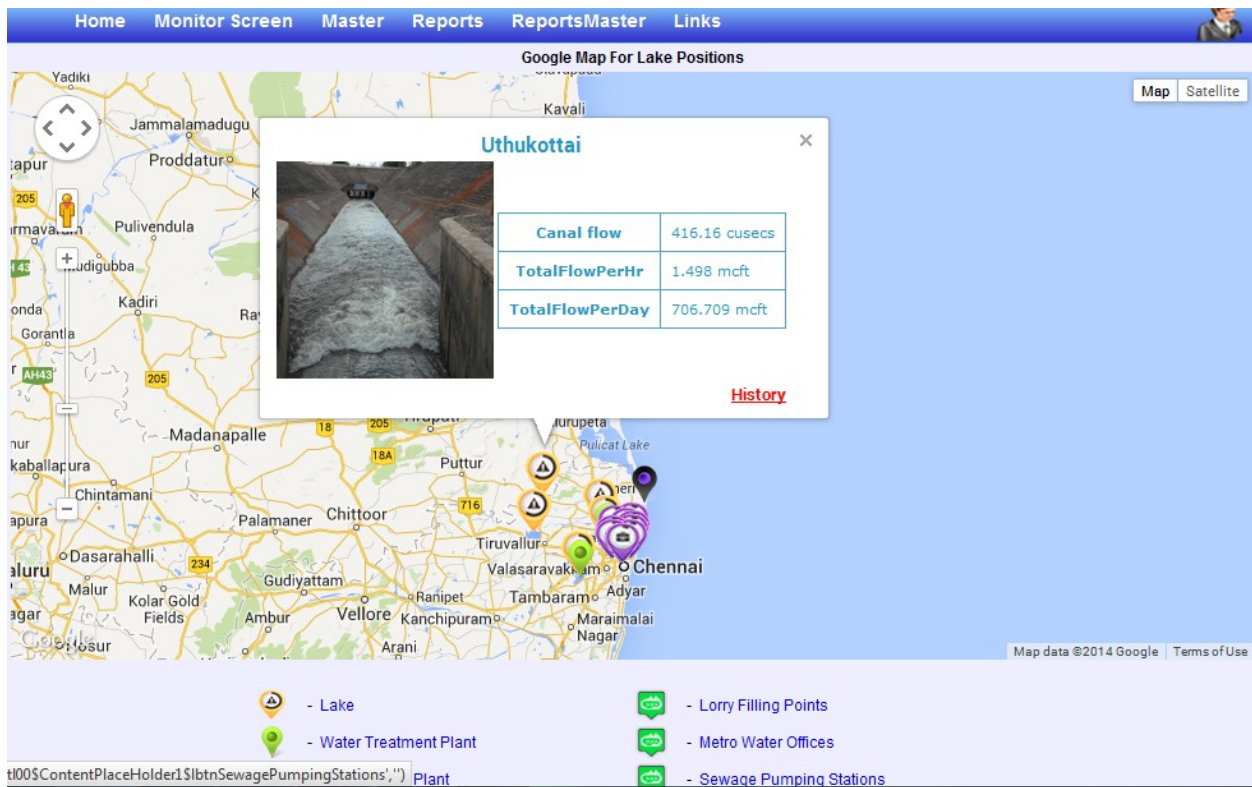


Metro water-station monitoring

Challenge of Metro Water department: The department had no way in which it could monitor different parameters of water stored in lakes, head works, water treatment plant, desalination plant etc. There are approximately 25 different locations of which several parameters are to be measured and monitored simultaneously. The parameters are like chlorine level, canal flow per hour and day etc. Also, location wise data on maps is unavailable.

Solution provided by Arun InfoTech: The crucial solution provided by Arun Info tech was showing the different locations on map as shown below:



As shown in above screen shot all different water storing locations are seen with map legend. When the cursor stops over a particular location a balloon pops up showing parameters for that location. This is a web browser based system and can be accessed globally.

In the location there is a sensor network connected to an embedded device, which senses the parameters values. These values are then transferred via GPRS to a predefined port on an IP address or a domain name. In below screen shot we can see that raw data is received via IP address or domain name.

