

1. 協力対象事業名
モンゴル国ウランバートル市給水施設改善計画
2. 我が国が援助することの必要性・妥当性
<p>(1) 我が国が当該国に対し援助することの必要性・妥当性</p> <p>モンゴル国は、90年以降、民主化及び市場経済化に向けた改革を進めていること、モンゴルの安定と経済発展は、周辺地域における政治的・経済的安定にとって重要であること、内陸国であるとともに、市場経済への移行期にあり、経済基盤が未整備であるとともに貧困層の増大という課題があることから援助需要が大きいこと等を踏まえてわが国は援助を実施している。</p> <p>また、わが国は91年から7回、世銀と共同で支援国会合を開催し、対モンゴル支援の国際的な枠組み造りにも主導的な役割を果たしている。こうした背景を受けて、モンゴル側との政策対話を踏まえて、産業振興のための経済基盤及び条件整備、市場経済移行のための知的支援と人材育成、経済政策及び法制度・行財政改革、農業振興のための長期計画策定、流通体制の整備、農業技術の開発・普及、水供給の安定化を含む基礎生活支援（教育、保健・医療、水供給）等の分野を援助の重点項目としている。</p> <p>(2) 当該プロジェクトを実施することの必要性・妥当性</p> <p>ウランバートル市の総合計画である、「ウランバートル市マスタープラン 2020年」が閣議承認され、人口の増加に伴うアパート建設、電気、工場建設及び水供給が優先的に対策が必要なものとされている。特に近い将来に水不足が生じると予想され、プロジェクトの目標年である2010年には現有の水源水量 222,000m³/日に対し需要量は 240,000 m³/日となり、18,000 m³/日が不足すると予測される。</p> <p>ウランバートル市民の居住形態は、アパート居住者と町周辺のゲル（テント式住居）居住者に分類される。アパートへは水道管による直接給水、ゲル地区へは地区内に設けた水槽から、共用栓で飲料水を供給しており一人当りの水使用量は大きく異なっている。アパートへの水供給状況は比較的良好であるが、時間により一部地域の上層階で水の出の悪いところがある。ゲルは水を得るのが不便なため、一部では不衛生な水を使用しているため水系伝染病も発生している。</p> <p>一方、ウランバートル市の水源はトーラ川の伏流水であり、これを井戸により取水してポンプ配水している。水源開発が可能な上流水源の施設は旧ソ連製のものであり、給水能力は公称能力を大幅に下回っている。また、市の主要水源である中央水源ポンプ場では、前回の日本の無償資金協力により多数の施設が改善され、断水の減少など多くの効果をあげているが、大容量のポンプ2台が旧ソ連製であり、不安定な送水と割高な運転経費に問題が残っている。</p> <p>USAG（ウランバートル市上下水道会社）は老朽化した施設を巧みに補修・管理して運転しているが、井戸開発と大容量のポンプ導入を独自で実施することは費用がかさむため経済的に困難であり、本件援助の必要性は高い。</p>
3. 協力対象事業の目的（プロジェクト目標）
ウランバートル市において、水源及び送配水施設を整備することにより、衛生的な上水を安定的に供給することを目的とする。
4. 協力対象事業の内容
<p>(1) 対象地域</p> <p>モンゴル国ウランバートル市</p>

(2) アウトプット

上流水源地域に井戸が建設され、上流水源送水ポンプ場、中央水源配水ポンプ場の送水施設が更新・整備される。また、上流水源井戸施設の保温設備が更新・整備される。

(3) インプット

(日本側)

上流水源ポンプ場改修

ポンプ 5 台 (90,000m³/日) 及び関連設備更新

中央水源ポンプ場改修

ポンプ 2 台 (96,000m³/日) 及び関連設備更新

井戸ポンプ建設

上流水源井戸及び取水ポンプ場 (16 井、18,000m³/日)、導水管約 12.6km の建設

圧力水槽の建設

上流水源送水ポンプ場内にサージベッセル設備の建設

機材調達

上流水源井戸の保温設備：55 箇所分の機材調達 (既存井戸 39 箇所、新設井戸 16 箇所)

(現地側)

・ EIA の取得、既設ポンプの撤去・処分、上流水源井戸保温設備の設置

・ 送電線、フェンスの設置

・ 運営維持管理体制の整備及び人員配置

(4) 総事業費

概算事業費 17.02 億円 (日本側 16.85 億円 モンゴル側 0.17 億円)

(5) スケジュール

詳細設計期間を含め約 32.5 ヶ月の工期を予定

(6) 実施体制

実施機関：ウランバートル市上下水道会社 (USAG)

5. プロジェクトの成果

(1) プロジェクトの裨益対象の範囲及び規模

ウランバートル市 地域住民

裨益人口：約 990,500 人(2010 年)

(2) 事業の目的 (プロジェクトの目標) を示す指標

	2003 年 (現状)	2007 年 (プロジェクト完了時)
給水能力	222,000 m ³ / 日	240,000 m ³ / 日

(3) その他の成果指標

・ 水系伝染病の発生数 (現状 約 73 人 / 万人・年) が減少する。

・ ゲルへの給水量が増加する。

6. 外部要因リスク

・ 関係諸機関における専門職員が確保され、維持管理に必要な予算が継続して確保される

・ 大規模な天候不順や自然災害が発生しない

・ ゲル地区の給水改善と既存配水管網の改善など、世銀の事業が予定通り実施される

7. 今後の評価計画

(1) 事後評価における成果指標： 給水能力

(2) 評価のタイミング： 2007 年以降

資料-7 収集資料リスト

収集資料リスト

調査名：モンゴル国ウランバートル市給水施設改善計画

番号	名称	形態 図書・ビデオ 地図・写真等	オリジナル・コピー	発行機関	発行年
1	ウランバートル市マスタープラン	図書	オリジナル	ウランバートル市	2003
2	The Survey report of the Study of the living environment of The Ger Area in Ulaanbaatar, Mongolia	図書	コピー	JICA	2002.2
3	Mongolian Statistical Yearbook 2001, 2002	図書	オリジナル	National Statistical Office of Mongolia	2002, 2003
4	DONORS' THEMATIC GROUP MEETING ON ULAANBAATAR CITY DEVELOPMENT	図書	オリジナル	Ulaanbaatar Mongolia	2003
5	法律（飲料水の水源選択に関する規定及び衛生要求）	図書	コピー	モンゴル国法制局	1993
6	法律（飲料水の衛生規定及び管理）	図書	コピー	モンゴル国法制局	1993
7	法律（町村の給水及び浄水施設の利用に関する法定）	図書	コピー	モンゴル国法制局	2002
8	法律（水に関する法定）	図書	コピー	モンゴル国法制局	1995
9	法律（固定資産減価償却費及びその評価について）	図書	コピー	モンゴル国法制局	1994
10	環境保護法	図書	コピー	モンゴル国法制局	1994
11	関税法	図書	コピー	モンゴル国法制局	1996
12	土地料金法	図書	コピー	モンゴル国法制局	1997
13	労働法	図書	コピー	モンゴル国法制局	1999
14	土地法	図書	コピー	モンゴル国法制局	2002
15	会計法	図書	コピー	モンゴル国法制局	2002
16	2000年度税務申告書（00/01/01～00/12/31）	図書（抜粋）	コピー	ウランバートル市	2001
17	2001年度税務申告書（01/01/01～01/12/31）	図書（抜粋）	コピー	ウランバートル市	2002
18	2002年度税務申告書（02/01/01～02/12/31）	図書（抜粋）	コピー	ウランバートル市	2003
19	USAG, 2002年度の営業実績	図書	コピー	ウランバートル市	2003
20	USAG, 2001年度予算書	図書	コピー	ウランバートル市	2001
21	USAG, 2002年度予算書	図書	コピー	ウランバートル市	2002
22	USAG, 2003年度予算書	図書	コピー	ウランバートル市	2002
23	USAG 上下水道料金表	図書	コピー	USAG	2003

番号	名称	形態 図書・ビデオ 地図・写真等	デジタルコピー	発行機関	発行年
24	OSNAAG 上下水道料金表	図書	コピー	OSNAAG	2003
25	漏水修理伝票	図書	コピー	USAG	2003
26	OSNAAG 節水キャンペーンパンフレット	図書	原稿	OSNAAG	2003
27	USAG 節水キャンペーンパンフレット	図書	コピー	USAG	
28	UB 市飲料水源に関する保全地域決定通達	図書	コピー	ウランバートル市	1980
29	水源の水の貯蓄量の評価及び水利用に関する料金の規定	図書	コピー	内閣通達	1991
30	地形図 (1/25,000) L-4811-g-b	地図	コピー	国家地図局	1987
31	地形図 (1/25,000) L-48-11-B-g	地図	コピー	国家地図局	1987
32	地形図 (1/50,000) L-48-12-A	地図	コピー	国家地図局	1968
33	地形図 (1/50,000) L-48-12-B	地図	コピー	国家地図局	1968
34	地形図 (1/50,000) L-48-11-b	地図	コピー	国家地図局	1968
35	地形図 (1/50,000) L-48-11-G	地図	コピー	国家地図局	1968
36	地形図 (1/100,000) L-48-23	地図	コピー	国家地図局	1984
37	上流水源系統図	図書	コピー	ロシア	1990
38	上流水源用水ポンプ一覧	図書	コピー	ロシア	不明
39	中央水源配水ポンプ資料	図書	コピー	旧ソ連	1988
40	上流水源送水ポンプ資料	図書	コピー	旧ソ連	1986
41	ウランバートル市管網モデル化資料	図書	コピー	ウランバートル市	2002
42	ゲル地区配管図	図面	コピー	USAG	2001
43	Hailaast・Denjiin 地区配管計画図	図面	コピー	World Bank	
44	ザフサリン配水池滅菌システム	図書	コピー	World Bank	2002
45	キオスク給水報告	図面	コピー	USAG	2003
46	ウランバートル市配水量資料	図書	コピー	USAG	2002～03

表 A-1 導水管管網計算

Case2												
Node No.	Well No.	Reservoir	Water Flow m ³ /d	Pipe Dia. mm	Velocity m/sec	Length m	Hydraulic Gradient %	Pipe Friction Loss (m)	Water Level a (m)	Ground Level b (m)	Water Pressur c=a-b (m)	Remark
1	N-5								1462.2	1413.3	48.9	
3			1,200	150	0.79	455	6.7	3.0	1459.2	1413.3	45.9	
2	N-1								1460.5	1413.45	47.1	
3			1,200	150	0.79	200	6.7	1.3	1459.2	1413.3	45.9	
5			2,400	200	0.88	460	6.0	2.8	1456.4	1412.8	43.6	from1-3
4	N-2								1457.5	1412.8	44.7	
5			1,200	150	0.79	160	6.7	1.1	1456.4	1412.8	43.6	
7			3,600	250	0.85	400	4.3	1.7	1454.7	1411.13	43.6	from3-5
6	N-3								1457.4	1411.26	46.1	
7			1,200	150	0.79	400	6.7	2.7	1454.7	1411.26	43.5	
9			4,800	250	1.13	60	7.3	0.4	1454.3	1411.29	43.0	from5-7
8	N-6								1455.9	1411.29	44.7	
9			1,200	150	0.79	250	6.7	1.7	1454.3	1411.29	43.0	
11			6,000	300	0.98	500	4.5	2.3	1452.0	1410.28	41.7	from7-9
10	N-4								1455.8	1410.28	45.5	
11			1,200	150	0.79	560	6.7	3.8	1452.0	1410.28	41.7	
13			7,200	400	0.66	1200	1.6	1.9	1450.1	1407.87	42.2	from9-11
12	N-7								1450.8	1407.87	42.9	
13			1,200	150	0.79	100	6.7	0.7	1450.1	1407.87	42.2	
15			8,400	400	0.77	800	2.1	1.7	1448.4	1407.87	40.6	from11-13
14	N-8								1449.1	1407.87	41.2	
15			1,200	150	0.79	100	6.7	0.7	1448.4	1407.87	40.6	
17			9,600	400	0.88	1000	2.7	2.7	1445.7	1404.97	40.8	from13-15
16	N-9								1446.4	1404.97	41.4	
17			1,200	150	0.79	100	6.7	0.7	1445.7	1404.97	40.8	
19			10,800	400	0.99	720	3.3	2.4	1443.3	1402.8	40.5	from15-17
18	N-10								1444.0	1402.8	41.2	
19			1,200	150	0.79	100	6.7	0.7	1443.3	1402.8	40.5	
21			12,000	400	1.11	750	4.0	3.0	1440.3	1402.1	38.2	from17-19
20	N-11								1441.7	1402.1	39.6	
21			1,200	150	0.79	200	6.7	1.3	1440.3	1402.1	38.2	
29			13,200	400	1.22	500	4.8	2.4	1437.9	1401.76	36.2	from19-21
22	N-16								1452.7	1401.76	50.9	
24			1,200	150	0.79	550	6.7	3.7	1449.0	1401.76	47.3	
23	N-14								1452.7	1401.76	50.9	
24			1,200	150	0.79	550	6.7	3.7	1449.0	1401.76	47.3	
26			2,400	200	0.88	20	6.0	0.1	1448.9	1401.76	47.1	from22-24
25	N-15								1449.0	1401.76	47.3	
26			1,200	150	0.79	20	6.7	0.1	1448.9	1401.76	47.1	
28			3,600	200	1.33	580	12.6	7.3	1441.6	1401.76	39.8	from24-26
27	N-13								1445.1	1401.76	43.4	
28			1,200	150	0.79	530	6.7	3.6	1441.6	1401.76	39.8	
29			4,800	250	1.13	500	7.3	3.7	1437.9	1401.76	36.2	from26-28
31			18,000	500	1.06	220	2.9	0.6	1437.3	1399.83	37.5	from21-29
30	N-12								1437.3	1399.83	37.5	
31			0	150	0.00	150	0.0	0.0	1437.3	1399.83	37.5	
32	Upper Pump St		18,000	500	1.06	380	2.9	1.1	1436.2	1417.34	18.9	from29-31
33	Reservoir		18,000	500	1.06	110	2.9	0.3	1435.9	1430.81	5.1	
34			0	500	0.00	10	0.0	0.0	1435.9	1430.81	5.1	0
33									1435.9	1430.81	5.1	
35	Reservoir		18,000	500	1.06	30	2.9	0.1	1435.8	1430.8	5.0	from32-33

Note C-110

資料 8-2 配水管網計算

表 A8-2-1-1	接点情報	(2002 年)
表 A8-2-1-2	計算結果：水圧	(2002 年)
表 A8-2-1-3	計算結果：管路	(2002 年)
図 A8-2-1	管網図	(2002 年)
表 A8-2-2-1	接点情報	(2010 年)
表 A8-2-2-2	計算結果：水圧	(2010 年)
表 A8-2-2-3	計算結果：管路	(2010 年)

表 A8-2-1-1

接点情報

(2002 年)

Daily Maximum Flow in 2002										(1/5)
Label	Elevation (m)	Base Flow (1/s)	Daily Max. Flow (1/s)	1 Flow from Tas & 3/4	2 Flow from Barun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30		5 Flow from West Re (1/s)	
J-2	1,441.00	0	0	0	0	0		0	0	
J-3	1,401.35	0	0	0	0	0		0	0	
J-4	1,455.82	0	0	0	0	0		0	0	
J-5	1,461.00	0	0	0	0	0		0	0	
J-6	1,398.40	0	0	0	0	0		0	0	
J-7	1,453.72	0	0	0	0	0		0	0	
J-8	1,413.00	0	0	0	0	0		0	0	
J-9	1,508.54	0	0	0	0	0		0	0	
J-10	1,491.70	0	0	0	0	0		0	0	
J-11	1,494.20	0	0	0	0	0		0	0	
J-12	1,447.75	0	0	0	0	0		0	0	
J-13	1,431.24	0	0	0	0	0		0	0	
J-14	1,438.00	0	0	0	0	0		0	0	
J-15	1,429.00	0	0	0	0	0		0	0	
J-16	1,408.50	0	0	0	0	0		0	0	
J-17	1,417.37	0	0	0	0	0		0	0	
J-18	1,416.92	0	0	0	0	0		0	0	
J-19	1,400.62	0	0	0	0	0		0	0	
J-20	1,404.39	0	0	0	0	0		0	0	
J-21	1,390.50	0	0	0	0	0		0	0	
J-22	1,394.20	0	0	0	0	0		0	0	
J-23	1,380.00	0	0	0	0	0		0	0	
J-26	1,352.98	0	0	0	0	0		0	0	
J-27	1,348.02	0	0	0	0	0		0	0	
J-28	1,310.61	0	0	0	0	0		0	0	
J-33	1,351.63	0	0	0	0	0		0	0	
J-34	1,317.58	0	0	0	0	0		0	0	
J-35	1,314.20	2.6	4.65	0	0	0		0	0	
J-36	1,302.30	0.04	0.07	0	0	0		0	0	
J-37	1,345.50	4.73	8.47	0	0	0		0	0	
J-39	1,316.50	38.11	68.21	0	0	0		0	0	
J-40	1,325.00	0	0	0	0	0		0	0	
J-41	1,335.30	0	0	0	0	0		0	0	
J-42	1,317.30	0	0	0	0	0		0	0	
J-43	1,315.30	0	0	0	0	0		0	0	
J-44	1,313.70	17.15	30.7	0	0	0		0	0	
J-45	1,308.20	6.62	11.85	0	0	0		0	0	
J-46	1,333.30	0	0	0	0	0		0	0	
J-47	1,318.00	1.47	2.63	0	0	0		0	0	
J-48	1,317.80	5.83	10.43	0	0	0		0	0	
J-49	1,310.40	2.94	5.26	0	0	0		0	0	
J-50	1,330.00	9	16.11	0	0	0		0	0	
J-52	1,321.00	0	0	0	0	0		0	0	
J-53	1,318.00	0	0	0	0	0		0	0	
J-54	1,321.00	0	0	0	0	0		0	0	
J-55	1,309.00	7.45	13.33	0	0	0		0	0	
J-56	1,308.10	1.01	1.81	0	0	0		0	0	
J-57	1,314.50	5.2	9.31	0	0	0		0	0	
J-58	1,306.00	4.8	8.59	0	0	0		0	0	
J-59	1,306.00	13.86	24.81	0	0	0		0	0	
J-60	1,306.00	3.99	7.14	0	0	0		0	0	
J-61	1,310.00	3.99	7.14	0	0	0		0	0	
J-62	1,296.50	0	0	0	0	0		0	0	
J-63	1,297.00	0	0	0	0	0		0	0	
J-64	1,297.00	4.94	8.84	0	0	0		0	0	
J-65	1,297.00	0	0	0	0	0		0	0	
J-66	1,295.40	4.94	8.84	0	0	0		0	0	
J-67	1,296.20	0	0	0	0	0		0	0	
J-69	1,325.00	0	0	0	0	0		0	0	
J-71	1,302.30	11	19.89	0	0	0		0	0	
J-72	1,301.50	11	19.89	0	0	0		0	0	
J-73	1,288.50	8.38	15	0	0	0		0	0	
J-74	1,296.90	30.33	54.28	0	0	0		0	0	
J-75	1,295.00	0	0	0	0	0		0	0	
J-76	1,292.60	11.92	21.33	0	0	0		0	0	
J-77	1,305.50	42.19	75.51	0	0	0		0	0	

Daily Maximum Flow in 2002

(2/5)

