

**Water Security Agency**

<b>Land Location:</b>	SE-1-33-45-02W3	<b>NTS Map:</b>	73B/16
<b>UTM Coordinates:</b>	Z13 417781 E 5863553 N	<b>RM No.:</b>	463
<b>Ground Elevation:</b>		<b>Source:</b>	
<b>Date Sampled:</b>	28-Sep-64	<b>Time Sampled:</b>	
<b>Sample Location:</b>		<b>Sampled by:</b>	
<b>Well name:</b>	SWA Duck Lake #2	<b>Contractor:</b>	
<b>Well owner:</b>	Water Security Agency		
<b>Address:</b>	111 Fairford Street East Moose Jaw, SK S6H 7X9	<b>Tel:</b>	
<b>Sample Depth:</b>	124.6	<b>Date Drilled:</b>	
<b>Depth to Water:</b>		<b>Pump Setting:</b>	
<b>Well Diameter:</b>		<b>Pumping Rate:</b>	
<b>WWRD #</b>	9649	<b>Construction method:</b>	
<b>Analysis No.:</b>		<b>Formation:</b>	Empress Group
<b>Laboratory:</b>		<b>Aquifer name:</b>	Hatfield Valley aquifer

Constituent	Concentration	Constituent	Concentration
<b>Major Ions</b>		<b>Metals</b>	
Calcium (Ca)	220	Aluminum (Al)	
Magnesium (Mg)	97	Antimony (Sb)	
Sodium (Na)	1500	As (arsenic) (µg/L)	
Potassium (K)	18	Barium (Ba)	
Carbonate (CO3)		Beryllium (Be)	
Bicarbonate (HCO3)	484	Boron (B)	
Sulphate (SO4)	1860	Cadmium (Cd)	
Chloride (Cl)	1320	Chromium (Cr)	
Fluoride (F)		Cobalt (Co)	
Nitrate - Nitrate (NO3, NO2 + NO3)		Copper (Cu)	
Total Iron (Fe)	8.5	Lead (Pb)	
Manganese (Mn)		Molybdenum (Mo)	
pH (pH units)	7.5	Nickel (Ni)	
Conductivity (uS/cm)	7700	Selenium (Se)	
Sum of Ions	5499	Silver (Ag)	
Total Dissolved Solids (TDS)		Strontium (Sr)	
Error in Balance (%)		Thallium (Tl)	
Hardness (as CaCO3)	947	Tin (Sn)	
Total Alkalinity (as CaCO3)	397	Titanium (Ti)	
		Uranium (U) (µg/L)	
Dissolved Organic Carbon (DOC)		Vanadium (V)	
Turbidity (NTU)		Zinc (Zn)	
Perchlorate			
Iodine (I)			

All values in mg/L, unless indicated otherwise

**Water Security Agency**

<b>Land Location:</b>	SE-1-33-45-02W3	<b>NTS Map:</b>	73B/16
<b>UTM Coordinates:</b>	Z13 417781 E 5863553 N	<b>RM No.:</b>	463
<b>Ground Elevation:</b>		<b>Source:</b>	
<b>Date Sampled:</b>	5-Jun-68	<b>Time Sampled:</b>	
<b>Sample Location:</b>		<b>Sampled by:</b>	
<b>Well name:</b>	SWA Duck Lake #2	<b>Contractor:</b>	
<b>Well owner:</b>	Water Security Agency		
<b>Address:</b>	111 Fairford Street East Moose Jaw, SK S6H 7X9	<b>Tel:</b>	
<b>Sample Depth:</b>	124.6	<b>Date Drilled:</b>	
<b>Depth to Water:</b>		<b>Pump Setting:</b>	
<b>Well Diameter:</b>		<b>Pumping Rate:</b>	
<b>WWRD #</b>	9649	<b>Construction method:</b>	
<b>Analysis No.:</b>		<b>Formation:</b>	Empress Group
<b>Laboratory:</b>		<b>Aquifer name:</b>	Hatfield Valley aquifer

