

# Appendix I

---

Combined Effluent Flow Data from current WwTF

Chipman Wastewater Treatment Facility

Total Daily EFFLUENT Flow Summary - 2010 (as obtained from Chipman Operation Staff)

2010 - Daily Total EFFLUENT Wastewater Flows - m<sup>3</sup>/d

Month	J	F	M	A	M	J	J	A	S	O	N	D
Day												
1										421	400	430
2										527	165	817
3										389	222	678
4										466	547	1222
5										336	1441	1848
6										559	1557	1659
7										444	1214	1705
8										341	2180	1439
9										381	2738	898
10										365	1340	653
11										476	822	708
12										258	1318	757
13										364	1018	2012
14										232	788	1546
15										595	649	1013
16										338	577	1007
17										455	1313	920
18										297	916	1023
19										322	666	1031
20										341	866	870
21										406	732	1228
22										302	628	1528
23										319	1004	951
24										303	808	957
25										390	843	944
26										331	782	825
27										348	666	819
28										427	689	817
29										307	696	620
30										298	595	504
31										323		581
<b>Total Monthly Vol. (m<sup>3</sup>)</b>	0	0	0	0	0	0	0	0	0	11662	28181	32009
<b>Monthly Avg. Day Q</b>	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	376	939	1033
<b>Monthly Max. Day Q</b>	0	0	0	0	0	0	0	0	0	595	2738	2012
<b>Monthly Min. Day Q</b>	0	0	0	0	0	0	0	0	0	232	165	430
<b>Max Day Q/ Avg. Day Q</b>	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.63	0.34	0.51
<b>Annual Avg. Day Q</b>	788	- Average of all daily total flows measured to date										
<b>Annual Max. Day Q</b>	2738	- Single maximum day flow measured to date										
<b>Annual Min. Day Q</b>	165	- Single minimum day flow measured to date										
<b>Max. 7-Day Avg. Q</b>	#DIV/0!	- Maximum 7 consecutive days measured to date										
<b>Min. 7-Day Avg. Q</b>	#DIV/0!	- Minimum 7 consecutive days measured to date										

Chipman Wastewater Treatment Facility

Total Daily EFFLUENT Flow Summary - 2011 (as obtained from Chipman Operation Staff)

2011 - Daily Total EFFLUENT Wastewater Flows - m<sup>3</sup>/d

Month	J	F	M	A	M	J	J	A	S	O	N	D
Day												
1	527	240	255	885	1044	763	788	1095	814	343	376	459
2	607	227	257	877	844	663	789	914	830	408	215	550
3	473	244	235	958	719	453	942	907	737	337	364	528
4	490	71	176	986	919	522	732	799	635	292	244	480
5	531	216	377	1764	1256	643	820	759	656	341	276	640
6	334	314	1709	1276	1176	401	873	686	551	299	323	552
7	409	219	1814	1676	2614	557	659	1175	586	203	314	968
8	381	338	1321	1067	2697	579	608	981	508	302	265	1419
9	479	243	1546	1088	2418	556	786	1075	481	320	372	838
10	356	204	892	1428	1270	493	667	703	588	344	390	1032
11	420	285	1367	1323	496	514	948	891	510	286	1279	791
12	340	121	1129	1590	1059	618	1282	630	451	318	746	699
13	363	264	850	1836	768	421	1177	765	316	274	835	671
14	353	281	1933	911	1256	552	836	736	267	340	762	659
15	359	240	1575	1009	1456	487	805	579	289	329	638	906
16	408	156	1497	1465	812	438	760	1225	356	432	589	693
17	207	392	2029	1730	689	388	1644	616	371	223	664	837
18	403	291	2048	1182	940	877	653	787	426	378	408	584
19	371	314	845	1355	479	1028	660	569	369	370	550	627
20	245	297	1724	1082	1104	862	662	596	246	322	517	554
21	393	612	1139	1214	870	897	548	624	508	274	578	931
22	221	263	1191	965	621	525	686	789	333	321	422	458
23	248	202	995	984	1329	835	605	452	263	365	394	678
24	270	359	1022	614	646	383	549	576	351	381	319	473
25	259	176	819	1254	642	1469	562	593	487	323	375	531
26	266	304	831	869	463	598	623	401	269	219	389	494
27	284	265	925	1157	668	885	669	562	355	327	516	517
28	287	248	629	1006	854	1018	702	1748	314	201	378	1405
29	89		860	998	946	919	586		297	278	430	542
30	238		898	940	771	845	1133	953	271	486	862	569
31	264		1035		629		842	953		212		749
<b>Total Monthly Vol. (m<sup>3</sup>)</b>	10873	7387	33925	35488	32452	20190	24595	24139	13436	9848	14792	21835
<b>Monthly Avg. Day Q</b>	351	264	1094	1183	1047	673	793	805	448	318	493	704
<b>Monthly Max. Day Q</b>	607	612	2048	1836	2697	1469	1644	1748	830	486	1279	1419
<b>Monthly Min. Day Q</b>	89	71	176	614	463	383	548	401	246	201	215	458
<b>Max Day Q/ Avg. Day Q</b>	1.73	2.32	1.87	1.55	2.58	2.18	2.07	2.17	1.85	1.53	2.59	2.01
<b>Annual Avg. Day Q</b>	684	- Average of all daily total flows measured to date										
<b>Annual Max. Day Q</b>	2697	- Single maximum day flow measured to date										
<b>Annual Min. Day Q</b>	71	- Single minimum day flow measured to date (disregarding 0 reading on 29 August)										
<b>Max. 7-Day Avg. Q</b>	1764	- Maximum 7 consecutive days measured to date										
<b>Min. 7-Day Avg. Q</b>	196	- Minimum 7 consecutive days measured to date										

