CHAPTER 33

OUR PUBLIC INFRASTRUCTURE: PUBLIC FACILITIES: AND VITAL SERVICES

33. 1. OUR BASIC INFRASTRUCTURE SERVICES

33. 1. 1. Introduction

Much of our modern lifestyle is made possible by a network of facilities and built-in services we use everyday. Even though they are used constantly, we usually take them for granted and know very little about them.

These things include our roads, airports and seaports, water lines, sewers, and our electrical power plants. These provide the services we use everyday. All together such facilities are called **infrastructure**; that is, things that are *built-in* to our communities.

Without this complex infrastructure our modern lifestyle would not be possible. For instance, we turn on the tap and water comes out. Our waste is simply flushed away down the sink or toilet, or it's carried away to the dump.

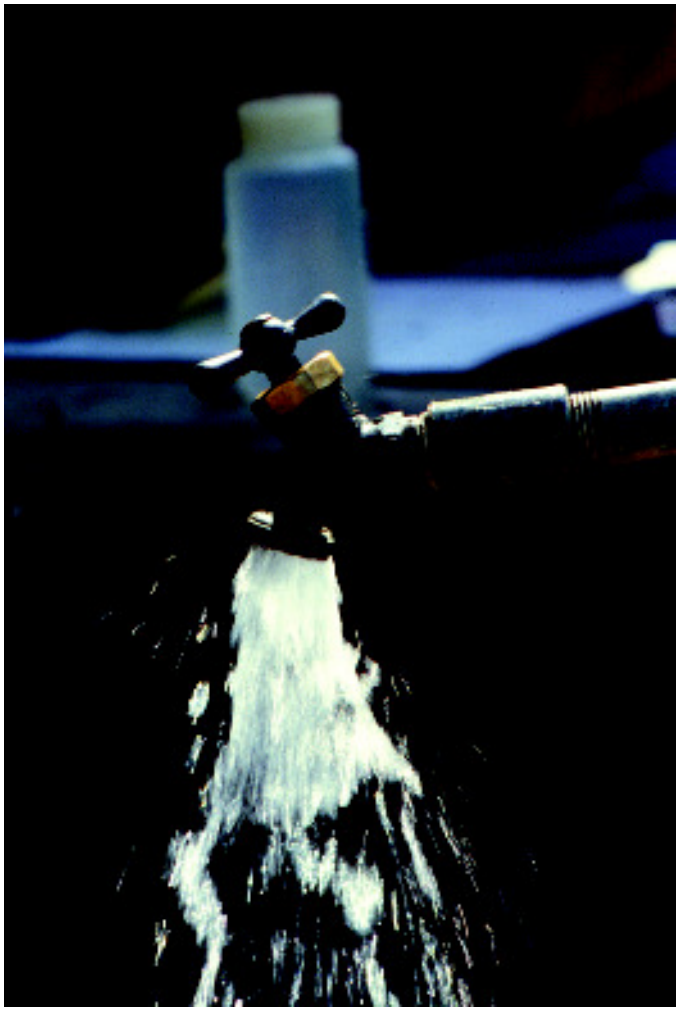
All our modern goods that come from far away are carried by planes or ships to our airports and seaports. From there they are loaded onto trucks that drive over paved roads to our homes or stores. We turn a switch and the room is full of light.

It is hard for us to imagine that things were not always this way. For most of history, however, they were not. The conveniences of modern life are a very recent innovation compared to how long people have inhabited our islands.

Now these conveniences have become so commonplace that they are taken for granted; most of us know very little about the vast network of infrastructure that keeps our modern lifestyle going.

In addition to the conveniences provided by our infrastructure, we also enjoy some remarkable **public facilities** and **vital services**. Schools of various levels of learning are available to everyone. A library is provided free of charge. Modern medical care is provided at our hospital. Parks and land for recreation are set aside for public use. The police and fire departments provide us with safety services.

Much of our modern lifestyle is made possible by a network of facilities and built-in services we use everyday.



On average, each person uses about 125 gallons of water every day in and around the home.

When commercial uses are added, it is easy to see why water supply problems occur.

As mentioned, most people take public facilities and infrastructure for granted. We seldom think about where our water comes from, where the wastes go, and how many people it takes to keep everything operating.

In this chapter we will learn about public services and facilities, where they come from, and how they are maintained and improved. We also discuss our vital public services, including the several sections of our police and our fire divisions.

We count on these vital public services to be there when we call for them. We want real people to help us when we call and we expect that real people will actively respond.

Additionally, as our population continues to increase on Saipan, Tinian, and Rota, it is especially important for students to understand the relationship between the size of the population and the costs of the services needed to provide for it.

For the most part, these are the facilities, infrastructure, and services, which we pay for through our taxes.

33. 1. 2. Water

A person needs to drink only about two quarts of water each day to live. If this were all the water we used, there would be no water problems on our islands. It would be simple to catch a little rain now and then and store it away for dry periods, or collect a little water from our small streams and shoreline seeps.

Besides drinking, however, we use water for many things. On average, each person uses about 125 gallons every day. This seems like a lot, but as we will see, all of our uses add up fast. Some people use much less water and some much more. The water used for commercial purposes, which everyone takes a share in using when we consume goods and services, is also figured into this amount.

Some big water uses around our houses include bathing and showering, washing clothes, dishes, and vehicles, and flushing the toilet.

A person showering can use 20 gallons of water. One load of clothes in a modern washer can use 35 gallons. Washing one's car or truck uses much more. The toilet can use up to 7 gallons with each flush. It is hard to estimate how much water it takes to water one's lawn or irrigate one's garden.

The amount of water we use adds up quickly when these different uses are all considered. Remember, too, that these are just household uses. When we add in the commercial uses, such as hotels, laundromats, car washes, and restaurants, it is easy to see why water supply problems occur.

