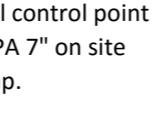


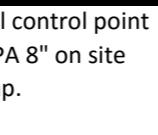


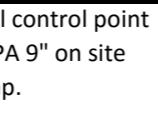
**MCWILLIAM'S**  
FAMILY WINEMAKERS

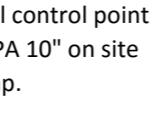
## EPA ENVIRONMENTAL MONITORING

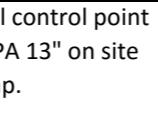
EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	Pollutant											
						EC	Exch. Ca	Exch. Mg	Exch. K	Exch. Na	Nitrate	N (total)	pH	P (total)	K	SAR	P sorption capacity
<a href="#">Point 11: Soil Sample Old</a>	Soil quality monitoring		Soil sample.	Soil control point "EPA 11" on site map.	Test unit of measure frequency; sampling method	µs/cm	cmol(+)/kg	cmol(+)/kg	cmol(+)/kg	cmol(+)/kg	mg/kg	mg/kg	pH	mg/kg	mg/kg	SAR	mg/kg
<a href="#">Chardonnay 5</a>														yearly; composite sample		spec. freq 1	

EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	<u>Standing Water Level</u>	Pollutant											
<a href="#">Point 7: Piezometer Red Frontignac Row 1</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 7" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L	mg/L	
					frequency	every 6 months							yearly					
					sampling method	inspection							representative sample					

EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	<u>Standing Water Level</u>	Pollutant											
<a href="#">Point 8: Piezometer South End Lined Dam</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 8" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L	mg/L	
					frequency	every 6 months							yearly					
					sampling method	inspection							representative sample					

EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	<u>Standing Water Level</u>	Pollutant											
<a href="#">Point 9: Piezometer South West End Row 8 Touriga 13</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 9" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L	mg/L	
					frequency	every 6 months							yearly					
					sampling method	inspection							representative sample					

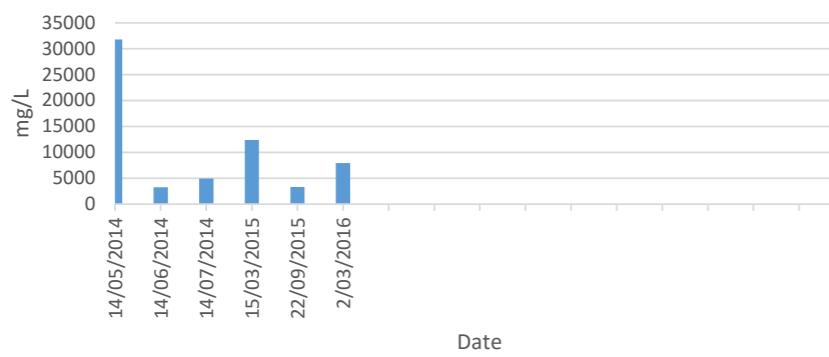
EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	<u>Standing Water Level</u>	Pollutant											
<a href="#">Point 10: Piezometer South West Point F128 dam</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 10" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L	mg/L	
					frequency	every 6 months							yearly					
					sampling method	inspection							representative sample					

EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	<u>Standing Water Level</u>	Pollutant											
<a href="#">Point 13: Piezometer West End Old Chardonnay 6</a>	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample. Groundwater level m'mnt.	Soil control point "EPA 13" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
					unit of measure	metres	mg/L	mg/L	µs/cm	mg/L	mg/L	mg/L	pH	mg/L	mg/L	mg/L	mg/L	
					frequency	every 6 months							yearly					
					sampling method	inspection							representative sample					

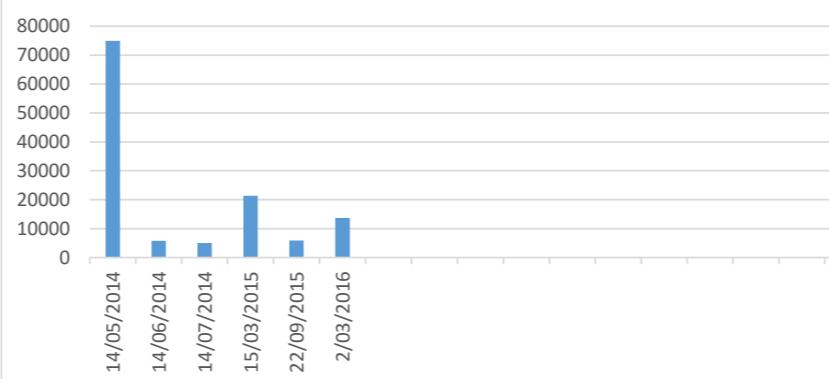
### Point 1: Influent Quality Monitoring

Type of Test	Name of Test	Test	Units	Date												
				14/05/2014	14/06/2014	14/07/2014	14/08/2014	14/09/2014	14/10/2014	15/03/2015	22/09/2015	2/03/2016				
Quality monitoring	Biological oxygen demand	BOD	mg/L	31800	3260	4950	12400	3320	7920							
Quality monitoring	Chemical oxygen demand	COD	mg/L	74900	5820	5060	21400	5850	13700							
Quality monitoring	Electrical conductivity	EC	µs/cm	11800	1020	2900	3290	7330	6610							
Quality monitoring	Nitrogen	N (total)	mg/L	717	13	103	286	27	420							
Quality monitoring	pH	pH	pH	n/a	n/a	5.3	4.1	12.4	6							
Quality monitoring	Phosphorus	P (total)	mg/L	47	2.8	11.2	23.2	5.69	14.4							
Quality monitoring	Sodium absorption ratio	SAR	SAR	<1	2	2	1	2	2							
Quality monitoring	Total dissolved solids	TDS	mg/L	11700	1280	2140	3310	6250	7240							
Quality monitoring	Total suspended solids	TSS	mg/L	25400	254	144	2410	322	1310							

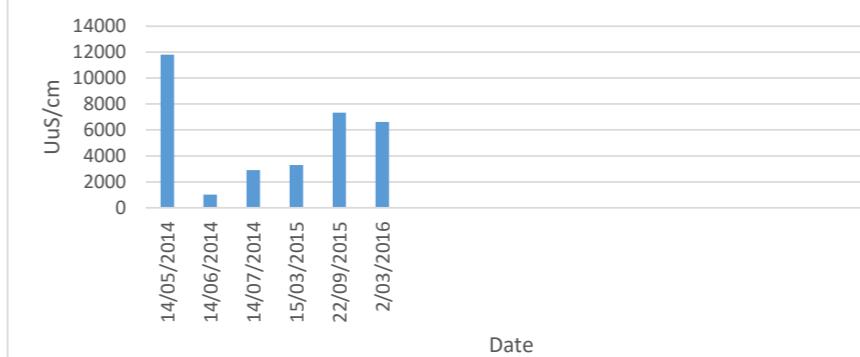
Biochemical Oxygen Demand



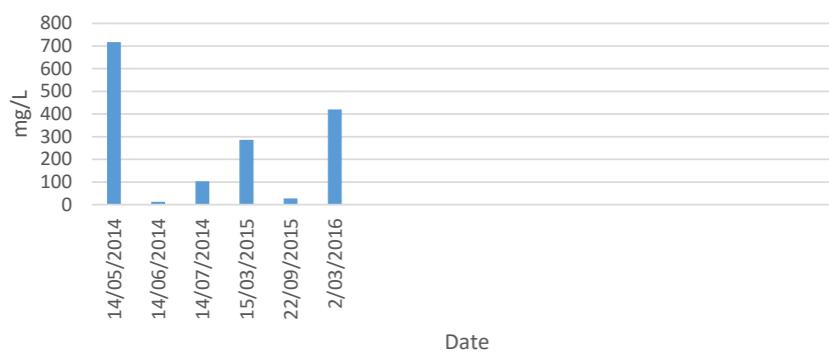
Chemical Oxygen Demand



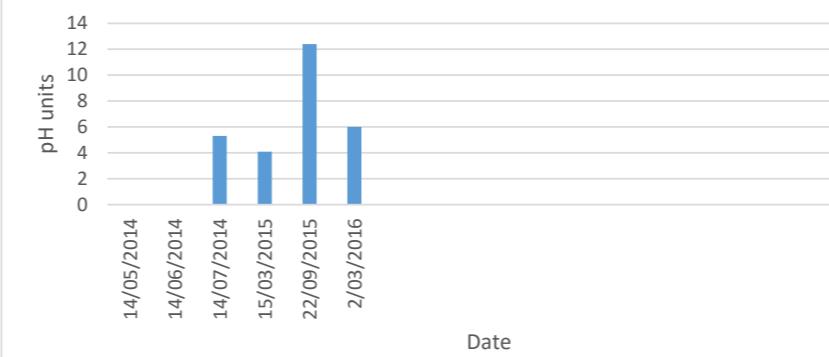
Conductivity



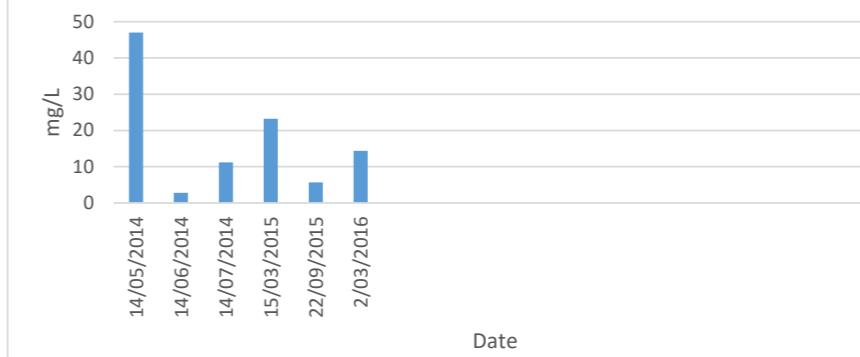
Nitrogen Total



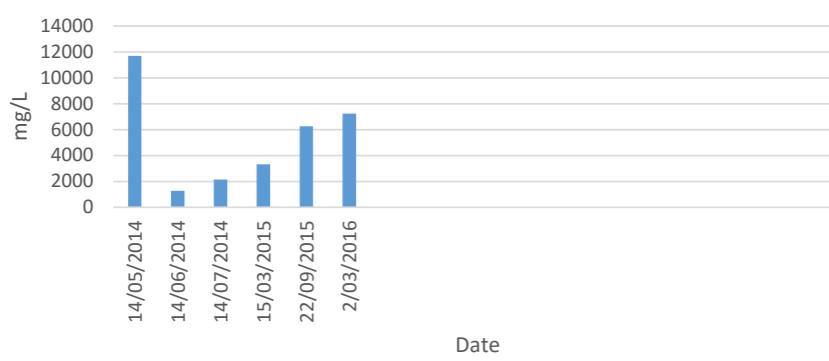
pH



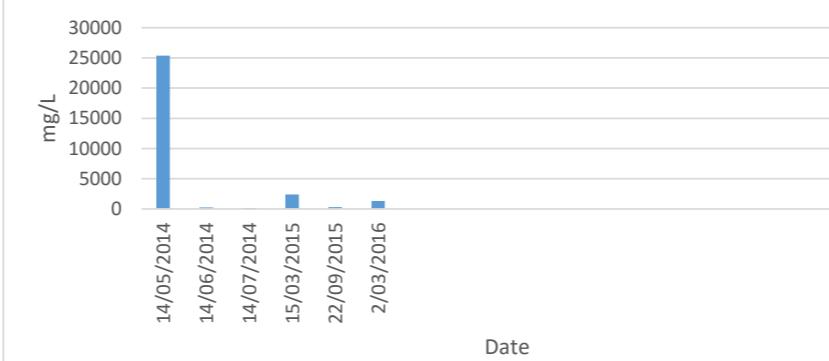
Phosphorous Total



Total Dissolved Solids



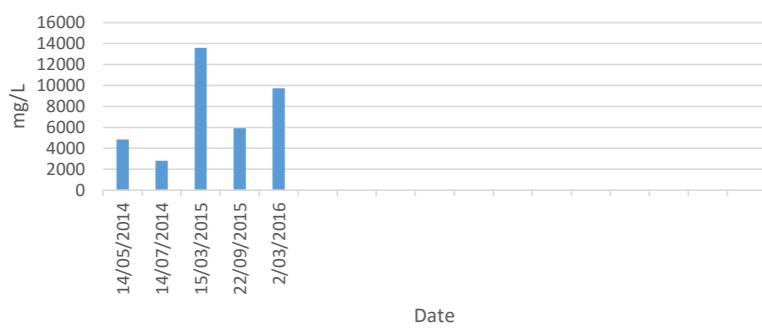
Total Suspended Solids



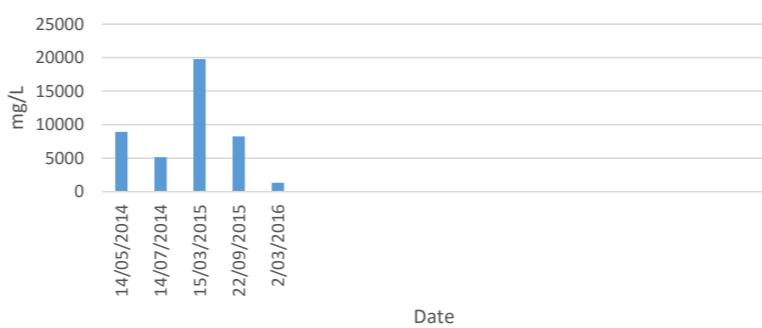
## Point 2: Effluent Quality Monitoring

Type of Test	Name of Test	Test	Units	Date							
				14/05/2014	14/07/2014	15/03/2015	22/09/2015	2/03/2016			
Quality monitoring	Biological oxygen demand	BOD	mg/L	4830	2820	13600	5920	9730			
Quality monitoring	Chemical oxygen demand	COD	mg/L	8940	5160	19800	8260	1350			
Quality monitoring	Electrical conductivity	EC	µS/cm	3580	2870	6260	2860	4010			
Quality monitoring	Nitrogen	N (total)	mg/L	221	105	527	159	348			
Quality monitoring	pH	pH			5.3	5.5	5.2	4.9			
Quality monitoring	Phosphorus	P (total)	mg/L	20.7	11.5	27.4	11.8	14.8			
Quality monitoring	Sodium aborption ratio	SAR	SAR	1	2	1	1	2			
Quality monitoring	Total dissolved solids	TDS	mg/L	3240	2210	4460	2770	2620			
Quality monitoring	Total suspended solids	TSS	mg/L	464	156	269	360	363			