Label	Elevation (m)	Base Flow (1/s)	Daily Max Flow (1/s)	1 Flow from Tas & 3/4	2 Flow from Barun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30	5 Flow from West Re (1/s)
J-78	1,301.82	25.53	45.89	0	0	0	0	0
J-79	1,299.21	8.45	11.54	0	0	0	0	0
J-80	1,297.30	11.02	19.72	0	0	0	0	0
J-81	1,292.80	1.84	3.29	0	0	0	0	0
J-82	1,305.40	8	14.32	0	0	0	0	0
J-83	1,302.80	2.3	4.12	0	0	0	0	0
J-84	1,302.80	3.53	6.32	0	0	0	0	0
J-85	1,281.70	2.78	4.98	0	0	0	0	0
J-86	1,299.93	5.72	10.24	0	0	0	0	0
J-87	1,283.80	1.46	2.61	0	0	0	0	0
J-88	1,300.00	2.75	4.92	0	0	0	0	0
J-89	1,292.88	6	10.74	0	0	0	0	0
J-90	1,286.50	0	0	0	0	0	0	0
J-91	1,306.00	0	0	0	0	0	0	0
J-92	1,302.20	0	0	0	0	0	0	0
J-93	1,299.30	1.95	3.49	0	0	0	0	0
J-94	1,296.70	4.73	8.47	0	0	0	0	0
J-95	1,296.34	0	0	0	0	0	0	0
J-96	1,294.50	10.64	19.04	0	0	0	0	0
J-97	1,293.88	13.42	24.02	0	0	0	0	0
J-98	1,303.60	0	0	0	0	0	0	0
J-103	1,323.10	9.61	17.2	17.2	0	0	0	0
J-104	1,325.50	0	0	0	0	0	0	0
J-105	1,315.50	0	0	0	0	0	0	0
J-107	1,310.20	0.45	0.81	0.81	0	0	0	0
J-108	1,300.00	0.88	1.58	0	0	0	0	0
J-109	1,298.34	4.59	8.22	0	0	0	0	0
J-110	1,293.80	13.39	23.97	0	0	0	0	0
J-111	1,298.00	0	0	0	0	0	0	0
J-112	1,291.90	5.78	10.35	0	0	0	0	0
J-113	1,291.90	9.24	16.54	0	0	0	0	0
J-114	1,291.50	42.34	75.78	0	0	0	0	0
J-115	1,284.70	0	0	0	0	0	0	0
J-116	1,291.50	10.98	19.85	0	0	0	0	0
J-117	1,291.50	0	0	0	0	0	0	0
J-118	1,282.85	0	0	0	0	0	0	0
J-119	1,284.40	0.4	0.72	0	0	0	0	0
J-120	1,288.30	2.44	4.37	0	0	0	4	4.37
J-121	1,288.50	1.2	2.15	0	0	0	0	0
J-123	1,281.70	0.51	0.91	0	0	0	0	0
J-124	1,284.07	0	0	0	0	0	0	0
J-125	1,284.07	0	0	0	0	0	0	0
J-127	1,284.09	2.18	3.87	0	0	0	0	0
J-128	1,287.10	0	0	0	0	0	0	0
J-130	1,283.73	2.71	4.85	0	0	0	0	0
J-131	1,283.08	0.09	0.16	0	0	0	0	0
J-132	1,283.70	0.62	1.11	0	0	0	0	0
J-133	1,284.40	0	0	0	0	0	0	0
J-134	1,284.38	1.82	3.28	0	0	0	0	0
J-136	1,285.21	3.27	5.85	0	0	0	0	0
J-137	1,287.70	7.13	12.78	0	0	0	0	0
J-138	1,282.51	0	0	0	0	0	0	0
J-141	1,284.96	0	0	0	0	0	0	0
J-142	1,284.96	0.31	0.55	0	0	0	0	0
J-146	1,287.80	4.25	7.61	0	0	0	0	0
J-147	1,284.53	0	0	0	0	0	0	0
J-148	1,284.53	1.16	2.08	0	0	0	0	0
J-149	1,284.94	1.15	2.06	0	0	0	0	0
J-151	1,333.10	32.97	59.01	59.01	0	0	0	0
J-152	1,320.00	10.96	19.62	19.62	0	0	0	0
J-153	1,321.20	0	0	0	0	0	0	0
J-154	1,327.20	25.3	45.28	45.28	0	0	0	0
J-155	1,326.60	25.3	45.28	45.28	0	0	0	0
J-156	1,319.40	0	0	0	0	0	0	0
J-157	1,320.60	23.5	42.06	42.06	0	0	0	0
J-158	1,296.20	5.03	9	9	0	0	0	0
J-159	1,302.80	27.34	48.93	48.93	0	0	0	0

Daily Maximum Flow in 2002

(3/5)

Label	Elevation (m)	Base Flow (1/s)	Daily Max. Flow (1/s)	1 Flow from Tas & 3/4	2 Flow from Barun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30	5 Flow from West Re (1/s)
J-160	1,304.30	13.29	23.79	23.79	0	0	0	0
J-161	1,317.30	14.29	25.58	25.58	0	0	0	0
J-162	1,304.30	0	0	0	0	0	0	0
J-163	1,308.90	10.28	18.4	18.4	0	0	0	0
J-164	1,279.96	0	0	0	0	0	0	0
J-165	1,278.30	0	0	0	0	0	0	0
J-166	1,302.70	2.92	5.23	5.23	0	0	0	0
J-167	1,284.70	15.9	26.46	0	0	0	0	0
J-168	1,277.90	0	0	0	0	0	0	0
J-169	1,277.30	23.14	41.42	0	0	0	0	0
J-170	1,282.00	0	0	0	0	0	0	0
J-171	1,281.00	41.29	73.9	73.9	0	0	0	0
J-172	1,274.50	48.44	86.7	0	0	0	0	0
J-173	1,274.10	1.13	2.02	0	0	0	0	0
J-174	1,274.30	0	0	0	0	0	0	0
J-175	1,275.00	0	0	0	0	0	0	0
J-176	1,273.40	0	0	0	0	0	0	0
J-177	1,272.40	0.8	1.07	0	0	0	0	0
J-178	1,278.00	0	0	0	0	0	0	0
J-179	1,272.70	6.1	10.92	0	0	0	0	0
J-180	1,273.00	0	0	0	0	0	0	0
J-181	1,272.70	20.75	37.14	0	0	0	0	0
J-187	1,285.70	0	0	0	0	0	0	0
J-188	1,281.60	0	0	0	0	0	0	0
J-189	1,271.00	0	0	0	0	0	0	0
J-191	1,286.00	4.31	7.71	0	0	0	0	7.71
J-193	1,285.50	4.43	7.93	0	0	0	0	7.93
J-194	1,283.31	5.13	9.18	0	0	0	0	9.18
J-195	1,272.20	0	0	0	0	0	0	0
J-198	1,270.80	0.07	0.13	0	0.13	0	0	0
J-198	1,271.20	0	0	0	0	0	0	0
J-199	1,267.50	1.62	3.44	0	0	3.44	0	0
J-200	1,267.60	0	0	0	0	0	0	0
J-203	1,280.00	0.34	0.61	0	0.61	0	0	0
J-205	1,270.80	1.42	2.54	0	2.54	0	0	0
J-206	1,270.80	0	0	0	0	0	0	0
J-207	1,267.20	0	0	0	0	0	0	0
J-208	1,266.70	8.63	15.45	0	0	15.45	0	0
J-208	1,265.70	0	0	0	0	0	0	0
J-210	1,266.60	0.99	1.77	0	0	1.77	0	0
J-211	1,263.10	1.69	3.02	0	0	3.02	0	0
J-212	1,263.00	2.78	4.98	0	0	4.98	0	0
J-213	1,261.22	0	0	0	0	0	0	0
J-214	1,260.00	0	0	0	0	0	0	0
J-215	1,259.50	0.08	0.14	0	0	0.14	0	0
J-216	1,284.09	23.33	41.76	0	0	0	0	0
J-218	1,306.20	0	0	0	0	0	0	0
J-219	1,280.60	4.55	8.14	0	0	0	0	0
J-221	1,303.80	0	0	0	0	0	0	0
J-244	1,307.55	0	0	0	0	0	0	0
J-245	1,273.85	0	0	0	0	0	0	0
J-246	1,276.90	1.53	2.74	0	0	0	0	0
J-247	1,279.84	1.7	3.04	0	0	0	0	0
J-248	1,335.13	10.53	18.85	18.85	0	0	0	0
J-249	1,301.00	0	0	0	0	0	0	0
J-250	1,303.00	8.47	15.16	0	0	0	0	0
J-252	1,318.86	0	0	0	0	0	0	0
J-253	1,334.74	0	0	0	0	0	0	0
J-255	1,300.00	0	0	0	0	0	0	0
J-256	1,300.00	0.08	0.11	0	0	0	0	0
J-257	1,334.00	2.19	3.92	0	0	0	0	0
J-258	1,330.00	38.24	64.86	0	0	0	0	0
J-262	1,333.00	0	0	0	0	0	0	0
J-263	1,324.44	10.53	18.85	0	0	0	0	0
J-264	1,324.44	0.86	1.54	0	0	0	0	0
J-265	1,332.00	0	0	0	0	0	0	0
J-266	1,331.00	0.73	1.31	0	0	0	0	0

Daily Maximum Flow in 2002

(4/5)

Label	Elevation (m)	Base Flow (1/s)	Daily Max Flow (1/s)	1 Flow from Tas & 3/4	2 Flow from Barun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30	5 Flow from West Re (1/s)
J-267	1,298.43	0	0	0	0	0	0	0
J-268	1,284.20	0.83	1.49	0	0	0	0	0
J-269	1,290.93	0.77	1.38	0	0	0	0	0
J-270	1,290.96	0.66	1.18	0	0	0	0	0
J-271	1,298.00	0	0	0	0	0	0	0
J-273	1,283.67	49.88	89.28	0	0	0	0	0
J-274	1,281.71	0	0	0	0	0	0	0
J-275	1,282.70	0.49	0.88	0	0	0	0	0
J-280	1,284.08	2.84	5.08	0	0	0	0	0
J-281	1,284.97	2.78	4.94	0	0	0	0	0
J-282	1,284.45	6.5	11.63	0	0	0	0	0
J-283	1,283.98	3.85	6.89	0	0	0	0	0
J-284	1,284.00	0	0	0	0	0	0	0
J-285	1,286.00	2.83	5.07	0	0	0	0	0
J-286	1,284.18	0.3	0.54	0	0	0	0	0
J-287	1,284.40	0	0	0	0	0	0	0
J-288	1,284.30	0	0	0	0	0	0	0
J-289	1,283.63	0	0	0	0	0	0	0
J-290	1,284.83	0	0	0	0	0	0	0
J-291	1,284.00	1.05	1.88	0	0	0	0	0
J-292	1,285.30	4.17	7.46	0	0	0	0	0
J-293	1,285.50	0	0	0	0	0	0	0
J-294	1,284.54	0	0	0	0	0	0	0
J-295	1,284.78	0	0	0	0	0	0	0
J-296	1,284.54	0	0	0	0	0	0	0
J-297	1,285.60	0	0	0	0	0	0	0
J-298	314.05	0	0	0	0	0	0	0
J-299	319.25	0	0	0	0	0	0	0
J-300	281.95	0	0	0	0	0	0	0
J-301	285.43	0	0	0	0	0	0	0
J-302	281.95	0.11	0.2	0	0	0	0	0.2
J-303	285.00	0	0	0	0	0	0	0
J-304	1,280.00	0	0	0	0	0	0	0
J-305	1,280.00	0	0	0	0	0	0	0
J-306	1,270.52	0	0	0	0	0	0	0
J-307	1,271.83	0	0	0	0	0	0	0
J-308	1,259.60	0.7	1.25	0	0	1.25	0	0
J-309	1,282.27	0.02	0.04	0	0	0.04	0	0
J-310	1,270.60	8.66	15.5	0	15.5	0	0	0
J-311	1,270.16	6.8	12.17	0	12.17	0	0	0
J-312	1,270.95	13.43	24.04	0	24.04	0	0	0
J-314	1,268.18	0	0	0	0	0	0	0
J-316	1,268.18	0	0	0	0	0	0	0
J-317	1,269.47	0	0	0	0	0	4	0
J-319	1,268.70	0.77	1.38	0	1.38	0	0	0
J-320	1,268.18	0.21	0.38	0	0.38	0	0	0
J-321	1,275.50	9.42	16.86	0	16.86	0	0	0
J-322	1,265.30	0.77	1.38	0	0	1.38	0	0
J-323	1,283.40	0	0	0	0	0	0	0
J-324	1,283.50	1.72	3.08	0	0	3.08	0	0
J-325	1,283.02	6.74	12.06	0	0	12.06	0	0
J-326	1,332.00	2.23	3.99	0	0	0	0	0
J-327	1,318.49	0	0	0	0	0	0	0
J-328	1,283.67	92.4	165.38	0	0	0	0	0
J-329	1,267.60	0.3	0.54	0	0	0.54	4	0.54
J-330	1,273.00	0	73.61	0	0	0	0	0
J-331	1,299.00	0	0	0	0	0	0	0
J-332	1,268.00	0	0	0	0	0	4	0
J-333	1,268.40	0	0	0	0	0	4	0
J-334	1,271.50	0	0	0	0	0	4	0
J-335	1,272.15	0	0	0	0	0	4	0
J-336	1,272.14	0	0	0	0	0	4	0
J-337	1,272.30	0	0	0	0	0	4	0
J-338	1,272.50	0	0	0	0	0	4	0
J-339	1,273.20	0	0	0	0	0	4	0
J-340	1,275.10	0.89	1.59	0	0	1.59	4	1.59
J-341	1,274.00	0	0	0	0	0	4	0

Daily Maximum Flow in 2002

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Label	Elevation (m)	Base Flow (1/s)	Daily Max. Flow (1/s)	1 Flow from Tas & 3/4	2 Flow from Baruun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30	5 Flow from West Re (1/s)
J-342	1,272.00	0.05	0.09	0	0	0.09	4	0.09
J-343	1,274.40	0.07	0.13	0	0	0.13	4	0.13
J-344	1,274.40	253.07	452.94	0	0	0	0	0
Total		1444.42	2658.91	452.94	73.61	48.96	6.72	25.02
(without J-330,J-344)		1191.35	2132.36	452.94	73.61	48.96	6.72	25.02

Scenario: Daily maximum 2002

Steady State Analysis

Junction Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculated (l/s)	Calculated Hydraulic Grade (m)	Pressure (m)
J-2	1,441.00				
J-3	1,401.35				
J-4	1,455.82				
J-5	1,461.00				
J-6	1,398.40				
J-7	1,453.72				
J-8	1,413.00				
J-9	1,508.54				
J-10	1,491.70				
J-11	1,494.20				
J-12	1,447.75				
J-13	1,431.24				
J-14	1,438.00				
J-15	1,429.00				
J-16	1,408.50				
J-17	1,417.37				
J-18	1,416.92				
J-19	1,400.62				
J-20	1,404.39				
J-21	1,390.50				
J-22	1,394.20				
J-23	1,380.00				
J-26	1,352.96	0	0	1,416.37	63.3
J-27	1,348.02	0	0	1,414.90	66.7
J-28	1,310.61	0	0	1,405.86	95.1
J-33	1,351.63	0	0	1,416.54	64.8
J-34	1,317.58	0	0	1,402.84	85.1
J-35	1,314.20	4.65	4.65	1,397.81	83.4
J-36	1,302.30	0.07	0.07	1,393.01	90.5
J-37	1,345.50	8.47	8.47	1,391.97	46.4
J-39	1,316.50	68.21	68.21	1,371.73	55.1
J-40	1,325.00	0	0	1,384.95	59.8
J-41	1,335.30	0	0	1,389.24	53.8
J-42	1,317.30	0	0	1,391.50	74.0
J-43	1,315.30	0	0	1,390.14	74.7
J-44	1,313.70	30.7	30.7	1,378.68	64.9
J-45	1,308.20	11.85	11.85	1,378.56	70.2
J-46	1,333.30	0	0	1,387.18	53.8
J-47	1,318.00	2.63	2.63	1,386.97	68.8
J-48	1,317.80	10.43	10.43	1,380.83	62.9
J-49	1,310.40	5.26	5.26	1,378.50	68.0
J-50	1,330.00	16.11	16.11	1,378.41	48.3
J-52	1,321.00	0	0	1,375.17	54.1
J-53	1,318.00	0	0	1,378.82	60.7
J-54	1,321.00	0	0	1,380.57	59.5
J-55	1,309.00	13.33	13.33	1,370.81	61.7
J-56	1,308.10	1.81	1.81	1,371.38	63.2
J-57	1,314.50	9.31	9.31	1,374.82	60.2
J-58	1,306.00	8.59	8.59	1,371.37	65.2
J-59	1,306.00	24.81	24.81	1,373.90	67.8
J-60	1,306.00	7.14	7.14	1,373.73	67.6
J-61	1,310.00	7.14	7.14	1,375.99	65.9
J-62	1,296.50	0	0	1,381.25	84.6
J-63	1,297.00	0	0	1,381.44	84.3
J-64	1,297.00	8.84	8.84	1,383.48	86.3
J-65	1,297.00	0	0	1,381.95	84.8

Scenario: Daily maximum 2002
 Steady State Analysis
 Junction Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculated (l/s)	Calculated hydraulic Grad< (m)	Pressure (m)
J-66	1,295.40	8.84	8.84	1,373.18	77.6
J-67	1,296.20	0	0	1,380.80	84.4
J-69	1,325.00	0	0	1,377.51	52.4
J-71	1,302.30	19.69	19.69	1,368.41	66.0
J-72	1,301.50	19.69	19.69	1,367.95	66.3
J-73	1,288.50	15	15	1,368.18	79.5
J-74	1,296.90	54.28	54.28	1,368.81	71.8
J-75	1,295.00	0	0	1,374.48	79.3
J-76	1,292.60	21.33	21.33	1,373.24	80.5
J-77	1,305.50	75.51	75.51	1,367.70	62.1
J-78	1,301.82	45.69	45.69	1,364.68	62.7
J-79	1,299.21	11.54	11.54	1,364.85	65.5
J-80	1,297.30	19.72	19.72	1,364.76	67.3
J-81	1,292.80	3.29	3.29	1,364.31	71.4
J-82	1,305.40	14.32	14.32	1,366.84	61.3
J-83	1,302.80	4.12	4.12	1,362.71	59.8
J-84	1,302.80	6.32	6.32	1,363.98	61.1
J-85	1,281.70	4.98	4.98	1,350.21	68.4
J-86	1,299.93	10.24	10.24	1,361.27	61.2
J-87	1,283.80	2.61	2.61	1,350.33	66.4
J-88	1,300.00	4.92	4.92	1,363.86	63.7
J-89	1,292.88	10.74	10.74	1,359.47	66.5
J-90	1,289.50	0	0	1,359.50	69.9
J-91	1,306.00	0	0	1,360.83	54.7
J-92	1,302.20	0	0	1,360.48	58.2
J-93	1,299.30	3.49	3.49	1,359.92	60.5
J-94	1,296.70	8.47	8.47	1,358.37	61.5
J-95	1,296.34	0	0	1,358.51	62.0
J-96	1,294.50	19.04	19.04	1,357.46	62.8
J-97	1,293.86	24.02	24.02	1,357.12	63.1
J-99	1,303.60	0	0	1,355.32	51.6
J-103	1,323.10	17.2	17.2	1,359.86	36.7
J-104	1,330.00	0	0	1,358.41	28.3
J-105	1,315.50	0	0	1,358.90	43.3
J-107	1,310.20	0.81	0.81	1,359.48	49.2
J-108	1,300.00	1.58	1.58	1,355.11	55.0
J-109	1,298.34	8.22	8.22	1,355.16	56.7
J-110	1,293.80	23.97	23.97	1,354.12	60.2
J-111	1,298.00	0	0	1,355.03	56.9
J-112	1,291.90	10.35	10.35	1,354.02	62.0
J-113	1,291.90	16.54	16.54	1,354.17	62.1
J-114	1,291.50	75.78	75.78	1,354.73	63.1
J-115	1,284.70	0	0	1,353.46	68.6
J-116	1,291.50	19.65	19.65	1,352.11	60.5
J-117	1,291.50	0	0	1,354.14	62.5
J-118	1,282.85	0	0	1,350.61	67.6
J-119	1,284.40	0.72	0.72	1,352.89	68.4
J-120	1,288.30	4.37	4.37	1,353.48	65.0
J-121	1,288.50	2.15	2.15	1,355.25	66.6
J-123	1,281.70	0.91	0.91	1,350.45	68.6
J-124	1,284.07	0	0	1,350.61	66.4
J-125	1,284.07	0	0	1,350.61	66.4
J-127	1,284.09	3.87	3.87	1,350.50	66.3
J-128	1,287.10	0	0	1,350.47	63.2
J-130	1,283.73	4.85	4.85	1,350.21	66.3
J-131	1,283.08	0.16	0.16	1,350.39	67.2

