Buckman Direct Diversion Project

A joint regional project of the City of Santa Fe and Santa Fe County to build a reliable and sustainable water supply.

Date: **September 4, 2012**

To: **Buckman Direct Diversion Board**

From: **Erika Schwender, CEP, Interim BDD Facilities Manager**

Re: **Update on BDD operation during July and August 2012**

This memo is intended to share with the BDD Board operational procedures in place for the BDD facilities to provide the drinking water quality and services that people in Santa Fe County have come to expect from this project, while protecting the integrity of the largest capital improvement this City and County have ever pursued.

In May 2011, after the BDD Board officially accepted ownership and operation of the project, BDD staff implemented various operational policies that had been developed by the Design - Built contractor and were based on the original design criteria. These policies were reviewed and modified by BDD staff to provide excellent drinking water quality, protection of project-wide facilities and equipment and budget compliance. These policies were created taking into account various aspects, such as weather-related river water quality, water treatment cost, solids treatment and associated disposal costs, energy costs related to on-peak vs. off-peak pumping, partners' needs, etc. Additionally, during the summer of 2011 the BDD staff was confronted with the first big test on these operational policies, due to the Las Conchas Fire, and adjustments had to be made in the process.

The following is a summary of the events in the first year or so of operations, and an explanation of how the policies and their revisions have worked so far. :

- As it was presented to the BDD Board in the October 2011 BDD Board meeting, during the Las Conchas Fire the BDD had to respond to water quality issues associated with ash-laden storm water run-off. Heightened monitoring established that ash-laden flows increased VOC in the river but did not necessarily correlate with turbidity levels. To minimize the amount of ash entering the treatment plant, BDD staff limited diversion operations to times when the river water quality was at turbidity levels less than 300NTU and / or the online VOC meter read less than "2".

- Between fall 2011 and winter 2011/12, additional monitoring and analytical comparisons established that no VOC compounds regulated by the Safe Drinking Water Act (SDWA) were detected in samples collected during storm events with inline VOC meter detects of "3". Based on this analysis BDD increased the acceptable online VOC level to "3".

- Based on additional monitoring, in the winter 2011/12 BDD increased acceptable diversion river turbidity levels to 600NTU in anticipation of potential ash-laden storm-flows associated with snow melt.

- In spring 2012, BDD established policies to address various water quality issues:
    - During traditional storm events that do not carry ash, diversions can take place until the river water quality parameters exceed turbidity levels of 600NTU and / or the online VOC meter detects levels greater than 3.
    - During storm events carrying ash, river diversions can take place until river water quality parameters exceed turbidity levels of 300NTU and or the online VOC meter detects levels greater than 3.

- This year monsoonal storms have had a negative impact on the water quality in the Rio Grande, especially after last year's fire events. Storm water carries high sediment loading, and has a direct effect upon treatment and solids disposal costs. To assure budget compliance and to minimize the possibility of having to dispose of solids containing elevated contaminant levels, BDD staff suspended diversion operations during storm events.

- Anytime flow rates through the Early Notification System station E109.9 exceed 5cfs, BDD staff stops water diversions.

- To allow travel time from Abiquiu Reservoir to the BDD diversion structure the BDD's San Juan Chama (SJC) water orders need to be placed at least one day before its actual diversion. Since the weather and raw water quality are unstable and fast changing during monsoon season, it is difficult to rely on SJC water alone for diversions during this period. To provide more flexibility in the currently established water rights accounting and utilization policy, the BDD partners are in the process of establishing agreements to allow the BDD to utilize native water rights during monsoon season and to "pay back" the utilized native water rights by diverting SJC water during the remainder of the year.