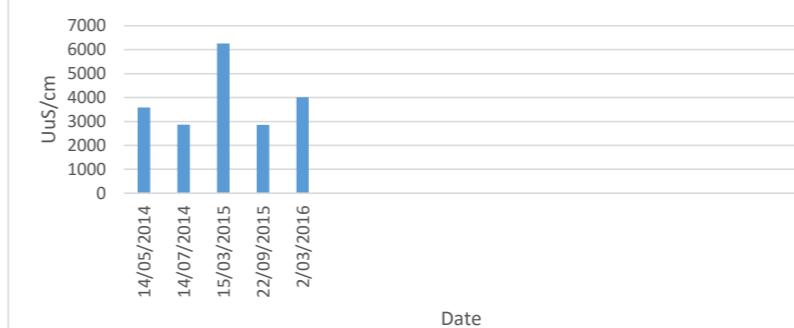
Biochemical Oxygen Demand



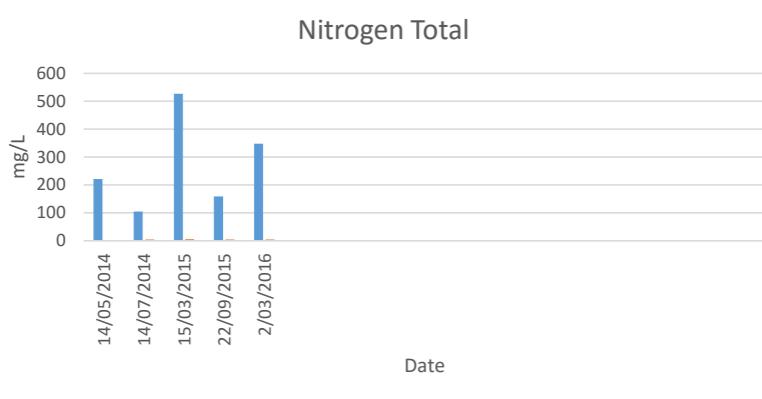
Chemical Oxygen Demand



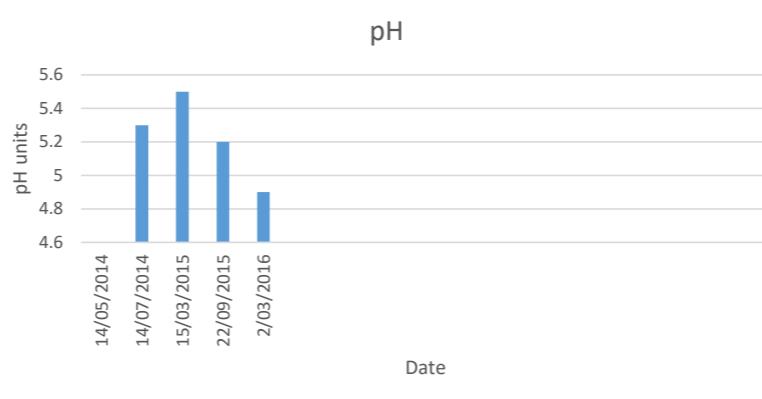
Conductivity



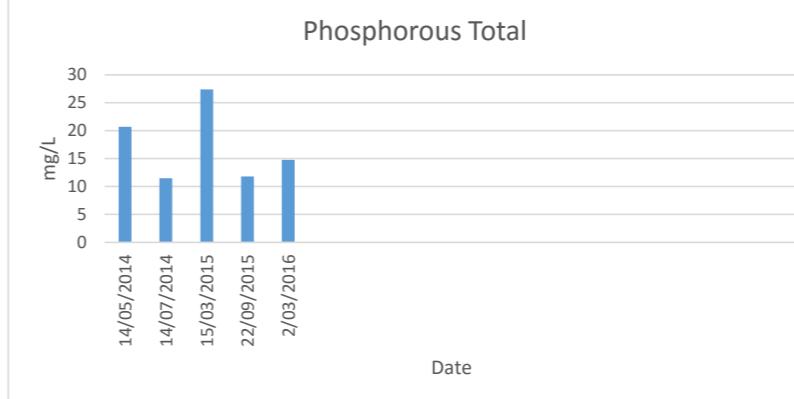
Nitrogen Total



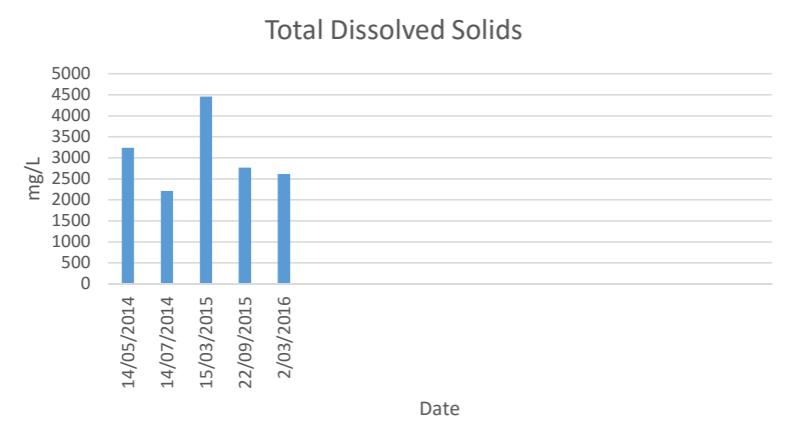
pH



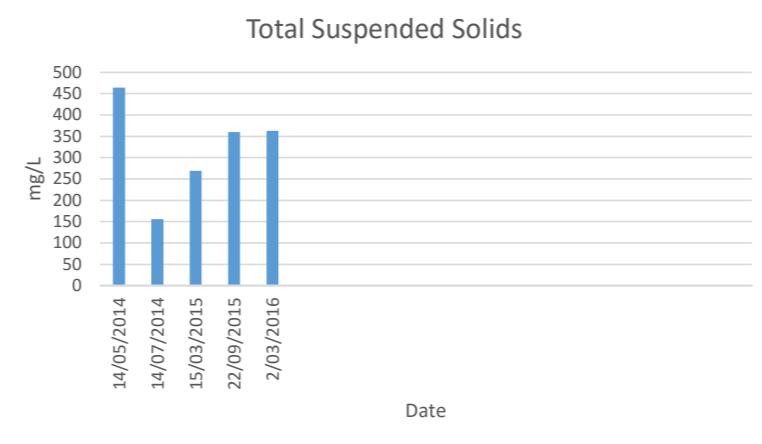
Phosphorous Total



Total Dissolved Solids



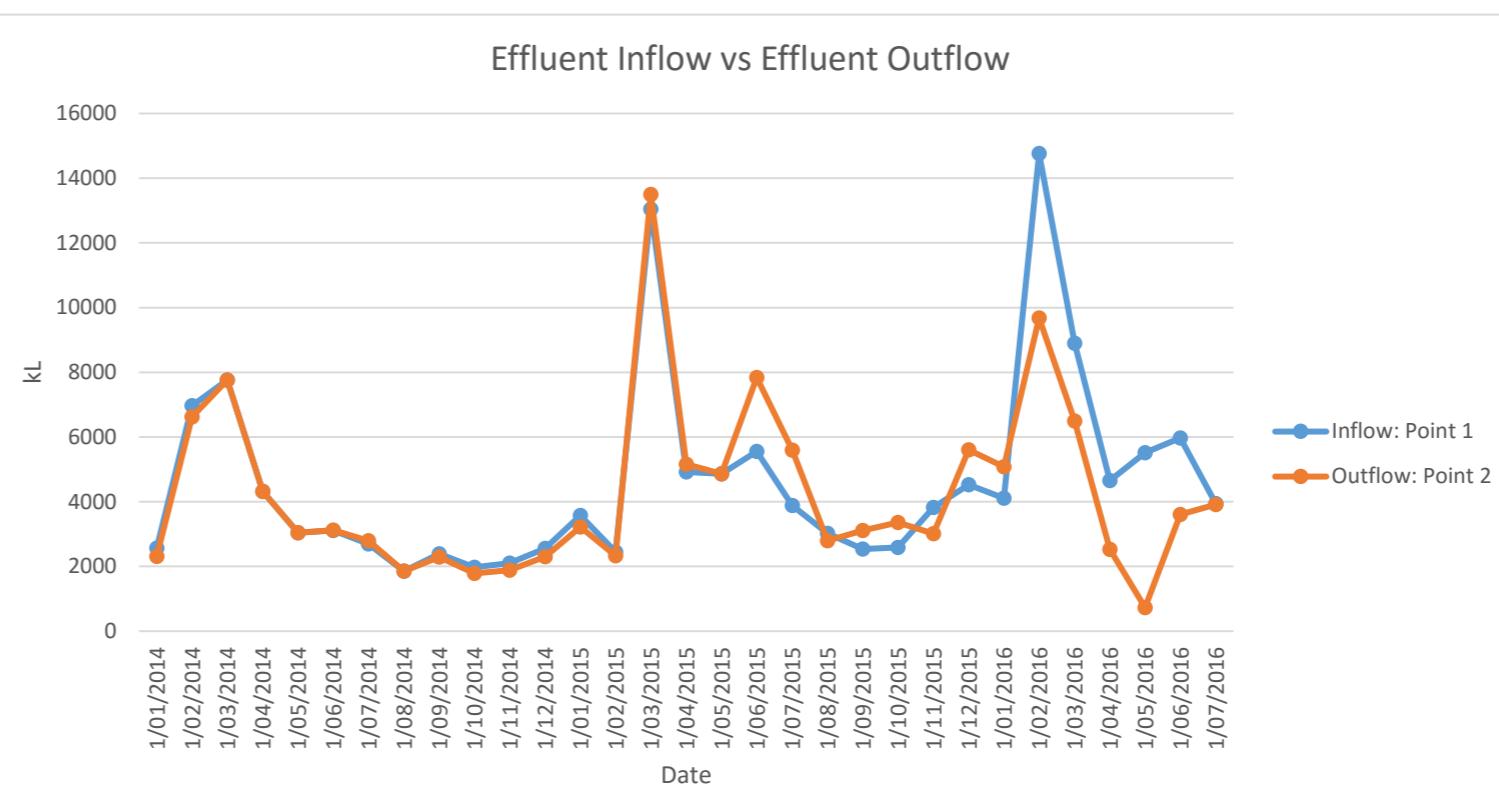
Total Suspended Solids



### Influent (Inflow) vs Effluent (Outflow)

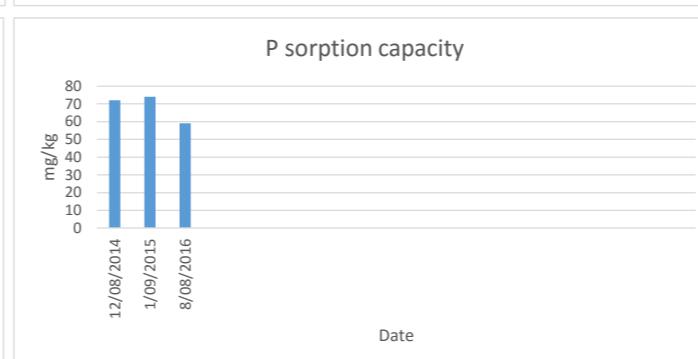
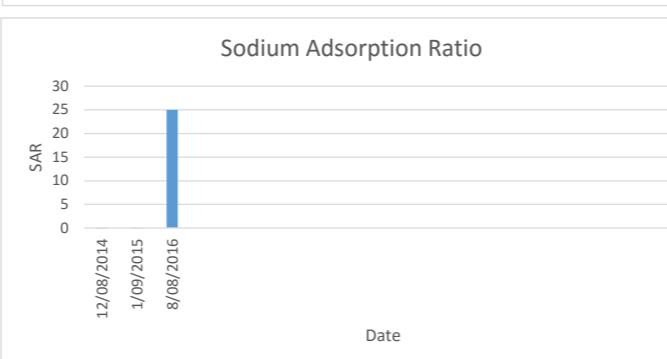
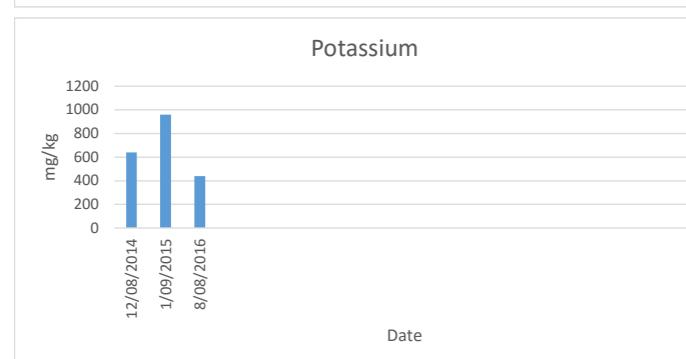
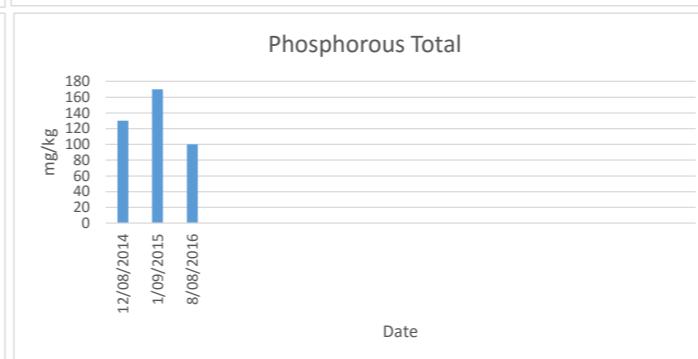
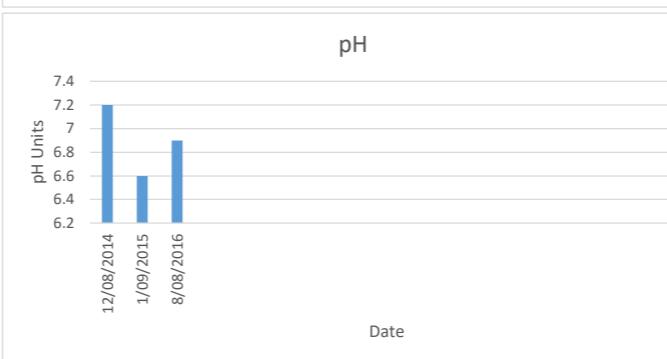
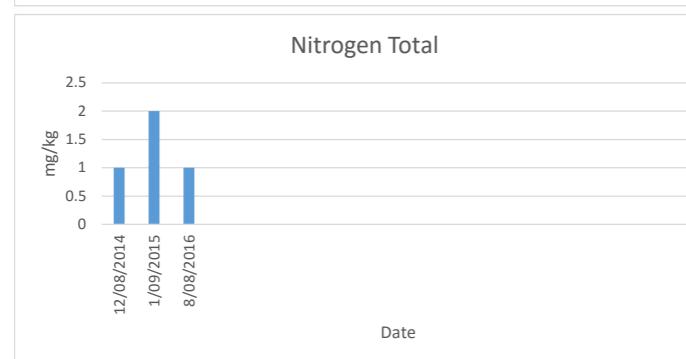
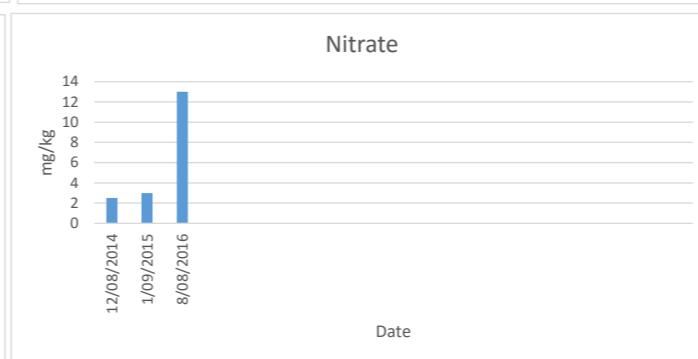
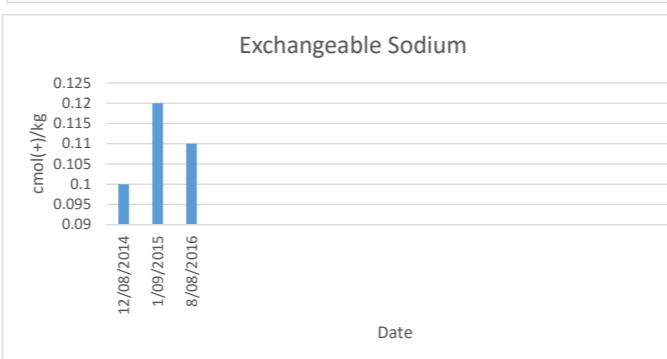
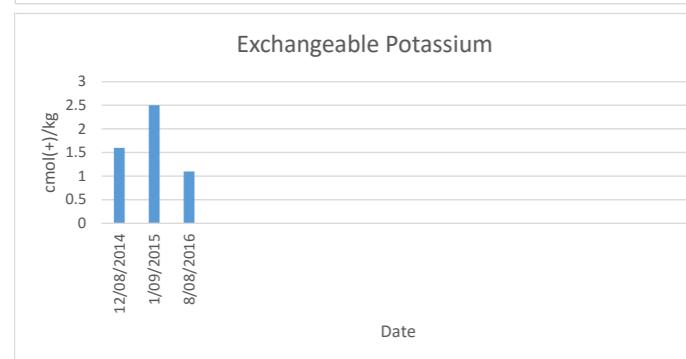
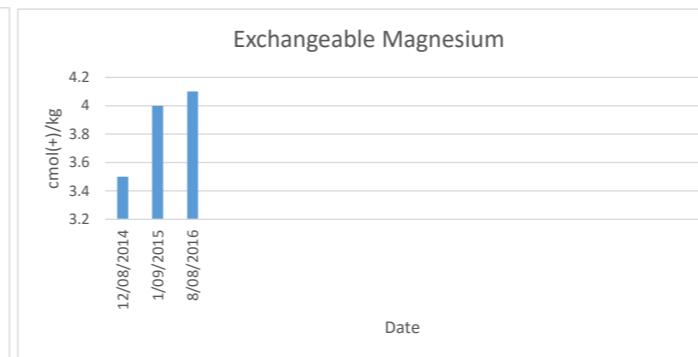
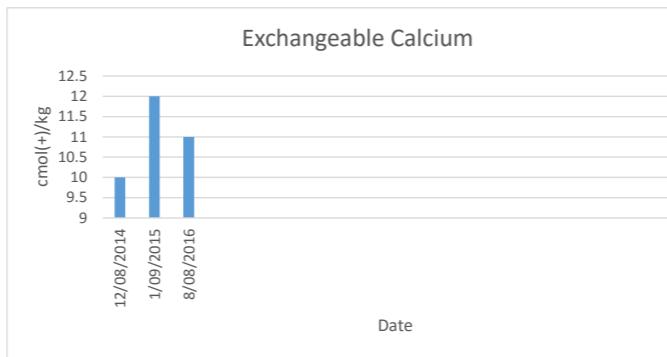
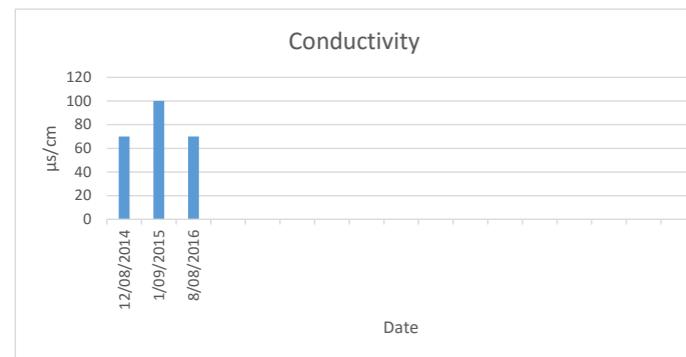
Date	Inflow: Point 1	Outflow: Point 2
27/01/2014	2566	2309
24/02/2014	6970	6622
31/03/2014	7760	7760
28/04/2014	4315	4316
26/05/2014	3043	3044
30/06/2014	3110	3122
28/07/2014	2698	2798
25/08/2014	1854	1854
29/09/2014	2391	2290
27/10/2014	1979	1787
24/11/2014	2100	1890
29/12/2014	2554	2300
26/01/2015	3578	3220
