilling contractor at all golf courses during the progression of this work. The process was documented with field notes and pictures for the H & S Engineering firm.



**BELOW.** The District Collection Crew replaced the Chlorine Injection System and housing at IQ 518 in Abacoa. The Chlorine Building and all interior components for the injection system was a planned budget purchase. The existing system had exceeded its design life-cycle and had deteriorated to the point that replacement was necessary. The original Chlorine Building and Injection System had been in service since startup in 1997.

The installation, wiring, set-up and start-up of the new Injection System and adjustment of the Smart Dosage System were performed by the South Route Crew and the Field/Plant Electrician.



**BELOW.** Lift Station #141, Coconut Cove Station wet well was refurbished with plumbing and pumps by District Crews. The old pumps and C-Channel guide rails were removed and new pumps on stainless steel pipe guide rails were placed onto new pump base elbows, which were mounted onto the new sub floor and secured onto the existing floor.

The Collection Crew assisted with confined space entry while the Construction Crew handled the demolition and installation. Control panel improvements were also completed for the new pumps by the District Field/Plant Electrician.





**ABOVE.** The District Construction Crew performed the scheduled replacement on the Nano Concentrate Filtration force main check valve from the Town of Jupiter Water Treatment Plant.

All work and parts were completed by the District Construction Crew. The reason for replacement was that the check valve would not function properly. The shutdown of flow from the Town of Jupiter Water Treatment Plant was scheduled with no adverse effects to the treatment plant. Work went very smoothly and the crew completed work flawlessly. The flow was returned to online status within 2 hours.

**RIGHT.** A new potable water backflow device was installed at the River Center. Backflow purchases and all work was performed by the District Construction crew and Reuse Departments.

After the new installation, a Reuse Technician performed the backflow test as is normally required after install and before putting on-line.



**LEFT.** For the reporting month, one (1) new Low Pressure System came online in the Low Pressure Pump Station System.

The District Vac Con Crew cleaned the following Lift Stations in April 2015; 141, 53, 140, 114, 4, 88, 171, 191, 170, 171, 126, 18, 4, 38, 53, 159, 190, 13, 152, 40, 61, 52, 9, and 34.

The crew also completed a one year inspection of the Gravity System for Lift Station #218; 19 manholes and 2,636 lineal feet of gravity main.



## Maintenance

**BELOW.** The columns that support the roof of the Construction Barn were deteriorated and in need of repair. Maintenance has shored up and removed the rusted base and has installed new material and is coating the columns with marine epoxy.



**BELOW.** The District is performing routine maintenance on one of our clarifiers. The Maintenance Crew has stripped the exterior of the stilling ring to bare metal and is applying a galvanized treatment to ensure several years of service.



## Tidbits from Tom

April, 2015 – *Earth Day*



On April 22, worldwide events are held to demonstrate support for environmental protection. It was first celebrated in 1970 and is now coordinated globally and celebrated in more than 192 countries each year. The United States founded Earth Day as a “teach-in” and was oriented toward taking action on current and actual environmental issues by way of seminars, forums and other public gatherings.

Loxahatchee River District continues to take environmental issues seriously each and every day not only in the jobs that we do but also by sharing our knowledge, experience and resources with others.

**BELOW.** Our Safety and Compliance Officer gave a tour to the children and parents of *Sonshine Christian Academy* on April 29<sup>th</sup>. The school’s stated objective is to provide academic excellence by “equipping each student to make an impact in our community and the world”. The employees of the Loxahatchee River District are continuously honored by the opportunity that we have to share our environmental goals with our neighbors.



**See ya’ at the Top – (That’s near Cheese Station “N”)**

**Tom Vaughn**  
**Director of Operations**