

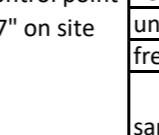


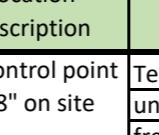
MCWILLIAM'S
FAMILY WINEMAKERS

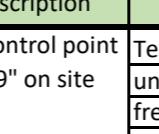
EPA ENVIRONMENTAL MONITORING

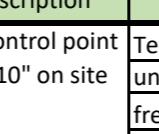
EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	Pollutant											
						EC	Exch. Ca	Exch. Mg	Exch. K	Exch. Na	Nitrate	N (total)	pH	P (total)	K	SAR	P sorption capacity
<u>Point 4: Soil Sample Old Canada Muscat</u> <u>11</u>	Soil quality monitoring		Soil sample.	Soil control point "EPA 4" on site map.	Test	µs/cm	cmol(+)/kg	cmol(+)/kg	cmol(+)/kg	cmol(+)/kg	mg/kg	mg/kg	pH	mg/kg	mg/kg	SAR	mg/kg
					unit of measure												spec. freq 1
					frequency												yearly
					sampling method												composite sample

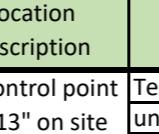
EPA Identification point number	Type of Monitoring Point	Type of Discharge Point	How Monitored	Location Description	Detail	Pollutant											
						EC	Exch. Ca	Exch. Mg	Exch. K	Exch. Na	Nitrate	N (total)	pH	P (total)	K	SAR	P sorption capacity
Point 11: Soil Sample Old	Soil quality monitoring		Soil sample.	Soil control point "EPA 11" on site map.	Test unit of measure	µs/cm	cmol(+)/kg	cmol(+)/kg	cmol(+)/kg	cmol(+)/kg	mg/kg	mg/kg	pH	mg/kg	mg/kg	SAR	mg/kg
Chardonnay 5					frequency; sampling method								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											
Point 7: Piezometer Red Frontignac Row 1	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample.	Soil control point "EPA 7" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
			Groundwater level m'mnt.		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											
Point 8: Piezometer South End Lined Dam	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample.	Soil control point "EPA 8" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
			Groundwater level m'mnt.		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											
Point 9: Piezometer South West End Row 8 Touriga 13	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample.	Soil control point "EPA 9" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
			Groundwater level m'mnt.		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	

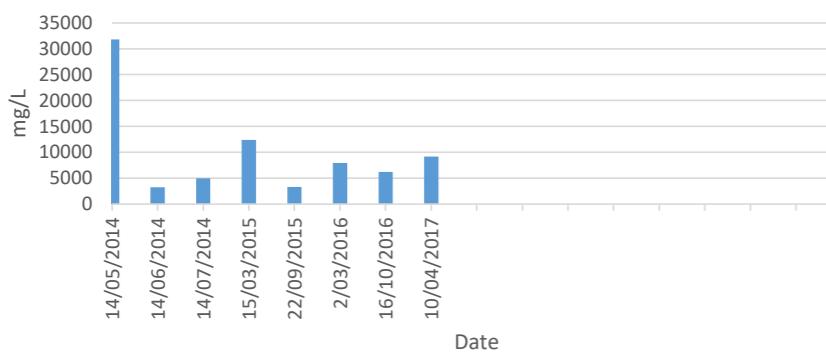
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Point 10: Piezometer South West Point F128 dam	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample.	Soil control point "EPA 10" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
			Groundwater level m'mnt.		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											
Point 13: Piezometer West End Old Chardonnay 6	Groundwater quality monitoring. Standing water level monitoring		Groundwater sample.	Soil control point "EPA 13" on site map.	Test		ammonia	Ca	EC	Mg	Nitrate N	N (total)	pH	P (total)	K	Na		
			Groundwater level m'mnt.		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	

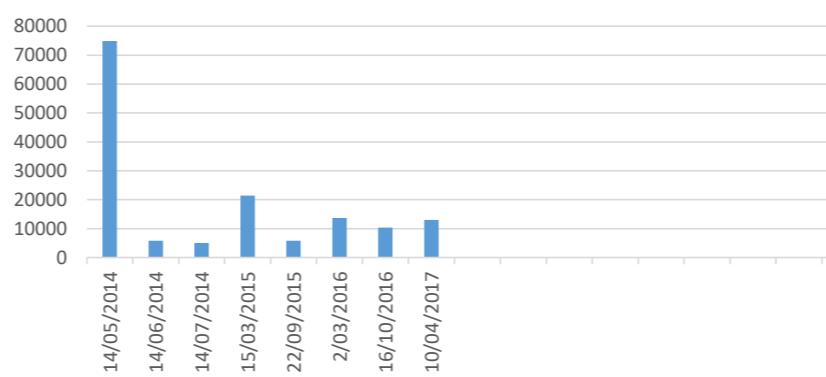
Point 1: Influent Quality Monitoring

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	14/11/2014	14/12/2014	15/01/2015	22/02/2015	
Quality monitoring	Biological oxygen demand	BOD	mg/L	31800	3260	4950	12400	3320	7920	6190	9210			
Quality monitoring	Chemical oxygen demand	COD	mg/L	74900	5820	5060	21400	5850	13700	10400	13000			
Quality monitoring	Electrical conductivity	EC	µs/cm	11800	1020	2900	3290	7330	6610	3540	1450			
Quality monitoring	Nitrogen	N (total)	mg/L	717	13	103	286	27	420	582	127			
Quality monitoring	pH	pH	pH	n/a	n/a	5.3	4.1	12.4	6	9.8	5.4			
Quality monitoring	Phosphorus	P (total)	mg/L	47	2.8	11.2	23.2	5.69	14.4	12.9	17.3			
Quality monitoring	Sodium absorption ratio	SAR	SAR	<1	2	2	1	2	2	3	2			
Quality monitoring	Total dissolved solids	TDS	mg/L	11700	1280	2140	3310	6250	7240	1960	1240			
Quality monitoring	Total suspended solids	TSS	mg/L	25400	254	144	2410	322	1310	312	945			