- Diversions were dramatically restricted through the majority of July 2012 due to disagreements between the Office of the State Engineer (OSE), US Fish and Wildlife Service's (USFWS), Bureau of Reclamation, Interstate Stream Commission (ISC) and the BDD regarding how to determine when Native Rio Grande flows require diversion curtailments. In October 2007 the BDD received the US Forest Service's (USFS) Record of Decision, which requires the BDD to follow and meet all requirements spelled out in the USFWS' Biological Opinion and to protect silvery minnow habitat from March to October. In July 2012, OSE notified BDD that based on their calculations the Rio Grande Native Flow would require the BDD to apply diversion curtailments. BDD, County, and City staff engaged in discussions with the OSE to address major differences between the OSE's method of determining when Native River Flows would require diversion curtailments and BDD's method, which was officially approved by the USFWS and BOR. On July 30, 2012, the BDD received the OSE's final decision stating the BDD can continue implementing the originally established procedures. This decision resulted in permission to divert the maximum allowable amount of native river water as spelled out in the USFWS' Biological Opinion, which for the month of August was 4.8 million gallons per day.

- To achieve budget compliance and follow established agreements between the Partners the BDD has been diverting mostly during off-peak hours. During June, July, and August electric rates are 6x's higher during on-peak (8am to 8pm) than during off-peak hours (8pm to 8am). The remainder of the year electric rates are 3x's higher during on-peak (8am to 8pm) than during off-peak hours (8pm to 8am).

The extended shut down of the BDD in July and August of 2012 was due to a combination of factors.

- The original shut down was ordered because of impaired water quality (turbidity greater than 2000 NTU and heavy ash loading in the water) in the Rio Grande stemming from severe storm events during the night.

- Water quality in the Rio Grande remained impaired due to a series of thunder storms throughout July and August.
- The BDD operated under the understanding that on-peak diversions should only take place in unavoidable circumstances, e.g. to conduct maintenance.
- Due to the unpredictability of the Rio Grande water quality it became impossible to place water calls for SJC water without risking the loss of this water.
- As explained above during these days the BDD was also informed to follow stricter curtailment procedures than had been originally established, which drastically reduced the amount of Native Rio Grande Water available for diversions.

07/01/2012	* RWLS Turbidity NTU	* RWLS VOC	LANL LANL 109.9 Flow CFS	RWLS Combined Flow MGD	RWLS Diverting Water	Las Campanas Pumps Running	Water Quality 1 = Useable Water - Off Peak	Water Quality 3 = Unusable Water - Off Peak	
							Water Quality 2 = Useable Water - On Peak	Water Quality 4 = Unusable Water - On Peak	
00:30	50.8	0.0	0.0	8.7	1	1	1		
01:00	52.3	0.0	0.0	8.7	1	1	1		
01:30	51.3	0.0	0.0	8.7	1	1	1		
02:00	52.3	0.0	0.0	8.7	1	1	1		
02:30	52.3	0.0	0.0	8.1	1	1	1		
03:00	53.2	0.0	0.0	7.8	1	1	1		
03:30	52.7	0.0	0.0	7.7	1	1	1		
04:00	51.3	0.0	0.0	7.7	1	1	1		
04:30	51.3	0.0	0.0	7.7	1	1	1		
05:00	53.7	0.0	0.0	7.7	1	1	1		
05:30	52.3	0.0	0.0	7.7	1	1	1		
06:00	52.3	0.0	0.0	7.7	1	1	1		
06:30	51.8	0.0	0.0	7.7	1	1	1		
07:00	56.7	0.0	0.0	7.7	1	1	1		
07:30	51.8	0.0	0.0	7.7	1	1	1		
08:00	51.3	0.0	0.0	7.7	1	1	1		
08:30	51.8	0.0	0.0	7.7	1	1	1		
09:00	65.4	0.0	0.0	7.7	1	1	1		
09:30	50.8	0.0	0.0	7.7	1	1	1		
10:00	51.8	0.0	0.0	7.7	1	1	1		
10:30	52.7	0.0	0.0	7.7	1	1	1		
11:00	51.3	0.0	0.0	7.7	1	1	1		
11:30	52.7	0.0	0.0	7.7	1	1	1		
12:00	52.7	0.0	0.0	7.7	1	1	1		
12:30	52.3	0.0	0.0	7.7	1	1	1		
13:00	52.3	0.0	0.0	7.7	1	1	1		
13:30	51.3	0.0	0.0	7.7	1	1	1		
14:00	51.8	0.0	0.0	9.2	1	1	1		
14:30	51.3	0.0	0.0	10.9	1	1	1		
15:00	51.3	0.0	0.0	11.2	1	1	1		
15:30	51.3	0.0	0.0	11.2	1	1	1		
16:00	55.7	0.0	0.0	11.2	1	1	1		
16:30	52.3	0.0	0.0	11.2	1	1	1		
17:00	52.3	0.0	0.0	10.2	1	1	1		
17:30	50.8	0.0	0.0	10.2	1	1	1		
18:00	52.7	0.0	0.0	10.2	1	1	1		
18:30	49.8	0.0	0.0	10.2	1	1	1		
19:00	49.3	0.0	0.0	10.2	1	1	1		
19:30	47.9	0.0	0.0	10.2	1	1	1		
20:00	47.9	0.0	0.0	10.2	1	1	1		
20:30	47.9	0.0	0.0	10.2	1	1	1		
21:00	47.4	0.0	0.0	10.2	1	1	1		
21:30	46.4	0.0	0.0	10.2	1	1	1		
22:00	47.4	0.0	0.0	10.2	1	1	1		
22:30	46.9	0.0	0.0	10.2	1	1	1		
23:00	47.9	0.0	0.0	10.2	1	1	1		
23:30	56.2	0.0	0.0	9.8	1	1	1		
24:00	47.4	0.0	0.0	9.3	1	1	1		