23/02/2015	2451	2330
30/03/2015	13047	13503
27/04/2015	4927	5155
25/05/2015	4858	4865
29/06/2015	5558	7839
27/07/2015	3882	5593
31/08/2015	3027	2800
28/09/2015	2543	3110
26/10/2015	2584	3360
30/11/2015	3826	3010
31/12/2015	4524	5600
31/01/2016	4110	5080
29/02/2016	14760	9680
31/03/2016	8900	6490
30/04/2016	4651	2530
31/05/2016	5515	730
30/06/2016	5971	3610
31/07/2016	3942	3914

Effluent Inflow vs Effluent Outflow



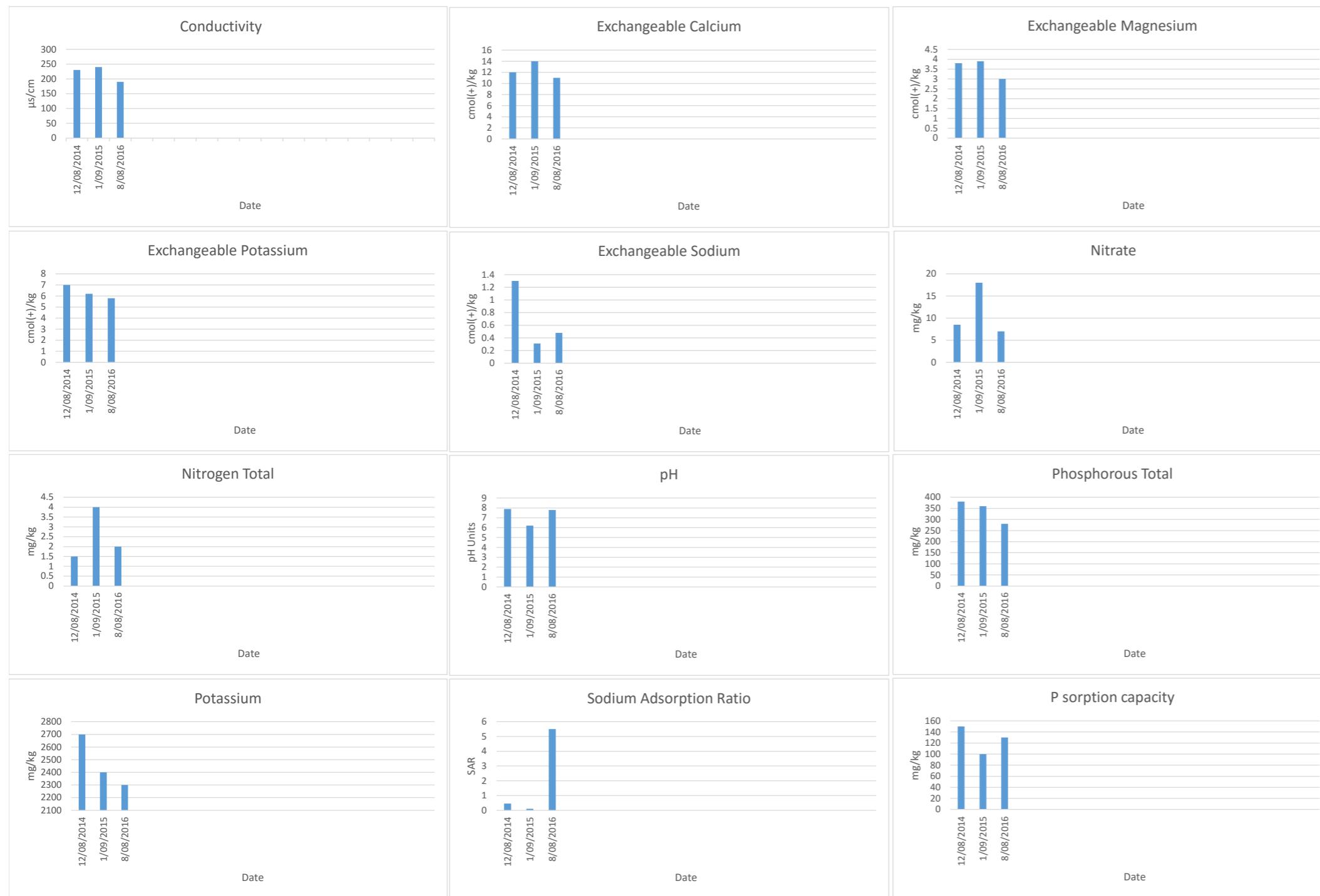
### Point 3: Soil Test Results Chardonnay 7

Type of Test	Name of Test	Test	Units	12/08/2014	1/09/2015	8/08/2016
Quality monitoring	Electrical conductivity	EC	µS/cm	70	100	70
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	10	12	11
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	3.5	4	4.1
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	1.6	2.5	1.1
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.1	0.12	0.11
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	2.5	3	13
Quality monitoring	Total nitrogen	N (total)	mg/kg	1	2	1
Quality monitoring	pH	pH	pH	7.2	6.6	6.9
Quality monitoring	Total phosphorus	P (total)	mg/kg	130	170	100
Quality monitoring	Potassium	K	mg/kg	640	960	440
Quality monitoring	Sodium absorption ratio	SAR	SAR	0.04	0.04	25
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	72	74	59



