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The public administrators and program managers concerned with the water resources of the Territory of the US Virgin Islands have continually confronted the twin problems of limited quantity and poor quality of water on the small, semi-arid, tropical islands. History shows that attempts to solve these problems using sophisticated technology have, for the most part, ended in failure. Territorial residents have always relied on the inconstant rainfall to replenish water stored in individual cisterns as well as the meager ground water supplies. Fresh water was known to be scarce, rainfall unpredictable, and therefore was not to be wasted. The traditional methods of collection and storage of water generally fulfilled the needs of the style of life and the level of commerce in the Territory until the US Naval Administration invested in the development of a military base on St. Thomas.

The initial public water systems in the Territory were installed by the US Navy in the 1930's. Water was collected from a combination of wells and surfaces including an elaborate system of paved hillside catchments and, on St. Thomas, the airport runway. Water was stored in large cisterns, then rationed throughout the limited distribution systems. During extended periods of dry weather, water was barged by the Navy to the Virgin Islands from Puerto Rico.

The water needs rose sharply during the 1960's. A burgeoning tourism-based economy along with the population explosion required a dependable, economical, constant, and larger supply of water---particularly potable water. The Virgin Islands Government undertook an extensive development program to augment water supplies: a salt water distribution system was expanded to accommodate requirements for sanitary flushing and firefighting; several sea water distillation plants were purchased in order to provide a constant source of potable water; large tanks for storing water supplies were constructed; and, sewage treatment plants were built to control the rapidly increasing problem of water pollution. The catching and storage of rainwater, however, remained as the essential source of household potable water for the inhabitants of the islands.

For a while there was an abundant supply of high quality water, even during periods of dry weather. The Government's strategy, particularly the emphasis on desalination, appeared to solve the water problem, with the result that maintenance on the public water catchments lessened and many public wells became unused. The catchments were eventually abandoned and very quickly fell into local disrepair and ground water development for public supply was ignored.

By the mid-1970's, severe water problems developed. Operation of the public water systems suddenly became

more erratic and expensive. Equipment failures in the potable water, salt water, sewage systems became daily occurrences. Corrective measures on the complex systems were often ineptly executed and ineffective. The condition of the water infrastructure quickly deteriorated.

Today, the water supply situation endangers the health and well-being of the residents and visitors in the Territory because of the poor quality as well as the shortage of water. The situation is most acute on St. Thomas where there has been a need to take extreme measures to check runaway demands on the water system by rationing potable supplies since 1976. Barging of water to St. Thomas from Puerto Rico has also been re-instituted in order to meet minimum daily needs.

Present water problems in the Territory include: the failure of the desalting equipment to achieve production specifications or to maintain achievable levels of production; the Government has failed to exert legislated authorities for the management and conservation of the water resources; and, the present institutional arrangements for management of water resources does not encourage planned, orderly growth of the utility, good financial practices, or conservation of a scarce resource.

The present focus of public debates in the Territory on the selection of a manufacturer from which to procure additional desalting equipment, which type of desalting technology should be purchased, or which branch of government is legally authorized to provide funding for the purchase of new equipment, only diverts attention from the more basic need for an overall analysis of the problems.

If existing water resources in the Territory are properly managed, and if water management systems are effectively developed and efficiently operated, little additional desalting capability is likely to be needed for the foreseeable future.

Let's look at some of the real water-related issues in the U.S Virgin Islands.

Are good resource management techniques now practiced in the Territory? Not with a system of resource accountability or if resources are wasted--or simply "disappear". Not when the water storage, distribution, and waste collection/treatment infrastructure experience frequent repetitious operational failures. Not when official policies and, more importantly, actions relative to resource conservation can, at best, be described as superficial.

Are good business management practices applied to the programming for water management? Not when program authority and responsibility are scattered among several competing institutions which can have conflicting objectives. Not when there are inequities in pricing policies and there are inconsistencies in the collection of revenues. Not when budgetary, organizational, and staffing patterns fail to reflect mandated program responsibilities. Not when there is insufficient funding for proper maintenance, for procurement of adequate inventories, or for properly executing a phased plan for capital improvements.

Is there a uniform policy consistently applied for the comprehensive management of the Territory's water resources? Not when existing mandates are ignored. Not when several programs are duplicative and may have conflicting objectives. Not if basic data is inconsistent, inaccurate, incomplete, or simply non-existent.

A variety of solutions for addressing the most pressing water problems in the Territory have been proposed in recent years. Some the most important of these of which copies are on file at the Water Center include:

1. Potable Water Supply, St. Thomas, V.I.; Tippetts-Abbett-McCarthy-Stratton, Nov. 1958

2. Water Reclamation Study for the U.S. Virgin Islands; Engineering-Science, Inc., Nov. 1968

3. Creating a Water Distribution and Wastewater Disposal Authority in the U.S. Virgin Islands; Chongasing, E.A. and Francois, D.C., May 1972

4. A Survey of the Water Resources of St. Thomas, V.I.; Jordan and Cosner, USDI, Geological Survey, 1973.

5. Master Plan and Report, Potable Water System, East End (St. Thomas); McDowell and Assoc. and Adams and Assoc., July 1973

6. Water Records of the U.S.V.I. 1962-69; USDI, Geological Survey, 1973

7. Audit of Potable Water Supply and Distribution (July 1, 1971-October 31, 1973); U.S. Government Comptroller for the Virgin Islands, USDI, (Audit Report No. 409-74-60) May 1975

8. Potable Water System, Government of the Virgin Islands, 1975; Harry B. Howe, March 1976

9. A Water Management Plan for St. Croix; Black, Crow, Eidsness, March, 1976.

10. Status Report and Recommendations for Desalination Plants, Virgin Islands; U.S. Army Corps of Engineers, March, 1977

11. Proposed Bill: "To Relieve the Potable Water Crisis by Improving the Potable Water Production and Distribution System"; Office of the Governor of the Virgin Islands, March, 1977

12. Report on the Water Crisis on St. Thomas, Virgin Islands; USDI Task Force, December, 1977

13. V.I. Housing Authority Report on the Current Water Crisis; VI Housing Authority, March, 1978

14. Proposed Bill: "To create a Virgin Islands Water Resources Agency..."; Senator Eric E. Dawson, June, 1978

15. Proposed Bill: "To Authorize and Direct a Study to Determine the the Feasibility of Constructing Two Dams for Retention of Rain Water..."; Senator John A. Bell, February, 1978

16. Proposed Bill: "To Create a Virgin Islands Water Resources Agency..."; Senator Ruby M. Rouss, February, 1979.