Worksheet 1: Judging Rubric

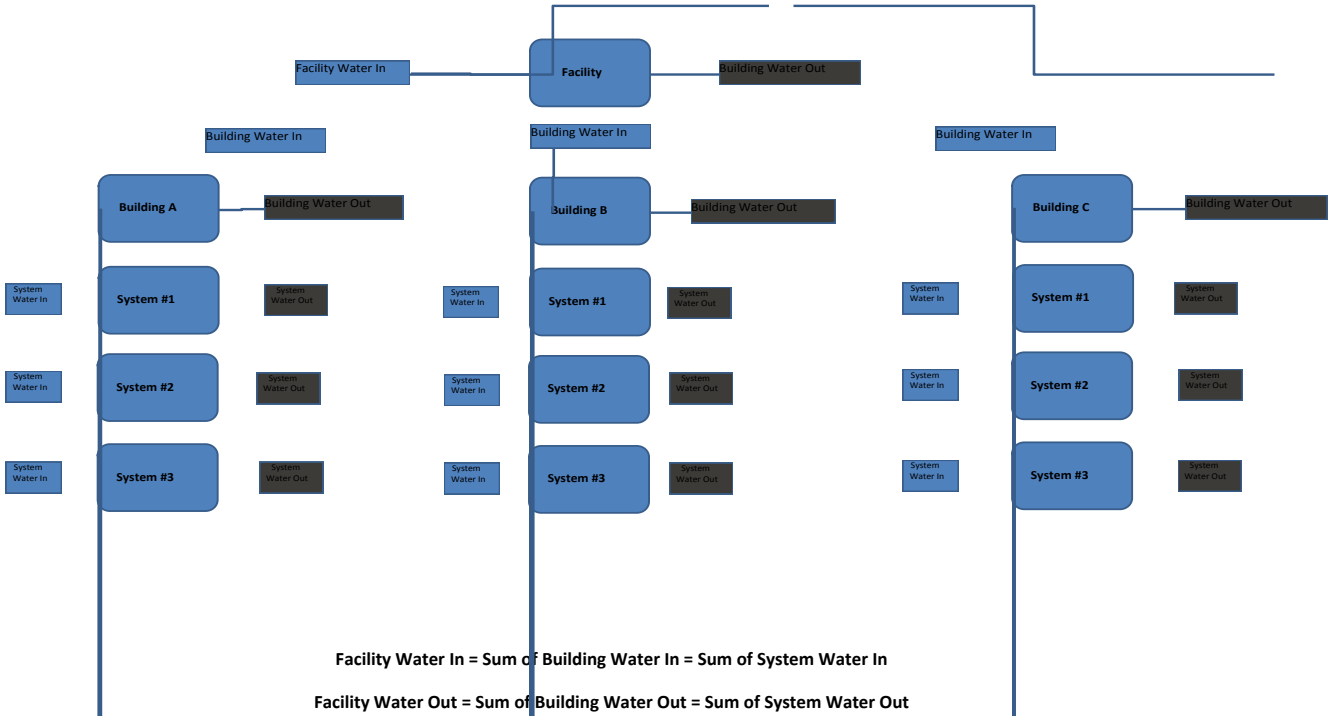
Judging Rubric

Category	Priority	Poor		Average		Excellent
Overall Design	1	1	2	3	4	5
Dashboard Functionality	1	1	2	3	4	5
System Hierarchy	1	1	2	3	4	5
Data Export Functionality	2	1	2	3	4	5
Identifying Bad Data	2	1	2	3	4	5
Cost Integration	2	1	2	3	4	5
Blue Footprint Integration	2	1	2	3	4	5

