

AN ASSESSMENT: GUAM'S INFRASTRUCTURE AND ECONOMIC DEVELOPMENT

BUREAU OF PLANNING

INTRODUCTION

As the economic condition of the island deteriorates, an understandable sense of urgency is felt within the councils of government. There is a tendency to grasp at projects and programs that seemingly provide solutions to the symptoms of recession--sagging employment rolls, reduced government revenues, drawbacks in private investment, etc. In this atmosphere, it is necessary to maintain a framework to rationally evaluate the short and long term affects of proposed projects. As part of this framework, an assessment of the limitation of the infrastructure to maintain and/or promote economic development is necessary.

Much of the existing infrastructure of the island was constructed by the military and transferred to the control of the Government of Guam in the late fifties. The government has extended and improved parts of the infrastructure, such as the phone and transportation systems, to accommodate increases in the population and the expansion of the economy which has occurred during the last twenty years. Other components, such as sewer and waste water treatment facilities, were seriously neglected. During this period, infrastructure improvements and extension were localized more in the northern and central sections of the island than in the south.

During the frenzy of activity which brought Guam in to the modern world, the time for reflection on the impacts of infrastructure development was not available. Likewise, the condition of the economy today requires more action than reflection. However, the impacts of programs and projects must be evaluated. Water is a limited resource, and projects that require significant volumes of water will have to be evaluated carefully. Agricultural development in the south beyond the "family assistance" level should be assessed in light of the actual benefits to the island's economy as opposed to the tremendous capital improvements necessary to begin such development. Land availability for economic development projects (e.g., Cabras Island) is a crucial problem requiring cooperation between the military and GovGuam.

By the year 1990, an infrastructure will be needed to serve approximately 200,000 people. The following sections provide a generalized assessment of the limitations of various parts of the island's existing infrastructure.

COMMUNICATION

The overall goal of the Guam Telephone Authority (GTA) is to provide service to the civilian community on demand. Currently, GTA services 10,500 subscribers. It is projected that well over 20,000 subscribers will demand service by 1980. It is apparent to all that the present quality of telephone service is poor.

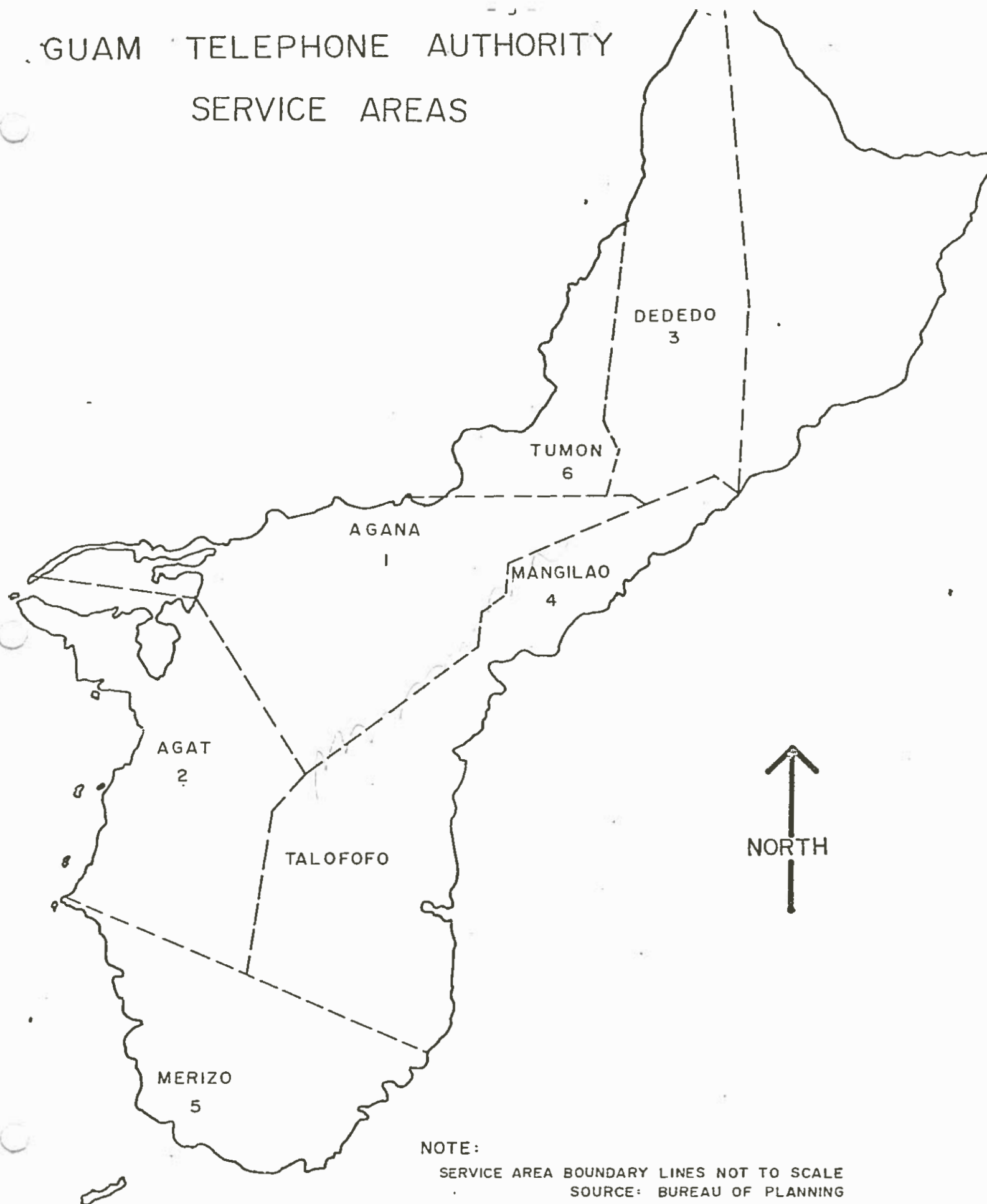
The accompanying map and table indicates that the Tumon-Tamuning area has the highest estimated number of subscribers and the highest percentage of existing establishments utilizing a telephone. The current demand for telephone service is highest in Agana with almost 2,500 applicants requesting service. GTA projects that the future demand for telephone service will be greatest in Dededo. The data presented on the map and table was compiled and tabulated by the Bureau of Planning to determine the extent of current coverage and future demand of the system. The base data was provided to the Bureau of Planning by GTA.