07/02/2012	* RWLS Turbidity NTU	* RWLS VOC	LANL LANL 109.9 Flow CFS	RWLS Combined Flow MGD	RWLS Diverting Water	Las Campanas Pumps Running	Water Quality 1 = Useable Water - Off Peak	Water Quality 3 = Unusable Water - Off Peak	
							Water Quality 2 = Useable Water - On Peak	Water Quality 4 = Unusable Water - On Peak	
00:30	47.9	0.0	0.0	8.7	1	1	1		
01:00	47.4	0.0	0.0	7.8	1	1	1		
01:30	47.4	0.0	0.0	7.7	1	1	1		
02:00	47.9	0.0	0.0	7.7	1	1	1		
02:30	47.9	0.0	0.0	6.6	1	1	1		
03:00	47.9	0.0	0.0	1.1	1	1	1		
03:30	45.9	0.0	0.0	0.0	0	0	1		
04:00	43.0	0.0	0.0	5.5	1	1	1		
04:30	47.4	0.0	0.0	7.7	1	1	1		
05:00	48.4	0.0	0.0	5.6	1	1	1		
05:30	48.4	0.0	0.0	0.6	1	1	1		
06:00	47.4	0.0	0.0	0.0	0	0	1		
06:30	45.9	0.0	0.0	2.5	1	1	1		
07:00	45.9	0.0	0.0	4.1	1	1	1		
07:30	45.9	0.0	0.0	0.0	0	0	1		
08:00	128.0	0.5	0.0	0.0	0	0	2		
08:30	52.7	0.0	0.0	0.0	0	0	2		
09:00	47.9	0.0	0.0	0.0	0	0	2		
09:30	46.9	0.0	0.0	0.0	0	0	2		
10:00	46.4	0.0	0.0	0.0	0	0	2		
10:30	46.4	0.0	0.0	0.0	0	0	2		
11:00	42.0	0.0	0.0	0.0	0	0	2		
11:30	45.9	0.0	0.0	0.0	0	0	2		
12:00	46.4	0.0	0.0	0.0	0	0	2		
12:30	46.4	0.0	0.0	0.0	0	0	2		
13:00	46.4	0.0	0.0	0.0	0	0	2		
13:30	45.9	0.0	0.0	0.0	0	0	2		
14:00	45.9	0.0	0.0	0.0	0	0	2		
14:30	45.9	0.0	0.0	0.0	0	0	2		
15:00	42.5	0.0	0.0	0.0	0	0	2		
15:30	42.0	0.0	0.0	0.0	0	0	2		
16:00	41.0	0.0	0.0	0.0	0	0	2		
16:30	44.0	0.0	0.0	0.0	0	0	2		
17:00	43.0	0.0	0.0	0.0	0	0	2		
17:30	43.0	0.0	0.0	0.0	0	0	2		
18:00	45.9	0.0	0.0	10.8	1	1	2		
18:30	42.0	0.0	0.0	17.1	1	1	2		
19:00	42.0	0.0	0.0	17.2	1	1	2		
19:30	42.0	0.0	0.0	17.2	1	1	2		
20:00	41.0	0.0	0.0	1.1	1	1	2		
20:30	51.3	0.0	0.0	0.0	0	0	1		
21:00	51.3	0.0	0.0	0.0	0	0	1		
21:30	54.7	0.0	0.0	0.0	0	0	1		
22:00	413.7	1.2	0.0	0.0	0	0	1		
22:30	1999.5	0.0	0.0	0.0	0	0	no	3	
23:00	1999.5	0.0	0.0	0.0	0	0	no	3	
23:30	1998.5	0.0	0.0	0.0	0	0	no	3	
24:00	1630.3	1.5	0.0	0.0	0	0	no	3	