Scenario: Daily maximum 2002
 Steady State Analysis
 Junction Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculated (l/s)	Calculated hydraulic Grad< (m)	Pressure (m)
J-132	1,283.70	1.11	1.11	1,350.39	66.6
J-133	1,284.40	0	0	1,350.53	66.0
J-134	1,284.36	3.26	3.26	1,350.20	65.7
J-136	1,285.21	5.85	5.85	1,349.73	64.4
J-137	1,287.70	12.76	12.76	1,350.36	62.5
J-138	1,282.51	0	0	1,350.31	67.7
J-141	1,284.96	0	0	1,350.22	65.1
J-142	1,284.96	0.55	0.55	1,350.23	65.1
J-146	1,287.80	7.61	7.61	1,350.32	62.4
J-147	1,284.53	0	0	1,350.07	65.4
J-148	1,284.53	2.08	2.08	1,350.20	65.5
J-149	1,284.94	2.06	2.06	1,350.21	65.1
J-151	1,333.10	59.01	59.01	1,346.44	13.3
J-152	1,320.00	19.62	19.62	1,345.92	25.9
J-153	1,321.20	0	0	1,346.23	25.0
J-154	1,327.02	45.28	45.28	1,346.23	19.2
J-155	1,325.33	45.28	45.28	1,346.99	21.6
J-156	1,319.40	0	0	1,351.63	32.2
J-157	1,320.60	42.06	42.06	1,356.69	36.0
J-158	1,296.20	9	9	1,345.77	49.5
J-159	1,302.60	48.93	48.93	1,345.75	43.1
J-160	1,304.30	23.79	23.79	1,347.23	42.8
J-161	1,317.30	25.58	25.58	1,346.64	29.3
J-162	1,304.30	0	0	1,350.93	46.5
J-163	1,308.90	18.4	18.4	1,354.20	45.2
J-164	1,279.96	0	0	1,342.42	62.3
J-165	1,278.30	0	0	1,341.38	62.9
J-166	1,302.70	5.23	5.23	1,354.13	51.3
J-167	1,284.70	28.46	28.46	1,341.08	56.3
J-168	1,277.90	0	0	1,341.12	63.1
J-169	1,277.30	41.42	41.42	1,341.17	63.7
J-170	1,282.00	0	0	1,340.83	58.7
J-171	1,281.00	73.9	73.9	1,340.63	59.5
J-172	1,274.50	86.7	86.7	1,340.24	65.6
J-173	1,274.10	2.02	2.02	1,340.78	66.5
J-174	1,274.30	0	0	1,340.71	66.3
J-175	1,275.00	0	0	1,340.60	65.5
J-176	1,273.40	0	0	1,340.62	67.1
J-177	1,272.40	1.07	1.07	1,340.63	68.1
J-178	1,276.00	0	0	1,340.58	64.4
J-179	1,272.70	10.92	10.92	1,340.57	67.7
J-180	1,273.00	0	0	1,340.55	67.4
J-181	1,272.70	37.14	37.14	1,340.52	67.7
J-187	1,285.70	0	0	1,341.68	55.9
J-188	1,281.60	0	0	1,340.96	59.2
J-189	1,271.00	0	0	1,339.74	68.6
J-191	1,286.00	7.71	7.71	1,341.48	55.4
J-193	1,285.50	7.93	7.93	1,339.88	54.3
J-194	1,283.31	9.18	9.18	1,337.67	54.3
J-195	1,272.20	0	0	1,339.00	66.7
J-196	1,270.80	0.13	0.13	1,338.69	67.7
J-198	1,271.20	0	0	1,338.66	67.3
J-199	1,267.50	3.44	3.44	1,331.40	63.8
J-200	1,267.60	0	0	1,330.36	62.6
J-203	1,280.00	0.61	0.61	1,336.90	56.8
J-205	1,270.80	2.54	2.54	1,338.09	67.2

Scenario: Daily maximum 2002
 Steady State Analysis
 Junction-Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculated (l/s)	Calculated hydraulic Grad< (m)	Pressure (m)
J-206	1,270.80	0	0	1,334.94	64.0
J-207	1,267.20	0	0	1,337.90	70.6
J-208	1,266.70	15.45	15.45	1,329.20	62.4
J-209	1,265.70	0	0	1,329.36	63.5
J-210	1,268.60	1.77	1.77	1,329.52	60.8
J-211	1,263.10	3.02	3.02	1,329.60	66.4
J-212	1,263.00	4.98	4.98	1,329.75	66.6
J-213	1,261.22	0	0	1,329.69	68.3
J-214	1,260.00	0	0	1,329.54	69.4
J-215	1,259.50	0.14	0.14	1,329.40	69.8
J-216	1,284.09	41.76	41.76	1,350.31	66.1
J-218	1,309.20	0	0	1,382.47	73.1
J-219	1,280.60	8.14	8.14	1,350.12	69.4
J-221	1,303.80	0	0	1,373.39	69.5
J-244	1,307.55	0	0	1,359.09	51.4
J-245	1,273.85	0	0	1,338.11	64.1
J-246	1,276.90	2.74	2.74	1,341.16	64.1
J-247	1,279.94	3.04	3.04	1,342.47	62.4
J-248	1,335.13	18.85	18.85	1,358.49	23.3
J-249	1,301.00	0	0	1,364.71	63.6
J-250	1,303.00	15.16	15.16	1,358.78	55.7
J-252	1,318.86	0	0	1,380.68	61.7
J-253	1,334.74	0	0	1,378.41	43.6
J-255	1,300.00	0	0	1,392.25	92.1
J-256	1,300.00	0.11	0.11	1,386.88	86.7
J-257	1,334.00	3.92	3.92	1,380.47	46.4
J-258	1,330.00	64.86	64.86	1,379.45	49.4
J-262	1,333.00	0	0	1,377.64	44.6
J-263	1,324.44	18.85	18.85	1,375.12	50.6
J-264	1,324.44	1.54	1.54	1,375.11	50.6
J-265	1,332.00	0	0	1,378.37	46.3
J-266	1,331.00	1.31	1.31	1,378.39	47.3
J-267	1,298.43	0	0	1,358.87	60.3
J-268	1,284.20	1.49	1.49	1,360.16	75.8
J-269	1,290.93	1.38	1.38	1,359.55	68.5
J-270	1,290.96	1.18	1.18	1,359.56	68.5
J-271	1,298.00	0	0	1,354.53	56.4
J-273	1,283.67	89.28	89.28	1,350.98	67.2
J-274	1,281.71	0	0	1,350.43	68.6
J-275	1,282.70	0.88	0.88	1,350.44	67.6
J-280	1,284.06	5.08	5.08	1,350.21	66.0
J-281	1,284.97	4.94	4.94	1,350.22	65.1
J-282	1,284.45	11.63	11.63	1,350.98	66.4
J-283	1,283.96	6.89	6.89	1,350.87	66.8
J-284	1,284.00	0	0	1,350.23	66.1
J-285	1,286.00	5.07	5.07	1,355.25	69.1
J-286	1,284.18	0.54	0.54	1,350.24	65.9
J-287	1,284.40	0	0	1,350.22	65.7
J-288	1,284.30	0	0	1,350.21	65.8
J-289	1,283.63	0	0	1,350.38	66.6
J-290	1,284.83	0	0	1,350.37	65.4
J-291	1,284.00	1.88	1.88	1,350.29	66.2
J-292	1,285.30	7.46	7.46	1,350.23	64.8
J-293	1,285.50	0	0	1,350.23	64.6
J-294	1,284.54	0	0	1,350.22	65.6
J-295	1,284.78	0	0	1,350.22	65.3

Scenario: Daily maximum 2002
Steady State Analysis
Junction Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculated (l/s)	Calculated hydraulic Grad< (m)	Pressure (m)
J-296	1,284.54	0	0	1,350.22	65.6
J-297	1,285.60	0	0	1,350.23	64.5
J-298	1,314.05	0	0	1,341.68	27.6
J-299	1,319.25	0	0	1,341.56	22.3
J-300	1,281.95	0	0	1,339.87	57.8
J-301	1,285.43	0	0	1,340.17	54.6
J-302	1,281.95	0.2	0.2	1,339.69	57.6
J-303	1,285.00	0	0	1,338.68	53.6
J-304	1,280.00	0	0	1,337.92	57.8
J-305	1,280.00	0	0	1,337.62	57.5
J-306	1,270.52	0	0	1,338.12	67.5
J-307	1,271.83	0	0	1,339.01	67.0
J-308	1,259.60	1.25	1.25	1,329.15	69.4
J-309	1,262.27	0.04	0.04	1,329.15	66.7
J-310	1,270.60	15.5	15.5	1,335.82	65.1
J-311	1,270.16	12.17	12.17	1,335.71	65.4
J-312	1,270.95	24.04	24.04	1,335.73	64.7
J-314	1,268.18	0	0	1,334.90	66.6
J-316	1,268.18	0	0	1,334.62	66.3
J-317	1,269.47	0	0	1,334.26	64.7
J-319	1,268.70	1.38	1.38	1,334.79	66.0
J-320	1,268.18	0.38	0.38	1,334.04	65.7
J-321	1,275.50	16.86	16.86	1,333.41	57.8
J-322	1,265.30	1.38	1.38	1,334.26	68.8
J-323	1,263.40	0	0	1,328.05	64.5
J-324	1,263.50	3.08	3.08	1,327.82	64.2
J-325	1,263.02	12.06	12.06	1,326.80	63.7
J-326	1,332.00	3.99	3.99	1,389.26	57.1
J-327	1,318.49	0	0	1,386.86	68.2
J-328	1,283.67	165.38	165.38	1,352.89	69.1
J-329	1,267.60	0.54	0.54	1,330.32	62.6
J-330	1,273.00	73.61	73.61	1,338.08	64.9
J-331	1,299.00	0	0	1,355.04	55.9
J-332	1,268.00	0	0	1,330.29	62.2
J-333	1,268.40	0	0	1,330.28	61.8
J-334	1,271.50	0	0	1,330.25	58.6
J-335	1,272.15	0	0	1,330.25	58.0
J-336	1,272.14	0	0	1,330.25	58.0
J-337	1,272.30	0	0	1,330.25	57.8
J-338	1,272.50	0	0	1,330.25	57.6
J-339	1,273.20	0	0	1,330.25	56.9
J-340	1,275.10	1.59	1.59	1,330.24	55.0
J-341	1,274.00	0	0	1,330.23	56.1
J-342	1,272.00	0.09	0.09	1,330.23	58.1
J-343	1,274.40	0.13	0.13	1,330.23	55.7
J-344 (TJ)	1,333.05	452.94	452.94	1,354.64	21.5

Scenario: Daily maximum 2002
Steady State Analysis
Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-1	200.00	300	0.00	1,361.00	1,361.00	0.00	0.00
P-1a	300.00	300	0.00	1,346.44	1,346.44	0.00	0.00
P-2	275.00	300	26.48	1,346.44	1,346.23	0.21	0.75
P-3	280.00	300	32.78	1,346.23	1,345.92	0.31	1.11
P-4	720.00	300	13.16	1,345.92	1,345.77	0.15	0.20
P-5	885.00	300	4.16	1,345.77	1,345.75	0.02	0.02
P-6	750.00	300	-44.78	1,345.75	1,347.23	1.48	1.98
P-7	350.00	200	14.14	1,347.23	1,346.64	0.59	1.69
P-8	300.00	200	-11.43	1,346.64	1,346.99	0.34	1.14
P-9	355.00	300	46.52	1,346.99	1,346.23	0.75	2.12
P-10	400.00	300	1.24	1,346.23	1,346.23	0.00	0.00
P-17	600.00	125	-1.43	1,329.40	1,329.54	0.14	0.24
P-18	600.00	125	-1.43	1,329.54	1,329.69	0.14	0.24
P-19	600.00	150	-1.43	1,329.69	1,329.75	0.06	0.10
P-20	321.00	250	10.00	1,329.75	1,329.65	0.10	0.30
P-20a	178.50	250	10.00	1,329.65	1,329.60	0.05	0.30
P-21	500.00	250	6.97	1,329.60	1,329.52	0.08	0.15
P-22	600.00	200	5.20	1,329.52	1,329.36	0.16	0.26
P-23	600.00	200	5.20	1,329.36	1,329.20	0.16	0.26
P-24	920.50	200	-10.25	1,329.20	1,330.06	0.85	0.93
P-25	329.50	200	-10.25	1,330.06	1,330.36	0.31	0.93
P-29	30.00	250	-40.62	1,330.00	1,330.12	0.12	4.01
P-29a	318.00	250	-40.62	1,330.12	1,331.40	1.28	4.01
P-30	30.00	400	-151.20	1,330.00	1,330.14	0.14	4.64
P-30a	10.00	400	-153.55	1,330.32	1,330.36	0.05	4.78
P-30c	38.00	400	-151.20	1,330.14	1,330.32	0.18	4.64
P-32	253.00	150	18.88	1,337.90	1,334.94	2.96	11.69
P-34	420.00	400	-79.54	1,338.09	1,338.69	0.59	1.41
P-35	140.00	400	-102.16	1,338.69	1,339.00	0.31	2.24
P-36	621.00	400	-66.99	1,339.00	1,339.64	0.64	1.03
P-36a	99.00	400	-66.99	1,339.64	1,339.74	0.10	1.03
P-44	275.00	250	55.33	1,336.90	1,334.94	1.96	7.11
P-48	300.00	400	106.01	1,341.68	1,340.96	0.72	2.40
P-49	509.00	400	106.01	1,340.96	1,339.74	1.22	2.40
P-53	70.00	500	-73.61	1,338.08	1,338.11	0.03	0.41
P-53a	5.00	500	0.00	1,359.00	1,338.08	0.00	0.00
P-55	285.00	600	-71.63	1,340.52	1,340.57	0.05	0.16
P-56	300.00	600	-82.55	1,340.57	1,340.63	0.06	0.21
P-57	245.00	300	6.64	1,340.63	1,340.62	0.01	0.06
P-58	320.00	300	6.64	1,340.62	1,340.60	0.02	0.06
P-59	300.00	600	46.45	1,340.60	1,340.58	0.02	0.07
P-60	345.00	600	46.45	1,340.58	1,340.55	0.03	0.07
P-62	410.00	600	46.45	1,340.55	1,340.52	0.03	0.07
P-63	610.00	600	-39.81	1,340.60	1,340.63	0.03	0.05
P-64	260.00	300	38.62	1,340.63	1,340.24	0.39	1.50
P-65	240.00	300	-48.08	1,340.24	1,340.78	0.54	2.26
P-66	310.00	600	90.26	1,340.78	1,340.71	0.08	0.25
P-67	300.00	600	90.26	1,340.71	1,340.63	0.07	0.25
P-68	300.00	600	-152.33	1,340.63	1,340.83	0.20	0.65
P-69	390.00	600	-152.33	1,340.83	1,341.08	0.25	0.65
P-70	200.00	300	-13.34	1,341.08	1,341.12	0.04	0.21
P-71	215.00	300	-13.34	1,341.12	1,341.17	0.05	0.21
P-72	690.00	600	140.36	1,341.17	1,340.78	0.39	0.56
P-73	200.00	600	-195.12	1,341.17	1,341.38	0.21	1.03
P-74	1,015.00	600	-195.12	1,341.38	1,342.42	1.05	1.03

Scenario: Daily maximum 2002
Steady State Analysis
Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-75	1,725.00	600	167.45	1,342.42	1,341.08	1.34	0.78
P-76	600.00	300	-82.71	1,347.23	1,350.93	3.70	6.16
P-77	520.00	300	-82.71	1,350.93	1,354.13	3.20	6.16
P-78	210.00	200	-5.51	1,354.13	1,354.20	0.06	0.29
P-82	5.00	500	76.81	1,350.61	1,350.61	0.00	0.45
P-83	330.00	500	79.60	1,350.61	1,350.45	0.16	0.48
P-83a	5.00	100	-0.12	1,350.39	1,350.39	0.00	0.00
P-84	600.00	200	6.23	1,350.43	1,350.21	0.22	0.37
P-85	10.00	150	-3.10	1,350.43	1,350.44	0.00	0.42
P-86	325.00	500	-58.63	1,350.12	1,350.21	0.09	0.27
P-87	600.00	500	-62.23	1,350.21	1,350.39	0.18	0.30
P-88	175.00	200	3.12	1,350.45	1,350.43	0.02	0.10
P-88a	140.00	500	-75.56	1,350.39	1,350.45	0.06	0.43
P-89	150.00	300	10.68	1,350.33	1,350.31	0.02	0.14
P-90	516.00	300	-19.65	1,350.31	1,350.53	0.22	0.43
P-91	250.00	100	1.24	1,350.53	1,350.39	0.14	0.54
P-92	400.00	250	1.25	1,350.21	1,350.21	0.00	0.01
P-93	50.00	500	-50.49	1,350.00	1,350.01	0.01	0.21
P-93a	550.00	500	-50.49	1,350.01	1,350.12	0.11	0.21
P-95	240.00	300	-22.33	1,350.07	1,350.20	0.13	0.55
P-103	200.00	100	2.75	1,350.20	1,349.73	0.48	2.38
P-112	48.00	500	86.11	1,350.53	1,350.50	0.03	0.55
P-113	200.00	400	22.82	1,350.50	1,350.47	0.03	0.14
P-114	800.00	400	22.82	1,350.47	1,350.36	0.11	0.14
P-115	1,454.00	400	10.06	1,350.36	1,350.32	0.04	0.03
P-116	700.00	500	59.42	1,350.50	1,350.31	0.19	0.28
P-120	152.00	500	86.11	1,350.61	1,350.53	0.08	0.55
P-122	657.00	500	-2.79	1,350.61	1,350.61	0.00	0.00
P-128	425.00	250	-22.48	1,352.89	1,353.46	0.57	1.34
P-129	230.00	250	-31.05	1,353.46	1,354.02	0.56	2.44
P-130	265.00	400	-48.46	1,354.02	1,354.17	0.15	0.56
P-132	500.00	150	-8.57	1,352.11	1,353.46	1.35	2.70
P-133	540.00	400	-66.91	1,354.17	1,354.73	0.55	1.02
P-134	265.00	300	47.66	1,354.73	1,354.14	0.59	2.22
P-135	665.00	150	-11.25	1,354.14	1,357.12	2.98	4.48
P-136	105.00	150	-9.54	1,357.12	1,357.46	0.35	3.30
P-137	500.00	150	-6.88	1,357.46	1,358.37	0.90	1.80
P-138	465.00	150	-11.09	1,352.11	1,354.14	2.03	4.36
P-139	1,200.00	400	47.82	1,354.14	1,353.48	0.66	0.55
P-140	500.00	400	-165.38	1,354.73	1,357.46	2.74	5.48
P-141	460.00	200	-25.73	1,357.12	1,359.47	2.35	5.11
P-142	845.00	200	-28.74	1,359.47	1,364.76	5.30	6.27
P-143	630.00	300	26.02	1,364.76	1,364.31	0.46	0.72
P-145	905.00	400	-152.21	1,355.25	1,359.50	4.25	4.70
P-145a	380.00	400	-151.87	1,353.48	1,355.25	1.78	4.68
P-146	500.00	300	-7.72	1,359.47	1,359.50	0.04	0.08
P-147	1,523.00	700	-540.89	1,355.25	1,360.16	4.90	3.22
P-147a	1,360.00	700	-534.02	1,350.98	1,355.25	4.27	3.14
P-148	20.00	600	73.91	1,355.04	1,355.03	0.00	0.17
P-149	322.50	250	-30.34	1,354.36	1,355.11	0.75	2.34
P-149a	102.50	250	-30.34	1,354.12	1,354.36	0.24	2.34
P-150	400.00	250	-6.21	1,355.11	1,355.16	0.05	0.12
P-150a	400.00	300	-10.03	1,355.11	1,355.16	0.05	0.12
P-151	580.00	250	-49.42	1,355.16	1,358.51	3.35	5.77
P-152	263.00	200	-12.74	1,358.51	1,358.87	0.37	1.39