Based on the area coverage survey, GTA has determined necessary system improvements to meet the current and future demands for telephone service. In effect, additional lines and terminal equipment will be necessary in Agana, Agat, Dededo, and Mangilao to accommodate the increasing demand for telephone service in these areas. As existing service to the southern end of Guam is admittedly poor, it will be necessary to construct additional facilities at Merizo to upgrade service to Merizo-Inarajan-Malojloj areas. A general improvement in the telephone system in the Tumon-Tamuning area is also needed as well as an increase in the service to the Harmon Industrial area. GTA is also studying the feasibility of constructing central offices in Talofofo and Yigo to upgrade service in these areas since proposed housing developments are being considered.

Whether the territory can expect to see an extension of telephone facilities and a general improvement in the quality of service depends on an application made to the Rural Electrification Administration (REA) for an \$18 million dollar loan. A tentative Capital Improvement Plan was developed as part of the

GUAM TELEPHONE AUTHORITY

SERVICE AREAS



RESULTS OF PRELIMINARY AREA COVERAGE SURVEY SOURCE: GUAM TEL. AUTHORITY

SERVICE AREAS	% OF ESTABLISHMENTS WITH SERVICE 1975	ESTIMATED SUBSCRIBERS OCTOBER 31, 1975	PROJECTED NEW SUBSCRIBERS-BY 1980	TOTAL ESTIMATED SUBSCRIBERS-BY 1980
1. AGANA	52%	3299	3409	6708
2. AGAT	60%	1012	657	1669
3. DEDEDO	47%	2615	4435	7050
4. MANGILAO	52%	993	1322	2315
5. MERIZO	48%	408	361	769
6. TUMON	51%	2800	2820	5620

application. Once the REA loan is approved, GTA will program the particular projects to meet the needs presented in the previous paragraph. It is evident that without the REA Loan, there is little possibility for improving the existing quality of service. In the event of the loan's disapproval, it may be necessary to sell or lease the telephone system. Otherwise, all that can be expected is maintenance of the existing system facilities and moderate improvements to the quality of service.

POWER

In 1972, the military and the Guam Power Authority (GPA) entered in to the "Power Pool Agreement." The purpose of the agreement was to integrate the two power systems and establish GPA as the sole power producer on the island. Following the agreement, GPA undertook a tremendous expansion program to upgrade its power generation capacity and to improve and extend transmission and distribution facilities. The expansion program was financed through the issuance of General Revenue Bonds. Since 1968, GPA has grown from a transmission and distribution operation to a complete power system with an installed generating capacity of 206.5 megawatts. The military has an installed generating capacity of 94 megawatts, bringing the total island generating capacity to 300.5 megawatts. The net dependable capacity available to meet island-wide demand is 206.5 megawatts with 94 megawatts available in reserve capacity. The need to perform preventive maintenance and repairs on the generating units warrant the necessity of having this "spinning reserve." The installed generating capacity of GPA alone will exceed the projected island-wide power demands (civilian and military) to the year 1981. However, due to a slack of about 10% between actual demand and estimated demand in the past, the critical year may be 1983.

<u>Island-Wide Generating Capacity</u>		<u>Estimated Island-Wide Peak Demand</u>	
I. Guam Power Authority		1976	161.59 MW
		1977	169.67 MW
A. Cabras 1 & 2	132.0 MW	1978	178.15 MW
B. Tanguisson (2)	26.5 MW	1979	187.05 MW
C. Diesels	20.0 MW	1980	196.41 MW
D. Barge	28.0 MW	1981	206.23 MW
II. Navy			
A. Piti	67.5 MW		
B. Tanguisson (1)	26.5 MW		
TOTAL	300.5 MW		
III. Reserve Capacity	(94.0) MW		
IV. Net Dependable Capacity	206.5 MW		