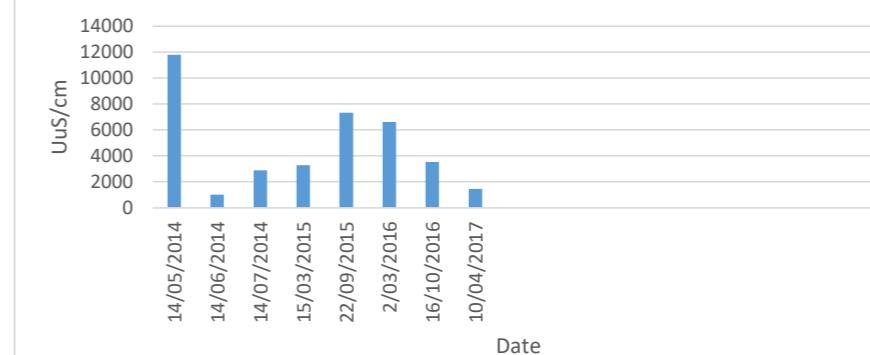
Biochemical Oxygen Demand



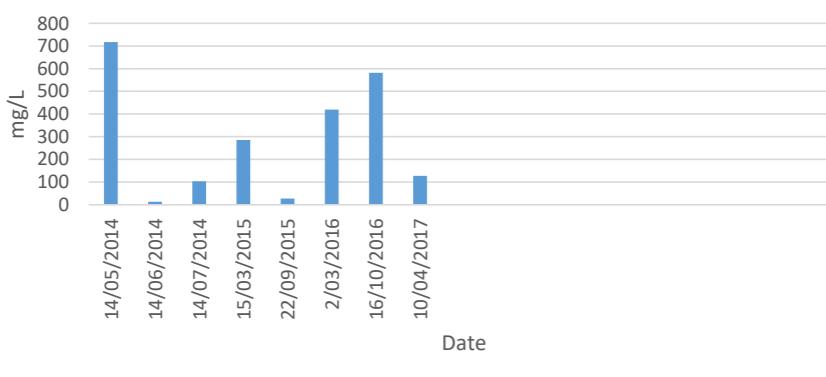
Chemical Oxygen Demand



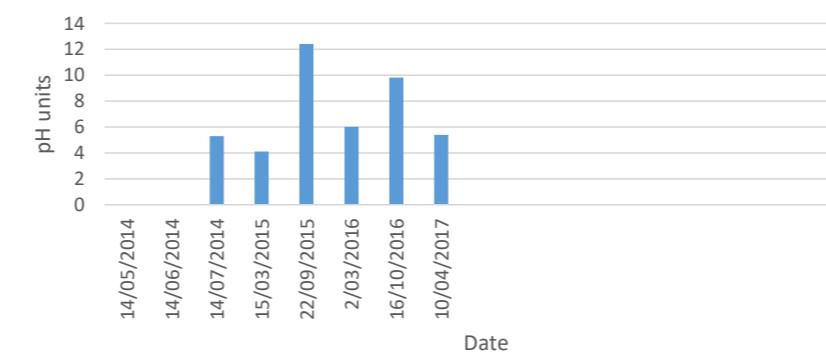
Conductivity



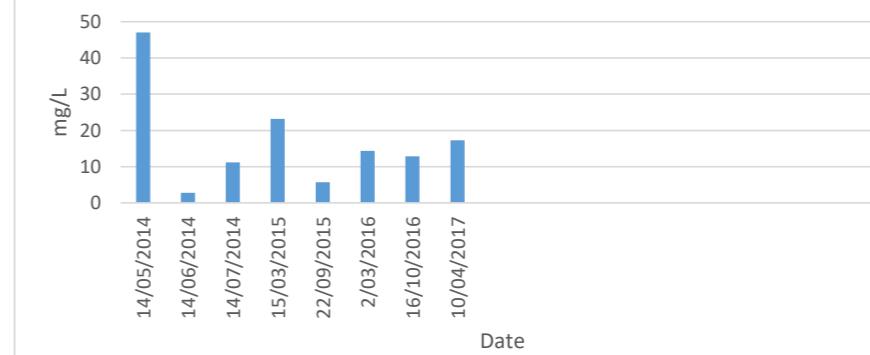
Nitrogen Total



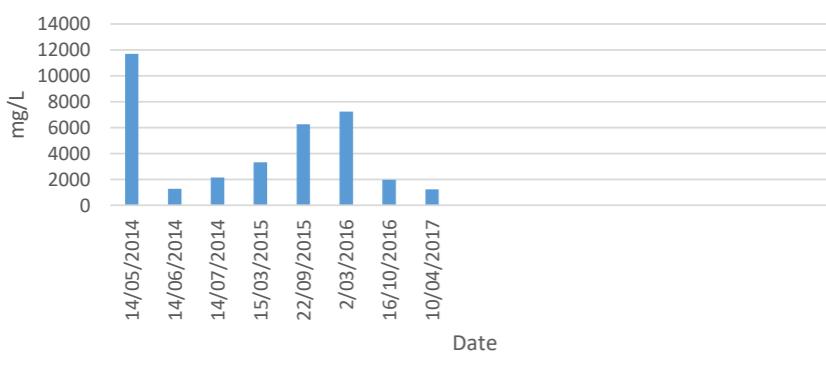
pH



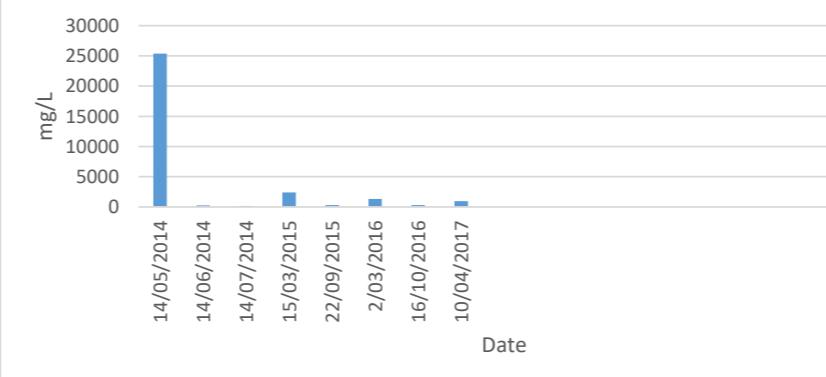
Phosphorous Total



Total Dissolved Solids

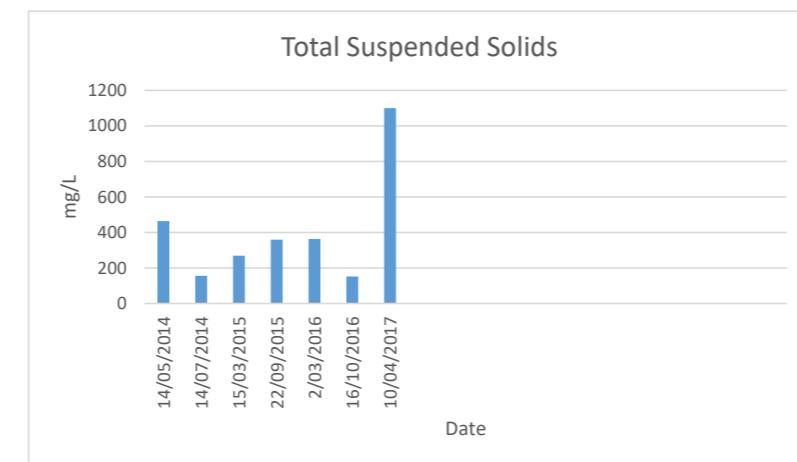
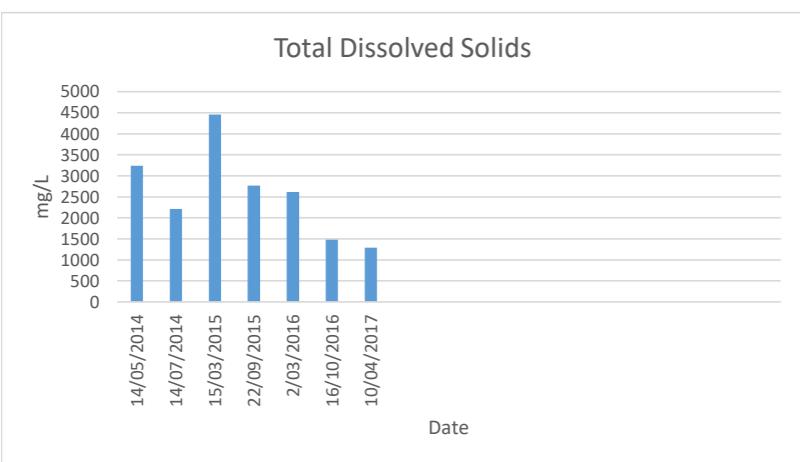
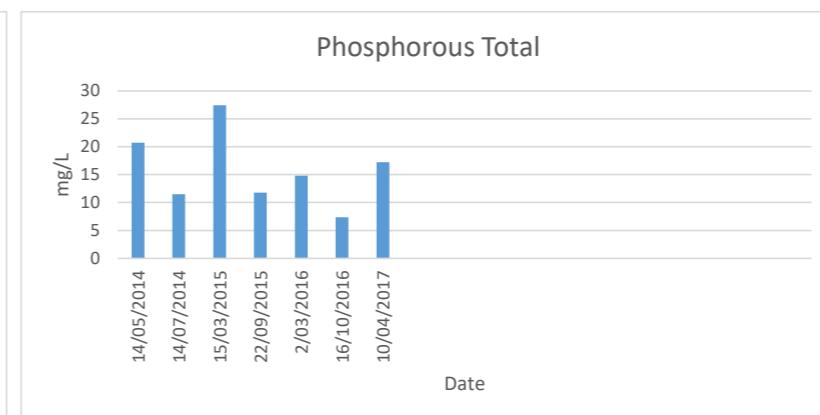
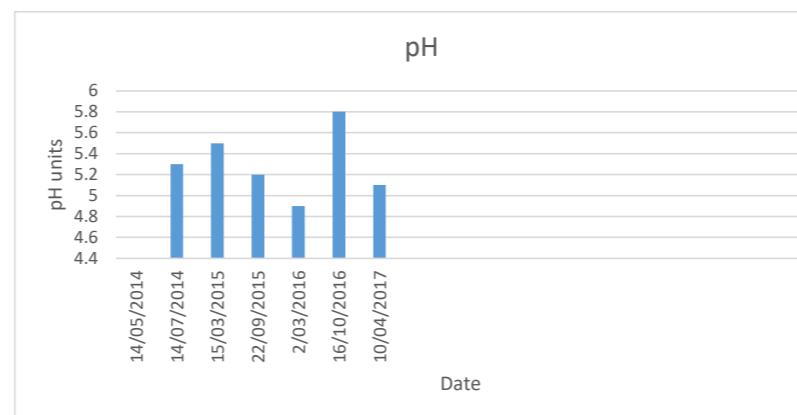
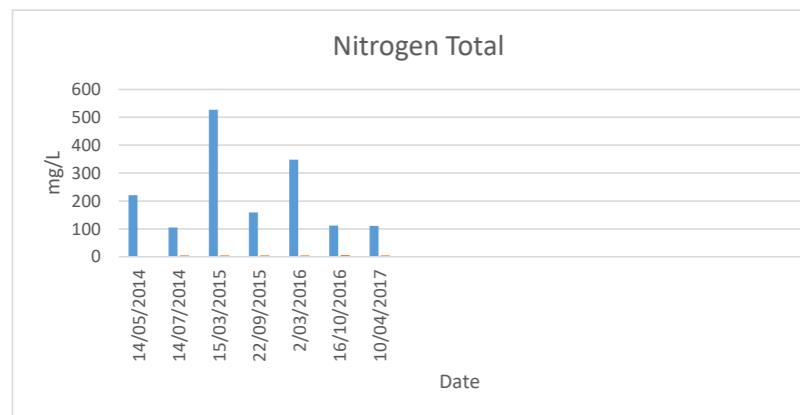
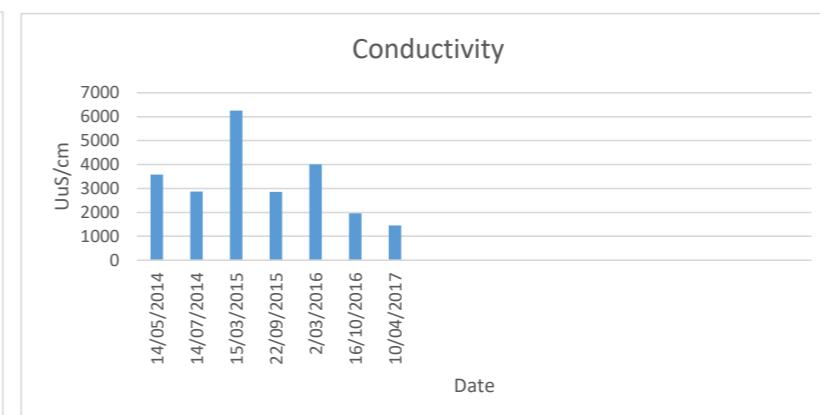
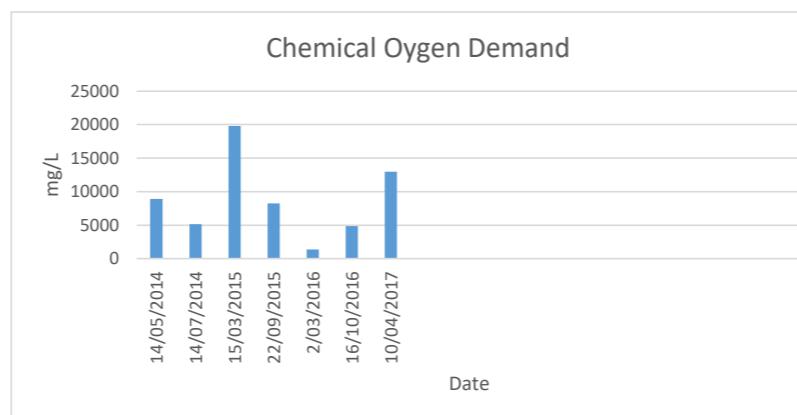
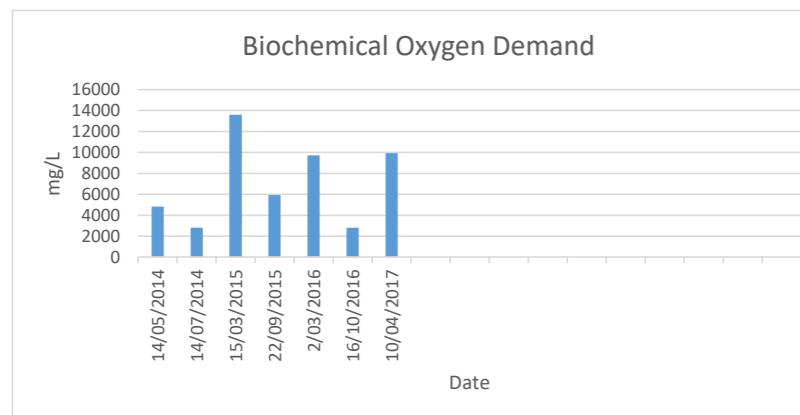


Total Suspended Solids



Point 2: Effluent Quality Monitoring

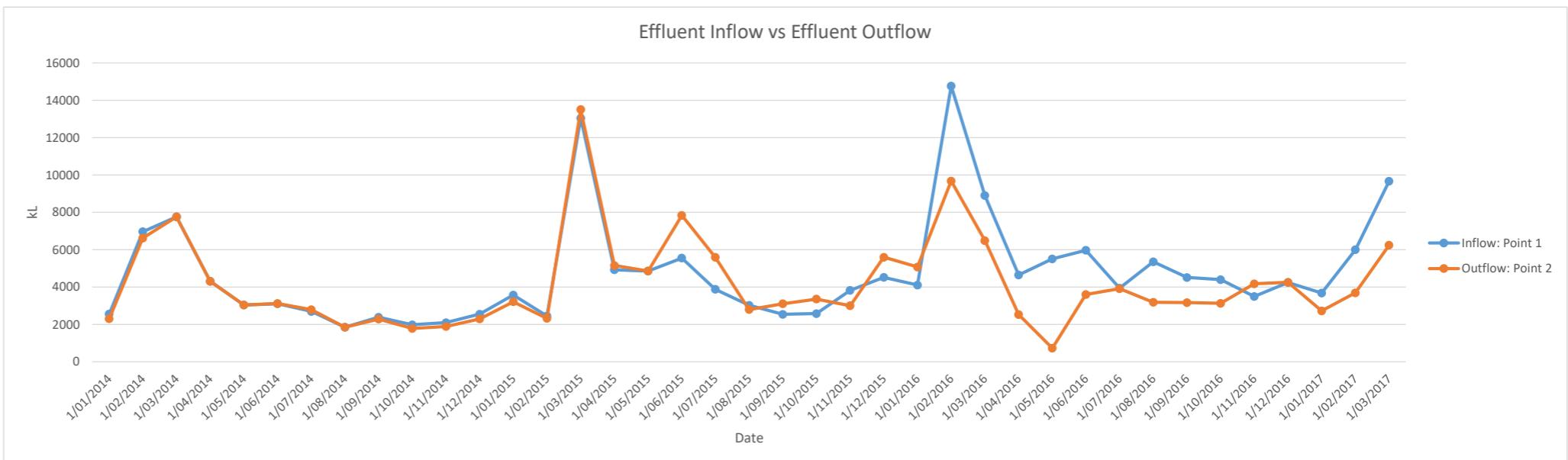
Type of Test	Name of Test	Test	Units	Date									
				14/05/2014	14/07/2014	14/09/2014	14/01/2015	15/03/2015	22/09/2015	2/03/2016	16/10/2016	10/04/2017	
Quality monitoring	Biological oxygen demand	BOD	mg/L	4830	2820	13600	5920	9730	2800	9930			
Quality monitoring	Chemical oxygen demand	COD	mg/L	8940	5160	19800	8260	1350	4860	13000			
Quality monitoring	Electrical conductivity	EC	µS/cm	3580	2870	6260	2860	4010	1960	1450			
Quality monitoring	Nitrogen	N (total)	mg/L	221	105	527	159	348	112	111			
Quality monitoring	pH	pH			5.3	5.5	5.2	4.9	5.8	5.1			
Quality monitoring	Phosphorus	P (total)	mg/L	20.7	11.5	27.4	11.8	14.8	7.33	17.2			
Quality monitoring	Sodium aborption ratio	SAR	SAR	1	2	1	1	2	6	2			
Quality monitoring	Total dissolved solids	TDS	mg/L	3240	2210	4460	2770	2620	1480	1290			
Quality monitoring	Total suspended solids	TSS	mg/L	464	156	269	360	363	152	1100			



Influent (Inflow) vs Effluent (Outflow)

