



Results of the customer survey conducted in the fall of 2006 are presented.

## **Customer Survey Results**

**1. Please rate your overall satisfaction with the service provided by your water utility.**

Very dissatisfied	Somewhat dissatisfied	Average	Satisfied	Very satisfied	
18	5	33	288	248	592
3.04%	0.84%	5.57%	48.65%	41.89%	

**2. How would you rate the service provided by the staff of your water utility?**

Very low	Below average	Average	Above Average	Very High	
2	1	157	262	156	578
0.35%	0.17%	27.16%	45.33%	26.99%	

**3. Do you believe yourself to be informed on District and valley-wide water issues?**

Not informed at all	Less informed than most	Average knowledge	Above average knowledge	Very informed	
6	32	353	126	74	591
1.02%	5.41%	59.73%	21.32%	12.52%	

**4. Do the BMID newsletters provide you with relevant information on water issues that you are facing?**

Not at all	Marginal Information	Adequate Information	Good Information	Very good Information	
4	22	131	312	112	581
0.69%	3.79%	22.55%	53.70%	19.28%	

**5. How frequently would you like a newsletter on water issues?**

Monthly	Quarterly	Bi-annually	Annually	
20	257	221	93	591
3.38%	43.49%	37.39%	15.74%	

**6. How would you rate the quality of water supplied by BMID?**

No Opinion	Fair	Good	Very Good	
6	55	295	235	591
1.02%	9.31%	49.92%	39.76%	

**7. Do you believe your water from BMID is safe to use for all household purposes?**

Not Safe	Safe for some	Safe for most	Safe for all	
5	37	176	373	591
0.85%	6.26%	29.78%	63.11%	

**8. Do you provide additional treatment of the water within your home to improve the quality? Please check the most appropriate box below.**

No treatment	Paper filter (Brita)	Cartridge Filter	Reverse Osmosis	Bottled Water Service	
234	75	132	64	101	606
38.61%	12.38%	21.78%	10.56%	16.67%	

**9. If you provide additional treatment, how much do you spend per month to provide the additional treatment.**

Nothing	Don't Know	\$ 0 to \$ 10	\$ 10 to \$20	> \$ 20	
183	43	197	69	25	517
35.40%	8.32%	38.10%	13.35%	4.84%	

**10. Do you drink tap water from the BMID?**

Never	Sometimes	Most of the time	Always	
107	201	99	183	590
18.14%	34.07%	16.78%	31.02%	

**11. Do you drink bottled water?**

Never	Sometimes	Most of the time	Always	
129	321	87	55	592
21.79%	54.22%	14.70%	9.29%	

**12. Do you understand the new Interior Health Authority definitions and the difference between a Water Quality Advisory and a Boil Water Notice?**

Yes	No	Do not understand	
465	79	46	590
78.81%	13.39%	7.80%	

**13. Is your utility or any part of your water utility on a Water Quality Advisory?**

Yes	No	Don't Know	
65	338	183	586
11.09%	57.68%	31.23%	

**14. In the last 5 years, have you or anyone in your residence, ever experienced gastro-intestinal distress you feel was caused by a waterborne disease?**

Yes	No	Don't Know	
20	488	80	588
3.40%	82.99%	13.61%	

**15. Your current water rate in BMID is \$25.50/ month for a single family residence. What additional amount per month are you willing to pay for higher quality tap water?**

\$0	\$ 0 - \$ 5	\$ 5 - \$ 10	\$ 10 - \$15	> \$ 15	
291	161	108	8	4	572
50.87%	28.15%	18.88%	1.40%	0.70%	

**16. Are you concerned about the higher regulatory requirements for quality of water supplied and the impact it will have on your water rates?**

Not concerned	Somewhat concerned	Concerned	Very concerned	
94	243	184	64	585
16.07%	41.54%	31.45%	10.94%	

**17. Do you practice conservation practices such as have low flow shower heads, low flush toilets, sweep and not hose down your driveway, etc?**

Never	Occasionally	Sometimes	Most of the time	Always	
8	31	87	322	141	589
1.36%	5.26%	14.77%	54.67%	23.94%	

**18. Do you believe water meters provide an equitable means of measuring and charging for water usage?**

Strongly Disagree	Disagree	Agree	Strongly Agree	
59	144	307	63	573
10.30%	25.13%	53.58%	10.99%	

**19. Do you believe people who use excessive amounts of water should pay additional money for their overuse?**

Strongly Disagree	Disagree	Agree	Strongly Agree	
9	38	338	199	584
1.54%	6.51%	57.88%	34.08%	

**20. Do you prefer the current organizational structure for water utility service or would you prefer a centralized utility operated under a larger organization similar to that of Greater Vernon Water.**

No comment	Amalgamated service	Stand alone service	Need more information	
87	12	215	272	586
14.85%	2.05%	36.69%	46.42%	



The worksheet provides an estimate of the revenue that is diverted on an annual basis from the public water supply towards alternative water supply sources or home treatment systems. For BMID, the revenue is conservatively estimated to be sufficient to fund a \$7.4 million dollar water treatment project.

