ANNUAL REPORT

Fiscal Year 1961



RYUKYU DOMESTIC WATER CORPORATION



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FOREWORD

The Ryukyu Domestic Water Corporation (RDWC) was established as an instrumentality of the United States Civil Administration of the Ryukyu Islands by virtue of Office of the High Commissioner Ordinance No. 8 dated September 4, 1958, to provide water for the use and benefit of the Ryukyuan people and for industrial development. In order to carry out this mission, the RDWC has programmed a series of construction projects in the amount of \$2.8 million. The entire program is expected to be completed in 1962. Upon its completion, 5,000,000 gallons per day of treated water and 2,000,000 gallons per day of raw water will be available for the people on the island of Okinawa.

The Corporation is operated under the following basic policies:

- 1. To supply a maximum amount of water at a minimum cost to the people.
- 2. To encourage the municipalities to develop municipal water systems for integration into the Island Water System.

The implementation of the latter objective will make the most economical use of scarce raw water and will avoid the growth of dual treatment and distribution facilities.

During this reporting period, active planning for development and integration of municipal water systems has been noted. As of the end of fiscal year 1960, the municipalities of Naha, Koza, and Chatan were integrated into the Island Water System. During fiscal year 1961, integration of three additional municipalities: namely, Ginowan, Yomitan and Misato was completed. It is expected that the municipalities of Urasoe and Gushikawa will be united in the Island Water System in fiscal year 1962. As of 30 June 1960, 30 percent of the population living in central Okinawa, inculuding Naha City, received water from the RDWC and this figure increased to 45.7 percent at the end of fiscal year 1961.

The demand for potable water by the Ryukyuan populace is rapidly increasing. Water consumption by the RDWC customers in fiscal year 1961 showed an increase of 84 percent over the consumption rate of fiscal year 1960. The RDWC will endeavor to meet the increasing requirements by completing the \$2.8 million construction projects and also by developing new water sources.

1

W. A. KELLEY
President
Ryukyu Demestic Water Corporation

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ARTHUR J. DELLINGER & ASSOCIATES CERTIFIED PUBLIC ACCOUNTANTS

19 October 1961

Board of Directors

Ryukyu Domestic Water Corporation

Naha, Okinawa

Gentlemen:

We have examined the Balance Sheet of RYUKYU DOMESTIC WATER CORPORATION as of 30 June 1961, and the related Statement of Income and Retaind Earnings for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

Financial and statistical data as of 30 June 1960, and prior periods were prepared by another Certified Public Accountant, and are used in this report for reference only. We do not accept responsibility for such material used in this report.

Due to the fact that we were retained after 30 June 1931, it was necessary to test accounts receivable and accounts payable by review of events after the date of the Balance Sheet since confirmation of outstanding balances by written communication was impractical. Similarly, we could not confirm Customer's Advance Deposits.

In our opinion, with the above qualifications, the accompanying Balance Sheet and Statement of Income and Retained Earnings present fairly the financial position of RYUKYU DOMES FIC WATER CORPORATION as at 30 June 1961, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

s/Arthur J. Dellinger & Associates
Certified Public Accountants

RÝUKYU DOMESTIC WATER CORPORATION

EXHIBIT A

(A Corporation Wholly Owned by USCAR) COMPARATIVE BALANCE SHEETS

As at 30 June 1961 and 1960

ASSETS	30 June	1961	30 June	1960
Current Assets:				
Cash on hand and on deposit		\$ 936,294.74		\$ 93,910.71
Accounts receivable		36,487.25		27,927.88
Interest receivable		3,822.48		-0-
Total Current Assets		976,604.47		121,838.59
Fixed Assets:				
Facilities	\$ 443,758.68		\$ 1,577.00	222 22
Allowance for depreciation	4,157.63	439,601.05	957.00	620.00
Automobiles	5,645.00		2,450.00	
Allowance for depreciation	1,419.05	4,225.95	408.30	2,041.70
Office equipment and furniture	2,064.75		1,565.75	
Allowance for depreciation	282.10	1,782.65	81.25	1,484.50
Total Fixed Assets		445,609.65		4,146.20
Other Assets:				
Deposit on office lease		200.00		200.00
Deposit on purchase contract of vehicle		50.00		-0-
Advance for construction projects		124,861.31		-0-
Construction in progress		1,203,134.00		1,018,480.68
Total Other Assets		1,331,245.31		1,018,680.68
Total Assets		\$ 2,753,459.43		\$ 1,144,665.47
LIABILITIES				
Current Liabilities:				
Account payable to the U.S. Gov't for water supply and service	e	\$ 39,448.98		\$ 23,341.81
Other Liabilities:				
Customers' advance deposits		20,885.58		3,548.00
Total Liabilities		60,334.56		26,889.81
Capital and Net Worth:				
Contributed by the U.S. Gov't.	\$ 2,472,049.00		\$ 1,020,057.68	
Retained earnings	221,075.87		97,717.98	
Total Capital and Net Worth		2,693,124.87		1,117,775.66
Total Liabilities and Net Worth		\$ 2,753,459.43		\$ 1,144,665.47

RYUKYU DOMESTIC WATER CORPORATION

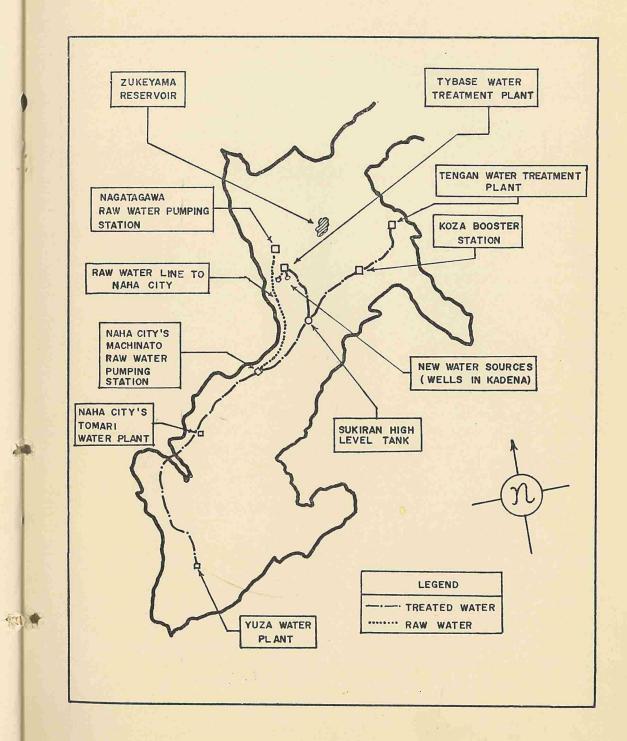
(A Corporation Wholly Owned by USCAR)