07/03/2012	* RWLS Turbidity NTU	* RWLS VOC	LANL LANL 109.9 Flow CFS	RWLS Combined Flow MGD	RWLS Diverting Water	Las Campanas Pumps Running	Water Quality 1 = Useable Water - Off Peak	Water Quality 3 = Unusable Water - Off Peak	
							Water Quality 2 = Useable Water - On Peak	Water Quality 4 = Unusable Water - On Peak	
00:30	1044.2	2.5	0.0	0.0	0	0	no	3	
01:00	727.7	2.4	0.0	0.0	0	0	no	3	
01:30	431.3	2.0	0.0	2.6	1	1	1		
02:00	296.5	1.7	0.0	17.5	1	1	1		
02:30	213.9	1.4	0.0	17.3	1	1	1		
03:00	170.9	1.1	0.0	17.3	1	1	1		
03:30	144.1	0.9	0.0	17.3	1	1	1		
04:00	124.1	0.9	0.0	17.3	1	1	1		
04:30	108.4	0.6	0.0	17.3	1	1	1		
05:00	96.7	0.5	0.0	17.3	1	1	1		
05:30	92.3	0.3	0.0	17.3	1	1	1		
06:00	81.1	0.1	0.0	17.3	1	1	1		
06:30	75.2	0.1	0.0	17.3	1	1	1		
07:00	71.3	0.1	0.0	17.3	1	1	1		
07:30	81.6	0.1	0.0	16.6	1	1	1		
08:00	66.4	0.2	0.0	15.3	1	0	2		
08:30	64.0	0.0	0.0	0.0	0	0	2		
09:00	62.5	0.0	0.0	15.2	1	0	2		
09:30	60.6	0.0	0.0	0.0	0	0	2		
10:00	57.6	0.0	0.0	12.7	1	0	2		
10:30	56.7	0.0	0.0	0.0	0	0	2		
11:00	56.2	0.0	0.0	0.0	0	0	2		
11:30	50.3	0.0	0.0	0.0	0	0	2		
12:00	49.8	0.0	0.0	0.0	0	0	2		
12:30	49.8	0.0	0.0	0.0	0	0	2		
13:00	49.3	0.0	0.0	0.0	0	0	2		
13:30	49.3	0.0	0.0	0.0	0	0	2		
14:00	48.4	0.0	0.0	0.0	0	0	2		
14:30	47.4	0.0	0.0	0.0	0	0	2		
15:00	47.9	0.0	0.0	0.0	0	0	2		
15:30	43.0	0.0	0.0	0.0	0	0	2		
16:00	44.0	0.0	0.0	0.0	0	0	2		
16:30	45.9	0.0	0.0	0.0	0	0	2		
17:00	45.9	0.0	0.0	0.0	0	0	2		
17:30	45.9	0.0	0.0	0.0	0	0	2		
18:00	42.0	0.0	0.0	0.0	0	0	2		
18:30	43.0	0.0	0.0	11.2	1	1	2		
19:00	43.0	0.0	0.0	17.6	1	1	2		
19:30	44.4	0.0	0.0	17.6	1	1	2		
20:00	42.0	0.0	0.0	17.6	1	1	2		
20:30	47.4	0.0	0.0	17.6	1	1	1		
21:00	47.4	0.0	0.0	17.6	1	1	1		
21:30	46.9	0.0	0.0	17.6	1	1	1		
22:00	48.4	0.0	0.0	17.6	1	1	1		
22:30	48.8	0.0	0.0	17.6	1	1	1		
23:00	52.7	0.0	0.0	17.6	1	1	1		
23:30	62.0	0.0	0.0	17.6	1	1	1		
24:00	58.1	0.0	0.0	17.6	1	1	1		

