

Appendix H

Table H-1: Cost Estimate for Alternative 1A

Oshkigamig Nibiwigamig (Water Treatment Plant) (1,070 m³/day capacity) - Slow Sand Filtration with Ozonation
 Wells 2, 3, 7,10, 453 m³ of Clearwell Storage,
 1,045 m³ Elevated Glass Fused-To-Steel Storage Facility and Phase I & II Watermains
Curve Lake Water System

Capital Cost Estimate (Class C)					
2011 Constant Dollars					January 2011
Item #	Item Description	Unit	Qty	Unit Cost	Total
Construction					
1.0	Mobilization/Demobilization	L.S.	100%	\$486,720	\$486,720
2.0	Site Work				
2.1	Clearing and Grubbing WTP Site raw watermain routes and treated wastewater discharge pipe	L.S.	100%	\$21,632	\$21,632
2.2	Site Development Work (access, fill, parking, yard piping)	L.S.	100%	\$102,752	\$102,752
2.3	Filter Backwash Treatment Tank (57,000 L) and Effluent Pumping Station	L.S.	100%	\$162,240	\$162,240
2.4	Install 9,000 L holding tank for wastewater	L.S.	100%	\$5,949	\$5,949
2.5	3 Phase Hydro to the Water Treatment Plant	L.S.	100%	\$9,734	\$9,734
2.6	Three Phase Hydro to Well No. 10	m	300	\$70	\$21,091
2.7	Single Phase Hydro Service to Wells No. 2, 3 and 7	L.S.	100%	\$12,979	\$12,979
2.8	Construct/Improve access roads to well 2, 3, 7 and 10	L.S.	100%	\$37,856	\$37,856
2.9	Construct 75 mm ϕ raw water watermain from Well No. 2 to Water Treatment Plant Site	m	370	\$233	\$86,041
2.10	Construct 50 mm ϕ raw water watermain from Well No. 3 to Water Treatment Plant Site	m	735	\$227	\$166,945
2.11	Construct 50 mm dia. raw watermain from Well No. 7 to Water Treatment Plant	m	985	\$227	\$223,729
2.12	Construct 75 mm dia. raw watermain from Well No. 10 to Water Treatment Plant	m	1,650	\$173	\$285,542
2.13	Construct 75 mm dia. treated backwash pipe from Water Treatment Plant to Buckhorn Lake	m	1,400	\$173	\$242,278
3.0	Water Treatment Plant				
3.1	Clearing, grubbing excavation, backfill and compaction	m ²	374	\$379	\$141,581
3.2	Concrete substructure, foundation and concrete floor	m ²	374	\$649	\$242,711
3.3	Inground concrete clearwell - 453 m ³ storage	m ³	453	\$1,139	\$515,933