COMPARATIVE STATEMENTS OF INCOME AND RETAINED EARNINGS

For Years Ended 30 June 1961 and 1960

	Year Ended	30 June 1961	Year Ended	30 June 1960
EARNINGS:				
Sale of water Repair and service charges	\$ 340,172.90 5,775.63		\$ 194,108.61 4,834.38	
Total Earnings		\$ 345,948.53		\$ 198,942.99
COST OF SALES: Water Repair and service charges	204,622.61 5,250.38		118,144.54 4,394.15	
Total Cost of Sales	Printed Street S	209,872.99		122,538.69
Gross Earnings on Sales	4	136,075.54		76,404.30
EXPENSES: Administrative: Salaries Wages, temporary helpers Office supplies and expenses Telephone, cables and postage Advertising and public notices Repair and maintenance Transportation Vehicle maintenance Utilities Office rent Unemployment insurance, employers share Audit fee Iusurance Miscellaneous Total Administrative Expense	11,399.09 359.75 976.66 677.78 196.71 97.12 40.00 584.76 207.80 1,200.00 126.67 700.00 334.10 9.13 16,909.57		7,750.53 139.50 557.04 327.62 -0- 186.93 41.81 321.91 107.41 883.25 48.14 736.77 135.99 -0- 11,236.90	
Field maintenance Services by USARYIS Local contract and supplies Total Maintenance Expense Land rent Depreciation	74.33 304.50 378.83 1,138.03 4,412.23		495.27 1,476.82 1,972.09 -0- 1,127.55	
Total Expenses Net Operating Income		22,838.66		14,336.54
OTHER INCOME: Connections, seal openings and inspection fees Interest on time deposit Interest on delinquent accounts	709.00 6,531.59 2,752.91	113,236.88	-0- - 0- -0-	62,067.76
Total Other Income		9,993.50		-0-
NET INCOME FOR YEAR Adjustment to prior years Retained earnings at beginning of year		123,230.38 127.51 97,717.98		62,067.76 (1,758.89) 37,409.11
Retained earnings at end of year		\$ 221,075.87		\$ 97,717.98
		Market and the second s		

CHART No. 1 MAP OF INTEGRATED ISLAND WATER SYSTEM PRINCIPAL FEATURES ONLY



Section I Highlights for Fiscal Year 1961

Section I

Highlights for Fiscal Year 1961

1. Financial:

a. During the fiscal year ending 30 June 1961, the corporation realized:

\$345,948 from sale of treated water and untreated water and from fees earned for services rendered by the U.S. Army in installing meters and repairing and connecting pipe lines of the RDWC customers. The corporation sold 1,636,397,000 gallons of water, of which 1,237,989,000 gallons were treated water and 398,408,000 gallons were untreated water. The municipalities received 755,368,000 gallons of treated water and 398,408,000 gallons of untreated water. Business establishments required 158,828,000 gallons and individual households consumed 323,793,000 gallons of treated water.

b. Other income of the corporation totaled:

\$9,994 of which

\$709 represents fees received from water customers for use of RDWC owned taps and for inspection and repairs of water connections;

\$6,532 was realized as interest income from bank deposits;

and

\$2,753 represents interest assessed on deilinquent accounts of the water customers.

- c. \$355,942 is the total operating earnings and other income of the corporation for fiscal year 1961.
 - d. The corporation's expense totaled:

\$232,712 of which

\$192,404 represents the cost of treated water supplied to the corporation by the U.S. Army;

\$12,219 represents the cost of the raw water supplied to the corporation by the U.S. Army;

\$5,250 was paid to the U.S. Army for services rendered in installing meters and repairing and connecting pipelines of the RDWC customers;

\$16,910 represents the total administrative expenses of the corporation including salaries of 13 employees, fees assessed by a commercial audit firm for examination of the financial records of the corporation, rent for use of the office, purchase of office supplies and equipment, repairs and maintenance of vehicles and office furniture, and other expenses of a sundry nature;

\$379 represents expenses incurred in repairing and maintaining water distribution facilities and meters and in procuring customer control supplies (e.g., sealing boxes, number tag, etc.);

- \$1,138 represents land rent for 11.05 acres of land at Zukeyama dam and reservoir and for .97 acre of rights-of-way for pipe line at the Machinato commercial area; and
- \$1,412 represents annual depreciation expense on the corporation's properties, which included pipelines, vehicles and office equipment.
 - e. \$123,230 is the net income of the corporation for the fiscal year 1961.
- f. Adjustment to prior years earnings in the amount of \$128 represents the net result of adjustments effected on prior years sale and purchase of water.
- g. The net increase to the retained earnings of the corporation during the fiscal year 1961 is therefore \$123,358.

2. Operations:

During fiscal year 1961, the municipalities of Ginowan-Son, Yomitan-Son and Misato-Son were integrated into the Island Water System. As shown below, a rapid increase in the demand for water is observed in this reporting period.

a. Customers:

Total number of RDWC customers:

As of 30 Jun 1960	As of 30 Jun 1961	Percentage of Increase	
1,203	2,333	93.9%	

b. Water sales:

(1) Breakdown of sale of treated and raw water:

	FY 1960 (As adjusted) (In Thousands	FY 1961 of Gallons)	Percentage of Increase
Treated water	693,955	1,237,989	78.4%
Raw water	195,896	398,408	103.4%
Total	889,851	1,636,397	83.9%

(2) Breakdown of sale of water by type of RDWC customers:

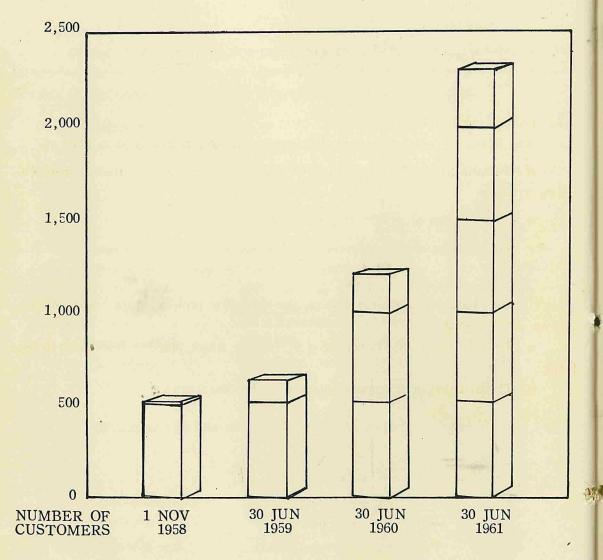
	FY 1960 (As adjusted) (In Thousand	FY 1961 s of Gallons)	Percentage of Increase
Municipalities	555,031	1,153,776	107.9%
Commercial	111,603	158,828	42.3%
Residential	223,217	323,793	45.1%
Total	889,851	1,636,397	83.9%

(3) Breakdown of sale of water to municipalities:

	FY 1960 (As adjusted)	FY 1961	Percentage of Increase
	(In Thousands	of Gallons)	
Naha	436,314	884,028	102.6%
Koza	109,679	194,154	77.0%
Chatan	9,038	15,168	67.8%
Ginowan	-0-	55,436	
Yomitan	-0-	3,583	-
Misato	-0-	1,407	
Total	555,031	1,153,776	107.9%

Chart No. 2

TREND IN WATER CUSTOMERS SERVED BY RDWC



(4) Breakdown of sale of water (treated and raw) to municipal areas

Municipal Areas	In Thousands of Gallons	Percentage
Naha	891,375	54.5%
Koza	203,898	12.5%
Ginowan	186,287	11.4%
Urasoe	150,527	9.2%
Chatan	74,579	4.6%
Kitanakagusuku	44,885	2.7%
Misato	36,349	2.2%
Kadena	23,051	1.4%
Yontan	21,502	1.3%
Gushikawa	3,944	.2%
Total	1,636,397	100.0%

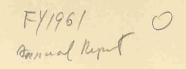
3. Completion of projects:

The following construction projects were completed in Fiscal year 1961:

- a. Installation of 88,304 feet of 16" and 14" treated water pipeline from Futenma to Naha.
 - b. Construction of a dam at Zukeyama.
 - c. Construction of a pumphouse at Futenma.