Constituent	Concentration	Constituent	Concentration
<b>Major Ions</b>		<b>Metals</b>	
Calcium (Ca)	226	Aluminum (Al)	
Magnesium (Mg)	94	Antimony (Sb)	
Sodium (Na)	1500	As (arsenic) (µg/L)	
Potassium (K)	26	Barium (Ba)	
Carbonate (CO3)		Beryllium (Be)	
Bicarbonate (HCO3)	455	Boron (B)	
Sulphate (SO4)	1940	Cadmium (Cd)	
Chloride (Cl)	1315	Chromium (Cr)	
Fluoride (F)		Cobalt (Co)	
Nitrate - Nitrate (NO3, NO2 + NO3)	16	Copper (Cu)	
Total Iron (Fe)	2.5	Lead (Pb)	
Manganese (Mn)		Molybdenum (Mo)	
pH (pH units)	7.5	Nickel (Ni)	
Conductivity (uS/cm)	8500	Selenium (Se)	
Sum of Ions	5572	Silver (Ag)	
Total Dissolved Solids (TDS)		Strontium (Sr)	
Error in Balance (%)		Thallium (Tl)	
Hardness (as CaCO3)	950	Tin (Sn)	
Total Alkalinity (as CaCO3)	373	Titanium (Ti)	
Dissolved Organic Carbon (DOC)		Uranium (U) (µg/L)	
Turbidity (NTU)		Vanadium (V)	
Perchlorate		Zinc (Zn)	
Iodine (I)			

All values in mg/L, unless indicated otherwise

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<b>Land Location:</b>	SE-1-33-45-02W3	<b>NTS Map:</b>	73B/16
<b>UTM Coordinates:</b>	Z13 417781 E 5863553 N	<b>RM No.:</b>	463
<b>Ground Elevation:</b>		<b>Source:</b>	
<b>Date Sampled:</b>	7-Aug-70	<b>Time Sampled:</b>	
<b>Sample Location:</b>		<b>Sampled by:</b>	
<b>Well name:</b>	SWA Duck Lake #2	<b>Contractor:</b>	
<b>Well owner:</b>	Water Security Agency		
<b>Address:</b>	111 Fairford Street East Moose Jaw, SK S6H 7X9	<b>Tel:</b>	
<b>Sample Depth:</b>	124.6	<b>Date Drilled:</b>	
<b>Depth to Water:</b>		<b>Pump Setting:</b>	
<b>Well Diameter:</b>		<b>Pumping Rate:</b>	
<b>WWRD #</b>	9649	<b>Construction method:</b>	
<b>Analysis No.:</b>		<b>Formation:</b>	Empress Group
<b>Laboratory:</b>		<b>Aquifer name:</b>	Hatfield Valley aquifer

Constituent	Concentration	Constituent	Concentration
<b>Major Ions</b>		<b>Metals</b>	
Calcium (Ca)	213	Aluminum (Al)	
Magnesium (Mg)	99	Antimony (Sb)	
Sodium (Na)	1500	As (arsenic) (µg/L)	
Potassium (K)	25	Barium (Ba)	
Carbonate (CO3)		Beryllium (Be)	
Bicarbonate (HCO3)	453	Boron (B)	
Sulphate (SO4)	2000	Cadmium (Cd)	
Chloride (Cl)	1300	Chromium (Cr)	
Fluoride (F)		Cobalt (Co)	
Nitrate - Nitrate (NO3, NO2 + NO3)	<2	Copper (Cu)	
Total Iron (Fe)	5.9	Lead (Pb)	
Manganese (Mn)		Molybdenum (Mo)	
pH (pH units)	7.32	Nickel (Ni)	
Conductivity (uS/cm)	8900	Selenium (Se)	
Sum of Ions	5590	Silver (Ag)	
Total Dissolved Solids (TDS)		Strontium (Sr)	
Error in Balance (%)		Thallium (Tl)	
Hardness (as CaCO3)	938	Tin (Sn)	
Total Alkalinity (as CaCO3)	371	Titanium (Ti)	
		Uranium (U) (µg/L)	
Dissolved Organic Carbon (DOC)		Vanadium (V)	
Turbidity (NTU)		Zinc (Zn)	
Perchlorate			
Iodine (I)			