Scenario: Daily maximum 2002
Steady State Analysis
Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headloss (m)	Headloss Gradient (m/km)
P-152a	325.10	200	-25.31	1,358.87	1,360.48	1.61	4.96
P-152b	500.00	300	12.58	1,358.87	1,358.78	0.09	0.19
P-153	403.00	150	6.03	1,360.48	1,359.92	0.57	1.41
P-153a	342.00	300	-31.34	1,360.48	1,360.83	0.35	1.02
P-154	235.00	250	-49.49	1,359.92	1,361.27	1.36	5.78
P-155	470.00	150	-9.15	1,361.27	1,362.71	1.44	3.06
P-156	208.00	150	-13.27	1,362.71	1,363.98	1.26	6.08
P-157	440.00	150	2.39	1,363.98	1,363.86	0.11	0.25
P-158	430.00	250	50.58	1,363.86	1,361.27	2.59	6.02
P-159	650.00	300	24.96	1,355.16	1,354.73	0.44	0.67
P-160	75.00	600	0.00	1,354.64	1,420.00	0.00	0.00
P-161	500.00	600	-226.47	1,354.64	1,355.32	0.68	1.36
P-163	500.00	600	-226.47	1,354.64	1,355.32	0.68	1.36
P-164	560.00	200	-23.91	1,354.20	1,356.69	2.50	4.46
P-165	300.00	400	-169.21	1,356.69	1,358.41	1.71	5.71
P-166	270.00	400	-164.03	1,358.41	1,359.86	1.46	5.39
P-167	72.50	400	162.32	1,359.86	1,359.48	0.38	5.29
P-170	65.00	100	5.17	1,358.90	1,358.41	0.50	7.66
P-171	545.00	300	103.24	1,356.69	1,351.63	5.06	9.29
P-172	500.00	300	103.24	1,351.63	1,346.99	4.64	9.29
P-173	308.50	500	86.58	1,355.28	1,355.11	0.17	0.56
P-173a	60.00	500	86.58	1,355.32	1,355.28	0.03	0.56
P-176	790.00	600	-573.45	1,360.83	1,366.84	6.00	7.60
P-177	215.00	700	-609.74	1,366.84	1,367.70	0.86	4.02
P-178	155.00	300	54.64	1,367.70	1,367.26	0.44	2.86
P-178a	901.00	300	54.64	1,367.26	1,364.68	2.58	2.86
P-179	360.00	250	29.87	1,364.68	1,363.86	0.82	2.27
P-180	750.00	200	21.98	1,366.84	1,363.98	2.86	3.81
P-181	625.00	300	-73.58	1,364.85	1,367.95	3.10	4.96
P-182	10.00	200	-84.34	1,367.95	1,368.41	0.46	46.03
P-183	645.00	300	-62.90	1,368.41	1,370.81	2.39	3.71
P-184	175.00	300	-58.78	1,370.81	1,371.38	0.57	3.27
P-185	160.00	300	7.78	1,371.38	1,371.37	0.01	0.08
P-186	400.00	250	58.84	1,371.37	1,368.18	3.19	7.97
P-187	460.00	250	56.62	1,368.18	1,364.76	3.41	7.42
P-190	990.00	700	-739.89	1,367.70	1,373.39	5.69	5.75
P-194	795.00	300	-68.37	1,371.38	1,374.82	3.44	4.33
P-195	35.00	400	-227.85	1,374.82	1,375.17	0.35	9.91
P-196	385.00	1	0.00	1,375.17	1,378.82	3.65	9.49
P-198	345.00	1	0.00	1,378.82	1,375.99	2.83	8.20
P-199	580.00	400	137.69	1,375.99	1,373.73	2.26	3.90
P-200	175.00	400	-65.71	1,373.73	1,373.90	0.17	0.99
P-201	755.00	300	59.65	1,373.90	1,371.37	2.54	3.36
P-202	540.00	400	-207.63	1,364.31	1,368.81	4.51	8.34
P-203	870.00	500	-283.62	1,368.81	1,373.18	4.36	5.01
P-204	532.00	600	-196.26	1,373.18	1,373.73	0.55	1.04
P-206	850.00	600	-164.01	1,380.80	1,381.44	0.64	0.75
P-207	10.00	400	319.05	1,381.44	1,381.25	0.18	18.48
P-208	1,366.00	700	682.93	1,381.25	1,374.48	6.77	4.96
P-209	216.00	700	682.93	1,374.31	1,373.24	1.07	4.96
P-209a	34.50	700	682.93	1,374.48	1,374.31	0.17	4.96
P-210	385.00	250	-96.21	1,373.18	1,380.80	7.63	19.81
P-214	55.00	1	0.00	1,378.82	1,380.57	1.75	31.89
p-217	932.00	500	-126.27	1,378.41	1,379.45	1.04	1.12
P-217a	421.00	500	-191.13	1,379.45	1,380.47	1.02	2.41

Scenario: Daily maximum 2002
 Steady State Analysis
 Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-218	936.50	500	-309.82	1,381.44	1,386.97	5.53	5.91
P-218a	527.50	250	-55.71	1,380.83	1,384.63	3.80	7.20
P-218b	10.00	200	39.64	1,386.97	1,386.86	0.11	11.37
P-218c	309.50	250	-55.71	1,384.63	1,386.86	2.23	7.20
P-218d	103.50	500	-309.82	1,380.83	1,381.44	0.61	5.91
P-219	309.50	500	-94.57	1,386.97	1,387.18	0.20	0.66
P-220	856.00	600	-308.19	1,387.18	1,389.24	2.06	2.41
P-221	550.00	300	-66.13	1,389.26	1,391.50	2.24	4.07
P-221a	50.00	300	-19.83	1,389.24	1,389.26	0.02	0.44
P-222	200.00	500	334.05	1,391.50	1,390.14	1.36	6.79
P-223	755.00	500	257.53	1,390.14	1,386.97	3.17	4.19
P-224	690.00	150	1.40	1,378.56	1,378.50	0.06	0.09
P-225	300.00	150	-3.87	1,378.50	1,378.68	0.19	0.62
P-226	135.50	150	41.96	1,378.68	1,371.73	6.95	51.30
P-227	614.50	150	-26.25	1,371.73	1,384.95	13.22	21.52
P-228	160.00	500	-400.18	1,391.50	1,393.01	1.52	9.49
P-229	1,286.00	600	-288.36	1,389.24	1,391.97	2.74	2.13
P-230	2,600.00	600	-296.83	1,391.97	1,397.81	5.84	2.24
P-231	505.00	500	400.25	1,397.81	1,393.01	4.79	9.49
P-232	1,569.00	600	-341.99	1,397.81	1,402.38	4.58	2.92
P-232a	630.50	800	-341.99	1,402.38	1,402.84	0.45	0.72
P-233	1,569.00	600	-359.74	1,397.81	1,402.83	5.03	3.20
P-233a	1.00	600	-359.74	1,402.83	1,402.84	0.00	3.27
P-234	1,850.00	800	-532.86	1,402.84	1,405.86	3.02	1.63
P-235	1,850.00	800	-532.86	1,402.84	1,405.86	3.02	1.63
P-236	20.00	1	0.00	1,383.48	1,381.95	1.54	76.83
P-237	1,205.00	700	213.09	1,381.95	1,381.25	0.69	0.57
P-238	30.00	600	-483.06	1,383.83	1,384.00	0.17	5.53
P-238a	280.00	600	483.06	1,382.99	1,381.44	1.55	5.53
P-239	30.00	800	505.22	1,384.00	1,383.96	0.04	1.48
P-239a	320.00	800	505.22	1,383.96	1,383.48	0.47	1.48
P-240	30.00	400	158.07	1,384.00	1,383.85	0.15	5.04
P-240a	1,050.00	400	158.07	1,383.85	1,378.56	5.29	5.04
P-244	920.00	700	-213.09	1,381.95	1,382.47	0.53	0.57
P-244a	1,220.00	400	-150.79	1,381.25	1,386.88	5.63	4.61
P-244b	1,162.00	400	-150.90	1,386.88	1,392.25	5.37	4.62
P-244c	2,290.00	400	-150.90	1,392.25	1,402.83	10.58	4.62
P-244d	1.00	400	-150.90	1,402.83	1,402.84	0.00	4.76
P-245	2,325.00	400	-213.09	1,382.47	1,402.83	20.36	8.75
P-247	200.00	300	19.49	1,350.61	1,350.53	0.08	0.42
P-251	200.00	300	0.00	1,361.00	1,361.00	0.00	0.00
P-251a	300.00	300	0.00	1,346.44	1,346.44	0.00	0.00
P-252	375.00	250	-39.18	1,358.51	1,359.92	1.41	3.75
P-253	515.00	150	2.49	1,358.51	1,358.37	0.14	0.28
P-254	270.00	150	-12.86	1,358.37	1,359.92	1.55	5.74
P-256	315.00	200	-8.93	1,367.95	1,368.18	0.23	0.72
P-258	25.00	400	-112.79	1,342.93	1,343.00	0.07	2.70
P-259	463.50	400	-112.79	1,341.68	1,342.93	1.25	2.69
P-263	325.00	150	-1.91	1,354.12	1,354.17	0.05	0.17
P-264	200.00	400	150.17	1,374.82	1,373.90	0.92	4.58
P-265	1,867.00	250	-16.40	1,330.00	1,331.40	1.40	0.75
P-265a	338.00	250	-16.40	1,329.75	1,330.00	0.25	0.75
P-266	350.00	300	-20.93	1,364.68	1,364.85	0.17	0.48
P-267	240.00	300	17.87	1,364.85	1,364.76	0.09	0.36
P-268	50.00	400	-11.16	1,350.00	1,350.00	0.00	0.04

Scenario: Daily maximum 2002
Steady State Analysis
Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headloss (m)	Headloss Gradient (m/km)
P-268a	1,815.00	400	-11.16	1,350.00	1,350.07	0.07	0.04
P-269	50.00	400	-11.16	1,350.00	1,350.00	0.00	0.04
P-269a	1,815.00	400	-11.16	1,350.00	1,350.07	0.07	0.04
P-277	570.00	1	0.00	1,375.99	1,380.80	4.81	8.44
P-278	4,170.00	800	496.38	1,383.48	1,377.51	5.97	1.43
P-281	30.00	600	0.00	1,420.00	1,354.64	0.00	0.00
P-283	5,534.00	800	-532.86	1,405.86	1,414.90	9.04	1.63
P-284	900.00	800	-532.86	1,414.90	1,416.37	1.47	1.63
P-285	107.00	800	-532.86	1,416.37	1,416.54	0.17	1.63
P-286	1,142.00	600					
P-287	1,346.00	600					
P-288	152.00	600					
P-289	390.00	600					
P-290	868.00	600					
P-291	300.00	600					
P-292	300.00	600					
P-293	269.00	600					
P-294	956.00	600					
P-295	776.00	600					
P-296	260.00	600					
P-297	500.00	600					
P-298	3,044.00	600					
P-299	996.00	600					
P-300	683.00	800					
P-301	4,494.00	700					
P-302	1,619.00	700					
P-303	2,856.00	700					
P-304	3,100.00	700					
P-305	1,680.00	700					
P-306	1,158.00	700					
P-307	914.00	700					
P-308	202.00	700					
P-309	5,534.00	800	532.86	1,414.90	1,405.86	9.04	1.63
P-310	900.00	800	-532.86	1,414.90	1,416.37	1.47	1.63
P-311	107.00	800	-532.86	1,416.37	1,416.54	0.17	1.63
P-312	1,142.00	600					
P-313	1,346.00	600					
P-314	152.00	600					
P-315	390.00	600					
P-316	868.00	600					
P-317	300.00	600					
P-318	300.00	600					
P-319	269.00	600					
P-320	956.00	600					
P-321	776.00	600					
P-322	260.00	600					
P-323	500.00	600					
P-324	3,044.00	600					
P-325	996.00	600					
P-326	683.00	600					
P-327	4,494.00	700					
P-328	1,619.00	700					
P-329	2,856.00	700					
P-330	3,100.00	700					
P-331	1,680.00	700					

Scenario: Daily maximum 2002
Steady State Analysis
Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-332	1,158.00	700					
P-333	914.00	700					
P-334	202.00	700					
P-337	2,500.00	400	-73.61	1,338.11	1,341.16	3.06	1.22
P-338	15.00	600	-362.57	1,342.42	1,342.47	0.05	3.24
P-339	1,735.00	600	-441.96	1,342.47	1,350.61	8.14	4.69
P-340	1,000.00	400	-76.35	1,341.16	1,342.47	1.31	1.31
P-341	1,655.00	300	-90.54	1,346.44	1,358.49	12.06	7.28
P-342	537.50	400	-109.39	1,358.49	1,359.86	1.37	2.55
P-343	30.00	400	226.47	1,420.00	1,419.71	0.29	9.80
P-344	440.50	400	226.47	1,364.18	1,359.86	4.32	9.80
P-345	30.00	400	226.47	1,420.00	1,419.71	0.29	9.80
P-346	472.00	400	226.47	1,364.49	1,359.86	4.63	9.80
P-347	200.00	200	-23.24	1,363.86	1,364.71	0.85	4.23
P-348	240.00	300	-23.24	1,364.71	1,364.85	0.14	0.59
P-349	510.00	600	-539.52	1,355.32	1,358.78	3.46	6.79
P-350	300.00	600	-542.11	1,358.78	1,360.83	2.05	6.85
P-351	50.00	100	5.17	1,359.48	1,359.09	0.38	7.66
P-353	25.00	100	5.17	1,359.09	1,358.90	0.19	7.66
P-354	600.00	400	-144.83	1,375.99	1,378.56	2.57	4.28
P-356	10.00	500	-422.90	1,380.57	1,380.68	0.11	10.51
P-357	20.00	500	-355.10	1,380.68	1,380.83	0.15	7.60
P-358	850.00	600	-67.80	1,380.68	1,380.80	0.12	0.15
P-359	4.00	500	56.26	1,378.41	1,378.41	0.00	0.26
P-360	2,956.00	500	-213.62	1,378.41	1,387.18	8.77	2.97
P-364	535.00	400	-227.85	1,375.17	1,380.47	5.30	9.91
P-365	10.00	500	-422.90	1,380.47	1,380.57	0.11	10.51
P-366	100.00	500	0.00	1,383.00	1,383.00	0.00	0.00
P-366a	788.00	500	0.00	1,377.64	1,377.64	0.00	0.00
P-368	167.00	500	-269.88	1,377.64	1,378.41	0.76	4.57
P-369	300.00	700	-739.89	1,373.39	1,375.12	1.72	5.75
P-370	10.00	400	269.88	1,377.64	1,377.51	0.14	13.56
P-371	390.00	700	-766.26	1,375.12	1,377.51	2.39	6.13
P-372	20.00	200	7.52	1,375.12	1,375.11	0.01	0.52
P-373	550.00	200	41.12	1,375.11	1,368.41	6.69	12.17
P-374	100.00	500	0.00	1,383.00	1,383.00	0.00	0.00
P-374a	788.00	500	0.00	1,378.37	1,378.37	0.00	0.00
P-375	100.00	500	53.90	1,378.41	1,378.39	0.02	0.23
P-376	359.00	200	-35.14	1,375.11	1,378.37	3.27	9.10
P-377	750.00	150	17.45	1,378.39	1,370.81	7.58	10.11
P-378	140.00	500	-35.14	1,378.37	1,378.39	0.01	0.10
P-379	1,230.00	300	-21.71	1,368.18	1,368.81	0.64	0.52
P-382	2,800.00	700	-661.60	1,360.16	1,373.24	13.09	4.67
P-383	600.00	500	119.22	1,360.16	1,359.55	0.60	1.01
P-384	900.00	500	187.08	1,359.55	1,357.46	2.09	2.32
P-385	470.00	400	230.35	1,364.31	1,359.56	4.75	10.11
P-386	10.00	400	159.93	1,359.56	1,359.50	0.05	5.15
P-387	3.00	400	69.24	1,359.56	1,359.55	0.00	1.09
P-389	350.00	500	144.82	1,354.53	1,354.02	0.51	1.44
P-393	165.00	700	-444.75	1,350.61	1,350.98	0.37	2.24
P-399	390.00	150	-1.59	1,350.39	1,350.44	0.05	0.12
P-401	315.00	300	-13.29	1,350.33	1,350.39	0.07	0.21
P-407	140.00	300	4.40	1,350.23	1,350.22	0.00	0.03
P-408	500.00	250	2.02	1,350.21	1,350.20	0.01	0.02
P-409	75.00	250	-1.51	1,350.22	1,350.22	0.00	0.01

Scenario: Daily maximum 2002
Steady State Analysis
Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headloss (m)	Headloss Gradient (m/km)
P-410	225.00	150	-0.96	1,350.21	1,350.22	0.01	0.05
P-413	440.00	150	-5.57	1,350.44	1,350.98	0.54	1.22
P-414	500.00	100	-1.40	1,350.53	1,350.87	0.34	0.68
P-415	140.00	100	3.99	1,350.87	1,350.20	0.66	4.73
P-416	250.00	250	12.27	1,350.98	1,350.87	0.11	0.44
P-419	70.00	300	-11.31	1,350.23	1,350.24	0.01	0.16
P-420	320.00	300	6.14	1,350.23	1,350.21	0.02	0.05
P-421	70.00	300	-30.32	1,350.24	1,350.31	0.07	0.96
P-422	1.50	400	-4.72	1,355.25	1,355.25	0.00	0.00
P-422a	1.50	400	-4.72	1,355.25	1,355.25	0.00	0.00
P-423	865.00	250	29.48	1,352.89	1,350.98	1.92	2.22
P-424	100.00	300	18.48	1,350.24	1,350.20	0.04	0.38
P-426	100.00	300	-5.16	1,350.22	1,350.23	0.00	0.04
P-427	130.00	300	-5.92	1,350.20	1,350.21	0.01	0.05
P-428	250.00	200	-1.71	1,350.21	1,350.21	0.01	0.03
P-429	100.00	200	4.21	1,350.22	1,350.21	0.02	0.18
P-430	395.00	200	1.60	1,350.39	1,350.38	0.01	0.03
P-431	505.00	200	1.60	1,350.38	1,350.37	0.02	0.03
P-432	190.00	100	-3.10	1,349.73	1,350.29	0.56	2.96
P-433	5.00	100	-3.38	1,350.29	1,350.31	0.02	3.48
P-434	620.00	150	1.60	1,350.37	1,350.29	0.07	0.12
P-437	40.00	300	0.14	1,350.23	1,350.23	0.00	0.00
P-439	100.00	250	-1.51	1,350.22	1,350.22	0.00	0.01
P-440	120.00	300	-0.95	1,350.22	1,350.22	0.00	0.00
P-441	50.00	300	3.12	1,350.22	1,350.22	0.00	0.01
P-442	150.00	300	0.55	1,350.22	1,350.22	0.00	0.00
P-443	130.00	200	-2.57	1,350.21	1,350.22	0.01	0.07
P-444	650.00	200	-1.20	1,350.21	1,350.23	0.01	0.02
P-445	325.00	150	-2.45	1,350.23	1,350.32	0.09	0.27
P-445a	140.00	300	-5.09	1,350.23	1,350.23	0.00	0.04
P-446	20.00	300	-1.06	1,350.23	1,350.23	0.00	0.00
P-447	100.00	300	3.12	1,350.23	1,350.22	0.00	0.01
P-448	200.00	300	4.18	1,350.23	1,350.23	0.00	0.02
P-448a	323.00	300	14.29	1,350.31	1,350.23	0.08	0.24
P-450	100.00	400	-6.78	1,341.68	1,341.68	0.00	0.01
P-450a	5.00	400	-6.78	1,341.68	1,341.68	0.00	0.00
P-451	25.00	400	-112.86	1,342.93	1,343.00	0.07	2.70
P-451a	463.50	400	-112.86	1,341.68	1,342.93	1.25	2.70
P-452	200.00	300	-17.85	1,341.48	1,341.56	0.07	0.36
P-453	1,427.00	400	-17.85	1,341.56	1,341.68	0.13	0.09
P-454	1,774.00	200	10.13	1,341.48	1,339.87	1.61	0.91
P-457	70.00	250	-41.56	1,339.88	1,340.17	0.29	4.19
P-458	1.50	400	-101.79	1,341.68	1,341.68	0.00	2.28
P-458a	677.00	400	-101.79	1,340.17	1,341.68	1.51	2.23
P-459	190.00	100	-6.17	1,337.67	1,339.69	2.02	10.61
P-460	200.00	200	-10.13	1,339.69	1,339.87	0.18	0.91
P-461	570.00	400	60.23	1,340.17	1,339.69	0.48	0.84
P-462	277.00	200	23.52	1,339.88	1,338.68	1.20	4.33
P-463	523.00	250	23.52	1,338.68	1,337.92	0.76	1.46
P-464	310.00	250	7.10	1,337.67	1,337.62	0.05	0.16
P-465	200.00	250	-23.52	1,337.62	1,337.92	0.29	1.46
P-466	295.00	250	-25.32	1,337.62	1,338.12	0.49	1.67
P-467	186.00	200	3.50	1,338.12	1,338.09	0.02	0.13
P-468	720.00	400	64.00	1,339.69	1,339.01	0.68	0.94
P-469	30.00	400	35.18	1,339.01	1,339.00	0.01	0.31