Chipman Wastewater Treatment Facility

Total Daily EFFLUENT Flow Summary - 2012 (as obtained from Chipman Operation Staff)

2012 - Daily Total EFFLUENT Wastewater Flows - m<sup>3</sup>/d

Month	J	F	M	A	M	J	J	A	S	O	N	D
Day												
1	534	275	304	765	779	392	408	308	243	690	1968	334
2	681	232	168	619	732	417	507	311	288	693	1591	396
3	700	186	549	551	714	469	523	289	179	340	1190	395
4	441	232	535	460	476	388	654	278	245	508	1160	455
5	404	234	302	479	679	391	344	264	467	394	957	594
6	419	254	394	477	702	461	454	378	327	506	734	341
7	415	265	503	581	672	346	541	303	250	400	791	337
8	438	225	1913	478	432	384	468	289	281	544	874	397
9	429	225	1309	867	887	473	401	360	305	396	871	431
10	360	177	898	753	1383	379	344	270	263	506	1194	489
11	377	289	737	837	1242	357	442	201	317	365	484	608
12	260	173	1078	500	802	451	315	332	180	537	879	506
13	361	242	660	458	1107	646	235	229	261	387	839	421
14	286	224	654	620	605	209	338	316	273	607	633	428
15	253	180	584	896	787	247	440	296	316	566	778	289
16	188	197	527	951	1052	372	411	392	311	1390	524	521
17	419	238	805	719	1055	524	463	306	171	1134	611	405
18	306	239	1516	589	837	340	363	315	314	994	691	540
19	195	222	1276	1101	720	432	357	286	622	785	521	349
20	260	182	1453	551	637	288	206	273	290	2562	539	453
21	232	281	1683	482	738	413	321	318	192	1991	373	676
22	295	250	1376	822	694	336	322	260	656	1222	476	963
23	622	610	1187	1806	609	406	350	268	467	1108	476	843
24	699	447	1145	2176	559	438	354	334	336	943	479	889
25	385	370	1081	1631	451	282	337	184	285	810	543	503
26	298	400	963	1000	524	610	309	248	298	947	430	605
27	371	297	803	1524	511	493	285	265	270	404	369	630
28	269	238	785	649	493	590	295	313	257	827	273	438
29	300	246	769	1004	493	465	296	276	1012	652	394	548
30	300		576	1010	482	467	316	246	888	1059	241	500
31	270		599		524		176	336		2093		356
<b>Total Monthly Vol. (m<sup>3</sup>)</b>	11765	7633	27134	25356	22378	12469	11576	9045	10564	26361	21883	15638
<b>Monthly Avg. Day Q</b>	<b>380</b>	<b>263</b>	<b>875</b>	<b>845</b>	<b>722</b>	<b>416</b>	<b>373</b>	<b>292</b>	<b>352</b>	<b>850</b>	<b>729</b>	<b>504</b>
<b>Monthly Max. Day Q</b>	700	610	1913	2176	1383	646	654	392	1012	2562	1968	963
<b>Monthly Min. Day Q</b>	188	173	168	458	432	209	176	184	171	340	241	289
<b>Max Day Q/ Avg. Day Q</b>	1.84	2.32	2.19	2.57	1.92	1.55	1.75	1.34	2.87	3.01	2.70	1.91
<b>Annual Avg. Day Q</b>	<b>551</b>	- Average of all daily total flows measured to date										
<b>Annual Max. Day Q</b>	<b>2562</b>	- Single maximum day flow measured to date										
<b>Annual Min. Day Q</b>	<b>168</b>	- Single minimum day flow measured to date										
<b>Max. 7-Day Avg. Q</b>	<b>1440</b>	- Maximum 7 consecutive days measured to date										
<b>Min. 7-Day Avg. Q</b>	<b>212</b>	- Minimum 7 consecutive days measured to date										

