



**COASTAL WATERS DISCHARGE  
PERMIT UPDATE  
2012/025/WC/SEA HARVEST  
16 August 2019**

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# CWDP overview

- Initial CWDP received 26 June 2017
- Amendment application submitted 17 Nov 2017 to include the RO Plant
- External Sampling done on 08 November 2017 by Enviroworks
- Amended permit received 09 March 2018
- Commissioning of RO mid April ( sampling stopped)
- Sampling recommenced on 17 June 2018
- External sampling done 14 June 2018 by Enviroworks
- Submission of 4<sup>th</sup> Quarter report to DEA on 26 June 2018
- Interim dispersion modelling and monitoring program submitted to DEA on the 9 July 2018
- External resampling done 10 July 2018 by Enviroworks due to inaccuracies in results
- Revised external resampling results received on 20 July 2018
- Final dispersion modelling submitted to DEA 9 August 2018
- Request was submitted to DPW on 9 August 2018 for pipe extension to end of Government jetty to allow better dispersion. Intake and Discharge volumes will be increased as well.

# CWDP overview(continued)



- Sampling stopped on 17 Aug 2018 due to major factory shut down ( 17 Aug- 03 Sept 2018)
- Sampling recommenced on 13 September 2018.
- Submitted 5<sup>th</sup> Quarter report to DEA on 21 September 2018
- Upgrade to the FFP Offcuts and Trimmings Plant ( mid Aug'2018- mid Dec'2018). FFP effluent discharge volume monitoring subsequently stopped (meter taken out) and monitoring to resume as of 8 December 2018.
- Process at FFP Offcuts and Trimmings Plant :The first contrashear screen was dropped for gentle handling. The large contrashear was moved down to above the pit and flume water runs directly into the screen so that no pumping is required. Underflow from the screen goes into the sump. Sump contents is pumped through the second contrashear screen and the underflow goes to the sea. The screens will be sprayed every 30 minutes to ensure that the screens stay clean and no rotting occurs and the Ammonia Nitrogen parameters can be met.
- As of 8 Dec 2018, both contrashear screens were operational and water meter was replaced.
- External sampling done on 29 November 2018 by Dr. Jan Marx (Chairperson of the SHBWQFT)
- 6<sup>th</sup> Quarterly report submitted to DEA on 21 December 2018.
- The RO Plant was shut down for an upgrade of filters from 24 January- 4 February 2019



# CWDP overview (continued)



- Currently awaiting approval of amendment application submitted to DEA 9 July 2018 due to process change in RO Plant not taking recycled effluent for treatment.
- Currently awaiting approval of amendment application submitted to DEA on 27 August 2018 for three effluent streams (FFP, RO and Added Value) to be discharged at a common point on the Government Jetty.
- Sea Harvest requested comments from DEA regarding Sea Harvest's CWDP compliance on 1 February 2019, as requested by the PAF on 25 January 2019
- Sea Harvest has been engaging with DPW since 11 March 2019 in regards to a Concessionary agreement, for effluent pipeline installation on Government Jetty.
- The RO Plant has been shutdown from 12 -15 March 2019 for a capacity upgrade.
- 7<sup>th</sup> Quarter report submitted to DEA on 26 March 2019.
- External Sampling done on 15 April 2019 by Dr Jan Marx
- During engagement at IGTT on 10 May 2019 –DEADP offered assistance to engage with DPW as to Sea Harvest's application status with regards to effluent pipeline extension on Government jetty.



# CWDP overview (continued)

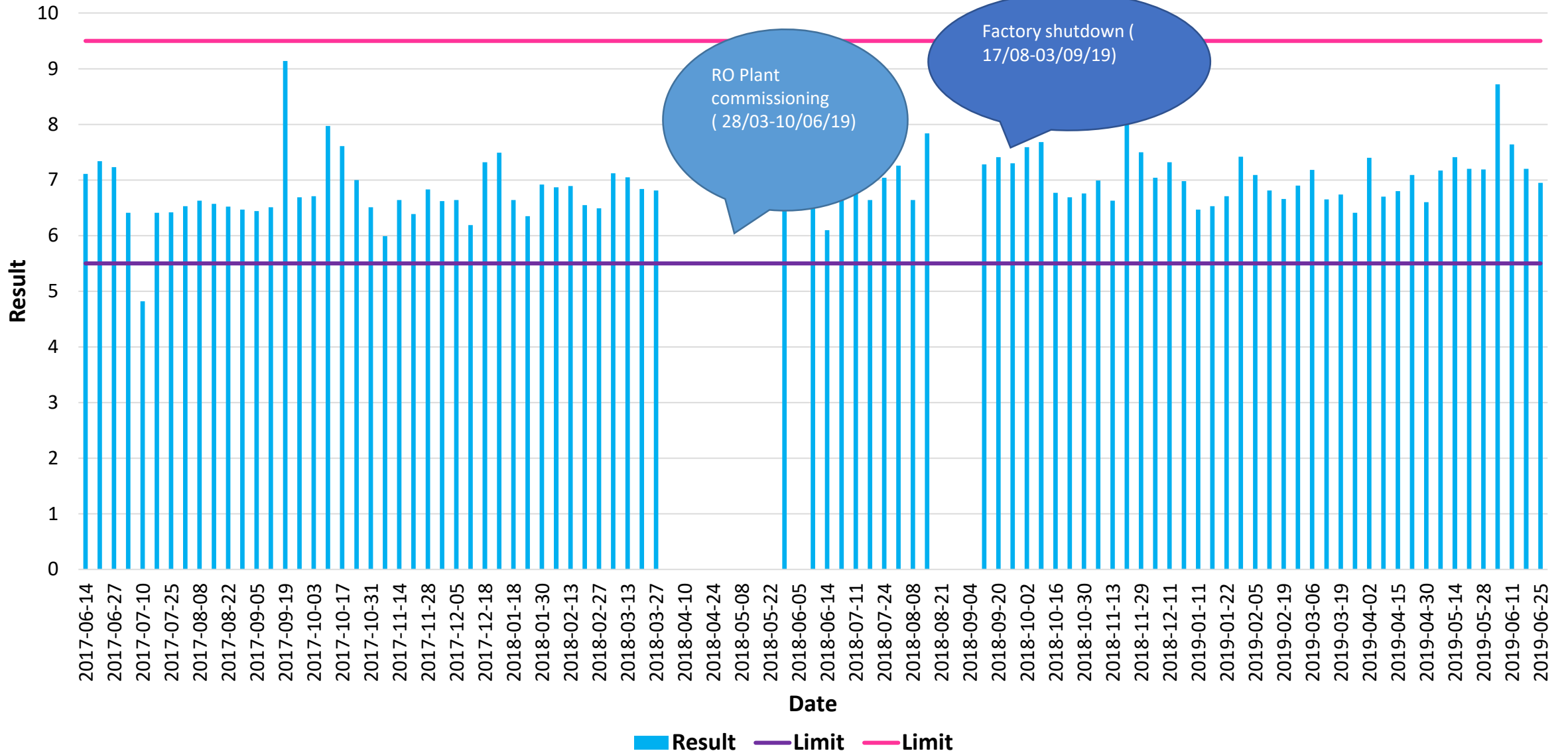
- 8<sup>th</sup> Quarter report submitted to DEA on 26 June 2019.
- On 11 June 2019, DPW authorized Sea Harvest, via email (whilst Concessionary Agreement is being finalized) to proceed with the installation of the dispersion line on the Government Jetty.
- DEADP and SBM officials visited Sea Harvest on 20 June 2019, to view operation and progress on the Sea Harvest Desalination Plant.
- A Gantt Chart was submitted to DEADP on 20 June 2019 to track Sea Harvest's progress on dispersion line, as per DEADP's request.
- 9<sup>th</sup> Quarter report due to DEA on 26 September 2019
- Expected commissioning of dispersion line on Government Jetty on 26 August 2019-refer Gantt chart attached.