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Item #	Item Description	Unit	Qty	Unit Cost	Total
3.4	Water Treatment Plant - Building superstructure (4 m inside height)	m ²	547	\$1,298	\$709,962
3.5	Building finishes	L.S.	100%	\$54,080	\$54,080
3.6	Package Slow Sand Filtration System - Supply	L.S.	100%	\$605,696	\$605,696
3.7	Install Package Slow Sand Filtration System	L.S.	100%	\$275,592	\$275,592
3.8	Supply and install Ozonation System	L.S.	100%	\$86,528	\$86,528
3.9	Treatment Equipment - UV disinfection	Unit	2	\$70,304	\$140,608
3.10	Treatment Equipment - chlorination & chlorine pumps	L.S.	100%	\$27,040	\$27,040
3.11	Automatic Water Quality Analysers	ea.	5	\$7,571	\$37,856
3.12	Laboratory and Monitoring Equipment	L.S.	100%	\$32,448	\$32,448
3.13	Two (2) highlift pumps (45 HP) - supply and install	ea.	2	\$48,672	\$97,344
3.14	Four (4) submersible well pumps - supply and install	ea.	4	\$21,632	\$86,528
3.15	Two (2) backwash pumps - supply and install	ea.	2	\$48,672	\$97,344
3.16	Two (2) wastewater pumps - supply and install	ea.	2	\$21,632	\$43,264
3.17	Mechanical, process piping, bldg. piping, valves, watermeter	L.S.	100%	\$248,768	\$248,768
3.18	Diesel generator set & controls	L.S.	100%	\$54,080	\$54,080
3.19	Electrical (bldg., MCC, controls, etc.)	L.S.	100%	\$248,768	\$248,768
3.20	Programmable logic controllers, SCADA system and telephone dialler	L.S.	100%	\$129,792	\$129,792
3.21	Heating and Ventilation	L.S.	100%	\$54,080	\$54,080
4.0	Elevated Water Storage 1,045 m³ (Site 1)				
4.1	Glass-Fused-To-Steel elevated tank on concrete pedestal	L.S.	100%	\$1,469,894	\$1,469,894
4.2	Interior Mechanical Rooms	L.S.	100%	\$91,936	\$91,936
4.3	Rechlorination Facility - NaOCl Tanks and Chemical Feed Pumps	L.S.	100%	\$43,264	\$43,264
4.4	Water Recirculation System	L.S.	100%	\$37,856	\$37,856
4.5	Mechanical/Electrical Controls/SCADA/Heating/Ventilation	L.S.	100%	\$129,792	\$129,792
4.6	Yard piping and sitework	L.S.	100%	\$32,448	\$32,448

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2011 Constant Dollars				January 2011	
Item #	Item Description	Unit	Qty	Unit Cost	Total
5.0	Environmental Works				
5.1	Erosion Control	L.S.	100%	\$4,326	\$4,326
5.2	Decommission and Seal Wells #1, #2 and new well (2006) in the Nishnawbeke Subdivision	unit	3	\$4,867	\$14,602
5.3	Decommission and Seal Private Wells	ea.	350	\$1,622	\$567,840
6.0	Watermain Construction				
6.1	Construct 150 mm ø watermain - Phase I	m	3,085	\$324	\$1,001,021
6.2	Construct 200 mm ø watermain - Phase I	m	3595	\$352	\$1,263,714
6.3	Construct 250 mm ø watermain - Phase I	m	4230	\$400	\$1,692,812
6.4	Construct 300 mm ø watermain - Phase I	m	865	\$422	\$364,878
6.5	Construct 350 mm ø watermain - Phase I	m	165	\$433	\$71,386
6.6	Hydrants - Phase I	ea.	79	\$5,084	\$401,598
6.7	Water services - Phase I	ea.	411	\$2,704	\$1,111,344
6.8	Construct 200 mm ø watermain - Phase II	m	4045	\$352	\$1,421,898
6.9	Hydrants - Phase II	ea.	28	\$5,084	\$142,339
6.10	Water Services - Phase II	ea.,	102	\$2,704	\$275,808
7.0	Bonding & Insurance	L.S.	100%	\$183,872	\$183,872
8.0	Allowances				
8.1	Soils Investigation Water Treatment Plant, Elevated Storage facility and watermains.	L.S.	100%	\$48,672	\$48,672
8.2	Decommission existing Nishnawabeke Subdivision Water Treatment Plant (save building)	L.S.	100%	\$5,408	\$5,408
8.3	Commission new water treatment plant	L.S.	100%	\$43,264	\$43,264
	Subtotal Construction Cost				\$16,215,465
	Construction Contingency	%	10%		\$1,621,547
	Total Construction Cost				\$17,837,012
Non-Construction					
9.0	Engineering Design	%	5.5%		\$981,036
10.0	Contract Administration	%	5.5%		\$981,036
11.0	Engineering Disbursement	%	1.8%		\$321,066

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Item #	Item Description	Unit	Qty	Unit Cost	Total
12.0	Materials Testing Allowance and Soils Inspection during construction	L.S.	100%		\$64,896
13.0	First Nations Administration	%	2%		\$356,740
14.0	Project Management Fees	%	2%		\$356,740
Total Non-Construction Cost					\$3,061,514
Total Project Cost					\$20,898,526