Chipman Wastewater Treatment Facility

Total Daily EFFLUENT Flow Summary - 2013 (as obtained from Greyline Area-Velocity Flow Meter)

2013 - Daily Total EFFLUENT Wastewater Flows - m<sup>3</sup>/d

Month	J	F	M	A	M	J	J	A	S	O	N	D
Day 1	467	942	269	896	694	1012	615	938	541	608	722	973
2	260	841	355	914	486	1130	521	533	415	523	829	1019
3	401	955	522	897	548	673	503	749	438	474	786	1081
4	372	617	434	627	568	929	523	720	453	434	569	1047
5	375	438	511	719	657	503	534	1528	432	289	736	1242
6	342	351	408	714	526	643	354	909	279	451	529	925
7	372	422	361	772	517	623	478	690	472	502	550	1153
8	275	286	338	700	450	1139	441	848	573	523	505	947
9	391	412	383	784	460	579	444	1859	374	442	470	800
10	284	277	449	705	450	648	396	2016	434	456	501	906
11	251	359	683	616	439	931	432	2053	429	425	509	579
12	338	359	929	605	505	970	372	1048	647	443	522	698
13	379	299	929	744	617	676	431	1271	729	389	405	371
14	491	296	1027	949	429	704	427	874	864	448	375	483
15	394	293	593	832	405	734	296	909	822	374	322	577
16	390	408	987	722	402	798	389	834	764	460	375	509
17	385	362	1004	1044	365	571	365	518	585	437	553	390
18	234	306	737	876	390	605	329	734	515	401	705	431
19	278	308	732	785	411	552	357	773	467	499	593	374
20	384	401	471	1250	502	632	327	640	386	375	735	292
21	273	307	683	893	515	401	358	419	502	473	475	446
22	254	218	482	850	318	467	453	704	1355	394	511	477
23	311	327	500	811	417	626	609	367	1112	371	526	389
24	241	349	559	975	1023	462	458	477	975	341	469	371
25	220	305	570	1146	913	367	330	495	902	346	517	420
26	278	311	571	875	906	438	1638	444	603	342	469	294
27	222	256	712	899	774	262	1828	457	689	435	1776	304
28	243	293	808	836	1017	579	1433	458	691	302	1128	333
29	273		857	764	1087	618	1273	402	770	413	814	364
30	551		838	862	1001	615	954	417	527	268	1078	261
31	1352		839		613		784	403		641		297
<b>Total Monthly Vol. (m<sup>3</sup>)</b>	11280	11297	19542	25060	18408	19887	18652	25487	18744	13280	19053	18756
<b>Monthly Avg. Day Q</b>	364	403	630	835	594	663	602	822	625	428	635	605
<b>Monthly Max. Day Q</b>	1352	955	1027	1250	1087	1139	1828	2053	1355	641	1776	1242
<b>Monthly Min. Day Q</b>	220	218	269	605	318	262	296	367	279	268	322	261
<b>Max Day Q/ Avg. Day Q</b>	3.72	2.37	1.63	1.50	1.83	1.72	3.04	2.50	2.17	1.50	2.80	2.05
<b>Annual Avg. Day Q</b>	601	- Average of all daily total flows measured to date										
<b>Annual Max. Day Q</b>	2053	- Single maximum day flow measured to date										
<b>Annual Min. Day Q</b>	218	- Single minimum day flow measured to date										
<b>Max. 7-Day Avg. Q</b>	1433	- Maximum 7 consecutive days measured to date										
<b>Min. 7-Day Avg. Q</b>	253	- Minimum 7 consecutive days measured to date										

Note: Daily average flow figures shown in red represent the average daily flow calculated for that month.

