CHAPTER 16 – PRIVATIZATION/CONSOLIDATION OPPORTUNITIES

16.1 Introduction/Background

Based on the past history of the Guam Government's inability to successfully manage and operate its water and wastewater utilities on Guam, questions arose regarding the financial, technical, and political ability of the GWA to provide adequate water and wastewater services. This past history has resulted in the government evaluating the transfer of the management and operation of the GWA utility to the private sector. There are possibilities for shifting these responsibilities to the private sector or the U.S. military through consolidation, concession, outsourcing and/or privatization. The successful implementation of any alternative approach depends on the support of GWA staff, the Government of Guam, the competence of the third party, overall cost, and the wishes of GWA's customers.

Privatization is a utility option that is being implemented with some success on the U.S. mainland. The process of privatization of government entities can create a significant change in the management and operation of a utility. Opposition to change is a common reaction by employees, managers, customers and the public. Two of the biggest concerns regarding privatization are potential rate hikes and water rights, both of which are addressed in later sections of this chapter.

Because of its size, GWA is potentially a prime candidate for consolidation with the military installations on Guam that own and operate smaller, separate water and wastewater facilities. The U.S. Navy has a Base Operations and Support Contractor that operates and maintains its water and wastewater systems on Guam, among other responsibilities. There are examples throughout the United States where a small community has successfully consolidated its utility functions with a military installation to the benefit of both parties, as discussed in Section 16.3.1.1. Additional consolidation opportunities exist with other public corporations that have similar service functions, such as the GPA.

According to the Stipulated Order, one of the components of the WRMP was to explore consolidation opportunities with the U.S. military. During the planning process, both privatization and the consolidation with other public entities were added to the WRMP scope of work. After the Stipulated Order was signed, the CCU began its own exploration of these two alternatives as a means to improve the water and wastewater facilities on Guam. Rather than exploring new forms of privatization and consolidation, this chapter discusses the different opportunities already studied and summarizes the efforts of GWA and CCU in regard to privatizing GWA and consolidating with GPA, and possibly with the U.S. military.

16.1.1 Privatization

Privatization is a broad term describing many policy tools for shifting some degree of responsibility for services to the private sector[1]. There are several reasons why privatization is considered for traditional government-owned facilities such as water and wastewater, and there are varying degrees of privatization based on these reasons.

16.1.1.1 Rationale for Privatization

In general, local government surveys have found that public officials turn to privatization in response to fiscal crisis and/or when privatization has been shown to work in other jurisdictions.[1]

The fiscal crisis that some government facilities experience is a result of the growing population and demands of the community, decaying water and wastewater infrastructure, stricter water quality and effluent standards, and political apathy toward effective resolution of water and wastewater issues.

All of these general reasons are present on Guam in varying degrees. The population has outgrown the existing water and wastewater infrastructure, which is over 50 years old, creating "grave public health risks as well as the general endangerment of the People of Guam."[2] As a result, the United States Government and GWA entered into a Stipulated Order for Preliminary Relief (see Appendix 1B) on June 5, 2003. At that time, discussion of privatization began as a possible means to comply with the requirements of the Stipulated Order.

Other reasons for privatization have included the need to obtain private capital to finance major infrastructure and improvement of the collection rate on billings where there is a poor record of collecting income. These issues are of less concern on Guam compared to neighboring Asian countries where privatization of water and sanitation services has occurred.

16.1.2 Consolidation

Consolidation is a process whereby two entities that provide a similar service can combine efforts in order to increase efficiency, improve service and save money.

16.1.2.1 Rationale for Consolidation

In general, consolidation is beneficial to small communities where there are multiple facilities providing the same service. By consolidating such facilities so they are operated and/or owned by one party, the service can be performed in a more cost-effective manner while relieving one or more government agencies of the responsibility.

The problems discussed in Section 16.1.1.1 have also led to initial discussions of consolidation with other government-owned facilities. Specifically, the Stipulated Order states that the WRMP must include an assessment of the potential consolidation with the U.S. military's wastewater systems. The U.S. military's position, as expressed in Directive #49[3] is to turn over activities that can be done more efficiently by someone else, so that the installation can focus on its core defense missions. Although Directive #49 has typically related to the privatization of such functions, the same philosophy applies to consolidation.

Currently, there are three major water facilities and two major wastewater facilities in Guam, operated by GWA, Andersen Air Force Base (AFB) and the Navy Base. Given a population of only 168,000 people, one operator should be able to manage and operate all the water and wastewater facilities for the entire island. However, barriers against consolidation stem from both real and perceived limitations by the respective system operating entities. Some of the barriers to be overcome are listed below:

- Discussions may not be open, and legitimate debates regarding advantages and disadvantages with consolidation may not occur.

