



BROCKWAY
ENGINEERING
P.L.L.C.

Hydraulics

Hydrology

Water Resources

March 28, 2008

Mr. Lyle Swank, Regional Manager
Idaho Department of Water Resources
900 N. Skyline Drive, Suite A
Idaho Falls, ID 83402-1718

RECEIVED

MAR 31 2008

Department of Water Resources
Eastern Region

Re: Sam's Hollow Water Company – 2007 Annual Report
Project No. 370-04-2001

Dear Mr. Swank:

Enclosed please find the 2007 annual report required by the approved mitigation plan for Sam's Hollow Water Company in Bear Lake. If you have any questions or need additional information, please do not hesitate to contact me.

Cordially,

Charles G. Brockway, P.E.

Cc: Doug Johnson, Sam's Hollow Water Company
William D. Stock, President, Fish Haven Water Users Company
T. J. Budge, Atty.

CHARLES E.
BROCKWAY,
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Project No. 370-01-1999

2007 Annual Report on Water Use and Mitigation for the Sam's Hollow Water Company

Prepared for:

**Sam's Hollow Water Company
Bear Lake, Idaho**

March 28, 2008

For information concerning this report, contact
Charles E. Brockway, Ph.D., P.E.
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Project No. 370-01-1999

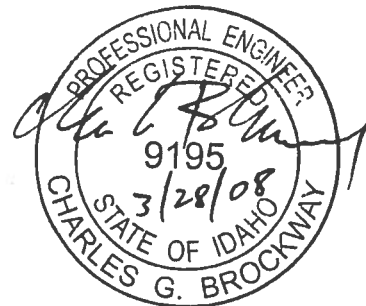
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2007 Annual Report on Water Use and Mitigation Sam's Hollow Water Company

Brockway Engineering, PLLC

March 28, 2008

Introduction

The Water Management and Operations Plan for Mitigation (the "Plan") dated June 19, 2006 for Sam's Hollow Water Company requires an annual report of water use on residences and facilities in-use during the year. The reporting requirements are outlined in the Plan, which was submitted to the Idaho Department of Water Resources. The Plan requires the submittal of the number and type of facilities (residences, commercial, and other) utilizing ground water during the year, the estimated depletion to Bear Lake resulting from the occupancy of the facilities, irrigated acres taken out of production within the project, and the volume of mitigation water returned to Bear Lake through the mitigation facilities.

The mitigation facilities consist of conveyance channel which delivers water from the end of the irrigation system to a pipeline which conveys water to Bear Lake from Fish Haven Creek. Water delivered through the irrigation system and mitigation pipeline is measured through a flow meter before it returns to Bear Lake.

Sam's Hollow Water Company has shares in Fish Haven Water Users for delivery through three ditches from Fish Haven Creek to the project. Deliveries into the ditches are measured through calibrated flumes. During 2007, deliveries through Ditch No. 1, the lower ditch, were the source of water for mitigation. A portion of the flow through Ditch No. 1 was delivered into a pond and thence through the flow meter and into Bear Lake.

Project Build-Out

In 2006 there were no homes or water-using facilities in use on the Project. Project buildout during 2007 was minimal. Only one residence was furnished water from the project during part of 2007. It appears that the projected build out will be slower than anticipated. It is now anticipated that full buildout of the subdivision will likely take longer than 10 years. It is anticipated that facilities on line during 2008 will be no more than 15 units.

Irrigated Acres

Mitigation for water use on residential and commercial units requires that formerly irrigated acres be dried up to compensate for consumptive use depletion. During 2007 it was estimated that at least 2.05 acres were removed from the historically irrigated area due to roadway construction. The attached maps illustrates the acres removed from irrigation within the Chalet Phase. The roadway surface is 2.05 acres, but the actual reduction of irrigated acreage is likely somewhat greater. Based on procedures developed by Dr. Robert Hill and adopted in the Bear River Ground Water Management Plan, the consumptive depletion for grass pasture is 1.18 ac-ft/acre/year. The 2.05 acres removed therefore resulted in a depletion reduction of 2.42 ac-ft for 2007.