Overall Design	This score will be based on the overall design of the solution. This will take into consideration: easy of navigation, system hierarchy, pleasing design, easy to see all information in one location.
Dashboard Functionality	This score will be based on how well the dashboard renders the data and provide a good overview of the customer's water systems. Dashboard graphs should provide the ability to choose date ranges
System Hierarchy	This score will be based on how well the solution provide a customer with mulitple locations to see all of their systems together and individually.
Data Export Functionality	This score will be based on how easily and effectively the solution allows a user to export the data point for desired time frame for the desired data points
Identifying Bad Data	This score will be based on how well the solution identifies data that is or may be inaccurate and allows the user to exclude the data from a given chart, graph or report.
Cost Integration	This score will be based the ability of the system to attach a cost to each data point and provides the ability to render dashboard graphs to show actual use or cost.
Blue Footprint Integration	This score will be based the ability of the system to calculate and graph a blue footprint. Blue footprint is defined as the amount of water used per unit of production. For example, if a printing company uses 100,000 gallons of water and prints 100,000 pages then their blue footprint would be 1 gallon per page.

Worksheet 2: System Hierarchy

System Hierarchy



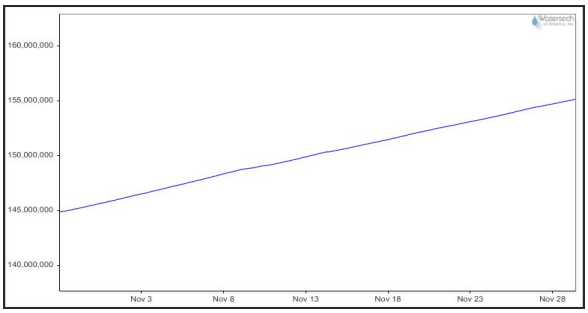
Facility Water In = Sum of Building Water In = Sum of System Water In

Facility Water Out = Sum of Building Water Out = Sum of System Water Out

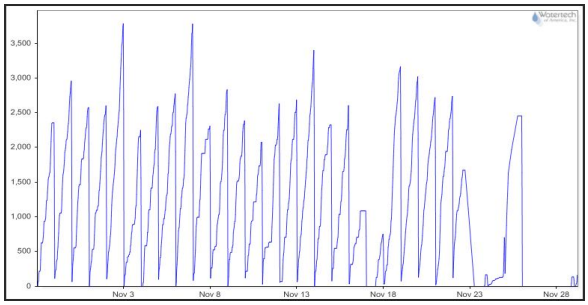
Worksheet 3: Flow Data

Typical Readings	Explanation	Desired Dashboard Graph	Potential for Bad Data.
Flow	Flow data points are generally logged as a totalized reading. For example, at 8:00 am a flow data point may show 1234 which means that the flow meter was reading 1,234 gallons at that time. The next data point may be 1334 at 8:10 am. This means that difference between the two readings is how much water was used in that time frame. (1,334 -1,234) = 100 gallons. Flow data may be totalized continually or reset every day. Flow data that is totalized continually will never reset to 0. Data that is reset every day will be reset to 0 at the same time everyday.	The dashboard of flow data will allow the user to see how much water was used by in a certain time period and compare that time period to the period before it. There should be a chart for each flow data point. Each graph should all the user to select to view the daily water use for each data point by month, week, day. The graph should clearly show the current periods flow and the flow for the period previous.	Bad flow data is generally identifable by a sudden increase in the flow that doesn't match the patten of flow data from previous dates. However, care must be taken not to identify an actuall sudden increase in flow with bad data.