Source: Engineering Division, GPA

SYSTEM MAP

LEGEND

□ POWER PLANTS

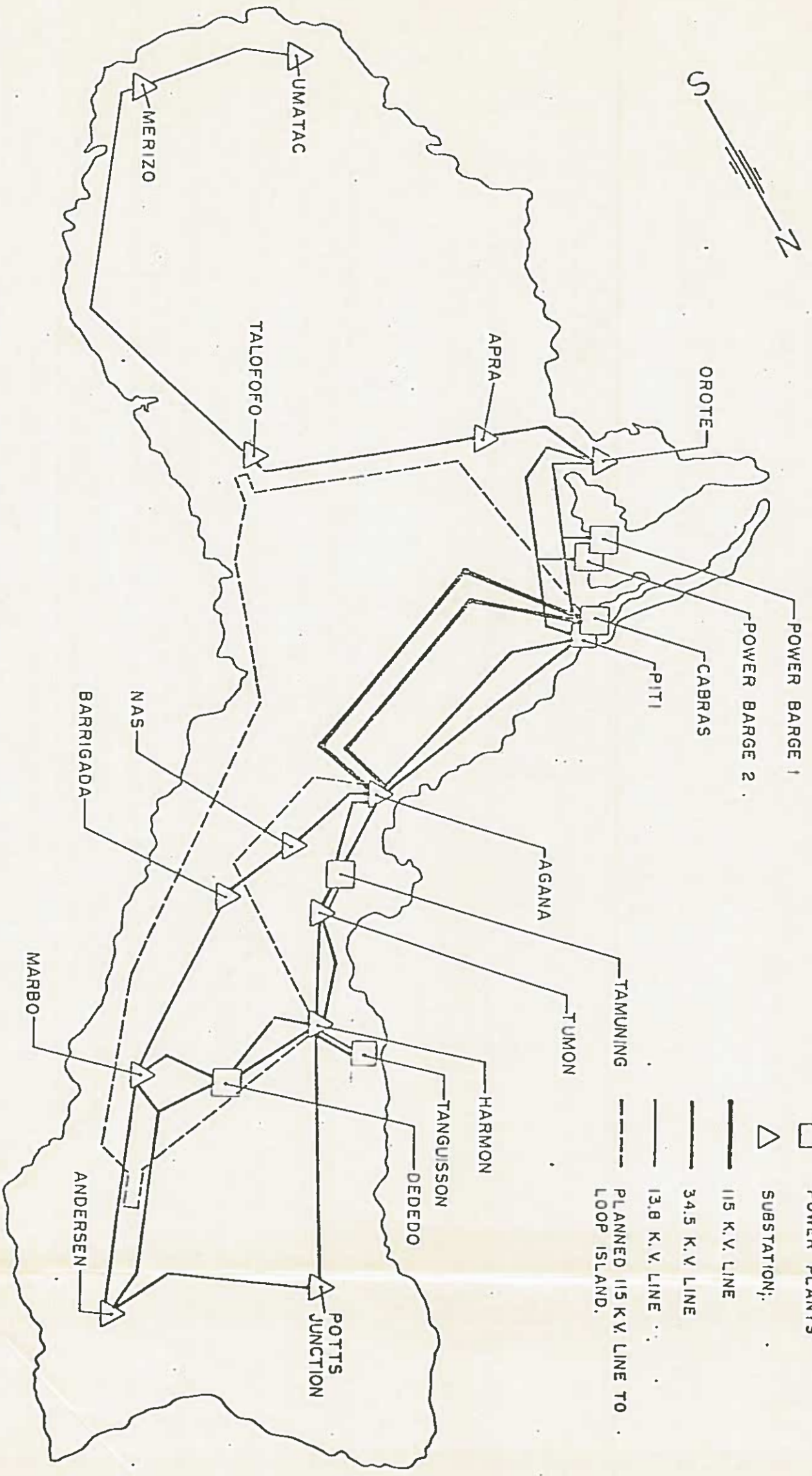
△ SUBSTATION

— 115 K.V. LINE

— 34.5 K.V. LINE

— 13.8 K.V. LINE

- - - PLANNED 115 K.V. LINE TO LOOP ISLAND.



Currently, the Cabras and Tanguisson No. 2 plants (owned and operated by GPA) and the Tanguisson No. 1 plant (owned by Navy and operated by GPA) are generating power. The Piti Plant, the Inductance Power Barge, and the GPA diesels will remain in service. However, because these are older, less dependable, and less efficient units, they will be used mainly on a reserve standby capacity. At the present time, GPA is generating between 80-90% of total island demands for power.

As indicated on the attached map, the more populated central and northern areas of Guam are served more extensively than the less populated southern areas. The transmission and distribution facilities in the north and central areas are capable of handling the existing and anticipated power demand in to the 1980's. The completion of a new distribution line from Apra to Talofofo has greatly improved the reliability and dependability of power service to the southern areas. However, additional lines and an additional substation will be necessary to accommodate any major development in the south.

The life of the transmission and distribution system is about fifty years. This estimate is based on the assumptions that proper maintenance takes place and that there is no significant typhoon damage. GPA has planned to loop the island with 115 KV transmission lines by the year 1990 (see attached map). However, due to current financial problems, GPA spokesmen indicate that this project may be delayed an additional ten years. Power availability on Guam depends on the availability of oil. Two oil storage tanks with a 60-day reserve capacity are in the process of being completed adjacent to the Piti and Cabras plants. The increasing costs of oil should encourage the island to investigate alternative energy sources. GPA now is looking in to the possibility of using Australian coal for its steam powered generating plants. Further expansion programs by GPA will depend heavily on its ability to remain solvent. Presently, the agency is attempting to initiate a \$40 million dollar revenue bond issue to cover already incurred debts.

POTABLE WATER

Rainfall is the only source of water for Guam. Barring a significant breakthrough in water desalination technology, the island's capacity to meet the water demands of its increasing population and to serve the needs of its economy will be determined by our success in managing our limited water resources. The dependable maximum yield of island-wide water resources

has been estimated at 17 million gallons per day for surface waters and between 35 and 50 million gallons per day from the ground reserves of the northern water lenses. Both the Government of Guam and the military provide water for Guam's residents.

The Government of Guam currently operates 65 wells located on the northern limestone plateau. These wells provide water to all the villages with the exception of the Merizo/Umatac and Agat/Santa Rita areas. The water line is being extended from Inarajan to Merizo. Project completion will take approximately 12 to 14 months once property access permits are negotiated. Fifty percent of the project's \$3.6 million is to be federally funded. There are no current plans to extend the pipe to Umatac. The Navy obtains the bulk of its water supply from the Fena Reservoir and supplies Agat/Santa Rita, while the Air Force produces its water from eight deep wells in the north.