Where does the water we use come from? In previous units we studied the water cycle and all the recycling pathways that water takes in nature. If we trace it back far enough we will see that nature itself is our real water supplier.

To supply ourselves with water, we collect it from the various sources in nature. Basically, there are three sources of fresh water available to us on our small, steep-sided, but level-terraced, tropical islands.

First, there is the *direct catchment* of rainwater. Although this is a very minimally used source for water here in the Marianas, we receive nearly 100 inches of rainfall each year; this distributed over each square inch of our islands. Over an entire year, on the island of Saipan alone, this adds up to a total of 190 million gallons per day. Yet, in many parts of the world where it rains much less, people survive completely on captured rainwater.

Second, there is *surface water*. This comes from our lakes, rivers, and streams. On small steep-sided limestone tropical islands, these sources are usually small or non-existent. Where they do exist, the water sources are often of very poor quality, or are only available during certain times of the year.

Similarly, our first ancestors utilized the *freshwater seeps* located along our beaches as a source of freshwater. Holes were dug in our sandy beaches and freshwater draining from our limestone aquifers was recovered.

When our island populations were small and people used only a little bit of water each day, enough water was available at these streams and seeps to accommodate our populations. Now with our much larger populations, this surface water is not nearly enough to provide for our needs.

For this reason we must tap our third source. This is our *groundwater*. When rain falls on our islands, a part of the rain will percolate into the ground. Groundwater saturates a large part of the rocks in our southernmost Mariana Islands. Actually the freshwater seeps, mentioned above, are a form of groundwater.

Direct catchment of rainwater could supply all of our water needs.

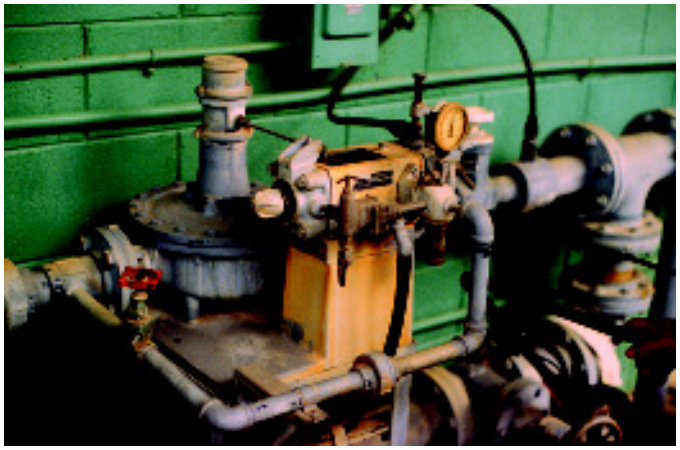
Groundwater must be drawn out of the ground using wells and pumps. At the time of this book's writing, the present pumping rate for Saipan is about 4 million gallons per day. After being pumped, the water is stored in large holding tanks. Several of these are located around our islands. Some of these tanks hold 1 million gallons of water. From these tanks the groundwater is distributed to homes and businesses.

Once water is pumped from the ground and stored in the tanks, it must be distributed to those who will use it. A very complex system of pumps, piping, and valves is used to do this.

A water distribution system can be compared to the branches of a tree. Water from the ground is taken up by the roots and passed up the trunk. Then it is distributed into smaller and smaller tree branches until each leaf at the end of every tiny twig receives a small amount of water.

In our water system, water is first pumped from wells to large storage tanks. Then a large pipe carries water away from these storage tanks. The water is carried to smaller and smaller connecting pipes until finally each house, apartment, or business has a small pipe

Groundwater is stored in large holding tanks, some of which hold 1 million gallons of water.



To keep the water pressurized and moving, pumps must be installed at critical locations.

The treatment plant is designed to process large quantities of wastewater on a continual basis.

entering it. The even smaller individual connections to the sinks and toilets inside each house or apartment can be thought of as connections to the leaves on a tree.

In a large water system, it may be many miles from the storage tank to the last house on the system. This is true even on a small island like Saipan. Along the way there are many lines that branch off and carry water to some of the users.

To keep the water pressurized and moving to everyone on the system, even to the last house, pumps must be installed at critical locations. The number of pumps depends on how much water is needed and how far it must be carried.

Water demands for a community usually change over time as the population grows. A water collection, storage, and distribution system that was adequate years ago may be insufficient for our needs today. Also, mechanical equipment and piping will wear out over long periods and must be replaced.

For these reasons, the system must be upgraded, improved, and maintained periodically. These are expensive tasks. Even if enough money is available to maintain the man-made part of the system, nature only gives us so much water.

Water conservation is really the best way to reduce the costs of building and maintaining water systems. This also helps make sure that we do not need more water than nature can give us.

33. 1. 3. Wastewater

After water is used, it is dirty. How dirty it is depends on what it was used for. Since it is no longer fit for human use, it must be collected, carried away, treated, and disposed of.

Just as there is a system of pipes and equipment to bring clean water to our homes, there is a similar system to collect dirty water and carry it to a treatment facility. This is the *wastewater collection system*.

The waste plumbing system to and from our homes, schools, hotels, and restaurants, collects wastewater from the drains, sinks, and toilets. It then transports it to larger sewer pipes, which eventually reach our wastewater treatment plants.

Remember that in the water distribution system, pipes started out large and got smaller towards the end of the system. In the sewer system it is just the opposite. Pipes start out small and then get larger as they get closer to the treatment works. The largest pipes are located closest to the treatment plant.

These sewer pipes are buried in the ground just like water pipes. Once the sewage is collected and brought to the treatment plant, treatment begins.