All values in mg/L, unless indicated otherwise

**Water Security Agency**

<b>Land Location:</b>	SE-1-33-45-02W3	<b>NTS Map:</b>	73B/16
<b>UTM Coordinates:</b>	Z13 417781 E 5863553 N	<b>RM No.:</b>	463
<b>Ground Elevation:</b>		<b>Source:</b>	
<b>Date Sampled:</b>	24-Oct-71	<b>Time Sampled:</b>	
<b>Sample Location:</b>		<b>Sampled by:</b>	
<b>Well name:</b>	SWA Duck Lake #2	<b>Contractor:</b>	
<b>Well owner:</b>	Water Security Agency		
<b>Address:</b>	111 Fairford Street East Moose Jaw, SK S6H 7X9	<b>Tel:</b>	
<b>Sample Depth:</b>	124.6	<b>Date Drilled:</b>	
<b>Depth to Water:</b>		<b>Pump Setting:</b>	
<b>Well Diameter:</b>		<b>Pumping Rate:</b>	
<b>WWRD #</b>	9649	<b>Construction method:</b>	
<b>Analysis No.:</b>		<b>Formation:</b>	Empress Group
<b>Laboratory:</b>		<b>Aquifer name:</b>	Hatfield Valley aquifer

Constituent	Concentration	Constituent	Concentration
<b>Major Ions</b>		<b>Metals</b>	
Calcium (Ca)	216	Aluminum (Al)	
Magnesium (Mg)	95	Antimony (Sb)	
Sodium (Na)	1530	As (arsenic) (µg/L)	
Potassium (K)	26	Barium (Ba)	
Carbonate (CO3)		Beryllium (Be)	
Bicarbonate (HCO3)	454	Boron (B)	
Sulphate (SO4)	2047	Cadmium (Cd)	
Chloride (Cl)	1330	Chromium (Cr)	
Fluoride (F)	0.03	Cobalt (Co)	
Nitrate - Nitrate (NO3, NO2 + NO3)	<1	Copper (Cu)	
Total Iron (Fe)	6.5	Lead (Pb)	
Manganese (Mn)		Molybdenum (Mo)	
pH (pH units)	7.55	Nickel (Ni)	
Conductivity (uS/cm)	7390	Selenium (Se)	
Sum of Ions	5698	Silver (Ag)	
Total Dissolved Solids (TDS)		Strontium (Sr)	
Error in Balance (%)		Thallium (Tl)	
Hardness (as CaCO3)	930	Tin (Sn)	
Total Alkalinity (as CaCO3)	372	Titanium (Ti)	
		Uranium (U) (µg/L)	
Dissolved Organic Carbon (DOC)		Vanadium (V)	
Turbidity (NTU)		Zinc (Zn)	
Perchlorate			
Iodine (I)			

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**Water Security Agency**

<b>Land Location:</b>	SE-1-33-45-02W3	<b>NTS Map:</b>	73B/16
<b>UTM Coordinates:</b>	Z13 417781 E 5863553 N	<b>RM No.:</b>	463
<b>Ground Elevation:</b>		<b>Source:</b>	
<b>Date Sampled:</b>	29-Jun-72	<b>Time Sampled:</b>	
<b>Sample Location:</b>		<b>Sampled by:</b>	
<b>Well name:</b>	SWA Duck Lake #2	<b>Contractor:</b>	
<b>Well owner:</b>	Water Security Agency		
<b>Address:</b>	111 Fairford Street East Moose Jaw, SK S6H 7X9	<b>Tel:</b>	
<b>Sample Depth:</b>	124.6	<b>Date Drilled:</b>	
<b>Depth to Water:</b>		<b>Pump Setting:</b>	
<b>Well Diameter:</b>		<b>Pumping Rate:</b>	
<b>WWRD #</b>	9649	<b>Construction method:</b>	
<b>Analysis No.:</b>		<b>Formation:</b>	Empress Group
<b>Laboratory:</b>		<b>Aquifer name:</b>	Hatfield Valley aquifer