Continually Totalizing Data



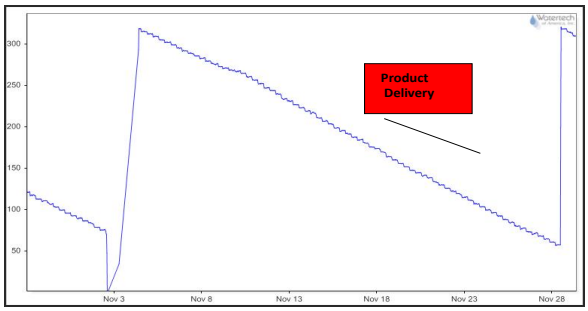
Data that is Reset Everyday



Worksheet 4: Level Data

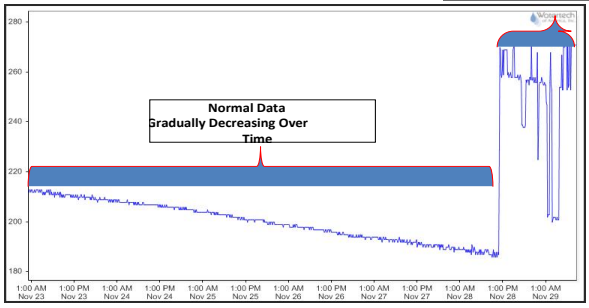
Typical Readings	Explanation	Desired Dashboard Graph	Potential for Bad Data.
Level	Level data is generally expressed at the volume of liquid in a tank. The data should should show a small amount of "bounce" in the raw data with an overall trend down. A sudden increase in the volume is normall and indicates that a delivery of product was made.	The dashboard of level data will allow the user to see how much product was used by in a certain time period and compare that time period to the period before it. There should be a chart for each level data point. Each graph should all the user to select to view the daily water use for each data point by month, week, day. The graph should clearly show the current periods flow and the flow for the period previous. Useage calculations need to take into account the delivery of product.	Bad flow data is generally identifable by a sudden and frequent changes in the volumen in the positive and negative direction. However, care must be taken not to identify an product delivery as bad data.

Normal Level Data



Bad Data

Bad Data Frequent Changes in Level Both Positive &

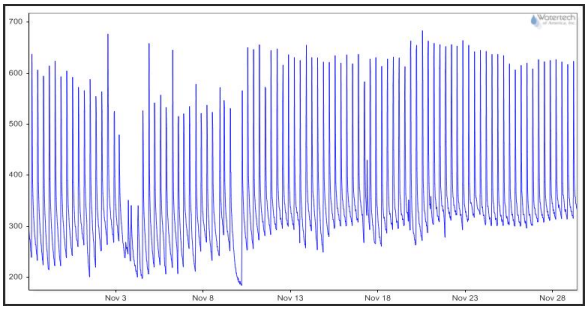


Level Data

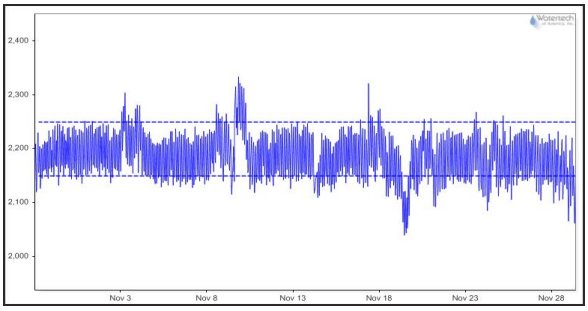
Worksheet 5: Non-Totalizing Data

Typical Readings	Explanation	Desired Dashboard Graph	Potential for Bad Data.
Conductivity, pH, ORP, Turbidity, Chlorine	These types of data points do not get totalized. Instead, they just provide a continuous reading of a particular parameter.	The dashboard of level data will allow the user to see the trend of the reading over a period of time (day, week, month) which is selectable by the users. Also provide the ability to export the raw data to a spreadsheet program for further analysis	Bad flow data is generally identifable by a sudden and frequent changes in the volumen in the positive and negative direction. However, care must be taken not to identify an product delivery as bad data.