07/04/2012	* RWLS Turbidity NTU	* RWLS VOC	LANL LANL 109.9 Flow CFS	RWLS Combined Flow MGD	RWLS Diverting Water	Las Campanas Pumps Running	Water Quality 1 = Useable Water - Off Peak	Water Quality 3 = Unusable Water - Off Peak	
							Water Quality 2 = Useable Water - On Peak	Water Quality 4 = Unusable Water - On Peak	
00:30	47.4	0.0	0.0	17.6	1	1	1		
01:00	47.4	0.0	0.0	17.6	1	1	1		
01:30	47.9	0.0	0.0	17.6	1	1	1		
02:00	47.4	0.0	0.0	17.6	1	1	1		
02:30	47.4	0.0	0.0	17.6	1	1	1		
03:00	48.4	0.0	0.0	17.6	1	1	1		
03:30	47.4	0.0	0.0	17.6	1	1	1		
04:00	46.9	0.0	0.0	17.6	1	1	1		
04:30	46.9	0.0	0.0	17.6	1	1	1		
05:00	45.9	0.0	0.0	17.6	1	1	1		
05:30	45.9	0.0	0.0	17.6	1	1	1		
06:00	45.9	0.0	0.0	17.6	1	1	1		
06:30	42.0	0.0	0.0	17.6	1	1	1		
07:00	42.0	0.0	0.0	17.5	1	1	1		
07:30	46.9	0.0	0.0	16.7	1	1	1		
08:00	40.5	0.0	0.0	15.3	1	1	2		
08:30	40.5	0.0	0.0	15.1	1	0	2		
09:00	42.0	0.0	0.0	15.1	1	0	2		
09:30	40.5	0.0	0.0	15.1	1	0	2		
10:00	40.0	0.0	0.0	15.1	1	0	2		
10:30	40.0	0.0	0.0	15.1	1	0	2		
11:00	40.0	0.0	0.0	15.1	1	0	2		
11:30	40.0	0.0	0.0	14.7	1	0	2		
12:00	40.5	0.0	0.0	10.3	1	0	2		
12:30	40.5	0.0	0.0	0.0	0	0	2		
13:00	44.0	0.0	0.0	0.0	0	0	2		
13:30	40.0	0.0	0.0	0.0	0	0	2		
14:00	43.0	0.0	0.0	0.0	0	0	2		
14:30	59.6	0.0	0.0	0.0	0	0	2		
15:00	87.9	0.4	0.0	0.0	0	0	2		
15:30	99.6	0.7	0.0	0.0	0	0	2		
16:00	92.8	0.6	0.0	0.0	0	0	2		
16:30	81.6	0.2	0.0	0.0	0	0	2		
17:00	69.4	0.0	0.0	0.0	0	0	2		
17:30	57.6	0.0	0.0	0.0	0	0	2		
18:00	53.2	0.0	0.0	0.0	0	0	2		
18:30	51.3	0.0	0.0	10.7	1	1	2		
19:00	49.3	0.0	0.0	17.4	1	1	2		
19:30	48.4	0.0	0.0	17.4	1	1	2		
20:00	46.4	0.0	0.0	17.4	1	1	2		
20:30	47.4	0.0	0.0	17.4	1	1	1		
21:00	45.9	0.0	0.0	17.4	1	1	1		
21:30	46.4	0.0	0.0	17.4	1	1	1		
22:00	47.4	0.0	0.0	17.4	1	1	1		
22:30	48.8	0.0	0.0	17.4	1	1	1		
23:00	49.3	0.0	0.0	17.4	1	1	1		
23:30	53.2	0.0	0.0	17.4	1	1	1		
24:00	50.3	0.0	0.0	17.4	1	1	1		