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[The islands infrastructure has a current capacity to supply about 32 million gallons per day (mgd) to both the military and the government, while consumption has been fluctuation around 15 mgd for the civilian community, 9 mgd for the Navy, and 3.25 for the Air Force. Total consumption, therefore, stands at 27 .25 mgd. Thus, there would seem to be a reserve capacity island-wide. This does not exist in the civilian sector, however, as capacity and consumption are approximately even at 15 mgd.] *delete*

Currently, no new wells are being drilled as consumption has remained fairly static this year. There are plans at the Public Utility Agency of Guam (PUAG) to develop surface water through damming and to upgrade the existing infrastructure. However, implementation of these plans depend on availability of funding.

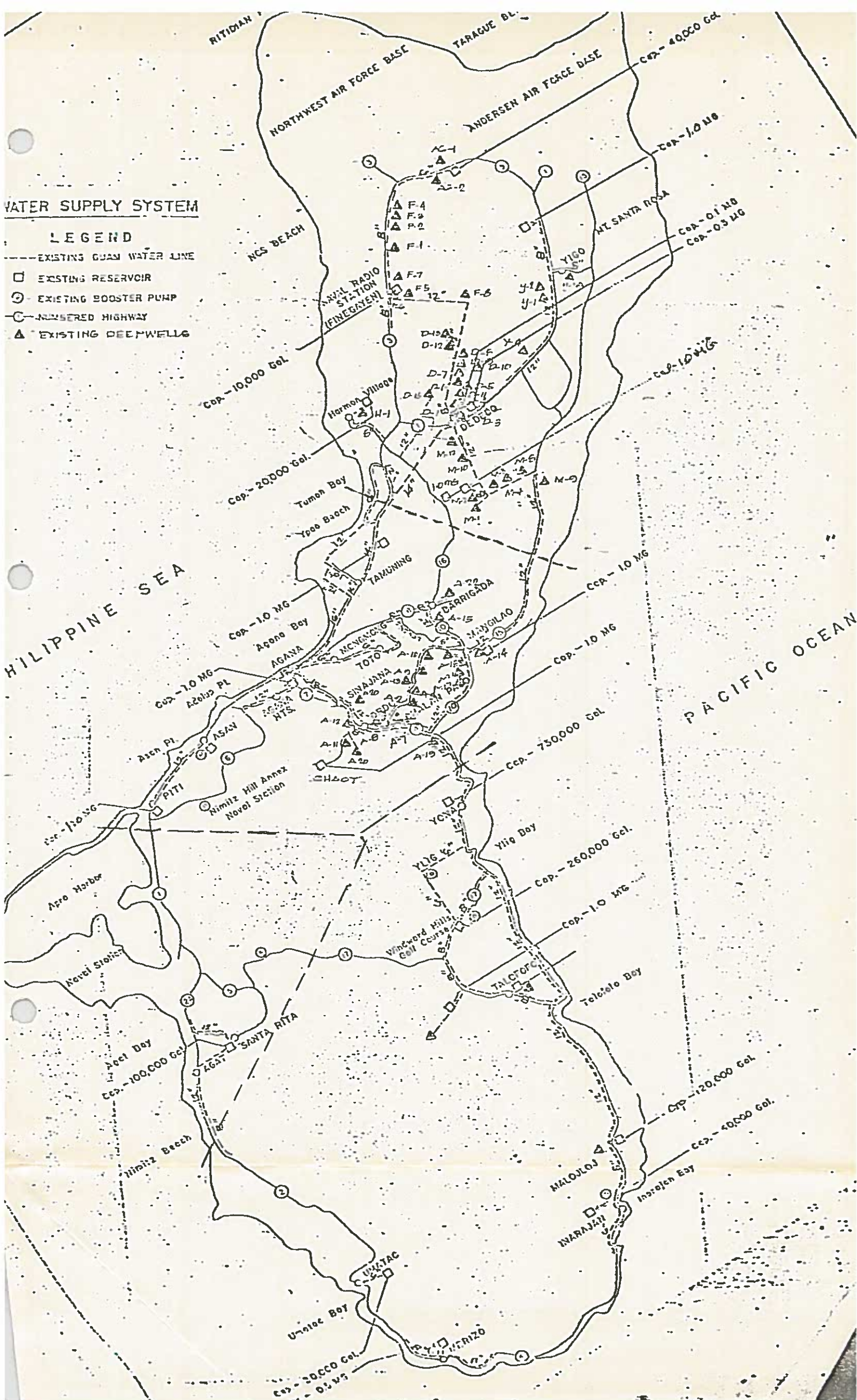
PUAG has been funded in the amount necessary for maintenance of only existing facilities this year. PUAG spokesmen do not know if any new funds will become available to implement new plans outside of the pipe line to Merizo. Current pipe line infrastructure is considered adequate to meet present demand. However, there are areas where deterioration, and replacement, and expansion are needed,

(i.e., Umatac/Merizo and certain other areas in the south of the island)

The limitations to the island's water resources are complicated further by environmental problems and economic reality. As we approach the northern water lense's estimated capacity, the quality of the island's fresh water will be threatened by salt water intrusion. It is not inconceivable that indiscriminate and irrational development over the northern water lenses will destroy the

LEGEND

- EXISTING GUAN WATER LINE
- EXISTING RESERVOIR
- ⊙ EXISTING BOOSTER PUMP
- C- PAVED HIGHWAY
- ▲ EXISTING DEEPWELL



destroy the potential of that source. Another threat to the water supply in the north is pollution due to the absence of sewer lines and waste water treatment facilities. It is possible for the lense to become contaminated due to pollution from overflowing cesspools and septic tanks.