The treatment plant is a large, centralized facility. It is designed to process large quantities of wastewater on a continual basis. There are three basic stages to processing wastewater. These are **settling**, **biological treatment**, and **disinfection**.

In the first stage, the wastewater is sent to a large basin, which can hold up to 1 million gallons. Here the heaviest solids settle out. These solids are collected and sent on to a different facility for further processing and disposal as solid waste.

In the second stage, the wastewater is sent to another large basin for biological treatment. Here a very large and vigorous population of bacteria and other microbes actually eat the wastewater's organic matter. The microbes are filtered out before the last stage is reached.

In the disinfection process, the final stage, the wastewater is now cleaner and noticeably clearer than it was when it first entered the plant. The wastewater is treated with chlorine to kill many of the harmful bacteria and viruses that were not removed in the first two treatment processes. Finally, the wastewater is piped out to the ocean where it mixes with the natural waters.

Wastewater, which is heavily saturated with organic matter upon entering the plant...

Although the type of wastewater treatment discussed above works fairly well, it is not perfect. Some pollution from even the best and most expensive treatment plants continues to escape into our ocean waters. Moreover, the treated wastewater is still much too dirty for us to drink or use for washing or cooking.

Treating it further would be so expensive that often we could not afford to do it. We intentionally leave the last stage of treatment to nature. When we send our treated wastewater to the ocean, the water re-enters the hydrologic cycle where it is cleansed by natural processes and returns to us again as fresh, clean rain.

...is cleaner and noticeably clearer when it is discharged into the ocean.

It is wrong, and dangerous, to think that nature will always help us treat our wastewater. If we produce too much wastewater, or don't treat it adequately, then nature cannot do its part properly. In addition, nature cannot clean up some types of pollutants. It is important that we be careful about what kind of, and how much, wastewater we produce.

Wastewater treatment facilities and sewer lines are very expensive to build, operate, and maintain. Just as with the water system, mechanical equipment wears out and must be replaced.

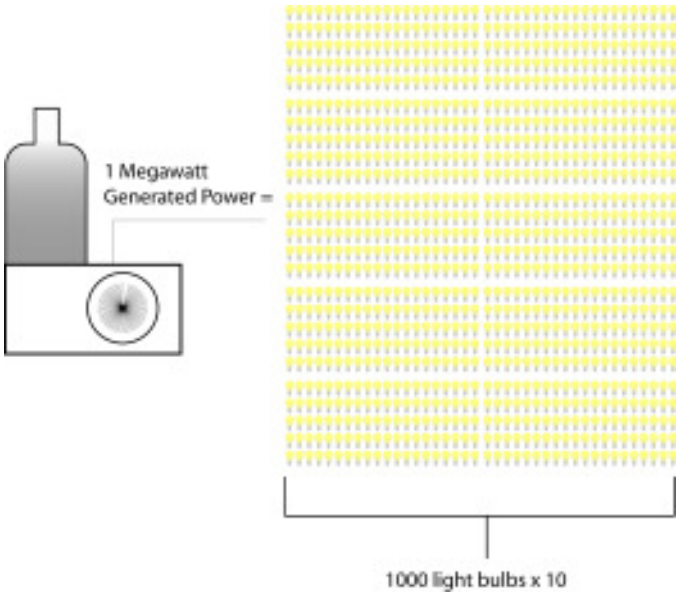
The best strategy for minimizing the need for wastewater treatment facilities is water conservation. When we conserve water, we produce less wastewater. When we use fewer toxic materials, we put fewer of them into the sewer system and fewer into the ocean. A smaller amount of wastewater is easier and cheaper to treat, and puts less of a burden on nature for the final treatment stage.

33. 1. 4. Electrical Power

Introduction

Diesel engine generator units produce Saipan's, Tinian's and Rota's electricity. These are large piston-type engines. They are similar in size to those used in railroad locomotives. These piston engines are used to turn electric generators.

Diesel engine generator units produce Saipan's, Tinian's and Rota's electricity.



A megawatt is equal to 10,000 average light bulbs operating at the same time.

A power plant usually has several different generators.

For even a small island population, it usually takes many generators to produce enough power. All power-generating units are usually located near the port facility so fuel can easily be transported to them.

What's A Watt?
Measuring the amount of electricity we produce or use is different from measuring water, wastewater, trash, or other things we can see or touch.

We cannot see electricity and there is nothing to touch. Electricity does not take up any space. It has no smell and it does not make any sound. Electricity has no material substance, so in a way it can be thought of as "nothing". But it is something; it is *energy*.

When a generator is operating, it is converting the energy of diesel fuel into electrical energy. The energy assumes a form that we can use to light our homes, to cook our food, and to run many of the other appliances around our houses.

Electrical energy is measured in **watts**. This unit is named after an English scientist (James Watt) who made many early discoveries about electricity.

Generating capacity in our power plants is measured in millions of watts, or **megawatts**. The prefix "mega" means million. A megawatt is a lot of power, and it is equal to about 10,000 average-sized light bulbs operating at the same time.

Running All of the Time
Generators need to be run all the time so that electricity is always available. Since each generator has only a certain amount of capacity, more than one generator is needed to supply enough electricity to meet our communities' needs.

The demand for power changes from day to day, season to season, and even between night and day. At night, when almost everyone is asleep, there is less demand for electricity. During the day, when people turn up their air conditioners and use appliances to cook and heat water, the demand for power increases.

A power plant usually has several different generators. Some have different capacities from others so that different combinations of generators can be used to most closely match our islands' power demand.

A power plant will also have one or two generators for standby use. If one generator breaks down, which they do from time to time, a standby generator is used until the other one can be fixed. Stand bys are also needed when generators are taken down for routine maintenance.

When the community uses too much electricity, the power plant may have to use all of the generators to meet the demand, the standby ones as well. If this continues over long periods, or if the power plant must depend on using the standby generators constantly, then no back up is available in case of a breakdown.