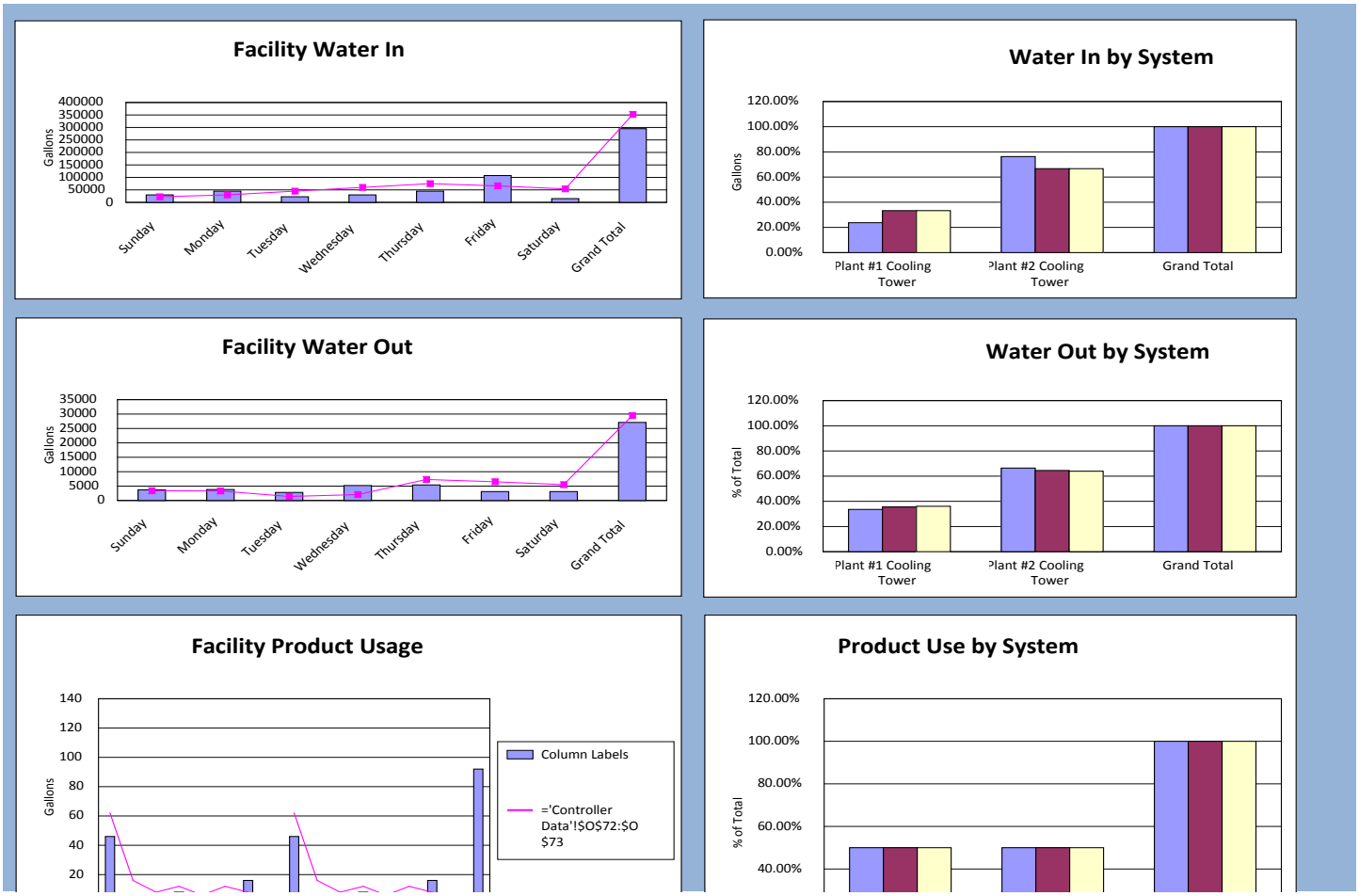
Trend of ORP Data over 1 month

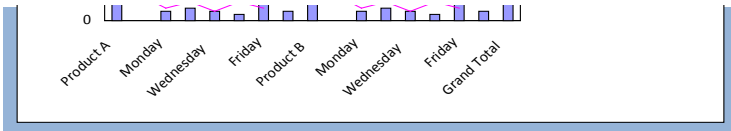


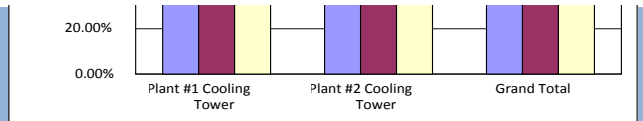
Trend of Conductivity Data over 1 month

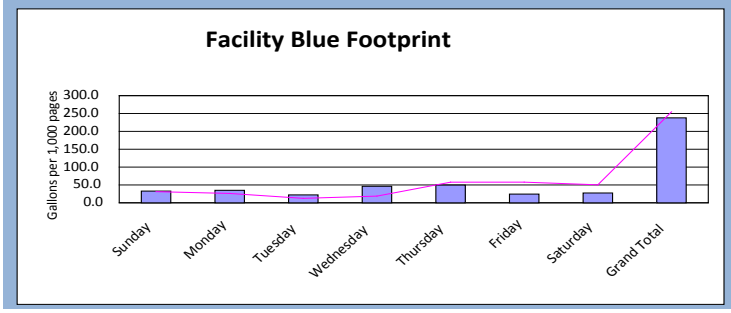


Worksheet 6: Dashboard


Facility Water In
Gallons
400000
350000
300000
250000
200000
150000
100000
50000
0
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Grand Total
Water In by System
Gallons
120.00%
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
Plant #1 Cooling Tower
Plant #2 Cooling Tower
Grand Total
Facility Water Out
Gallons
35000
30000
25000
20000
15000
10000
5000
0
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Grand Total
Water Out by System
% of Total
120.00%
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
Plant #1 Cooling Tower
Plant #2 Cooling Tower
Grand Total
Facility Product Usage
Gallons
140
120
100
80
60
40
20
Column Labels
='Controller Data'!$O$72:$O$73
Product Use by System
% of Total
120.00%
100.00%
80.00%
60.00%
40.00%


0
Product A
Monday
Wednesday
Friday
Product B
Monday
Wednesday
Friday
Grand Total


20.00%
0.00%
Plant #1 Cooling Tower
Plant #2 Cooling Tower
Grand Total


Facility Blue Footprint
Gallons per 1,000 pages
300.0
250.0
200.0
150.0
100.0
50.0
0.0
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Grand Total

Worksheet 7: Controller Data

Controller Data

Date	Week	Day	Facility	System Name	System Type	Input	Input Type	In/Out	Daily Flow	Daily Usage
30-Oct	45.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	10000	
30-Oct	45.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	20000	
30-Oct	45.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1200	
30-Oct	45.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	2500	
31-Oct	45.00	Monday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	15000	
31-Oct	45.00	Monday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	30000	
31-Oct	45.00	Monday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1300	
31-Oct	45.00	Monday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	2500	
1-Nov	45.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	7500	
1-Nov	45.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	15000	
1-Nov	45.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1000	
1-Nov	45.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	1800	
2-Nov	45.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	10000	