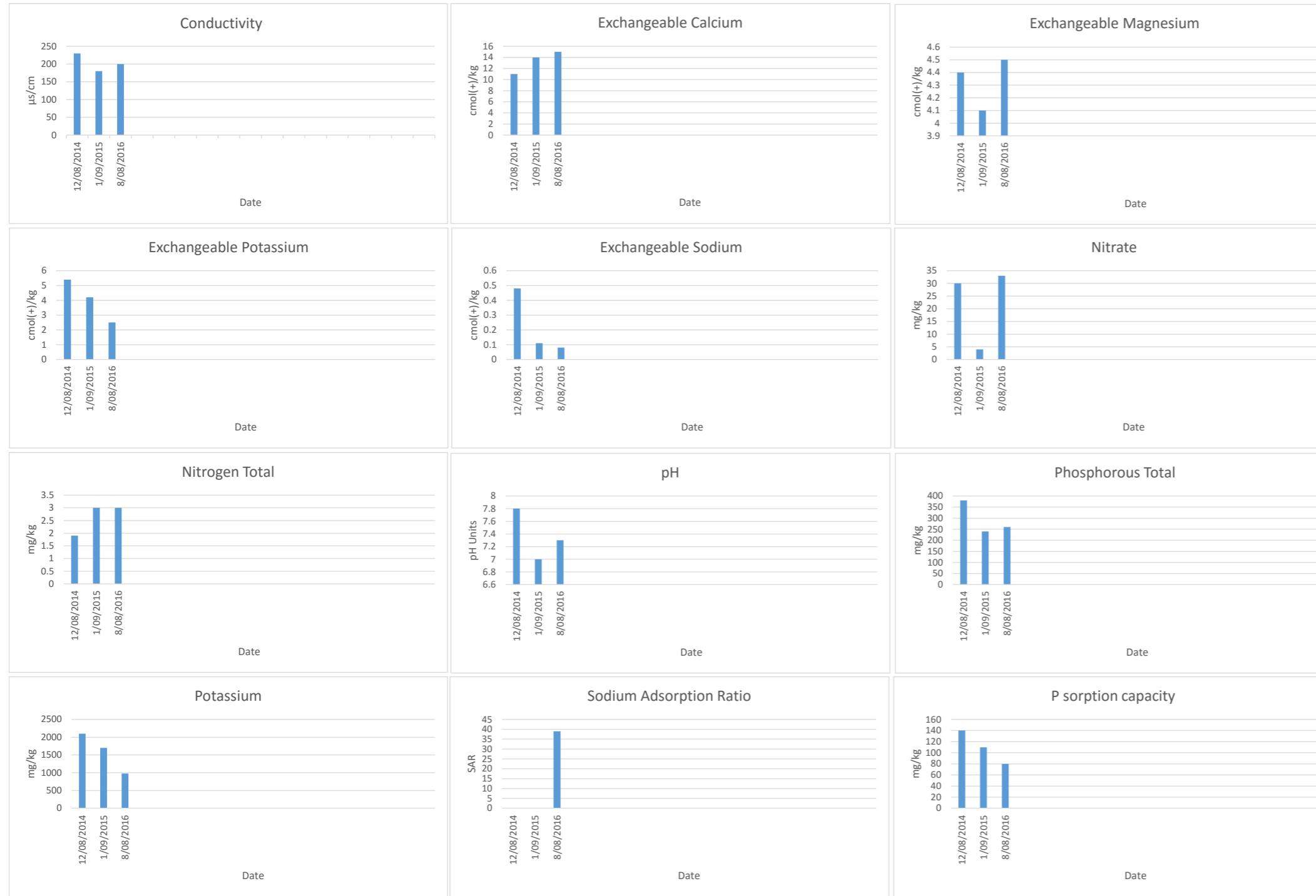
**Point 4: Soil Test Results Canada Muscat 11**

Type of Test	Name of Test	Test	Units	12/08/2014	1/09/2015	8/08/2016
Quality monitoring	Electrical conductivity	EC	µs/cm	230	240	190
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	12	14	11
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	3.8	3.9	3
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	7	6.2	5.8
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	1.3	0.31	0.48
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	8.5	18	7
Quality monitoring	Total nitrogen	N (total)	mg/kg	1.5	4	2
Quality monitoring	pH	pH	pH	7.9	6.2	7.8
Quality monitoring	Total phosphorus	P (total)	mg/kg	380	360	280
Quality monitoring	Potassium	K	mg/kg	2700	2400	2300
Quality monitoring	Sodium absorption ratio	SAR	SAR	0.46	0.1	5.5
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	150	100	130

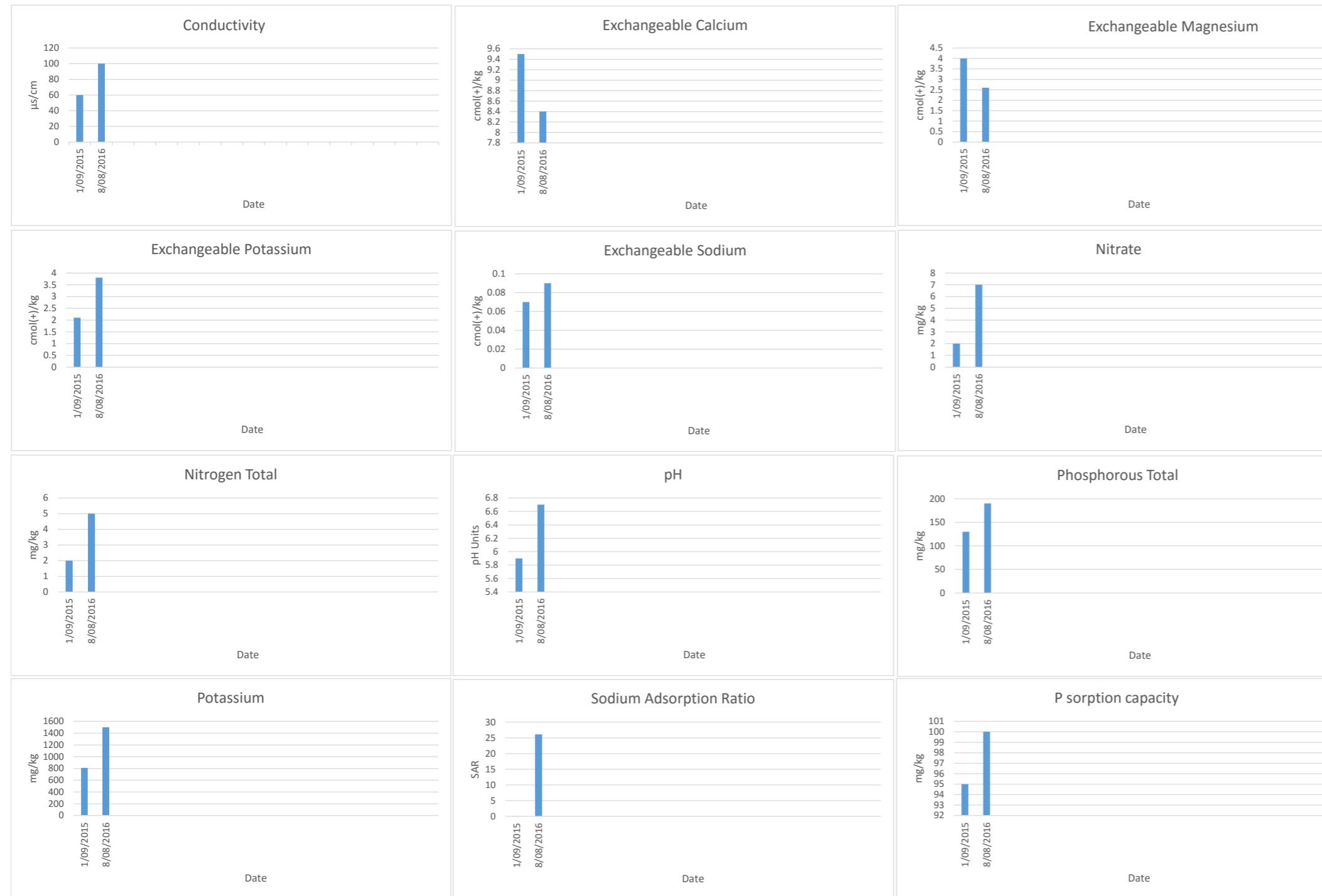


### Point 5: Soil Test Results Red Frontignac 12

Type of Test	Name of Test	Test	Units	12/08/2014	1/09/2015	8/08/2016
Quality monitoring	Electrical conductivity	EC	µs/cm	230	180	200
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	11	14	15
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	4.4	4.1	4.5
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	5.4	4.2	2.5
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.48	0.11	0.08
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	30	4	33
Quality monitoring	Total nitrogen	N (total)	mg/kg	1.9	3	3
Quality monitoring	pH	pH	pH	7.8	7	7.3
Quality monitoring	Total phosphorus	P (total)	mg/kg	380	240	260
Quality monitoring	Potassium	K	mg/kg	2100	1700	980
Quality monitoring	Sodium adsorption ratio	SAR	SAR	0.17	0.04	39
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	140	110	80

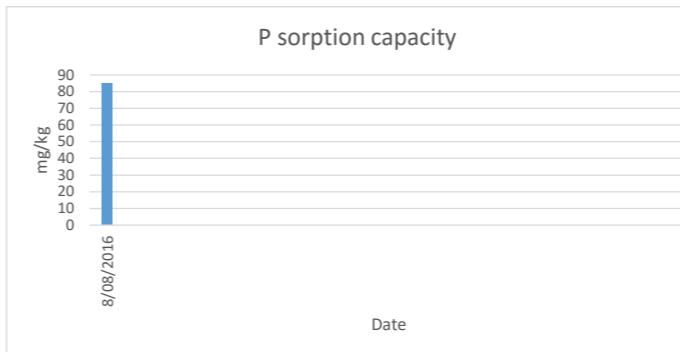
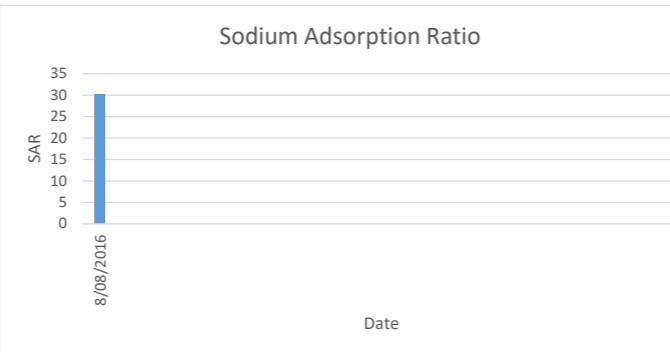
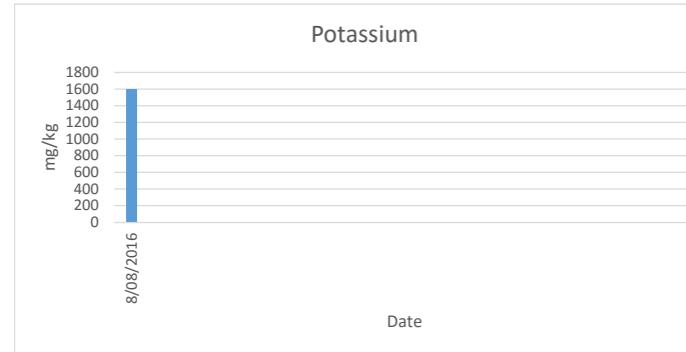
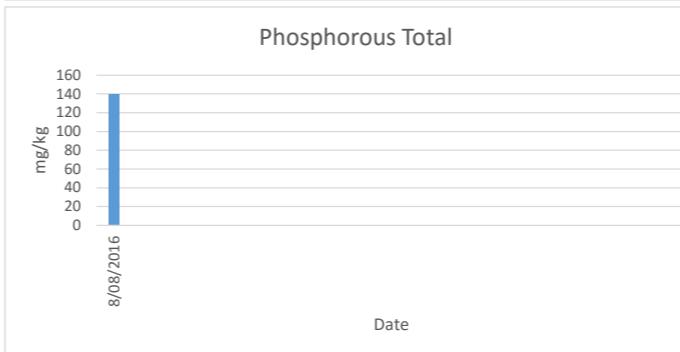
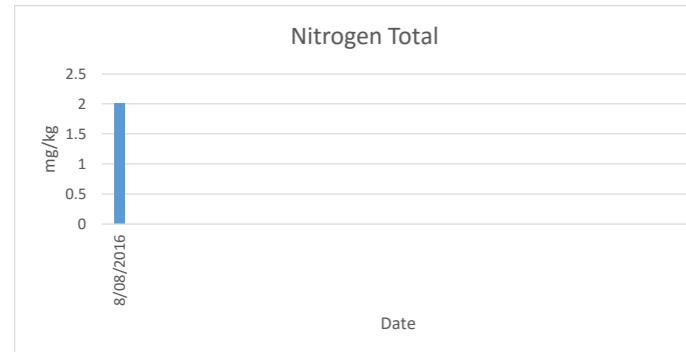
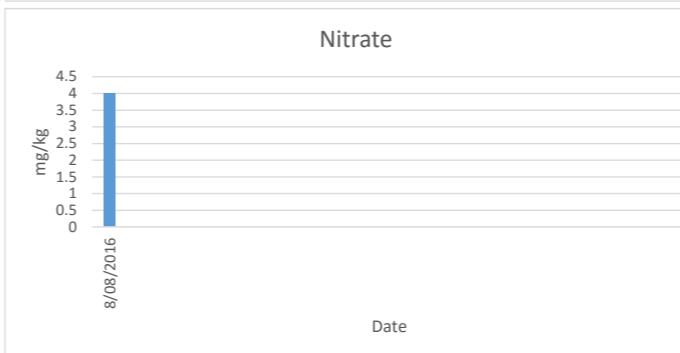
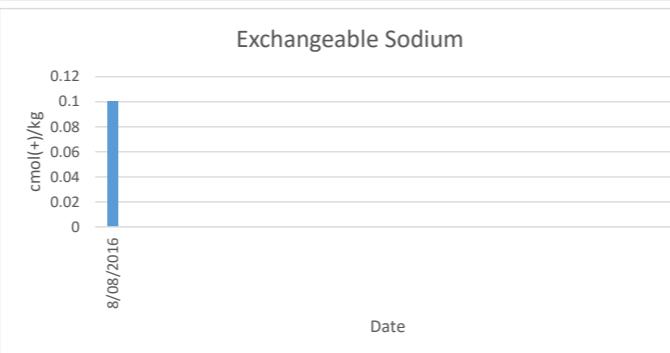
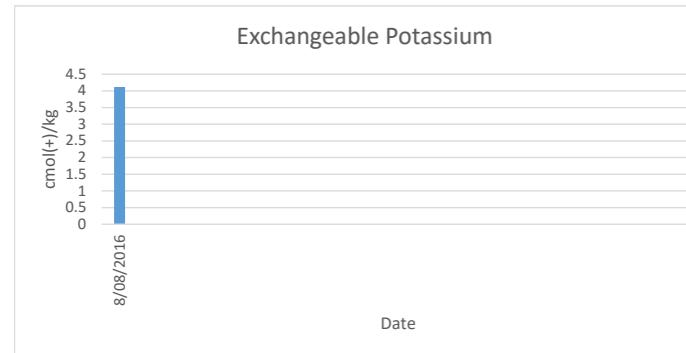
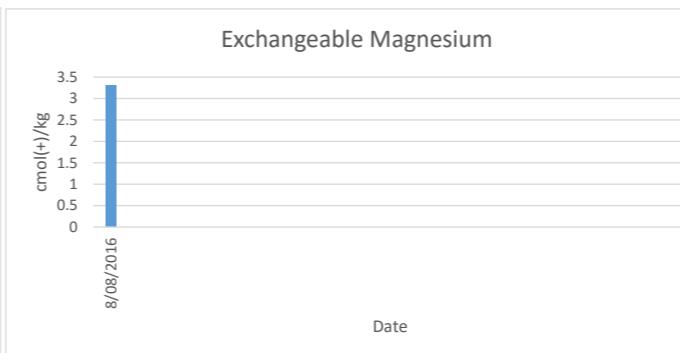
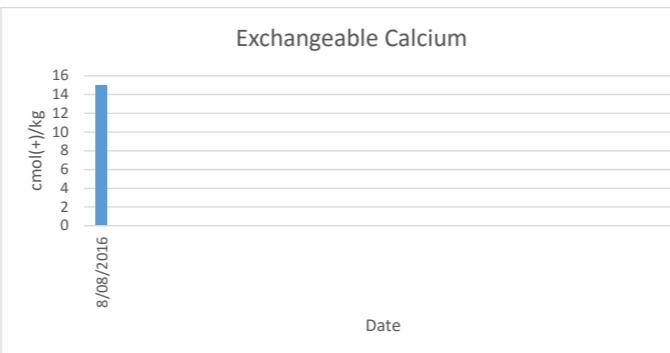
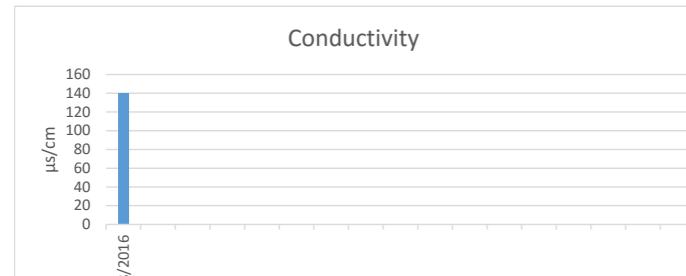