# CWDP monitoring parameters



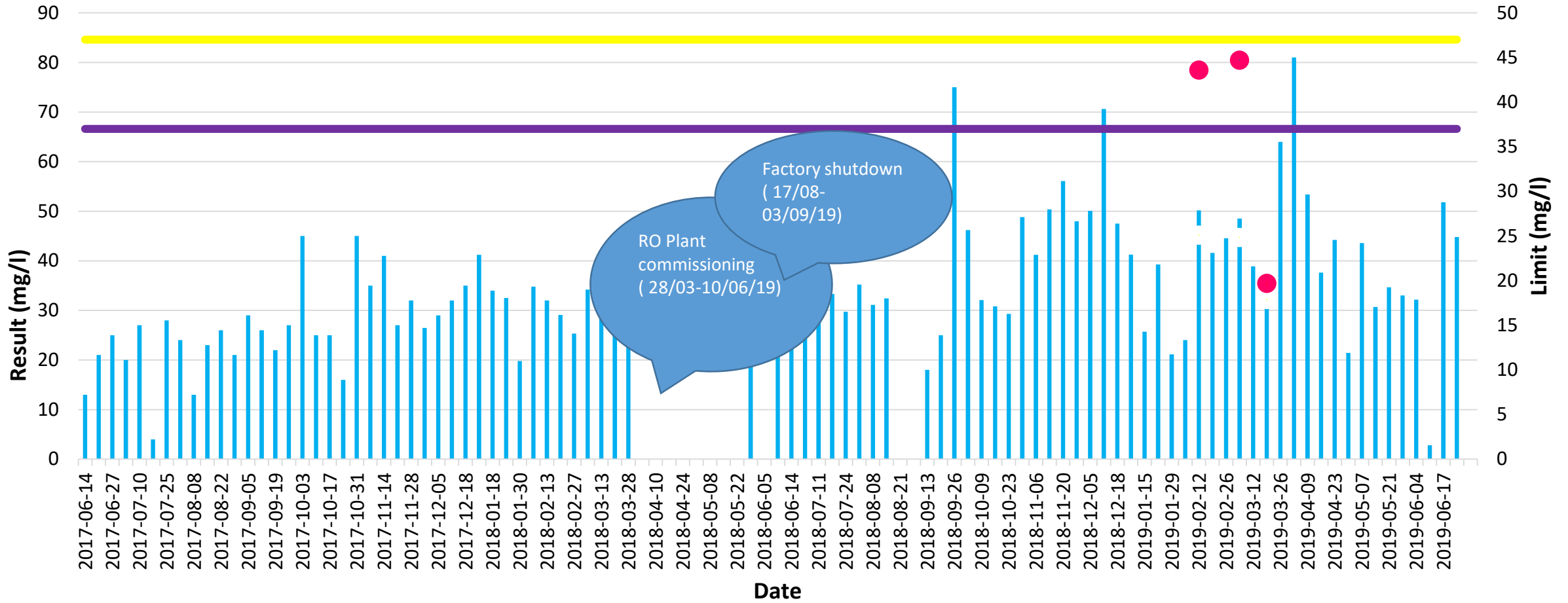
Substances	Limits	Frequency
pH	5.5-9.5	Weekly
Salinity	37 psu <b>47 psu ( recommended by Anchor Environmental)</b>	Weekly
Temperature	38°C	Weekly
Soap, Oil & Grease	10 mg/l	Monthly
Total Suspended Solids	230mg/l	Monthly
Ammonia Nitrogen	100 mg/l	Monthly
Chemical Oxygen Demand	250 mg/l	Monthly