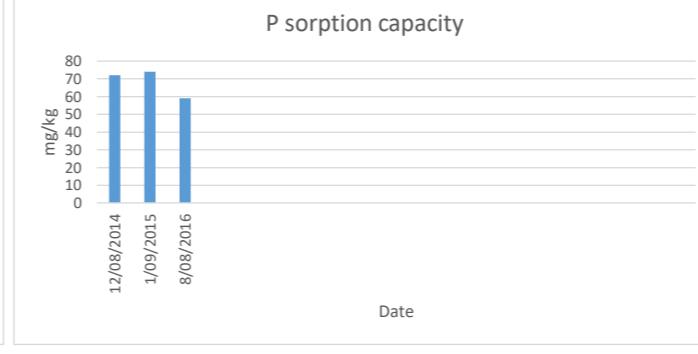
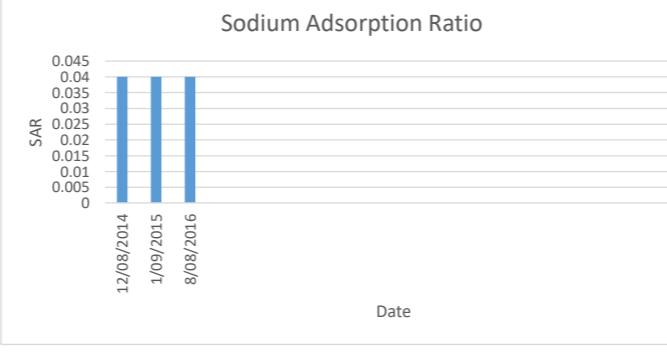
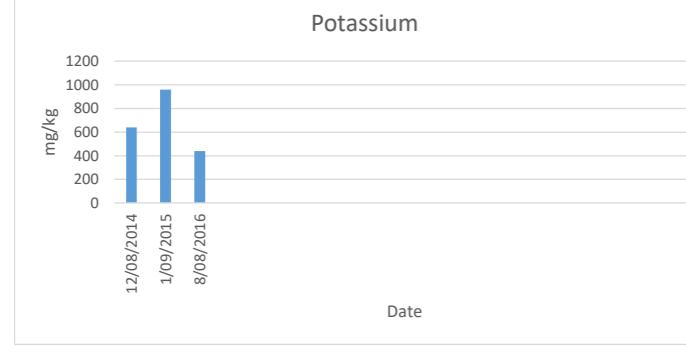
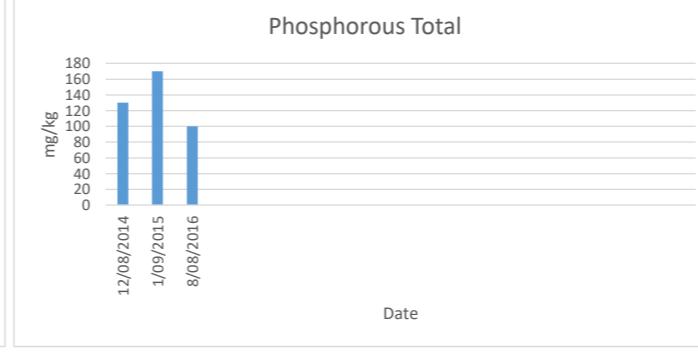
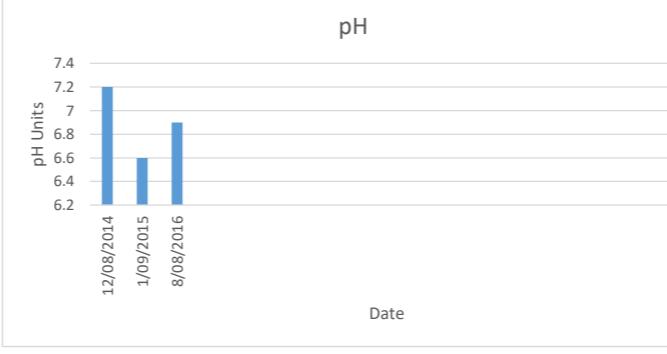
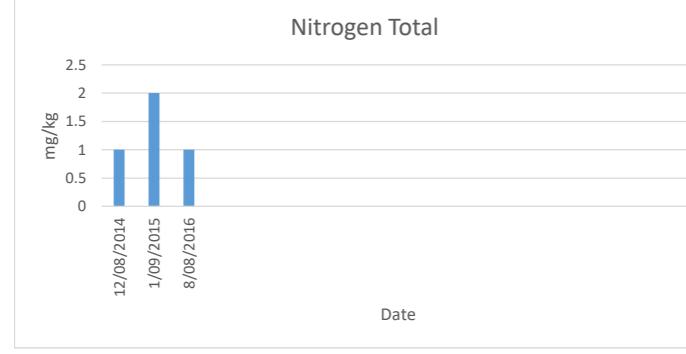
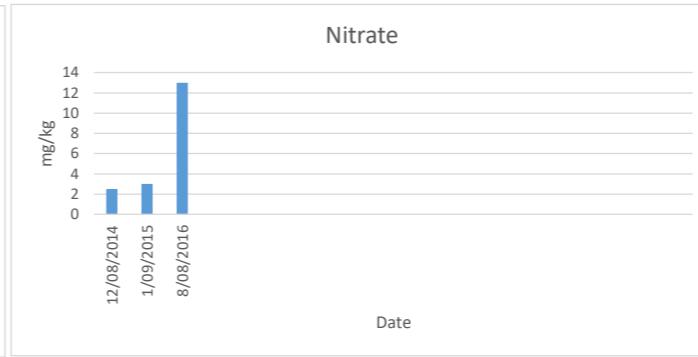
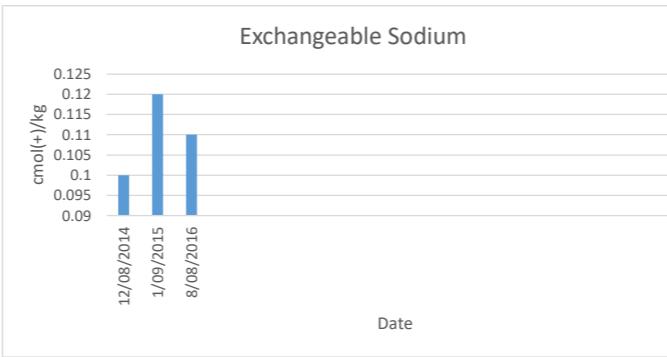
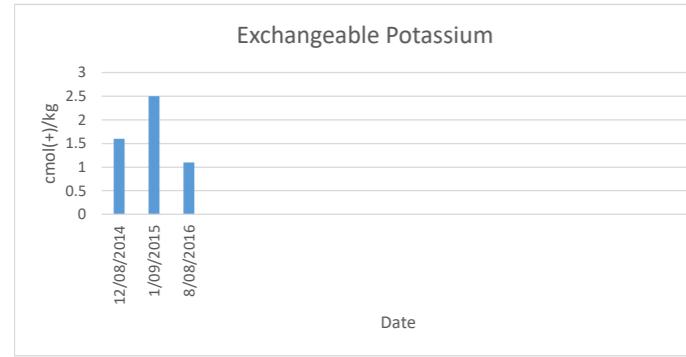
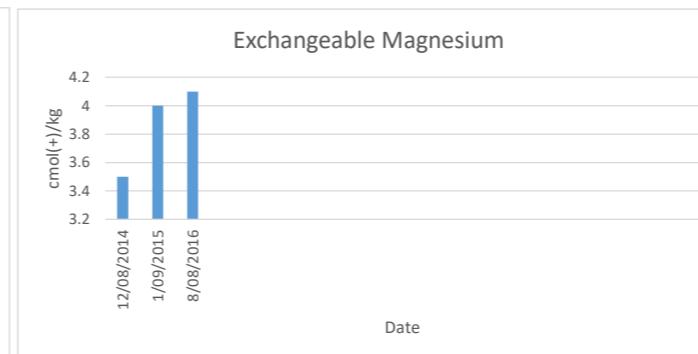
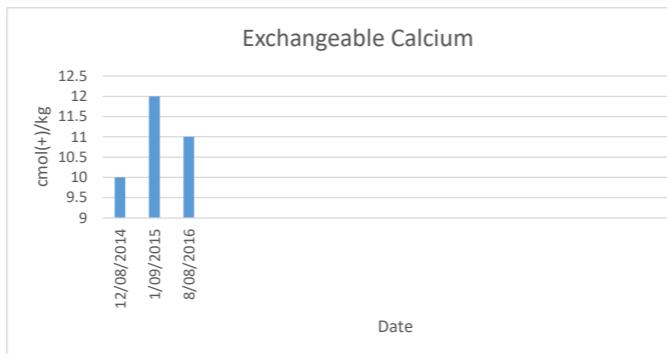
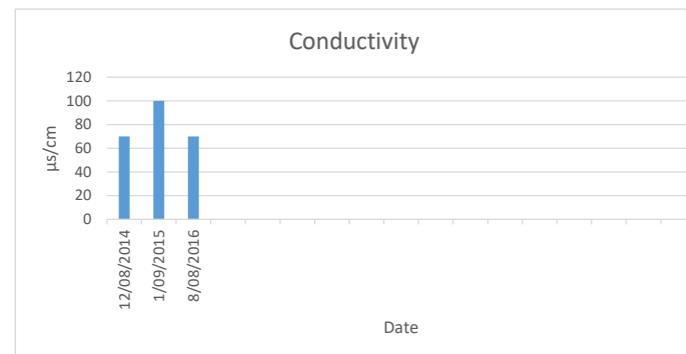
Date	Inflow: Point 1	Outflow: Point 2
27/01/2014	2566	2309
24/02/2014	6970	6622
31/03/2014	7760	7760
28/04/2014	4315	4316
26/05/2014	3043	3044
30/06/2014	3110	3122
28/07/2014	2698	2798
25/08/2014	1854	1854
29/09/2014	2391	2290
27/10/2014	1979	1787
24/11/2014	2100	1890
29/12/2014	2554	2300
26/01/2015	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
31/08/2016	5354	3190
30/09/2016	4515	3174
31/10/2016	4398	3135
30/11/2016	3497	4176
31/12/2016	4249	4253
31/01/2017	3685	2728
28/02/2017	6000	3692
31/03/2017	9669	6242

Effluent Inflow vs Effluent Outflow



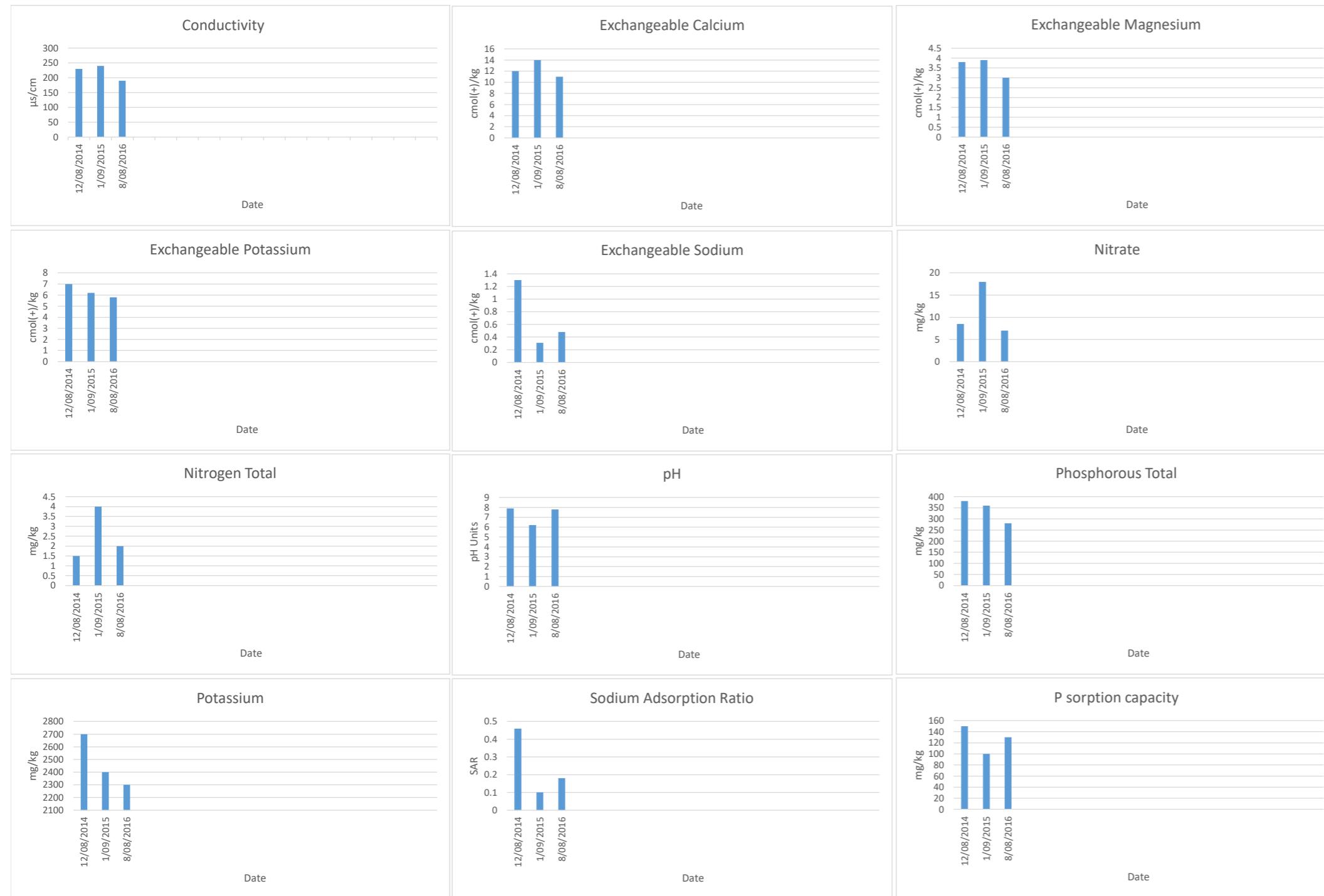
Point 3: Soil Test Results Chardonnay 7

Type of Test	Name of Test	Test	Units	Date			
				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	0.04	
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	72	74	59	