07/05/2012	* RWLS Turbidity NTU	* RWLS VOC	LANL LANL 109.9 Flow CFS	RWLS Combined Flow MGD	RWLS Diverting Water	Las Campanas Pumps Running	Water Quality 1 = Useable Water - Off Peak	Water Quality 3 = Unusable Water - Off Peak	
							Water Quality 2 = Useable Water - On Peak	Water Quality 4 = Unusable Water - On Peak	
00:30	47.9	0.0	0.0	17.4	1	1	1		
01:00	45.9	0.0	0.0	17.4	1	1	1		
01:30	45.9	0.0	0.0	17.4	1	1	1		
02:00	45.9	0.0	0.0	17.4	1	1	1		
02:30	45.9	0.0	0.0	17.4	1	1	1		
03:00	45.9	0.0	0.0	17.4	1	1	1		
03:30	46.4	0.0	0.0	17.4	1	1	1		
04:00	45.9	0.0	0.0	17.4	1	1	1		
04:30	51.8	0.0	0.0	17.4	1	1	1		
05:00	40.5	0.0	0.0	17.4	1	1	1		
05:30	40.0	0.0	0.0	17.4	1	1	1		
06:00	40.0	0.0	0.0	17.4	1	1	1		
06:30	40.0	0.0	0.0	17.4	1	1	1		
07:00	42.0	0.0	0.0	17.2	1	1	1		
07:30	42.0	0.0	0.0	16.4	1	1	1		
08:00	44.0	0.0	0.0	15.4	1	0	2		
08:30	44.0	0.0	0.0	15.4	1	0	2		
09:00	51.3	0.0	0.0	14.1	1	0	2		
09:30	48.8	0.0	0.0	10.9	1	0	2		
10:00	48.8	0.0	0.0	11.4	1	0	2		
10:30	48.8	0.0	0.0	11.4	1	0	2		
11:00	48.4	0.0	0.0	10.3	1	0	2		
11:30	46.9	0.0	0.0	5.6	1	0	2		
12:00	47.4	0.0	0.0	0.0	0	0	2		
12:30	49.3	0.0	0.0	0.0	0	0	2		
13:00	42.0	0.0	0.0	0.0	0	0	2		
13:30	42.0	0.0	0.0	0.0	0	0	2		
14:00	42.0	0.0	0.0	0.0	0	0	2		
14:30	42.0	0.0	0.0	0.0	0	0	2		
15:00	45.9	0.0	0.0	0.0	0	0	2		
15:30	43.0	0.0	0.0	0.0	0	0	2		
16:00	42.5	0.0	0.0	0.0	0	0	2		
16:30	42.0	0.0	0.0	1.5	1	0	2		
17:00	40.5	0.0	0.0	4.8	1	0	2		
17:30	43.0	0.0	0.0	7.2	1	0	2		
18:00	43.0	0.0	0.0	9.7	1	0	2		
18:30	44.0	0.0	0.0	12.6	1	0	2		
19:00	2.9	0.5	0.0	0.0	0	0	2		
19:30	251.0	0.5	0.0	0.0	0	0	2		
20:00	11.7	0.5	0.0	0.0	0	0	2		
20:30	47.4	0.0	5.5	0.0	0	0	1		
21:00	45.9	0.0	17.5	0.0	0	0	1		
21:30	42.0	0.0	18.6	0.0	0	0	1		
22:00	40.5	0.0	18.6	0.0	0	0	1		
22:30	685.2	0.0	17.6	0.0	0	0	no	3	
23:00	903.5	0.0	14.0	0.0	0	0	no	3	
23:30	665.2	0.0	4.6	0.0	0	0	no	3	
24:00	759.5	0.0	0.0	0.0	0	0	no	3	