Constituent	Concentration	Constituent	Concentration
<b>Major Ions</b>		<b>Metals</b>	
Calcium (Ca)	210	Aluminum (Al)	
Magnesium (Mg)	100	Antimony (Sb)	
Sodium (Na)	1547	As (arsenic) (µg/L)	
Potassium (K)	19	Barium (Ba)	
Carbonate (CO3)		Beryllium (Be)	
Bicarbonate (HCO3)	446	Boron (B)	
Sulphate (SO4)	2039	Cadmium (Cd)	
Chloride (Cl)	1325	Chromium (Cr)	
Fluoride (F)	0.1	Cobalt (Co)	
Nitrate - Nitrate (NO3, NO2 + NO3)	<0.1	Copper (Cu)	
Total Iron (Fe)	11.6	Lead (Pb)	
Manganese (Mn)		Molybdenum (Mo)	
pH (pH units)	7.6	Nickel (Ni)	
Conductivity (uS/cm)	7410	Selenium (Se)	
Sum of Ions	5686	Silver (Ag)	
Total Dissolved Solids (TDS)		Strontium (Sr)	
Error in Balance (%)		Thallium (Tl)	
Hardness (as CaCO3)	933	Tin (Sn)	
Total Alkalinity (as CaCO3)	366	Titanium (Ti)	
Dissolved Organic Carbon (DOC)		Uranium (U) (µg/L)	
Turbidity (NTU)		Vanadium (V)	
Perchlorate		Zinc (Zn)	
Iodine (I)			

All values in mg/L, unless indicated otherwise

**Water Security Agency**

<b>Land Location:</b>	SE-1-33-45-02W3	<b>NTS Map:</b>	73B/16
<b>UTM Coordinates:</b>	Z13 417781 E 5863553 N	<b>RM No.:</b>	463
<b>Ground Elevation:</b>		<b>Source:</b>	
<b>Date Sampled:</b>	14-Aug-84	<b>Time Sampled:</b>	
<b>Sample Location:</b>		<b>Sampled by:</b>	
<b>Well name:</b>	SWA Duck Lake #2	<b>Contractor:</b>	
<b>Well owner:</b>	Water Security Agency		
<b>Address:</b>	111 Fairford Street East Moose Jaw, SK S6H 7X9	<b>Tel:</b>	
<b>Sample Depth:</b>	124.6	<b>Date Drilled:</b>	
<b>Depth to Water:</b>		<b>Pump Setting:</b>	
<b>Well Diameter:</b>		<b>Pumping Rate:</b>	
<b>WWRD #</b>	9649	<b>Construction method:</b>	
<b>Analysis No.:</b>		<b>Formation:</b>	Empress Group
<b>Laboratory:</b>		<b>Aquifer name:</b>	Hatfield Valley aquifer