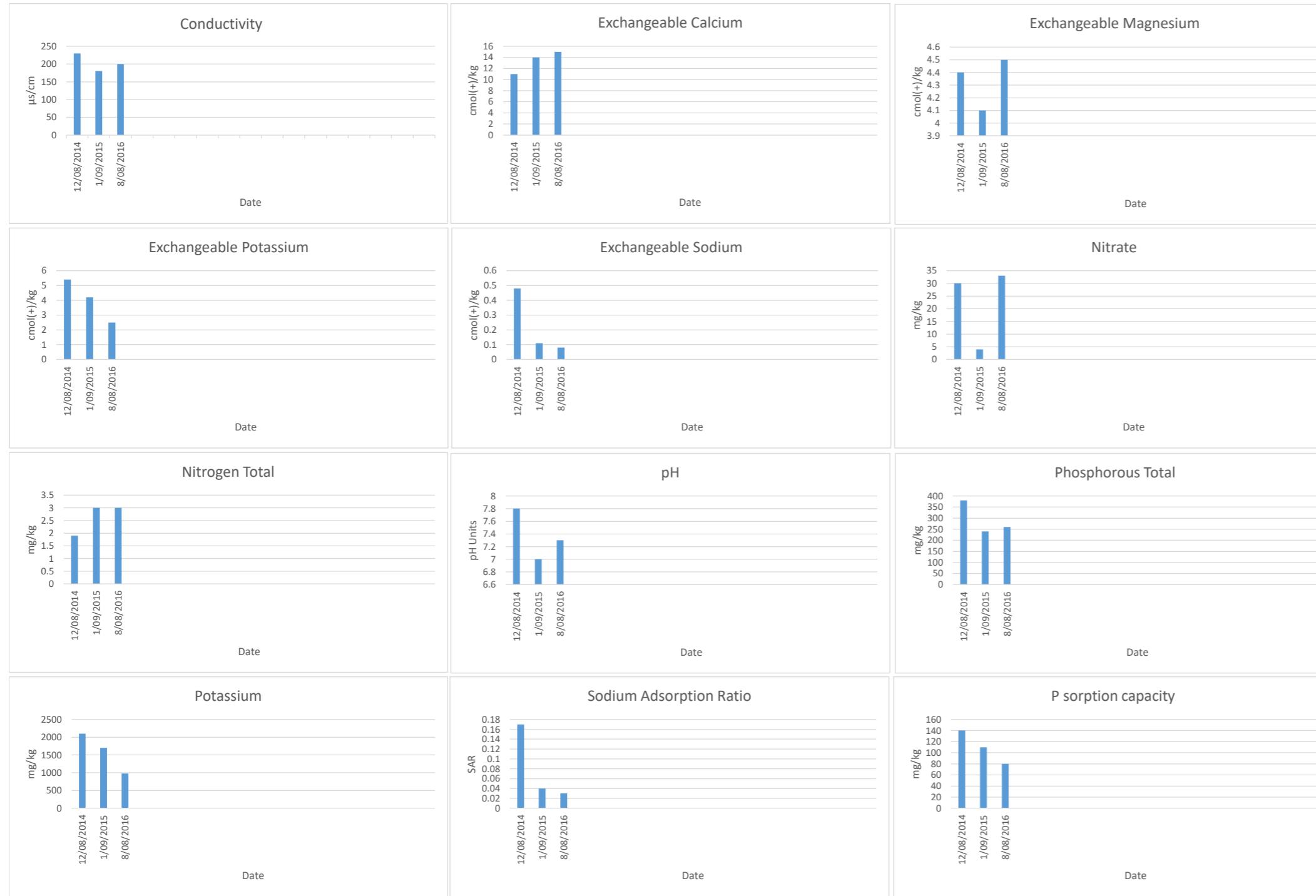
Point 4: Soil Test Results Canada Muscat 11

Type of Test	Name of Test	Test	Units	Date		
				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	0.18
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	150	100	130

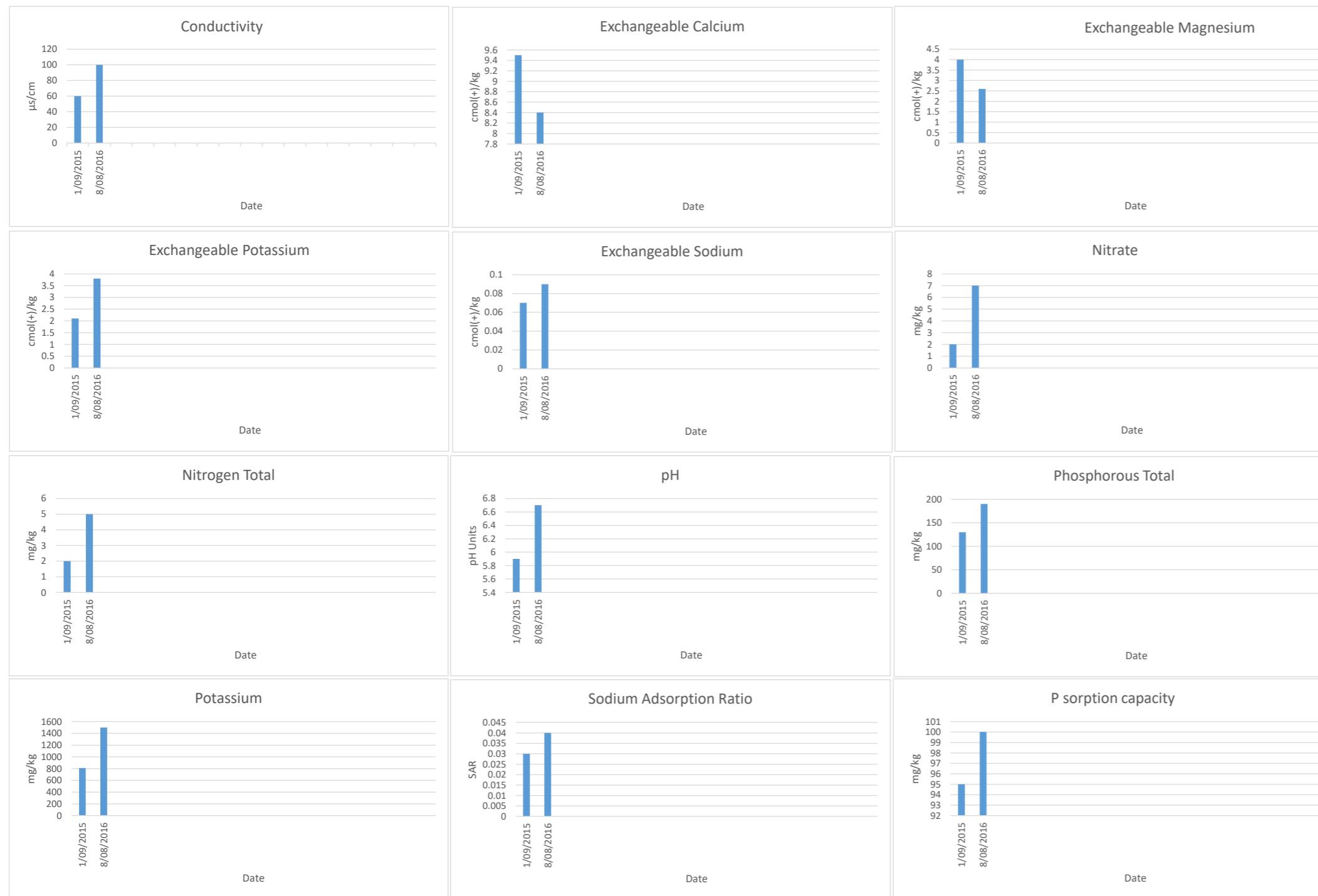


Point 5: Soil Test Results Red Frontignac 12

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	0.03
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	140	110	80

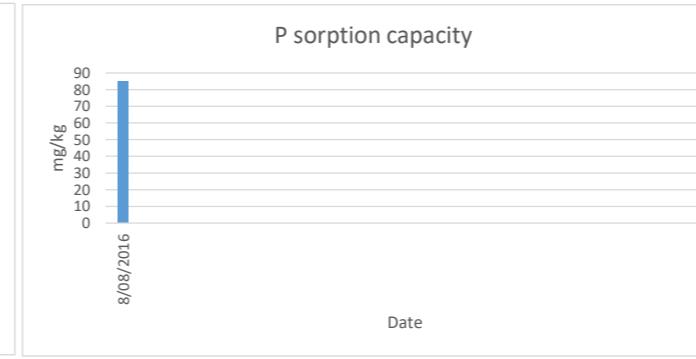
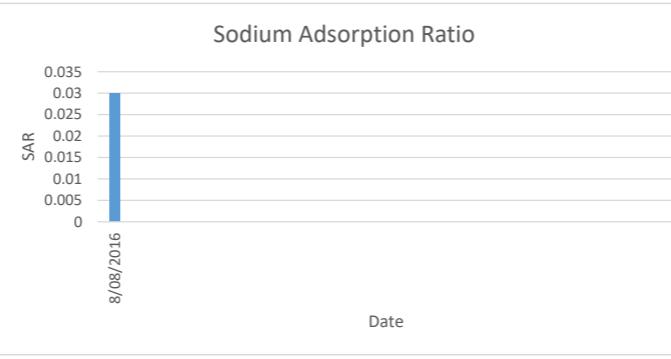
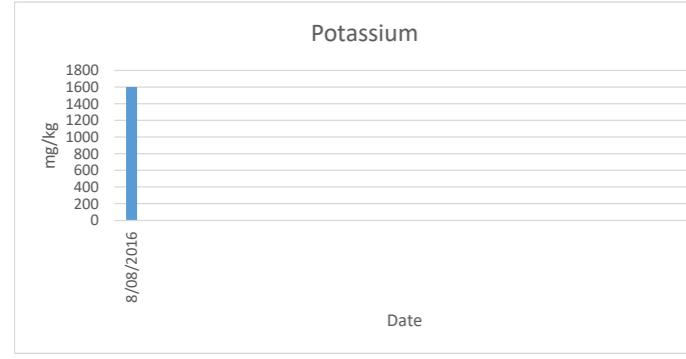
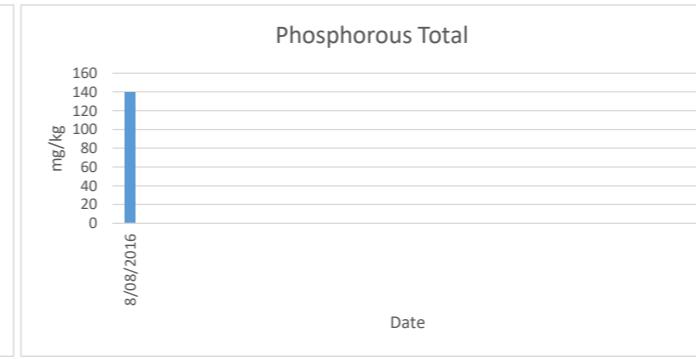
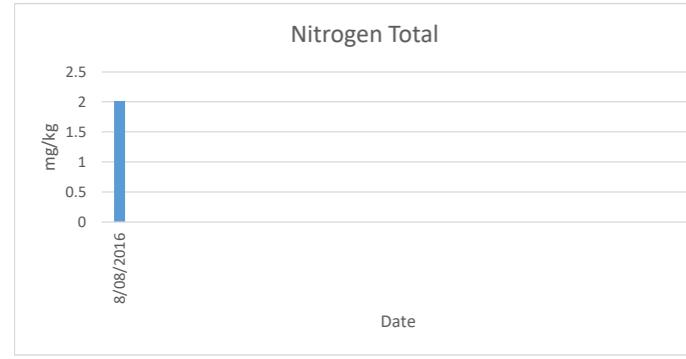
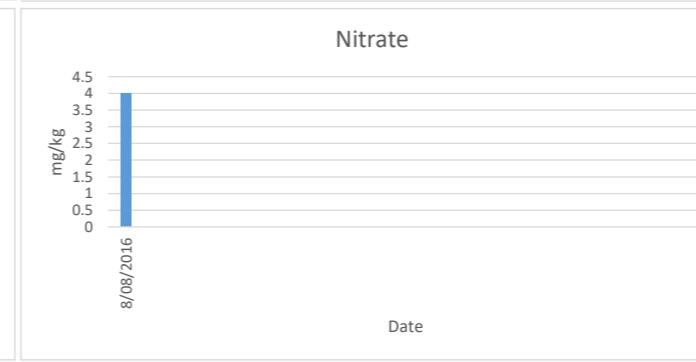
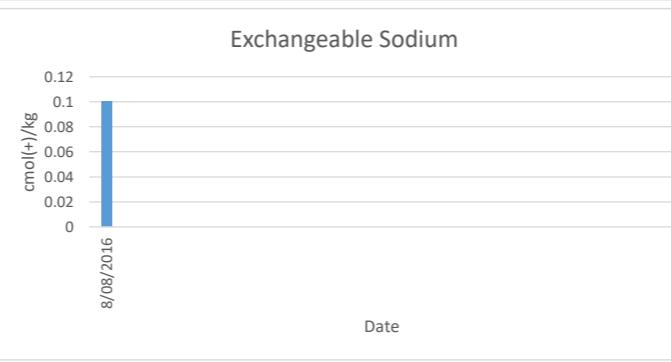
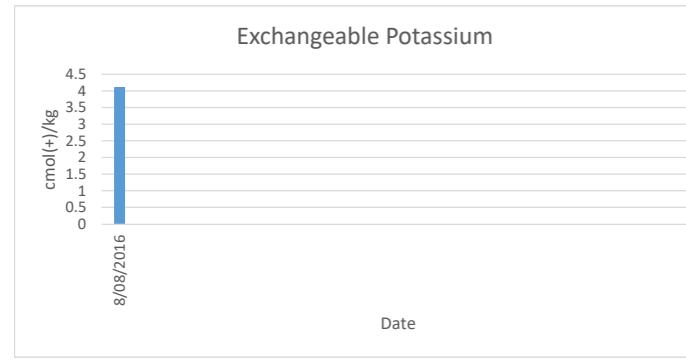
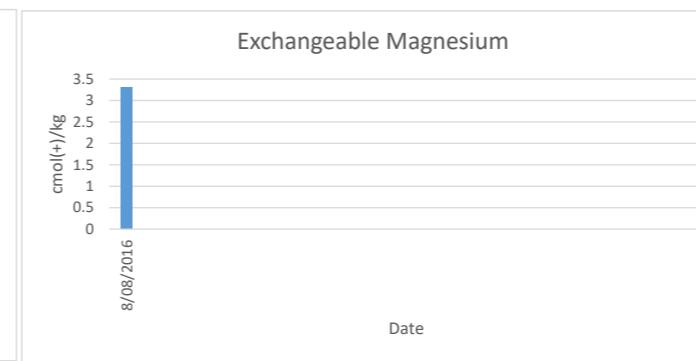
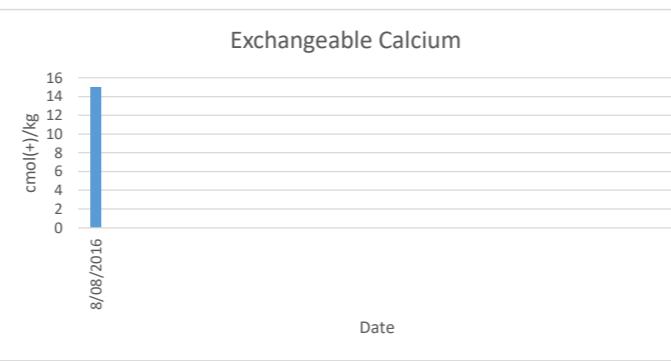
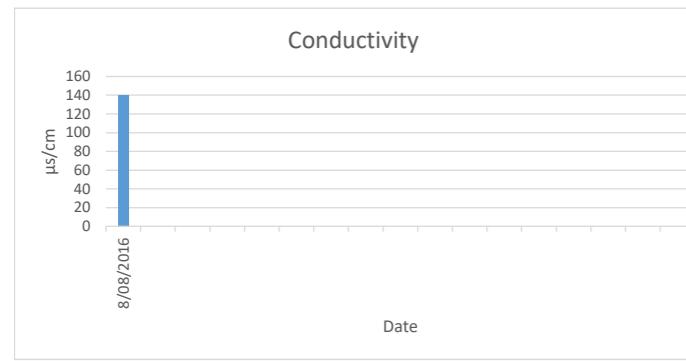