## **Point 11: Soil Test Results Old Chardonnay 5**

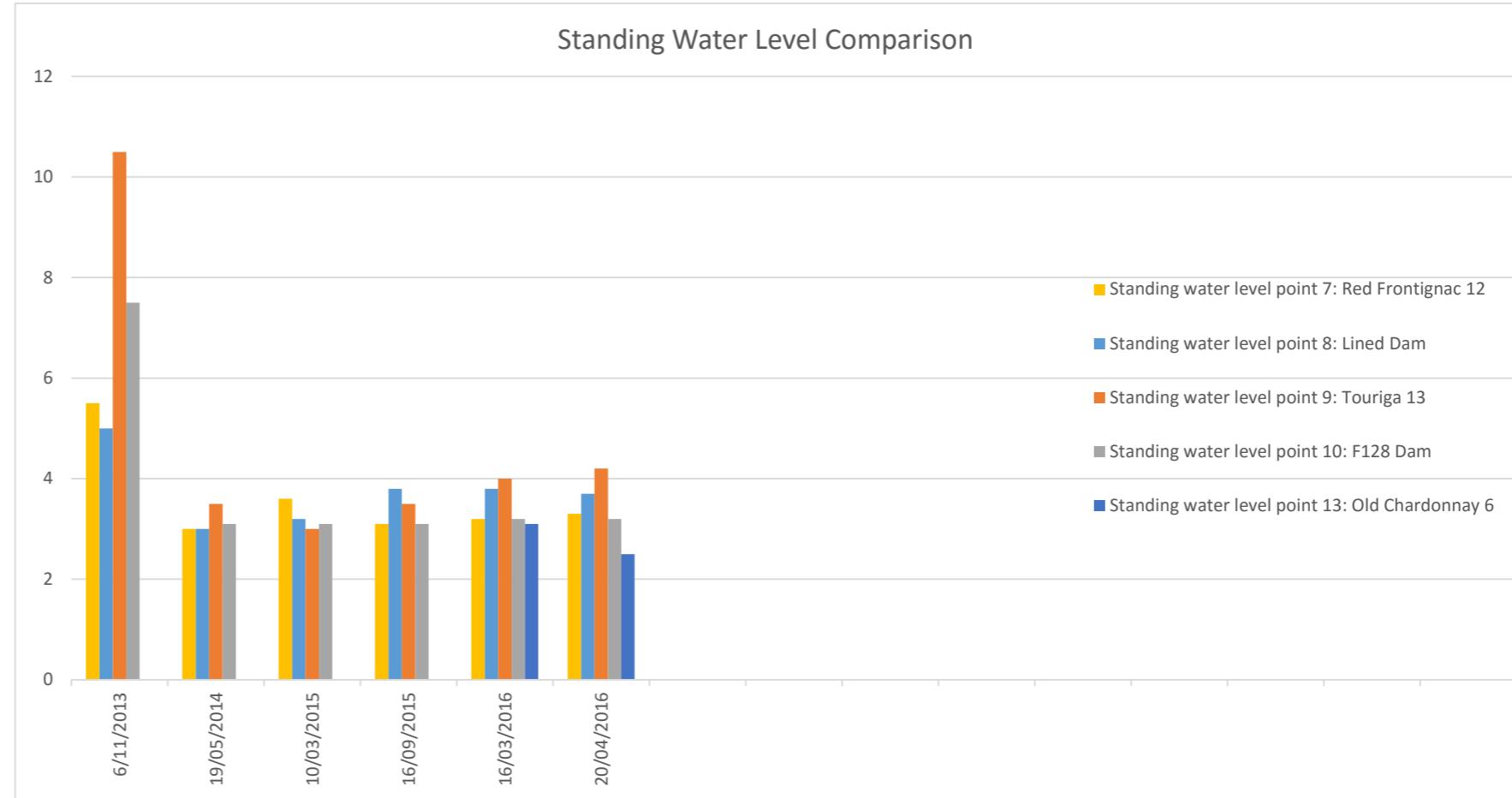


**Point 12: Soil Test Results Old Chardonnay 6**

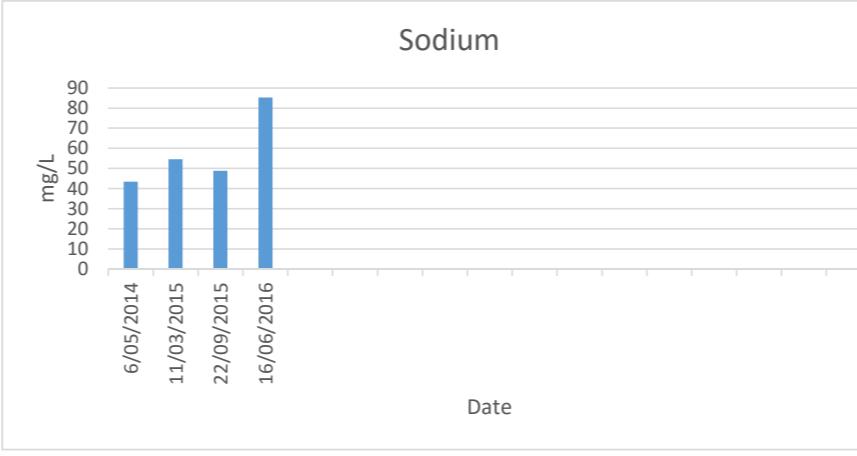
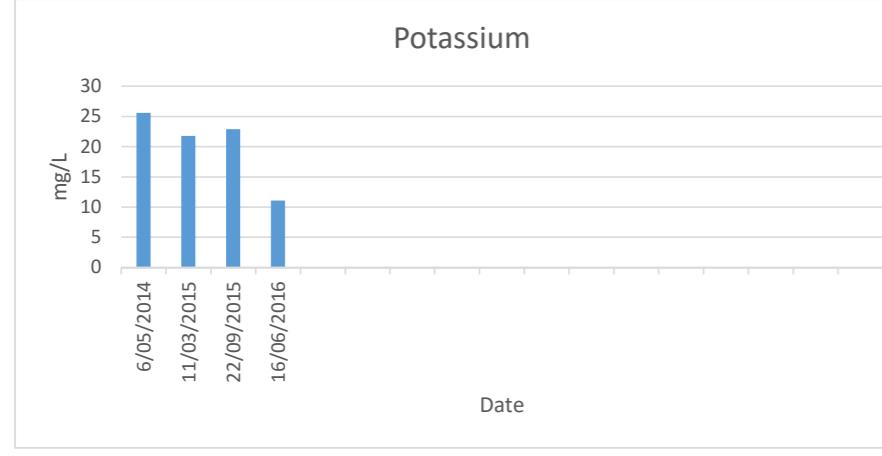
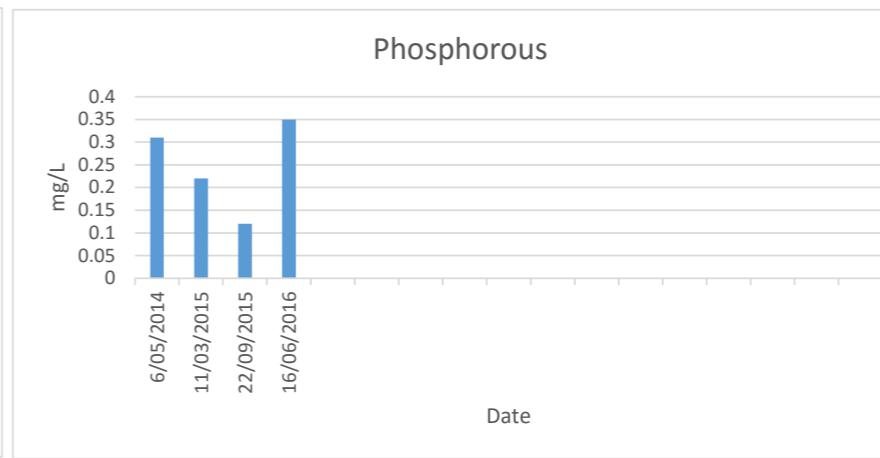
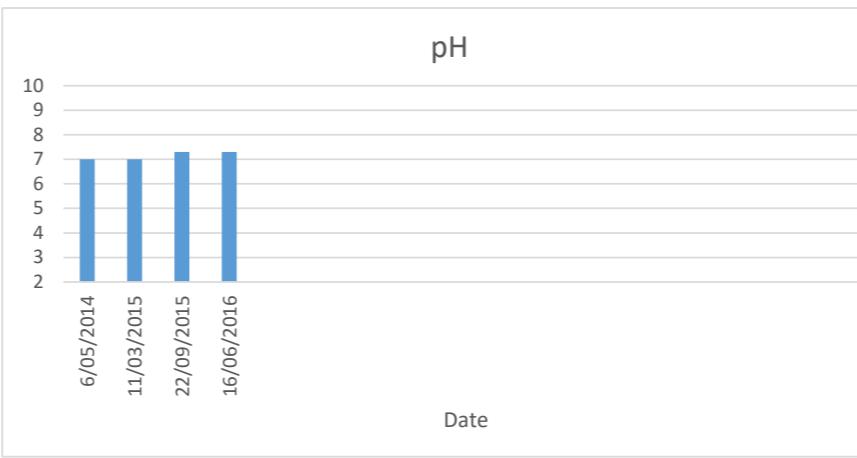
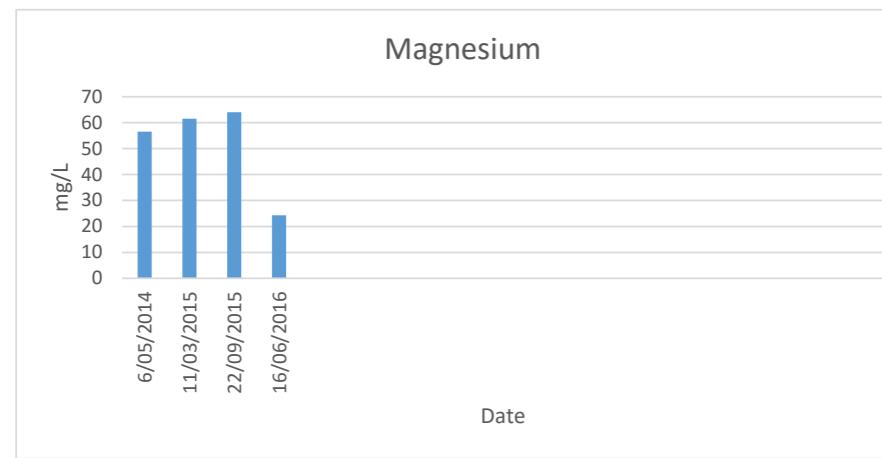
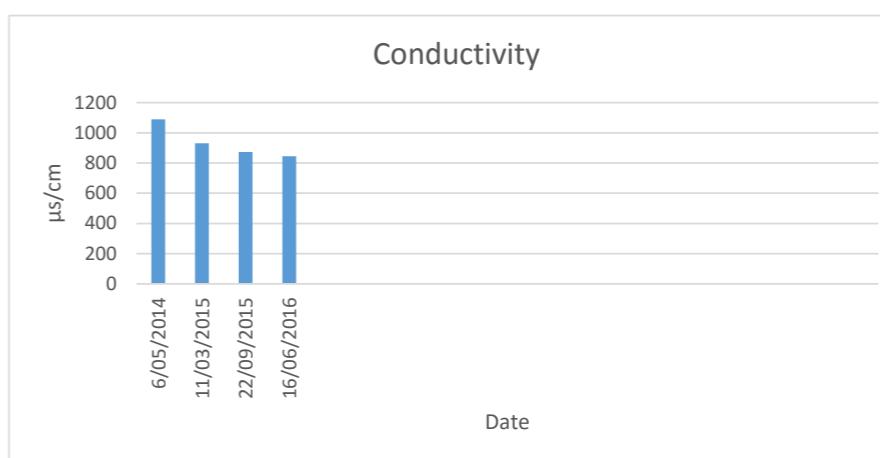
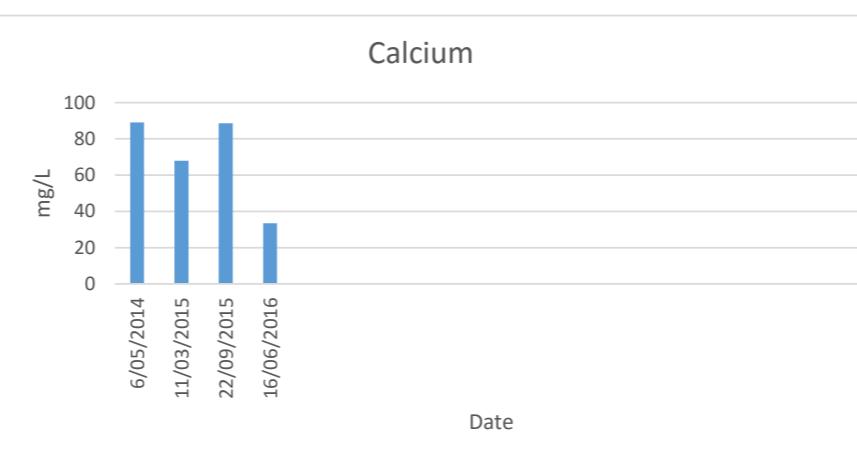
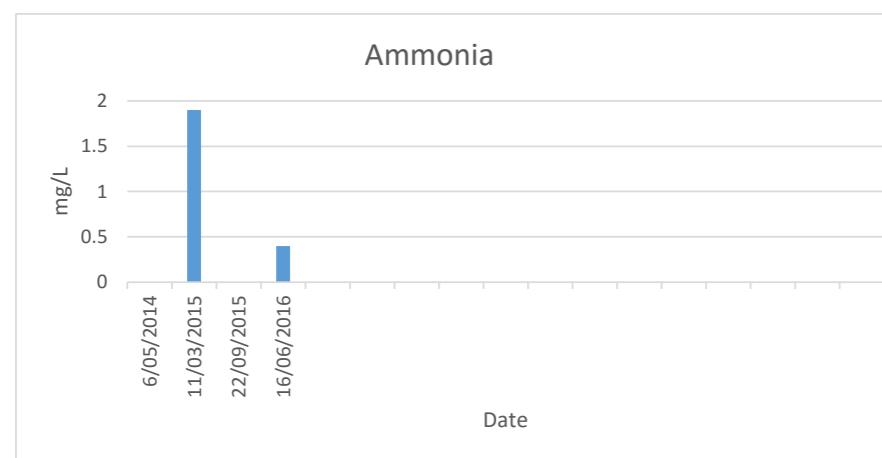
Type of Test	Name of Test	Test	Units	Date
Quality monitoring	Electrical conductivity	EC	µs/cm	8/08/2016
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	15
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	3.3
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	4.1
Quality monitoring	Exchangeable sodium	Exch. Na	cmol(+)/kg	0.1
Quality monitoring	Nitrate nitrogen	Nitrate	mg/kg	4
Quality monitoring	Total nitrogen	N (total)	mg/kg	2
Quality monitoring	pH	pH	pH	8
Quality monitoring	Total phosphorus	P (total)	mg/kg	140
Quality monitoring	Potassium	K	mg/kg	1600
Quality monitoring	Sodium absorption ratio	SAR	SAR	30.2
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	85