A well managed and rational development of Guam's water resources is required. Conservation programs, even at the home level, may become necessary. Water development projects, such as an eel farm or agricultural projects requiring extensive irrigation, should be analyzed carefully as they may come in to conflict with our future population's need for drinking water.

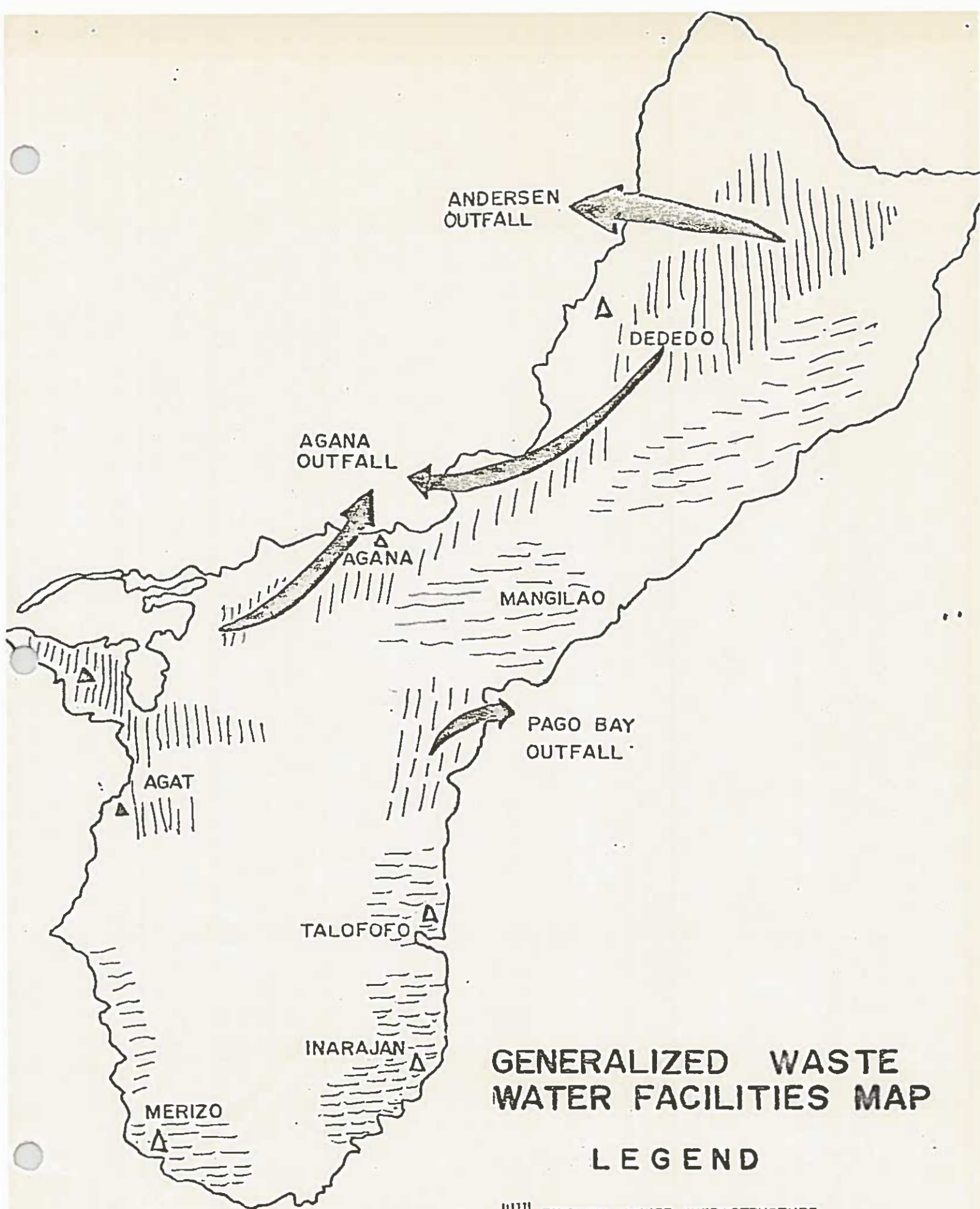
The attached map indicates the existing Guam water supply system including the positions of both water lines and deep wells.

WASTE WATER

Today over 75% of the island's sewage either flows directly into the ocean or seeps into the ground from septic tanks, cesspools, and outhouses. Thus, the danger of pollution to the water supply is a problem which must be faced. A plan for the development of a waste water system is operational, and Guam's Environmental Protection Agency is now engaging the services of a consultant to examine the island's need for future development of waste water facilities.

The extent of existing sewer lines and treatment facilities is now limited to the northern and central sections of the island. Interception and collection lines, pumping stations, and other improvements are gradually being linked together. Current projects are being undertaken in Mangilao (\$1 million), Barrigada (\$1.6 million), and Chalan Pago (\$1 million). These current projects should be completed by the summer or fall of 1976. As projects are completed, all residences and business establishments will be required by law to connect to the new systems. *The southwestern portion of the island is* The ~~western and southern~~ districts are served by Guam's only sewer treatment plant in Agat. A Navy facility is presently under construction. Because of the topographical features of the south, at least three separate systems will be necessary. The overall costs, island wide within the next five years, have been estimated at close to \$40 million, with approximately \$25 million going to the north/central regions and \$15 million going to the south/western part of the island. *(See attached waste water facilities map.)*

Another equally important concern is the reef ecosystem. The government, on a project-by-project basis, should determine the impacts of the waste



material of any proposed manufacturing or industrial project. Future aquaculture projects may be jeopardized if untreated sewage is allowed to flow out into the ocean and then drift back upon our reefs.