Point 11: Soil Test Results Old Chardonnay 5

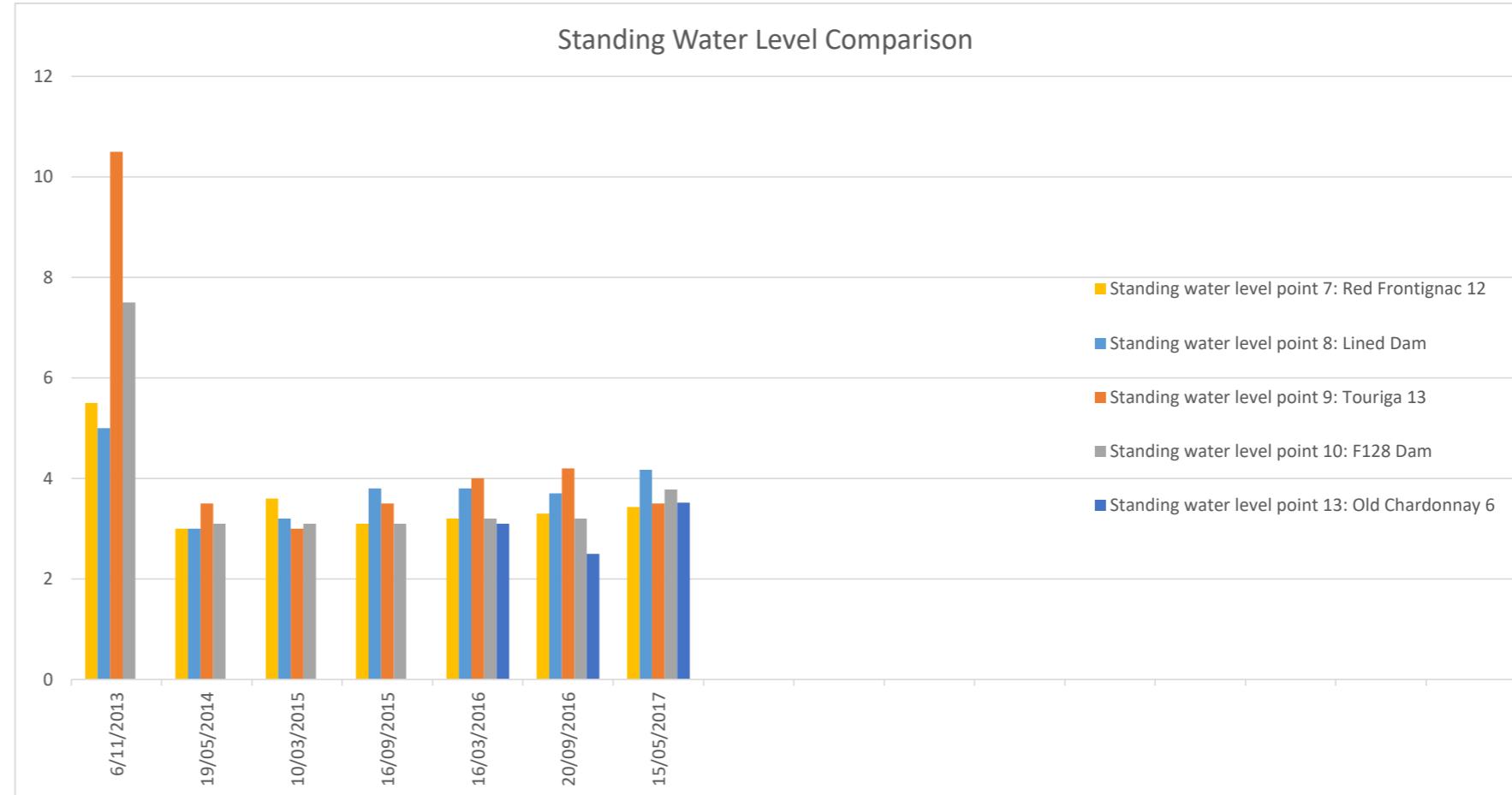


Point 12: Soil Test Results Old Chardonnay 6

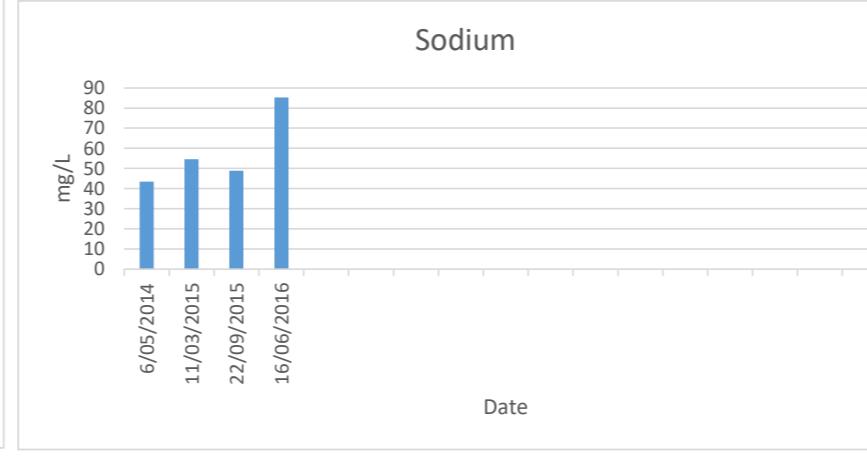
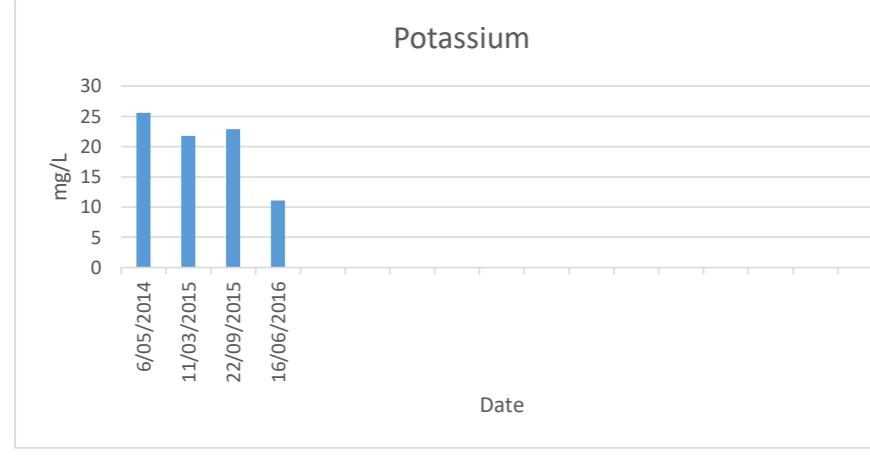
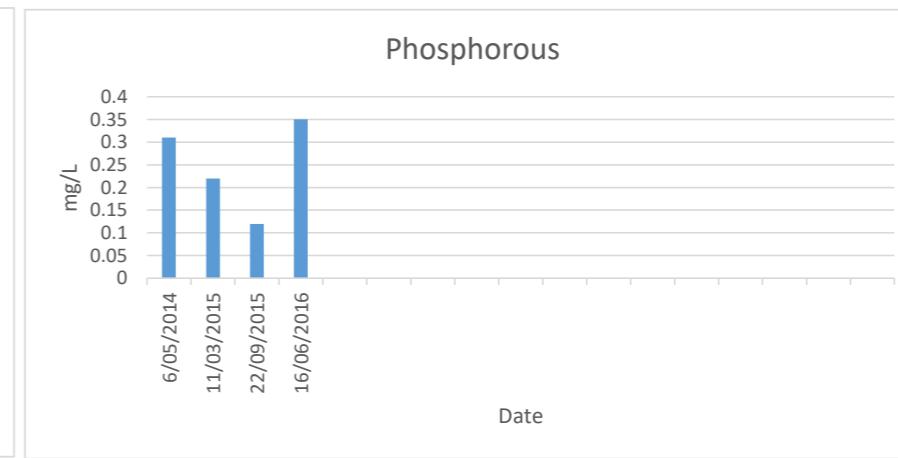
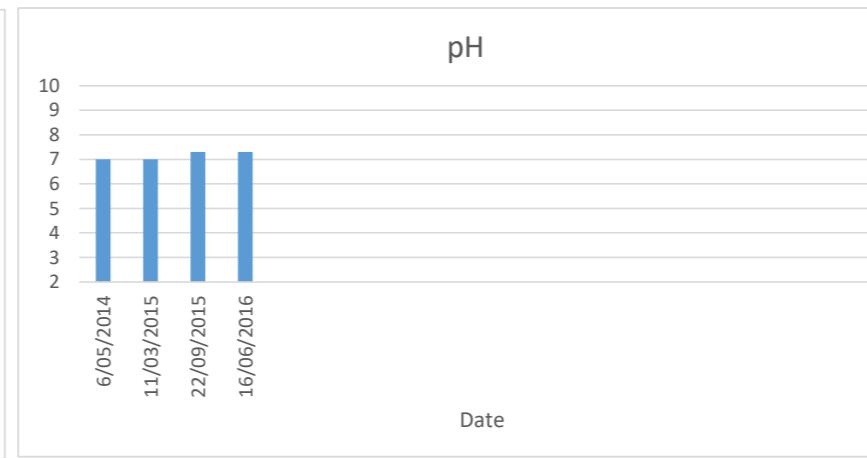
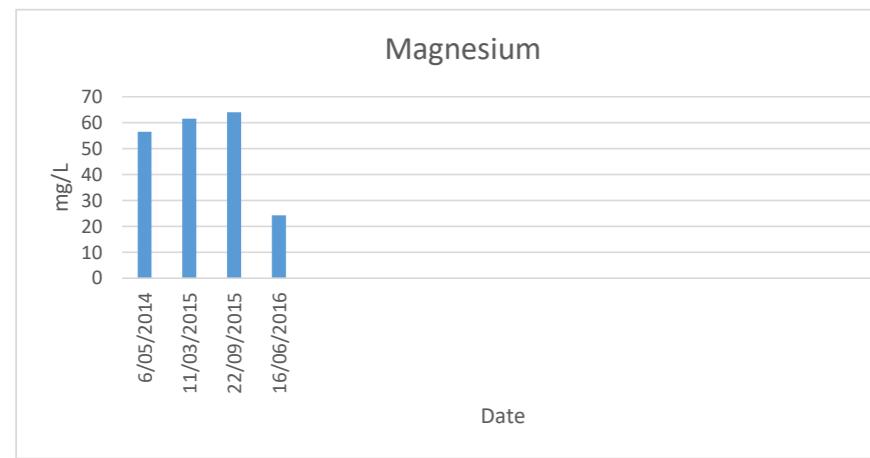
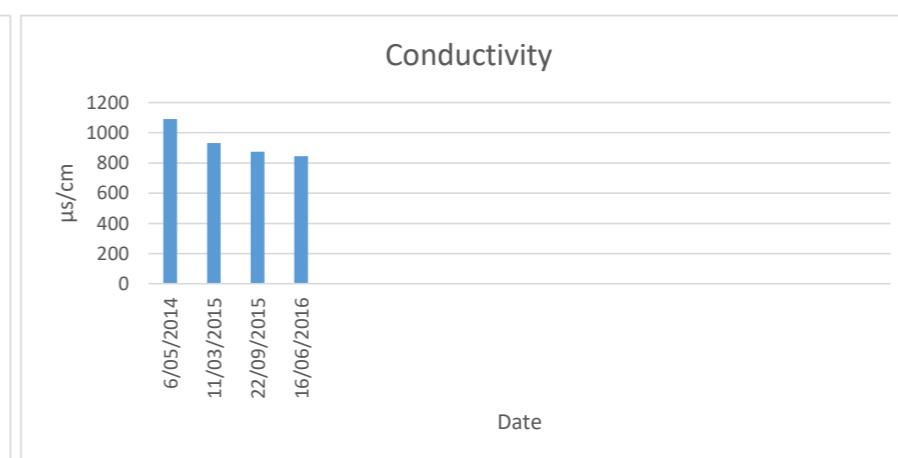
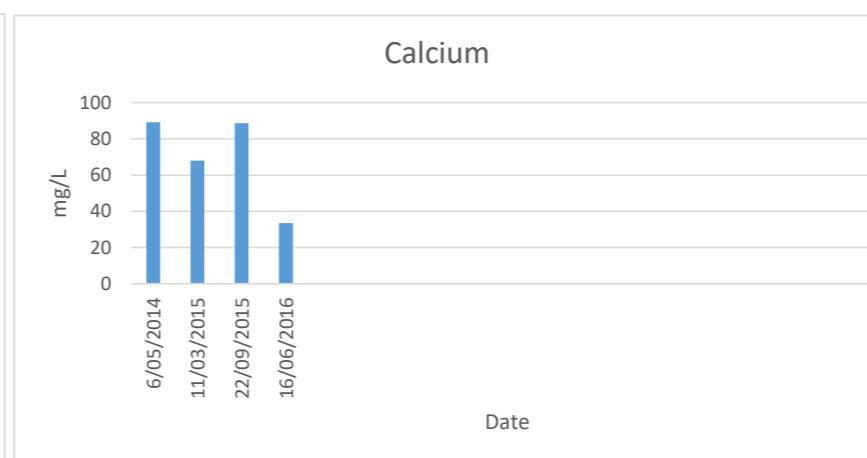
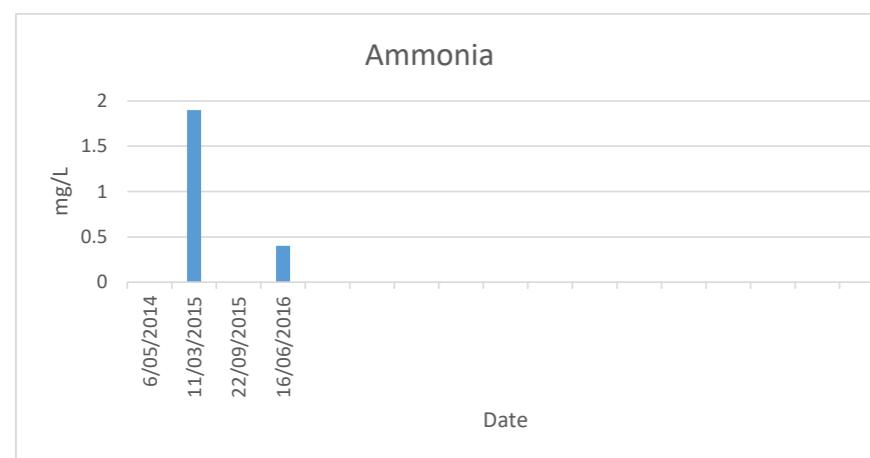
Type of Test	Name of Test	Test	Units	Date
Quality monitoring	Electrical conductivity	EC	µs/cm	8/08/2016
Quality monitoring	Exchangeable calcium	Exch. Ca	cmol(+)/kg	15
Quality monitoring	Exchangeable magnesium	Exch. Mg	cmol(+)/kg	3.3
Quality monitoring	Exchangeable potassium	Exch. K	cmol(+)/kg	4.1
Quality 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	0.03
Quality monitoring	P sorption capacity	P sorption capacity	mg/kg	85



