

# King County Environmental Lab Analytical Report

Project: 421195-240  
 Locator: SEKC\_MW-10  
 Descrip: HORSESHOE LAKE  
 Sample: L66151-1  
 Matrix: LJ GRND WTR  
 ColDate: 9/29/16 11:05  
**WET Weight Basis**

Project: 421195-240  
 Locator: SEKC\_MW-12  
 Descrip: HORSESHOE LAKE  
 Sample: L66151-2  
 Matrix: LJ GRND WTR  
 ColDate: 9/26/16 11:25  
**WET Weight Basis**

Project: 421195-240  
 Locator: SEKC\_MW-27  
 Descrip: HORSESHOE LAKE  
 Sample: L66151-4  
 Matrix: LJ GRND WTR  
 ColDate: 9/28/16 13:50  
**WET Weight Basis**

Parameters	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units			
<b>CV KEROUEL &amp; AMINOT 1997</b>																		
Ammonia Nitrogen		<MDL	0.002	0.01	mg/L			<MDL	0.002	0.01	mg/L			<MDL	0.002	0.01	mg/L	
<b>CV SM2320-B</b>																		
Total Alkalinity	69.4		1	5	mg CaCO3/L	45.2		1	5	mg CaCO3/L	48.5		1	5	mg CaCO3/L			
<b>CV SM2540-D</b>																		
Total Suspended Solids	3.2		1	2	mg/L	1.5		0.5	1	mg/L	26.3		1.3	2.5	mg/L			
<b>CV SM4110B SO4</b>																		
Sulfate	6.47		0.1	0.2	mg/L	4.71		0.1	0.2	mg/L	6.25		0.1	0.2	mg/L			
<b>CV SM4500-N-C</b>																		
Total Nitrogen	1		0.05	0.1	mg/L	0.353		0.05	0.1	mg/L	0.932		0.05	0.1	mg/L			
<b>CV SM4500-NO3-F</b>																		
Nitrite + Nitrate Nitrogen	0.927		0.01	0.04	mg/L	0.321		0.01	0.04	mg/L	0.86		0.01	0.04	mg/L			
<b>CV SM4500-P-B,F</b>																		
Total Phosphorus	0.0111		0.005	0.01	mg/L	0.0407		0.005	0.01	mg/L	0.0379		0.005	0.01	mg/L			
<b>CV SM4500-P-F</b>																		
Orthophosphate Phosphorus	0.00733		0.0005	0.002	mg/L	0.0366		0.0005	0.002	mg/L	0.00814		0.0005	0.002	mg/L			
<b>ES KCEL SOP# 245</b>																		
Conductivity, Field	170		0.5	10	umhos/cm	125		0.5	10	umhos/cm	128		0.5	10	umhos/cm			
Dissolved Oxygen, Field	4.4		0.5	1	mg/L	3.8		0.5	1	mg/L	6.5		0.5	1	mg/L			
pH, Field	6.96				pH	6.7				pH	6.5				pH			
Sample Temperature, Field	10.9				deg C	12				deg C	10.9				deg C			
<b>ES NONE</b>																		
Turbidity, Field	12.1		0.5	2	NTU	5.7		0.5	2	NTU	27.8		0.5	2	NTU			