When this happens, problems with the electricity occur. There will be frequent power outages, voltage spikes, brownouts, and blackouts. When these things become common, it usually means that too much electricity is being used for the capacity of the system, or the equipment is too old or has not been properly maintained.

Distribution
Electricity is distributed around the island by high voltage lines called **feeders**. A few feeders run underground but most run overhead between poles.

A feeder line has too much voltage to connect directly to our homes. Instead, feeders "feed" electricity to a facility called a **substation**. Smaller lines run from these substations to our businesses and homes.

Feeders "feed" electricity to a facility called a substation.

As we can see, the branching and subbranching network of electrical distribution lines is similar to the networks we studied for water and wastewater. These types of distribution networks are common for infrastructure where large numbers of people must be served from just a few centralized facilities.

33. 1. 5. Trash Collection and Disposal

In most places trash disposal is part of the public infrastructure. The government provides a landfill, or other disposal facility. Many municipal jurisdictions provide publicly funded collection services as well.

On Saipan, trash is usually disposed of at the Lower Base Transfer station (see our chapter on "Managing Our Solid Wastes"). From there is is transfered to the Marpi sanitary landfill. At the time of this book's writing however, there are still many illegal dumping sites on private and public properties around this island.

Several private firms provide residential and commercial trash pick-up in the CNMI.

Public dumps are also located on Tinian and Rota. These sites are much smaller than the Marpi Landfill. Because the populations are smaller and there is much less tourism on those islands than on Saipan, the volume of trash needing to be disposed of is smaller. Still illegal dumping of trash occurs here also.

At the time of this book's writing, there are no government collection services for trash in the CNMI. However, there are several private firms that provide residential and commercial trash pick-up.

For our current purposes it is enough to know that trash disposal is part of the infrastructure. Since the problems of solid waste are very important to a community, we will examine them more fully in a later chapter.

33. 2. OUR TRANSPORTATION INFRASTRUCTURE

33. 2. 1. Our Roads

In communities with widespread use of automobiles and trucks, the most important transportation infrastructure is the roadways. At the time of this book's writing, people choose to travel mostly by motor vehicle. Roads connect houses and farms with each other and with our businesses and schools. Other roadway networks connect the community to our seaports and airports.

The most important transportation infrastructure in the CNMI is our roadways.

Roads are designed and built according to how much traffic they must carry and for the types of vehicles that will ride on them. They can be large multilane highways, or small coral "jeep trails".

It is interesting that once again we see a branching network pattern in our infrastructure. There are a few large highways that connect the commercial and population centers. From these, many minor roads branch off. Finally, small roads and driveways connect each house or business to the bigger roadway network.

Saipan's commercial port serves as the main port for the CNMI and feeds other island ports.

33. 2. 2. Our Seaports

Introduction

Our Commonwealth relies heavily on ocean transportation to import goods to our islands and export products (mostly garments) to the United States and elsewhere. In fiscal year 1996, the Saipan commercial port had a record high of 810,131 revenue tons of goods moved through its port facilities, of which 85% consisted of inbound cargo.

Almost 90% of all cargo imported and exported is containerized. Outbound cargo consists primarily of garment products manufactured on Saipan and shipped to the US mainland. The number of vessels calling at the port in FY 1996 was recorded at 520.

Because we in the Northern Marianas continue to rely heavily on imports to fuel our economic activities, our ports' infrastructure plays a vital role in transporting goods to our islands.

Saipan Harbor

Saipan's commercial port serves as the main port for the CNMI and feeds other island ports.

Tinian Harbor was originally constructed by the US military during World War II.

The Commonwealth Ports Authority has recently re-dredged Saipan Harbor, and reconstructed and expanded the entire port facilities. This port can now handle 3 to 4 large vessels at once.

The ports in Rota and Tinian, as described below, are in dire need of repairs and thus, both facilities are faced with constraints. The majority of cargo moved into these two ports is usually broken down in small units first on Guam or Saipan, consolidated, and then shipped to Rota or Tinian on smaller vessels.

Passengers also disembark and embark at the Saipan commercial port. Passenger liners from Japan make annual trips here. Recreational leisure craft also embark and disembark passengers each day.

In Fiscal Year 1996, a total of 55,054 passengers were recorded at the seaport, of which 46,830 represent passengers who boarded leisure or sightseeing craft. The remainder includes the passengers for the large Japanese ocean liners.

Tinian Seaport

Tinian Harbor is located at San Jose village, two miles from the Tinian Airport. The harbor's major facilities were originally constructed by the US military during World War II and unfortunately

have not had any major repairs since that time. The harbor itself consists of a basin protected by a 3,500-foot breakwater. The port area includes constructed docks, landing spaces, and other amenities.

With a port over 50 years old, combined with anticipated economic growth from casino gambling activities, port improvement plans are being aggressively pursued. These should include the rehabilitation of the port facilities, as well as the re-dredging of the channel and turning basin, along with urgent repairs to the rapidly deteriorating breakwater.

Rota's West Harbor was expanded in 1988 and again in 1996.

Rota Seaport
Rota has two harbors; the West Harbor at Sasanlagu, which is the main harbor, and the East Harbor at Sasanhaya, which small fishing boats and tour operators use. The West Harbor was expanded in 1988 and again in 1996.

Adjacent to the West Harbor is a small boat marina. This is operational for both private and commercial boat owners and can moor up to six 20-foot boats at one time. At the time of this book's writing, some 25 to 30 containers are shipped to Rota each week and unloaded at the West Harbor.

On the East Harbor, only small boat operations occur as a result of the existing condition of the harbor. A couple of privately owned dive shops and tour agents operate from this area. In addition, fuel storage tanks are located nearby and are accessible for large tankers to discharge fuel while anchored outside the harbor.