Piezometer Standing Water Levels: depth in metres below surface

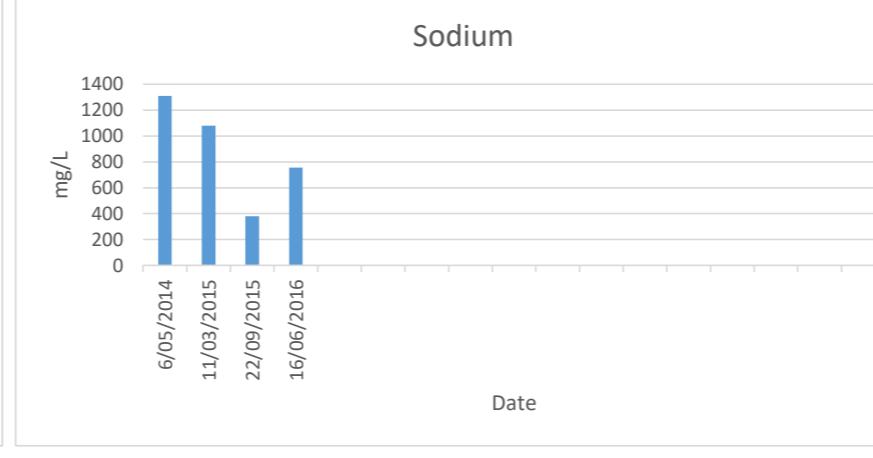
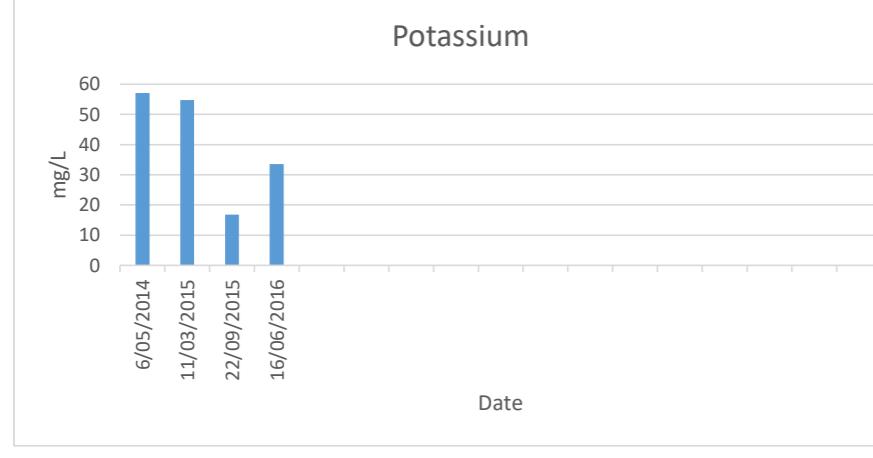
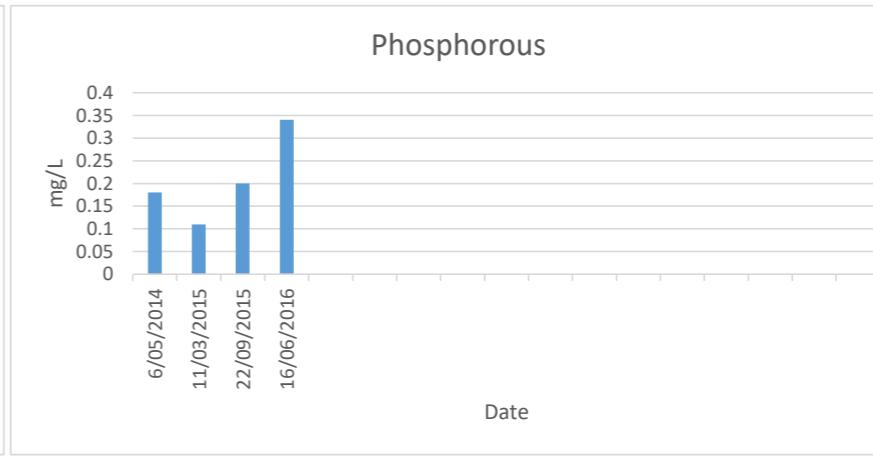
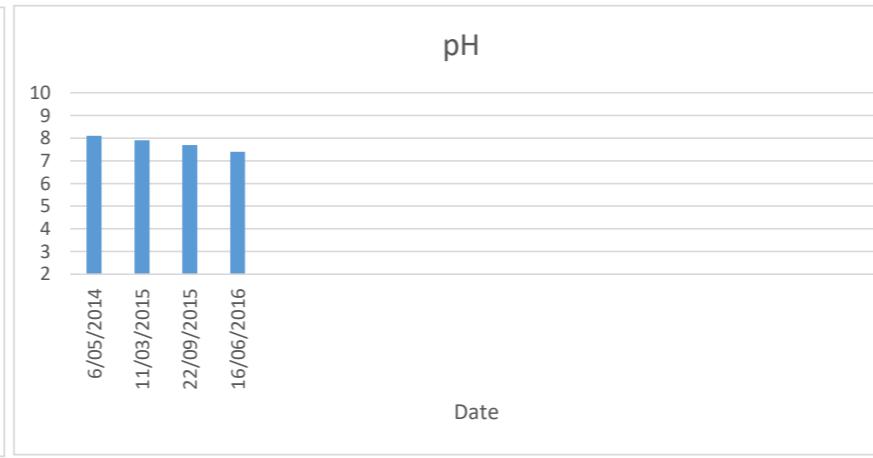
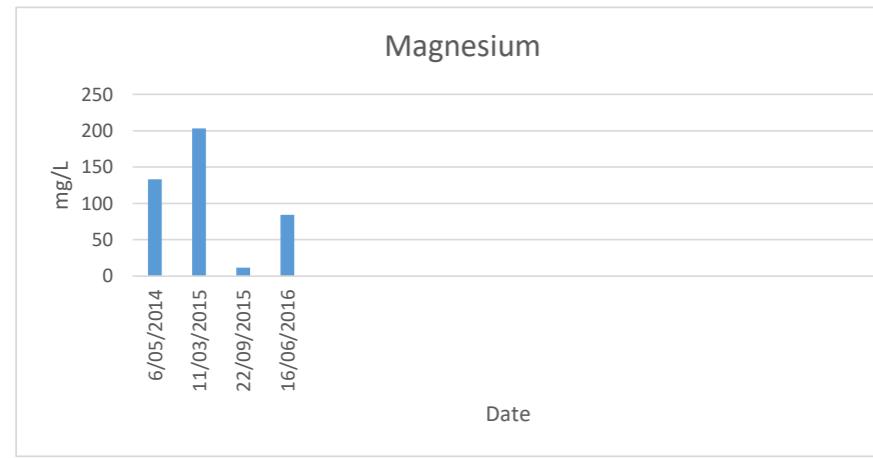
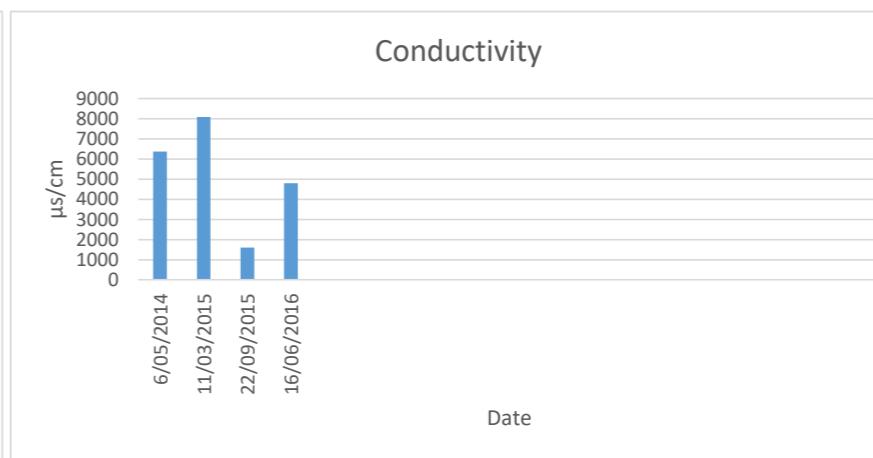
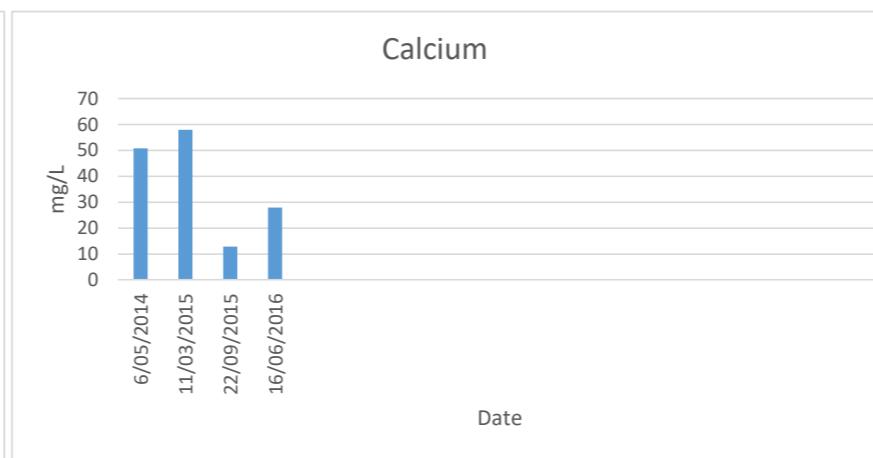
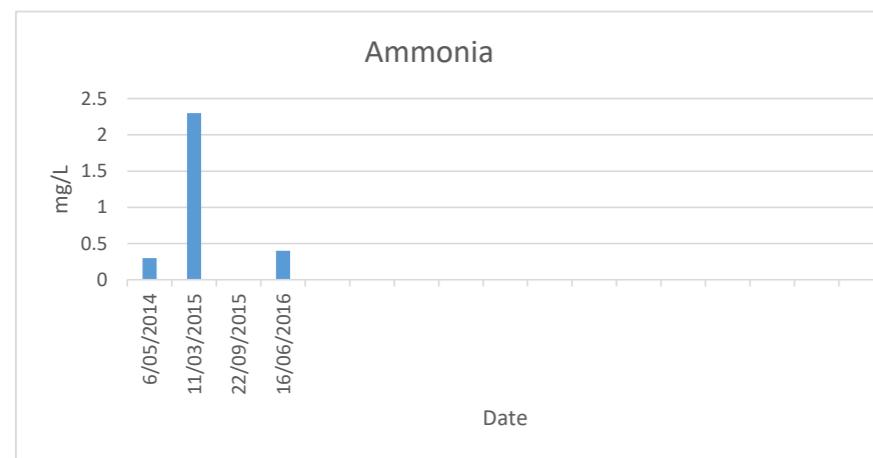