Estimated Project Depletion

The estimated consumptive depletion from residences and other facilities was determined using procedures developed by Dr. Robert Hill and adopted in the Bear River Ground Water Management Plan. For the Sam's Hollow system, the depletion values for potable water and irrigation of residences and commercial facilities were developed and included in the Plan for the project. Table 1 was developed to assist in estimating depletion each year based on the facilities buildout. Table 1 shows the annual unit depletion and the number of units on line in 2007. The total estimated depletion from the one (1) unit on line in 2007 is 0.17 acre feet.

Table 1. Depletion Analysis for Sam's Hollow Water Company in 2007.

Entities with On-Site Sewage Disposal

	Unit Depletion	Occupied Units	Total Depletion
Domestic Potable Water - Homesites	0.03	1	0.03
Irrigation - Homesites	0.14	1	0.14

Entities with St Charles Sewer District Service

	Unit Depletion	Occupied Units	Total Depletion
Domestic Potable Water - Homesites	0.19	0	0.00
Irrigation - Homesites	0.14	0	0.00

Domestic/Irrigation - Condominiums (Per Building = 4 units)	0.5	0	0.00
Irrigation - Condominiums	0.14	0	0.00

Potable Water - Commercial	2.80	1 : 10,000 sq/ft Area	0.00
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All Depletion Values are in Acre-Feet Annually

Total Depletion	0.17
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* The annual depletion value is based on a rate of 40.2% occupancy

Water Supply Available for Mitigation

The 140.5 shares in Fish Haven Water Users owned by Sam's Hollow Water Company can be diverted through any of three ditches: the Upper North Ditch, Number 1 Ditch, and Number 3 Ditch. Each ditch has been instrumented with water measuring flumes and flow measurements have been recorded since May 22, 2004. The flumes were installed by the Fish Haven Water Users Company with assistance from Sam's Hollow Water Company and are being monitored by Sam's Hollow Water Company

During 2007, discharge readings were obtained from May 22, 2007 through October 31, 2007 and are shown on the attached spreadsheet. This log shows that there was approximately 83.50 acre-feet of irrigation water diverted into Ditch No. 1 during the irrigation season of 2007, of which 12.49 acre-feet was allotted to Sam's Hollow Water Company.

Mitigation Water Returned to Bear Lake

Water was returned to Bear Lake via the mitigation pipeline and was measured by the flow meter located just east of the Fish Haven Cemetery. The pipeline, conveying water from the retention pond, under the highway, and to Bear Lake is an 8-inch PVC pipe with a Siemens SITRANS FM electromagnetic water meter Type MAG 8000 installed in the pipeline (see attached photograph). The meter has a totalizer and instantaneous discharge readout which reads in gallons and gallons per minute. The meter is maintained by Sam's Hollow staff.

The meter was installed in July 2007 and mitigation water commenced flowing from Ditch #1 to Bear Lake on July 21, 2007. The irrigation turn terminated on 7/24/2007. Table 2 shows the mitigation pipeline flow meter readings

Table 2. Flow Meter Readings for the Sam's Hollow Mitigation pipeline

Date	Time	Reading (gallons)	Volume (acre-feet)
7/21/2007	11:00 am	0	0
7/22/2007	7:00 am	318000	0.96
7/24/2007	4:22 pm	754120	2.31

The total volume returned to Bear Lake during the 2007 irrigation season was 2.31 acre feet which more than mitigates for the depletion from the one residential unit of 0.17 acre feet. Further, the consumptive use reduction appurtenant to the 2.05 acres removed from irrigation in 2007 is more than adequate to mitigate for the project depletion in 2007.