These two harbors lack adequate protection from the open sea and receive direct exposure to wave action during typhoons. The channel constantly needs to be re-dredged and both ports are periodically repaired.

The existing harbor and port facility can only accommodate small container-vessels and barges. The only mode of transporting goods into Rota is via transshipment from Saipan or Guam. The manner by which goods are transported to Rota has proved to be very costly to Rota's consumers.

The Francisco C. Ada Saipan International Airport is the largest airport in the CNMI.

33. 2. 3. Our Airports

Introduction
The majority of passenger travel to and from our islands is by air. Cargo transported by air, except mail, is minimal. Our three principal airports are located on the islands of Saipan, Tinian and Rota. Each has modern terminal facilities.

Complete aircraft rescue and fire fighting equipment and trained personnel are available at all airports. These services have ready access to each runway. Government Customs and Immigration inspectors are stationed at each airport to meet every flight.

Francisco C. Ada Saipan International Airport
Francisco C. Ada Saipan International Airport, being the largest airport facility in the CNMI, is equipped with an aircraft traffic control tower. The single runway and terminal buildings at Saipan

International are capable of handling major air carriers such as DC-10's and Boeing 747's. Refueling service is also available.

In fiscal year 1996, the Commonwealth had a record high of nearly 800,000 enplaning passengers, mostly for international destinations such as Japan and Korea. This level of traffic can be translated into 1.6 million passenger-movements (arriving and departing). Air traffic landings and takeoffs totaled a record 65,459 in the same year.

Flights with destinations to China, Guam, Japan, and Korea provide convenient connecting flights to many countries in the world and to major cities in the United States.

Saipan International Airport operates on a 24-hour basis with a single runway. The airport also has a large, wide parking apron able to accommodate wide-bodied aircraft.

The airfield is equipped with a visual approach slope indicator, runway end identifier lights, medium intensity runway and taxiway lighting, nondirectional radio beacon (NDB), and a precision instrument landing system (ILS). As mentioned, air traffic is directed by an air traffic control tower.

Tinian airport has a single runway and a relatively new terminal building.

Tinian Airport

Tinian airport has a single runway, which has recently been significantly improved. Aside from the terminal building, there are no other commercial activities, such as fuel storage or maintenance repair facilities, located on the airport grounds. At the time of this book's writing the airport was serviceable for B-727 aircraft and for single engine air taxis that handle the majority of passenger traffic between Guam, Rota, Tinian, and Saipan.

The airport has a relatively new terminal building. The facility has the necessary runway markings and emergency equipment to assure safe aircraft operations. The airfield is equipped with navigational aids and a beacon. It provides basic aircraft operations support with a wind indicator, segmented circle, and runway markings.

Airport safety measures include maintenance of Crash-Fire-Rescue equipment and a facility adjacent to the terminal building with fire protection equipment. Two fire trucks are located at the airport, which also serve as equipment for the municipal fire service.

The Rota International Airport also has a single runway. There are plans to also expand the runway to receive larger aircraft.

Rota International Airport

The Rota International Airport also has a single runway. A taxiway connects the runway with the passenger terminal aircraft-parking apron. This apron was recently enlarged. At the time of this book's writing, there were plans to also expand the runway to receive larger aircraft.

Again at the time of this book's writing, some medium-sized commercial jets, including 727 aircraft that formerly flew to Rota, no longer do so. This was because a surfacing of the runway caused it to become too slick and pilots feared they might not be able to safely stop their aircraft during wet weather. CPA was looking into resolving this concern.

Rota International is equipped with navigational aids; a visual approach slope indicator; runway end identifier lights; medium intensity runway and taxiway lighting, and a non-directional beacon.

The Crash-Fire-Rescue equipment, facility, and Airport Advisory Service Station (AAS) are located adjacent to the airport terminal. The terminal is situated south of the airfield and consists of arrival and departure areas, automobile rental booths, and a restaurant.

CPA recently upgraded Rota's terminal building, doubling its size to meet the demands of anticipated travelers and tenants. The immigration, customs, quarantine, baggage, and holding areas were all enlarged. Its restaurant was relocated to the bottom floor to meet the requirements of the Americans with Disabilities Act (ADA).

Our Department of Public Safety (DPS) is charged with the legal and moral responsibility to provide our public with reasonable safety services.

33. 3. OUR VITAL SERVICE AGENCIES

33. 3. 1. Introduction

Our Department of Public Safety (DPS) is charged with the legal and moral responsibility to provide our public with reasonable safety services. The responsibilities of the department are to safeguard lives and property, to serve our people by maintaining law and order, and to respect the constitutional rights of our citizens.

It has been reported that the budgetary needs for DPS is equivalent to providing for four departments. This is because the Commonwealth has to field a full compliment of police, corrections, fire, and emergency medical services and auxiliary services 24 hours per day, 7 days per week on our three most populated islands. Three fully staffed eight-hour shifts are constantly maintained.

33. 3. 2. Our Police Division

The police division's principal function is to safeguard life and property. It is made up of the traffic section, the patrol section, the boating safety section, the criminal investigation section, and the motor vehicles section.

The Commonwealth has to field a full compliment of police, corrections, fire, and emergency medical services and auxiliary services 24 hours per day, 7 days per week.

Traffic

Traffic section's functions include investigating accidents, directing traffic, and enforcing our traffic laws. The traffic investigation unit responds to vehicle accidents, conducts investigations, reconstructs accident scenes, interviews victims and suspects, and cites traffic law offenders. Traffic officers also direct traffic for parades, oversee other uses of our public roads, and maintain safety at accident scenes.