2-Nov	45.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	20000	
2-Nov	45.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1800	
2-Nov	45.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	3400	
3-Nov	45.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	15000	
3-Nov	45.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	30000	
3-Nov	45.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1900	
3-Nov	45.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	3500	
4-Nov	45.00	Friday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	7500	
4-Nov	45.00	Friday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	100000	
4-Nov	45.00	Friday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	900	
4-Nov	45.00	Friday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	2200	
5-Nov	45.00	Saturday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	5000	
5-Nov	45.00	Saturday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	10000	
5-Nov	45.00	Saturday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1000	
5-Nov	45.00	Saturday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	2100	
6-Nov	46.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	7500	
6-Nov	46.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	15000	
6-Nov	46.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1200	
6-Nov	46.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	2200	
7-Nov	46.00	Monday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	10000	
7-Nov	46.00	Monday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	20000	
7-Nov	46.00	Monday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1300	
7-Nov	46.00	Monday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	2000	
8-Nov	46.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	15000	
8-Nov	46.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	30000	
8-Nov	46.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	500	
8-Nov	46.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	900	
9-Nov	46.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	20000	
9-Nov	46.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	40000	
9-Nov	46.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	750	
9-Nov	46.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	1300	
10-Nov	46.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	25000	
10-Nov	46.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	50000	
10-Nov	46.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	2500	