- Political agendas by opponents and proponents may attempt to direct the legislative response to a crisis with the utility.
- Misperceptions occur when consolidation options are not fully explored or only partially presented to decision makers.
- Consolidation requires a commitment to providing an expanded utility operation by the government entity and the military installation.

16.2 Privatization of GWA Water and Wastewater Utilities

As a result of GWA's repeated violations of the Clean Water Act and Safe Drinking Water Act, and the issuance of the Stipulated Order that proposed expenditures of approximately $250 million to start rebuilding the system and improving operations, GWA began exploring options to meet the federal standards and its customer's expectations. In addition, the EPA had threatened to take over GWA and put it in receivership. In November 2002, EPA was persuaded to allow the CCU and GWA employees to fix the system instead of immediately placing it in receivership and hiring a private operator.

16.2.1 Past and Present Local Initiatives

In 2003, Raytheon, the Base Operations and Support Services (BOS) contractor for the Navy Base proposed to take over GWA as required by Guam law. In November of that year, the CCU rejected the proposal, stating that any privatization should be through competitive bidding, not sole source. After several rate increases and an approved $104 million bond issuance, concerns whether the GWA staff can make the necessary improvements persist.

The Guam community testifying at public hearings and most GWA staff did not favor the idea of privatization. After the CCU rejected a concession model of privatization, other forms of privatization were considered. The privatization of the GTA was deemed a success when the agreement was signed in 2005. However, this process evolved over a period of at least five years and cost the government millions of dollars to achieve. This section discusses the past and present initiatives relating to the privatization of the water and wastewater functions currently provided by GWA.

16.2.1.1 CCU's Impact Report for Public-Private Partnership (PPP)

In 2003, the CCU facilitated a two-pronged approach in reaching necessary goals of the Stipulated Order. The first step was to assess opportunities for addressing the financial condition, and the second was to conduct an impact study pursuing PPP opportunities. At that time, the CCU hired a team of consultants (Black & Veatch Corporation and Hunton and Williams) to complete the study. The Impact Report dated November 2005, explored three major models for privatization: Operations Contract, Concession of GWA Operations, and Sale of GWA (Divestiture), as discussed in greater detail below:

Operations Contract

An Operations Contract is when a public sector entity (PSE) hires a private sector entity to perform specific services for the utility. Three types of operation contracts were explored in the Impact Report. The **first** is the Build-Operate-Transfer (BOT) Contract, whereby the private contractor constructs an asset, operates it for a period

of time, and ultimately transfers it to the public utility. The **second** is the Build-Operate-Own (BOO) Contract, which is similar to the BOT; however, the private contractor retains ownership of the asset and does not transfer it to the public utility. The **third** and most common operations contract is the Service Management Contract, also known as a Performance Management Contract (PMC).

According to the Impact Report, the advantages and disadvantages of PMCs are as listed in Table 16-1.

Table 16-1 – Service Management Contracts Advantages and Disadvantages[5]

Advantages	Disadvantages
Contractor operates and maintains system, usually at reduced costs.	PSE retains responsibility for financing capital improvements.
Relatively easy to implement and PSE can rapidly improve specific system issues.	PSE retains change-in-regulation risk.
Sometimes used as an interim measure in preparation for greater private involvement.	Model does not fully take advantages of private sector's ability to reduce operation costs because PSE retains risk of utility business performance.
Model works best in situations where (1) public sector has already installed adequate water / sewerage connections, and (2) PSE seeks to improve operating efficiency.	
It is the most common PPP model in the U.S.	

In 1996, GPA began emergency procurement for Independent Power Producers and Performance Management Contractors. Contracts were awarded for the construction, operation, and maintenance of the Piti Power Plant No. 8 and No. 9 (88-megawatt slow speed diesel) to Marianas Energy Company and the Piti Power Plant No. 7 (40-megawatt combustion turbine) to Taiwan Electrical and Mechanical Engineering Services (TEMES). Next, GPA issued a hybrid contract (combining features of a BOT contract and a PMC) to Pruvient Energy Guam, Inc. This contract included the rehabilitation, operation, maintenance, and management of GPA employees at the 53-megawatt Tanguisson Power Plant in 1997.