### Diverted Revenue - Worksheet

		Tap Water	Britta Filter	Cartridge	Reverse Osmosis	Bottled Water Service	Convenience Water
Percentage of Use		39.00%	12.50%	21.50%	10.50%	16.50%	
Single Family	4800	1872	600	1032	504	792	0
Multi-family	2600	1014	325	559	273	429	0
Total Connections	7400	2886	925	1591	777	1221	7400
Price Per Month	\$ 25.50	\$ -	\$ 8.00	\$ 8.00	\$ 14.00	\$ 15.00	\$ 3.00
Total Revenue	\$ 2,264,400	\$ -	\$ 88,800	\$ 152,736	\$ 130,536	\$ 219,780	\$ 58,800
SUM OF DIVERTED REVENUE							\$ 650,652
Debt Servicing Capacity over 20 years		4.80%		\$ 8,247,849			
Debt Servicing Capacity over 20 years		5.00%		\$ 8,108,562			
Debt Servicing Capacity over 20 years		6.00%		\$ 7,462,927			

Convenience water - defined as bottled water purchase for each resident that is based on 2 purchases/mo of \$1.50 each  
Reverse Osmosis includes cartridge filter change twice per year and RO change once every four years

## **ADVANTAGES OF IMPROVEMENT DISTRICTS**

### **1) Efficient:**

- Improvement Districts (ID) have long been recognized by the Province of B.C. as one of the most efficient means in which to provide municipal services to the public.
- Some such as BMID have provided a long history of excellent service (85 years).

### **2) Self Sufficient and Self Sustaining:**

- All costs are associated with the provision of service.
- Ratepayers pay 100% of the operational, maintenance, and renewal costs of the service provided.

### **3) Full Cost Service Provider:**

- All costs relate directly to the service provided.
- ID's are accountable to their ratepayers for all costs.
- No external funds are available or directed from the province to IDs for normal operations or capital improvements.

### **4) Extremely Focused and High level of Service:**

- IDs usually specialize in one service making what they do very cost effective and focused.
- Efficient, single service provider.
- Not distracted by a wide range of municipal issues
- Cost effective

### **5) High Level of Responsiveness:**

- Locally based, close to their customers.
- Direct accessibility to all levels of management.
- Concerns are dealt with efficiently.
- Enhances communication and customer satisfaction.

### **6) Good Community Relationships:**

- ID's are experts at understanding and dealing with community issues that affect their service.
- A part of the local community.

### **7) Sensitive to Customer Needs:**

- Sensitive to specific customers needs (e.g. agricultural customers).
- Understand basic and complex issues related to specific customer needs.



**8) Politically Aware:**

- Trustees elected by landowners as a result of their interest, dedication, professional skills, and awareness of topical issues.
- ID Trustees have considerable political input and community involvement.
- Meetings, seminars, etc. well attended by Trustees who are usually focused on one issue.

**9) Excellent Staff Relations:**

- Staff relations excellent due to small size, little bureaucracy, good common interest.
- ID's typically develop dedicated, knowledgeable, and experienced employees.
- Usually low staff turnover.