In addition to the above projects, the following projects were near completion as of 30 June 1961:

- a. Installation of 12,301 feet of a 6" treated water pipeline from Sobe to Bolo Point.
 - b. Construction of a pumping station on the Nagatagawa.



Section I Summary of History and Operations

In the prewar period Ryukyuan citizens received their water supply mostly from rivers, wells and rain water tanks.

The United States Army developed a potable water system on Okinawa in the early post-war period and has supplied municipalities, institutions and individuals with water which was excess to the needs of the military. Since the United States Army's water system was designed to meet only military needs and the developed water sources, including pumping and distribution mains, were inadequate to satisfy the increasing demands of the Ryukyuan economy, the United States Army, Ryukyu Islands and the Office of the High Commissioner of the Ryukyu Islands agreed in 1958 to assume responsibility for planning, funding, constructing and operating an integrated island water system which would serve both the military and Ryukyuan population. It was further agreed that the facilities and water sources required to be constructed and developed in order to furnish the Ryukyuan economy with treated Illustration No. 1



TYBASE WATER TREATMENT PLANT

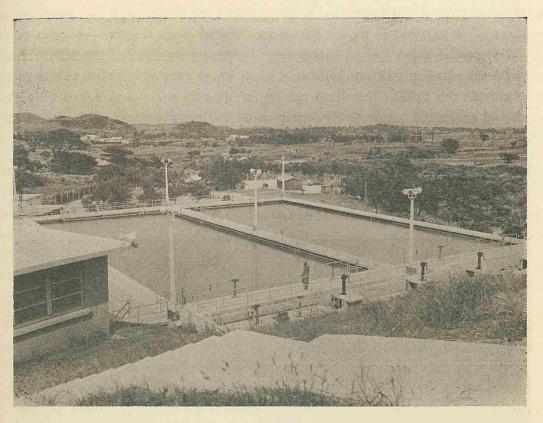
This plant is located at Kadena Air Base. The water treatment capacity of this plant is expected to be increased from 8,600,000 gallons per day to 15,000,000 gallons per day.

water be funded by the Office of the High Commissioner or its designated agency. The Ryukyu Domestic Water Corporation (RDWC) was, therefore, created as an instrumentality of the United States Civil Administration to acquire title to all High Commissioner and certain United States funded facilities and improvements to the island water system and to perform necessary administrative functions accompanying the responsibilities assigned to the Office of the High Commissioner under the agreement.

As provided in the Charter of the RDWC, which is included as Appendix No. 3 of this report, the corporation is empowered to acquire, maintain, and operate domestic water producing properties and facilities in the Ryukyu Islands in order that various water supply installations can be united into one or more systems by interconnecting pipelines for the purpose of collection, treatment, transmission, distribution and sale of water for the use and benefit of the Ryukuan people, for industrial development, and for other purposes.

The corporation is operated in accordance with the charter, by-laws and policies established by the Board of Directors of the Corporation which is composed of six members (including one non-voting member) appointed by the Civil Administrator of the Ryukyu Islands. The members consist of representatives from the Office of the High Commissioner (2), the Government of the Ryukyu Islands (1), the Ryukyu Development Loan Corporation (1), the U.S. Army Ryukyu Islands, Engineer Group (1), and the U.S. Army Engineer District, Okinawa (1). The Board is assisted in its legal and technical matters by two advisors from the staff of the Office of the High Commissioner. The Board of Directors meet regularly once a month or more often if required. The Corporation's routine business is carried on by thirteen Ryukyuan employees, including a general manager and a treasurer.

In order to provide a minimum of 5,000,000 gallons per day of treated water for use of the civilian population concentrated between Tengan and Naha, a series of construction projects at a cost of \$2.2 million were programmed in the General Fund of the Office of the High Commissioner beginning fiscal year 1959. In addition, the Congress of the United States appropriated \$600,000 for the construction of raw water facilities capable of supplying 2,000,000 gallons per day of untreated water to the City of Naha. Of the \$600,000 construction program, the project for the raw water pipeline (which extends from the Bishigawa area to the Naha City pumping station at Machinato) became operational in October 1959 through the use of temporary pumping facilities. The permanent pumping station was 95 percent completed as of 30 June 1961. Upon completion, the corporation will acquire title to these properties. The Corporation has also received, on a nonreimbursable basis, some off-base water supply lines from the U.S. army.



TENGAN WATER TREATMENT PLANT

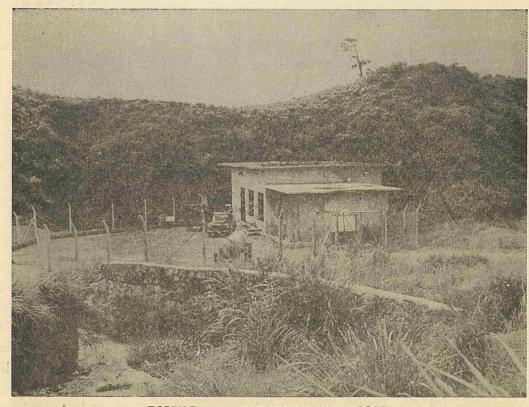
Located near the Tengan River, this plant is capable of treating 6,000,000 gallons per day of water. Water treated at this plant is conveyed by pipelines to the Sukiran High Level Tank for storage and distribution.

The basic facilities of the integrated island water system, including the \$2.8 million addition, will continue to be operated by the United States Army. The RD-WC, however, is responsible for the operation and maintenance of secondary distribution lines which are not owned by municipalities or private persons and for the supply and sale of water to all "off-base" customers; these include, in addition to the large municipalities of Naha and Koza, many enterprises, institutions, and individual households.

At the inception of the corporation's operation on 1 November 1958, the United States Army transferred approximately 500 water customers to the RDWC. The number of customers as of 30 June 1960 was 1,203 and the number has increased to 2,333 by 30 June 1961. As additional municipal water distribution systems are established, the retail customers in the respective areas of these municipal systems will no longer be supplied water directly by the RDWC.

As an operating policy, the corporation is required to earn a return of 5 percent on its net worth. Unlike the case of the Ryukyu Electric Power Corporation, no rental or other payment is received from the United States Army as none of the RDWC properties serve United States installation. By integrating the RDWC facilities with the existing military system, a much lower capital investment was required to provide the 5,000,000 gallons per day of treated water and 2,000,000 gallons per day of untreated water to Ryukyuan communities of central Okinawa, including Naha City. The RDWC water rates are predicated on the basis of covering costs of water, administrative expenses, depreciation of facilities, and a return on the investment.

Illustration No. 3



BISHIGAWA PUMPING STATION

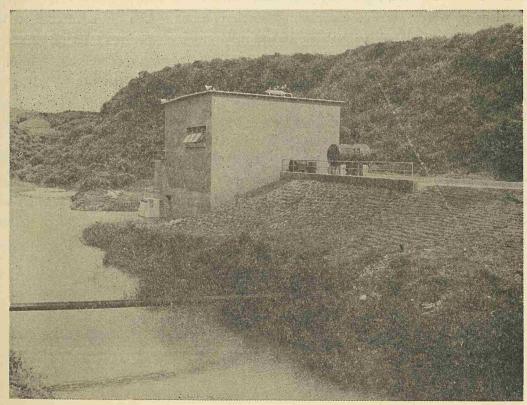
Located on the Bishigawa, this station pumps river water to the Tybase Treatment Plant. The capacity of this pumping station is 8,600,000 gallons per day.