The traffic law enforcement unit uses the laser speed detector, maintains periodic sobriety checkpoints to enforce DUI (Driving Under the Influence of Alcohol) laws, and augments the presence of other traffic officers on our roads.

Patrol

The patrol section's function is to conduct village and highway patrols. Officers are called upon to respond to disturbance calls, burglaries, traffic accidents, domestic violence, shootings, etc.

The boating safety section's function is to safeguard lives and property in the water.

Boating safety personnel are a combination of police and firefighters.

These officers also make arrests of persons who violate either local or federal laws. They entertain all citizen complaints against other citizens, and provide security for off-island dignitaries and for our Governor.

The number of police patrol areas has increased as our population has grown. While some patrol areas have expanded, others have been consolidated around our more heavily populated areas, each with their rising criminal incidence.

In many areas, violent crimes have escalated. Hard drugs and prostitution are becoming more and more common. Implementing a foot patrol program in the Garapan tourist district is identified as being very effective in deterring crime.

The patrol section operates twenty-four (24) hours a day. Each platoon works an eight-hour shift. At the time of this book's writing, platoons consist of 14 officers.

Each patrol officer concentrates his or her law enforcement efforts within our villages. The presence of such officers provides police exposure and crime deterrence. At the time of this book's writing, a shift reportedly entertains an average of 20 calls within an eight-hour period.

Before *taking the beat*, patrol officers are briefed by their platoon supervisor on important law enforcement events that took place before their shift. Problem areas, wanted individuals, etc., are discussed before they *roll out* of the station.

At the time of this book's writing, we have fifty-five (55) patrol officers, seven of whom are women. Each patrols our streets at all hours of the day and into the night. These officers dedicate themselves to keeping our neighborhoods as safe as possible.

The Criminal Investigation Bureau
The function of the Criminal Investigation Bureau is to follow-up on investigations and to assist the Attorney General's Office prepare cases for prosecution. Officers do follow-up investigations for misdemeanor and felony charges. They also recover evidence to support criminal allegations. These officers also execute search warrants and conduct covert and overt operations.

The Bureau includes the Tactical Response Enforcement Team or (T.R.E.T.). T.R.E.T. is the Special Weapons And Tactics (S.W.A.T.) Team of our Department of Public Safety.

Our Boating Safety Division
The Boating Safety Division's function is to safeguard lives and property in the water. Duties include search and rescue, boat safety inspection, education, monitoring of water activities, investigating boat accidents, citing violators, and responding to distressed boats and other water emergencies.

Boating safety personnel are a combination of police and firefighters. The local detachment of the US Coast Guard often carries on joint marine safety inspections with our Boating Safety Division.

At the time of this book's writing this Division is outfitted with three vessels; a 31 foot Fountain, a 24 foot Zodiac, and a 16 foot Mckee. Boating safety officers use these crafts for their missions.

33. 3. 3. Our Fire Division

The personnel in this field fight what others fear, "Fire!" Their duties also include performing rescues and salvage type operations, responding to hazardous material spills, providing mobile medical services, and conducting public education.

The dry season always keeps our firefighters busy. During some particularly dry years they respond to an average of ten fires a day.

The Fire Division reminds everyone that a **permit** *is required before burning things on your property*. One is available at your nearest fire station. Failure to obtain a permit will result in the issuance of a citation. Make sure safety measures are taken before making a fire. Recklessness could lead to substantial damage, even death.

The fire prevention unit is responsible for the enforcement of laws and regulations. These officers check and review building plans for compliance with fire rules and regulations; investigate fires to determine causes and recommend corrective measures; administer fire safety programs; and provide public safety and fire information services. At the time of this book's writing, however, the fire safety codes are still waiting to be fully enacted into law, so their role is mostly advisory in nature.

The fire suppression unit's main role is to extinguish fires. These officers also conduct dwelling inspections, prepare commercial and industrial pre-fire plans, and participate in fire fighting and disaster drills.

Our Emergency Medical Services (EMS)

This area of our Fire Division constitutes our mobile medical services. The ambulance personnel are classified as Fire Fighter-EMT's or as Fire Fighter-Paramedics. These officers have a great deal of knowledge in pre-hospital care. They have skills taught in accordance with the American Heart Association Basic Life Support for the Health Care Professional.

A certified First Responder is certified to administer CPR, assist a person who is choking, give oxygen, take vital signs, and immobilize a patient's spine while awaiting the arrival of an ambulance.

A certified Emergency Medical Technician (EMT) is qualified to give oxygen, administer CPR, apply a MAST suit (when a person is in shock), give oral glucose (for diabetics), splinting and immobilizing an injured person, just to name a few.

A Paramedic is sometimes known as a *physician extender*. They are trained to perform advanced life saving skills needed to stabilize a patient out in the field. The individuals in this profession receive specialized training that is often times more than what a trained nurse is allowed to perform in a hospital setting.

The fire suppression unit's main role is to extinguish fires.

EMS constitutes our mobile medical services whose ambulance personnel are classified as Fire Fighter-EMT's or as Fire Fighter-Paramedics.

The Bureau of Motor Vehicles is responsible for registering all motor vehicles and insuring they are inspected for safety.

The Division of Corrections is responsible for guarding our Commonwealth's incarcerated persons.

Our Office of Emergency Management (EMO) is headquartered in Capitol Hill on Saipan.

33. 3. 4. Other Sections of Our Department of Public Safety

Our Bureau of Motor Vehicles
The Bureau and its staff are responsible for registering all motor vehicles and insuring they are inspected for safety. They are also responsible for the issuance of driver's licenses, learner's permits, motor vehicle accident reports, firearm identification cards, gun dealer licenses, and shooting gallery licenses.

Our Division of Corrections
The Division of Corrections is responsible for guarding our Commonwealth's incarcerated persons. They also carry out programs to rehabilitate convicted criminals in order to prevent **recidivism** or the *repeating of criminal offenses*.