# pH (weekly)

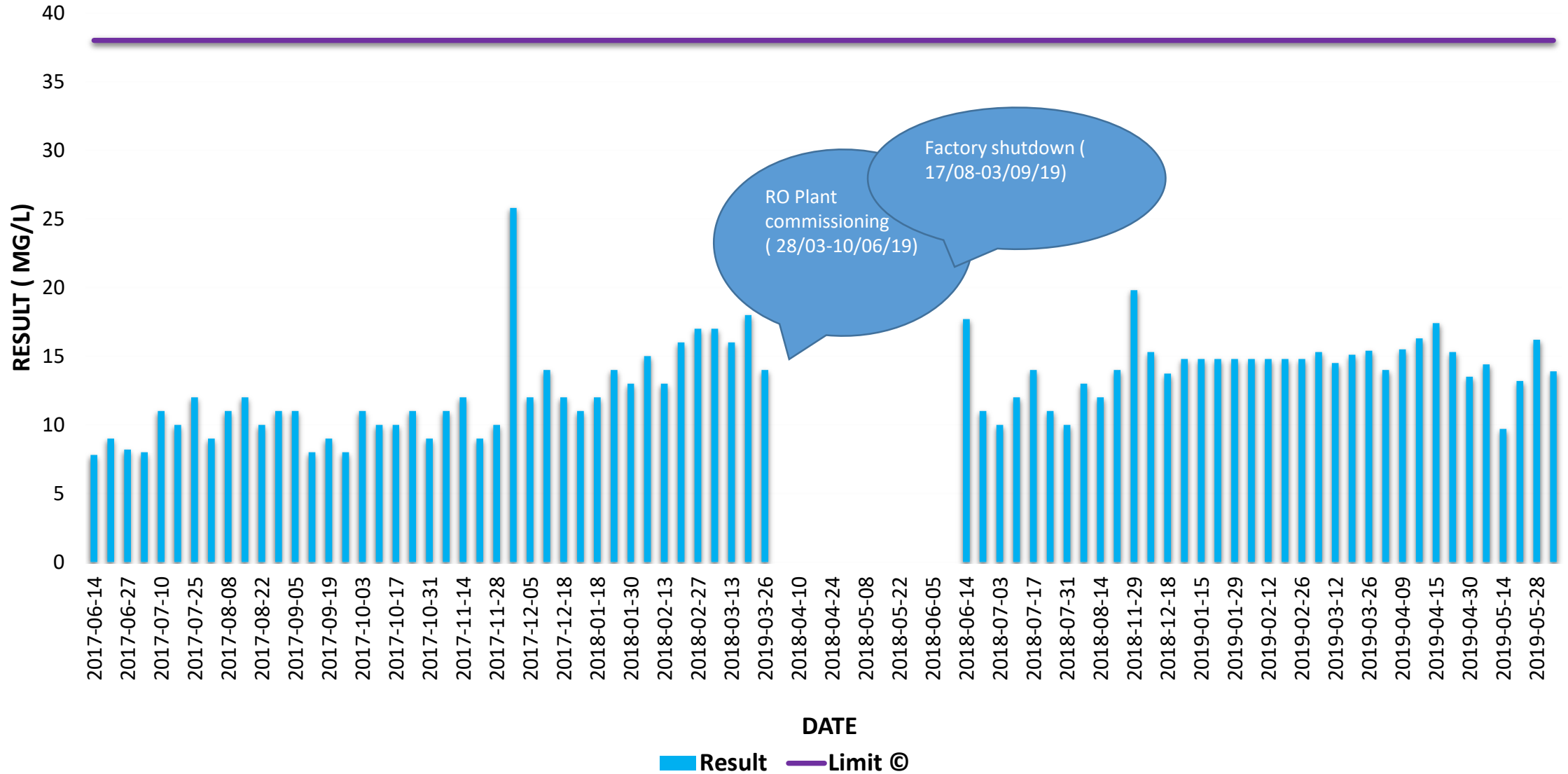




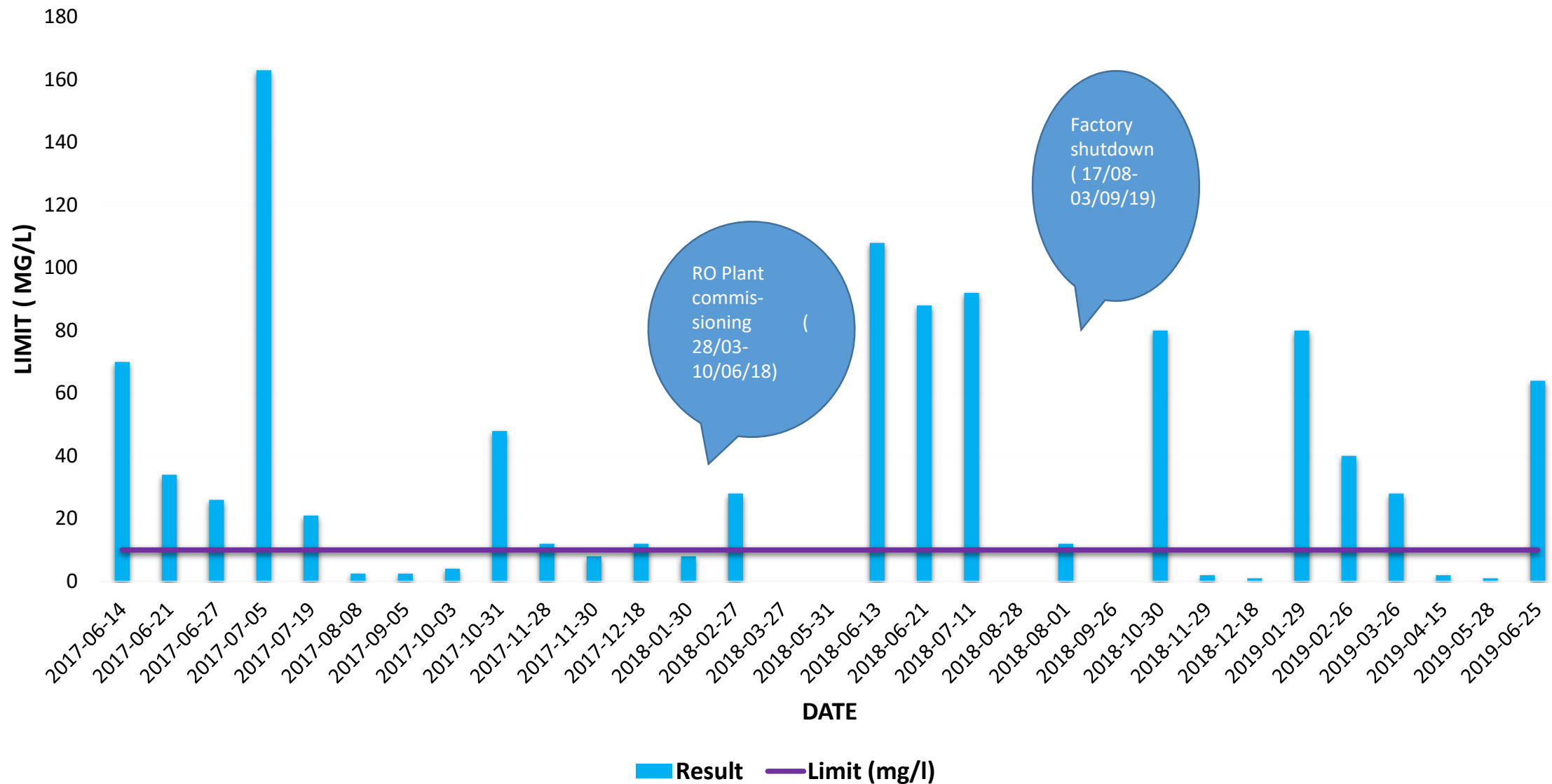
# Salinity (weekly)



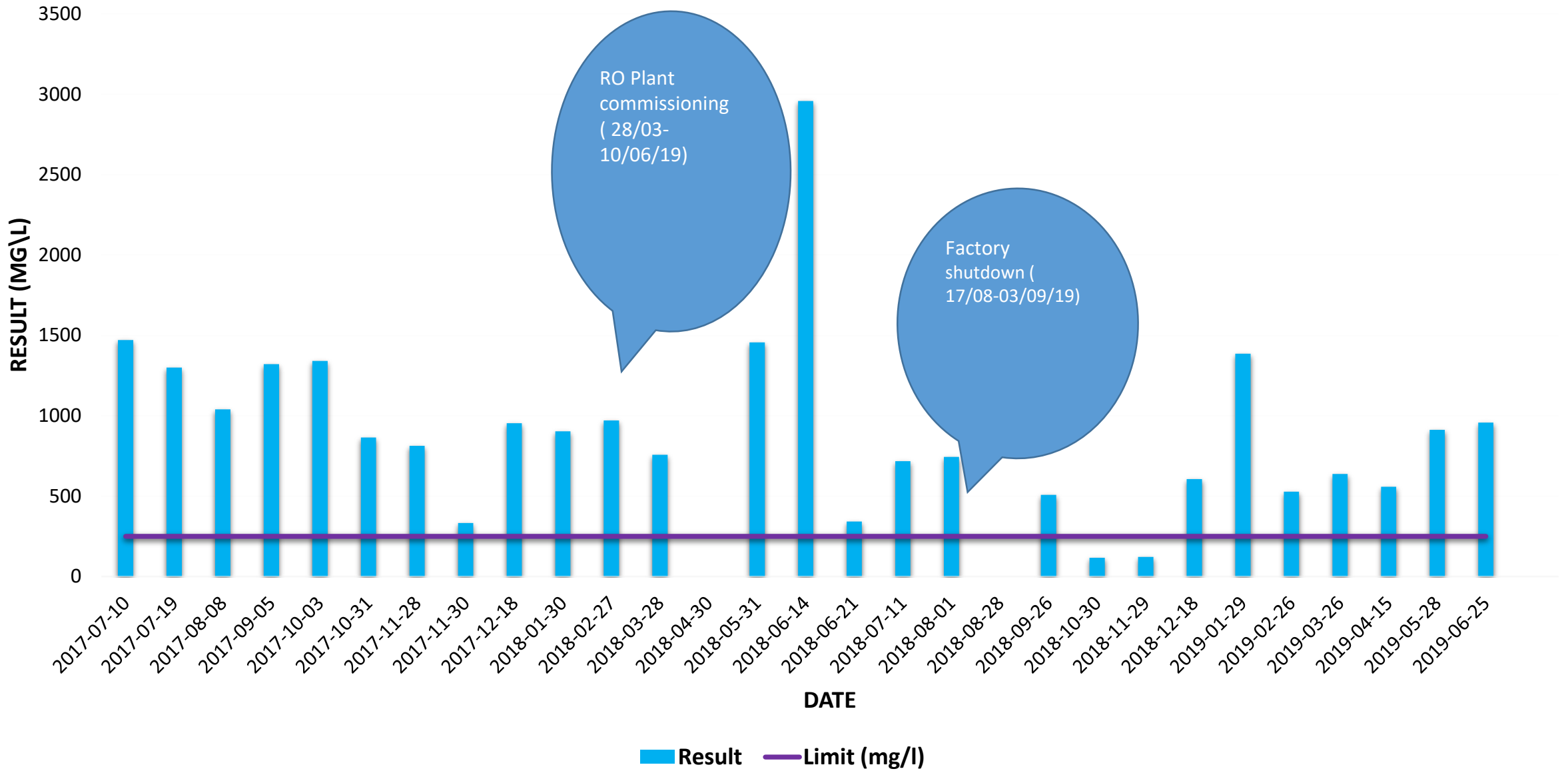
# Temperature( weekly)