The screenshot shows a web browser window with a 'DEMO' logo and a navigation menu. The main content area is titled 'MONITOR SCREEN' and features a search bar for 'Station Name' and a 'Search' button. A checkbox labeled 'Monitor Data For All Station' is checked. Below this is a table titled 'Monitor Data' with the following columns: Station Name, Date Time, and Data. The table contains 15 rows of data for various stations like Red Hills Lake, Uthukottai, Valluvar Kottam Headworks, etc.

Station Name	Date Time	Data
Red Hills Lake	25/08/2014 05:09:08 PM	000500103362D40DD40D00002AE6
Uthukottai	25/08/2014 05:04:34 PM	000300003362E605E60500008D8F
Valluvar Kottam Headworks	25/08/2014 05:03:02 PM	*108@25-8-2014 16:58:2@1.19:5@4.57:3@0.00:&
Kolathur Headworks	25/08/2014 05:02:55 PM	*110@25-8-2014 16:58:2@3.81:5@13.85:3@-2.46:&
Triplicane Headworks	25/08/2014 05:02:44 PM	*115@25-8-2014 16:58:2@2.73:5@6.12:3@-1.73:&
Southern Headworks	25/08/2014 05:02:42 PM	*107@25-8-2014 16:58:2@2.05:5@13.92:3@3.29:1@-1.100:&
Anna Poonga Headworks 1	25/08/2014 05:00:25 PM	0002001033620F010F010000D2EB
Vadakkuthu WTP	25/08/2014 05:00:01 PM	*106@25-8-2014 16:58:2@2.67:5@27.64:38@54.89:39@85.97:3@-2.75:36@-27896:37@0:&
Kilpauk Shaft Area	25/08/2014 04:49:58 PM	*103@25-8-2014 16:59:16@3.01:17@0.39:18@0.58:19@1.36:&
Kilpauk Main Pumping Station	25/08/2014 04:49:55 PM	*102@25-8-2014 16:59:30@0.86:31@0.22:3@-2.83:33@0.00:&
Puzhal WTP	25/08/2014 04:49:54 PM	*104@25-8-2014 16:58:2@2.65:5@21.46:3@1.52:&
Minjur Desalination Plant	25/08/2014 04:49:16 PM	*117@25-8-2014 16:58:3@0.63:6@453.217@8.18:8@1.68:1@39.11:&
Kilpauk Raw Water House	25/08/2014 04:49:12 PM	*101@25-8-2014 16:58:9@3.97:10@4.97:&
Kilpauk Shaft Area	25/08/2014 04:49:10 PM	*103@25-8-2014 16:58:11@2.17:12@0.41:13@0.58:14@12.11:15@4.52:&

Reports: In above screen shot raw data can be observed. This raw data is then formatted and presented in readable format as shown in reports below:

Station Parameters Report

Station Id	Station Name	Station Type	Area Name	Date	Chlorine	Level	UGT2Level	UGT1Capacity	UGT2Capacity	Total Capacity	Flow	Storage
2	Anna Poonga Headworks 1	Head Works	V	26-08-2014 00:00:32	No Flow	5.20 ft	6.2	5.022	7.822	12.844		5.25 ML
115	Triplicane Headworks	Head Works	IX	25-8-2014 23:58	No Flow	2.72 ft				0		6.08 ML
107	Southern Headworks	Head Works	X	25-8-2014 23:58	4.18 mg/l	1.75 ft				0	-1.10 ML	11.82 ML
110	Kolathur Headworks	Head Works	VI	25-8-2014 23:58	No Flow	3.52 ft				0		12.81 ML
111	Vysarpadi Headworks	Head Works	IV	26-8-2014 0:58	No Flow	6.32 ft				0	-1.10 ML	27.49 ML
113	Choolaimedu Headworks	Head Works	VIII	26-8-2014 0:58	No Flow	0.96 ft				0		16.73 ML
109	Anna Nagar Headworks	Head Works	VIII	26-8-2014 0:58	No Flow	2.38 ft				0		1.54 ML
2	Anna Poonga Headworks 1	Head Works	V	26-08-2014 01:00:30	No Flow	5.80 ft	6.8	5.348	8.034	13.380		5.57 ML
115	Triplicane Headworks	Head Works	IX	26-8-2014 0:58	No Flow	2.71 ft				0		6.07 ML
107	Southern Headworks	Head Works	X	26-8-2014 0:58	4.16 mg/l	1.85 ft				0	-1.10 ML	11.16 ML
110	Kolathur Headworks	Head Works	VI	26-8-2014 0:58	No Flow	3.52 ft				0		12.82 ML
109	Valluvar Kottam Headworks	Head Works	X	26-8-2014 0:58	No Flow	1.11 ft				0		4.27 ML
111	Vysarpadi Headworks	Head Works	IV	26-8-2014 1:58	No Flow	6.32 ft				0	-1.10 ML	27.49 ML
109	Anna Nagar Headworks	Head Works	VIII	26-8-2014 1:58	No Flow	2.41 ft				0		1.56 ML
2	Anna Poonga Headworks 1	Head Works	V	26-08-2014 02:00:29	No Flow	5.90 ft	6.9	5.589	8.343	13.932		5.87 ML
115	Triplicane Headworks	Head Works	IX	26-8-2014 1:58	No Flow	2.71 ft				0		6.06 ML
110	Kolathur Headworks	Head Works	VI	26-8-2014 1:58	No Flow	3.51 ft				0		12.79 ML
107	Southern Headworks	Head Works	X	26-8-2014 1:58	4.05 mg/l	1.55 ft				0	-1.10 ML	10.50 ML
109	Valluvar Kottam Headworks	Head Works	X	26-8-2014 1:58	0.00 mg/l	1.20 ft				0		4.61 ML
111	Vysarpadi Headworks	Head Works	IV	26-8-2014 2:58	No Flow	6.32 ft				0	-1.10 ML	27.49 ML

Station Parameters Report

Station Id	Station Name	Station Type	Area Name	Date	Level	Capacity	Canal flow	Total flow/hr in mcf	Total flow per day in mcf	Flow
3	Uthukottai	Lake	Uthukottai Entry point	26-08-2014 00:04:53			446.37 cusecs	1.607	726.925	
5	Red Hills Lake	Lake	Red Hills	26-08-2014 00:06:47	35.46 ft	821.9000				
118	Veeranam Lake	Lake	Veeranam	26-8-2014 0:58	25.80 ft	0.0000				-20.05 ML
4	Poondi Reservoir	Lake	Poondi	26-08-2014 00:53:35	127.95 ft	571.5280				
3	Uthukottai	Lake	Uthukottai Entry point	26-08-2014 01:04:39			455.78 cusecs	1.641	730.566	
5	Red Hills Lake	Lake	Red Hills	26-08-2014 01:06:47	35.50 ft	826.2200				
118	Veeranam Lake	Lake	Veeranam	26-8-2014 1:58	25.80 ft	0.0000				-21.00 ML
4	Poondi Reservoir	Lake	Poondi	26-08-2014 01:52:40	127.94 ft	570.2570				
3	Uthukottai	Lake	Uthukottai Entry point	26-08-2014 02:04:40			451.32 cusecs	1.625	732.191	
5	Red Hills Lake	Lake	Red Hills	26-08-2014 02:06:47	35.49 ft	825.1400				
118	Veeranam Lake	Lake	Veeranam	26-8-2014 2:58	25.80 ft	0.0000				-23.98 ML
4	Poondi Reservoir	Lake	Poondi	26-08-2014 02:51:38	127.94 ft	570.2570				
3	Uthukottai	Lake	Uthukottai Entry point	26-08-2014 03:04:44			455.78 cusecs	1.641	733.832	
5	Red Hills Lake	Lake	Red Hills	26-08-2014 03:06:48	35.48 ft	824.0800				
118	Veeranam Lake	Lake	Veeranam	26-8-2014 3:58	25.80 ft	0.0000				-24.91 ML
4	Poondi Reservoir	Lake	Poondi	26-08-2014 03:50:37	127.89 ft	563.9090				