In/Out	In
Facility	(All)
System	(All)

Sum of Daily Flow	Column Labels		
Row Labels	45	46	Grand Total
Sunday	30000	22500	52500
Monday	45000	30000	75000
Tuesday	22500	45000	67500
Wednesday	30000	60000	90000
Thursday	45000	75000	120000
Friday	107500	66000	173500
Saturday	15000	54000	69000
Grand Total	**295000**	**352500**	**647500**

In/Out	Out
Facility	(All)
System	(All)

Sum of Daily Flow	Column Labels		
Row Labels	45	46	Grand Total
Sunday	3700	3400	7100
Monday	3800	3300	7100
Tuesday	2800	1400	4200
Wednesday	5200	2050	7250
Thursday	5400	7300	12700
Friday	3100	6500	9600
Saturday	3100	5500	8600
Grand Total	**27100**	**29450**	**56550**

In/Out	Out
Facility	(All)

Sum of Daily Flow	Column Labels			
Row Labels	45	46	47	Grand Total
Plant #1 Cooling Tower	33.58%	35.48%	36.07%	34.94%
Plant #2 Cooling Tower	66.42%	64.52%	63.93%	65.06%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

10-Nov	46.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	4800	
11-Nov	46.00	Friday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	22000	
11-Nov	46.00	Friday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	44000	
11-Nov	46.00	Friday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	2200	
11-Nov	46.00	Friday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	4300	
12-Nov	46.00	Saturday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	18000	
12-Nov	46.00	Saturday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	36000	
12-Nov	46.00	Saturday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	2000	
12-Nov	46.00	Saturday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	3500	
13-Nov	47.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	12000	
13-Nov	47.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	24000	
13-Nov	47.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1000	
13-Nov	47.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	1600	
14-Nov	47.00	Monday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	7500	
14-Nov	47.00	Monday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	15000	
14-Nov	47.00	Monday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1200	
14-Nov	47.00	Monday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	2200	
15-Nov	47.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	10000	
15-Nov	47.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	20000	
15-Nov	47.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1300	
15-Nov	47.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	2400	
16-Nov	47.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	15000	
16-Nov	47.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	30000	
16-Nov	47.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1500	
16-Nov	47.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	2500	
17-Nov	47.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Make Up	Flow	In	7500	
17-Nov	47.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Make Up	Flow	In	15000	
17-Nov	47.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Bleed	Flow	Out	1600	
17-Nov	47.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Bleed	Flow	Out	3000	
30-Oct	45.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	155	
31-Oct	45.00	Monday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	152	3
1-Nov	45.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	148	4
2-Nov	45.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	145	3
3-Nov	45.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	143	2
4-Nov	45.00	Friday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	135	8
5-Nov	45.00	Saturday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	132	3
6-Nov	46.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	124	8
7-Nov	46.00	Monday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	120	4
8-Nov	46.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	114	6
9-Nov	46.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	111	3
10-Nov	46.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	105	6
11-Nov	46.00	Friday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	101	4
12-Nov	46.00	Saturday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	275	
13-Nov	47.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	271	4
14-Nov	47.00	Monday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	264	7
15-Nov	47.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	258	6
16-Nov	47.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	250	8
17-Nov	47.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Product A	Level	Out	245	5

In/Out	In
Facility	(All)

Sum of Daily Flow	Column Labels			
Row Labels	**45**	**46**	**47**	**Grand Total**
Plant #1 Cooling Tower	23.73%	33.33%	33.33%	29.81%
Plant #2 Cooling Tower	76.27%	66.67%	66.67%	70.19%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Facility	(All)
System	(All)

Sum of Daily Usage	Column Labels		
Row Labels	**45**	**46**	**Grand Total**
Product A	**46**	**62**	**108**
Sunday	0	16	16
Monday	6	8	14
Tuesday	8	12	20
Wednesday	6	6	12
Thursday	4	12	16
Friday	16	8	24
Saturday	6		6
Product B	**46**	**62**	**108**
Sunday	0	16	16
Monday	6	8	14
Tuesday	8	12	20
Wednesday	6	6	12
Thursday	4	12	16
Friday	16	8	24
Saturday	6		6
Grand Total	**92**	**124**	**216**