These figures marked in red replace flows on these dates, as the original flow figures were considered to be erroneous.

Chipman Wastewater Treatment Facility

Total Daily EFFLUENT Flow Summary - 2014 (as obtained from Greyline Area-Velocity Flow Meter)

2014 - Daily Total EFFLUENT Wastewater Flows - m<sup>3</sup>/d

Month	J	F	M	A	M	J	J	A	S	O	N	D
Day												
1	389	450	379	485	1431	643	658	583	413	292	379	1114
2	270	506	346	479	1329	713	677	470	449	310	933	1002
3	214	407	282	527	1480	445	604	746	439	227	824	1505
4	247	436	290	565	1657	613	423	384	413	267	793	1074
5	384	333	234	655	1662	797	1154	840	348	372	750	1067
6	877	420	307	827	1710	1179	983	643	670	281	778	1234
7	667	253	181	1095	1782	1269	1519	849	512	321	1224	1048
8	552	360	292	1637	1648	1270	1417	599	481	298	1038	926
9	508	327	373	1550	1015	1147	1280	663	490	315	754	1237
10	535	368	258	1206	773	848	1025	848	424	243	874	1419
11	1544	269	310	1118	691	753	669	422	424	245	654	1174
12	1078	306	319	1168	595	718	899	525	327	234	769	1095
13	1113	397	243	2672	668	561	1090	686	380	258	679	1022
14	1213	383	222	2034	871	898	754	753	408	260	622	1229
15	1388	402	472	1922	968	906	661	720	488	246	535	1288
16	1173	415	343	1575	759	682	1269	657	328	370	645	1288
17	1368	300	309	1602	874	607	1042	1084	429	273	842	1113
18	1389	314	310	2203	1025	1123	657	837	314	340	884	761
19	1314	344	309	1854	1391	828	851	672	299	334	691	921
20	1088	317	472	2551	1196	634	667	747	306	323	577	912
21	910	355	424	2949	1047	670	869	709	467	280	583	863
22	657	695	428	1370	819	633	470	431	378	277	564	822
23	842	551	412	1323	831	511	662	612	300	396	565	610
24	502	411	408	1381	865	390	619	563	314	826	855	991
25	572	369	356	1206	898	700	524	594	354	578	602	1350
26	626	286	346	1174	681	851	523	496	268	544	614	1026
27	692	354	275	1151	808	720	642	630	324	472	566	1454
28	539	204	511	1420	742	709	994	366	385	329	440	817
29	389		568	1181	555	911	622	429	335	564	514	1322
30	493		649	1339	514	508	706	492	328	513	897	1091
31	419		567		647		425	472		310		941
<b>Total Monthly Vol. (m<sup>3</sup>)</b>	23954	10532	11195	42219	31931	23237	25356	19523	11792	10895	21446	33715
<b>Monthly Avg. Day Q</b>	<b>773</b>	<b>376</b>	<b>361</b>	<b>1407</b>	<b>1030</b>	<b>775</b>	<b>818</b>	<b>630</b>	<b>393</b>	<b>351</b>	<b>715</b>	<b>1088</b>
<b>Monthly Max. Day Q</b>	1544	695	649	2949	1782	1270	1519	1084	670	826	1224	1505
<b>Monthly Min. Day Q</b>	214	204	181	479	514	390	423	366	268	227	379	610
<b>Max Day Q/ Avg. Day Q</b>	2.00	1.85	1.80	2.10	1.73	1.64	1.86	1.72	1.71	2.35	1.71	1.38
<b>Annual Avg. Day Q</b>	<b>728</b>	- Average of all daily total flows measured to date										
<b>Annual Max. Day Q</b>	<b>2949</b>	- Single maximum day flow measured to date										
<b>Annual Min. Day Q</b>	<b>181</b>	- Single minimum day flow measured to date										
<b>Max. 7-Day Avg. Q</b>	<b>2094</b>	- Maximum 7 consecutive days measured to date										
<b>Min. 7-Day Avg. Q</b>	<b>411</b>	- Minimum 7 consecutive days measured to date										

Note: Daily average flow figures shown in red represent the average daily flow calculated for that month.