The Professional Standards Unit
The objective of this section, also known as the *Internal Affairs* unit, is to provide for the thorough and concise investigation of complaints against employees of the Department of Public Safety.

Officers evaluate such complaints based on fairness, impartiality, and objectivity. This includes complaints arising from Saipan, Tinian, and Rota and includes complaints of the Department itself.

Members of this unit are expected to adhere to the highest standards of dedication, loyalty, and integrity in law enforcement. The Unit reports directly to the Commissioner of DPS.

The PSU personnel have a crucial responsibility to the Department, its employees, and to each member of our local communities. We need to be able to trust that our Police and Fire Department personnel are constantly prepared, diligent, and trustworthy. This unit helps us to have confidence that only our best will serve us when we need them.

DPS Community Education Efforts; Project DARE Example
DPS carries out several community education programs. One of its most successful has been the DARE program. DARE stands for Drug Abuse Resistance Education.

The program was first implemented in 1985 and has graduated over 2,000 students here in the CNMI. Its goal is to prevent substance abuse among school children. By targeting our children, DARE seeks to prevent adolescent substance abuse, thus reducing the demand for drugs.

The program has 17 lessons in its curriculum. Concepts taught range from practices for personal safety and resisting peer pressure, to building self-esteem, and much more.

33. 3. 5. Our Emergency Management Office

Our Office of Emergency Management (EMO) is headquartered in Capitol Hill on Saipan. Here it is close to our Governor's Office where it can readily inform our Governor of actual and potential emergency situations. Emergency management offices are likewise situated on Rota and Tinian, close to these island's respective Mayors.

Staff of EMO work in close coordination with all of our government's agencies, including those of the US federal government. EMO has the principal responsibility for monitoring nearby tropical storms, collecting and disposing of all found ordnance, responding during all natural and human-caused disasters, coordinating damage assessments, and keeping the public informed during any crisis.

EMO uses an Incident Command System or ICS. Other agencies work within this command structure. By doing so, each expedites its response times and provides more effective services to our general public.

33. 4. OUR PUBLIC FACILITIES

33. 4. 1. Our Public School System

Of all of the elements of this subchapter's title, our public school system is the one that is most familiar to us. We spend much of our day either here, or at NMC, both as students and as teachers. At the time of this book's writing, under the requirements of our Public School System (PSS), we are in school for 180 days during each calendar year.

If we calculate that many schools begin at 8:00am and end at 3:00pm, we are in school for seven hours each day. Multiplied out, this totals 1,260 hours or 75,600 minutes per year. Multiply this by the 13 years of our K-12 experience, plus at least two (and preferably four or more) years of post-secondary education, and we get a total of 1,134,000 minutes.

Of course, this calculation is not entirely accurate since we do not consider lunch hours, recess or between-class passing times. Nevertheless, we can easily appreciate that we do dedicate a good deal of our lives to learning.

We have elementary schools in most of our islands' main villages and each of the most populated islands has its own public high school. Saipan now has 3 public high schools and 2 middle schools.

Our Commonwealth's public school system has been described as the most important institution for the modernizing of our community. Employees of PSS seek to provide students with the basic and specialized skills needed to participate in our modern work force.

PSS staff seek to give our youth the ability to compete with others in advanced educational institutions and to prepare each for meaningful jobs.

33. 4. 2. Our Northern Marianas College

Northern Marianas College (NMC) is mandated by the Commonwealth's Constitution and by Commonwealth law to provide to the people of the Northern Mariana Islands the best possible kinds of postsecondary, adult, and continuing education.

At the time of this book's writing, our college is fully accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges.

Northern Marianas College (NMC) is mandated to provide post-secondary, adult, and continuing education.

In the Fall Semester of 1995 there were 998 students enrolled in Associate Degree programs at NMC. This represented a 70% increase in the number of students enrolled in such degree programs as compared with 1990. After that year, NMC became accredited to award Baccalaureate degrees in Elementary Education as well.

Adult Basic Education (ABE)
An Adult Basic Education program at NMC provides no-cost instruction to adults who wish to improve their basic academic skills to function more effectively in our society.

ABE offers instruction, counseling and tutoring in several skill areas. These include reading, writing, social studies, science, mathematics, and computer literacy.

For students who have not completed high school, the ABE program offers classes specifically designed to prepare them to pass the five General Education Development (GED) tests. By passing these tests, these students can earn a high school equivalency diploma.

The agriculture and life science research program conducts agricultural research projects in the CNMI.

Our College Research, Extension and Education Services (CREES)
By an Act of the US Congress in November of 1986, Northern Marianas College was granted Land Grant Institution status. The name *Land Grant* was later changed to the *Agriculture and Life Sciences Department*. The program recently co-adopted a Natural Resource Management Associate of Science Degree program along with the Science, Mathematics, and Technology Department. The term "Land Grant Institution" was later changed to CREES.

The agriculture and life science research program conducts agricultural research projects in the CNMI that have been approved by the US Department of Agriculture. Data obtained from these research projects are published and distributed for general information. The research information is particularly utilized by the program's extension agents in their work with farmers, aquaculturalists, and other clients here in the Commonwealth.

NMC extension agents take their services to where the people are. They provide on-site, hands on instruction to farmers in the cultural management, processing, and marketing of crops in the Commonwealth. Extension agents help farmers solve day-to-day problems associated with pests, soil, livestock, and farm management.

33. 4. 3. Our Health Care Facilities

One of our most critical public facilities is our hospital. Our Department of Public Health (DPH) manages our health care facilities. DPH consists of three divisions; Hospital, Public Health, and Mental Health and Social Services.