30-Oct	45.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	155	
31-Oct	45.00	Monday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	152	3
1-Nov	45.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	148	4
2-Nov	45.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	145	3
3-Nov	45.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	143	2
4-Nov	45.00	Friday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	135	8
5-Nov	45.00	Saturday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	132	3
6-Nov	46.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	124	8
7-Nov	46.00	Monday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	120	4
8-Nov	46.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	114	6
9-Nov	46.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	111	3
10-Nov	46.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	105	6
11-Nov	46.00	Friday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	101	4
12-Nov	46.00	Saturday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	275	
13-Nov	47.00	Sunday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	271	4
14-Nov	47.00	Monday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	264	7
15-Nov	47.00	Tuesday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	258	6
16-Nov	47.00	Wednesday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	250	8
17-Nov	47.00	Thursday	Milwaukee	Plant #1	Cooling Tower	Product B	Level	Out	245	5
30-Oct	45.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	155	
31-Oct	45.00	Monday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	152	3
1-Nov	45.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	148	4
2-Nov	45.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	145	3
3-Nov	45.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	143	2
4-Nov	45.00	Friday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	135	8
5-Nov	45.00	Saturday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	132	3
6-Nov	46.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	124	8
7-Nov	46.00	Monday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	120	4
8-Nov	46.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	114	6
9-Nov	46.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	111	3
10-Nov	46.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	105	6
11-Nov	46.00	Friday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	101	4
12-Nov	46.00	Saturday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	275	
13-Nov	47.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	271	4
14-Nov	47.00	Monday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	264	7
15-Nov	47.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	258	6
16-Nov	47.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	250	8
17-Nov	47.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Product A	Level	Out	245	5
30-Oct	45.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	155	
31-Oct	45.00	Monday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	152	3
1-Nov	45.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	148	4
2-Nov	45.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	145	3
3-Nov	45.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	143	2
4-Nov	45.00	Friday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	135	8
5-Nov	45.00	Saturday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	132	3
6-Nov	46.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	124	8
7-Nov	46.00	Monday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	120	4
8-Nov	46.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	114	6

Sum of Daily Usage	**Column Labels**			
Row Labels	**45**	**46**	**47**	**Grand Total**
Plant #1 Cooling Tower	50.00%	50.00%	50.00%	50.00%
Plant #2 Cooling Tower	50.00%	50.00%	50.00%	50.00%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Controller Data

9-Nov	46.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	111	3
10-Nov	46.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	105	6
11-Nov	46.00	Friday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	101	4
12-Nov	46.00	Saturday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	275	
13-Nov	47.00	Sunday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	271	4
14-Nov	47.00	Monday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	264	7
15-Nov	47.00	Tuesday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	258	6
16-Nov	47.00	Wednesday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	250	8
17-Nov	47.00	Thursday	Milwaukee	Plant #2	Cooling Tower	Product B	Level	Out	245	5