These figures marked in red replace flows on these dates, as the original flow figures were considered to be erroneous.

Chipman Wastewater Treatment Facility

Total Daily EFFLUENT Flow Summary - 2015 (as obtained from Greyline Area-Velocity Flow Meter)

2015 - Daily Total EFFLUENT Wastewater Flows - m<sup>3</sup>/d

Month	J	F	M	A	M	J	J	A	S	O	N	D
Day												
1	799	279	328	363	577	630	743	391	616	1291	1279	815
2	546	312	336	408	668	713	564	405	644	1316	1070	857
3	654	272	304	796	635	591	453	407	550	1580	786	801
4	545	354	328	907	597	429	579	335	299	1278	1005	847
5	728	331	336	670	569	620	629	441	713	1331	722	780
6	505	302	279	555	541	578	460	388	496	725	863	1015
7	357	337	316	305	922	539	560	251	337	835	667	720
8	484	305	370	346	749	575	498	391	497	782	833	714
9	290	300	287	562	848	569	346	414	372	842	488	732
10	390	291	421	1136	861	841	500	334	742	619	651	621
11	467	291	316	1319	847	776	319	607	1182	680	515	661
12	462	293	356	1211	830	704	605	529	883	615	568	701
13	456	329	276	1270	904	771	386	306	1467	864	676	670
14	362	338	375	1417	629	719	453	513	1007	1089	662	727
15	394	320	359	1032	669	840	347	490	706	709	701	594
16	332	332	326	1346	778	540	376	528	804	539	734	597
17	327	292	376	1355	608	615	274	632	979	717	407	514
18	318	289	338	934	962	762	464	353	489	630	523	1309
19	834	297	395	1147	500	602	309	457	657	730	499	1073
20	350	295	391	1219	664	680	572	506	770	684	538	886
21	281	303	373	1362	715	1470	328	283	643	500	490	849
22	438	287	363	1276	432	1455	398	426	439	473	733	1052
23	352	301	392	1499	493	802	486	414	639	504	1118	1146
24	479	312	353	1302	581	1392	327	382	454	473	795	827
25	316	327	473	1491	566	959	390	398	332	592	1045	1047
26	342	340	378	1303	617	498	480	1200	453	447	1057	1156
27	393	239	439	1341	549	801	450	1212	439	438	679	1295
28	369	293	353	1436	808	1036	414	801	481	1259	864	961
29	345		381	1356	743	608	380	797	801	1310	982	887
30	289		374	1218	733	727	428	690	1499	1274	567	863
31	372		407		865		346	749		1312		889
<b>Total Monthly Vol. (m<sup>3</sup>)</b>	13574	8559	11097	31880	21458	22841	13865	16030	20391	26439	22517	26605
<b>Monthly Avg. Day Q</b>	<b>438</b>	<b>306</b>	<b>358</b>	<b>1063</b>	<b>692</b>	<b>761</b>	<b>447</b>	<b>517</b>	<b>680</b>	<b>853</b>	<b>751</b>	<b>858</b>
<b>Monthly Max. Day Q</b>	834	354	473	1499	962	1470	743	1212	1499	1580	1279	1309
<b>Monthly Min. Day Q</b>	281	239	276	305	432	429	274	251	299	438	407	514
<b>Max Day Q/ Avg. Day Q</b>	1.90	1.16	1.32	1.41	1.39	1.93	1.66	2.34	2.21	1.85	1.70	1.52
<b>Annual Avg. Day Q</b>	<b>645</b>	- Average of all daily total flows measured to date										
<b>Annual Max. Day Q</b>	<b>1580</b>	- Single maximum day flow measured to date										
<b>Annual Min. Day Q</b>	<b>239</b>	- Single minimum day flow measured to date										
<b>Max. 7-Day Avg. Q</b>	<b>1199</b>	- Maximum 7 consecutive days measured to date										
<b>Min. 7-Day Avg. Q</b>	<b>295</b>	- Minimum 7 consecutive days measured to date										

Note: Daily average flow figures shown in red represent the average daily flow calculated for that month.