Scenario: Daily maximum 2002
Steady State Analysis
Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-470	420.00	250	-28.82	1,338.12	1,339.01	0.89	2.13
P-471	425.00	100	1.29	1,329.40	1,329.15	0.25	0.58
P-472	1,750.00	200	0.04	1,329.15	1,329.15	0.00	0.00
P-473	10.00	400	-73.61	1,358.99	1,359.00	0.01	1.22
P-473a	17.50	400	-73.61	1,339.74	1,339.76	0.02	1.22
P-474	290.00	400	112.64	1,339.44	1,338.66	0.78	2.69
P-474a	110.00	400	112.64	1,339.74	1,339.44	0.30	2.69
P-475	720.00	200	22.50	1,338.69	1,335.82	2.87	3.98
P-476	240.00	200	7.00	1,335.82	1,335.71	0.11	0.46
P-477	10.00	200	-17.15	1,335.71	1,335.73	0.02	2.41
P-482	400.00	400	-193.58	1,335.73	1,338.66	2.93	7.33
P-485	100.00	250	55.94	1,337.62	1,336.90	0.73	7.26
P-486	135.00	400	-80.50	1,337.90	1,338.09	0.19	1.44
P-487	30.00	250	-40.81	1,330.00	1,330.12	0.12	4.05
P-487a	315.00	250	-40.81	1,330.12	1,331.40	1.27	4.05
P-488	650.00	200	11.98	1,335.71	1,334.90	0.81	1.24
P-489	345.00	250	-61.63	1,334.90	1,337.90	3.00	8.68
P-490	5.00	150	44.30	1,334.90	1,334.62	0.28	56.73
P-491	260.00	400	-74.21	1,334.62	1,334.94	0.32	1.24
P-495	500.00	400	29.31	1,334.90	1,334.79	0.11	0.22
P-496	82.50	400	180.31	1,334.79	1,334.26	0.53	6.43
P-497	200.00	400	-152.39	1,334.79	1,335.73	0.94	4.70
P-498	485.00	250	53.34	1,334.62	1,331.40	3.22	6.65
P-499	5.00	150	-65.16	1,334.04	1,334.62	0.58	115.94
P-500	800.00	250	16.86	1,334.04	1,333.41	0.63	0.79
P-501	485.00	250	-47.93	1,331.40	1,334.04	2.64	5.45
P-502	725.00	400	163.79	1,334.26	1,330.36	3.90	5.38
P-503	10.00	400	16.52	1,334.26	1,334.26	0.00	0.07
P-504	800.00	150	15.14	1,334.26	1,328.05	6.21	7.77
P-505	350.00	250	15.14	1,328.05	1,327.82	0.23	0.65
P-506	200.00	150	12.06	1,327.82	1,326.80	1.02	5.10
P-507	121.00	450	70.91	1,355.11	1,355.03	0.08	0.64
P-508	1,123.00	200	-16.07	1,386.86	1,389.26	2.40	2.14
P-508a	200.00	150	26.25	1,389.26	1,384.95	4.30	21.52
P-509	160.00	700	-7.71	1,352.89	1,352.89	0.00	0.00
P-510	520.00	700	-195.32	1,352.89	1,353.15	0.25	0.49
P-510a	680.00	700	-195.32	1,353.15	1,353.48	0.33	0.49
P-511	1,030.00	500	-182.41	1,350.61	1,352.89	2.28	2.21
P-513	350.00	500	144.82	1,355.03	1,354.53	0.51	1.44
P-514	900.00	400	156.34	1,359.48	1,355.04	4.44	4.93
P-515	600.00	400	82.42	1,355.04	1,354.13	0.90	1.51
P-516	650.00	500	160.17	1,354.02	1,352.89	1.13	1.74
P-517	450.00	250	8.28	1,354.12	1,354.02	0.10	0.21
P-518	600.00	150	10.11	1,339.88	1,337.67	2.20	3.67
P-519	240.00	600	520.83	1,420.00	1,418.47	1.53	6.36
P-519a	260.00	600	520.83	1,418.20	1,416.54	1.65	6.36
P-520	240.00	600	544.90	1,420.00	1,418.34	1.66	6.91
P-520a	260.00	600	-544.90	1,416.54	1,418.34	1.80	6.91
P-525	1.00	400	-213.09	1,402.83	1,402.84	0.01	8.78
P-527	1,175.00	400	-80.94	1,338.66	1,340.38	1.71	1.46
P-528	100.00	400	-80.94	1,340.38	1,340.52	0.15	1.46
P-530	340.00	200	1.81	1,330.32	1,330.30	0.01	0.04
P-531	324.00	200	1.81	1,330.30	1,330.29	0.01	0.04
P-533	300.00	200	1.81	1,330.29	1,330.28	0.01	0.04
P-534	664.00	200	1.81	1,330.28	1,330.25	0.02	0.04

Scenario: Daily maximum 2002

Steady State Analysis

Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Struct! Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-535	60.00	150	0.00	1,330.25	1,330.25	0.00	0.00
P-536	12.00	150	0.00	1,330.25	1,330.25	0.00	0.00
P-537	58.00	150	0.00	1,330.25	1,330.25	0.00	0.00
P-538	41.00	150	0.00	1,330.25	1,330.25	0.00	0.00
P-539	24.00	150	0.00	1,330.25	1,330.25	0.00	0.00
P-540	517.00	200	1.81	1,330.25	1,330.24	0.02	0.04
P-541	158.00	150	0.21	1,330.24	1,330.23	0.00	0.00
P-542	45.00	100	0.09	1,330.23	1,330.23	0.00	0.01
P-543	35.00	80	0.13	1,330.23	1,330.23	0.00	0.03
P-547	100.00	150	76.52	1,390.14	1,378.68	11.46	114.56
P-551	275.00	150	5.05	1,346.44	1,346.23	0.21	0.75

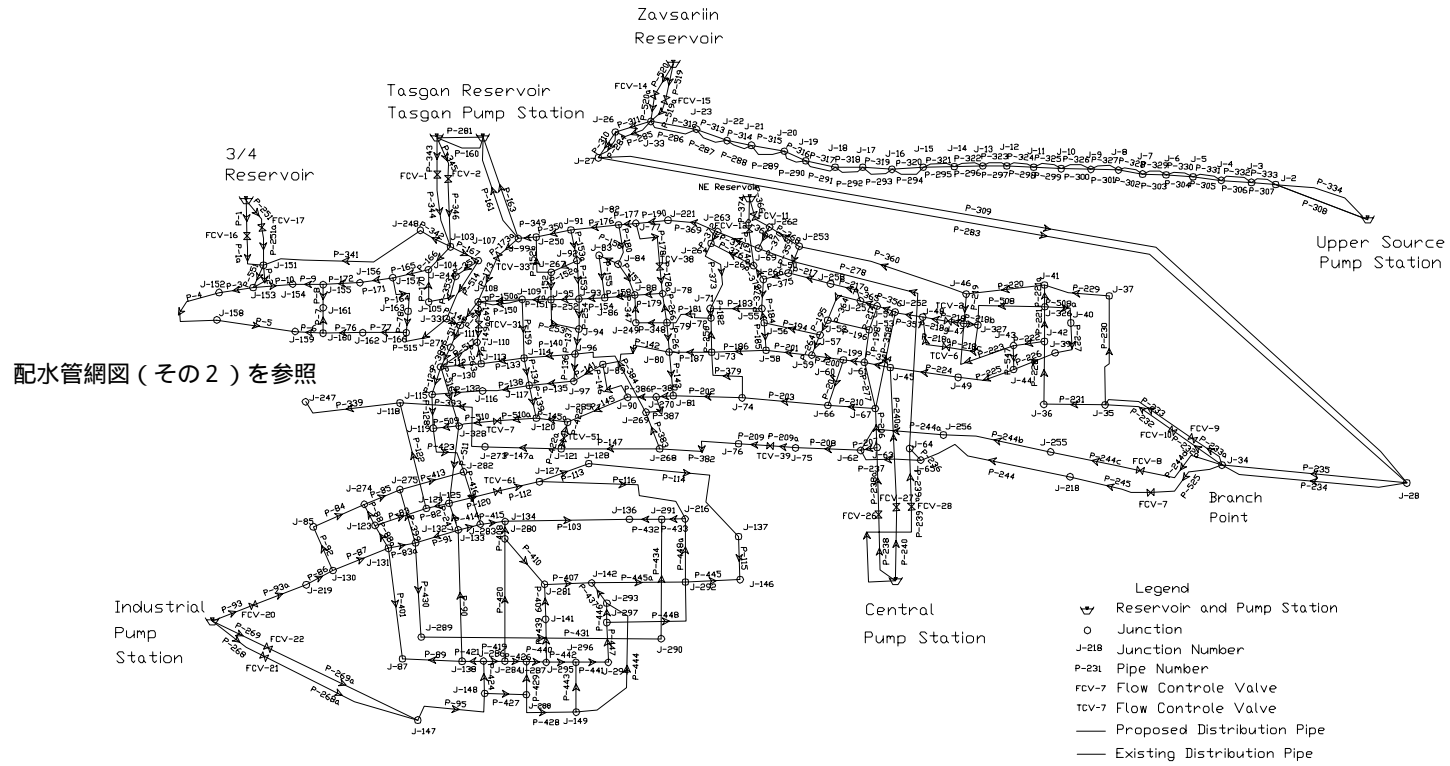


図 A8-2-1 配水管網図(その1)

表 A8-2-2-1

接点情報

(2010年)

Junction Flow at Daily Maximum Flow in 2010					(1/5)				
Label	Elevation (m)	Base Flow (1/s)	Daily Max. Flow (1/s)	1 Flow from Tss. PS (1/s)	2 Flow from Barun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30	5 Flow from West Re (1/s)	
J-2	1,441.00	0	0	0	0	0	0	0	
J-3	1,401.35	0	0	0	0	0	0	0	
J-4	1,455.82	0	0	0	0	0	0	0	
J-5	1,461.00	0	0	0	0	0	0	0	
J-6	1,398.40	0	0	0	0	0	0	0	
J-7	1,453.72	0	0	0	0	0	0	0	
J-8	1,413.00	0	0	0	0	0	0	0	
J-9	1,508.54	0	0	0	0	0	0	0	
J-10	1,491.70	0	0	0	0	0	0	0	
J-11	1,494.20	0	0	0	0	0	0	0	
J-12	1,447.75	0	0	0	0	0	0	0	
J-13	1,431.24	0	0	0	0	0	0	0	
J-14	1,438.00	0	0	0	0	0	0	0	
J-15	1,428.00	0	0	0	0	0	0	0	
J-16	1,408.50	0	0	0	0	0	0	0	
J-17	1,417.37	0	0	0	0	0	0	0	
J-18	1,416.92	0	0	0	0	0	0	0	
J-19	1,400.62	0	0	0	0	0	0	0	
J-20	1,404.39	0	0	0	0	0	0	0	
J-21	1,390.50	0	0	0	0	0	0	0	
J-22	1,394.20	0	0	0	0	0	0	0	
J-23	1,380.00	0	0	0	0	0	0	0	
J-26	1,352.96	0	0	0	0	0	0	0	
J-27	1,348.02	0	0	0	0	0	0	0	
J-28	1,310.61	0	0	0	0	0	0	0	
J-33	1,351.63	0	0	0	0	0	0	0	
J-34	1,317.58	0	0	0	0	0	0	0	
J-35	1,314.20	2.6	6.07	0	0	0	0	0	
J-36	1,302.30	0.04	0.09	0	0	0	0	0	
J-37	1,345.50	4.73	11.04	0	0	0	0	0	
J-39	1,316.50	38.11	88.94	0	0	0	0	0	
J-40	1,325.00	0	0	0	0	0	0	0	
J-41	1,335.30	0	0	0	0	0	0	0	
J-42	1,317.30	0	0	0	0	0	0	0	
J-43	1,315.30	0	0	0	0	0	0	0	
J-44	1,313.70	17.15	40.02	0	0	0	0	0	
J-45	1,308.20	6.62	15.45	0	0	0	0	0	
J-46	1,333.30	0	0	0	0	0	0	0	
J-47	1,318.00	1.47	3.43	0	0	0	0	0	
J-48	1,317.80	5.83	13.61	0	0	0	0	0	
J-49	1,310.40	2.94	6.86	0	0	0	0	0	
J-50	1,330.00	9	21	0	0	0	0	0	
J-52	1,321.00	0	0	0	0	0	0	0	
J-53	1,318.00	0	0	0	0	0	0	0	
J-54	1,321.00	0	0	0	0	0	0	0	
J-55	1,309.00	7.45	17.39	0	0	0	0	0	
J-56	1,308.10	1.01	2.36	0	0	0	0	0	
J-57	1,314.50	5.2	12.14	0	0	0	0	0	
J-58	1,308.00	4.8	11.2	0	0	0	0	0	
J-59	1,306.00	13.86	32.35	0	0	0	0	0	
J-60	1,308.00	3.99	9.31	0	0	0	0	0	
J-61	1,310.00	3.99	9.31	0	0	0	0	0	
J-62	1,296.50	0	0	0	0	0	0	0	
J-63	1,297.00	0	0	0	0	0	0	0	
J-64	1,297.00	4.94	11.53	0	0	0	0	0	
J-65	1,297.00	0	0	0	0	0	0	0	
J-66	1,295.40	4.94	11.53	0	0	0	0	0	
J-67	1,296.20	0	0	0	0	0	0	0	
J-69	1,325.00	0	0	0	0	0	0	0	
J-71	1,302.30	11	25.67	0	0	0	0	0	
J-72	1,301.50	11	25.67	0	0	0	0	0	
J-73	1,288.50	8.38	19.56	0	0	0	0	0	
J-74	1,296.90	30.33	70.76	0	0	0	0	0	
J-75	1,295.00	0	0	0	0	0	0	0	
J-76	1,292.60	11.92	27.82	0	0	0	0	0	
J-77	1,305.50	42.19	98.46	0	0	0	0	0	

Junction Flow at Daily Maximum Flow in 2010

(2/5)

Label	Elevation (m)	Base Flow (1/s)	Daily Max. Flow (1/s)	1 Flow from Tas. PS (1/s)	2 Flow from Barun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30	5 Flow from West Re (1/s)
J-78	1,301.82	25.53	59.58	0	0	0	0	0
J-79	1,299.21	6.45	15.05	0	0	0	0	0
J-80	1,297.30	11.02	25.72	0	0	0	0	0
J-81	1,292.80	1.84	4.29	0	0	0	0	0
J-82	1,305.40	8	18.67	0	0	0	0	0
J-83	1,302.80	2.3	5.37	0	0	0	0	0
J-84	1,302.80	3.53	8.24	0	0	0	0	0
J-85	1,281.70	2.78	6.49	0	0	0	0	0
J-86	1,299.93	5.72	13.35	0	0	0	0	0
J-87	1,283.80	1.46	3.41	0	0	0	0	0
J-88	1,300.00	2.75	6.42	0	0	0	0	0
J-89	1,292.88	6	14	0	0	0	0	0
J-90	1,289.50	0	0	0	0	0	0	0
J-91	1,306.00	0	0	0	0	0	0	0
J-92	1,302.20	0	0	0	0	0	0	0
J-93	1,299.30	1.95	4.55	0	0	0	0	0
J-94	1,296.70	4.73	11.04	0	0	0	0	0
J-95	1,286.34	0	0	0	0	0	0	0
J-96	1,294.50	10.64	24.83	0	0	0	0	0
J-97	1,293.86	13.42	31.32	0	0	0	0	0
J-99	1,303.60	0	0	0	0	0	0	0
J-103	1,323.10	9.61	22.43	22.43	0	0	0	0
J-104	1,325.50	0	0	0	0	0	0	0
J-105	1,315.50	0	0	0	0	0	0	0
J-107	1,310.20	0.45	1.05	1.05	0	0	0	0
J-108	1,300.00	0.88	2.05	0	0	0	0	0
J-109	1,298.34	4.59	10.71	0	0	0	0	0
J-110	1,293.80	13.39	31.25	0	0	0	0	0
J-111	1,298.00	0	0	0	0	0	0	0
J-112	1,291.90	5.78	13.49	0	0	0	0	0
J-113	1,291.90	9.24	21.56	0	0	0	0	0
J-114	1,291.50	42.34	98.81	0	0	0	0	0
J-115	1,284.70	0	0	0	0	0	0	0
J-116	1,291.50	10.98	25.63	0	0	0	0	0
J-117	1,291.50	0	0	0	0	0	0	0
J-118	1,282.85	0	0	0	0	0	0	0
J-119	1,284.40	0.4	0.93	0	0	0	0	0
J-120	1,288.30	2.44	5.69	0	0	0	4	5.69
J-121	1,288.50	1.2	2.8	0	0	0	0	0
J-123	1,281.70	0.51	1.19	0	0	0	0	0
J-124	1,284.07	0	0	0	0	0	0	0
J-125	1,284.07	0	0	0	0	0	0	0
J-127	1,284.09	2.18	5.04	0	0	0	0	0
J-128	1,287.10	0	0	0	0	0	0	0
J-130	1,283.73	2.71	6.32	0	0	0	0	0
J-131	1,283.08	0.09	0.21	0	0	0	0	0
J-132	1,283.70	0.62	1.45	0	0	0	0	0
J-133	1,284.40	0	0	0	0	0	0	0
J-134	1,284.36	1.82	4.25	0	0	0	0	0
J-136	1,285.21	3.27	7.63	0	0	0	0	0
J-137	1,287.70	7.13	16.64	0	0	0	0	0
J-138	1,282.51	0	0	0	0	0	0	0
J-141	1,284.96	0	0	0	0	0	0	0
J-142	1,284.96	0.31	0.72	0	0	0	0	0
J-146	1,287.80	4.25	9.92	0	0	0	0	0
J-147	1,284.53	0	0	0	0	0	0	0
J-148	1,284.53	1.18	2.71	0	0	0	0	0
J-149	1,284.94	1.15	2.68	0	0	0	0	0
J-151	1,333.10	32.97	78.95	78.95	0	0	0	0
J-152	1,320.00	10.96	25.58	25.58	0	0	0	0
J-153	1,321.20	0	0	0	0	0	0	0
J-154	1,327.20	25.3	59.05	59.05	0	0	0	0
J-155	1,326.60	25.3	59.05	59.05	0	0	0	0
J-156	1,319.40	0	0	0	0	0	0	0
J-157	1,320.60	23.5	54.84	54.84	0	0	0	0
J-158	1,296.20	5.03	11.74	11.74	0	0	0	0
J-159	1,302.60	27.34	63.81	63.81	0	0	0	0