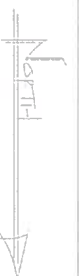
Projection of 2008 Sufficiency of Mitigation Water

It is estimated that the seasonal water availability for Sam's Hollow in 2008 will be more than adequate to provide mitigation water for the expected number of units on-line in 2008. Currently (March 22, 2008) the Bear River Basin snow pack based on NRCS SNOTEL data is at 95% of normal. So the expected runoff for Fish Haven Creek is near normal and ample water for mitigation is expected to be available. It is estimated that the maximum mitigation requirement for 2008, based on 15 residential units on line, will be 2.55 acre feet. This is approximately equal to the depletion from one (1) acre of pasture, and the expected diversion available to Ditch No. 1 will be more than ample to provide mitigation water to Bear Lake for 2008.



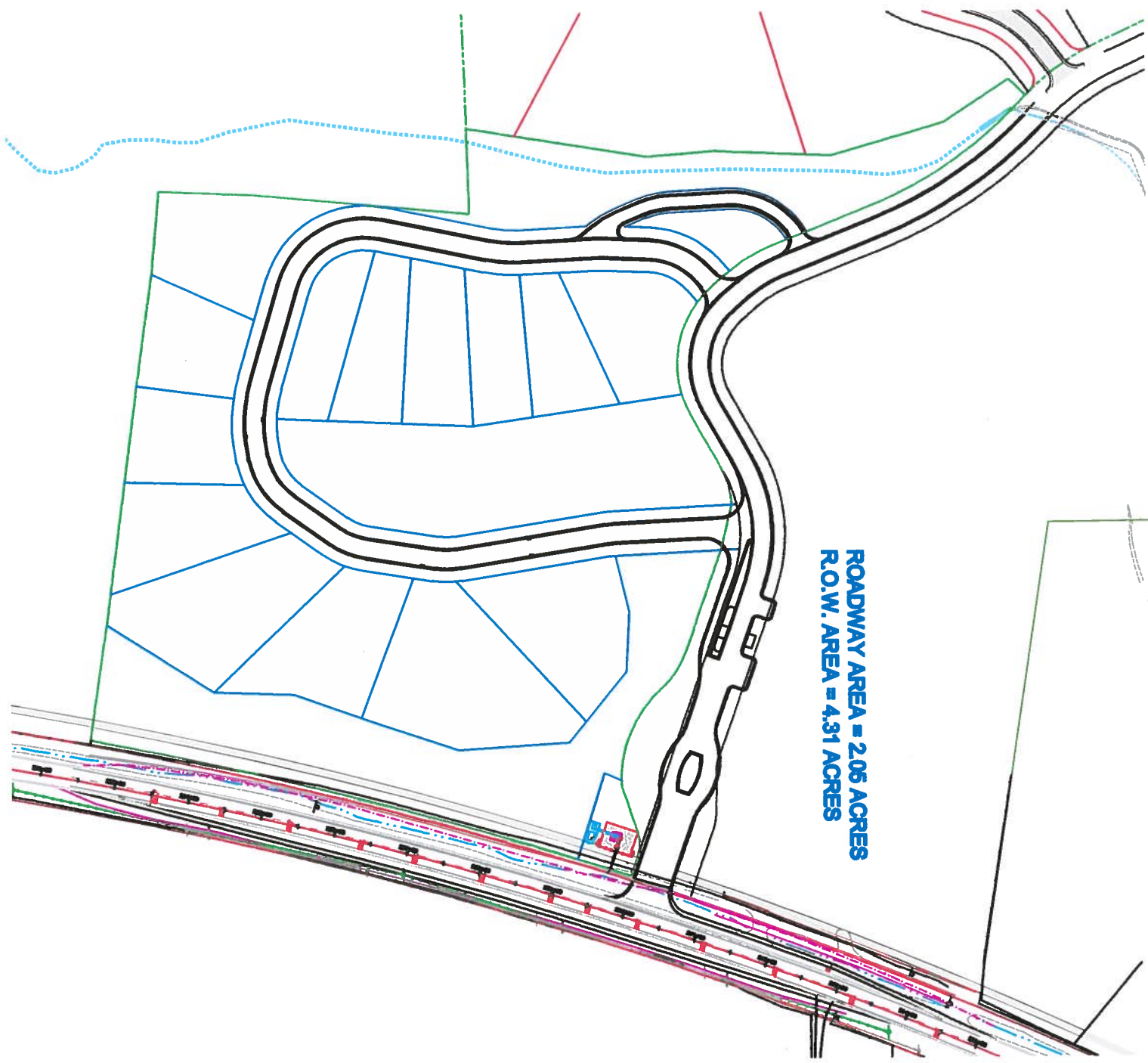
Terminus of the Sam's Hollow mitigation pipeline.