TRANSPORTATION

An evaluation of the capability of the existing transportation system to support the future economic development of Guam requires an appraisal of the adequacy of the port and air terminal facilities as well as the internal transportation network. Facility capacity to accommodate passengers and cargo at the airport and harbor is a factor which can limit Guam's economic growth potential. Also, the ease of movement of people, goods, and services internally throughout the island will have consequences in the economic development of Guam.

While existing facilities at the Guam International Air Terminal are inadequate to handle the present passenger and cargo loads, gradual expansion of terminal and landing facilities is now underway. By 1995, an estimated volume of 2,000,000 passengers per year and 51 million pounds of cargo will be moving through the airport. A master plan for airport facility expansions is currently at the environmental impact assessment stage. The costs for implementation of the plan is estimated between \$30-\$40 million dollars. The Guam Airport Authority plans to finance the expansion with revenues, federal grants, and loans from GovGuam. Expense to the local government is expected to be minimal as the loans are to be paid back out of revenues. The "risk" is that if air travel were to diminish so much, that fees and taxes collected would not cover the cost of operating, maintaining and debt servicing, the Government of Guam would assume the liability.

It is also necessary that the facilities at the Commercial Port be expanded. The presentation by the Department of Revenue and Taxation at an earlier meeting of this committee indicated the necessity of resolving the ammunition wharf relocation issue. It is important that land become available immediately for industrial expansion and additional cargo handling frontage and storage facilities. The government might well consider the feasibility of a dredging and fill program to allow for a more immediate expansion of facilities rather than wait for a resolution to the ammunition wharf issue. Though sites along the Glass Breakwater would be ideal for industrial parks, economic necessity may dictate the acceptance of less desirable, but more available, expansion lands. An expanded Commercial Port is vital to economic development of Guam.

GROUP A - FIRST FIVE YEAR PROGRAM

Source: Dept. of Public Works

The necessary road and bridge reconstructions program will be expensive. (See Attachment)

The ability of the territory to finance any new road construction is highly questionable. Improving the level of service provided by our existing transportation network is the primary objective. Furthermore, the government will have to decide its position on the introduction of a bus transit system. The future growth of the economy will ^{have to} be supported by a smoothly functioning road network. Alternatives to the dependence on the privately owned vehicle should be seriously considered.

CONCLUSION

The research in to the various components of the island's infrastructure indicated that extensive capital improvements are necessary if we hope to provide an environment supporting economic development. The magnitude of the needed improvements is such that implementation of the projects and programs to realize a suitable infrastructure in itself would stimulate and awaken our dormant economy. However, it will be necessary to prioritize capital improvements to the infrastructure since funds will be limited.

In the State of the Territory address, the Governor listed the administration's 10 economic objectives. To realize the economic potential within any of the objectives, infrastructure development and improvements will be necessary. For example, extensive development of the Commercial Port and air terminal facilities will be necessary for Guam to become a transshipment and aviation center. For Guam to become a regional banking, insurance, or an office center, the communication system will have to be improved. Traditional agricultural and light industrial development will require water, power, and transportation infrastructure improvements and extensions, particularly in the south. Likewise, an expanding tourism industry will require general improvements to the entire infrastructure.

The Governor stated that negotiations with the Department of the Interior for a 75.5 million dollar grant and loan package, most of which is to be used for infrastructure capital improvements, are already underway. To make the best use of these funds, or even more definitely assured appropriations, a capital improvements plan for the development of the island's infrastructure is most

necessary. The research completed for this paper indicated deficiencies in the short and long range planning processes of the responsible departments and agencies.

Attached to this document is a recommended infrastructure development approach to be submitted to the Governor. The potential of certain key locations to accommodate development is evaluated. The recommended approach evolved from the analysis of the limitations of the island's infrastructure to the economic development of Guam.

ECONOMIC DEVELOPMENT: Sector Potential by Location

An assessment of the infrastructure to support and promote economic development requires the identification of particular geographic locations which provide the greatest potential at least cost for particular kinds of development. The following discussion presents an analysis of the infrastructure needs to specific locations for economic sector development.

A. TOURISM

Expansion of the tourist industry on Guam, at least in the immediate future, should be localized to Tumon Bay. The only infrastructure limitation is the capacity of existing sewer lines. Even without new hotel construction, the existing line is inadequate and thus could limit future growth.

This limitation along with the fractional lot problem may force or cause development to occur in the Sasayan area. Infrastructure in this new area is not considered to be a problem, however, since most of the Sasayan section will probably be privately developed. Consequently, no major public infrastructure investment in the basin will be required. The infrastructure systems will only have to be extended from Route 15 to the new development site.

Merizo presents a different problem as it is basically an undeveloped area. As a result, significant infrastructure extensions will be needed. Sewer lines and waste water treatment facilities, improvements to the roads, the bridges, and the telephone system will be necessary. Of these five ^{more if} infrastructure development projects, the two that put the greatest limitation on eventual tourist development are sewers

and potable water; however, this problem should be resolved within the next 2-5 years with the extension of the water line from Darajan to Merizo and the construction of sewer lines and a waste water treatment plant to serve Merizo.

B. AGRICULTURE

The Mount Santa Rosa area in Yigo, the Talofofo area, and Dandan are all prime locations for traditional agricultural development. Regardless of the location, immediate agricultural development will place demands on the island's depleting potable water lens capacity. The government's water system is operating at close to capacity now and any increased demand for irrigation will require new wells and lines being constructed. As a result, this will draw more water from the lens and may stimulate salt water intrusion into our underground supply. We must, therefore, be extremely cautious in developing this resource.