2007 CAPITAL WORKS PLAN  
APPENDIX D  
SUPPORT INFORMATION  
NOVEMBER 2007

WATER USE ESTIMATE by category

BMID Water User Category	2007 Sept. 30, 2007	2006 yr end	2005	2004	2003
	Units	Units	ACTUAL	ACTUAL	CONSUMPTION
Pickers Cabin	24	23		26	21
Single Family Dwelling	4704	4505		4408	4268
SF Dwelling with suite	159	158		122	125
Duplex	79	73		92	93
Triplex	2	2		3	3
Fourplex	11	10		17	18
Day Care Facility	0	0		1	1
SF units ( not metered, flat rate)	4979 ML/yr	4771 ML/yr	4741	4669 ML/yr	4529 ML/yr
ML/SF unit/Year	0.546 2718.53	0.600 2862.60		0.469 2189.76	0.650 2943.85
<b>Water Use Category</b>					
Townhouses	150 0.18 27.00	109 0.138 210.50		1482 0.138 205.10	78784696 0.24 357.37
Multi-Unit Apartment Building	1642 0.138 227.24	1521 0.138 210.50		1482 0.138 205.10	78784696 0.24 357.37
Motel, Hotel, and Lodging	168 0.089 14.91	168 0.089 14.91		168 0.089 14.91	6583632 0.18 29.86
MHP, Metered	76 0.446 33.89	76 0.446 33.89		76 0.446 33.89	17040000 1.02 77.29
Eating and Drinking Establishment	10 2.738 27.38	11 2.738 30.12		10 2.738 28.62	9360120 4.06 42.46
MF Building - Metered	171 0.417 71.28	138 0.417 57.53		128 0.417 53.43	19088256 0.68 86.58
Single Unit Bldg - Metered	83 1.110 92.16	79 1.110 87.72		70 1.110 77.32	24591864 1.60 111.55
Recreation Use - Metered	3 23.066 69.20	2 23.066 46.13		2 23.066 54.52	14175744 27.20 64.30
Carwash - Metered	2 9.833 19.67	2 9.833 19.67		2 9.833 19.67	7137240 16.19 32.37
School and Community Institutional	12 3.383 40.59	12 3.383 40.59		12 3.383 40.59	11794728 4.46 53.50
Processing Plant - Metered	4 1.481 5.93	4 1.481 5.93		4 1.481 5.93	2200120 2.49 9.98
Veterinary Clinic - Metered	1 0.727 0.73	1 0.727 0.73		1 0.727 0.73	256608 1.16 1.16
Medical Clinic - Metered	9 0.266 2.40	9 0.266 2.40		9 0.266 2.40	1236840 0.62 5.61
Auto Dealer - Metered	6 1.782 10.69	6 1.782 10.69		5 1.782 8.91	1236840 1.12 5.61
Multi-Unit Apartment Building - metered	112 0.085 9.47	171 0.085 14.46		112 0.085 9.47	2695736 0.11 12.23
Lodging Homes	0 0.077 0.00	0 0.077 0.00		1 0.077 0.06	0.1 0.07
MHP	142 0.180 25.56	142 0.180 25.56		142 0.180 25.56	1.00 142.00
Commercial Low Usage	106 0.469 49.71	118 0.469 55.34		105 0.469 49.20	0.65 68.19
Commercial Medium Usage	6 0.469 2.81	6 0.469 2.81		6 0.469 3.03	0.65 4.20
Commercial High Usage	3 0.469 1.41	3 0.469 1.41		4 0.469 1.88	0.65 2.60
Eating and Drinking Establishment	2 0.469 0.94	3 0.469 1.41		4 0.469 1.83	0.65 2.54
Garden Shops	3 0.469 1.41	2 0.469 0.94		2 0.469 1.15	0.65 1.60
Entertainment and Amusement	2 0.469 0.94	2 0.469 0.94		2 0.469 0.94	0.65 1.30
Industrial Light Warehouse	54 0.469 25.33	44 0.469 20.64		49 0.469 22.85	0.65 31.67
Industrial Manufacturing	5 0.469 2.35	5 0.469 2.35		5 0.469 2.35	0.65 3.25
Industrial Manufacturing	2 0.469 0.94	2 0.469 0.94		2 0.469 0.94	0.65 1.30
Industrial Miscellaneous	26 0.469 12.19	26 0.469 12.19		26 0.469 12.19	0.65 16.90
Caretaker Suite	9 0.469 4.22	9 0.469 4.22		8 0.469 3.75	0.65 5.20
Community Institutional - Schools	3 0.469 1.41	3 0.469 1.41		3 0.469 1.41	0.65 1.95
Community Institutional - _____	8 0.469 3.75	8 0.469 3.75		8 0.469 3.75	0.65 5.20
Standby Fire Supply	26 0.469 12.19	27 0.469 12.66		28 0.469 13.13	0.65 18.20
Bulk / Miscellaneous	1 0.469 0.47	1 0.469 0.47		1 0.469 0.47	0.65 0.65
ICI Units	300 798	304 722	300 0	297 700	1197
SF Units	4979 2719	4771 2863	4720 0	4669 2190	2944
MF Units	2547 571	2406 491	2293 0	2181 3385	4980
Subtotals	7826 3517	7481 4076	7314 3517	7147 2890	4141
Agricultural application rate	acres 0.48 m depth	0.52 m depth	0.49 m depth	0.48 m depth	0.58 m depth
Irrigation Connections	860	860	860	860	
Grade A lands, full rights and using water	4110 7980	4107 8639	4101 8128	4116 7992 7992 ML	9657 9657 ML
Grade C lands, full rights but not using water	1220	1218	1190	1162	
Grade D lands, no water rights	2025	2025	1689	1691	
Total Land within District (area of lots > 1.0 acre)	7355	7350	6980	6970	
Leakage	954	954	954	954	954
TOTAL ESTIMATED WATER USE (ML)	12450	13668	12599	11835	14751
TOTAL ACTUAL ANNUAL WATER USE (ML)	12500	13662	12664	11834 ML	14784 ML
AVERAGE YEAR (Normalized volume)	13600	13500	13466	13333	13200
	2007	2006	2005	2004 actual	2003 dry year



This spreadsheet provides a reference of overage charges for irrigation on commercial operations. It primarily affects golf courses and turf farms.