Worksheet 8: Other Data

Production Data

Date	Week	Day	Facility	System	Production	Units	Bleed Flow	Blue Footprint (gallons per 1,000 units)
30-Oct	45.00	Sunday	Milwaukee	Plant #1	100000	Pages	1200	12.0
30-Oct	45.00	Sunday	Milwaukee	Plant #2	120000	Pages	2500	20.8
31-Oct	45.00	Monday	Milwaukee	Plant #1	130000	Pages	1300	10.0
31-Oct	45.00	Monday	Milwaukee	Plant #2	100000	Pages	2500	25.0
1-Nov	45.00	Tuesday	Milwaukee	Plant #1	120000	Pages	1000	8.3
1-Nov	45.00	Tuesday	Milwaukee	Plant #2	130000	Pages	1800	13.8
2-Nov	45.00	Wednesday	Milwaukee	Plant #1	100000	Pages	1800	18.0
2-Nov	45.00	Wednesday	Milwaukee	Plant #2	120000	Pages	3400	28.3
3-Nov	45.00	Thursday	Milwaukee	Plant #1	130000	Pages	1900	14.6
3-Nov	45.00	Thursday	Milwaukee	Plant #2	100000	Pages	3500	35.0
4-Nov	45.00	Friday	Milwaukee	Plant #1	120000	Pages	900	7.5
4-Nov	45.00	Friday	Milwaukee	Plant #2	130000	Pages	2200	16.9
5-Nov	45.00	Saturday	Milwaukee	Plant #1	100000	Pages	1000	10.0
5-Nov	45.00	Saturday	Milwaukee	Plant #2	120000	Pages	2100	17.5
6-Nov	46.00	Sunday	Milwaukee	Plant #1	130000	Pages	1200	9.2
6-Nov	46.00	Sunday	Milwaukee	Plant #2	100000	Pages	2200	22.0
7-Nov	46.00	Monday	Milwaukee	Plant #1	120000	Pages	1300	10.8
7-Nov	46.00	Monday	Milwaukee	Plant #2	130000	Pages	2000	15.4
8-Nov	46.00	Tuesday	Milwaukee	Plant #1	100000	Pages	500	5.0
8-Nov	46.00	Tuesday	Milwaukee	Plant #2	120000	Pages	900	7.5
9-Nov	46.00	Wednesday	Milwaukee	Plant #1	130000	Pages	750	5.8
9-Nov	46.00	Wednesday	Milwaukee	Plant #2	100000	Pages	1300	13.0
10-Nov	46.00	Thursday	Milwaukee	Plant #1	120000	Pages	2500	20.8
10-Nov	46.00	Thursday	Milwaukee	Plant #2	130000	Pages	4800	36.9
11-Nov	46.00	Friday	Milwaukee	Plant #1	100000	Pages	2200	22.0
11-Nov	46.00	Friday	Milwaukee	Plant #2	120000	Pages	4300	35.8
12-Nov	46.00	Saturday	Milwaukee	Plant #1	130000	Pages	2000	15.4
12-Nov	46.00	Saturday	Milwaukee	Plant #2	100000	Pages	3500	35.0
13-Nov	47.00	Sunday	Milwaukee	Plant #1	120000	Pages	1000	8.3
13-Nov	47.00	Sunday	Milwaukee	Plant #2	130000	Pages	1600	12.3
14-Nov	47.00	Monday	Milwaukee	Plant #1	100000	Pages	1200	12.0
14-Nov	47.00	Monday	Milwaukee	Plant #2	120000	Pages	2200	18.3
15-Nov	47.00	Tuesday	Milwaukee	Plant #1	130000	Pages	1300	10.0
15-Nov	47.00	Tuesday	Milwaukee	Plant #2	100000	Pages	2400	24.0
16-Nov	47.00	Wednesday	Milwaukee	Plant #1	120000	Pages	1500	12.5
16-Nov	47.00	Wednesday	Milwaukee	Plant #2	130000	Pages	2500	19.2
17-Nov	47.00	Thursday	Milwaukee	Plant #1	100000	Pages	1600	16.0
17-Nov	47.00	Thursday	Milwaukee	Plant #2	120000	Pages	3000	25.0

Cost Data

Facility	Cost per Gallon
Water In	$0.005
Water Out	$0.004
Product A	$8.00
Product B	$4.75
Product C	$7.75

Sum of Blue Footprint (gallons per 1,000 units)	Column Labels		
Row Labels	**45**	**46**	**Grand Total**
Sunday	32.83333333	31.23	64.0641026
Monday	35	26.22	61.2179487
Tuesday	22.17948718	12.5	34.6794872
Wednesday	46.33333333	18.77	65.1025641
Thursday	49.61538462	57.76	107.371795
Friday	24.42307692	57.83	82.2564103
Saturday	27.5	50.38	77.8846154
Grand Total	**237.8846154**	**254.7**	**492.576923**