The net revenue derived from operations has been retained by the corporation for further improvements and expansion of the water system. The Charter of the Water Corporation provides that "Whenever any capital in the Ryukyu Domestic Water Fund is determined by the Board of Directors to be in excess of the needs

of the Corporation, taking into consideration funds required for operations, plant replacement and expansion and emergencies, such surplus shall be paid into the General Fund of USCAR as miscellaneous receipts." The General Fund of the Office of the High Commissioner is administered in trust for the benefit of the Ryukyuan people and is not utilized for the Office of the High Commissioner or United States Government requirements.

During the past 12 months of operation (1 July 1960 - 30 June 1961), the corporation sold raw water at 8 cents per 1,000 gallons to Naha City. Treated water was sold at 21.94 cents per 1,000 gallons to all metered customers, including municipalities, and at a flat monthly rate of \$4.85 to residences. The corporation purchased water from the United States Army at production cost which was 3.44 cents per 1,000 gallons for raw water and 15.8 cents per 1,000 gallons for treated water. The United States Army cost of 15.8 cents per 1,000 gallons was revised to 14.54 cents per 1,000 gallons, effective 1 May 1961. The RDWC water rates are under

Illustration No. 4



NAGATAGAWA PUMPING STATION

Located on the Nagatagawa, this station pumps water to the Naha City pumping station at Machinato through raw water lines installed along Route #1. The capacity of this pumping station is 2,000,000 gallons per day.

sutdy by a committee appointed by the Board of Directors.

There are presently 10 municipal treated water systems in the Ryukyu Islands. These are Naha, Koza, Nago, Chatan, Ginowan, Misato and Yomitan in Okinawa; Taira City in Miyako; and Ishigaki City and Ohama-Cho on the island of Ishigaki in Yaeyama. The City of Naha has a treatment plant capable of treating 3,700,000 gallons per day of water. All of the other municipalities on the island of Okinawa, which are integrated in the island water system, however, purchase treated water from the RDWC for distribution to their citizens. Approximately 200 water systems in the Ryukyus, comprised of the 10 systems mentioned above plus small water systems handling untreated water for domestic use, serve nearly 48 percent of the population. It is expected that ultimately all of the major water systems on Okinawa will be connected with the island water system.

In fiscal year 1960, Naha City's purchase of treated and untreated water from the RDWC of 436,314,000 gallons accounted for 35.5 percent of the City's total distribution of water. During fiscal year 1961 the RDWC sold to Naha City 884,028, 000 gallons of water, which represented 58.5 percent of the total water distributed by the City. Treated water supplied to other municipalities in FY 1960 and in FY 1961 was 118,717,000 gallons and 269,748,000 gallons, respectively. As of 30 June 1960 approximately 54,500 Ryukyuans in the municipalities located along the integrated island water system received water from the Ryukyu Domestic Water Corporation and this figure increased to 101,000 people by 30 June 1961.

By 1965 demand for treated water by the Ryukyuan economy is expected to exceed the maximum amount of water to be made available for the Ryukyuan communities. Therefore, the corporation is undertaking a study in coordination with the Office of the High Commissioner and the United States Army, Ryukyu Islands on the development of new water sources to meet future requirements.

Section III

Development Programs

Section II

Development Programs

1. Current Projects:

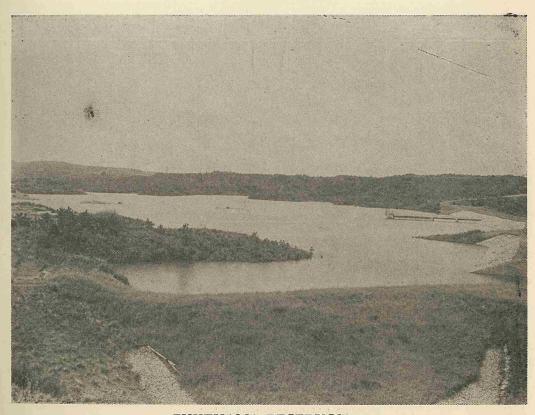
a. Projects for Improvement of the Integrated Island Water System.

The General Fund of the Office of the High Commissioner contributed \$2.2 million to the RDWC from fiscal year 1959 to fiscal year 1961 for a series of construction projects to improve the integrated island water system. The final project under the \$2.2 million water construction program is expected to be completed in 1962. Major projects currently under construction are as follows:

- (1) Pipelines for treated water
 - (a) From Sobe to Bolo Point

The United States military forces and the Ryukyu Domestic Water Corporation are jointly financing the construction of a 6" pipeline from Sobe to

Illustration No. 5



ZUKEYAMA RESERVOIR

Located at a tributary of the Bishigawa, the reservoir was completed in fiscal year 1961. The reservoir is capable of storing 600 million gallons of water which will be spilled into the Bishigawa when the river water level drops.

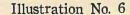
Bolo point in order to supply potable water to military organizations and local villages located between Sobe and Bolo Point. This project was 99 percent completed as of 30 June 1961.

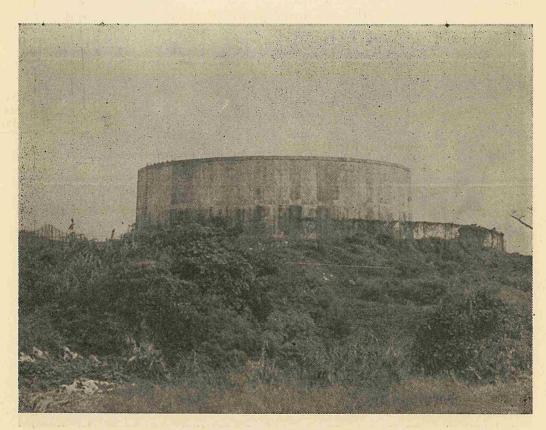
(b) From Tybase-Kadena Tank to Sukiran High Level Tank.

This project will replace the existing 16" and 14" pipelines with a 32" asbestos-cement pipeline from the Tybase Water Treatment Plant to the Sukiran High Level Tank. The project is expected to be completed in fiscal year 1962.

(2) Well field at Kadena

Underground water sources capable of yielding 3,000,000 gallons per day of water were located in Kadena Air Base. Water from these sources will be treated at the Tybase Water Treatment Plant. This project is also expected to be completed in fiscal year 1962.





SUKIRAN HIGH LEVEL TANK

Water treated at the Tybase and Tengan treatment plants is stored in this tank. Capacity of the tank is 1,500,000 gallons.

(3) Modification of Tybase Water Treatment Plant.

It is planned to increase the water treatment capacity of the Tybase Plant from 8,600,000 gallons per day to 15,000,000 gallons per day. This project is expected to be completed in fiscal year 1962.

b. Raw water system projects

The United States Congress appropriated the sum of \$600,000 for the construction of raw water facilities to provide 2,000,000 gallons per day of raw water to Naha City. Raw water projects currently under construction are as follows:

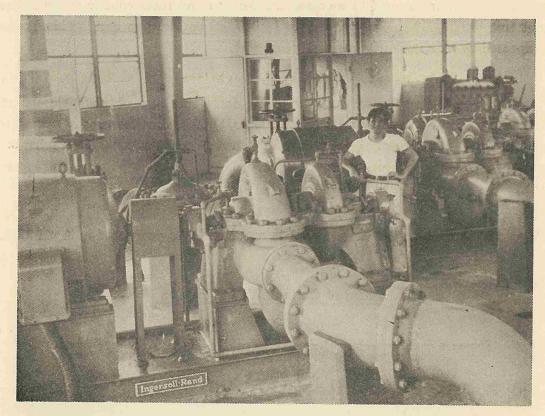
- (1) A permanent pumping station on the Nagatagawa was 95 percent completed as of 30 June 1961
 - (2) A dam on the Nagatagawa is expected to be completed in April 1962.