<b>MT EPA 200.8*SW846 6020A</b>																		
Aluminum, Dissolved, ICP-MS		<MDL	2	10	ug/L			<MDL	2	10	ug/L			<MDL	2	10	ug/L	
Antimony, Dissolved, ICP-MS		<MDL	0.3	1	ug/L			<MDL	0.3	1	ug/L			<MDL	0.3	1	ug/L	
Arsenic, Dissolved, ICP-MS	0.35		<RDL	0.1	0.5	ug/L	0.788		<RDL	0.1	0.5	ug/L	0.2		<RDL	0.1	0.5	ug/L
Beryllium, Dissolved, ICP-MS		<MDL	0.1	0.5	ug/L			<MDL	0.1	0.5	ug/L			<MDL	0.1	0.5	ug/L	
Cadmium, Dissolved, ICP-MS		<MDL	0.05	0.25	ug/L			<MDL	0.05	0.25	ug/L			<MDL	0.05	0.25	ug/L	
Calcium, Dissolved, ICP-MS	20000		50	50	ug/L	9180		50	50	ug/L	13000		50	50	ug/L			
Calcium, Total, ICP-MS	21200		50	50	ug/L	9840		50	50	ug/L	14100		50	50	ug/L			
Chromium, Dissolved, ICP-MS	0.27	<RDL	0.2	1	ug/L			<MDL	0.2	1	ug/L	0.31	<RDL	0.2	1	ug/L		
Copper, Dissolved, ICP-MS		<MDL	0.2	2	ug/L	0.21		<RDL	0.2	2	ug/L			<MDL	0.2	2	ug/L	
Iron, Dissolved, ICP-MS	58.6		10	50	ug/L	19		<RDL	10	50	ug/L			<MDL	10	50	ug/L	
Iron, Total, ICP-MS	2230		10	50	ug/L	619		10	50	ug/L	1600		10	50	ug/L			
Lead, Dissolved, ICP-MS		<MDL	0.1	0.5	ug/L			<MDL	0.1	0.5	ug/L			<MDL	0.1	0.5	ug/L	
Magnesium, Dissolved, ICP-MS	4890		50	50	ug/L	3920		50	50	ug/L	4300		50	50	ug/L			
Magnesium, Total, ICP-MS	5100		50	50	ug/L	4120		50	50	ug/L	5010		50	50	ug/L			
Manganese, Dissolved, ICP-MS	3.82		0.1	0.5	ug/L	1.46		0.1	0.5	ug/L	6.59		0.1	0.5	ug/L			
Nickel, Dissolved, ICP-MS	0.32	<RDL	0.1	0.5	ug/L	0.2		<RDL	0.1	0.5	ug/L	0.27	<RDL	0.1	0.5	ug/L		
Selenium, Dissolved, ICP-MS		<MDL	0.5	1	ug/L			<MDL	0.5	1	ug/L			<MDL	0.5	1	ug/L	
Silver, Dissolved, ICP-MS		<MDL	0.04	0.2	ug/L			<MDL	0.04	0.2	ug/L			<MDL	0.04	0.2	ug/L	
Sodium, Dissolved, ICP-MS	3940		100	100	ug/L	4850		100	100	ug/L	4020		100	100	ug/L			
Thallium, Dissolved, ICP-MS		<MDL	0.1	0.2	ug/L			<MDL	0.1	0.2	ug/L			<MDL	0.1	0.2	ug/L	
Zinc, Dissolved, ICP-MS		<MDL	0.5	2.5	ug/L			<MDL	0.5	2.5	ug/L			<MDL	0.5	2.5	ug/L	
<b>MT EPA 200.8*SW846 6020A*SM2340B</b>																		
Hardness, Calc	74.1		0.331	0.331	mg CaCO3/L	41.5		0.331	0.331	mg CaCO3/L	55.7		0.331	0.331	mg CaCO3/L			