Note: Date on photo is incorrect. The correct date is July 2007.



The Reserve at Bear Lake





ROADWAY AREA = 2.06 ACRES
R.O.W. AREA = 4.31 ACRES

SAM'S HOLLOW WATER COMPANY AVAILABLE IRRIGATION DIVERSIONS

PRELIMINARY

Fish Haven Water Users Association

MEASUREMENTS BY The Reserve staff

2007

Water Year

Date	Upper North Ramped Flume*						NO 1 NORTH " RAMPED FLUME"						No. 3 North 12" Parshall Flume						Sam's Hollow Total af/d
	Gage ft	Discharge cfs	Measured af/d	Estimated af/d	Sams Hollow 99.5shares 249.5in ditch 39.9%	Accum af	Gage ft	Discharge cfs	Measured af/d	Estimated af/d	Sams Hollow 20.0shares 133.8in ditch 15.0%	Accum af	Gage ft	Discharge cfs	Measured af/d	Estimated af/d	Sams Hollow 21.0shares 255.4in ditch 8.2%	Accum af	Total af/d
1-May																			
2-May																			
3-May																			
4-May																			
5-May																			
6-May																			
7-May																			
8-May																			
9-May																			
10-May																			
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27-May																			
28-May																			
29-May																			
30-May																			
31-May																			
1-Jun																			
2-Jun																			
3-Jun																			
4-Jun																			
5-Jun	0	0.00	0.00	0.00	0.00	0.00	0.46	1.23	2.43	2.43	0.36	0.36	1.07	11.53	22.84	22.84	1.88	1.88	0.00
6-Jun				1.06	0.42	0.42				2.37	0.35	0.72				22.75	1.87	3.75	25.26
7-Jun				3.18	0.85	1.27				2.31	0.35	1.06				22.66	1.86	3.75	26.18
8-Jun				5.17	1.27	2.54				2.25	0.34	1.40				22.58	1.86	5.61	27.09
9-Jun	0.43	2.68	5.31	5.31	2.12	4.65	0.43	1.11	2.19	2.19	0.33	1.73	1.06	11.36	22.49	22.49	1.85	7.47	28.01
10-Jun				5.04	2.06	6.72				2.00	0.30	2.03				22.38	1.85	9.32	29.99
11-Jun				4.91	2.01	8.73				1.80	0.27	2.30				22.26	1.84	11.16	31.15
12-Jun	0.41	2.48	4.91	4.91	1.96	10.69	0.35	0.81	1.60	1.60	0.24	2.53	1.05	11.19	22.15	22.15	1.83	12.99	32.44
13-Jun				4.91	1.96	12.64				1.20	0.18	2.71				20.00	1.64	16.46	34.10
14-Jun				4.91	1.96	14.60				0.80	0.12	2.83				17.83	1.47	17.92	35.57
15-Jun				4.91	1.96	16.56				0.40	0.06	2.89				15.65	1.29	19.21	36.86
16-Jun	0.41	2.48	4.91	4.91	1.96	18.52	0	0.00	0.00	0.00	0.00	2.89	0.77	6.79	13.45	13.45	1.11	20.31	38.15
17-Jun				4.91	1.96	20.48				0.00	0.00	2.89				16.81	1.38	20.31	39.44
18-Jun				4.91	1.96	22.44				0.00	0.00	2.89				20.17	1.66	20.31	40.73
19-Jun	0.41	2.48	4.91	4.91	1.96	24.39	0	0.00	0.00	0.00	0.00	2.89	1.09	11.88	23.53	23.53	1.93	22.35	42.02
20-Jun				3.68	1.47	25.86				0.00	0.00	2.89				23.27	1.91	23.27	43.31
21-Jun				2.46	0.98	26.84				0.00	0.00	2.89				23.01	1.89	23.01	44.60
22-Jun				1.23	0.49	27.33				0.00	0.00	2.89				22.75	1.87	23.01	45.89
23-Jun	0	0.00	0.00	0.00	0.00	27.33	0	0.00	0.00	0.00	0.00	2.89	1.06	11.36	22.49	22.49	1.85	23.96	47.18
24-Jun				0.00	0.00	27.33				0.00	0.00	2.89				22.72	1.87	32.81	48.47
25-Jun				0.00	0.00	27.33				0.00	0.00	2.89				22.49	1.85	22.49	50.12
26-Jun				0.00	0.00	27.33	0	0.00	0.00	0.00	0.00	2.89	1.08	11.71	23.18	23.18	1.89	36.57	51.41
27-Jun				0.00	0.00	27.33				0.00	0.00	2.89				22.84	1.91	38.47	52.70
28-Jun				0.00	0.00	27.33				0.00	0.00	2.89				22.50	1.88	40.35	53.99
29-Jun				0.00	0.00	27.33				0.00	0.00	2.89				22.15	1.85	42.20	55.28
30-Jun	0	0.00	0.00	0.00	0.00	27.33	0	0.00	0.00	0.00	0.00	2.89				21.81	1.82	44.02	56.57
1-Jul				0.00	0.00	27.33				0.00	0.00	2.89	1.04	11.02	21.81	21.81	1.79	45.81	57.86
2-Jul				0.00	0.00	27.33				0.00	0.00	2.89				19.83	1.63	47.44	59.15
																17.84	1.47	48.91	60.44