Status of Current Water Projects

Projects for improvement of the Integrated Island Water System

(1)		cent Completed of 30 Jun 1961
	a. From Sukiran to Futenma	100%
	b. From Futenma to Naha	100%
	c. From Sobe to Bolo Point	99%
	d. From Tybase-Kadena Tank to Sukiran High Level Ta	ank 3%
(2)	Dam at Zukeyama	100%
(3)	Relocation of Jato surveillance building and access road	100%
(4-)	Pumphouse at Futenma	100%
(5)	Well Field at Kadena	
	a. Water collection system	3%
	b. Raw water pipeline from well field to Tybase Water	
	Treatment Plant	3%
(6)	Modification of Tybase Water Treatment Plant	-0-
(7)	Conversion of Kawasaki raw water pipeline to treated water	er line -0-
(8)	Exploration of water sources and other minor projects	100%

Illustration No. 7



NAHA CITY'S MACHINATO RAW WATER PUMPING STATION

Located at the terminus of the raw water line of the Ryukyu Domestic Water Corporation, this station pumps raw water to Naha City's Tomari Water Plant. The capacity of this pumping station is 3,000,000 gallons per day.

Raw Water System Projects

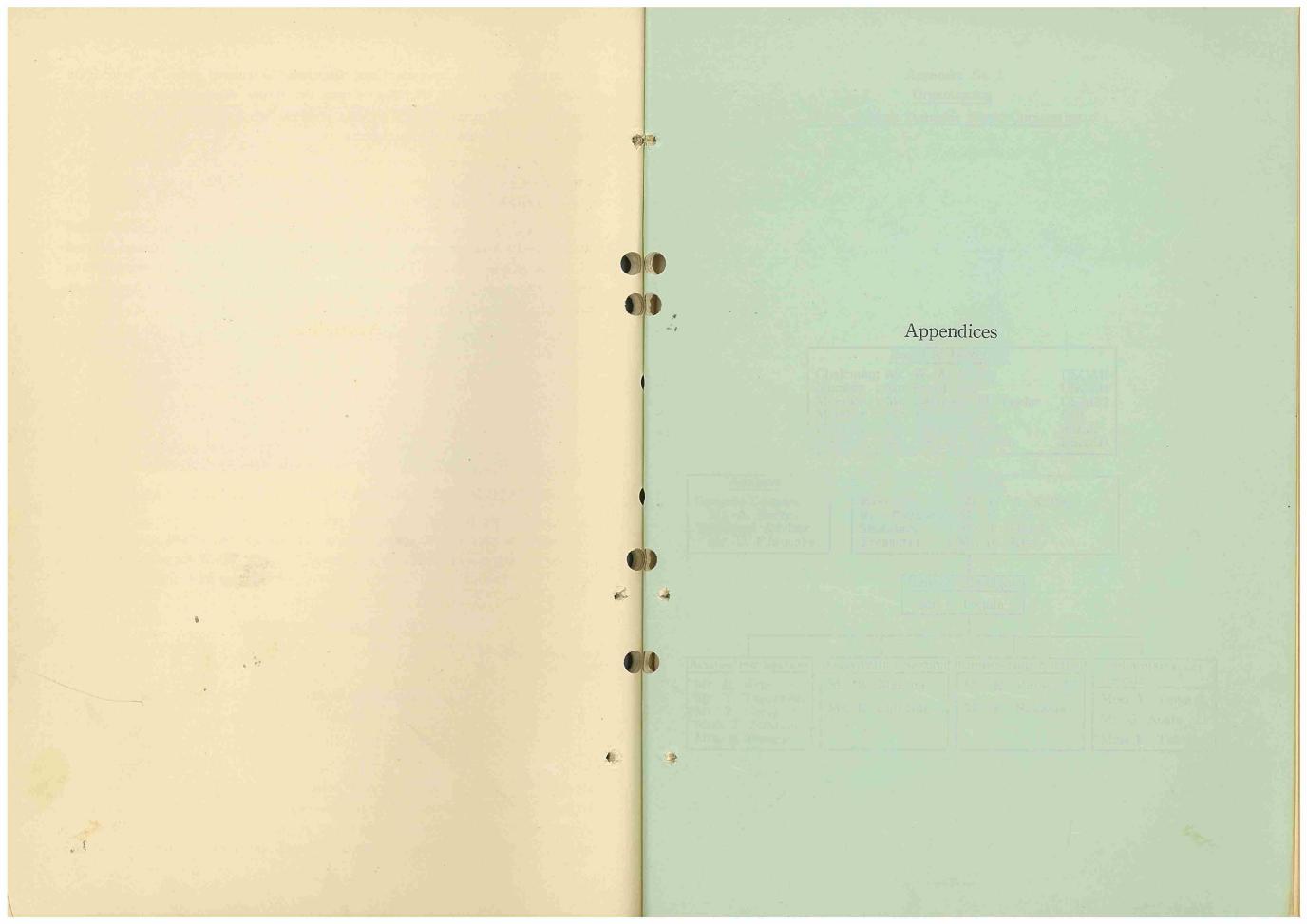
		Purcent Completed As of 30 Jun 1961
(1)	Raw water line from Kadena to Machinato	100%
(2)	Pumping Station on Nagatagawa	95%
(3)	Dam on the Nagatagawa	-0-

2. Future projects:

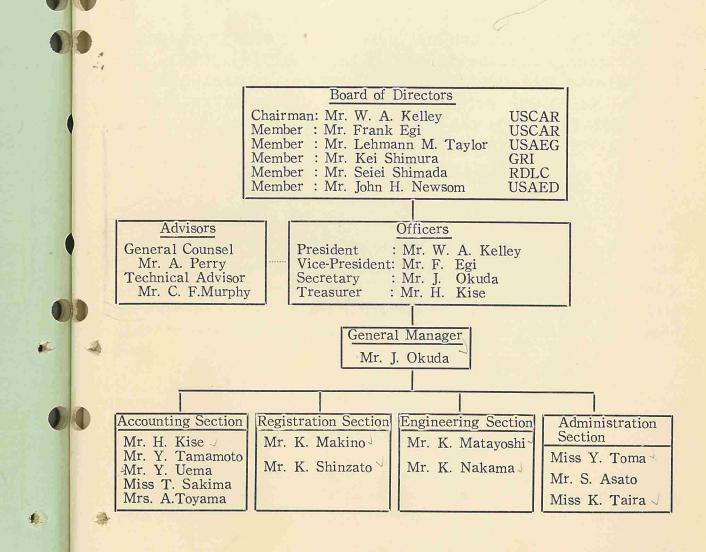
A study made by the corporation indicates that by 1965 or earlier the demand for treated water by the local economy will exceed 5,000,000 gallons per day, which is the maximum amount of water to be made available to the corporation by the United States Army, Ryukyu Islands upon completion of the \$2.2 million

water program. The corporation has, therefore, formulated plans to investigate possible water sources on Okinawa to meet the future requirements of the local economy. As an initial approach to this problem, the corporation is planning to obtain approval for the following projects:

- a. To perform a feasibility study to determine if the Kokuba River can be used as a source for water. It is estimated that 6,000,000 gallons per day of water is available from the Kokuba river watershed.
- b. To develop a comprehensive master plan for the integrated island water system. This plan expects to cover, among other items, the future demand and supply of water and an investigation of water sources including watersheds in northern Okinawa. It is estimated that 50,000,000 gallons per day of water is available from watersheds in northern Okinawa.
- c. To conduct an evaluation of the characteristics of the streams on Okinawa.