The CNMI health systems are patterned after the US model. They were built, expanded, and are staffed using both federal and local funding sources. An active hospital volunteers program also conducts ongoing fundraising efforts.

Our largest hospital is the Commonwealth Health Center (CHC) on Saipan. At the time of this book's writing, it has 74 acute care beds. CHC offers a modern and attractive hospital setting and Public Health Center. The Municipalities of Rota and Tinian likewise both maintain Health Centers.

By tradition, our health care facilities receive the highest priority in funding from both our Executive and Legislative branches. Staff at these facilities provide the CNMI population with universal access to care. By law, no one is refused or denied health care because of an inability to pay or for non-payment of their bills.

CHC does not offer several secondary services or advanced tertiary care. As a result, off-island referrals are carried out at our Commonwealth government's expense. These referrals often exceed our health care budgets. Likewise medical staffing is a constant difficulty for CHC with many recruited doctors and nurses not renewing. Doctors, nurses, and other professionals can often earn a higher income working elsewhere in the US.

Our largest hospital is the Commonwealth Health Center (CHC) on Saipan.

Although the system is providing excellent health care, at the time of this book's writing, resources at all levels are strained. This is partly because most of its infrastructure planning was based on expected 10 year growth patterns, using as a point of reference the CNMI's 1984 population. Unexpectedly however, the population has doubled in the past decade without an equal expansion of the health care infrastructure. Efforts towards this are ongoing.

The rapid rise in our population makes the delivery of proper health care difficult. Doctors also point to sometimes inadequate education, local cultural beliefs, and a heavy emphasis on acute clinical care as conditions that hamper their health care service delivery. Several doctors feel more effort is needed in the fostering of primary care services and preventive health care.

33. 4. 4. Our Libraries

Our Public Library
The Joeten-Kiyu public library building in Susupe, Saipan was donated to the CNMI citizens by its two founding benefactors, Mr. Jose Tenorio (Joeten) and Mr. Manuel Villagomez (Kiyu).

The Joeten-Kiyu public library building in Susupe, Saipan was donated to the CNMI citizens by Mr. Jose Tenorio (Joeten) and Mr. Manuel Villagomez (Kiyu).

A major island-wide fund raising campaign at the facility's opening allowed for the purchasing of its books and other materials. A donation by Tan Holdings Company supported the purchase of a network of computers, scanners, printers, and access to the Internet. The CNMI government supports the library's paid staff, utility payments, and other operational costs.

The library has a large conference room used by many civic groups for meetings and events.

Our College Library
The Olympio T. Borja Memorial Library's collection includes books, periodicals, newspapers, films, videos, and microfilms. It has a permanent collection of nearly 60,000 titles. The library is divided into two parts; the general collection and the Pacific collection.

The Olympio T. Borja memorial library has a permanent collection of nearly 60,000 titles.

Our recreational facilities allow us to come together as a community, to interact socially, and to jointly work to resolve our community concerns.

The general collection contains works on a variety of subjects. These support the school's curriculum and provide reading material of general interest. The general collection undergoes continuous development by the library's staff. The general collection also contains a basic *periodical* collection of some four hundred and twenty-five titles.

Our College Library's Archives
The CNMI archives, which is also housed at the NMC library, contains records from the former Trust Territory of the Pacific Islands, and from the present CNMI government.

The archives collection includes records, publications, public laws and regulations, journals, photographs, newspapers, and oral histories, along with recordings and audio-visual materials produced about our Commonwealth and all of Micronesia.

Materials deposited at the college archives must be used within the facility since these items are not allowed to circulate. One exception to this is that duplicate copies of video tape recordings are available to instructors for classroom use.

Other School Libraries
Each of our CNMI's public schools and the NMC Tinian and Rota campuses maintains a library. Students are always encouraged to use these libraries for quiet study and research. Librarians and other staff provide helpful advice and instruction on how to use the card catalog, computers, and other research tools. One of our largest is at Marianas High School on Saipan.

33. 4. 5. Our Community Buildings, Recreation Facilities, and Other Public Grounds

Before we begin here, we should make note that we've reserved our discussion of the designation and care of our parks and scenic areas for our last chapter, "community aesthetics"; it seemed fitting. In addition to developing our parks however, we have built several public ball fields, tennis and basketball courts, bike paths, and other recreational facilities.

In our villages and communities we have built several social halls and multi-purpose centers. Here we conduct our public meetings, conferences, performing art shows, etc.

These facilities allow us to come together as a community, to interact socially, and to jointly work to resolve our community concerns. One note, please take care in using them. We should always treat them as we would our own houses, since to a very great extent, they are exactly this.

On Saipan, our Parks and Grounds Division of the Department of Lands and Natural Resources maintains the grounds of many of our public buildings and recreation areas. On Rota and Tinian, community workers of these islands' respective Mayor's Offices, and agency staff of these islands' DLNR Parks and Grounds Division, join together to do much of this work. Some government entities, such as Northern Marianas College, contract landscaping services out to private firms.

Groundskeepers insure that the areas near our public buildings are regularly mowed, that fallen branches and other hazards are removed, and that the trash in outdoor receptacles gets disposed of.

On such annual occasions as Arbor Month and Environmental Awareness/Earth Week, government workers plant new tree seedlings and participate in organized trash cleanups. At the time of this book's writing, DEQ's monthly island cleanup brigade has been an outstanding example of public agency/community involvement. It has regularly cleaned an area from 8am until 11am on the first Saturday at each month. Contact DEQ. Volunteer for their next clean up. Participate 3 times and receive a cool green T-shirt.

It is important that our government agencies and our public (and private) schools support these efforts and that everyone who can do so participate in them. By doing their best to foster good landscaping and grounds keeping near our public's buildings, our government employees and the involved volunteers present an excellent model for our entire community.

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