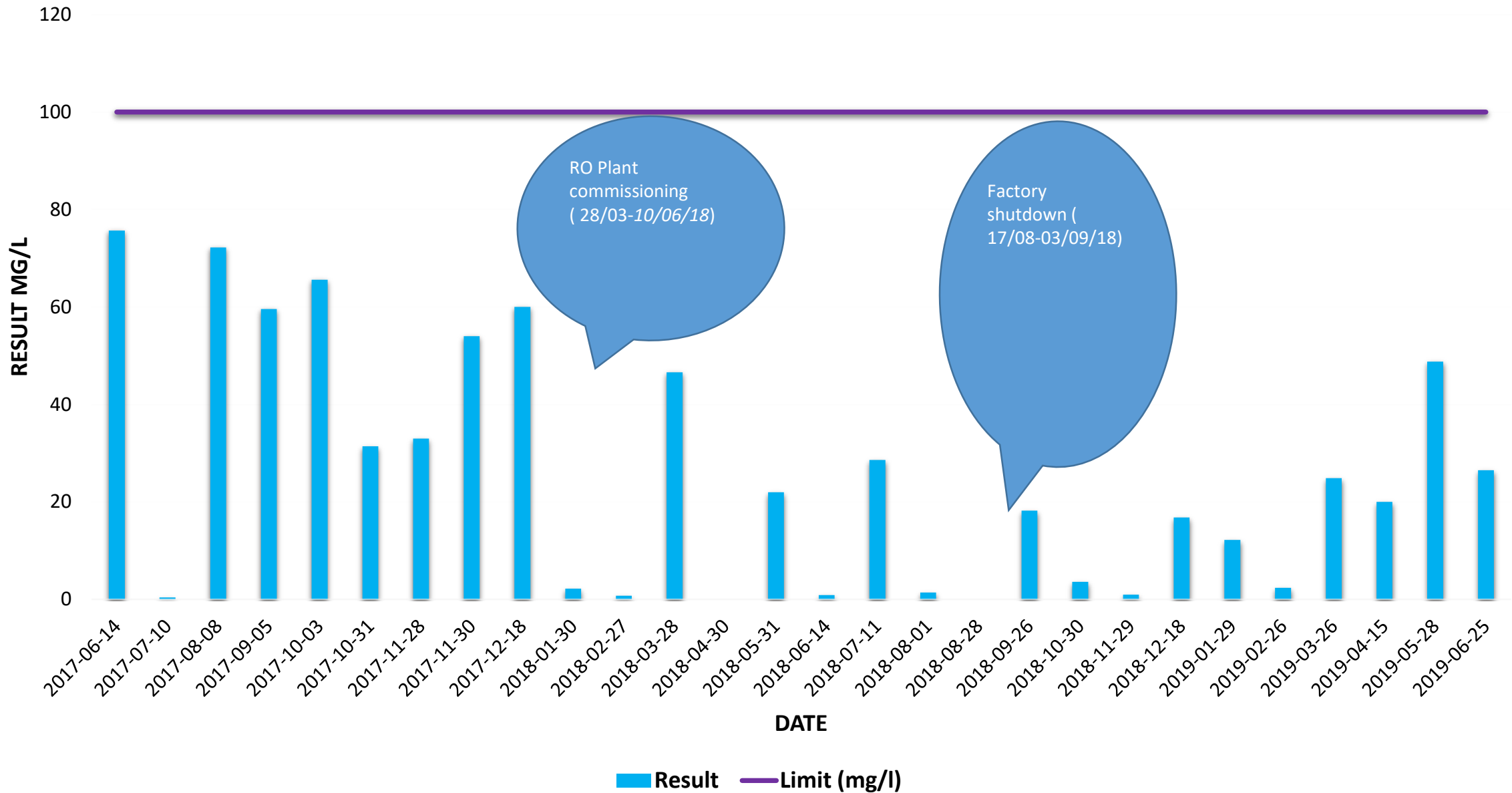
# Oil & Grease ( monthly)