Junction Flow at Daily Maximum Flow in 2010

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Label	Elevation (m)	Base Flow (1/s)	Daily Max. Flow (1/s)	1 Flow from Tas. PS (1/s)	2 Flow from Barun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30	5 Flow from West Re (1/s)
J-160	1,304.30	13.29	31.02	31.02	0	0	0	0
J-161	1,317.30	14.29	33.35	33.35	0	0	0	0
J-162	1,304.30	0	0	0	0	0	0	0
J-163	1,308.90	10.28	23.99	23.99	0	0	0	0
J-164	1,279.96	0	0	0	0	0	0	0
J-165	1,278.30	0	0	0	0	0	0	0
J-166	1,302.70	2.92	6.81	6.81	0	0	0	0
J-167	1,284.70	15.9	37.11	0	0	0	0	0
J-168	1,277.90	0	0	0	0	0	0	0
J-169	1,277.30	23.14	54	0	0	0	0	0
J-170	1,282.00	0	0	0	0	0	0	0
J-171	1,281.00	41.29	96.38	96.38	0	0	0	0
J-172	1,274.50	48.44	113.05	0	0	0	0	0
J-173	1,274.10	1.13	2.64	0	0	0	0	0
J-174	1,274.30	0	0	0	0	0	0	0
J-175	1,275.00	0	0	0	0	0	0	0
J-176	1,273.40	0	0	0	0	0	0	0
J-177	1,272.40	0.8	1.4	0	0	0	0	0
J-178	1,278.00	0	0	0	0	0	0	0
J-179	1,272.70	6.1	14.24	0	0	0	0	0
J-180	1,273.00	0	0	0	0	0	0	0
J-181	1,272.70	20.75	48.43	0	0	0	0	0
J-187	1,285.70	0	0	0	0	0	0	0
J-188	1,281.60	0	0	0	0	0	0	0
J-189	1,271.00	0	0	0	0	0	0	0
J-191	1,288.00	4.31	10.08	0	0	0	0	10.08
J-193	1,285.50	4.43	10.34	0	0	0	0	10.34
J-194	1,283.31	5.13	11.97	0	0	0	0	11.97
J-195	1,272.20	0	0	0	0	0	0	0
J-196	1,270.80	0.07	0.18	0	0.18	0	0	0
J-198	1,271.20	0	0	0	0	0	0	0
J-199	1,267.50	1.92	4.48	0	0	4.48	0	0
J-200	1,267.60	0	0	0	0	0	0	0
J-203	1,280.00	0.34	0.79	0	0.79	0	0	0
J-205	1,270.80	1.42	3.31	0	3.31	0	0	0
J-206	1,270.80	0	0	0	0	0	0	0
J-207	1,267.20	0	0	0	0	0	0	0
J-208	1,268.70	8.63	20.14	0	0	20.14	0	0
J-209	1,265.70	0	0	0	0	0	0	0
J-210	1,268.60	0.99	2.31	0	0	2.31	0	0
J-211	1,263.10	1.89	3.94	0	0	3.94	0	0
J-212	1,263.00	2.78	6.49	0	0	6.49	0	0
J-213	1,261.22	0	0	0	0	0	0	0
J-214	1,260.00	0	0	0	0	0	0	0
J-215	1,259.50	0.08	0.19	0	0	0.19	0	0
J-216	1,284.09	23.33	54.45	0	0	0	0	0
J-218	1,309.20	0	0	0	0	0	0	0
J-219	1,280.60	4.55	10.62	0	0	0	0	0
J-221	1,303.80	0	0	0	0	0	0	0
J-244	1,307.55	0	0	0	0	0	0	0
J-245	1,273.85	0	0	0	0	0	0	0
J-246	1,276.90	1.53	3.57	0	0	0	0	0
J-247	1,279.84	1.7	3.97	0	0	0	0	0
J-248	1,335.13	10.53	24.57	24.57	0	0	0	0
J-249	1,301.00	0	0	0	0	0	0	0
J-250	1,303.00	8.47	19.77	0	0	0	0	0
J-252	1,318.86	0	0	0	0	0	0	0
J-253	1,334.74	0	0	0	0	0	0	0
J-255	1,300.00	0	0	0	0	0	0	0
J-256	1,300.00	0.08	0.14	0	0	0	0	0
J-257	1,334.00	2.19	5.11	0	0	0	0	0
J-258	1,330.00	38.24	84.58	0	0	0	0	0
J-262	1,333.00	0	0	0	0	0	0	0
J-263	1,324.44	10.53	24.57	0	0	0	0	0
J-264	1,324.44	0.86	2.01	0	0	0	0	0
J-265	1,332.00	0	0	0	0	0	0	0
J-266	1,331.00	0.73	1.7	0	0	0	0	0

Junction Flow at Daily Maximum Flow in 2010

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Label	Elevation (m)	Base Flow (1/s)	Daily Max. Flow (1/s)	1 Flow from Tas. PS (1/s)	2 Flow from Barun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30	5 Flow from West Re (1/s)
J-267	1,298.43	0	0	0	0	0	0	0
J-268	1,284.20	0.83	1.94	0	0	0	0	0
J-269	1,290.93	0.77	1.8	0	0	0	0	0
J-270	1,290.96	0.68	1.54	0	0	0	0	0
J-271	1,298.00	0	0	0	0	0	0	0
J-273	1,283.67	49.88	118.41	0	0	0	0	0
J-274	1,281.71	0	0	0	0	0	0	0
J-275	1,282.70	0.49	1.14	0	0	0	0	0
J-280	1,284.06	2.84	6.63	0	0	0	0	0
J-281	1,284.97	2.76	6.44	0	0	0	0	0
J-282	1,284.45	6.5	15.17	0	0	0	0	0
J-283	1,283.98	3.85	8.99	0	0	0	0	0
J-284	1,284.00	0	0	0	0	0	0	0
J-285	1,286.00	2.83	6.6	0	0	0	0	0
J-286	1,284.18	0.3	0.7	0	0	0	0	0
J-287	1,284.40	0	0	0	0	0	0	0
J-288	1,284.30	0	0	0	0	0	0	0
J-289	1,283.63	0	0	0	0	0	0	0
J-290	1,284.83	0	0	0	0	0	0	0
J-291	1,284.00	1.05	2.45	0	0	0	0	0
J-292	1,285.30	4.17	9.73	0	0	0	0	0
J-293	1,285.50	0	0	0	0	0	0	0
J-294	1,284.54	0	0	0	0	0	0	0
J-295	1,284.78	0	0	0	0	0	0	0
J-296	1,284.54	0	0	0	0	0	0	0
J-297	1,285.60	0	0	0	0	0	0	0
J-298	1,314.05	0	0	0	0	0	0	0
J-299	1,319.25	0	0	0	0	0	0	0
J-300	1,281.95	0	0	0	0	0	0	0
J-301	1,285.43	0	0	0	0	0	0	0
J-302	1,281.95	0.11	0.28	0	0	0	0	0.28
J-303	1,285.00	0	0	0	0	0	0	0
J-304	1,280.00	0	0	0	0	0	0	0
J-305	1,280.00	0	0	0	0	0	0	0
J-306	1,270.52	0	0	0	0	0	0	0
J-307	1,271.83	0	0	0	0	0	0	0
J-308	1,259.60	0.7	1.63	0	0	1.63	0	0
J-309	1,262.27	0.02	0.05	0	0	0.05	0	0
J-310	1,270.60	8.66	20.21	0	20.21	0	0	0
J-311	1,270.16	6.8	15.87	0	15.87	0	0	0
J-312	1,270.95	13.43	31.34	0	31.34	0	0	0
J-314	1,268.18	0	0	0	0	0	0	0
J-316	1,268.18	0	0	0	0	0	0	0
J-317	1,269.47	0	0	0	0	0	4	0
J-319	1,268.70	0.77	1.8	0	1.8	0	0	0
J-320	1,268.18	0.21	0.49	0	0.49	0	0	0
J-321	1,275.50	9.42	21.98	0	21.98	0	0	0
J-322	1,265.30	0.77	1.8	0	0	1.8	0	0
J-323	1,263.40	0	0	0	0	0	0	0
J-324	1,263.50	1.72	4.01	0	0	4.01	0	0
J-325	1,263.02	6.74	15.73	0	0	15.73	0	0
J-326	1,332.00	2.23	5.2	0	0	0	0	0
J-327	1,318.49	0	0	0	0	0	0	0
J-328	1,283.67	92.4	215.64	0	0	0	0	0
J-329	1,267.60	0.3	0.7	0	0	0.7	4	0.7
J-330	1,273.00	0	0	0	0	0	0	0
J-331	1,299.00	0	0	0	0	0	0	0
J-332	1,268.00	0	0	0	0	0	4	0
J-333	1,268.40	0	0	0	0	0	4	0
J-334	1,271.50	0	0	0	0	0	4	0
J-335	1,272.15	0	0	0	0	0	4	0
J-336	1,272.14	0	0	0	0	0	4	0
J-337	1,272.30	0	0	0	0	0	4	0
J-338	1,272.50	0	0	0	0	0	4	0
J-339	1,273.20	0	0	0	0	0	4	0
J-340	1,275.10	0.89	2.08	0	0	2.08	4	2.08
J-341	1,274.00	0	0	0	0	0	4	0

Junction Flow at Daily Maximum Flow in 2010

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Label	Elevation (m)	Base Flow (1/s)	Daily Max. Flow (1/s)	1 Flow from Tas. PS (1/s)	2 Flow from Baruun. (1/s)	3 Flow from Meat PS (1/s)	4 Flow from Meat P-30	5 Flow from West Re (1/s)
J-342	1,272.00	0.05	0.12	0	0	0.12	4	0.12
J-343	1,274.40	0.07	0.16	0	0	0.16	4	0.16
J-344	1,274.40	253.06	590.6	0	0	0		0
Total		1444.41	3370.95	590.6	95.95	63.83	9	32.63
(without J-330, J-344)		1191.35	2780.35	590.6		95.95	63.83	75

Scenario: planed Daily maximum 2010

Steady State Analysis

Junction Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculated (l/s)	Calculated Hydraulic Grade (m)	Pressure (m)
J-2	1,441.00				
J-3	1,401.35				
J-4	1,455.82				
J-5	1,461.00				
J-6	1,398.40				
J-7	1,453.72				
J-8	1,413.00				
J-9	1,508.54				
J-10	1,491.70				
J-11	1,494.20				
J-12	1,447.75				
J-13	1,431.24				
J-14	1,438.00				
J-15	1,429.00				
J-16	1,408.50				
J-17	1,417.37				
J-18	1,416.92				
J-19	1,400.62				
J-20	1,404.39				
J-21	1,390.50				
J-22	1,394.20				
J-23	1,380.00				
J-26	1,352.96	0	0	1,414.88	60.59
J-27	1,348.02	0	0	1,413.11	63.73
J-28	1,310.61	0	0	1,402.21	89.67
J-33	1,351.63	0	0	1,415.10	62.11
J-34	1,317.58	0	0	1,398.57	79.24
J-35	1,314.20	6.07	6.07	1,392.48	76.60
J-36	1,302.30	0.09	0.09	1,386.60	82.48
J-37	1,345.50	11.04	11.04	1,385.58	39.21
J-39	1,316.50	88.94	88.94	1,361.32	43.87
J-40	1,325.00	0	0	1,377.22	51.07
J-41	1,335.30	0	0	1,382.37	46.10
J-42	1,317.30	0	0	1,384.74	65.96
J-43	1,315.30	0	0	1,383.03	66.27
J-44	1,313.70	40.02	40.02	1,374.78	59.78
J-45	1,308.20	15.45	15.45	1,370.41	60.90
J-46	1,333.30	0	0	1,380.03	45.70
J-47	1,318.00	3.43	3.43	1,379.73	60.39
J-48	1,317.80	13.61	13.61	1,372.63	53.70
J-49	1,310.40	6.86	6.86	1,372.33	60.59
J-50	1,330.00	21	21	1,371.34	40.43
J-52	1,321.00	0	0	1,365.52	43.57
J-53	1,318.00	0	0	1,370.20	51.07
J-54	1,321.00	0	0	1,372.36	50.26
J-55	1,309.00	17.39	17.39	1,360.02	49.95
J-56	1,308.10	2.36	2.36	1,360.73	51.47
J-57	1,314.50	12.14	12.14	1,365.08	49.55
J-58	1,306.00	11.2	11.2	1,360.71	53.50
J-59	1,306.00	32.34	32.34	1,363.94	56.74
J-60	1,306.00	9.31	9.31	1,363.74	56.54
J-61	1,310.00	9.31	9.31	1,366.85	55.63
J-62	1,296.50	0	0	1,372.74	74.58
J-63	1,297.00	0	0	1,372.95	74.37
J-64	1,297.00	11.53	11.53	1,382.95	84.10
J-65	1,297.00	0	0	1,373.57	74.98

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Junction Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculated (l/s)	Calculated hydraulic Grad< (m)	
J-66	1,295.40	11.53	11.53	1,363.04	66.17
J-67	1,296.20	0	0	1,372.49	74.68
J-69	1,325.00	0	0	1,370.86	44.89
J-71	1,302.30	25.67	25.67	1,357.09	53.60
J-72	1,301.50	25.67	25.67	1,356.49	53.80
J-73	1,288.50	19.56	19.56	1,356.76	66.77
J-74	1,296.90	70.78	70.78	1,357.59	59.38
J-75	1,295.00	0	0	1,364.78	68.29
J-76	1,292.60	27.82	27.82	1,363.31	69.20
J-77	1,305.50	98.46	98.46	1,357.31	50.66
J-78	1,301.82	59.58	59.58	1,352.60	49.75
J-79	1,299.21	15.05	15.05	1,352.81	52.49
J-80	1,297.30	25.72	25.72	1,352.74	54.31
J-81	1,292.80	4.29	4.29	1,352.40	58.36
J-82	1,305.40	18.67	18.67	1,356.16	49.65
J-83	1,302.80	5.37	5.37	1,350.16	46.31
J-84	1,302.80	8.24	8.24	1,351.85	48.03
J-85	1,281.70	6.49	6.49	1,338.46	55.53
J-86	1,299.93	13.35	13.35	1,348.42	47.42
J-87	1,283.80	3.41	3.41	1,338.47	53.50
J-88	1,300.00	6.42	6.42	1,351.60	50.46
J-89	1,292.88	14	14	1,347.01	52.99
J-90	1,289.50	0	0	1,347.13	56.44
J-91	1,306.00	0	0	1,348.27	41.34
J-92	1,302.20	0	0	1,347.79	44.58
J-93	1,299.30	4.55	4.55	1,346.86	46.51
J-94	1,296.70	11.04	11.04	1,345.04	47.32
J-95	1,296.34	0	0	1,345.21	47.83
J-96	1,294.50	24.83	24.83	1,344.39	48.84
J-97	1,293.86	31.32	31.32	1,343.80	48.84
J-99	1,303.60	0	0	1,341.07	36.68
J-103	1,323.10	22.43	22.43	1,347.78	24.12
J-104	1,330.00	0	0	1,345.87	15.50
J-105	1,315.50	0	0	1,346.51	30.40
J-107	1,310.20	1.05	1.05	1,347.25	36.27
J-108	1,300.00	2.05	2.05	1,341.03	40.12
J-109	1,298.34	10.71	10.71	1,341.16	41.95
J-110	1,293.80	31.25	31.25	1,340.24	45.49
J-111	1,298.00	0	0	1,341.02	42.15
J-112	1,291.90	13.49	13.49	1,340.24	47.32
J-113	1,291.90	21.56	21.56	1,340.36	47.42
J-114	1,291.50	98.81	98.81	1,340.94	48.43
J-115	1,284.70	0	0	1,339.79	53.90
J-116	1,291.50	25.62	25.62	1,337.43	44.99
J-117	1,291.50	0	0	1,340.57	48.03
J-118	1,282.85	0	0	1,338.27	54.21
J-119	1,284.40	0.93	0.93	1,339.50	53.90
J-120	1,288.30	5.69	5.69	1,340.19	50.76
J-121	1,288.50	2.8	2.8	1,342.76	53.09
J-123	1,281.70	1.19	1.19	1,338.47	55.53
J-124	1,284.07	0	0	1,338.46	53.20
J-125	1,284.07	0	0	1,338.46	53.20
J-127	1,284.09	5.04	5.04	1,338.37	53.09
J-128	1,287.10	0	0	1,338.34	50.16
J-130	1,283.73	6.32	6.32	1,338.51	53.60
J-131	1,283.08	0.21	0.21	1,338.48	54.21

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Junction Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculated (l/s)	Calculated hydraulic Grad< (m)	
J-132	1,283.70	1.45	1.45	1,338.45	53.60
J-133	1,284.40	0	0	1,338.46	52.89
J-134	1,284.36	4.25	4.25	1,338.26	52.79
J-136	1,285.21	7.63	7.63	1,337.39	51.07
J-137	1,287.70	16.64	16.64	1,338.22	49.45
J-138	1,282.51	0	0	1,338.48	54.82
J-141	1,284.96	0	0	1,338.33	52.18
J-142	1,284.96	0.72	0.72	1,338.30	52.18
J-146	1,287.80	9.92	9.92	1,338.19	49.35
J-147	1,284.53	0	0	1,339.27	53.60
J-148	1,284.53	2.71	2.71	1,338.59	52.89
J-149	1,284.94	2.68	2.68	1,338.35	52.28
J-151	1,333.10	76.94	76.94	1,333.46	0.30
J-152	1,320.00	25.58	25.58	1,331.42	11.15
J-153	1,321.20	0	0	1,332.25	10.84
J-154	1,327.02	59.04	59.04	1,331.96	4.86
J-155	1,325.33	59.04	59.04	1,332.35	6.89
J-156	1,319.40	0	0	1,337.75	17.93
J-157	1,320.60	54.84	54.84	1,343.62	22.49
J-158	1,296.20	11.74	11.74	1,330.74	33.84
J-159	1,302.60	63.8	63.8	1,330.40	27.26
J-160	1,304.30	31.01	31.01	1,331.92	27.05
J-161	1,317.30	33.35	33.35	1,331.39	13.78
J-162	1,304.30	0	0	1,336.21	31.21
J-163	1,308.90	23.99	23.99	1,339.99	30.40
J-164	1,279.96	0	0	1,329.08	48.03
J-165	1,278.30	0	0	1,328.00	48.64
J-166	1,302.70	6.81	6.81	1,339.93	36.48
J-167	1,284.70	37.11	37.11	1,327.71	42.05
J-168	1,277.90	0	0	1,327.75	48.74
J-169	1,277.30	54	54	1,327.79	49.45
J-170	1,282.00	0	0	1,327.48	44.48
J-171	1,281.00	96.36	96.36	1,327.30	45.29
J-172	1,274.50	113.04	113.04	1,326.61	50.97
J-173	1,274.10	2.64	2.64	1,327.44	52.18
J-174	1,274.30	0	0	1,327.40	51.98
J-175	1,275.00	0	0	1,327.30	51.17
J-176	1,273.40	0	0	1,327.33	52.79
J-177	1,272.40	1.4	1.4	1,327.35	53.80
J-178	1,276.00	0	0	1,327.30	50.26
J-179	1,272.70	14.24	14.24	1,327.32	53.50
J-180	1,273.00	0	0	1,327.30	53.20
J-181	1,272.70	48.42	48.42	1,327.30	53.40
J-187	1,285.70	0	0	1,342.97	56.03
J-188	1,281.60	0	0	1,342.97	60.09
J-189	1,271.00	0	0	1,327.59	55.42
J-191	1,286.00	10.06	10.06	1,342.88	55.63
J-193	1,285.50	10.34	10.34	1,342.81	56.13
J-194	1,283.31	11.97	11.97	1,341.63	57.05
J-195	1,272.20	0	0	1,327.30	53.90
J-196	1,270.80	0.16	0.16	1,327.26	55.22
J-198	1,271.20	0	0	1,327.30	54.92
J-199	1,267.50	4.48	4.48	1,329.32	60.49
J-200	1,267.60	0	0	1,298.07	29.79
J-203	1,280.00	0.79	0.79	1,327.08	46.10
J-205	1,270.80	3.31	3.31	1,327.21	55.22

