



Photo 6 Damaged Water Supply Infrastructure at Beausejour

Damage was spread across the island, but was worse in the southern and eastern parishes.

Rehabilitation strategies include:

1. An initial temporary cleaning of all dams (already completed)
2. Proper cleaning of dams on a systematic basis. Three dams have already been properly cleaned, Concorde, Vendham and Radix. Annandale is to be cleaned by excavator by the end of September, 2004. It should be noted that restoration activities have been hampered by the relatively remote locations of many dams and consequent lack of access.
3. Temporary repairs to the trunk main on the Beausejour Bridge were made, however, these have to be redone and made permanent.
4. The distribution system at the Les Avocats site also needs to be repaired.

It is estimated that close to 90% capacity would be available by the end of September, 2004, however, water supply is still intermittent up to the time of writing of this report. This has prompted an advisory for the public to boil all water prior to consumption.

A damage assessment carried out by NAWASA revealed the following capital cost estimate breakdown for rehabilitation of services.

| | |
|---|-----------------|
| Pipeline Repairs | EC\$2.5 million |
| Repairs to Buildings | EC\$2.5 million |
| Repairs to plant (pumping stations, reservoirs, etc.) | EC\$1.5 million |

This results in a total estimate of direct replacement costs of EC\$6.5 million. It should be noted that no damages were reported for the Grand Anse sewerage system and outfall. In terms of indirect costs as a result of loss of revenue, the following can be noted:

- Total daily revenues equal EC\$46,000/day
- Based on the above assumption table 19 lists indirect costs by geographical location.

| Parish/Region | % of Revenue |
|---------------|--------------|
| Carriacou | 0.5 |
| St George | 70 |
| St. David | 9 |
| St. Andrew | 14 |
| St Patrick | 3 |
| St. Mark | 1.5 |
| St John | 2 |

Table 32 Indirect costs in water supply and sewerage by parish

- It has been assumed that there has been a 70% loss of revenue overall in the month of September.
- Based on the referenced interview, it has been assumed that only 10% loss of revenue will occur in the month of October.
- No loss of income is expected to be incurred in November.
- Based on these facts and assumptions, it is computed that the total expected loss of revenues for this utility (indirect losses) will be EC\$1.1 million.

Telecommunications and Broadcasting

Cable & Wireless Grenada is currently the sole telecommunications company offering direct exchange lines service to customers in Grenada. The company, 70% owned by Cable & Wireless plc, has in place an 18 optic fiber cable ring around Grenada (part of the Eastern Caribbean Fiber System) and has over 30,000 lines installed. A wide range of modern telecommunications services is provided through this company.

The telecoms industry has been deregulated in Grenada, and there are now several mobile and internet service providers established in the country. These include Digicel, AT&T and GNP.

Following the storm, a detailed damage assessment was carried out by Cable & Wireless, with assistance from both regional and extra-regional resources of the parent company. The assessment revealed the following information³⁵.

- Both cellular and land line networks remain largely in operation
- The lines on the east coast were installed underground, whereas those on the west coast were largely above ground. As a result, significant damage was sustained to poles on the west coast.

³⁵ Interview with Mr Aaron Moses, Head of Human Resources, Cable & Wireless



Photo 7 Downed Poles Carrying Communication Cables

- All cell sites were installed with generators.
- Significant damage was sustained to overhead fibres and to distribution lines, for which it is estimated that there was a 60% loss island-wide.
- Damage was also caused post-storm by people driving over lines and accidentally chopping cables as part of clean-up efforts.
- After the hurricane, it was discovered that the antennae (i.e. sectors) at several cell site locations had been blown off alignment by the wind. These all had to be realigned.

Restoration efforts have been ongoing since the hurricane, and Cable & Wireless have carried out restoration activities in concert with GRENLEC, with whom it shares the use of poles. At time of writing of this report, the following was the status of the restoration strategy.

- 21 of 24 GSM cellular sites were up and running
- 10 of 12 TDMA cellular sites were now back in operation
- 15 of 21 switches were now working
- The primary problem with the restoration activities will lie with the distribution lines, which are not expected to be fully operational for another six (6) months.
- As a measure of goodwill, Cable & Wireless has given the month of September free to all land line and internet users.
- It should be noted that meter readings indicate that approximately 10,000-15,000 lines are presently working, out of a total of 34,500 residential and commercial