Appendix No. 1 Organization of the Ryukyu Domestic Water Corporation



Appendix No. 2

HEADQUARTERS U. S. ARMY, RYUKYU ISLANDS AND IX CORPS APO 3 3 1 AND

UNITED STATES CIVIL ADMINISTRATION OF THE RYUKYU ISLANDS OFFICE OF THE HIGH COMMISSIONER

APO 331

AGREEMENT BETWEEN USARYIS AND THE RYUKYU DOMESTIC WATER CORPORATION, OFFICE OF THE CIVIL ADMINISTRATOR, UNITED STATES CIVIL ADMINISTRATION OF THE RYUKYU ISLANDS, FOR PLANNING, FUNDING, DEVELOPMENT, CONSTRUCTION, OPERATION AND MAINTENANCE OF INTEGRATED ISLAND WIDE WATER SYSTEM AND OPERATION AND MAINTENANCE OF THE RAW WATER LINE AND PUMPING STATION FROM THE BISHIGAWA AND NAGATAGAWA TO NAHA CITY PUMPING STATION AT MACHINATO

PURPOSE (GENERAL)

The purpose of this composite agreement is to supersede the agreement between subject parties dated 15 May 1958 and include an agreement for the operation and maintenance of the raw water line from the Bishigawa and Nagatagawa to the Naha City Pumping Station at Machinato. For clarification and ease in determining responsibilities the composite agreement is separated into the two parts shown below.

PART I

Agreement for Planning, funding, development, construction, operation and maintenace of the Integrated Island Wide Water System.

- 1. The purpose of part I is to establish responsibility for planning, funding, development, construction and operation and maintenance of the planned integrated water system which will serve both the military and Ryukyuan population.
 - 2. It is recognized, by both parties to this agreement, that the present military water system on Okinawa is complete and adequate to meet military needs, present and projected. It is also agreed that water sources, distribution lines, pumping equipment, and reservoir facilitities, are not presently available in the military.

ry system to the degree that the military system can furnish water to the Ryukyuan economy.

- 3. It is further agreed that the facilities and water sources required to be constructed and developed in order to furnish the Ryukyuan economy approximately 5,000,000 gpd of potable water, are as indicated on Inclosure #1 hereto, at the approximate estimated costs which are also indicated. It is agreed that the construction and development of facilities and water sources indicated in Inclosure #1, cannot and should not be provided by USAARYIS, and that such construction and development will be funded by RDWC or from GRI sources. Both parties to this agreement, after thorough study, consider that the proposed Integrated Island Water System is the most feasible and economical solution to the local water problem and that its operation and maintenance by USARYIS is the only acceptable method.
- 4. It is agreed that RDWC has funded the facilities required and that after construction and development, the RDWC funded facilities will be operated and maintained by USARYIS as a part of the Integrated Island Wide System.
- 5. As RDWC has been successful in obtaining the funds required for the construction and development as indicated in Inclosure #1 horeto, it is further agreed that:
- a. U. S. Army Engineers are designated as the agencies to develop detailed plans, specifications and conduct all necessary engineering required, as well as supervise and direct the construction and development of the RDWC funded facilities and water sources. Management and engineering charges will be at rates established for other U. S. Government agencies.
- b. Upon completion of the RDWC funded facilities and improvements, it is agreed that USARYIS, acting as custodian for the entire Integrated Island Water System, is responsible for the operation and maintenance of the integrated system.
- c. Maintenance of inter-service lines that solely benefit the Ryukyuan populace will be the responsibility of RDWC.
- d. Title to all RDWC financed facilities and improvements will remain with RDWC. All additions to the integrated system, from the water points to master meters, will be turned over to the custody of USARYIS for operation and maintenance without cost to the military.
 - e. USARYIS will deliver to RDWC, after construction of the RDWC por-

tion of the system as indicated in Inclosure #1, approximately 5,000,000 gpd of potable water through master meters within the range of the system.

- f. USARYIS will install interconnecting lines between the USARYIS main feeder lines and the RDWC funded main feeder lines, with proper valving so as to provide maximum flexibility to the system and to guarantee both parties mutual benefit as emergencies arise, i.e., line breaks, area shortages, etc./Interconnecting lines installed on Army master planned land will be funded by USARYIS; those outside Army master planned land by RDWC and on a pro-rata basis when both are involved.
- g. Any leasing of land, acquisition of right-of-way or claims for damages or relief of any nature for damage to land occupied by RDWC funded improvements, will necessarily have to be financed by RDWC.
 - h. Water, delivered by USARYIS to RDWC will be measured by master meters located at the points of delivery. The master meter reading will constitute the definitive determinaition of the quantity of water delivered. Water, thus delivered, will be reimbursable to USARYIS in dollar instruments at cost to the Army in accordance with Inclosure #2. These costs will be reviewed twice annually by USARYIS and adjustments, when appropriate, will be made in future water rates.
 - i. Capital costs of the USARYIS and RDWC funded portions of the Integrated Water System are specifically excluded from consideration as a charge by USARYIS to RDWC, or as a charge by RDWC to USARYIS. Thus, the present water system will be expanded to serve the civilian community without increased costs to the military. The elimination of the capital charges by USARYIS is in consideration for a similar elimination of capital charges by RDWC and the increased flexibility realized from the expanded system.
- j. USARYIS as the sole operating and maintaining agency, will furnish to the maximum extent possible the daily amount of water needed to satisfy requirement of this agreement, or such additional amounts only as shall be provided by amendment hereto, subject to failures due to Acts of God, public enemy or any other circumstances beyond the control of USARYIS.
 - k. USARYIS will furnish to RDWC water in addition to the amount indicated in this agreement, to the extent that water can be furnished without detriment to the interests of military requirements. RDWC agrees to pay for such additional water by U. S. dollar instruments under same provision as stated in paragra-

- 1. Invoices for water delivered will be prepared by USARYIS using rates as agreed to herein and RDWC will be presented billings on a monthly basis which must be paid in dollar instruments within 15 calendar days after receipt thereof.
- m. USARYIS reserves the right to construct and retain title to any and all improvements which are deemed necessary to satisfy military requirements, providing such improvements do not encroach upon RDWC funded facilities or detract from RDWC funded sources of water, unless specifically agreed to by RDWC. USARYIS further reserves the right of approval of future RDWC funded integrated water system facilities or improvements, to include adequacy of engineering design, compliance with spcifications and actual supervision and direction of construction utilizing RDWC funds.
- n. Scrap and/or salvage generated by virtue of improvements, alterations or major maintenance programs, shall remain the property of the party who held title to the material from which the scrap and/or salvage was generated.
- o. USARYIS shall maintain the facilities and properties of the Integrated Island Water System, both USARYIS and RDWC funded portions thereof, in good repair and operational condition during the continuation of this agreement.
- p. In the event of any dispute which cannot be resolved by RDWC, and USARYIS duly authorized representatives, the matter shall be referred to the High Commissioner of the Ryukyu Islands, whose decision shall be final.
- 6. The effective date of availability of water to the Ryukyuan economy under this agreement will be the date upon which the RDWC funded portion of the Integrated Water System is constructed and becomes operational, except that upon completion of any given element of the RDWC portion of the Integrated System which in itself can operate as a part of the Island Water System. USARAYIS will furnish water through the Integrated Water System master meters to the areas served by the partially completed RDWC funded portion of the Integrated System.
- 7. This agreement is subject to periodic review and revision at the request of either party provided that a 30 day notice of desire to modify is given. Termination or modification will be effected after approval of both parties or when directed by proper authority.