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Junction Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculated (l/s)	Calculated hydraulic Grad< (m)	
J-206	1,270.80	0	0	1,327.01	55.02
J-207	1,267.20	0	0	1,327.20	58.67
J-208	1,266.70	20.14	20.14	1,300.67	33.23
J-209	1,265.70	0	0	1,306.37	39.82
J-210	1,268.60	2.31	2.31	1,312.08	42.56
J-211	1,263.10	3.94	3.94	1,313.88	49.65
J-212	1,263.00	6.49	6.49	1,316.03	51.88
J-213	1,261.22	0	0	1,315.94	53.50
J-214	1,260.00	0	0	1,315.70	54.51
J-215	1,259.50	0.19	0.19	1,315.47	54.82
J-216	1,284.09	54.44	54.44	1,338.24	52.99
J-218	1,309.20	0	0	1,374.20	63.63
J-219	1,280.60	10.62	10.62	1,338.55	56.74
J-221	1,303.80	0	0	1,365.14	59.98
J-244	1,307.55	0	0	1,346.76	38.40
J-245	1,273.85	0	0	1,322.00	47.12
J-246	1,276.90	3.57	3.57	1,326.99	49.04
J-247	1,279.94	3.97	3.97	1,329.13	48.13
J-248	1,335.13	24.57	24.57	1,346.21	10.84
J-249	1,301.00	0	0	1,352.64	50.56
J-250	1,303.00	19.77	19.77	1,345.57	41.64
J-252	1,318.86	0	0	1,372.46	52.49
J-253	1,334.74	0	0	1,371.35	35.87
J-255	1,300.00	0	0	1,385.90	84.10
J-256	1,300.00	0.14	0.14	1,379.48	77.82
J-257	1,334.00	5.11	5.11	1,372.26	37.49
J-258	1,330.00	84.57	84.57	1,371.63	40.73
J-262	1,333.00	0	0	1,370.94	37.08
J-263	1,324.44	24.57	24.57	1,367.51	42.15
J-264	1,324.44	2.01	2.01	1,367.47	42.15
J-265	1,332.00	0	0	1,371.30	38.50
J-266	1,331.00	1.7	1.7	1,371.32	39.42
J-267	1,298.43	0	0	1,345.69	46.31
J-268	1,284.20	1.94	1.94	1,348.10	62.52
J-269	1,290.93	1.8	1.8	1,347.18	55.02
J-270	1,290.96	1.54	1.54	1,347.19	55.02
J-271	1,298.00	0	0	1,340.63	41.75
J-273	1,283.67	116.4	116.4	1,338.59	53.70
J-274	1,281.71	0	0	1,338.45	55.53
J-275	1 *282.70	1.14	1.14	1,338.45	54.51
J-280	1,284.06	6.63	6.63	1,338.34	53.09
J-281	1,284.97	6.44	6.44	1,338.30	52.18
J-282	1,284.45	15.17	15.17	1,338.37	52.79
J-283	1,283.96	8.98	8.98	1,338.31	53.20
J-284	1,284.00	0	0	1,338.43	53.30
J-285	1,286.00	6.6	6.6	1,342.76	55.53
J-286	1,284.18	0.7	0.7	1,338.48	53.09
J-287	1,284.40	0	0	1,338.42	52.89
J-288	1,284.30	0	0	1,338.53	53.09
J-289	1,283.63	0	0	1,338.43	53.60
J-290	1,284.83	0	0	1,338.39	52.39
J-291	1,284.00	2.45	2.45	1,338.22	53.09
J-292	1,285.30	9.73	9.73	1,338.28	51.88
J-293	1,285.50	0	0	1,338.30	51.68
J-294	1,284.54	0	0	1,338.33	52.69
J-295	1,284.78	0	0	1,338.36	52.49

Scenario: planed Daily maximum 2010
Steady State Analysis
Junction Report

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Label	Elevation (m)	Base Flow (l/s)	Demand Calculatedl (l/s)	Calculated hydraulic Grade (m)	
J-296	1,284.54	0	0	1,338.34	52.69
J-297	1,285.60	0	0	1,338.30	51.57
J-298	1,314.05	0	0	1,342.96	28.27
J-299	1,319.25	0	0	1,342.91	23.20
J-300	1,281.95	0	0	1,342.87	59.58
J-301	1,285.43	0	0	1,342.87	56.24
J-302	1,281.95	0.26	0.26	1,342.87	59.58
J-303	1,285.00	0	0	1,342.81	56.54
J-304	1,280.00	0	0	1,342.81	61.50
J-305	1,280.00	0	0	1,327.11	46.10
J-306	1,270.52	0	0	1,327.20	55.42
J-307	1,271.83	0	0	1,327.30	54.31
J-308	1,259.60	1.63	1.63	1,315.06	54.31
J-309	1,262.27	0.05	0.05	1,315.06	51.68
J-310	1,270.60	20.21	20.21	1,326.71	54.92
J-311	1,270.16	15.87	15.87	1,326.97	55.63
J-312	1,270.95	31.34	31.34	1,327.01	54.92
J-314	1,268.18	0	0	1,327.01	57.55
J-316	1,268.18	0	0	1,327.00	57.55
J-317	1,269.47	0	0	1,297.98	27.86
J-319	1,268.70	1.8	1.8	1,327.01	57.05
J-320	1,268.18	0.49	0.49	1,326.92	57.45
J-321	1,275.50	21.98	21.98	1,325.89	49.35
J-322	1,265.30	1.8	1.8	1,297.98	32.02
J-323	1,263.40	0	0	1,287.82	23.91
J-324	1,263.50	4.01	4.01	1,287.45	23.41
J-325	1,263.02	15.73	15.73	1,285.78	22.29
J-326	1,332.00	5.2	5.2	1,382.39	49.35
J-327	1,318.49	0	0	1,379.60	59.78
J-328	1,283.67	215.63	215.63	1,339.50	54.61
J-329	1,267.60	0.7	0.7	1,298.07	29.79
J-330	1,273.00	95.95	95.95	1,321.95	47.93
J-331	1,299.00	0	0	1,341.02	41.14
J-332	1,268.00	0	0	1,298.03	29.38
J-333	1,268.40	0	0	1,298.01	28.98
J-334	1,271.50	0	0	1,297.97	25.94
J-335	1,272.15	0	0	1,297.97	25.23
J-336	1,272.14	0	0	1,297.97	25.23
J-337	1,272.30	0	0	1,297.97	25.13
J-338	1,272.50	0	0	1,297.97	24.93
J-339	1,273.20	0	0	1,297.97	24.22
J-340	1,275.10	2.08	2.08	1,297.94	22.39
J-341	1,274.00	0	0	1,297.94	23.41
J-342	1,272.00	0.12	0.12	1,297.94	25.43
J-343	1,274.40	0.16	0.16	1,297.94	23.00
J-344 (Ts	1,333.05	590.6	590.6	1,339.95	6.79

表 A8-2-2-3

計算結果：管路

(2010 年)

Scenario: planed Daily maximum 2010
Steady State Analysis
Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Struct! Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-1	200	300	32.8	1,361.00	1,360.78	0.22	1.11
P-1a	300	300	32.8	1,333.79	1,333.46	0.33	1.11
P-2	275	300	68.85	1,333.46	1,332.25	1.21	4.39
P-3	280	300	55.76	1,332.25	1,331.42	0.83	2.97
P-4	720	300	30.18	1,331.42	1,330.74	0.69	0.95
P-5	885	300	18.44	1,330.74	1,330.40	0.34	0.38
P-6	750.00	300	-45.36	1,330.40	1,331.92	1.52	2.03
P-7	350	200	13.31	1,331.92	1,331.39	0.53	1.51
P-8	300	200	-20.04	1,331.39	1,332.35	0.96	3.22
P-9	355	300	32.81	1,332.35	1,331.96	0.39	1.11
P-10	400	300	-26.23	1,331.96	1,332.25	0.29	0.73
P-17	600	125	-1.87	1,315.47	1,315.70	0.23	0.39
P-18	600	125	-1.87	1,315.70	1,315.94	0.23	0.39
P-19	600	150	-1.87	1,315.94	1,316.03	0.1	0.16
P-20	321	250	42.24	1,316.03	1,314.65	1.38	4.31
P-20a	178.5	250	42.24	1,314.65	1,313.88	0.77	4.31
P-21	500	250	38.3	1,313.88	1,312.08	1.8	3.6
P-22	600	200	35.99	1,312.08	1,306.37	5.7	9.51
P-23	600	200	35.99	1,306.37	1,300.67	5.7	9.51
P-24	920.5	200	15.85	1,300.67	1,298.75	1.92	2.08
P-25	329.5	200	15.85	1,298.75	1,298.07	0.69	2.08
P-29	30	250	27.54	1,330.00	1,329.94	0.06	1.95
P-29a	318	250	27.54	1,329.94	1,329.32	0.62	1.95
P-30	30	400	8.75	1,330.00	1,330.00	0	0.02
P-30a	10	400	5.69	1,298.07	1,298.07	0	0.01
P-30c	38	400	8.75	1,298.07	1,298.07	0	0.02
P-32	253	150	4.2	1,327.20	1,327.01	0.18	0.72
P-34	420	400	-22.45	1,327.21	1,327.26	0.06	0.14
P-35	140	400	-31.84	1,327.26	1,327.30	0.04	0.26
P-36	621	400	-40.51	1,327.30	1,327.55	0.25	0.4
P-36a	99	400	-40.51	1,327.55	1,327.59	0.04	0.41
P-44	275	250	9.25	1,327.08	1,327.01	0.07	0.26
P-48	300	400	0	1,342.97	1,342.97	0	0
P-49	509	400	0	1,342.97	1,327.59	0	0
P-53	70	500	-95.95	1,321.95	1,322.00	0.05	0.67
P-53a	5	500	0	1,359.00	1,321.95	0	0
P-55	285	600	-44.25	1,327.30	1,327.32	0.02	0.07
P-56	300	600	-58.49	1,327.32	1,327.35	0.03	0.11
P-57	245	300	8.48	1,327.35	1,327.33	0.02	0.09
P-58	320	300	8.48	1,327.33	1,327.30	0.03	0.09
P-59	300	600	4.18	1,327.30	1,327.30	0	0
P-60	345	600	4.18	1,327.30	1,327.30	0	0
P-62	410	600	4.18	1,327.30	1,327.30	0	0
P-63	610	600	4.29	1,327.30	1,327.30	0	0
P-64	260	300	52.45	1,327.30	1,326.61	0.69	2.65
P-65	240	300	-60.59	1,326.61	1,327.44	0.83	3.46
P-66	310	600	68.36	1,327.44	1,327.40	0.05	0.15
P-67	300	600	68.36	1,327.40	1,327.35	0.04	0.15
P-68	300	600	-144.51	1,327.30	1,327.48	0.18	0.59
P-69	390	600	-144.51	1,327.48	1,327.71	0.23	0.59
P-70	200	300	-12.48	1,327.71	1,327.75	0.04	0.19
P-71	215	300	-12.48	1,327.75	1,327.79	0.04	0.19
P-72	690	600	131.6	1,327.79	1,327.44	0.34	0.5
P-73	200	600	-198.07	1,327.79	1,328.00	0.21	1.06
P-74	1,015.00	600	-198.07	1,328.00	1,329.08	1.08	1.06

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Struct! Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)	
P-75	1,725.00	600	169.14	1,329.08	1,327.71	1.37	0.79	
P-76		600	300	-89.68	1,331.92	1,336.21	4.29	7.16
P-77		520	300	-89.68	1,336.21	1,339.93	3.72	7.16
P-78		210	200	-5.28	1,339.93	1,339.99	0.06	0.27
P-82		5	500	44.07	1,338.46	1,338.46	0	0.15
P-83		330	500	-16.38	1,338.46	1,338.47	0.01	0.03
P-83a		5	100	3.88	1,338.48	1,338.45	0.02	4.49
P-84		600	200	-0.12	1,338.45	1,338.46	0	0
P-85		10	150	2.93	1,338.45	1,338.45	0	0.37
P-86		325	500	38.76	1,338.55	1,338.51	0.04	0.13
P-87		600	500	25.83	1,338.51	1,338.48	0.04	0.06
P-88		175	200	2.81	1,338.47	1,338.45	0.01	0.08
P-88a		140	500	20.38	1,338.48	1,338.47	0.01	0.04
P-89		150	300	-2.05	1,338.47	1,338.48	0	0.01
P-90		516	300	3.87	1,338.48	1,338.46	0.01	0.02
P-91		250	100	0.33	1,338.46	1,338.45	0.01	0.05
P-92		400	250	-6.61	1,338.46	1,338.51	0.06	0.14
P-93		50	500	49.38	1,350.00	1,349.99	0.01	0.2
P-93a		550	500	49.38	1,338.66	1,338.55	0.11	0.2
P-95		240	300	54.8	1,339.27	1,338.59	0.69	2.87
P-103		200	100	3.82	1,338.26	1,337.39	0.87	4.36
P-112		48	500	77.64	1,338.39	1,338.37	0.02	0.46
P-113		200	400	24.13	1,338.37	1,338.34	0.03	0.15
P-114		800	400	24.13	1,338.34	1,338.22	0.12	0.15
P-115	1,454.00	400	7.49	1,338.22	1,338.19	0.03	0.02	
P-116		700	500	48.47	1,338.37	1,338.24	0.13	0.19
P-120		152	500	77.64	1,338.46	1,338.39	0.07	0.46
P-122		657	500	60.45	1,338.46	1,338.27	0.19	0.29
P-128		425	250	-15.81	1,339.50	1,339.79	0.3	0.7
P-129		230	250	-27.4	1,339.79	1,340.24	0.44	1.93
P-130		265	400	-43.83	1,340.24	1,340.36	0.12	0.47
P-132		500	150	-11.59	1,337.43	1,339.79	2.37	4.73
P-133		540	400	-68.4	1,340.36	1,340.94	0.58	1.07
P-134		265	300	37.34	1,340.94	1,340.57	0.37	1.41
P-135		665	150	-11.76	1,340.57	1,343.80	3.24	4.87
P-136		105	150	-12.65	1,343.80	1,344.39	0.58	5.57
P-137		500	150	-5.76	1,344.39	1,345.04	0.65	1.3
P-138		465	150	-14.03	1,337.43	1,340.57	3.14	6.75
P-139	1,200.00	400	35.07	1,340.57	1,340.19	0.37	0.31	
P-140		500	400	-187.29	1,340.94	1,344.39	3.45	6.89
P-141		460	200	-30.43	1,343.80	1,347.01	3.21	6.97
P-142		845	200	-30	1,347.01	1,352.74	5.73	6.79
P-143		630	300	22.32	1,352.74	1,352.40	0.34	0.54
P-145		905	400	-154.58	1,342.76	1,347.13	4.37	4.83
P-145a		380	400	-185.08	1,340.19	1,342.76	2.56	6.74
P-146		500	300	-14.43	1,347.01	1,347.13	0.12	0.24
P-147	1,523.00	700	-566.55	1,342.76	1,348.10	5.34	3.51	
P-147a	1,360.00	700	-526.65	1,338.59	1,342.76	4.17	3.06	
P-148		20	600	96.4	1,341.02	1,341.02	0.01	0.28
P-149	322.5	250	-26.96	1,340.43	1,341.03	0.61	1.88	
P-149a	102.5	250	-26.96	1,340.24	1,340.43	0.19	1.88	
P-150		400	250	-10.25	1,341.03	1,341.16	0.13	0.31
P-150a		400	300	-16.55	1,341.03	1,341.16	0.13	0.31
P-151		580	250	-54.77	1,341.16	1,345.21	4.05	6.98
P-152		263	200	-14.87	1,345.21	1,345.69	0.49	1.85

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Struct/ Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headless Gradient (m/km)
P-152a	325.1	200	-29.2	1,345.69	1,347.79	2.1	6.45
P-152b	500	300	14.32	1,345.69	1,345.57	0.12	0.24
P-153	403	150	7.89	1,347.79	1,346.86	0.94	2.32
P-153a	342	300	-37.09	1,347.79	1,348.27	0.48	1.4
P-154	235	250	-53.36	1,346.86	1,348.42	1.56	6.65
P-155	470	150	-10.15	1,348.42	1,350.16	1.74	3.7
P-156	208	150	-15.52	1,350.16	1,351.85	1.69	8.13
P-157	440	150	3.67	1,351.85	1,351.60	0.25	0.56
P-158	430	250	56.55	1,351.60	1,348.42	3.18	7.41
P-159	650	300	17.26	1,341.16	1,340.94	0.22	0.34
P-160	75	600	0	1,339.95	1,420.00	0	0
P-161	500	600	-295.3	1,339.95	1,341.07	1.11	2.22
P-163	500	600	-295.3	1,339.95	1,341.07	1.11	2.22
P-164	560	200	-29.27	1,339.99	1,343.62	3.63	6.49
P-165	300	400	-196.01	1,343.62	1,345.87	2.25	7.5
P-166	270	400	-190.09	1,345.87	1,347.78	1.91	7.09
P-167	72.5	400	194.58	1,347.78	1,347.25	0.54	7.4
P-170	65	100	5.92	1,346.51	1,345.87	0.64	9.83
P-171	545	300	111.89	1,343.62	1,337.75	5.88	10.78
P-172	500	300	111.89	1,337.75	1,332.35	5.39	10.78
P-173	308.5	500	31.68	1,341.06	1,341.03	0.03	0.09
P-173a	60	500	31.68	1,341.07	1,341.06	0.01	0.09
P-176	790	600	-664.82	1,348.27	1,356.16	7.89	9.99
P-177	215	700	-710.92	1,356.16	1,357.31	1.15	5.34
P-178	155	300	69.45	1,357.31	1,356.62	0.69	4.46
P-178a	901	300	69.45	1,356.62	1,352.60	4.02	4.46
P-179	360	250	33.34	1,352.60	1,351.60	1	2.78
P-180	750	200	27.43	1,356.16	1,351.85	4.31	5.75
P-181	625	300	-80.7	1,352.81	1,356.49	3.68	5.89
P-182	10	200	-96.64	1,356.49	1,357.09	0.59	59.25
P-183	645	300	-70.19	1,357.09	1,360.02	2.93	4.55
P-184	175	300	-65.92	1,360.02	1,360.73	0.71	4.05
P-185	160	300	9.36	1,360.73	1,360.71	0.02	0.11
P-186	400	250	66.06	1,360.71	1,356.76	3.95	9.87
P-187	460	250	61.82	1,356.76	1,352.74	4.02	8.73
P-190	990	700	-878.82	1,357.31	1,365.14	7.83	7.91
P-194	795	300	-77.64	1,360.73	1,365.08	4.36	5.48
P-195	35	400	-259.32	1,365.08	1,365.52	0.44	12.59
P-196	385	1	-0	1,365.52	1,370.20	4.68	12.14
P-198	345	1	0	1,370.20	1,366.85	3.35	9.7
P-199	580	400	163.45	1,366.85	1,363.74	3.11	5.36
P-200	175	400	-69.29	1,363.74	1,363.94	0.19	1.09
P-201	755	300	67.9	1,363.94	1,360.71	3.23	4.28
P-202	540	400	-224.09	1,352.40	1,357.59	5.19	9.61
P-203	870	500	-319.91	1,357.59	1,363.04	5.45	6.27
P-204	532	600	-223.43	1,363.04	1,363.74	0.71	1.33
P-206	850	600	-138.42	1,372.49	1,372.95	0.46	0.55
P-207	10	400	344.64	1,372.95	1,372.74	0.21	21.33
P-208	1,366.00	700	745.56	1,372.74	1,364.78	7.96	5.83
P-209	216	700	745.56	1,364.57	1,363.31	1.26	5.83
P-209a	34.5	700	745.56	1,364.78	1,364.57	0.2	5.83
P-210	385	250	-108.01	1,363.04	1,372.49	9.45	24.55
P-214	55	1	-0	1,370.20	1,372.36	2.16	39.31
p-217	932	500	-62.89	1,371.34	1,371.63	0.29	0.31
P-217a	421	500	-147.47	1,371.63	1,372.26	0.63	1.49