## King County Environmental Lab Analytical Report

Project: 421195-240  
 Locator: SEKC\_MW-28  
 Descrip: HORSESHOE LAKE  
 Sample: L66151-5  
 Matrix: LJ GRND WTR  
 ColDate: 9/28/16 12:45  
**WET Weight Basis**

Project: 421195-240  
 Locator: SEKC\_MW-29  
 Descrip: HORSESHOE LAKE  
 Sample: L66151-6  
 Matrix: LJ GRND WTR  
 ColDate: 10/6/16 11:35  
**WET Weight Basis**

Project: 421195-240  
 Locator: SEKC\_MW-30  
 Descrip: HORSESHOE LAKE  
 Sample: L66151-7  
 Matrix: LJ GRND WTR  
 ColDate: 9/26/16 12:55  
**WET Weight Basis**

Parameters	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units
<b>CV KEROUEL &amp; AMINOT 1997</b>															
Ammonia Nitrogen		<MDL	0.002	0.01	mg/L	0.0025	<RDL	0.002	0.01	mg/L		<MDL	0.002	0.01	mg/L
<b>CV SM2320-B</b>															
Total Alkalinity	48.3		1	5	mg CaCO3/L	19.7		1	5	mg CaCO3/L	21.3		1	5	mg CaCO3/L
<b>CV SM2540-D</b>															
Total Suspended Solids	1.9	<RDL	1	2.1	mg/L	3.8		0.5	1	mg/L	1.4		0.5	1	mg/L
<b>CV SM4110B SO4</b>															
Sulfate	3.34		0.1	0.2	mg/L	2.12		0.1	0.2	mg/L	2.35		0.1	0.2	mg/L
<b>CV SM4500-N-C</b>															
Total Nitrogen	0.802		0.05	0.1	mg/L	1.58		0.05	0.1	mg/L	2.94		0.05	0.1	mg/L
<b>CV SM4500-NO3-F</b>															
Nitrite + Nitrate Nitrogen	0.784		0.01	0.04	mg/L	1.44		0.01	0.04	mg/L	2.76		0.01	0.04	mg/L
<b>CV SM4500-P-B,F</b>															
Total Phosphorus	0.0139		0.005	0.01	mg/L	0.0153		0.005	0.01	mg/L	0.0088	<RDL	0.005	0.01	mg/L
<b>CV SM4500-P-F</b>															
Orthophosphate Phosphorus	0.00898		0.0005	0.002	mg/L	0.0101		0.0005	0.002	mg/L	0.00505		0.0005	0.002	mg/L
<b>ES KCEL SOP# 245</b>															
Conductivity, Field	118		0.5	10	umhos/cm	65.9		0.5	10	umhos/cm	96		0.5	10	umhos/cm
Dissolved Oxygen, Field	7.7		0.5	1	mg/L	10.1		0.5	1	mg/L	7		0.5	1	mg/L
pH, Field	6.55				pH	6.02				pH	6.6				pH
Sample Temperature, Field	10.4				deg C	14				deg C	12.4				deg C
<b>ES NONE</b>															
Turbidity, Field	3.5		0.5	2	NTU	5.1		0.5	2	NTU	1.5	<RDL	0.5	2	NTU
<b>MT EPA 200.8*SW846 6020A</b>															
Aluminum, Dissolved, ICP-MS		<MDL	2	10	ug/L		<MDL	2	10	ug/L		<MDL	2	10	ug/L
Antimony, Dissolved, ICP-MS		<MDL	0.3	1	ug/L		<MDL	0.3	1	ug/L		<MDL	0.3	1	ug/L
Arsenic, Dissolved, ICP-MS	0.38	<RDL	0.1	0.5	ug/L	0.11	<RDL	0.1	0.5	ug/L	0.18	<RDL	0.1	0.5	ug/L
Beryllium, Dissolved, ICP-MS		<MDL	0.1	0.5	ug/L		<MDL	0.1	0.5	ug/L		<MDL	0.1	0.5	ug/L
Cadmium, Dissolved, ICP-MS		<MDL	0.05	0.25	ug/L		<MDL	0.05	0.25	ug/L		<MDL	0.05	0.25	ug/L
Calcium, Dissolved, ICP-MS	13000		50	50	ug/L	5840		50	50	ug/L	5660		50	50	ug/L
Calcium, Total, ICP-MS	14700		50	50	ug/L	6160		50	50	ug/L	5840		50	50	ug/L
Chromium, Dissolved, ICP-MS	0.28	<RDL	0.2	1	ug/L	0.41	<RDL	0.2	1	ug/L	0.44	<RDL	0.2	1	ug/L
Copper, Dissolved, ICP-MS		<MDL	0.2	2	ug/L	0.31	<RDL	0.2	2	ug/L	0.78	<RDL	0.2	2	ug/L
Iron, Dissolved, ICP-MS		<MDL	10	50	ug/L		<MDL	10	50	ug/L	12	<RDL	10	50	ug/L
Iron, Total, ICP-MS	180		10	50	ug/L	186		10	50	ug/L	55.8		10	50	ug/L
Lead, Dissolved, ICP-MS		<MDL	0.1	0.5	ug/L		<MDL	0.1	0.5	ug/L		<MDL	0.1	0.5	ug/L
Magnesium, Dissolved, ICP-MS	3540		50	50	ug/L	1630		50	50	ug/L	3410		50	50	ug/L
Magnesium, Total, ICP-MS	4000		50	50	ug/L	1660		50	50	ug/L	3530		50	50	ug/L
Manganese, Dissolved, ICP-MS		<MDL	0.1	0.5	ug/L	1.43		0.1	0.5	ug/L	7.23		0.1	0.5	ug/L
Nickel, Dissolved, ICP-MS	0.16	<RDL	0.1	0.5	ug/L	0.755		0.1	0.5	ug/L	1.06		0.1	0.5	ug/L
Selenium, Dissolved, ICP-MS		<MDL	0.5	1	ug/L		<MDL	0.5	1	ug/L		<MDL	0.5	1	ug/L
Silver, Dissolved, ICP-MS		<MDL	0.04	0.2	ug/L		<MDL	0.04	0.2	ug/L		<MDL	0.04	0.2	ug/L
Sodium, Dissolved, ICP-MS	3450		100	100	ug/L	3250		100	100	ug/L	3010		100	100	ug/L
Thallium, Dissolved, ICP-MS		<MDL	0.1	0.2	ug/L		<MDL	0.1	0.2	ug/L		<MDL	0.1	0.2	ug/L
Zinc, Dissolved, ICP-MS		<MDL	0.5	2.5	ug/L		<MDL	0.5	2.5	ug/L	0.72	<RDL	0.5	2.5	ug/L
<b>MT EPA 200.8*SW846 6020A*SM2340B</b>															
Hardness, Calc	53.1		0.331	0.331	mg CaCO3/L	22.2		0.331	0.331	mg CaCO3/L	29.1		0.331	0.331	mg CaCO3/L