## Piezometer Standing Water Levels: depth in metres below surface

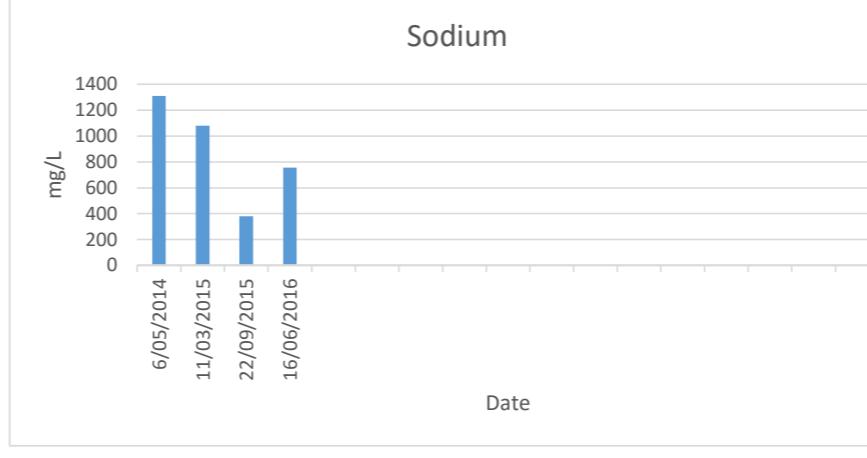
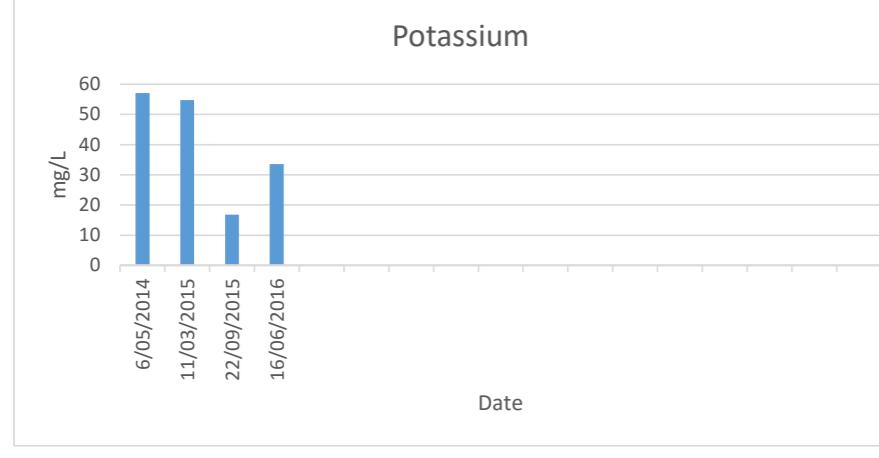
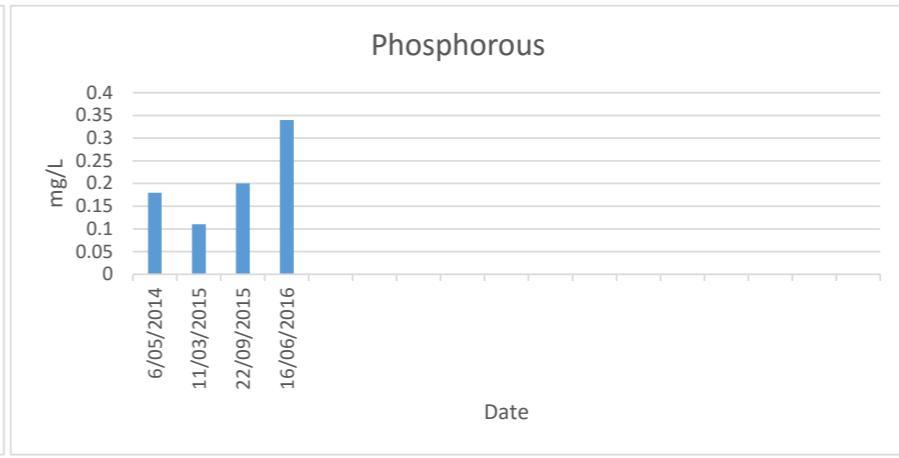
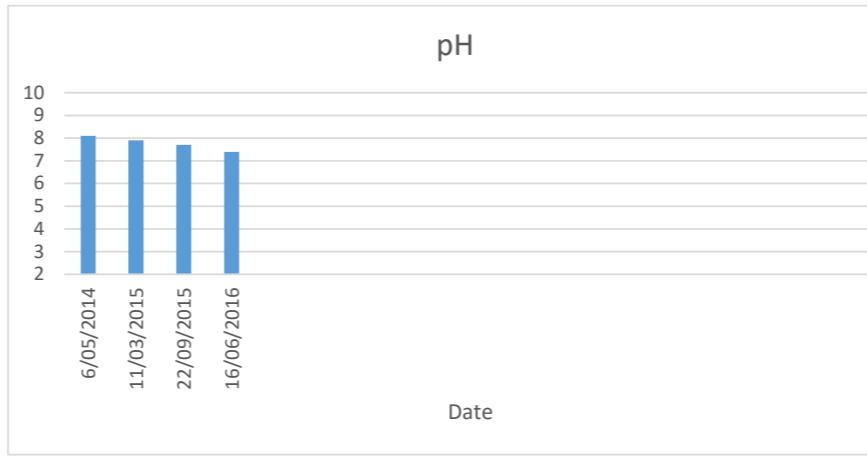
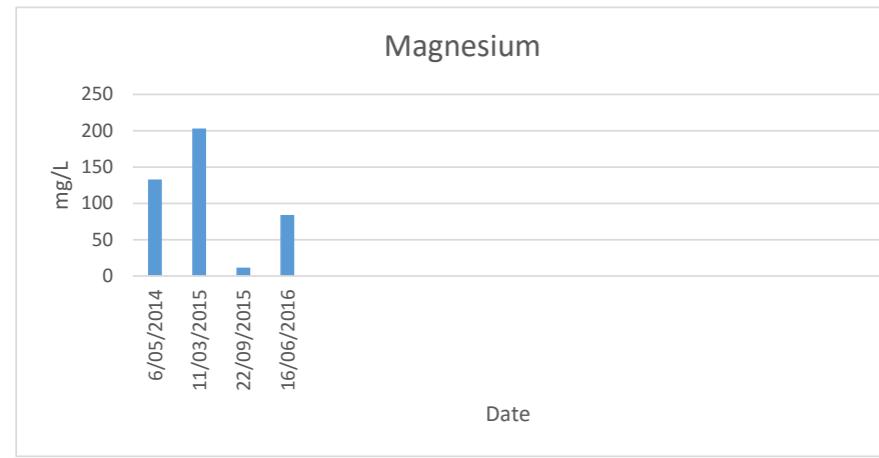
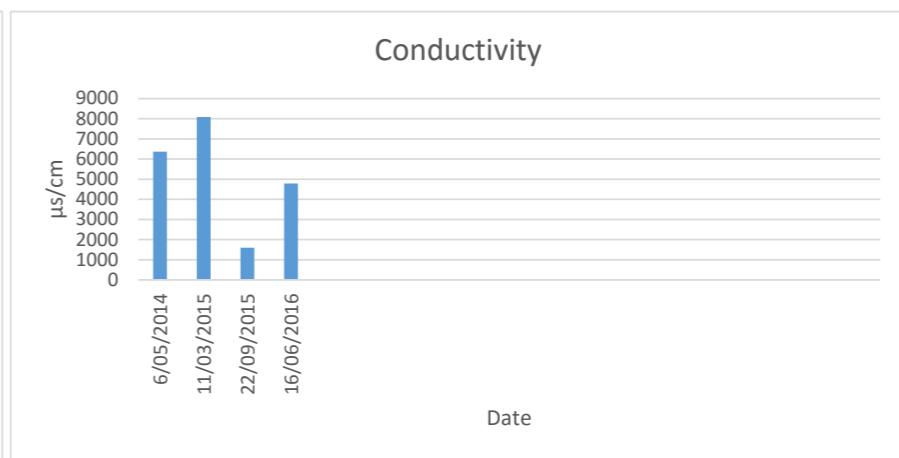
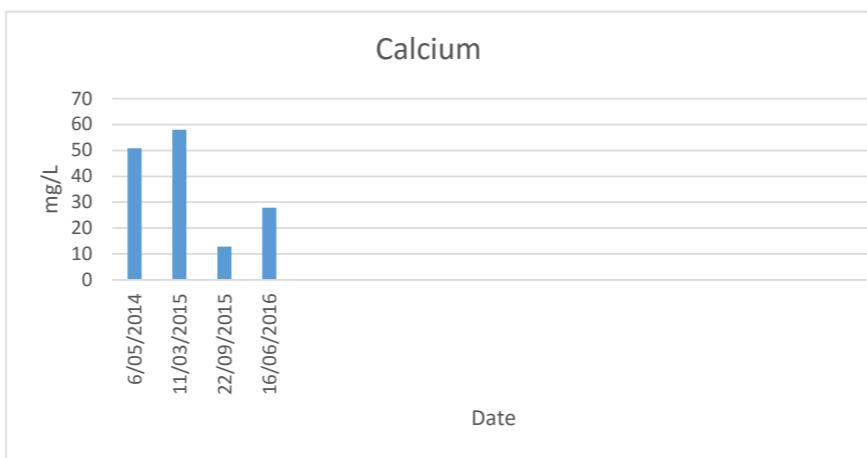
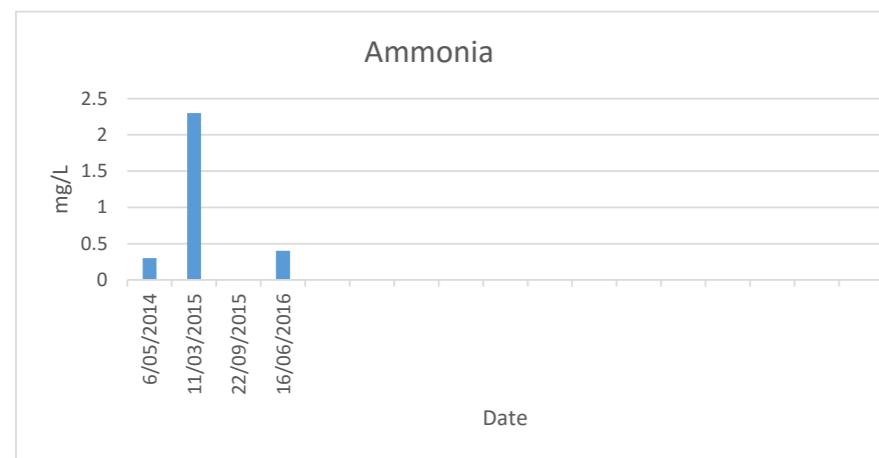


