

Resolute Bay - Effluent quality calculations

Assumed values
Calculated values
Measured value

Flow Data

Utilidor	I/d
Current Utilidor (2015 Annual Report)	1,173,897
After Utilidor Upgraded (exp design report)	221,184

Truck	
1 full truck	12,500
Truck (2015 Annual Report) Average	11,535
Truck (2015 Annual Report) High Month	17,792

Current Effluent Quality

	Truck
BOD	643
TSS	203
Fecal Coliform	1,880,000

Predicted Effluent Quality entering marine environment

	Option 1
BOD	32
TSS	22
Fecal Coliform	18,800

Community	% reduction cBOD ₅
Baker Lake	99%
Chesterfield Inlet	94%
Repulse Bay	93%
Average	95%
Average applied to Resolute Bay	32.15

I/hr	I/s
48,912	14
9,216	3

6 hr release	12 hr release
2,083	1,042
1,923	961
2,965	1,483

Utilidor pre upgrades	Utilidor Post upgardes
12	64
10	53
7.78E+03	4.13E+04

Option 2: 1 truckload	
6 hr release	12 hr release
170	123
81	68
3.80E+05	2.28E+05

% reduction TSS	% reduction e.Coli
99%	>99%
86%	>99%
82%	100%
89%	99%
22.33	1.88E+04

Option 3: 100% trucked

average		high month	
6 hr release	12 hr release	6 hr release	12 hr release
164	118	205	144
79	67	90	74
3.59E+05	2.15E+05	4.89E+05	2.96E+05