Metered Rate Overage - Worksheet											
Water allowed within tax rate (m3)	No. of Months	Annual allotment	Annual Depth (m)	0.400		0.450		0.500		0.550	0.600
Proposed tax rate	\$ 68.00				\$ 68.00	\$ 68.00		\$ 68.00		\$ 68.00	\$ 68.00
Prop. m3 rate	\$ 0.20										
250	5	1250	0.309	0.091	\$ 141.76	0.141	\$ 182.23	0.191	\$ 222.70	0.241	\$ 263.17
275	5	1375	0.340	0.060	\$ 116.76	0.110	\$ 157.23	0.160	\$ 197.70	0.210	\$ 238.17
300	5	1500	0.371	0.029	\$ 91.76	0.079	\$ 132.23	0.129	\$ 172.70	0.179	\$ 213.17
325	5	1625	0.402		\$ 68.00	0.048	\$ 107.23	0.098	\$ 147.70	0.148	\$ 188.17
350	5	1750	0.432		\$ 68.00	0.018	\$ 82.23	0.068	\$ 122.70	0.118	\$ 163.17
375	5	1875	0.463		\$ 68.00		\$ 68.00	0.037	\$ 97.70	0.087	\$ 138.17
400	5	2000	0.494		\$ 68.00		\$ 68.00	0.006	\$ 72.70	0.056	\$ 113.17
Prop. m3 rate	\$ 0.18										
250	5	1250	0.309	0.091	\$ 134.38	0.141	\$ 170.81	0.191	\$ 207.23	0.241	\$ 243.65
275	5	1375	0.340	0.060	\$ 111.88	0.110	\$ 148.31	0.160	\$ 184.73	0.210	\$ 221.15
300	5	1500	0.371	0.029	\$ 89.38	0.079	\$ 125.81	0.129	\$ 162.23	0.179	\$ 198.65
325	5	1625	0.402		\$ 68.00	0.048	\$ 103.31	0.098	\$ 139.73	0.148	\$ 176.15
350	5	1750	0.432		\$ 68.00	0.018	\$ 80.81	0.068	\$ 117.23	0.118	\$ 153.65
375	5	1875	0.463		\$ 68.00		\$ 68.00	0.037	\$ 94.73	0.087	\$ 131.15
400	5	2000	0.494		\$ 68.00		\$ 68.00	0.006	\$ 72.23	0.056	\$ 108.65
Prop. m3 rate	\$ 0.16										
250	5	1250	0.309	0.091	\$ 127.01	0.141	\$ 159.38	0.191	\$ 191.76	0.241	\$ 224.14
275	5	1375	0.340	0.060	\$ 107.01	0.110	\$ 139.38	0.160	\$ 171.76	0.210	\$ 204.14
300	5	1500	0.371	0.029	\$ 87.01	0.079	\$ 119.38	0.129	\$ 151.76	0.179	\$ 184.14
325	5	1625	0.402		\$ 68.00	0.048	\$ 99.38	0.098	\$ 131.76	0.148	\$ 164.14
350	5	1750	0.432		\$ 68.00	0.018	\$ 79.38	0.068	\$ 111.76	0.118	\$ 144.14
375	5	1875	0.463		\$ 68.00		\$ 68.00	0.037	\$ 91.76	0.087	\$ 124.14
400	5	2000	0.494		\$ 68.00		\$ 68.00	0.006	\$ 71.76	0.056	\$ 104.14
Prop. m3 rate	\$ 0.15										
250	5	1250	0.309	0.091	\$ 123.32	0.141	\$ 153.67	0.191	\$ 184.03	0.241	\$ 214.38
275	5	1375	0.340	0.060	\$ 104.57	0.110	\$ 134.92	0.160	\$ 165.28	0.210	\$ 195.63
300	5	1500	0.371	0.029	\$ 85.82	0.079	\$ 116.17	0.129	\$ 146.53	0.179	\$ 176.88
325	5	1625	0.402		\$ 68.00	0.048	\$ 97.42	0.098	\$ 127.78	0.148	\$ 158.13
350	5	1750	0.432		\$ 68.00	0.018	\$ 78.67	0.068	\$ 109.03	0.118	\$ 139.38
