



BULLETIN – 100

Progressive City Expands Capabilities and Reduces Operating Costs with AlarmAgent.com

One of the fastest growing cities in Texas, Midlothian works hard to stay on the cutting edge of technology to support its expansion while keeping costs down. With 12 pump stations and counting, a population on the rise, and a growing realization of the importance of pump reliability, Midlothian turned to RACO Manufacturing and Engineering Company for improved functionality and a more efficient way to monitor the performance of their pump stations.

Technology To-Do List

The top priority for the City of Midlothian was obtaining the ability to monitor pump performance on-demand with the goals of ensuring optimum pump performance and preventing the disastrous effects of a pump problem going unalerted. Now, with RACO's AlarmAgent.com®, a wireless, web-based alarm detection and notification system, the city's staff can review flow rates, start rates and alternations of pump cycles all on-demand. AlarmAgent.com makes monitoring pumps in a lead/lag

operation simple, ensuring equal loads and shared wear. The staff can also monitor high and low water level alarm points in wet wells, spotting potential problems before a pump or pump part gets seriously damaged. For example, if a high-level condition in a wet well went unalerted, sewer water could begin backing up into city resident's basements. This could not only create costly property damage, but would violate EPA Clean Drinking Water laws as well. Likewise, if a low-level condition in a wet well went unnoticed, air could enter the pump and cavitate, creating devastating pump damage. Recently, AlarmAgent.com alerted a city worker to a particular pump inefficiency that turned out to be the result of a mop head clogged in the pump. This early warning prevented severe pump damage from taking place. Additionally, by pinpointing specific trouble spots in the morning through the AlarmAgent.com Web site and only having to check out those specific pumps each day, the city saves a lot of time, freeing the staff to do other important city work.

ON-DEMAND STATISTICS

City of Midlothian												
ALARMAGENT PUMP STATION REPORT												
RTU NAME: PEBBLE CREEK LIFT STATION												
			PUMP 1		PUMP 2							
Cumul Run Time 1			289.2		244.7							
Hrs to Maint 1			-289.2		-244.7							
Hrs to Maint 2			-289.2		-244.7							
			GPM		# OF STARTS		RUNTIME HRS					
DATE	TIME	CALCULATED STATION FLOW KGAL	PUMP1	PUMP2	PUMP1	PUMP2	STARTS RATIO	PUMP1	PUMP2	RUN RATIO	HRS WITH 2 PUMPS RUNNING	
Jan 3, 2007	6:00 AM	29.21	159.5	229.1	54	54	1.0	1.6	1.0	0.63	0.0	
Jan 4, 2007	6:00 AM	33.34	172.3	230.0	60	61	1.02	1.6	1.1	0.69	0.0	
Jan 5, 2007	6:00 AM	32.17	182.7	230.4	59	59	1.0	1.5	1.1	0.73	0.0	
Jan 6, 2007	6:00 AM	24.49	184.5	231.8	47	47	1.0	1.1	0.8	0.73	0.0	
Jan 7, 2007	6:00 AM	28.22	167.7	226.3	53	52	0.98	1.4	1.0	0.71	0.0	
Jan 8, 2007	6:00 AM	33.04	170.9	226.3	60	60	1.0	1.6	1.1	0.69	0.0	
Jan 9, 2007	6:00 AM	27.93	175.9	222.3	52	52	1.0	1.3	1.0	0.77	0.0	
Jan 10, 2007	6:00 AM	27.05	177.3	220.0	50	51	1.02	1.2	1.0	0.83	0.0	
Jan 11, 2007	6:00 AM	25.54	161.4	215.9	48	47	0.98	1.3	0.9	0.69	0.0	
Jan 12, 2007	6:00 AM	24.32	154.1	215.9	45	45	1.0	1.3	0.9	0.69	0.0	

RACO's AlarmAgent.com offers on-demand statistics that demonstrate pump inefficiencies when they occur. By comparing performance and runtime levels, the City of Midlothian can easily recognize a pump inefficiency and investigate to prevent pump damage and restore efficient performance.

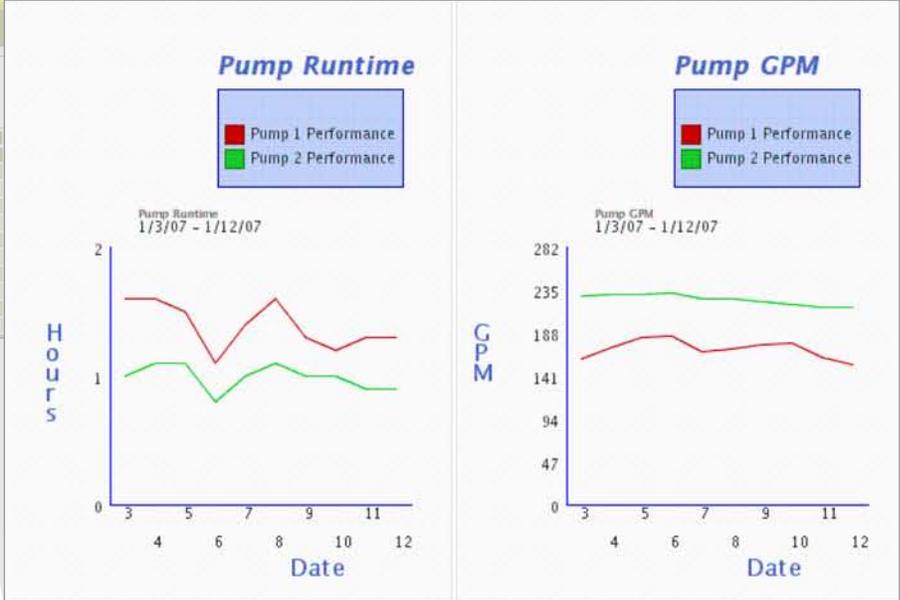
GRAPHICAL PERFORMANCE REPORTS

City of Midlothian
ALARMAGENT PUMP STATION REPORT

RTU NAME: PEBBLE CREEK LIFT STATION

	PUMP 1	PUMP 2
Control Run Time 1	289.2	244.7
Hrs to Maint 1	289.2	244.7
Hrs to Maint 2	289.2	244.7

DATE	TIME	CALCULATED STATION FLOW KGAL	GPM		# OF STARTS		STARTS RATIO		RUNTIME HRS	
			PUMP1	PUMP2	PUMP1	PUMP2	PUMP1	PUMP2	PUMP1	PUMP2
Jan 3, 2007	6:00 AM	29.21	159.5	229.1	54	54	1.0	1.6	1.0	
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These graphical representations of on-demand performance statistics through RACO's AlarmAgent.com indicate the inefficiency of Pump 1's runtime and output volume. Other performance report graphics that indicate pump activity are available as well.

The Future Partnership of RACO and Midlothian

Now, each time a lift station is added in Midlothian, standard city procedures dictate that AlarmAgent.com® needs to be added as well. The on-demand, SCADA-like capabilities and scalability that AlarmAgent.com provides are exactly what the City of Midlothian needed to gain better control of their pump monitoring. The city's pumps now perform at their ideal capacity more of the

time, lowering operating costs and using less energy. Most importantly, the city has greater access to pump flow information for preventing catastrophic failures before they can happen. Midlothian has developed a genuine partnership with RACO and views their focus on innovation as a perfect match to the city's approach of both intelligent budgeting and the management of growth.



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