Point 7: Piezometer Water Quality Test Results Red Frontignac 12 Row



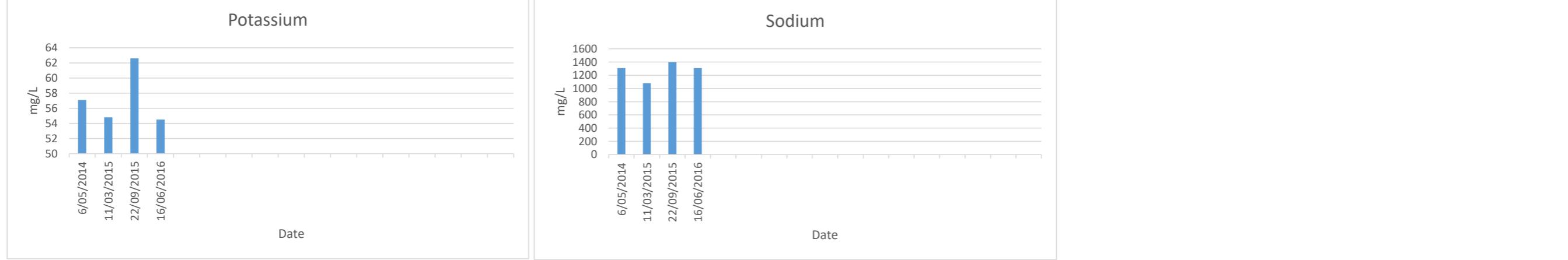
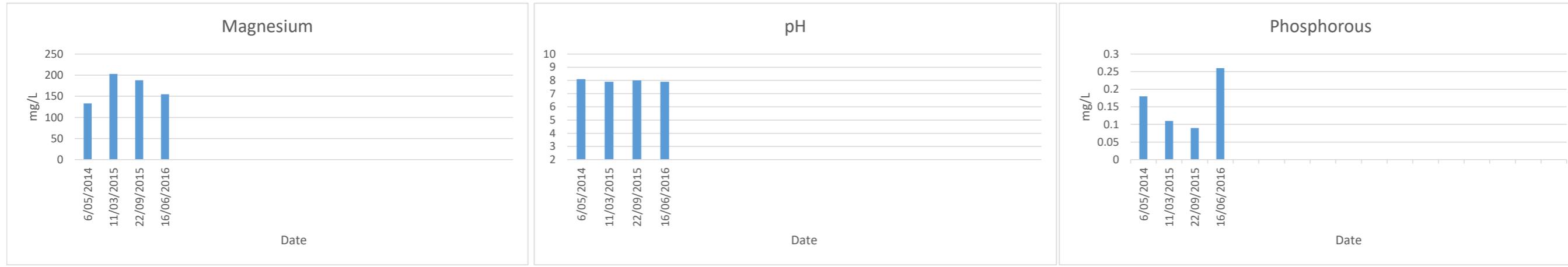
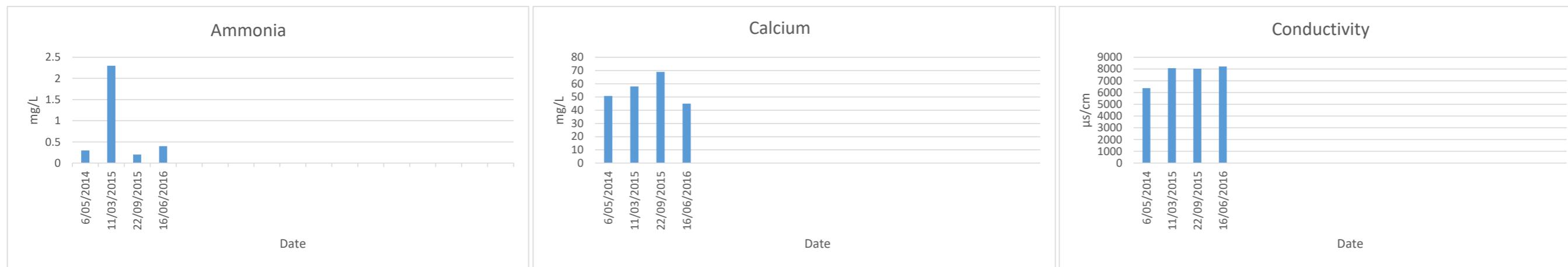
Point 8: Piezometer Water Quality Test Results Lined Dam SW End

Type of Test	Name of Test	Test	Units	Date					
				6/05/2014	11/03/2015	22/09/2015	16/06/2016		
Quality monitoring	Ammonium nitrogen	ammonia	mg/L	0.3	2.3	<0.2	0.4		
Quality monitoring	Calcium	Ca	mg/L	50.8	58	12.9	27.9		
Quality monitoring	Electrical conductivity	EC	µs/cm	6370	8080	1600	4790		
Quality monitoring	Magnesium	Mg	mg/L	133	203	11.4	84		
Quality monitoring	Nitrate nitrogen	N(nitrate)	mg/L	<0.5	<1.0	<0.5	1.1		
Quality monitoring	Total nitrogen	N(total)	mg/L	2	<2	2	3		
Quality monitoring	pH	pH	pH	8.1	7.9	7.7	7.4		
Quality monitoring	Phosphorus	P	mg/L	0.18	0.11	0.2	0.34		
Quality monitoring	Potassium	K	mg/L	57.1	54.8	16.8	33.6		
Quality monitoring	Sodium	Na	mg/L	1310	1080	380	756		

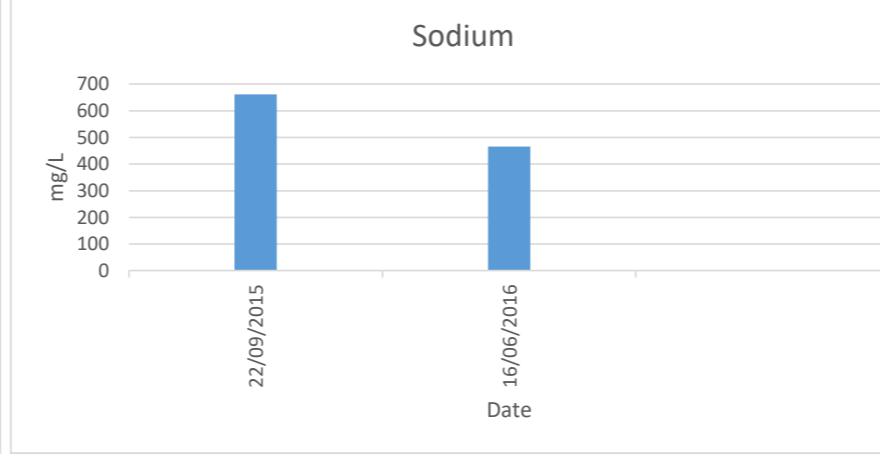
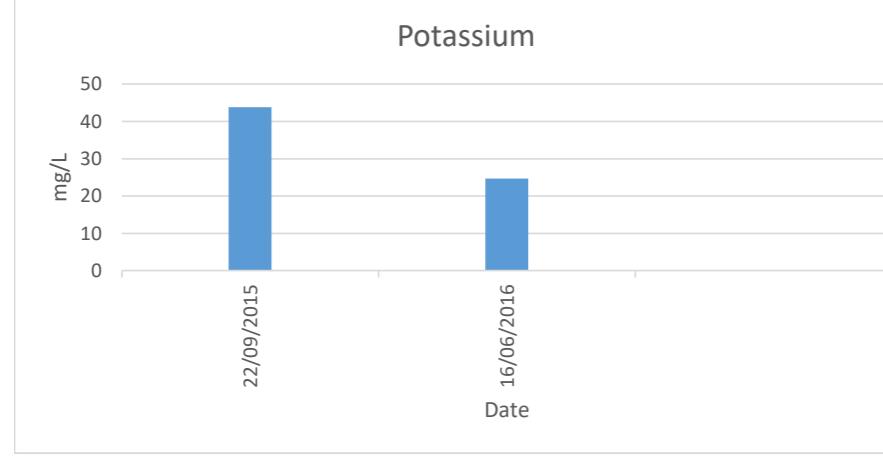
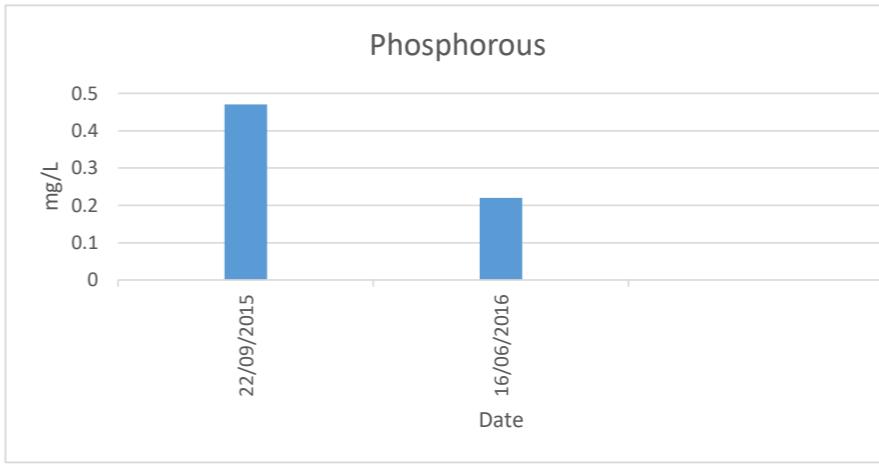
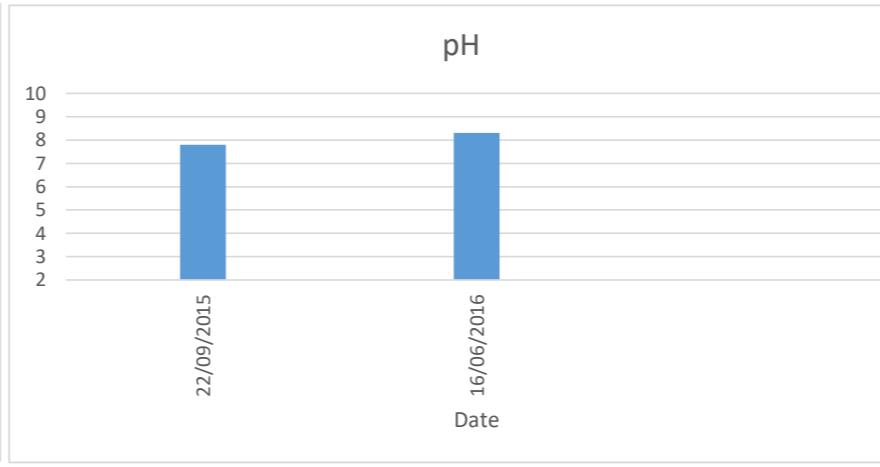
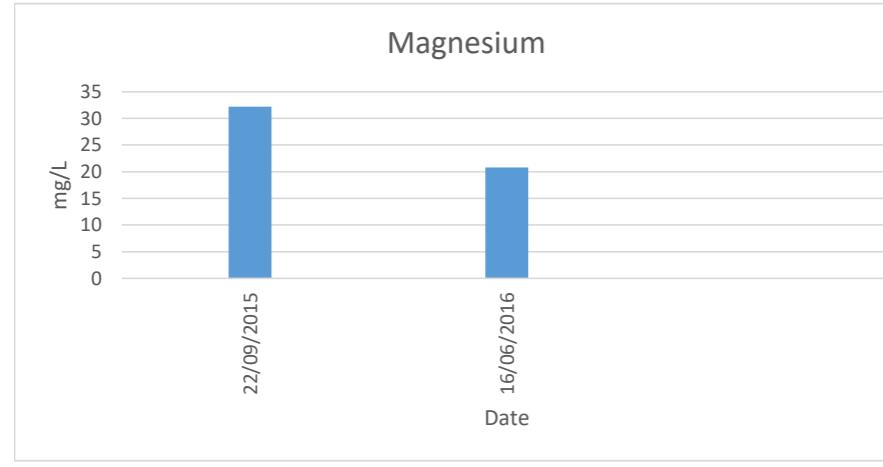
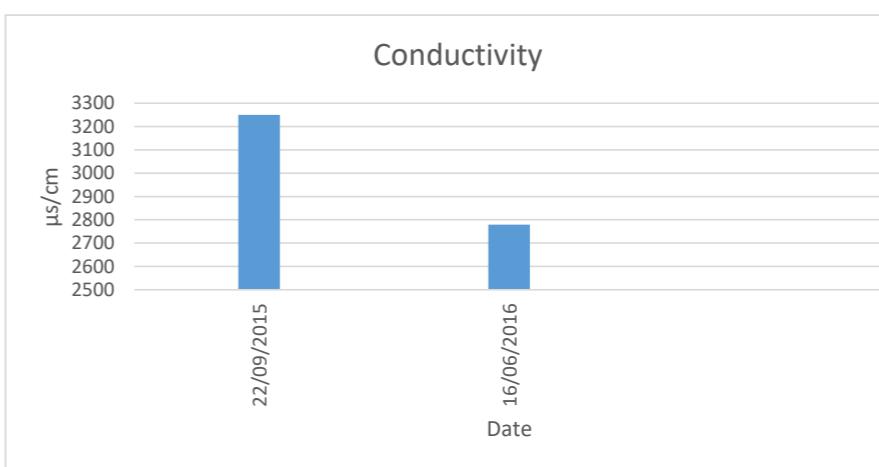
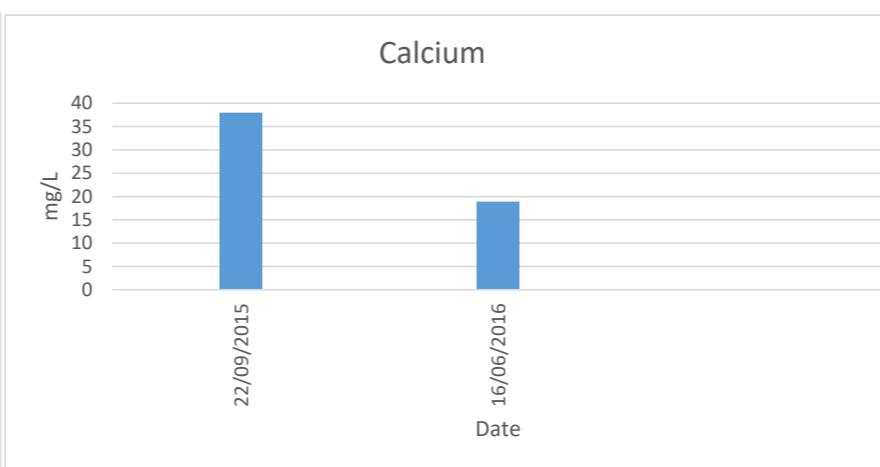
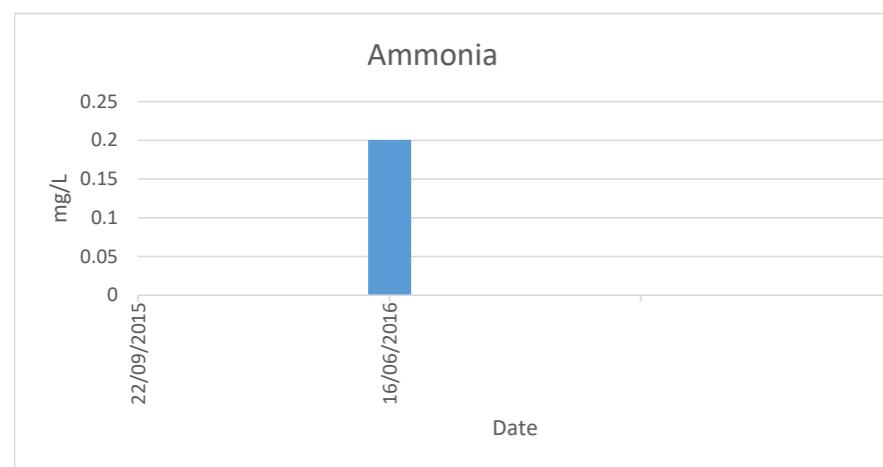