375	5	1875	0.463		\$ 68.00		\$ 68.00	0.037	\$ 90.28	0.087	\$ 120.63
400	5	2000	0.494		\$ 68.00		\$ 68.00	0.006	\$ 71.53	0.056	\$ 101.88
Prop. m3 rate	\$ 0.14										
250	5	1250	0.309	0.091	\$ 119.63	0.141	\$ 147.96	0.191	\$ 176.29	0.241	\$ 204.62
275	5	1375	0.340	0.060	\$ 102.13	0.110	\$ 130.46	0.160	\$ 158.79	0.210	\$ 187.12
300	5	1500	0.371	0.029	\$ 84.63	0.079	\$ 112.96	0.129	\$ 141.29	0.179	\$ 169.62
325	5	1625	0.402		\$ 68.00	0.048	\$ 95.46	0.098	\$ 123.79	0.148	\$ 152.12
350	5	1750	0.432		\$ 68.00	0.018	\$ 77.96	0.068	\$ 106.29	0.118	\$ 134.62
375	5	1875	0.463		\$ 68.00		\$ 68.00	0.037	\$ 88.79	0.087	\$ 117.12
400	5	2000	0.494		\$ 68.00		\$ 68.00	0.006	\$ 71.29	0.056	\$ 99.62
Prop. m3 rate	\$ 0.12										
250	5	1250	0.309	0.091	\$ 112.26	0.141	\$ 136.54	0.191	\$ 160.82	0.241	\$ 185.10
275	5	1375	0.340	0.060	\$ 97.26	0.110	\$ 121.54	0.160	\$ 145.82	0.210	\$ 170.10
300	5	1500	0.371	0.029	\$ 82.26	0.079	\$ 106.54	0.129	\$ 130.82	0.179	\$ 155.10
325	5	1625	0.402		\$ 68.00	0.048	\$ 91.54	0.098	\$ 115.82	0.148	\$ 140.10
350	5	1750	0.432		\$ 68.00	0.018	\$ 76.54	0.068	\$ 100.82	0.118	\$ 125.10
375	5	1875	0.463		\$ 68.00		\$ 68.00	0.037	\$ 85.82	0.087	\$ 110.10
400	5	2000	0.494		\$ 68.00		\$ 68.00	0.006	\$ 70.82	0.056	\$ 95.10
Prop. m3 rate	\$ 0.10										
250	5	1250	0.309	0.091	\$ 104.88	0.141	\$ 125.12	0.191	\$ 145.35	0.241	\$ 165.59
275	5	1375	0.340	0.060	\$ 92.38	0.110	\$ 112.62	0.160	\$ 132.85	0.210	\$ 153.09
300	5	1500	0.371	0.029	\$ 79.88	0.079	\$ 100.12	0.129	\$ 120.35	0.179	\$ 140.59
325	5	1625	0.402		\$ 68.00	0.048	\$ 87.62	0.098	\$ 107.85	0.148	\$ 128.09
350	5	1750	0.432		\$ 68.00	0.018	\$ 75.12	0.068	\$ 95.35	0.118	\$ 115.59
375	5	1875	0.463		\$ 68.00		\$ 68.00	0.037	\$ 82.85	0.087	\$ 103.09
400	5	2000	0.494		\$ 68.00		\$ 68.00	0.006	\$ 70.35	0.056	\$ 90.59
Prop. m3 rate	\$ 0.08										
250	5	1250	0.309	0.091	\$ 97.50	0.141	\$ 113.69	0.191	\$ 129.88	0.241	\$ 146.07
275	5	1375	0.340	0.060	\$ 87.50	0.110	\$ 103.69	0.160	\$ 119.88	0.210	\$ 136.07
300	5	1500	0.371	0.029	\$ 77.50	0.079	\$ 93.69	0.129	\$ 109.88	0.179	\$ 126.07
325	5	1625	0.402		\$ 68.00	0.048	\$ 83.69	0.098	\$ 99.88	0.148	\$ 116.07
350	5	1750	0.432		\$ 68.00	0.018	\$ 73.69	0.068	\$ 89.88	0.118	\$ 106.07
375	5	1875	0.463		\$ 68.00		\$ 68.00	0.037	\$ 79.88	0.087	\$ 96.07
400	5	2000	0.494		\$ 68.00		\$ 68.00	0.006	\$ 69.88	0.056	\$ 86.07