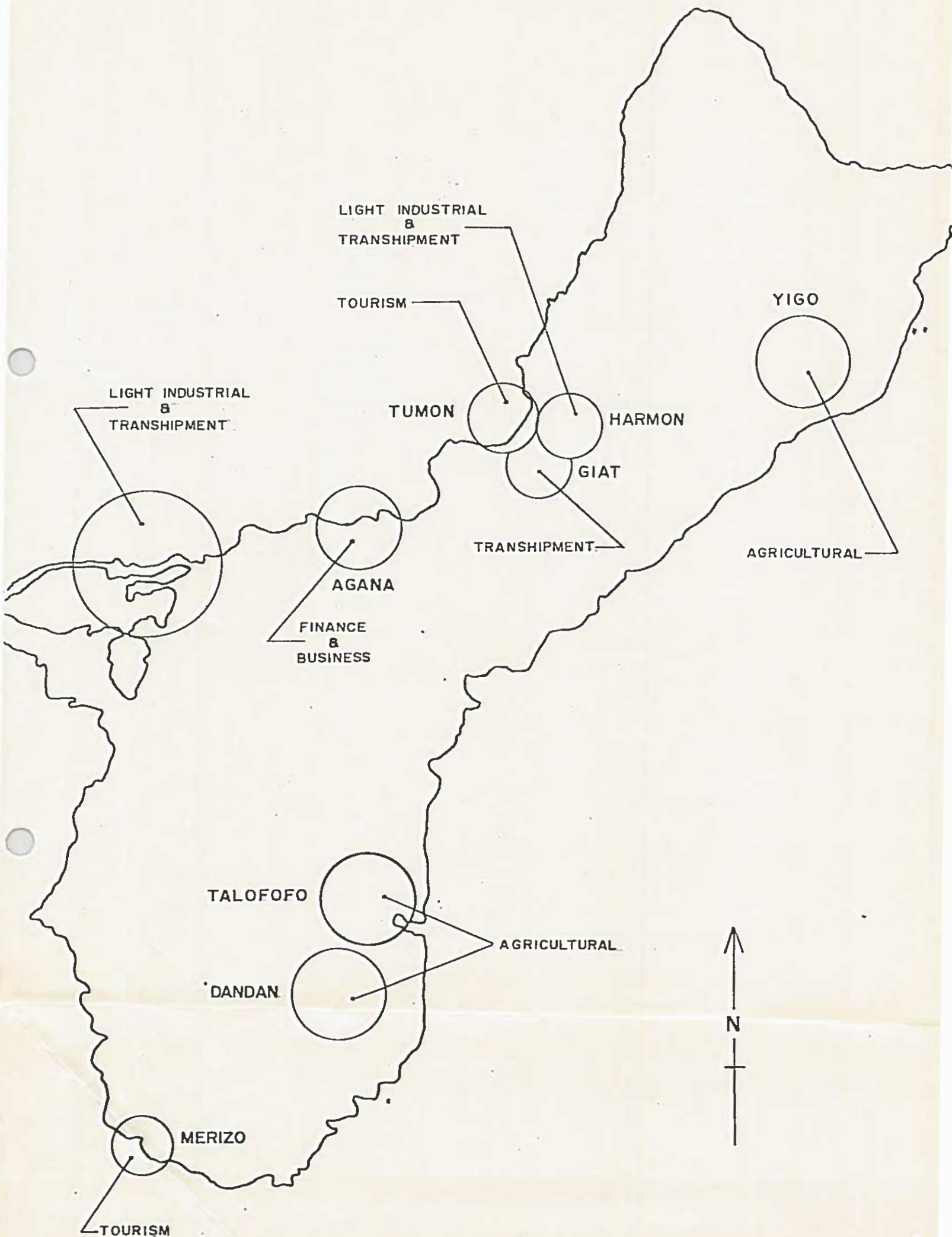
C. LIGHT-HEAVY INDUSTRY

Apra Harbor and Harmon Industrial Park are the two locations currently most suitable for industrial development. In the Apra Harbor area, industrial development will require the extension of water and sewer lines and an improvement to the road leading to the port from Marine Drive. Power availability to Apra is excellent. The Harmon area is also an excellent location for light industrial uses, manufacturing, and wholesaling. Access into and out of Harmon Field should be improved, and a general upgrading of the phone system is necessary. Given the type of industrial development expected in Harmon, significant investment in water and waste facilities will not be required.

D. TRANSSHIPMENT

The Commercial Port, the Guam International Air Terminal, and Harmon Industrial Park are the prime locations to develop to support the transshipment potential of Guam. Unavailability of land for development in the Commercial Port area may require dredge and fill operations. The storage facilities at the airport will have to be expanded. Telephone communication among the three areas will also have to be improved.

GENERALIZED LOCATION MAP FOR ECONOMIC DEVELOPMENT BY SECTOR



SOURCE: BUREAU OF PLANNING

E. FINANCIAL--OFFICE CENTER

If Agana is to realize its potential as the Pacific financial and office building center, the quality of the telephone service will have to improve. The delivering systems for power and water are adequate, while adjustments to the transportation system would entail improved local circulation and additional parking facilities. Development of Agana as a financial and office center should be preceded by the construction of the Agana waste water treatment plant.

Although general costs of infrastructure extensions and improvements have been considered in this paper in defining areas of potential development, detailed cost estimates should be considered in choosing priorities among locations and sectors for economic development. The finite nature of the island's water resources also should be considered. Government policies promoting economic development should reflect a recognition of the costs of infrastructure capital improvements and an awareness of the impacts of such improvements upon the island's natural resources.