07/06/2012	* RWLS Turbidity NTU	* RWLS VOC	LANL LANL 109.9 Flow CFS	RWLS Combined Flow MGD	RWLS Diverting Water	Las Campanas Pumps Running	Water Quality 1 = Useable Water - Off Peak	Water Quality 3 = Unusable Water - Off Peak	
							Water Quality 2 = Useable Water - On Peak	Water Quality 4 = Unusable Water - On Peak	
00:30	133.8	0.0	0.0	0.0	0	0	1		
01:00	23.4	0.0	0.0	0.0	0	0	1		
01:30	38.1	0.0	0.0	0.0	0	0	1		
02:00	65.4	0.0	0.0	0.0	0	0	1		
02:30	13.2	0.0	0.0	0.5	1	0	1		
03:00	10.7	0.0	0.0	1.2	1	0	1		
03:30	24.4	0.0	0.0	1.1	1	0	1		
04:00	45.9	0.0	0.0	1.2	1	0	1		
04:30	58.1	0.0	0.0	0.0	0	0	1		
05:00	126.0	0.5	0.0	0.0	0	0	1		
05:30	569.5	0.0	0.0	0.0	0	0	1		
06:00	64.0	0.0	0.0	0.0	0	0	1		
06:30	320.4	0.0	0.0	0.0	0	0	1		
07:00	160.2	0.0	0.0	0.0	0	0	1		
07:30	102.6	0.0	0.0	0.0	0	0	1		
08:00	91.3	0.0	0.0	0.0	0	0	2		
08:30	94.7	0.0	0.0	0.0	0	0	2		
09:00	115.8	0.0	0.0	0.0	0	0	2		
09:30	140.2	0.0	0.0	0.0	0	0	2		
10:00	212.0	0.0	0.0	0.0	0	0	2		
10:30	282.3	0.0	0.0	0.0	0	0	2		
11:00	319.4	0.0	0.0	0.0	0	0	2		
11:30	332.1	0.0	0.0	0.0	0	0	2		
12:00	302.8	0.0	0.0	0.0	0	0	2		
12:30	274.5	0.0	0.0	0.0	0	0	2		
13:00	264.7	0.0	0.0	0.0	0	0	2		
13:30	288.2	0.0	0.0	0.0	0	0	2		
14:00	347.7	0.0	0.0	0.0	0	0	2		
14:30	432.7	0.0	0.0	0.0	0	0	2		
15:00	552.4	0.0	0.0	0.0	0	0	2		
15:30	696.5	0.0	0.0	0.0	0	0	no	4	
16:00	821.5	0.0	0.0	0.0	0	0	no	4	
16:30	904.5	0.0	0.0	0.0	0	0	no	4	
17:00	925.0	0.0	0.0	0.0	0	0	no	4	
17:30	880.1	0.0	0.0	0.0	0	0	no	4	
18:00	858.6	0.0	0.0	0.0	0	0	no	4	
18:30	895.2	0.0	0.0	0.0	0	0	no	4	
19:00	1001.7	0.0	0.0	0.0	0	0	no	4	
19:30	1134.1	0.0	0.0	0.0	0	0	no	4	
20:00	1247.4	0.0	0.0	0.0	0	0	no	4	
20:30	1306.0	0.0	0.0	0.0	0	0	no	3	
21:00	1298.2	0.0	0.0	0.0	0	0	no	3	
21:30	1250.3	0.0	0.0	0.0	0	0	no	3	
22:00	1173.1	0.0	0.0	0.0	0	0	no	3	
22:30	1087.7	0.0	0.0	0.0	0	0	no	3	
23:00	981.7	0.0	0.0	0.0	0	0	no	3	
23:30	887.9	0.0	0.0	0.0	0	0	no	3	
24:00	790.7	0.0	0.0	0.0	0	0	no	3	