## 1050mm diameter Steel Pipe Purchase – Cost Comparison Sheet

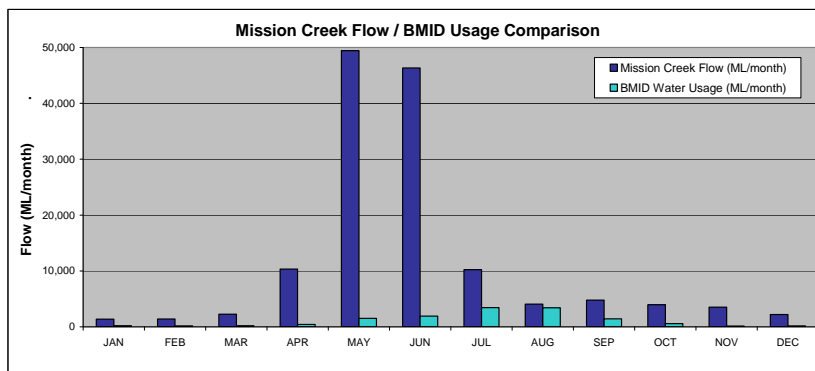
### BASE COMPARISON SHEET

22-Oct-07

		1050 DI Pipe		1050 Steel Pipe							
Section of Main	Length	DI Supply &	DI Install Cost	SUPPLY	COATING	SHIPPING	INSTALLATION	MISCELL.	TOTAL		
	(m)	Shipping (\$)	(\$)	(\$ / m)	(\$ / m)	(\$ / m)					
Pipe Supply and Install											
South Dam to Swainson/Tower	2235	\$ 1,531,273	\$ 975,950	\$ 581,672	\$ 284,292	\$ 63,139	\$ 1,087,700		\$	2,016,803	
	399	\$ 273,368	\$ 174,230	\$ 107,836	\$ 50,753	\$ 11,272	\$ 194,180		\$	364,041	
South Dam back to Valve Chamber	2516	\$ 1,723,795	\$ 1,098,653	\$ 679,989	\$ 320,035	\$ 71,077	\$ 1,224,453		\$	2,295,554	
Valve Chamber to top of Canyon	2450	\$ 1,678,577	\$ 1,069,833	\$ 662,151	\$ 311,640	\$ 69,213	\$ 1,192,333		\$	2,235,337	
Top of Canyon to Mission Creek	935	\$ 640,600	\$ 408,283	\$ 252,698	\$ 118,932	\$ 26,414	\$ 455,033		\$	853,078	
Yard Preparation											
Building Supply & Assembly (incl. insulation, GST)									\$ 176,000	\$	176,000
Electrical Service									\$ 15,000	\$	15,000
Temporary Heat (propane)									\$ 10,000	\$	10,000
Site Drainage pipe and installation									\$ 2,000	\$	2,000
Gravel Subbase Preparation (pit run)									\$ 54,000	\$	54,000
Equipment rental (Highmark)									\$ 36,000	\$	36,000
Crush Gravel									\$ 15,000	\$	15,000
Pavement in Works Yard									\$ 20,000	\$	20,000
Lock Block for materials, installation (\$3,206 + 2,000)									\$ 5,000	\$	5,000
staff time to set up yard									\$ 15,000	\$	15,000
GST included but recoverable		\$ 5,847,613	\$ 3,726,950	\$ 2,284,346	\$ 1,085,652	\$ 241,114	\$ 4,153,700	\$ 348,000	\$	8,112,812	
TOTAL	8535		\$ 9,574,563		Supply Costs	\$ 2,525,460		DI Price	\$	9,574,563	
Net Difference									\$	1,461,751	
BMID assets									\$	333,000	
Net Benefit									\$	1,794,751	
966 Loader Purchase									Funded from equipment reserve	\$	63,600
GEID Pipe Purchase		550	\$ 376,823	\$ 240,167	\$ 143,141	\$ 69,960	\$ 15,538	\$ 267,667	\$	496,305	
			\$ 616,990			\$ 158,678	\$ 496,305				
Support Information Price per metre											
Ductile Iron - Supply Price		\$ 655.00	taxes included, shipping extra, FOB Vancouver								
Installation Cost ( Ductile Iron)		\$ 436.67	cost based on supply being 60% of total cost, installation being 40% of total DI total cost								
Installation Cost (Steel Pipe)		\$ 486.67	cost based on a surcharge of \$50/m greater than DI install price								
Initial Price \$675/ton		\$ 675.00	taxes extra, shipping extra, FOB Vancouver			\$ 82.38	\$ / ft incl. taxes included (13%)			\$ 270.27	
Reduced Price \$650/ton		\$ 650.00	taxes extra, shipping extra, FOB Vancouver			\$ 79.33	\$ / ft incl. taxes included (13%)			\$ 260.26	
Steel Pipe, Coating Price/m		\$ 127.20	taxes included								
Shipping Price per load (DI)		\$ 30.13	cost per metre for haul/unload			60 metres per load	\$ 1,500.00	cost/load	Unload cost	\$100	
Shipping Price per load (Steel)		\$ 28.25	cost per metre for haul/unload			50 metres per load	\$ 1,150.00	cost/load	Unload cost	\$100	