# Chemical Oxygen Demand (monthly)

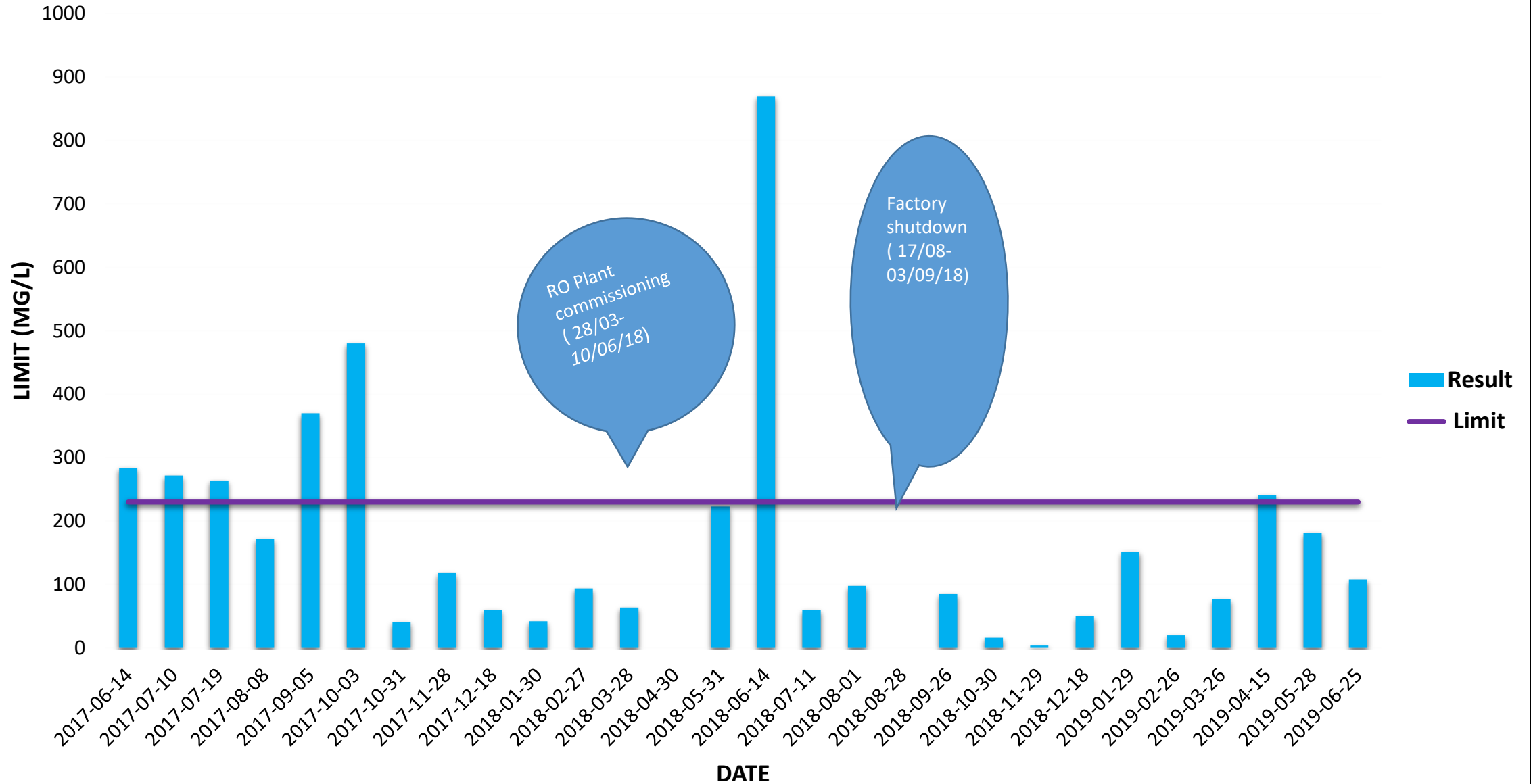


# Ammonia Nitrogen ( monthly)

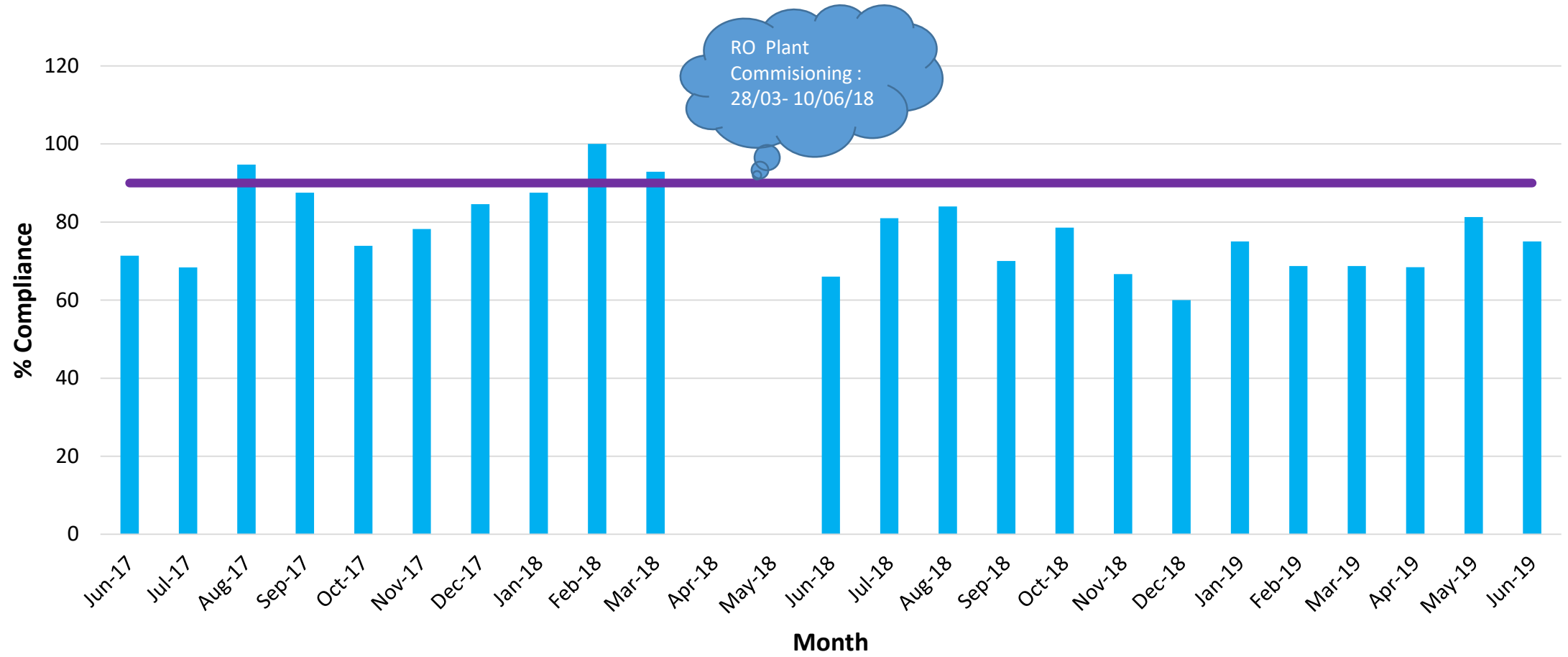




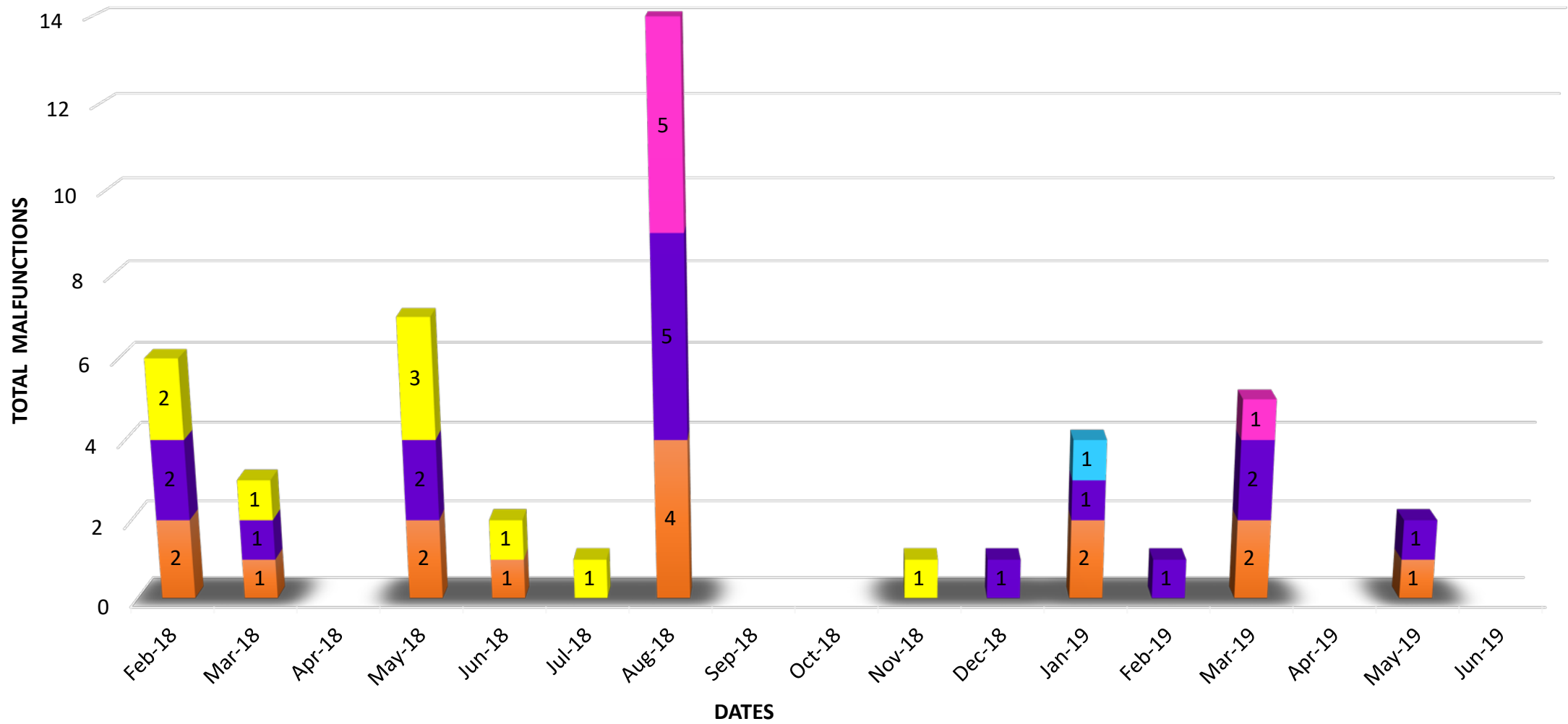
# Total Suspended Solids (monthly)