Point 9: Piezometer Water Quality Test Results Touriga SW End

Date

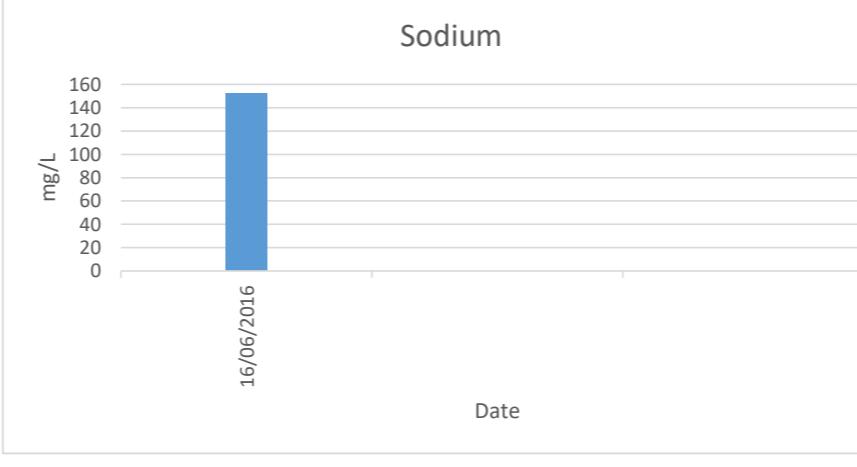
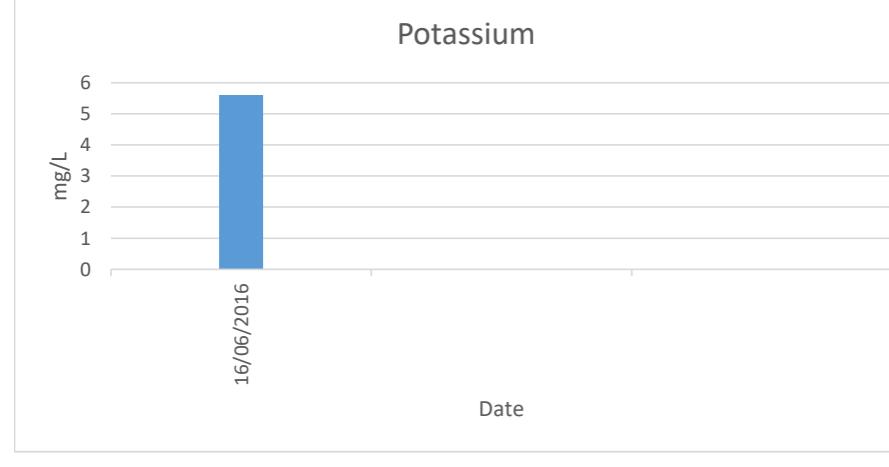
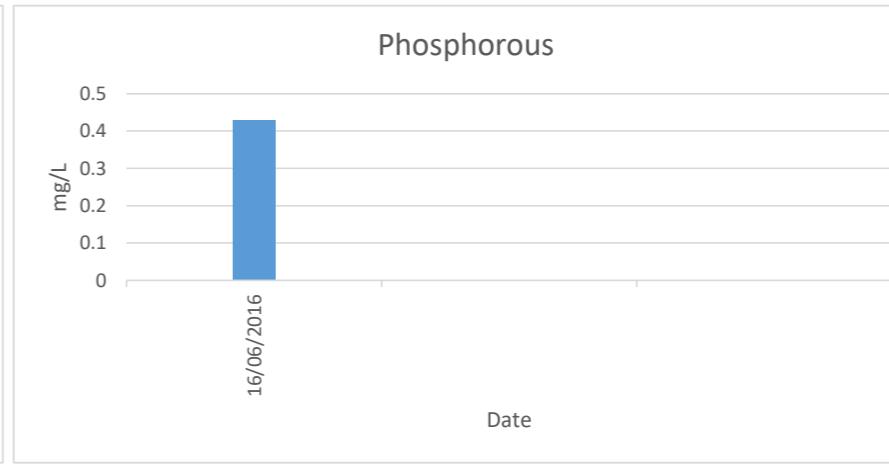
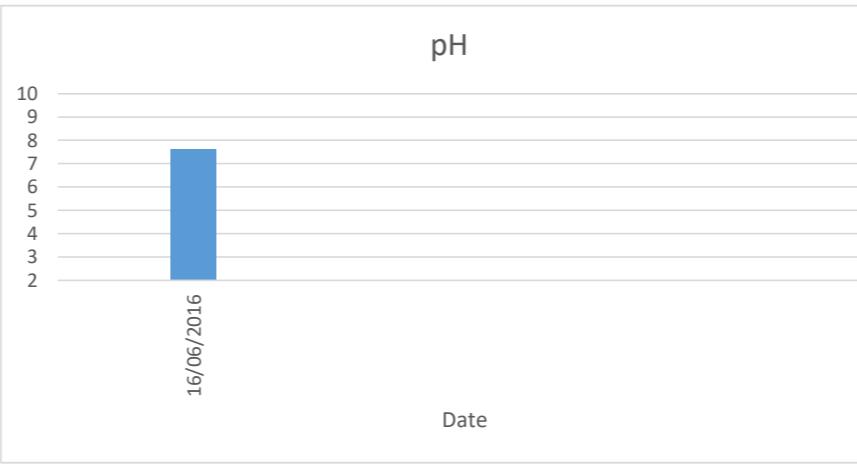
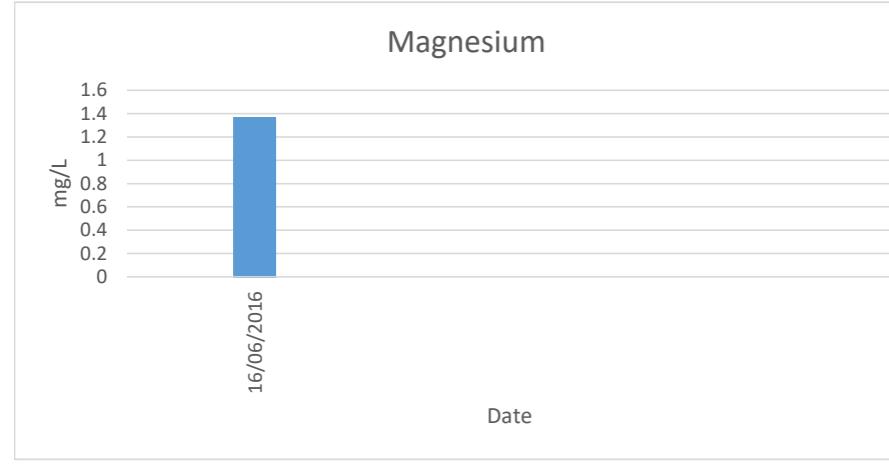
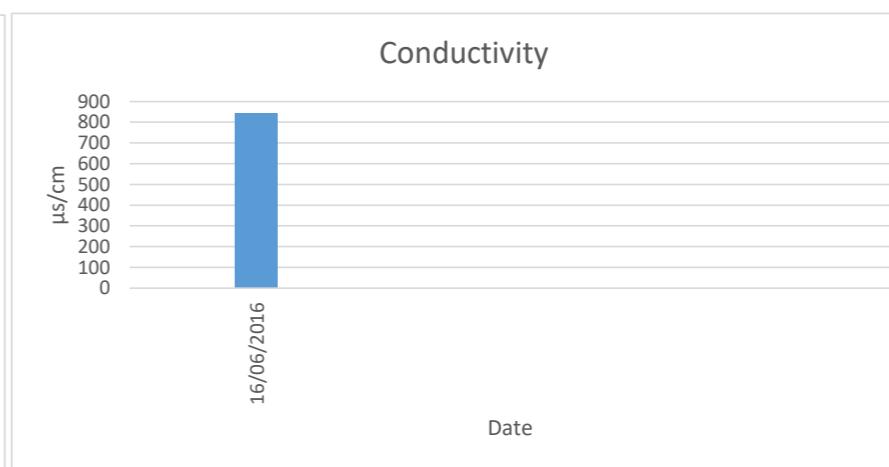
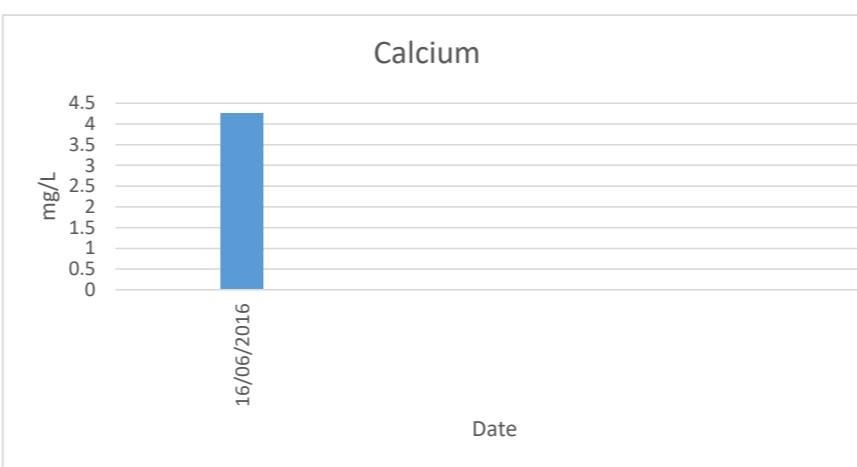
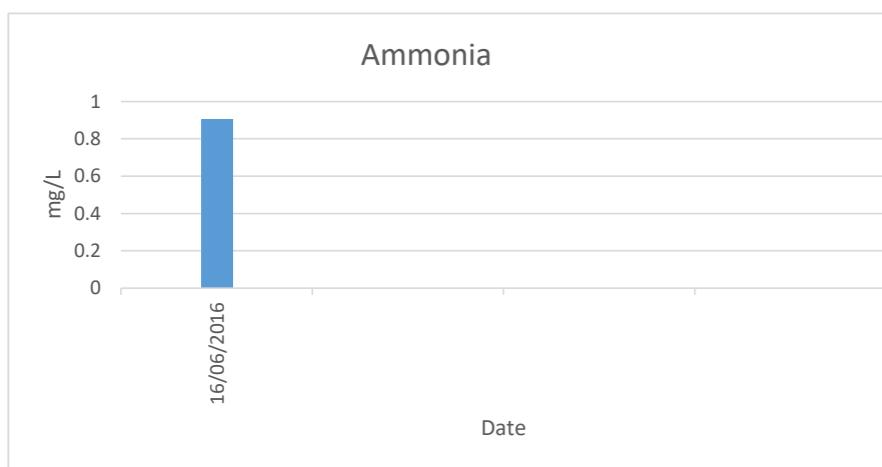


Point 10: Piezometer Water Quality Test Results F128 Dam SW Point



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)
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)
Rainfall	Rain gauge	Boundary of evaporation ponds "EPA 21" & "EPA 22" on site map.	Daily (working days)
Biosolids Cake	Biosolids sample, laboratory analysis	Evaporation ponds sludge	As required

Test Type	EPA Reference Points	Frequency of Monitoring	Next Sample Date
Soil quality monitoring	3, 4, 5, 6, 11	Annual	September
Groundwater quality monitoring	7, 8, 9, 10	Annual	September
Groundwater standing level	7, 8, 9, 10	6 monthly	March & September
Effluent quality monitoring: inflow and outflow	1, 2	6 monthly	March & September
Effluent volume monitoring: inflow and outflow	1,2	Monthly	Monthly