These figures marked in red replace flows on these dates, as the original flow figures were considered to be erroneous.

Chipman Wastewater Treatment Facility

Total Daily EFFLUENT Flow Summary - 2016 (as obtained from Greyline Area-Velocity Flow Meter)

2016 - Daily Total EFFLUENT Wastewater Flows - m<sup>3</sup>/d

Month	J	F	M	A	M	J	J	A	S	O	N	D
Day												
1	724	454	899	1214	644	387	380	375	332	232	311	561
2	727	525	1010	959	632	417	512	402	288	239	318	566
3	821	513	786	1096	594	445	524	318	286	235	398	537
4	541	768	696	843	568	327	419	311	280	200	460	527
5	547	676	666	697	557	406	461	216	353	211	322	509
6	512	401	817	709	469	618	354	191	320	233	284	411
7	418	632	643	949	635	972	726	409	294	195	268	471
8	414	503	610	1108	636	690	423	265	331	223	356	431
9	463	408	697	1170	597	619	529	315	309	354	300	363
10	1011	469	580	1161	453	455	566	295	310	394	308	319
11	1290	351	673	1017	609	468	504	318	252	228	288	401
12	986	361	572	932	443	643	427	207	354	301	272	339
13	808	366	618	1160	454	588	502	368	259	305	322	333
14	668	297	626	686	418	648	344	489	280	192	350	314
15	605	357	807	995	414	592	339	399	264	214	376	322
16	642	808	660	1114	592	603	440	414	289	229	369	263
17	704	962	985	920	603	653	364	384	296	281	428	261
18	571	955	510	933	542	509	372	297	161	239	393	348
19	510	770	728	940	570	584	498	250	443	210	403	321
20	439	1014	626	767	602	522	352	326	333	213	401	281
21	447	1007	695	676	551	503	360	401	271	348	358	328
22	436	1050	423	745	523	439	381	586	276	1071	478	262
23	403	678	599	727	686	456	377	467	303	502	358	289
24	418	1097	579	716	406	393	405	380	245	430	373	360
25	436	1076	518	710	523	379	386	362	279	376	353	304
26	468	790	490	678	497	516	330	335	267	391	344	409
27	339	1045	614	641	375	472	320	347	233	296	425	371
28	405	1089	1184	691	466	527	371	280	249	228	362	324
29	411	1108	800	440	485	465	354	385	235	336	346	497
30	412		952	515	460	366	356	295	239	379	354	456
31	351		1286		563		318	334		339		500
<b>Total Monthly Vol. (m<sup>3</sup>)</b>	17928	20531	22351	25907	16565	15661	12997	10720	8632	9625	10678	11982
<b>Monthly Avg. Day Q</b>	<b>578</b>	<b>708</b>	<b>721</b>	<b>864</b>	<b>534</b>	<b>522</b>	<b>419</b>	<b>346</b>	<b>288</b>	<b>310</b>	<b>356</b>	<b>387</b>
<b>Monthly Max. Day Q</b>	1290	1108	1286	1214	686	972	726	586	443	1071	478	566
<b>Monthly Min. Day Q</b>	339	297	423	440	375	327	318	191	161	192	268	261
<b>Max Day Q/ Avg. Day Q</b>	2.23	1.56	1.78	1.41	1.28	1.86	1.73	1.69	1.54	3.45	1.34	1.47
<b>Annual Avg. Day Q</b>	<b>502</b>	- Average of all daily total flows measured to date										
<b>Annual Max. Day Q</b>	<b>1290</b>	- Single maximum day flow measured to date										
<b>Annual Min. Day Q</b>	<b>161</b>	- Single minimum day flow measured to date										
<b>Max. 7-Day Avg. Q</b>	<b>1071</b>	- Maximum 7 consecutive days measured to date										
<b>Min. 7-Day Avg. Q</b>	<b>219</b>	- Minimum 7 consecutive days measured to date										

Note: Daily average flow figures shown in red represent the average daily flow calculated for that month.

These figures marked in red replace flows on these dates, as the original flow figures were considered to be erroneous.