Date	Upper North Ramped Flume*					NO 1 NORTH " RAMPED FLUME"					No. 3 North 12" Parshall Flume					Sam's Hollow				
	Gage ft	Discharge cfs	Measured af/d	Estimated af/d	Sams Hollow 99.5shares 249.5in ditch 39.9%	Accum af	Gage ft	Discharge cfs	Measured af/d	Estimated af/d	Sams Hollow 20.0shares 133.8in ditch 15.0%	Accum af	Gage ft	Discharge cfs	Measured af/d	Estimated af/d	Sams Hollow 21.0shares 255.4in ditch 8.2%	Accum af	Total af/d	
3-Jul	0	0.00	0.00	0.00	0.00	27.33	0	0.00	0.00	0.00	0.00	2.89	0			15.86	1.30	50.22	15.86	1.30
4-Jul					0.00	27.33					0.00	2.89				13.87	1.14	51.36	13.87	1.14
5-Jul					0.00	27.33					0.00	2.89				11.89	0.98	52.33	11.89	0.98
6-Jul					0.00	27.33					0.00	2.89				9.90	0.81	53.15	9.90	0.81
7-Jul	0	0.00	0.00	0.00	0.00	27.33	0	0.00	0.00	0.00	0.00	2.89	1.00	4.00	7.92	7.92	0.65	53.80	7.92	0.65
8-Jul					0.00	27.33					0.00	2.89				7.82	0.64	54.44	7.82	0.64
9-Jul					0.00	27.33					0.00	2.89				7.72	0.63	55.08	7.72	0.63
10-Jul	0				0.00	27.33	0				0.00	2.89	0.97			7.61	0.63	55.70	7.61	0.63
11-Jul					0.00	27.33					0.00	2.89				7.51	0.62	56.32	7.51	0.62
12-Jul					0.00	27.33					0.00	2.89				7.41	0.61	56.93	7.41	0.61
13-Jul					0.00	27.33					0.00	2.89				7.31	0.60	57.53	7.31	0.60
14-Jul	0	0.00	0.00	0.00	0.00	27.33	0	0.00	0.00	0.00	0.00	2.89	0.94	3.64	7.21	7.21	0.59	58.12	7.21	0.59
15-Jul					0.00	27.33					0.00	2.89				7.21	0.59	58.72	7.21	0.59
16-Jul					0.00	27.33					0.00	2.89				7.21	0.59	59.31	7.21	0.59
17-Jul	0	0.00	0.00	0.00	0.00	27.33	0	0.00	0.00	0.00	0.00	2.89	0.94	3.64	7.21	7.21	0.59	59.90	7.21	0.59
18-Jul					0.00	27.33					0.00	2.89				7.15	0.59	60.49	7.15	0.59
19-Jul					0.00	27.33					0.06	2.95				7.09	0.58	61.07	7.09	0.58
20-Jul					0.00	27.33					0.11	3.06				7.03	0.58	61.65	7.03	0.58
21-Jul	0				0.00	27.33	0				0.17	3.23				6.98	0.57	62.22	6.98	0.57
