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# THEODORE FLOODS 2011

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*I love a sunburnt country*
*A land of sweeping plains*
*Of rugged mountain ranges*
*Of droughts and flooding rains*

And that is how 2010 ended and 2011 started - with the flooding rain bit.

It was water water everywhere and not a drop to drink.

This whole adventure started on Christmas day 2010 as the sun was just getting out of bed that was the first of many phone calls. The first alert was that the river was rising rather quickly in both Theodore and Moura. The operators were informed to monitor it till I could get home as I was marooned in Calliope. And to keep contact with me.

**27/12/2010**
The assistant operator at Theodore phoned saying he was filling the tower as the river was rising and he feared that there could be water in the water plant by morning. Told him to fill the tower and close the plant down over night. The tower was filled to 110% which would be enough water to supply the town. I instructed the operator to monitor the river and note it in the diary.

**28/12/2010**
When the operator checked the water plant and what was in the tower by the telemetry there was only 50% in the tower so we had used 60% of the water stored. I asked the operator what was the state of the river told me it was getting high and there was talk of evacuations. He told me that he could still get around town so I asked him to check if he could see any major water movement as he drove around town. The operator phoned me again telling me that the river was coming up fast and what should he do? I told him to check the sewage plant and phone me back.

The return phone call informed me that the river was lapping the building at the sewage plant. I told him to close the plant down and turn all power off and make it secure. Later the operator said that the water at the sewage plant was about 300mm by the time he had turned everything off and secured. Told him to go check on the water plant and let me know the situation as they were starting to evacuate the town and to see if we could still fill the tower up as we were now down to 20%.

The operator phoned me saying that he could still operate the plant and was filling the tower up. By the time the tower was filled about two thirds of the town had been evacuated to Moura and the tower was 110% by the time the sun had gone down the operator then shut the plant down and turned off the power.

**29/12/2010**
In the morning of the 29th when the tower was checked we had about 60% of water left in the tower, this I thought was not right as it was not from public use so I suspected a leak in the mains.

The operator was approached by a member of council (who had nothing to do with water or sewage) to turn the water plant on and to fill the tower. Before that, the same person had asked another member of council (who again had nothing to do with water or sewage) to turn the plant on but that person declined the invitation informing the person it was not in his job description and walked away. The said person then went back to the operator and told him to start the plant the operator informed the person that it was not a good idea as the flood water was rising around the high lift pumps at the water plant. But the said person who knew everything about everything told the operator that he had to do it because it was a directive.

And like the old TV ad but wait there's more. Previously the operator, a member of SES plus an electrician went to check the condition of the plant. They were walking through water a foot deep. Meanwhile the rest of the population of the town were getting evacuated and only a handful of police would be left in town. So when the three from the water plant returned to the evacuation area, the person then sent the three back to water the plant to start it up. This was done with the operator not a happy camper; the water plant would not run on automatic but only on manual. The operator left instructions that the plant was be turned off when tower was full. The question was asked "when do you know when the tower is full?" – "when it is running over the top of the tower".

The flood water was now running level with the floor of the office. So all that was left was 8 members of the thin blue line. By next morning we had lost another 40% which in itself was rather strange with only 8 people in town. My fear was that now we could have a major leak somewhere in the mains. If there was a major leak there was very little that could be done until the water had gone down.

By **31/12/2010** the town was flooded and the water was 1.78m through the sewage plant and the high lift pumps at the water plant were under water. In the mean time we were planning what necessary to start the recovery. We put together a list of what would be needed to get started. A small team was formed to see what was damaged and to check what mains we could get to.

**Figure 1:** ***Main street (The Boulevard)***

We were able to get access to Theodore by chopper in the first week of January and we hit the town running. The retic crew went and checked the mains and services while Col and I checked the water plant and sewage plant.

**Figure 2:** ***The dryest part of Town - (Looking towards the Pub)***

The sewage plant was still under a metre of water and there was not much we could do there for the time being. The water plant was in a better state and we could get access. After checking the plant, a plan of attack was formed for the water plant. A phone call to organise the electrician to fly in next day was made. Then it was off to the raw water pump station. We discovered that the pumps inside the pump well were 10m under water. We set up pumps to remove the water so we could reach the pump motors. As this was going on, the reticulation crew could not find anything that looked like a leak, but what they did find was the reason for the loss of water someone had tried to open a valve on the tower but did not turn off properly so the mystery was solved.

**Figure 3:** ***Another angle from the main street (water tower in the foreground)***

**Figure 4:** *Looking west towards the business end of town*

So by the **5th** of January we had the water plant well on the way to recovery. The raw water pumps had been sent for repair and would be reinstalled next day. The sewage pump stations were all operational, but at this time only minimal use was going to sewage plant. We now had access to the sewage plant and that was not a pretty sight. There was still about 200mm of sludge on the ground, but the sewage plant - being an Imhoff Tank with Bio-filter, was still working for what it was receiving.

On the **6th** January we were able to enter Theodore by road with all the gear that we needed.

The first job was to get the raw water pumps working and then the army came to the rescue flying in a portable water plant which took a lot of pressure of us so we could concentrate on getting the water plant up and running. The army were making water for cleaning and flushing. They could only make enough water to part flush the mains, but what they did was very handy.

By the **8th** of **January** we had the sewage plant up and running and so were the sewage pump stations. The water plant was now working but not producing water as we were still in start up mode making sure that all equipment would work OK. The army was suppling water for flushing and clean up as there was plenty of bottled water for drinking.

On the **9th** of January the water plant was fired up and we started to fill up the mains and checking for leaks as we filled the reticulation system. We then super chlorinated the mains using a 20% solution of chlorine and left the system overnight fully charged. The next day we drained the mains and flushed and recharged the mains again using a 20% solution of chlorine and flushed again. This was done over the next two days then on the 12th of January the first samples were sent to Rockhampton for testing. The following day 13th we got the first results back and they were positive for low level of contamination.

The following day **14th** we super chlorinated the mains again. Over the weekend, samples were taken and sent to Rockhampton for testing. For the next four days we monitored the water supply and tested in-house as well as sending samples to the lab for testing. On the **18th of January** we finally got the all clear that the water met the ADWG criteria and so the water supply was back to normal. It was a great experience and very satisfying for a job well done.