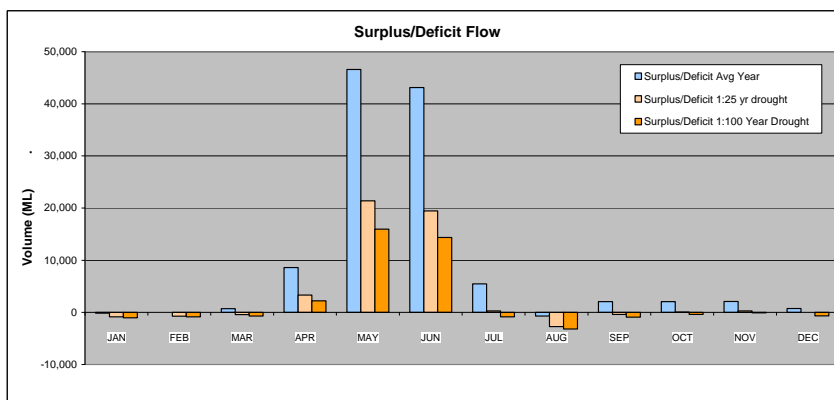


## BMID Mission Creek Operations Plan

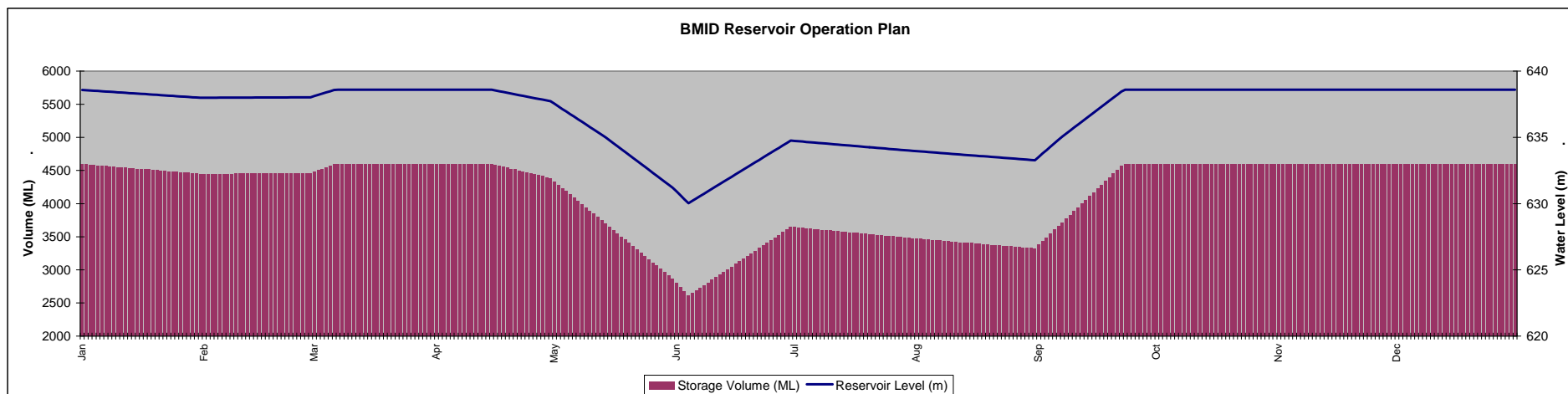


		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Average Year	Mission Creek Flow (ML/month)	1,403	1,414	2,270	10,328	49,461	46,345	10,239	4,063	4,802	3,960	3,544	2,237	140,067
	BMID Water Usage (ML/month)	217	196	220	436	1,515	1,946	3,425	3,411	1,454	568	162	171	13,721
	Desired Fish Flow (ML/month)	1,339	1,210	1,339	1,296	1,339	1,296	1,339	1,339	1,296	1,339	1,296	1,339	15,768
	Surplus / Deficit (ML/month)	-153	9	711	8,596	46,607	43,103	5,475	-687	2,052	2,053	2,086	727	110,578
1:25 Year Drought	Mission Creek Flow (ML/month)	688	693	1,112	5,061	24,236	22,709	5,017	1,991	2,353	1,940	1,737	1,096	68,633
	BMID Water Usage (ML/month)	217	196	220	436	1,515	1,946	3,425	3,411	1,454	568	162	171	13,721
	Desired Fish Flow (ML/month)	1,339	1,210	1,339	1,296	1,339	1,296	1,339	1,339	1,296	1,339	1,296	1,339	15,768
	Natural Fish Flow (ML/month)	656	593	656	635	656	635	656	656	635	656	635	656	7,726
	Surplus / Deficit (*) (ML/month)	-869	-713	-447	3,329	21,382	19,467	253	-2,759	-397	33	279	-414	39,144
	Surplus / Deficit (**) (ML/month)	-186	-96	236	3,990	22,065	20,128	936	-2,076	264	716	940	269	47,186
1:100 Year Drought	Mission Creek Flow (ML/month)	533	537	863	3,925	18,795	17,611	3,891	1,544	1,825	1,505	1,347	850	53,228
	BMID Water Usage (ML/month)	217	196	220	436	1,515	1,946	3,425	3,411	1,454	568	162	171	13,721
	Desired Fish Flow (ML/month)	1,339	1,210	1,339	1,296	1,339	1,296	1,339	1,339	1,296	1,339	1,296	1,339	15,768
	Natural Fish Flow (ML/month)	509	460	509	492	509	492	509	509	492	509	492	509	5,992
	Surplus / Deficit (*) (ML/month)	-1,023	-868	-697	2,193	15,941	14,369	-873	-3,206	-925	-402	-111	-660	23,737
	Surplus / Deficit (**) (ML/month)	-193	-118	134	2,996	16,771	15,173	-43	-2,376	-122	428	692	170	33,513