PART I

Agreement for operation and maintenance of the Raw Water Line and Pumping Station from the Bishigawa and Nagatagawa to Naha City Pumping Station at Machinato.

1. Purpose

The purpose of this agreement is to establish responsibilities for and interests in the operation and maintenancne of the dam, pumping station, and transmission water main constructed or to be constructed to provide river (raw) water to Naha City purification plant. The system to include, in general, a river dam, intake and pumping station on the Nagatagawa-Bishigawa streama and a cement asbestos pipe line of 13,500 LF of 14-inch pipe and 31,950 LF of 12-inch pipe extending along Route Nr 1 from the river pumping station to the Machinato raw water pumping station of the Naha water supply system.

2. Responsibilities

- a. USARYIS will be responsible for the following:
- (1) Maintain the facilities and properties of the raw water line system in good repair and operational condition during the life of the agreement. Such responsibility will end at the Naha City Machinato pumping station terminus of the line.
- (2) Deliver to RDWC on request or established schedule approximately 2.0 mg of raw water per day through the pipe line as measured at Machinato pumping station meter, dependent solely on availability of water, pipeline capacity and absence of unforeseen contingencies, as hereinafter stipulated. Pumping rate will be in increments of approximately 0.5 mgd as requested by the designated operators of the Naha Water Supply system.
- (3) USARYIS, upon specific request of RDWC, is designated as the agency responsible for development of plans, specifications, and engineering necessary for any alterations, additions, or modifications to this raw water system.
- (4) USARYIS will submit billings to RDWC covering reimbursable costs incurred under the terms of this agreement.
 - b. RDWC will be responsible for the following:
 - (1) Payment of rental for land solely occupied or to be occupied by the

RDWC-funded improvements or facilities.

(2) Payment by dollar instruments to USARYIS within 15 calendar days after receipt of billing document, for costs incurred by USARYIS under terms of this agreement.

3. Special Provisions and Conditions

- a. USARYIS as the sole operating and maintaining agency, will furnish to the maximum extent possible the daily amount of water needed to satisfy requirement of this agreement, or such additional amounts only as shall be provided by amendment hereto, subject to failures due to Acts of God, public enemy or any other circumstances beyond the control of USARYIS.
- b. The facilities as completed will become the property of RDWC and all operation and maintenance costs incurred by USARYIS will be reimbursed.
- c. Scrap or salvage generated from improvements, alterations, or major maintenance programs, will remain the property of the party holding title to the material from which the scrap and/or salvage was generated.
- d. USARYIS may, at its own discretion and cost, pump raw water through the line to any take-off along the line, provided such pumping does not affect the quantity specified in paragraph 2a(2) to be delivered to Naha City's pumping station. USARYIS will deduct from RDWC billings at the then current rate an amount equal to the cost of water diverted for USARYIS use. In the event that USARYIS does utilize more than 10,000 gallons per day from this line the cost of such water will be the subject of negotiations between the parties concerned.
- e. In the event of any dispute which cannot be resolved by RDWC and USARYIS duly authorized representatives, the matter shall be referred to the High Commissioner of the Ryukyu Islands, whose decision will be final.

4. Reimbursements

Reimbursements to USARYIS for operations in executing this agreement will be for actual costs of operation and maintenance (including costs of supplies consumed), the appropriate share of real estate right-of-way costs plus the management and engineering charges at rates established for other U. S. Government agencies. However, maintenance, repairs, and modifications estimated at \$500.00 or more, except in emergencies, will be subject for the approval of RDWC, prior to accomplishment.

5. Effective Date and Termination Provisions

Effective date of this part of the agreement will be 23 October 1959 and shall extend until such time as circumstances dictate termination or modification of this agreement. Termination or modification will be effected only after approval of both parties, or when directed by proper authority.

2 Incl

- 1. Plan & Cost Est for USCAR Sponsored Development & Const of Water Sys Facilities
- 2. Rate Computation

G. T. POWERS
Brigadier General, United States Army
Deputy Commanding General
(USARYIS Representative)

JAMES A. ROSS, JR.
Chairman, Board of Directors
Ryukyu Domestic Water Corporation
(USCAR Representative)

HEADQUARTERS U. S. ARMY, RYUKYU ISLANDS

AND IX CORPS

Office of the Engineer APO 3 3 1

PLAN AND COST ESTIMATE FOR USCAR SPONSORED DE-VELOPMENT AND CONSTRUCTION OF WATER SYSTEM FA-CILITIES TO BE INTEGRATED WITH THE MILITARY ISLAND WATER SYSTEM (REVISED)

Facilities to be Constructed and Estimated Cost:

In order to provide the local economy with an additional 5,000,000 gpd of potable water, construction of additional facilities which would be operated as an integrated element of the present Military Island Water System is required. The scope of the facilities to be constructed and estimated costs are indicated below:

a.	Zukeyama Dam & Reservoir with necessary appurtenant work	\$302,684
b.	Installation of 16" and 14" diameter pipeline from Sukiran Reservoir to Naha City clear-well	650,451
c.	MCAF Pumphouse	57,042
d.	Increase pumping capacity of Tengan Pumping Station; conver-	
	sion of raw water main to treated water main Tengan to Ty- base Water Plant	75,718
e.	Increase treatment capacity of Tybase Water plant and pumping capacity of Tybase High Lift Pumping Station	270,392
f.	Change existing 16" diameter to 28" diameter pipeline from	
	Tybase Water Plant to Sukiran Reservoir	493,110
g.	Development of well field in Kadena and investigation of south- ern Okinawa water sources	360,151

\$ 2,209,548

RATE COMPUTATION FOR SALE OF WATER

(BASED ON FY 60)

Operations - Water Plants & System	\$324,094
Maintenance - Water Plants & System	175,583
Distribution Mains & Service Lines	29,219
Management & Engineering (6% of above)	31,734
	\$ 560,630 5,420,588
Unit Cost for Operation and Maintenance (per M/gal)	\$0.1034
Unit Cost for power (per M/gal)	0.0420

TOTAL UNIT COST (per M/gal) - \$0.1454

TOTAL

Appendix No. 3

UNITED STATES CIVIL ADMINISTRATION OF THE RYUKYU ISLANDS

Office of the High Commissioner APO 3 3 1

HICOM ORDINANCE NUMBER 8 4 September 1958

ESTABLISHMENT

OF THE

RYUKYU DOMESITIC WATER CORPORATION

- 1. There is hereby created and established a public corporate entity under the name of Ryukyu Domestic Water Corporation having the powers, duties and responsibilities set forth in the attached Charter which constitutes a part of this Ordinance.
- 2. This Ordinance shall become effective on the fourth day of September 1958.

FOR THE HIGH COMMISSIONER:

1 Incl:
Charter - 4 September 1958
DISTRIBUTION
A, B, C, D, E, F
Plus
Econ. Dev. Dep. - 15

s/Vonna F. Burger
VONNA F. BURGER
Brigadier General, USA
Civil Administrator

CHARTER

OF THE

RYUKYU DOMESTIC WATER CORPORATION

4 September 1958

(As Amended by Change No. 1, June 30, 1960)

ARTICLE I

PURPOSE OF RYUKYU DOMESTIC WATER CORPORATION

For the purpose of acquiring, maintaining, and operating domestic water producing properties and facilities in the Ryukyus for collection, treatment, transmission, distribution and sale of water for the use and benefit of, the Ryukyuan people, for industrial development, and for other purposes, there is created, as an instrumentality of the United States Civil Administration of the Ryukyu Islands (hereinafter referred to as USCAR), a body corporate by the name of "Ryukyu Domestic Water Corporation" (hereinafter referred to as the "Corporation").