RECOMMENDATIONS

1. Water resource development and conservation should be given the highest priority in government economic development planning. The integrity of the water conservation districts should be insured. The development of the waste water system is vital. A cost/benefit analysis of the southern water resource development should be undertaken preliminary to a damming and reservoir program.
2. Improvements to the island telephone system in the Agana-Tamuning area should be given priority to support the financial-office center concept promoted by the Governor. The government should support GTA in the REA grant application process.
3. The generating capacity of the existing power plant system is adequate to meet island needs ^{into} ~~in to~~ the 1980's. During the next 5 years, emphasis should be placed on development and improvement of distribution facilities.
4. The Government should continue its basic road reconstruction program. However, if tourist and agricultural development of the south is to be promoted, emphasis should be shifted to the southern road and bridge network.

5. Data and information necessary for infrastructure development planning is either not collected or in a ^{or unusable} ~~useable~~ format. The data collection and analysis skills of line agency staffs should be upgraded ^{and coordinated}.
6. Responsible line agency planning staffs, (GPA, GTA, PUAG, DPW) should be instructed to cooperate in the development of a comprehensive capital improvements plan.

PROJEC7

ASSESSMENT

FORMAT

I PROJECTS	SIGNIFICANT INFRASTRUCTURE REQUIREMENTS	PREFERRED GEOGRAPHIC LOCATION	SIGNIFICANT INFRASTRUCTURE DEVELOPMENT NECESSARY	CAPITAL INVESTMENT (QUALITATIVE)	MANPOWER REQUIREMENTS		ACCESS TO MARKETS	
					QUANTITATIVE*	QUALITATIVE**	FOREIGN	LOCAL
Tuna Cannery	Power, water, wastewater	Apra Harbor	Yes	High	High	Low	Good	Good
Textiles and Apparel	Power	Existing industrial site, i.e., Harmon	No	Medium	High	Low	Good	Poor
Fishing Tackle			No	Low	Low	Medium	Poor	Poor
Tennis Shoes			No	Medium	Medium	Medium	Poor	Poor
Bicycle Assembly Plant			No	Low	Low	Low	Poor	Good
Poultry Processing	Power, water, wastewater	Non-populated area	Yes	Medium	Low	Medium	Good	Good
Beef, Production Pork	Power, water, wastewater	Area with suitable grazing	Yes	Medium	Low	Medium	Good	Good
Dairy Farm	Power, water, wastewater	Suitable grazing	Yes	High	Medium	Medium	Good	Good

* Labor intensive.

** Level of skill.

II PROJECTS	SIGNIFICANT INFRASTRUCTURE REQUIREMENTS	PREFERRED GEOGRAPHIC LOCATION	SIGNIFICANT INFRASTRUCTURE DEVELOPMENT NECESSARY	CAPITAL INVESTMENT (QUALITATIVE)	MANPOWER REQUIREMENTS		ACCESS TO MARKETS	
					QUANTITATIVE*	QUALITATIVE**	FOREIGN	LOCAL
Furniture Assembly	Power	Industrial area	No	Medium	Medium	Medium	Poor	Good
Casino Gambling	Power, water, wastewater, communication	Resort area-- Tumon	No	Low, existing facilities	Medium	Med. High	Good	Ambiguous
Slot Machines	Power	Tumon--Airport	No	High	Low	High	Good	Good
Warehousing Center for Southeast Asia	Improvements in port facilities	Apra Harbor and immediate vicinity	Yes	High	High	Medium	Good	Not applicable
Oil Transshipment Facilities	Power, port facilities, tank farm	Apra Harbor and immediate vicinity	Yes	High	Medium	High	Good	Not applicable
Territorial Stadium	Power, water, wastewater, transportation	Centrally located	Yes	Medium	High	Medium	Poor	Good
Fresh Fruit, Vegetable Export	Water, l.e., irrigation system	Suitable agricultural areas	Yes	Medium	Medium	Low	Good	Good
Regional Brewery. . . Known American Brands	Water, power wastewater	Industrial area Harmon	No	High	Medium	High	Good	Good

* Labor intensive.

** Level of skill.

PROGRAMS

1. Promote positive campaign to remove political obstacles and constraints preventing Guam membership in the Economic and Social Commission for Asia and the Pacific (ESCAP) and in the Asian Development Bank.
2. Seek expansion or amendment to the Jones Act (Maritime Law) to allow greater competition among world-wide shippers for the Guam market; reduce the island's vulnerability to mainland shipping strikes which is detrimental to the island well-being.
3. The development of a comprehensive manpower training program for the island.
4. Centralization of Data Collection and Dissemination within Government of Guam.
5. Establishment of a standing technical committee to advise investors on opportunities in agriculture and industry in the territory.
6. Tax reform: Specifically in relation to the property tax.
7. Establish entities within the executive and legislative branches to coordinate fiscal policy, particularly issuance of bonds.
8. Seek to convince the federal government to implement on Guam a recent policy decision, that is, to close eventually the exchanges and bases within the U.S. (Exchanges and Commissaries are presently competing with the private sector.)
9. The adoption of strong anti-trust legislation and vigorous enforcement of local and Federal laws in order to increase the competitive structure of the Guam commodities outlets.
10. Enact legislation to render Guam eligible for unemployment insurance coverage.
11. Establishment of an island accounting system.
12. An experimental negative income tax system. (This would require an alteration or modification of Section 31 of the Organic Act.)
13. The need to take immediate action to collect accounts receivable in all government agencies. (Ready available revenue source.)
14. Instill a sense of cost consciousness at all levels of government by a formal program of instruction.
15. Charge for solid waste pick-up.
16. Upgrading the capabilities of the University of Guam so it can be prominent in certain fields of study (i.e., Marine Biology, Fishery).
17. A system for periodic and objective evaluation of programs by individuals not directly involved with it.
18. Establishment of public transportation system.
19. *Promote the regional development of agriculture.*