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-218 P-218a	936.50	500.0	-334.87	1,373.34	1,372.63	6.39	6.82
P-218b	10	200	42.77	1,379.73	1,379.60	0.13	13.08
P-218c	309.5	250	-60.21	1,377.02	1,379.60	2.57	8.32
P-218d	103.5	500	-334.87	1,372.63	1,373.34	0.71	6.82
P-219	309.5	500	-117.73	1,379.73	1,380.03	0.3	0.98
P-220	856	600	-330.28	1,380.03	1,382.37	2.34	2.74
P-221	550	300	-67.92	1,382.39	1,384.74	2.35	4.28
P-221a	50	300	-16.29	1,382.37	1,382.39	0.02	0.3
P-222	200	500	378.87	1,384.74	1,383.03	1.71	8.57
P-223	755	500	263.34	1,383.03	1,379.73	3.3	4.37
P-224	690	150	-8.7	1,370.41	1,372.33	1.92	2.78
P-225	300	150	-15.56	1,372.33	1,374.78	2.45	8.17
P-226	135.5	150	59.95	1,374.78	1,361.32	13.46	99.33
P-227	614.5	150	-28.99	1,361.32	1,377.22	15.89	25.86
P-228	160	500	-446.79	1,384.74	1,386.60	1.86	11.63
P-229	1,286.00	600	-313.99	1,382.37	1,385.58	3.2	2.49
P-230	2,600.00	600	-325.03	1,385.58	1,392.48	6.9	2.66
P-231	505	500	446.88	1,392.48	1,386.60	5.88	11.64
P-232	1,569.00	600	-379.15	1,392.48	1,398.02	5.54	3.53
P-232a	630.5	800	-379.15	1,398.02	1,398.57	0.55	0.87
P-233	1,569.00	600	-398.83	1,392.48	1,398.56	6.09	3.88
P-233a	1	600	-398.83	1,398.56	1,398.57	0	3.87
P-234	1,850.00	800	-589.52	1,398.57	1,402.21	3.64	1.97
P-235	1,850.00	800	-589.52	1,398.57	1,402.21	3.64	1.97
P-236	20	1	0	1,382.95	1,373.57	9.39	469.4
P-237	1,205.00	700	234.79	1,373.57	1,372.74	0.83	0.69
P-238	30	600	-483.06	1,383.83	1,384.00	0.17	5.53
P-238a	280	600	483.06	1,374.50	1,372.95	1.55	5.53
P-239	30	800	737.97	1,384.00	1,383.91	0.09	2.99
P-239a	320	800	737.97	1,383.91	1,382.95	0.96	2.99
P-240	30	400	179.51	1,384.00	1,383.81	0.19	6.37
P-240a	1,050.00	400	179.51	1,377.10	1,370.41	6.69	6.37
P-244	920	700	-234.79	1,373.57	1,374.20	0.63	0.69
P-244a	1,220.00	400	-166.13	1,372.74	1,379.48	6.74	5.52
P-244b	1,162.00	400	-166.27	1,379.48	1,385.90	6.43	5.53
P-244C	2,290.00	400	-166.27	1,385.90	1,398.56	12.66	5.53
P-244d	1	400	-166.27	1,398.56	1,398.57	0.01	5.51
P-245	2,325.00	400	-234.79	1,374.20	1,398.56	24.36	10.48
P-247	200	300	-2.62	1,338.46	1,338.46	0	0.01
P-251	200	300	32.8	1,361.00	1,360.78	0.22	1.11
P-251a	300	300	32.8	1,333.79	1,333.46	0.33	1.11
P-252	375	250	-42.67	1,345.21	1,346.86	1.65	4.4
P-253	515	150	2.77	1,345.21	1,345.04	0.17	0.33
P-254	270	150	-14.03	1,345.04	1,346.86	1.82	6.74
P-256	315	200	-9.73	1,356.49	1,356.76	0.27	0.84
P-258	25	400	-15.46	1,343.00	1,343.00	0	0.07
P-259	463.5	400	-15.46	1,342.97	1,343.00	0.03	0.07
P-263	325	150	-3.01	1,340.24	1,340.36	0.13	0.39
P-264	200	400	169.54	1,365.08	1,363.94	1.15	5.73
P-265	1,867.00	250	-50.6	1,318.07	1,329.32	11.25	6.03
P-265a	338	250	-50.6	1,316.03	1,318.07	2.04	6.03
P-266	350	300	-23.47	1,352.60	1,352.81	0.21	0.6
P-267	240	300	16.22	1,352.81	1,352.74	0.07	0.3
P-268	50	400	27.4	1,350.00	1,349.99	0.01	0.2

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Struct! Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-268a	1,815.00	400	27.4	1,339.63	1,339.27	0.36	0.2
P-269	50	400	27.4	1,350.00	1,349.99	0.01	0.2
P-269a	1,815.00	400	27.4	1,339.63	1,339.27	0.36	0.2
P-277	570	1	-0	1,366.85	1,372.49	5.64	9.89
P-278	4,170.00	800	726.44	1,382.95	1,370.86	12.09	2.9
P-281	30	600	0	1,420.00	1,339.95	0	0
P-283	5,534.00	800	-589.52	1,402.21	1,413.11	10.9	1.97
P-284	900	800	-589.52	1,413.11	1,414.88	1.77	1.97
P-285	107	800	-589.52	1,414.88	1,415.10	0.21	1.97
P-286	1,142.00	600					
P-287	1,346.00	600					
P-288	152	600					
P-289	390	600					
P-290	868	600					
P-291	300	600					
P-292	300	600					
P-293	269	600					
P-294	956	600					
P-295	776	600					
P-296	260	600					
P-297	500	600					
P-298	3,044.00	600					
P-299	996	600					
P-300	683	800					
P-301	4,494.00	700					
P-302	1,619.00	700					
P-303	2,856.00	700					
P-304	3,100.00	700					
P-305	1,680.00	700					
P-306	1,158.00	700					
P-307	914	700					
P-308	202	700					
P-309	5,534.00	800	589.52	1,413.11	1,402.21	10.9	1.97
P-310	900	800	-589.52	1,413.11	1,414.88	1.77	1.97
P-311	107	800	-589.52	1,414.88	1,415.10	0.21	1.97
P-312	1,142.00	600					
P-313	1,346.00	600					
P-314	152	600					
P-315	390	600					
P-316	868	600					
P-317	300	600					
P-318	300	600					
P-319	269	600					
P-320	956	600					
P-321	776	600					
P-322	260	600					
P-323	500	600					
P-324	3,044.00	600					
P-325	996	600					
P-326	683	600					
P-327	4,494.00	700					
P-328	1,619.00	700					
P-329	2,856.00	700					
P-330	3,100.00	700					
P-331	1,680.00	700					

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-332	1,158.00	700					
P-333	914	700					
P-334	202	700					
P-337	2,500.00	400	-95.95	1,322.00	1,326.99	4.99	2
P-338	15	600	-367.21	1,329.08	1,329.13	0.05	3.32
P-339	1,735.00	600	-470.7	1,329.13	1,338.27	9.15	5.27
P-340	1,000.00	400	-99.52	1,326.99	1,329.13	2.14	2.14
P-341	1,655.00	300	-93.33	1,333.46	1,346.21	12.75	7.71
P-342	537.5	400	-117.9	1,346.21	1,347.78	1.57	2.93
P-343	30	400	262.5	1,420.00	1,419.61	0.39	12.88
P-344	440.5	400	262.5	1,353.46	1,347.78	5.67	12.88
P-345	30	400	262.5	1,420.00	1,419.61	0.39	12.88
P-346	472	400	262.5	1,353.86	1,347.78	6.08	12.88
P-347	200	200	-25.96	1,351.60	1,352.64	1.04	5.19
P-348	240	300	-25.96	1,352.64	1,352.81	0.17	0.72
P-349	510	600	-622.28	1,341.07	1,345.57	4.51	8.84
P-350	300	600	-627.73	1,345.57	1,348.27	2.7	8.98
P-351	50	100	5.92	1,347.25	1,346.76	0.49	9.83
P-353	25	100	5.92	1,346.76	1,346.51	0.25	9.83
P-354	600	400	-172.76	1,366.85	1,370.41	3.56	5.94
P-356	10	500	-411.89	1,372.36	1,372.46	0.1	10.02
P-357	20	500	-381.48	1,372.46	1,372.63	0.17	8.68
P-358	850	600	-30.42	1,372.46	1,372.49	0.03	0.03
P-359	4	500	-19.75	1,371.34	1,371.35	0	0.04
P-360	2,956.00	500	-212.55	1,371.35	1,380.03	8.69	2.94
P-364	535	400	-259.32	1,365.52	1,372.26	6.74	12.59
P-365	10	500	-411.89	1,372.26	1,372.36	0.1	10
P-366	100	500	0	1,383.00	1,383.00	0	0
P-366a	788	500	0	1,370.94	1,370.94	0	0
P-368	167	500	-192.79	1,370.94	1,371.35	0.41	2.45
P-369	300	700	-878.82	1,365.14	1,367.51	2.37	7.91
P-370	10	400	192.79	1,370.94	1,370.86	0.07	7.28
P-371	390	700	-919.24	1,367.51	1,370.86	3.35	8.59
P-372	20	200	15.84	1,367.51	1,367.47	0.04	2.08
P-373	550	200	52.12	1,367.47	1,357.09	10.38	18.88
P-374	100	500	0	1,383.00	1,383.00	0	0
P-374a	788	500	-0	1,371.30	1,371.30	0	0
P-375	100	500	61.64	1,371.34	1,371.32	0.03	0.3
P-376	359	200	-38.29	1,367.47	1,371.30	3.83	10.66
P-377	750	150	21.65	1,371.32	1,360.02	11.3	15.06
P-378	140	500	-38.29	1,371.30	1,371.32	0.02	0.12
P-379	1,230.00	300	-25.04	1,356.76	1,357.59	0.83	0.67
P-382	2,800.00	700	-717.74	1,348.10	1,363.31	15.22	5.43
P-383	600	500	149.25	1,348.10	1,347.18	0.92	1.53
P-384	900	500	219.01	1,347.18	1,344.39	2.8	3.11
P-385	470	400	242.12	1,352.40	1,347.19	5.21	11.09
P-386	10	400	169.02	1,347.19	1,347.13	0.06	5.7
P-387	3	400	71.56	1,347.19	1,347.18	0	1.19
P-389	350	500	125.88	1,340.63	1,340.24	0.39	1.11
P-393	165	700	-410.25	1,338.27	1,338.59	0.32	1.93
P-399	390	150	0.24	1,338.45	1,338.45	0	0
P-401	315	300	-1.36	1,338.47	1,338.48	0	0
P-407	140	300	-5.61	1,338.30	1,338.30	0.01	0.04
P-408	500	250	7.11	1,338.34	1,338.26	0.08	0.16
P-409	75	250	-10.2	1,338.30	1,338.33	0.02	0.31

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-410	225	150	1.85	1,338.34	1,338.30	0.04	0.16
P-413	440	150	2.03	1,338.45	1,338.37	0.08	0.19
P-414	500	100	0.92	1,338.46	1,338.31	0.16	0.31
P-415	140	100	0.95	1,338.31	1,338.26	0.05	0.33
P-416	250	250	9.01	1,338.37	1,338.31	0.06	0.25
P-419	70	300	-25.47	1,338.43	1,338.48	0.05	0.7
P-420	320	300	15.59	1,338.43	1,338.34	0.09	0.28
P-421	70	300	5.92	1,338.48	1,338.48	0	0.05
P-422	1.5	400	-37.1	1,342.76	1,342.76	0	0.3
P-422a	1.5	400	-37.1	1,342.76	1,342.76	0	0.4
P-423	865	250	22.15	1,339.50	1,338.37	1.13	1.3
P-424	100	300	-32.09	1,338.48	1,338.59	0.11	1.07
P-426	100	300	-9.88	1,338.42	1,338.43	0.01	0.12
P-427	130	300	20	1,338.59	1,338.53	0.06	0.44
P-428	250	200	8.79	1,338.53	1,338.35	0.17	0.7
P-429	100	200	-11.21	1,338.42	1,338.53	0.11	1.1
P-430	395	200	2.52	1,338.45	1,338.43	0.03	0.07
P-431	505	200	2.52	1,338.43	1,338.39	0.03	0.07
P-432	190	100	-3.82	1,337.39	1,338.22	0.83	4.36
P-433	5	100	-3.75	1,338.22	1,338.24	0.02	4.23
P-434	620	150	2.52	1,338.39	1,338.22	0.17	0.28
P-437	40	300	-6.76	1,338.30	1,338.30	0	0.06
P-439	100	250	-10.2	1,338.33	1,338.36	0.03	0.31
P-440	120	300	-21.09	1,338.36	1,338.42	0.06	0.49
P-441	50	300	-14.28	1,338.33	1,338.34	0.01	0.24
P-442	150	300	-10.89	1,338.34	1,338.36	0.02	0.14
P-443	130	200	3.39	1,338.35	1,338.34	0.02	0.12
P-444	650	200	2.72	1,338.35	1,338.30	0.05	0.08
P-445	325	150	2.43	1,338.28	1,338.19	0.09	0.26
P-445a	140	300	11.65	1,338.30	1,338.28	0.02	0.16
P-446	20	300	-4.04	1,338.30	1,338.30	0	0.02
P-447	100	300	-14.28	1,338.30	1,338.33	0.02	0.24
P-448	200	300	-10.24	1,338.28	1,338.30	0.03	0.13
P-448a	323	300	-9.72	1,338.24	1,338.28	0.04	0.12
P-450	100	400	-15.46	1,342.96	1,342.97	0.01	0.07
P-450a	5	400	-15.46	1,342.97	1,342.97	0	0.06
P-451	25	400	-17.17	1,343.00	1,343.00	0	0.08
P-451a	463.5	400	-17.17	1,342.96	1,343.00	0.04	0.08
P-452	200	300	-10.77	1,342.88	1,342.91	0.03	0.14
P-453	1,427.00	400	-10.77	1,342.91	1,342.96	0.05	0.03
P-454	1,774.00	200	0.71	1,342.88	1,342.87	0.01	0.01
P-457	70	250	-17.56	1,342.81	1,342.87	0.06	0.85
P-458	1.5	400	-21.85	1,342.96	1,342.96	0	0.1
P-458a	677	400	-21.85	1,342.87	1,342.96	0.09	0.13
P-459	190	100	-4.75	1,341.63	1,342.87	1.24	6.53
P-460	200	200	-0.71	1,342.87	1,342.87	0	0.01
P-461	570	400	4.29	1,342.87	1,342.87	0	0.01
P-462	277	200	0	1,342.81	1,342.81	0	0
P-463	523	250	0	1,342.81	1,342.81	0	0
P-464	310	250	0	1,341.63	1,327.11	0	0
P-465	200	250	0	1,327.11	1,342.81	0	0
P-466	295	250	-10.05	1,327.11	1,327.20	0.09	0.3
P-467	186	200	-1.37	1,327.20	1,327.21	0	0.02
P-468	720	400	0	1,342.87	1,327.30	0	0
P-469	30	400	-8.68	1,327.30	1,327.30	0	0.02

Scenario: planed Daily maximum 2010
 Steady State Analysis
 Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structl Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-470	420	250	-8.68	1,327.20	1,327.30	0.1	0.23
P-471	425	100	1.68	1,315.47	1,315.06	0.41	0.95
P-472	1,750.00	200	0.05	1,315.06	1,315.06	0	0
P-473	10	400	-95.95	1,358.98	1,359.00	0.02	1.99
P-473a	17.5	400	-95.95	1,327.59	1,327.63	0.03	1.99
P-474	290	400	55.44	1,327.51	1,327.30	0.21	0.72
P-474a	110	400	55.44	1,327.59	1,327.51	0.08	0.72
P-475	720	200	9.23	1,327.26	1,326.71	0.55	0.76
P-476	240	200	-10.98	1,326.71	1,326.97	0.25	1.06
P-477	10	200	-24.28	1,326.97	1,327.01	0.05	4.58
P-482	400	400	-55.45	1,327.01	1,327.30	0.29	0.72
P-485	100	250	10.05	1,327.11	1,327.08	0.03	0.3
P-486	135	400	-17.76	1,327.20	1,327.21	0.01	0.09
P-487	30	250	27.54	1,330.00	1,329.94	0.06	1.95
P-487a	315	250	27.54	1,329.94	1,329.32	0.62	1.95
P-488	650	200	-2.57	1,326.97	1,327.01	0.05	0.07
P-489	345	250	-13.56	1,327.01	1,327.20	0.18	0.53
P-490	5	150	9.02	1,327.01	1,327.00	0.01	2.98
P-491	260	400	-13.45	1,327.00	1,327.01	0.01	0.05
P-495	500	400	1.97	1,327.01	1,327.01	0	0
P-496	82.5	400	0	1,327.01	1,297.98	0	0
P-497	200	400	0.18	1,327.01	1,327.01	0	0
P-498	485	250	0	1,327.00	1,329.32	0	0
P-499	5	150	-22.47	1,326.92	1,327.00	0.08	16.16
P-500	800	250	21.98	1,326.92	1,325.89	1.03	1.29
P-501	485	250	0	1,329.32	1,326.92	0	0
P-502	725	400	-21.54	1,297.98	1,298.07	0.09	0.13
P-503	10	400	21.54	1,297.98	1,297.98	0	0.13
P-504	800	150	19.74	1,297.98	1,287.82	10.16	12.7
P-505	350	250	19.74	1,287.82	1,287.45	0.37	1.05
P-506	200	150	15.73	1,287.45	1,285.78	1.67	8.34
P-507	121	450	29.48	1,341.03	1,341.02	0.02	0.13
P-508	1,123.00	200	-17.44	1,379.60	1,382.39	2.79	2.49
P-508a	200	150	28.99	1,382.39	1,377.22	5.17	25.86
P-509	160	700	-7.27	1,339.50	1,339.50	0	0
P-510	520	700	-214.46	1,339.50	1,339.80	0.3	0.58
P-510a	680	700	-214.46	1,339.80	1,340.19	0.39	0.58
P-511	1,030.00	500	-119.09	1,338.46	1,339.50	1.04	1.01
P-513	350	500	125.88	1,341.02	1,340.63	0.39	1.11
P-514	900	400	187.61	1,347.25	1,341.02	6.22	6.92
P-515	600	400	91.21	1,341.02	1,339.93	1.09	1.82
P-516	650	500	127.54	1,340.24	1,339.50	0.74	1.14
P-517	450	250	-1.28	1,340.24	1,340.24	0	0.01
P-518	600	150	7.23	1,342.81	1,341.63	1.18	1.97
P-519	240	600	520.83	1,420.00	1,418.47	1.53	6.36
P-519a	260	600	520.83	1,416.75	1,415.10	1.65	6.36
P-520	240	600	658.21	1,420.00	1,417.65	2.35	9.81
P-520a	260	600	-658.21	1,415.10	1,417.65	2.55	9.81
P-525	1	400	-234.79	1,398.56	1,398.57	0.01	10.57
P-527	1,175.00	400	-0.01	1,327.30	1,327.30	0	0
P-528	100	400	-0.01	1,327.30	1,327.30	0	0
P-530	340	200	2.36	1,298.07	1,298.05	0.02	0.06
P-531	324	200	2.36	1,298.05	1,298.03	0.02	0.06
P-533	300	200	2.36	1,298.03	1,298.01	0.02	0.06
P-534	664	200	2.36	1,298.01	1,297.97	0.04	0.06

Scenario: planed Daily maximum 2010
Steady State Analysis
Pipe Report

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Label	Length (m)	Diameter (mm)	Discharge (l/s)	Upstream Structure Hydraulic Grade (m)	Downstream Struct! Hydraulic Grade (m)	Pressure Pipe Headless (m)	Headloss Gradient (m/km)
P-535	60	150	0	1,297.97	1,297.97	0	0
P-536	12	150	0	1,297.97	1,297.97	0	0
P-537	58	150	0	1,297.97	1,297.97	0	0
P-538	41	150	0	1,297.97	1,297.97	0	0
P-539	24	150	0	1,297.97	1,297.97	0	0
P-540	517	200	2.36	1,297.97	1,297.94	0.03	0.06
P-541	158	150	0.28	1,297.94	1,297.94	0	0
P-542	45	100	0.12	1,297.94	1,297.94	0	0.01
P-543	35	80	0.16	1,297.94	1,297.94	0	0.04
P-547	100	200	115.53	1,383.03	1,374.78	8.24	82.44
P-551	275	150	13.14	1,333.46	1,332.25	1.21	4.39