# CWDP Sampling Compliance Jun'17- Jun'19

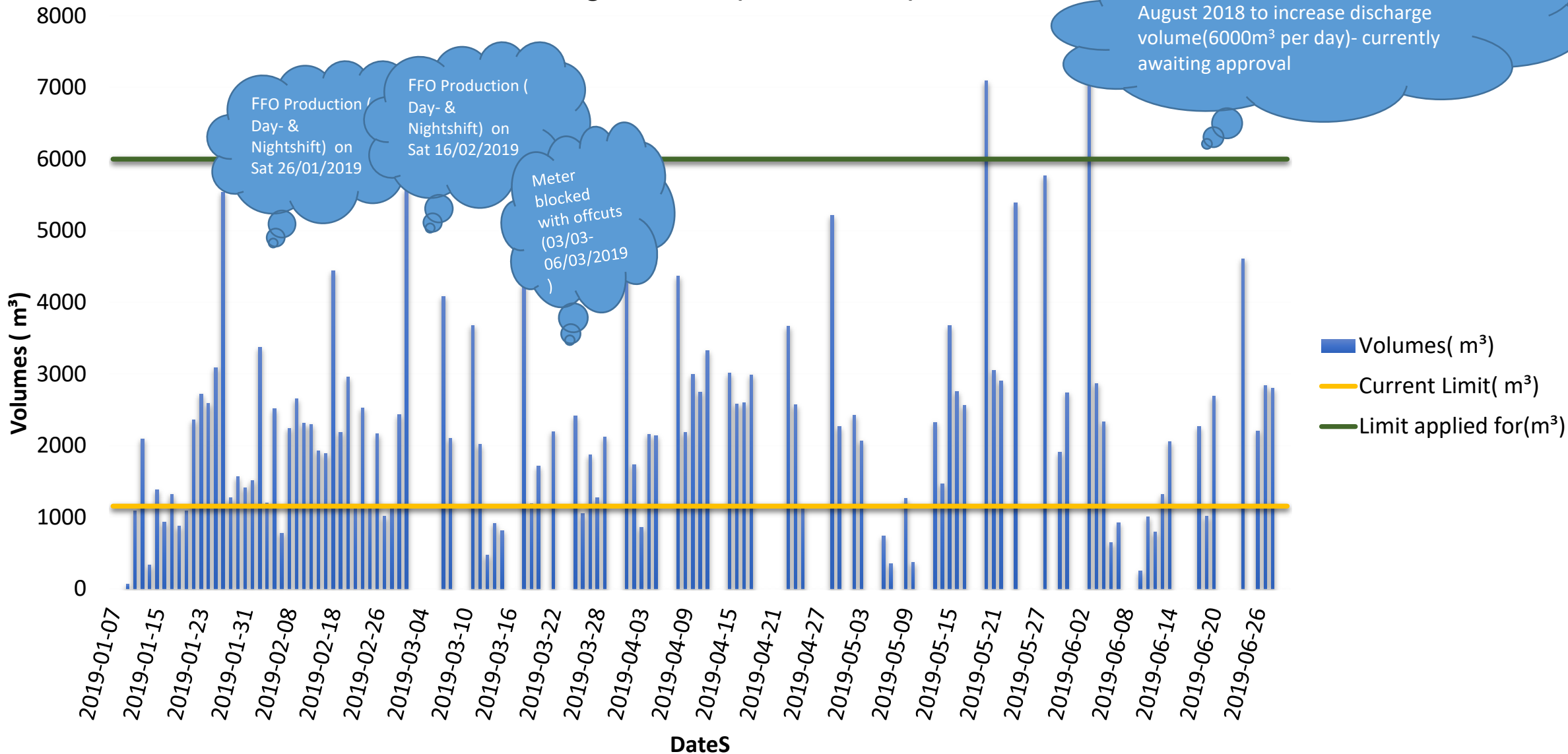


# FFP Offcuts & Trimmings Plant Malfunctions ( Feb'18- Jun'19)

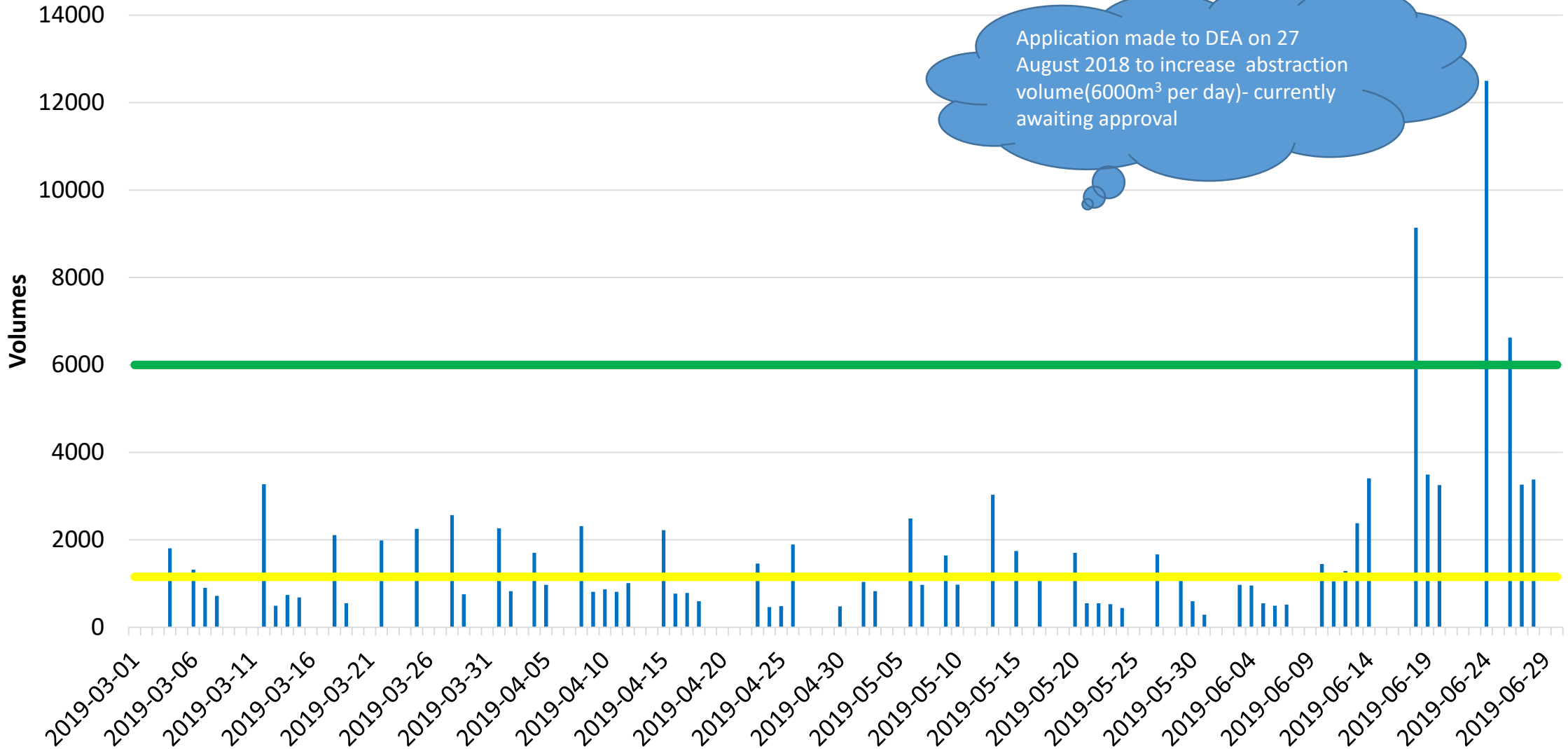


- Operating errors
- Mechanical failure
- Environmental factors eg. floods
- Loss of supply services eg. power failure
- Other causes
- Undetermined

# FFP & RO Plant Discharge Volumes (Jan- Jun 2019)



# Sea Water Abstraction Volumes (March-June 2019)

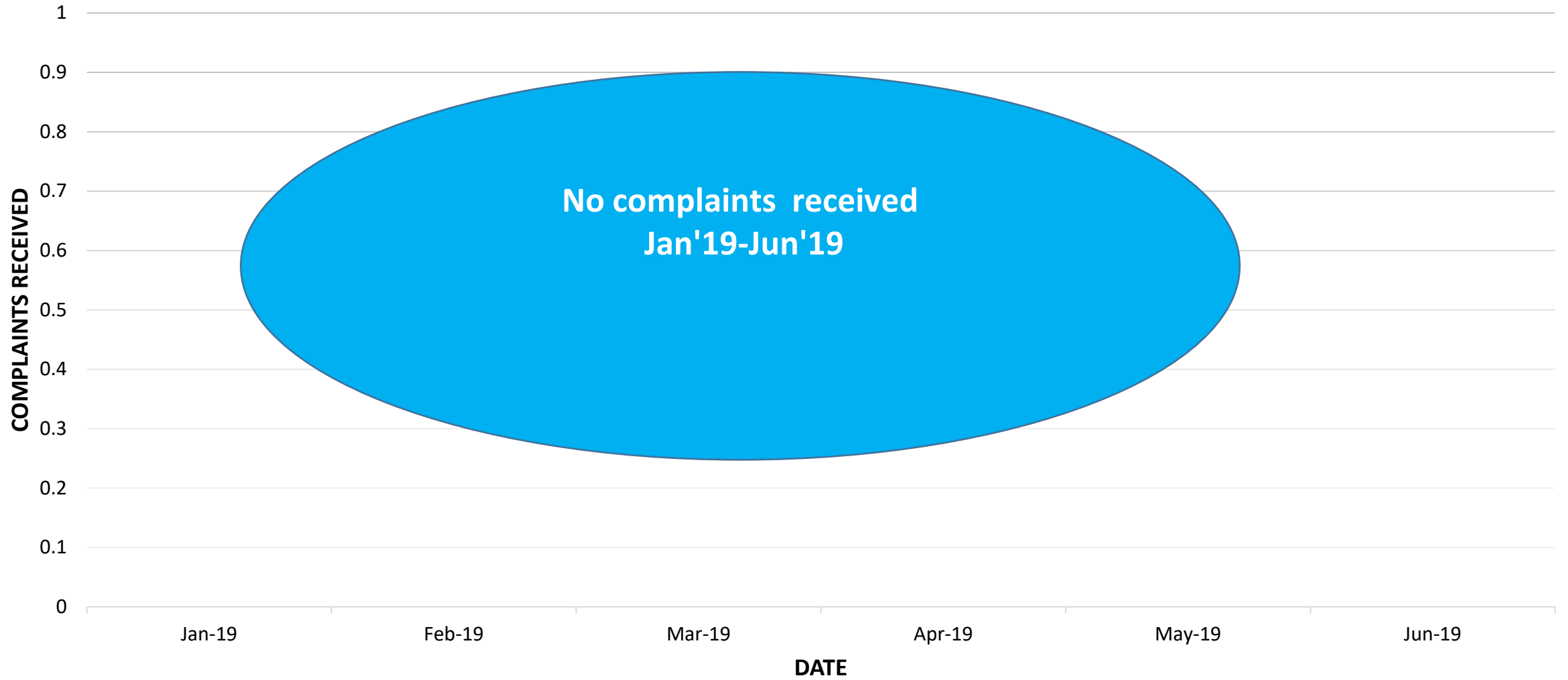


Application made to DEA on 27 August 2018 to increase abstraction volume(6000m³ per day)- currently awaiting approval

Usage Limit Limit applied for(m³)



# COMPLAINTS RECEIVED IRO FFP EFFLUENT DISCHARGE:



■ Complaints received:



Sea Harvest Dispersion line  
on Government jetty- Gantt  
chart

ID	Task Mode	Task Name	Duration	Start	Finish	2019												2020											
						3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		1st Quarter						
						Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb				
1		<b>RO Brine Dispersion</b>	<b>266 days</b>	<b>Fri 17/08/18</b>	<b>Mon 26/08/18</b>																								
2		Environmental analysis and report	2 wks	Fri 17/08/18	Thu 30/08/18																								
3		Design system based on report	2 wks	Mon 05/11/18	Fri 16/11/18																								
4		Costing & quotations	3 wks	Mon 19/11/18	Fri 07/12/18																								
5		Do proposal	1 wk	Mon 10/12/18	Fri 14/12/18																								
6		Approval process for work on Government Jetty	12 wks	Mon 17/12/18	Fri 08/03/19																								
7		Approval received from DPW	0 days	Tue 11/06/19	Tue 11/06/19																								
8		Place all orders for materials, equipment and services	1 wk	Tue 18/06/19	Mon 24/06/19																								
9		Longest lead time	4 wks	Tue 25/06/19	Mon 22/07/19																								
10		Pipe installation	5 wks	Wed 17/07/19	Tue 20/08/19																								
11		Installation of other components	3 wks	Mon 05/08/19	Fri 23/08/19																								
12		Test run and take samples	0 days	Mon 26/08/19	Mon 26/08/19																								

