



## **WATER AND SEWERAGE CORPORATION**

*Committed to Growth, Committed to Quality*

On June-12-2002 the North Eleuthera – Bogue SeaQuest system was installed and brought online on that Island. The system was set-up on the suction line at the Bogue Wellfield Station prior to the injection of chlorine gas. Total flows through the station from the wellfield are 510-Imperial Gallons (IG) per minute.

On October-1-2002 two New Providence SeaQuest Systems were installed at the Arawak Cay and the Windsor Pumping Stations. Both systems were installed on the suction lines prior to the administration of chlorine gas. The systems were brought online on Monday, Nov-4-2002. Total flows (wellfield and RO sources) out of the Windsor Station are 3,500 IG/min. Total flows at Arawak Cay are 4,000 IG/min.

The treatment rate for the North Eleuthera System is 3.5 part-per-million (ppm), and 1.5 ppm at both sites in New Providence. Prior to the installation of SeaQuest, samples were collected from all treatment sites and analyzed for pH, Iron, Manganese, Total Hardness, and Phosphates. Based primarily on the maximum flows and data from the laboratory results, a treatment rate was determined for each site by Aqua Smart (the sole distributor of the SeaQuest product).

The technical manual indicates the calculation for the treatment rate as follows: *Total iron (ppm) + total manganese (ppm) + total hardness/200 (ppm) + (0.15 to 0.03 ppm) = total amount of SeaQuest required.* Aqua Smart advises a maximum residual phosphate level of 10.0-ppm.

### **Objectives of SeaQuest Installations**

The primary benefits that the Water and Sewerage Corporation (WSC) expects to experience are:

- Lower required chlorine for disinfection's and THM formations,
- Elimination of red and black water,
- Removal of scale and corrosion in the distribution system,
- Maximize pumping efficiencies (increased line pressures, & lower electrical cost),
- Minimize costly tank or pipe cleaning / coating programs, and
- Minimize costly pipe replacement.

**As of August 2003 the water is clear in all of the sampling points and there is chlorine at every sampling point. Prior to the SeaQuest going on line there was no chlorine at any of the sampling points.**

**As of July and August 2003 all of the water samples collected in the SeaQuest testing area were clear. This is a major change in the water color as 40% of the samples taken prior to SeaQuest were colored and now 0% is colored. The chlorine residuals are increasing even though the amount of chlorine was decreased.**



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**Filters are another issue. At all of the sites that were tested the water running to the house was clear. In most of the cases the filter was clear as well.**





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We saw in one case a homeowner who broke her filter and never replaced it. Her water is running clear all the time something that was not happening prior to SeaQuest.

I have attached pictures of the filters and the water from various houses including the bypass.





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As you can see from the bottles all of the water in all of the sample locations remain clear even after one week.