Point 7: Piezometer Water Quality Test Results Red Frontignac 12 Row 1



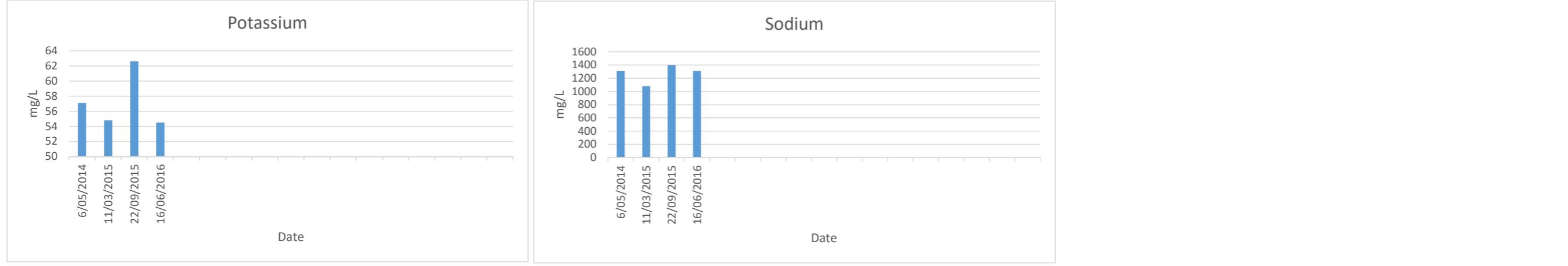
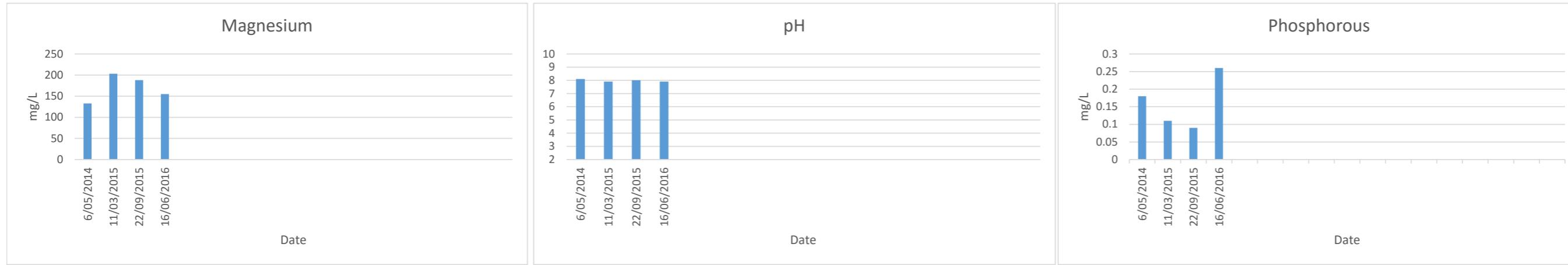
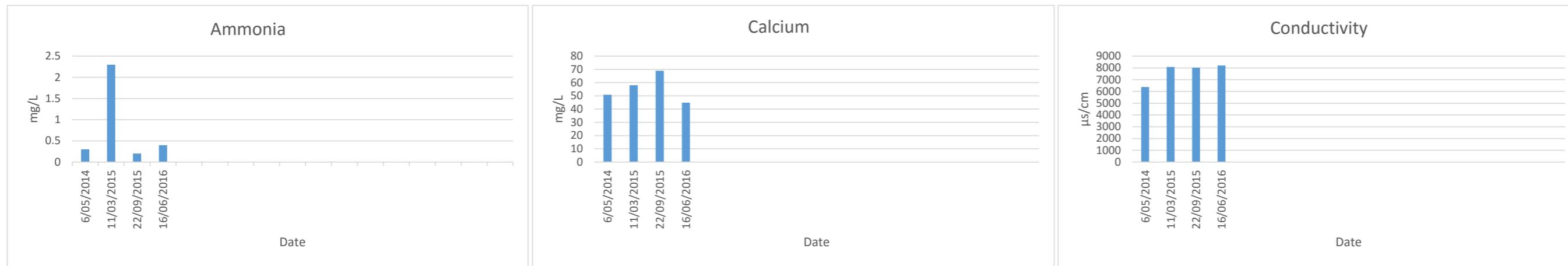
## **Point 8: Piezometer Water Quality Test Results Lined Dam SW End**

Date

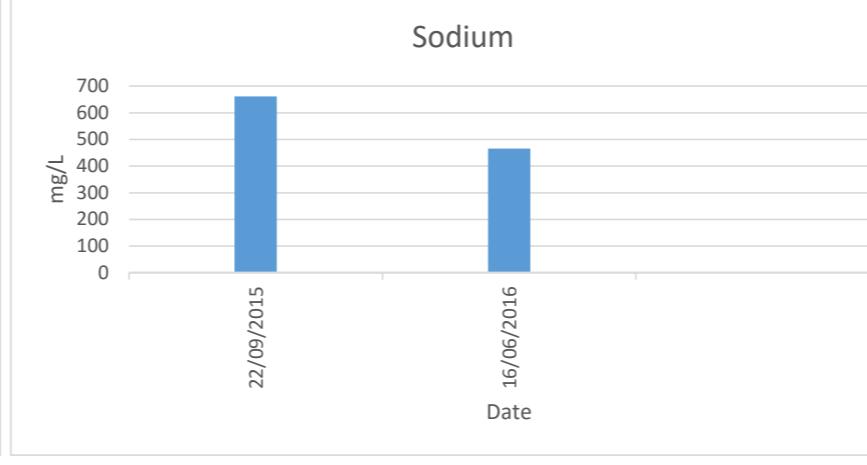
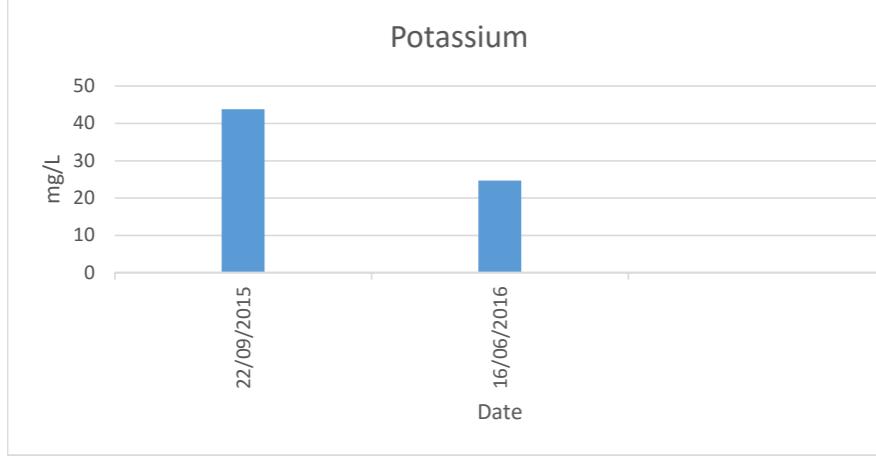
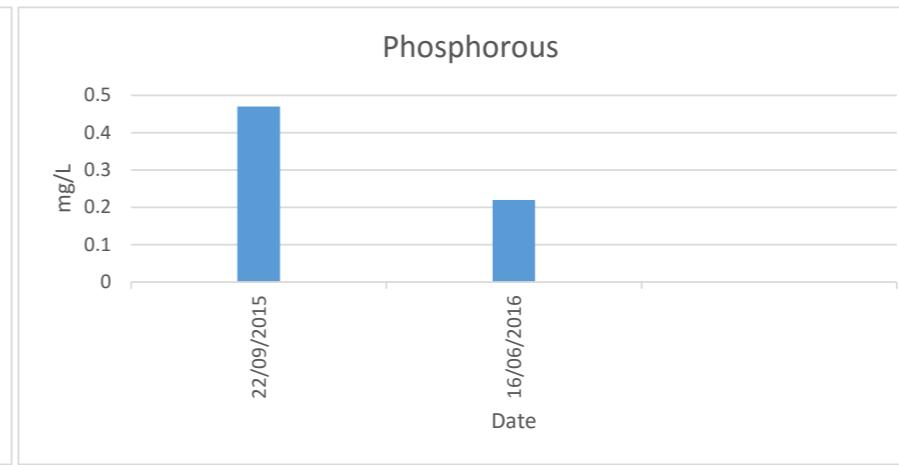
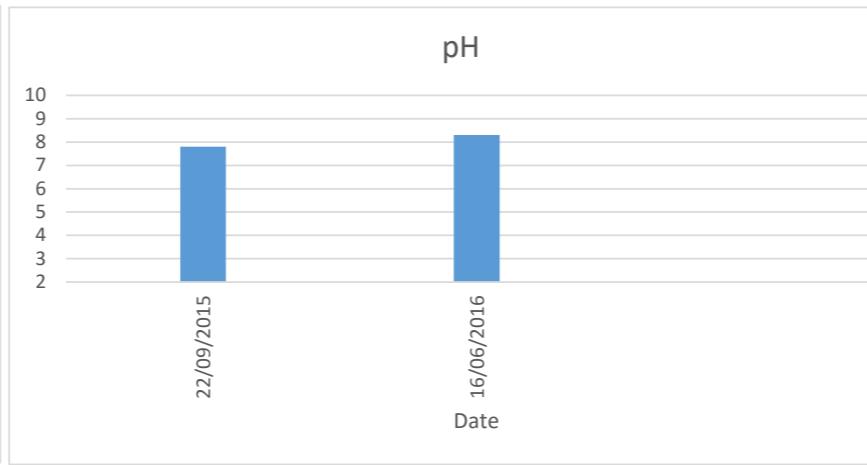
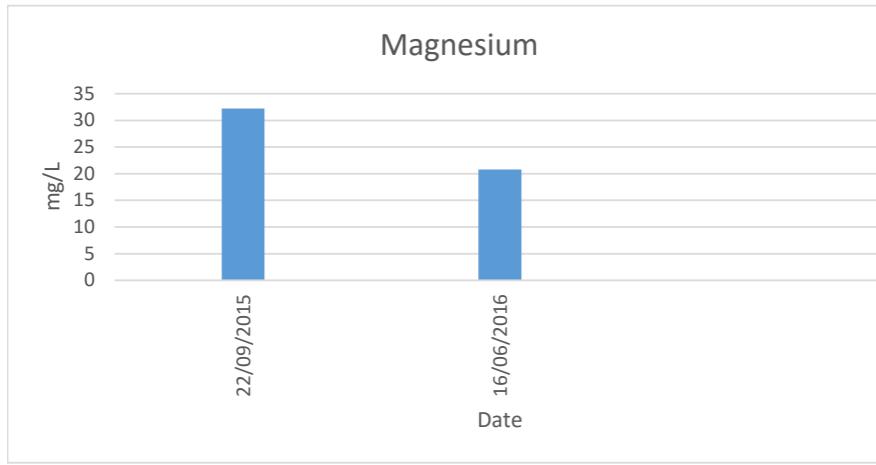
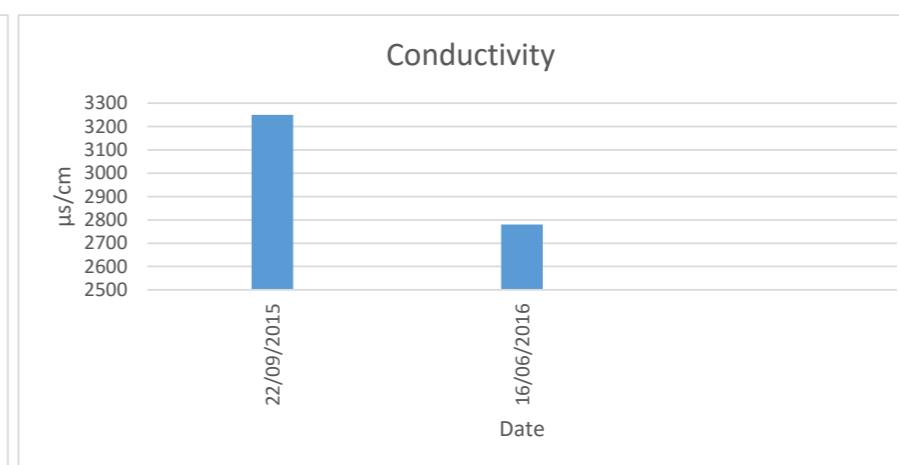
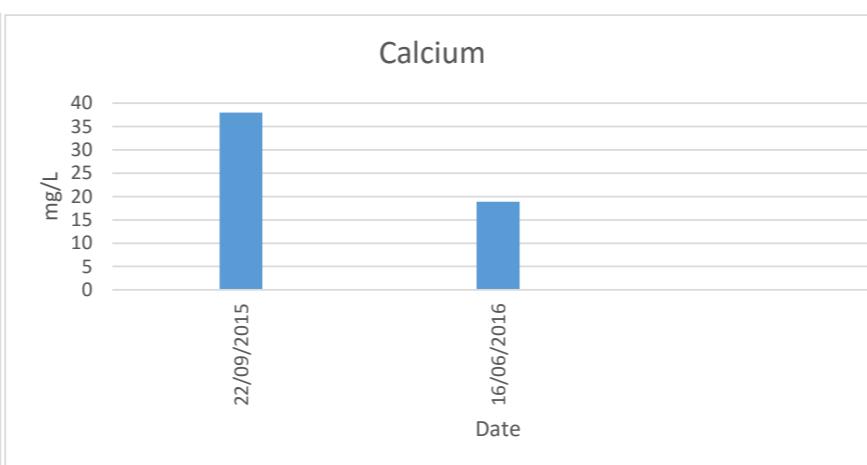
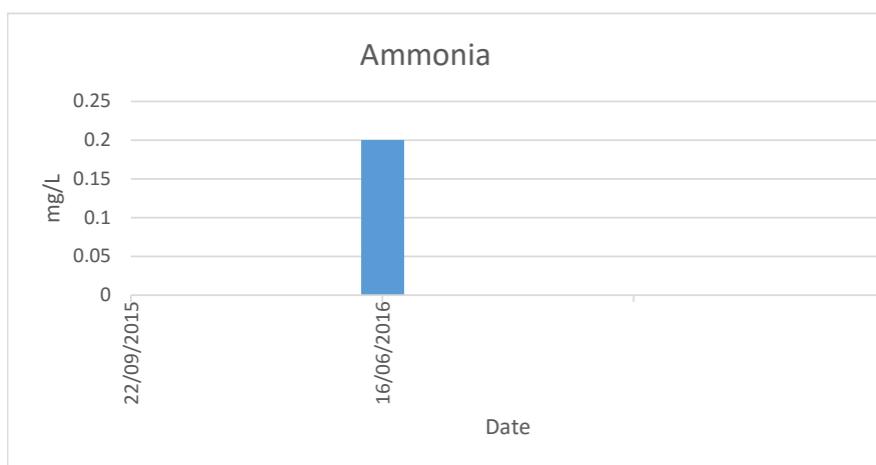