Project: Dispersion System  
Date: Tue 16/07/19

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			



# CWDP Action Log as at 30 June 2019



# COASTAL WATERS DISCHARGE PERMIT

**PERMIT NUMBER - 2012 / 025 / WC / SEA HARVEST**

*Key*

<b>FH</b>	<b>Frank Hickley</b>	<b>Complete</b>	<b>C</b>
<b>NvH</b>	<b>Nico van Houwelingen</b>	<b>In Progress</b>	<b>IP</b>
<b>ME</b>	<b>Meryl-Lee Edwards</b>	<b>On Hold</b>	<b>OH</b>
<b>NM</b>	<b>Nadia Martin</b>	<b>Outstanding</b>	<b>O</b>

SECTION NUMBER	ACTION	RESPONSIBLE	STATUS 30/06/2019	FREQUENCY
E 10	If an incident resulting in a discharge that exceeds the limits prescribed in this permit occurs, whether the requisite permission has been obtained from the Department or not, the permit holder must report the incident immediately to the Department, or where that is not possible, at the earliest opportunity, which must be within seven calendar days, providing full details of the cause of the incident, the measures taken to mitigate the incident, alternatives considered other than the discharge of effluent, the volume of effluent released, the location where effluent released and any other information requested by the Department subsequent to the reporting of the incident:	FH	n/a	Adhoc
E 11	The permit holder must, in addition to the above, comply with the requirements of <b>Section 30 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (“NEMA”)</b> , where applicable	FH	n/a	Adhoc
E 15	The permit holder must submit a renewal application at <b>least 6 (six) months</b> before the expiry of this permit to the Department. Where a renewal application has been submitted to the Department before the lapsing of the validity period, the validity of this permit will automatically be extended (“the period of administrative extension”) from the day before this permit would otherwise have lapsed, until the renewal application has been decided.	FH	n/a	
F 2.2.1	The quantity of effluent discharged must be metered by a continuous recording device with a <b>daily limit of 1152m<sup>3</sup>/ day</b> .	NvH		
F 2.3.1	The quality of the effluent discharged must comply with the emission limits for constituents/ properties by taking a grab sample at the treatment plant	FH	Ongoing	Weekly / Monthly
F 2.3.3	The permit holder must appoint an independent external auditor to determine compliance with limits set in <b>Table 1 every 6 months</b>	FH	n/a	Bi-Annual
F 3.1	The permit holder must inspect the sea daily for visibility of plume, any environmental and/ or ecological impact on the surface and vicinity.	NM	Ongoing	Daily



F 3.4	The constituents/parameters, in Table1 of the permit must not exceed the limits of the South African Water Quality guidelines for coastal marine waters ( Volume 1) <b>Natural Environmental published by the Department of Water Affairs and forestry in 1995</b> or any amended version thereof) at the end of the mixing zone. Compliance with Table 2 must be reported.	NvH / SBWQFT	Table 2 Parameters changed according to amended to perit.	Weekly / Monthly
F 6.1	Contamination by any substance (whether such substance is a solid, liquid, vapour or gas or a combination thereof which is produced, used, stored, dumped or spilled on the premises) of storm water leaving the permit holder's premises must be avoided	FH	n/a	Daily
F 6.2	No industrial effluents may be discharged into any storm water drain, canal or furrow, whether intentionally or accidentally.	NM	n/a	Daily
F 7.1	The concrete diffuser sump must be inspected on a <b>weekly basis</b> to check for any leaks or malfunctions. Records must be kept of such inspections.	NvH	Ongoing	Weekly
F 8.1	Accurate, up-to-date records of all system malfunctions resulting in the disposal of water containing effluent not in accordance with the requirements of this permit must be kept.	NvH	Ongoing	Daily
F 8.2	<b>The following headings must be used for the above records, accompanied by a full explanation of all contributory circumstances and proposed / implemented mitigation measures:</b> operating errors; 8.2.2 mechanical failure (including design, installation and maintenance; 8.2.3 environmental factors (e.g. floods 8.2.4 loss of supply services (e.g. power failure); 8.2.5 other causes; and 8.2.6 Undetermined.	NvH	Ongoing	Adhoc

F 9.4	The permit holder must outline reporting procedures and protocols for reporting events of malfunctioning/breakdown of the effluent disposal system, as well as the pollution events. These should include internal procedures as well as reporting to responsible authorities on local, regional, and national levels (including, but not limited to the reporting of emergency incidents in terms of <b>Section 30 of the NEMA</b> ).	NvH	Ongoing	Adhoc
F 10.1	All reporting to the Department must occur on prescribed forms, where available or in a format as agreed to, in writing, by the Department.	FH	Ongoing	Adhoc
F 10.2	The permit holder may establish or join a <b>Permit Advisory Forum (“PAF”) (or equivalent body)</b> . Such a body must meet, as a minimum, once quarterly, to discuss any breach of permit conditions, monitoring and reporting requirements as well as general effluent issues. The forum may be facilitated by an independent facilitator and composed of the permit holder (or a representative), interested and affected parties (such as NGO’s, local interest groups, etc.) and relevant government institutions. PAFs may be established for either a single pipeline (i.e. one permit holder) or a receiving environment (i.e. several permit holders). <b>Details (i.e TOR’s) of the forum must be submitted to the Department within 6 months of the date of issue of this permit</b>	FH	SBWQFT Meeting 26/07/2019	Quarterly
F 10.3	<p><b>The following must be reported on or presented quarterly to the Department:</b></p> <p>10.3.1 The exact volume discharged, showing daily and monthly discharge volumes;</p> <p>10.3.2 All minutes emanating from the PAF, where established.</p> <p>10.3.3 The result / findings of the monitoring requirements in terms of this permit and where further monitoring is required.</p>	FH	C	Quarterly

F 10.4	<p><b>The following must be reported on and presented annually to the Department:</b></p> <p>10.4.1 A report on the monitoring of trends, impact (marine impact assessment) and incidents as soon as it becomes available, but not later than 2 (two) months after being completed unless otherwise agreed to, in writing, by the Department.</p>	FH	C	Annual
F 10.5	<p><b>The following must be reported on and presented at the compliance review meeting to the Department:</b></p> <p>105.1 A report detailing compliance with <b>section F</b> of this permit.</p> <p>10.5.2 Calibration certificates for flow meter, recording and integrating devices.</p> <p>10.5.3 Any investigations carried out in terms of <b>section F: condition 11</b> at the compliance review and upon submission of a renewal / new application.</p>	FH	n/a	Quarterly
F 10.6	Any defects or deficiencies in terms of the underflow concrete diffuser must be reported to the Department immediately, or where that is not possible, at the earliest opportunity, which must be within <b>7 (seven) calendar days</b> . Where necessary, repairs must be carried out on the pipeline immediately.	NM	Ongoing	Adhoc
F 10.8	a Report detailing the results of the independent audit monitoring, must be <b>submitted / presented biannually to the Department</b> if the sampling is done internally.	FH	15/04/2019	bi-annually
F 11.1	The permit holder must investigate methods for continuous improvement of the effluent quality. These investigations must include, inter alia:	NvH	n/a	Adhoc
F 11.2	The permit holder must investigate means of optimising dispersion at sea and minimising the impact at sea.	NvH	n/a	Adhoc
F 11.3	The permit holder must develop plans to prevent any contamination of storm water. The plan must contain investigations into the collection, containment, treatment (if necessary) and re-use for industrial purposes any potentially polluted water.	NvH	n/a	Adhoc
F 12.1	The permit is valid for a period of (5) five years, subject to a compliance review at 30 months. A compliance review committee consisting of members determined by the Department will be established for compliance review.	DEA	Dec-19	Adhoc

**Thank You**