Constituent	Concentration	Constituent	Concentration
Major Ions		Metals	
Calcium (Ca)	204	Aluminum (Al)	
Magnesium (Mg)	101	Antimony (Sb)	
Sodium (Na)	1500	As (arsenic) (µg/L)	
Potassium (K)	17	Barium (Ba)	
Carbonate (CO3)		Beryllium (Be)	
Bicarbonate (HCO3)	458	Boron (B)	
Sulphate (SO4)	1776	Cadmium (Cd)	
Chloride (Cl)	1390	Chromium (Cr)	
Fluoride (F)	0.29	Cobalt (Co)	
Nitrate - Nitrate (NO3, NO2 + NO3)	0.02	Copper (Cu)	
Total Iron (Fe)	4.5	Lead (Pb)	
Manganese (Mn)	0.11	Molybdenum (Mo)	
pH (pH units)	7.82	Nickel (Ni)	
Conductivity (uS/cm)	7330	Selenium (Se)	
Sum of Ions	5446	Silver (Ag)	
Total Dissolved Solids (TDS)		Strontium (Sr)	
Error in Balance (%)		Thallium (Tl)	
Hardness (as CaCO3)	930	Tin (Sn)	
Total Alkalinity (as CaCO3)	375	Titanium (Ti)	
		Uranium (U) (µg/L)	
Dissolved Organic Carbon (DOC)		Vanadium (V)	
Turbidity (NTU)		Zinc (Zn)	
Perchlorate			
Iodine (I)			

All values in mg/L, unless indicated otherwise

**Water Security Agency**

<b>Land Location:</b>	SE-1-33-45-02W3	<b>NTS Map:</b>	73B/16
<b>UTM Coordinates:</b>	Z13 417781 E 5863553 N	<b>RM No.:</b>	463
<b>Ground Elevation:</b>		<b>Source:</b>	
<b>Date Sampled:</b>	20-Sep-05	<b>Time Sampled:</b>	
<b>Sample Location:</b>		<b>Sampled by:</b>	
<b>Well name:</b>	SWA Duck Lake #2	<b>Contractor:</b>	
<b>Well owner:</b>	Water Security Agency		
<b>Address:</b>	111 Fairford Street East Moose Jaw, SK S6H 7X9	<b>Tel:</b>	
<b>Sample Depth:</b>	124.6	<b>Date Drilled:</b>	
<b>Depth to Water:</b>		<b>Pump Setting:</b>	
<b>Well Diameter:</b>		<b>Pumping Rate:</b>	
<b>WWRD #</b>	9649	<b>Construction method:</b>	
<b>Analysis No.:</b>		<b>Formation:</b>	Empress Group
<b>Laboratory:</b>		<b>Aquifer name:</b>	Hatfield Valley aquifer

Constituent	Concentration	Constituent	Concentration
<b>Major Ions</b>		<b>Metals</b>	
Calcium (Ca)	163	Aluminum (Al)	0.0016
Magnesium (Mg)	94	Antimony (Sb)	< 0.0002
Sodium (Na)	1550	As (arsenic) (µg/L)	0.0079
Potassium (K)	25	Barium (Ba)	0.02
Carbonate (CO3)	<1	Beryllium (Be)	< 0.0001
Bicarbonate (HCO3)	454	Boron (B)	0.99
Sulphate (SO4)	1900	Cadmium (Cd)	< 0.0005
Chloride (Cl)	1360	Chromium (Cr)	< 0.005
Fluoride (F)	0.09	Cobalt (Co)	0.0012
Nitrate - Nitrate (NO3, NO2 + NO3)	<0.04	Copper (Cu)	< 0.0002
Total Iron (Fe)	2.3	Lead (Pb)	0.0003
Manganese (Mn)	0.1	Molybdenum (Mo)	0.013
pH (pH units)	7.91	Nickel (Ni)	0.001
Conductivity (uS/cm)	7690	Selenium (Se)	0.0003
Sum of Ions	5546	Silver (Ag)	0.0001
Total Dissolved Solids (TDS)	5470	Strontium (Sr)	2.2
Error in Balance (%)		Thallium (Tl)	< 0.0002
Hardness (as CaCO3)	793	Tin (Sn)	0.0003
Total Alkalinity (as CaCO3)	372	Titanium (Ti)	
		Uranium (U) (µg/L)	0.0003
Dissolved Organic Carbon (DOC)		Vanadium (V)	0.0002
Turbidity (NTU)	21	Zinc (Zn)	0.005
Perchlorate			
Iodine (I)			

All values in mg/L, unless indicated otherwise