Point 9: Piezometer Water Quality Test Results Touriga SW End

Date

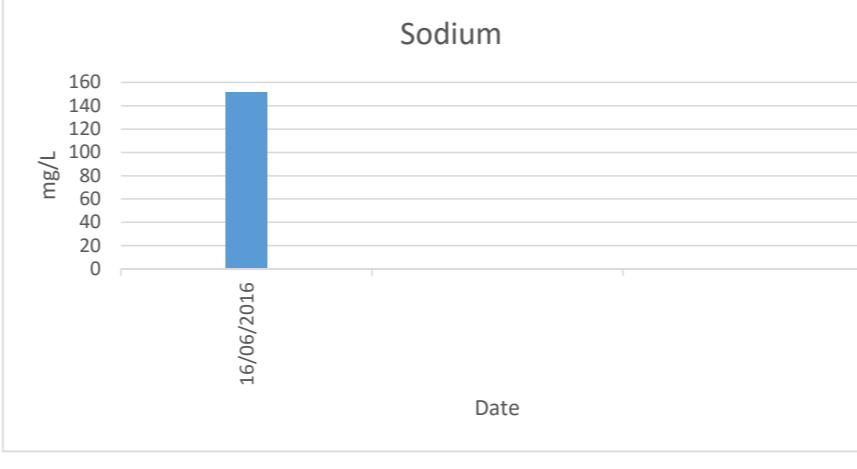
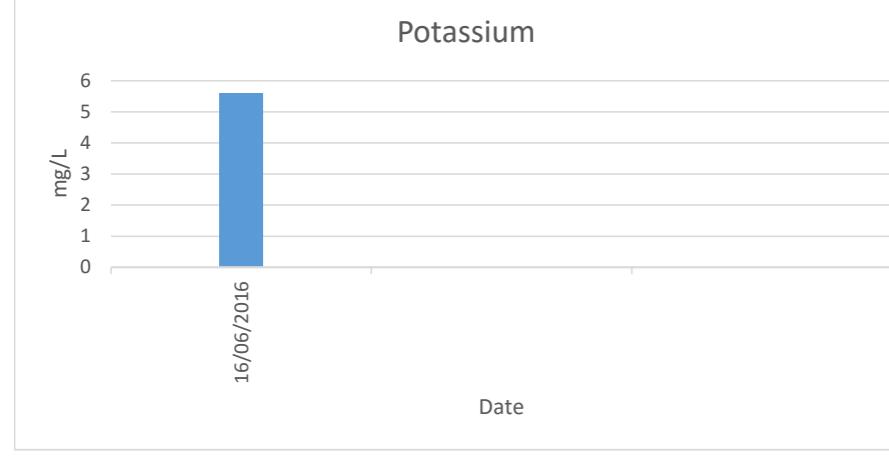
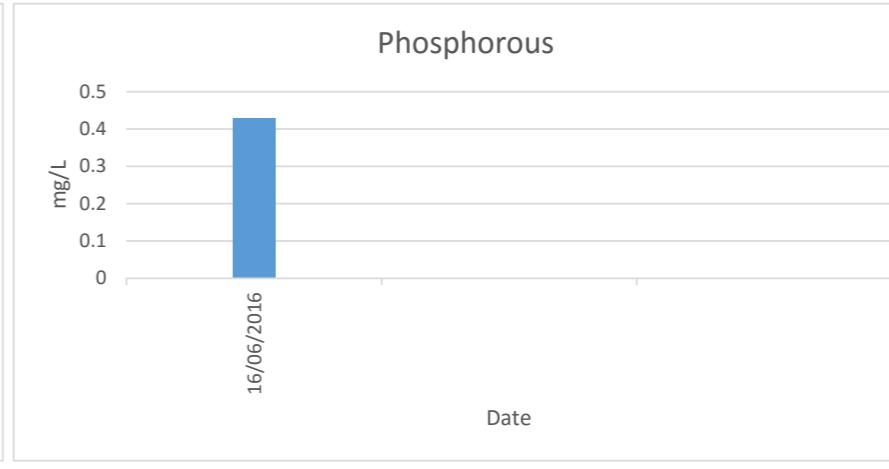
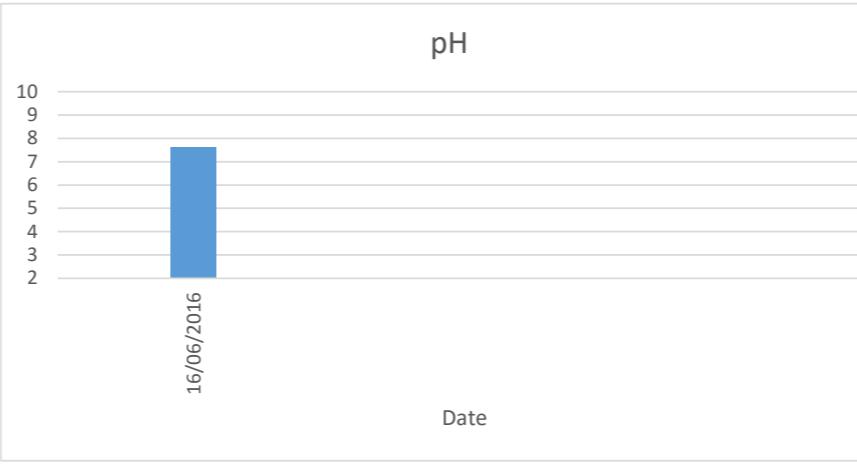
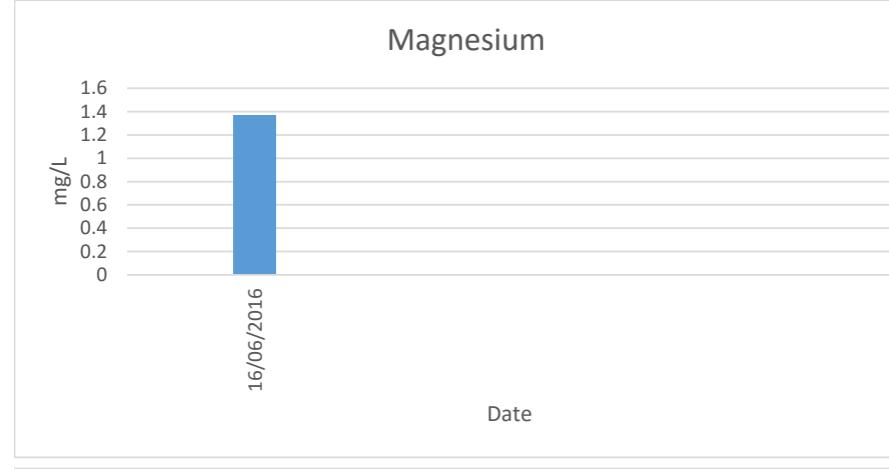
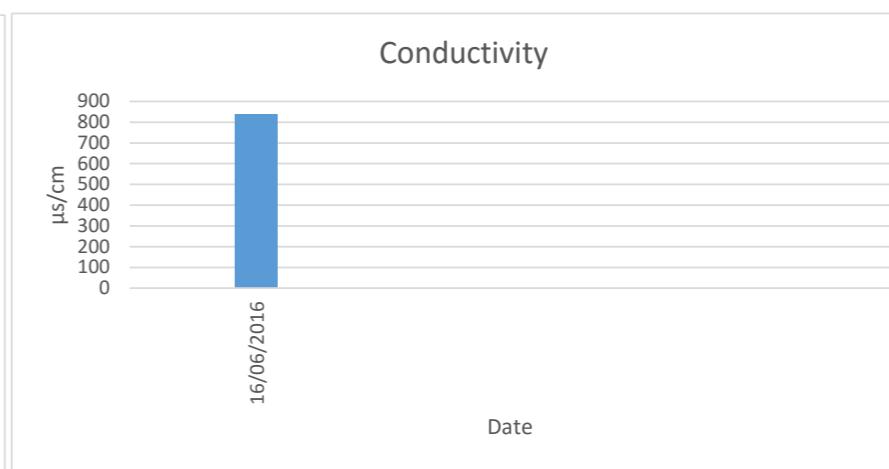
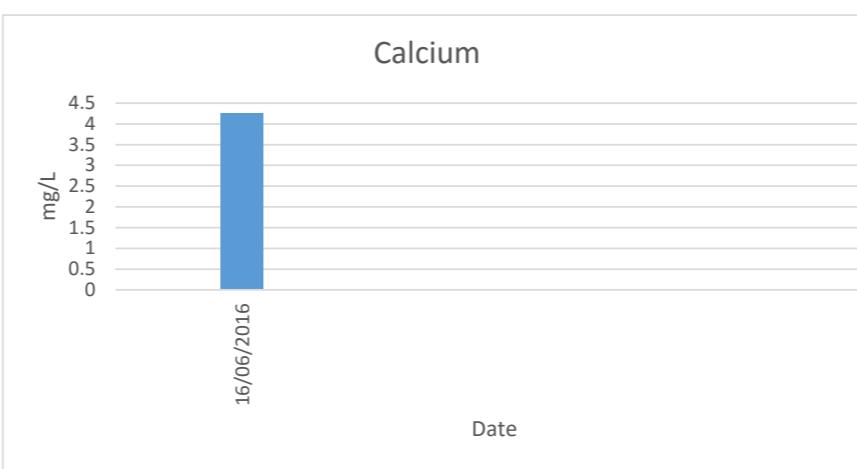
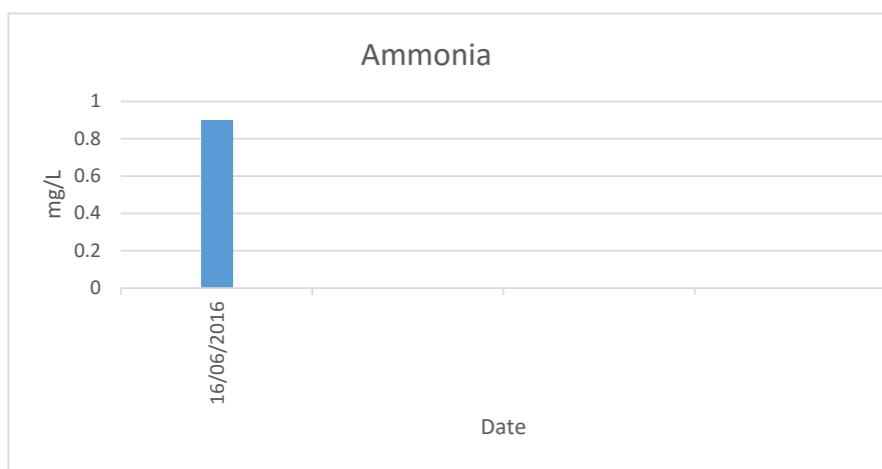


## Point 10: Piezometer Water Quality Test Results F128 Dam SW Point



Point 13: Piezometer Water Quality Test Results Old Chardonnay 6 SW End

Date



**EPA ENVIRONMENTAL MONITORING**

Type of Monitoring Point	How Monitored	Location Description	Frequency
Odour	Odour Intensity and Descriptor Sheet; observation.	Boundary of evaporation ponds "EPA 21" & "EPA 22" on site map.	Daily (working days)

Type of Monitoring Point	How Monitored	Location Description	Frequency
Weather conditions other than rainfall - temperature, wind speed, wind direction, humidity	Handheld weather meter	Boundary of evaporation ponds "EPA 21" & "EPA 22" on site map.	Daily (working days)

Type of Monitoring Point	How Monitored	Location Description	Frequency
Rainfall	Rain gauge	Boundary of evaporation ponds "EPA 21" & "EPA 22" on site map.	Daily (working days)

Type of Monitoring Point	How Monitored	Location Description	Frequency
Biosolids Cake	Biosolids sample, laboratory analysis	Evaporation ponds sludge	As required

<b>Test Type</b>	<b>EPA Reference Points</b>	<b>Frequency of Monitoring</b>	<b>Next Sample Date</b>
Soil quality monitoring	3, 4, 5, 6, 11	Annual	1/09/2016
Groundwater quality monitoring	7, 8, 9, 10	Annual	11/03/2016
Groundwater standing level	7, 8, 9, 10	6 monthly	16/03/2016
Effluent quality monitoring: inflow and outflow	1, 2	6 monthly	15/03/2016
Effluent volume monitoring: inflow and outflow	1,2	Monthly	28/10/2015