22-Jul					0.00	27.33					0.22	3.45				6.84	0.56	62.84	6.84	0.56
23-Jul					0.00	27.33					0.28	3.72				6.68	0.57	63.43	6.68	0.57
24-Jul	0	0.00	0.00	0.00	0.00	27.33	0.48	1.31	2.59	2.59	0.33	4.06	0.26	0.51	1.02	1.02	0.41	64.04	1.02	0.41
25-Jul					0.00	27.33					0.39	4.44				4.99	0.45	64.63	4.99	0.45
26-Jul					0.00	27.33					0.38	4.82				4.82	0.44	65.23	4.82	0.44
27-Jul					0.00	27.33					0.36	5.18				4.95	0.45	65.84	4.95	0.45
28-Jul	0	0.00	0.00	0.00	0.00	27.33	0.44	1.15	2.27	2.27	0.35	5.53				4.86	0.47	66.45	4.86	0.47
29-Jul					0.00	27.33					0.34	5.87				4.74	0.46	67.06	4.74	0.46
30-Jul					0.00	27.33					0.23	6.10				4.61	0.45	67.67	4.61	0.45
31-Jul	0	0.00	0.00	0.00	0.00	27.33	0	0.00	0.00	0.00	0.11	6.21	0.24	0.46	0.90	0.90	0.44	68.28	0.90	0.44
1-Aug					0.00	27.33					0.00	6.21				0.85	0.43	68.89	0.85	0.43
2-Aug					0.00	27.33					0.00	6.21				0.87	0.42	69.50	0.87	0.42
3-Aug					0.00	27.33					0.00	6.21				0.85	0.41	70.11	0.85	0.41
4-Aug	0	0.00	0.00	0.00	0.00	27.33	0	0.00	0.00	0.00	0.00	6.21	0.22	0.40	0.79	0.79	0.40	70.72	0.79	0.40
5-Aug					0.00	27.33					0.00	6.21				0.82	0.39	71.33	0.82	0.39
6-Aug					0.00	27.33					0.00	6.21				0.87	0.38	71.94	0.87	0.38
7-Aug	0	0.00	0.00	0.00	0.00	27.33	0	0.00	0.00	0.00	0.00	6.21	0.26	0.51	1.02	1.02	0.37	72.55	1.02	0.37
8-Aug					0.00	27.33					0.00	6.21				0.96	0.36	73.16	0.96	0.36
9-Aug					0.00	27.33					0.00	6.21				1.83	0.15	73.77	1.83	0.15
10-Aug					0.00	27.33					0.00	6.21				2.70	0.22	74.38	2.70	0.22
11-Aug	0				0.00	27.33	0		0.00	0.00	0.00	6.21	0.22	0.40	0.79	0.79	0.21	74.99	0.79	0.21
12-Aug					0.00	27.33					0.00	6.21				2.89	0.24	75.60	2.89	0.24
13-Aug					0.00	27.33					0.00	6.21				4.99	0.41	76.21	4.99	0.41
14-Aug					0.00	27.33	0	0.00	0.00	0.00	0.00	6.21	0.93	3.58	7.09	7.09	0.58	76.82	7.09	0.58