ARTICLE I

PRINCIPAL OFFICE

The address and principal office of the Corporation shall be Naha, Okinawa, Ryukyu Islands.

ARTICLE II

DIRECTORS

- 1. The Board of Directors of the Corporation (hereinafter referred to as the "Board") shall be composed of five members to be appointed by the Civil Administrator of the Ryukyu Islands or his lawful successor. He shall also designate the Chairman, who shall also act as the president of the Corporation and the member of the Board who shall act as Vice-President. The authority appointing the members of the Board may also appoint one or more alternate members who shall act as Directors during the absence or unavailability of any regular appointed members at the call of the Chairman or acting chairman.
- 2. The members of the Board shall serve at the pleasure of the appointing authority, but, unless sooner removed from office, shall serve for terms specified by

the appointing authority at the time of appointment. A successor of a member of the Board shall be appointed in the same manner as the original member.

- 3. Vacancies in the Board, so long as there shall be four regularly appointed members in office, shall not impair the powers of the Board to execute the functions of the Corporation. A quorum shall consist of four members made up of regular members or a combination of regular and alternate appointed members of the Board for the transaction of the business of the Board. The concurrence of three members at the meeting of the Board shall be necessary for a resolution of the Board.
- 4. The Board shall have the general management and control of the business affairs and property of the Corporation, and is empowered to exercise all the powers that may be exercised or performed by the Corporation under this Charter and applicable laws and ordinances.
- 5. Regular meetings of the Board shall be held once each month at such time and place as the Board shall, by resolution, designate. Special meetings may be called by the Chairman or by any two Directors by giving three days' notice to each Director.
- 6. Each Director shall be paid by the Corporation such salary or compensation for his service as a Director of the Corporation as shall be specified by the appointing authority, but in no event shall employees of the United States Government or Government of the Ryukyu Islands receive any salary or compensation for their services as Directors of the Corporation. Members of the Board shall, with the approval of the Board, be reimbursed by the Corporation for actual expenses incurred by them in the performance of the duties vested in the Board by this Charter.
 - 7. Except as otherwise provided by this Charter, and subject to the approval or direction of the authority appointing the members of the Board, the Board shall select and appoint the officers and such employees and agents as are necessary for the transaction of the business of the Corporation, and shall fix their compensation, define their duties, and require sufficient bonds of such of them as the Board may designate. Any officer, employee or agent may be removed at the direction, and in the discretion, of the Civil Administrator of the Ryukyu Islands or his lawful successor.
 - 8. The Board shall file with the appointing authority operating and financial statements at such time and in such form as the appointing authority shall direct.

9. Each member of the Board, before entering upon the duties of his office, shall subscribe to an oath faithfully and impartially to perform the duties imposed upon him by this Charter.

ARTICLE IV

OFFICERS

- 1. The officers of this Corporation shall consist of the President and such other officers as shall be appointed by the Board.
- 2. The President shall execute and direct the affairs of the Corporation in accordance with the resolutions of the Board of Directors, and shall be the officer who shall execute and deliver, in the name of and on behalf of the Corporation, contracts, conveyances, leases, and other instruments affecting the corporate properties. The President may delegate to the manager of the Corporation the power to execute contracts and such other instruments as are necessary in the routine business activities of the Corpoation.
- 3 The duties and powers of officers other than the President shall be defined in the resolution providing for such office and appointment thereto.

ARTICLE V

CORPORATE POWERS

- 1. Except as otherwise specifically provided in this Charter, the Corporation:
 - a. Shall have succession in its corporate name.
 - b. May sue and be sued in its corporate name.
 - c. Shall adopt and use the Corporate Seal.
 - d. May make contracts, as herein authorized.
- e. May purchase or lease and hold such real and personal property as may be necessary or convenient in the transaction of its business.
- f. Shall have power to exercise the right of eminent domain, and in the purchase or condemnation of any real estate, or rights therein, the title thereto shall be taken in the name of the Corporation and for the accomplishment of the purposes of this Charter.

g. Shall have power to acquire any property, real or personal, or rights therein or thereto, for the collection, treatment, transmission, distribution and sale of water, and shall have power to acquire or to construct dams, pumping stations, treatment plants, transmission lines, and incidental works, including storage facilities, in the Ryukyu Islands, and to unite the various water supply installations into one or more systems by interconnecting pipe lines.

h. Shall have power:

- (1) To convey by deed, lease, or otherwise, all or any portion of the corporate property; Provided, that no transfer authorized herein shall be made without the prior approval of the Civil Administrator of the Ryukyu Ialands, or his lawful successor, if the property to be conveyed exceeds \$500 in value; And Provided further, that no transfer of the entire corporate properties shall be made for the conduct of any business other than the collection, treatment, transmission, and sale of water or for any purpose in conflict with the purposes for which the Corporation is created.
- (2) To lease, consistent with the provisions of subsection (1), all or any portion of the corporate property to other government agencies of the United States of America.
- (3) To make loans and to purchase the obligations of private companies engaged in the distribution and public sale of water in the Ryukyu Islands.
- i. Shall have power to produce, to purchase and to distribute and sell, water to public and private consumers at rates approved by the Civil Administrator of the Ryukyu Islands, or his lawful successor.
- j. Shall have power to perform any other lawful acts necessary for the accomplishment of the corproate purposes.

ARTICLE VI

SEAL

The Corporate Seal of this Corporation shall be a circular seal bearing the name of the Corporation and the year of incorporation.

ARTICLE W

EXEMPTION FROM TAXATION

The Corporation, its property, revenues, activities, and operations shall be exempt from all taxation.

ARTICLE VIII

FINANCING

- 1. There is hereby established a Ryukyu Domestic Water Fund (referred to hereinafter as the "Fund"). Receipts from any operations under this act shall be credited to the Fund. The Fund shall be available for payment of all expenditures of the Corporation under this act.
- 2. The Board of Directors is authorized to invest, pursuant to approved budget programs, such portion of the Fund as is not required to meet current needs in interest bearing obligations of the Government of the Ryukyu Islands or of any of its agencies and instrumentalities. Such obligations shall be guaranteed as to principal and interest by the Government of the Ryukyu Islands and shall bear interest at a rate determined by agreement between the Corporation and the Government of the Ryukyu Islands. The interest on, and the proceeds from the sale or redemption of, any obligation held in the Fund shall be credited to and form a part of the Fund.
- 3. The banking or checking accounts of the Corporation shall be maintained with those banks designated by the Board of Directors, and all such accounts shall be credited to and form a part of the Fund.
- 4. Whenever any capital in the Fund is determined by the Board of Directors to be in excess of the needs of the Corporation, taking into consideration funds required for operations, plant replacement and expansion, and emergencies, such surplus shall be paid into the General Fund of the USCAR as miscellaneous receipts.
- 5. The Corporation may borrow, for any of the purposes of the Corporation, sums of money not to exceed a total of \$1,000,000 outstanding at any one time. For this purpose the Corporation is authorized to issue its notes, debentures, bonds or other obligations to be redeemable at the option of the Corporation before maturity in such manner as may be stipulated in such obligations. Any borrowings by the Corporation shall be subject to approval of the Civil administrator.