Surplus / Deficit (\*) Based on Desired Fish Flow 0.50 m<sup>3</sup>/s  
 Surplus / Deficit (\*\*) Based on Natural Flow which is reduced in drought years to a percentage of the annual average flow.  
 1:25 year drought is estimated to be 49% of the average annual flow.  
 1:100 year drought is estimated to be 31% of the average annual flow.



## BMID Black Mountain Reservoir Operations Plan



JANUARY TO MARCH	APRIL TO JUNE	JULY TO SEPTEMBER	OCTOBER TO DECEMBER
<b>January Operations - Comments</b> BMID Average daily demand 7.0 ML/day BMID Reservoir at 4600 ML (Full Pool) at beginning of the month BMID Reservoir emptying at 4.9 ML/day to obtain desired fish flow on Mission Creek BMID Reservoir volume at the end of the month at 4448 ML	<b>April Operations - Comments</b> BMID Average daily demand 14.5 ML/day BMID Reservoir at 4600 ML (Full Pool) at beginning of the month BMID Reservoir emptying at 14.5 ML/day after April 15th WTP not operating BMID Reservoir volume at the end of the month at 4383 ML	<b>July Operations - Comments</b> BMID Average daily demand 110.5 ML/day BMID Reservoir at 3641 ML at beginning of the month BMID Reservoir emptying at 5.5 ML/day to supplement WTP flow. WTP operating. BMID Reservoir volume at the end of the month at 3476 ML	<b>October Operations - Comments</b> BMID Average daily demand 18.3 ML/day BMID Reservoir at 4600 ML (Full Pool) at beginning of the month WTP not operating BMID Reservoir volume at the end of the month at 4600 ML
<b>February Operations - Comments</b> BMID Average daily demand 7.0 ML/day BMID Reservoir at 4448 ML at beginning of the month BMID Reservoir filling up at 0.32 ML/day using Mission Creek Surplus Flow. BMID Reservoir volume at the end of the month at 4457 ML	<b>May Operations - Comments</b> BMID Average daily demand 48.9 ML/day BMID Reservoir at 4333 ML at beginning of the month BMID Reservoir filling up at 48.9 ML/day. WTP not operating. Mission Creek poor quality water. BMID Reservoir volume at the end of the month at 2866 ML	<b>August Operations - Comments</b> BMID Average daily demand 110 ML/day BMID Reservoir at 3471 ML at beginning of the month BMID Reservoir emptying at 5.0 ML/day to supplement WTP flow. WTP operating. BMID Reservoir volume at the end of the month at 3321 ML	<b>November Operations - Comments</b> BMID Average daily demand 18.3 ML/day BMID Reservoir at 4600 ML (Full Pool) at beginning of the month WTP not operating BMID Reservoir volume at the end of the month at 4600 ML
<b>March Operations - Comments</b> BMID Average daily demand 7.1 ML/day BMID Reservoir at 4479 ML at beginning of the month BMID Reservoir filling up at 22.9 ML/day using Mission Creek Surplus Flow. Reservoir full on March 7th. BMID Reservoir volume at the end of the month at 4600 ML	<b>June Operations - Comments</b> BMID Average daily demand 65 ML/day BMID Reservoir at 2801 ML at beginning of the month BMID Reservoir emptying at 65 ML/day. WTP begins operation on June 4th. BMID Reservoir filling up at 40 ML/day from WTP. BMID Reservoir volume at the end of the month at 3647 ML	<b>September Operations - Comments</b> BMID Average daily demand 48.5 ML/day BMID Reservoir at 3378 ML at beginning of the month BMID Reservoir filling up at 56.5 ML/day using Mission Creek Surplus Flow. Reservoir full on September 23rd. BMID Reservoir volume at the end of the month at 4600 ML	<b>December Operations - Comments</b> BMID Average daily demand 18.3 ML/day BMID Reservoir at 4600 ML (Full Pool) at beginning of the month WTP not operating BMID Reservoir volume at the end of the month at 4600 ML