15-Aug					0.00	27.33					0.00	6.21				7.24	0.60	77.43	7.24	0.60
16-Aug					0.00	27.33					0.00	6.21				7.39	0.61	78.04	7.39	0.61
17-Aug					0.00	27.33					0.00	6.21				7.53	0.62	78.65	7.53	0.62
18-Aug	0				0.00	27.33	0				0.00	6.21				7.68	0.63	79.26	7.68	0.63
19-Aug					0.00	27.33					0.00	6.21				7.82	0.62	79.87	7.82	0.62
20-Aug					0.00	27.33					0.00	6.21				7.97	0.61	80.48	7.97	0.61
21-Aug					0.00	27.33					0.00	6.21				8.11	0.60	81.09	8.11	0.60
22-Aug					0.00	27.33					0.00	6.21				8.26	0.59	81.70	8.26	0.59
23-Aug					0.00	27.33					0.00	6.21				8.40	0.58	82.31	8.40	0.58
24-Aug					0.00	27.33					0.00	6.21				8.55	0.57	82.92	8.55	0.57
25-Aug	0.4	2.38	4.72	4.72	1.88	29.21	0	0.00	0.00	0.00	0.00	6.21	0.8	2.85	5.64	5.64	0.54	83.53	5.64	0.54
26-Aug					1.83	31.05					0.00	6.21				6.09	0.50	84.14	6.09	0.50
27-Aug					1.79	32.83					0.00	6.21				5.64	0.46	84.75	5.64	0.46
28-Aug	0.38	2.20	4.35	4.35	1.74	34.57	0	0.00	0.00	0.00	0.00	6.21	0.76	2.63	5.22	5.22	0.44	85.36	5.22	0.44
29-Aug					1.74	36.31					0.00	6.21				5.32	0.44	85.97	5.32	0.44
30-Aug					1.74	38.04					0.00	6.21				5.43	0.45	86.58	5.43	0.45
31-Aug	0.38	2.20	4.35	4.35	1.74	39.78	0	0.00	0.00	0.00	0.00	6.21	0.8	2.85	5.64	5.64	0.45	87.19	5.64	0.45
1-Sep					1.74	41.51					0.00	6.21				5.53	0.46	87.80	5.53	0.46
2-Sep					1.74	43.25					0.00	6.21				5.71	0.47	88.41	5.71	0.47
3-Sep					1.74	44.99					0.00	6.21				5.86	0.48	89.02	5.86	0.48
4-Sep	0.38	2.20	4.35	4.35	1.74	46.72	0	0.00	0.00	0.00	0.00	6.21	0.82	2.96	5.86	5.86	0.46	90.64	5.86	0.46
5-Sep					1.74	48.46					0.00	6.21				5.62	0.46	91.25	5.62	0.46
6-Sep					1.74	50.19					0.00	6.21				5.43	0.44	91.86	5.43	0.44
7-Sep					1.74	51.93					0.00	6.21				5.15	0.42	92.47	5.15	0.42
8-Sep	0.38	2.20	4.35	4.35	1.74	53.67	0	0.00	0.00	0.00	0.00	6.21	0.41	2.48	4.91	4.91	0.40	94.09	4.91	0.40

Blank Cover