Following the success of these privatization contracts in 1996, GPA issued two additional PMCs several years later. The first was to TEMES for the Cabras Power Plant No. 1 and No. 2 in 2003. The second was to Doosan Engine for Cabras No. 3 and No. 4 in 2005. Both contracts have steadily increased facility performance and provided GPA with millions of dollars in savings on operations and maintenance (O&M) spending, reduction in full-time employees (FTE), availability of personnel, and overall efficiency. Specifically, GPA projects a total annual savings of $11.1 million at the Cabras No. 3 and No. 4 facilities, with $4.1 million savings in O&M spending, $2.5 million in FTE reduction, $3.8 million in availability and $7,000 in efficiency. These projected savings are based on Doonan Engine's annual fee of $4.7 million.[5]

Another example of a PMC on Guam was the BOS contract given to Raytheon by the U.S. Navy to provide administration; facilities engineering and maintenance; **utilities operation and maintenance**; supply and transportation; waterfront and harbor operations, ordnance handling and storage; morale, welfare and recreation services; housing, food and family services; and surge support for storms and military contingencies for Naval Base Guam. This contract lasted for approximately five years. In 2005, DZSP 21 won the contract. Although some of the services that Raytheon provided were not included in the newest contract, DZSP 21 will still provide utilities O&M. In general, the main challenge faced by the BOS contractor is hiring staff on Guam who have adequate experience and local knowledge to reduce their learning curve and that can be responsive to the client. Also, authority needs to be delegated for on-the-spot decisions without requiring agreement from an off-island office.

Concession of GWA Operations

A concession is where a PSE transfers the entire utility business, including capital investment, to the private sector. However, the government retains ownership and rights to all water and wastewater.

According to the Impact Report, the advantages and disadvantages of a concession are those listed in Table 16-2:

Table 16-2 – Concession Advantages and Disadvantages[5]

Advantages	Disadvantages
PSE retains title to system.	PSE administers very complex contractual arrangement for extended period (25 to 30 years).
Contractor finances all capital improvements and otherwise fully assumes responsibility for utility business.	Option requires strong independent regulator that regulates monopoly over water services held by contractor.
Contractor has full incentives to efficiently manage every aspect of utility business.	Option requires high-quality regulatory framework that balances contractor's need for profits and rate payer's need for high quality, low priced service.
Concessions work well in circumstances where existing system need significant investment and PSE seeks to improve quality of service.	

Sale of GWA (Divestiture)

A divestiture is when a PSE sells assets to the private sector, which then assumes full responsibility for the assets and gains all rights of ownership thereafter.

Although divestiture was an option presented in the Impact Report, the CCU maintained a clear policy that the people of Guam would always maintain ownership of the wastewater and water rights. For this reason, the CCU rejected sale of GWA as an option.

The sale of GTA is an example of a successful divestiture, where service is perceived as improved and customers are satisfied with the results. The local Pacific Daily News has printed, "The benefits of privatization are already showing at the new GTA, and within the coming months will become even more clear as new services are added. According to Bob Taylor, president and general manager of the new

GTA, what used to be a two-month wait to get a phone line installed has been shortened to two days." (January 24, 2005 - Our View). Also, "The new GTA has accomplished a number of positive improvements in a short period of time and they have broken the artificial pricing scales in Internet and cell phone services. And they may transform cable TV on Guam soon." (PDN by Ron McNinch, September 26, 2005, Risks of Privatization must be Considered). Unlike a telephone service, however, the sale of a limited, natural resource such as water, which is essential to people's survival, is a different matter. Although many forms of privatization of water and wastewater utilities are common in the United States, total divestiture accounts for only a very small percentage of such arrangements.

After the completion of the Impact Report, the CCU chose the concession model for the privatization of GWA. Legislation was drafted and submitted in December 2004. However, with changes in the CCU board, members were no longer unanimous in their support of privatization and the legislation was never passed. In addition, the contract with Black and Veatch was terminated.

16.2.1.2 Current Proposal for PMCs

In the beginning of 2005, the CCU hired John Benavente, as General Manager, Consolidated Utility Services (GMCUS) to provide oversight to both GWA and GPA. One of his initial tasks was to explore alternative partnerships. In November 2005, Mr. Benavente proposed that GWA enter into a PMC, a type of Service Management Contract, which was discussed in the CCU Impact Report conducted by Black and Veatch.

According to Benavente, the PMC would be a performance-based contract structure that could immediately respond to the needs of GWA through quick implementation (six months to one year). The PMC responsibilities would include the following:

- Procurement of materials and services
- Personnel management
- Management of CIP
- Inventory management
- Environmental compliance
- Training development
- Performance standards

The chosen contractor would be required to use GWA staff, to minimize potential layoffs.

It was proposed that a PMC be developed for the following GWA functions:

Water[5]	Wastewater[5]
Production	Lift stations
Treatment	Treatment plants
Booster stations	Outfalls
Storage tanks	

The structure of the PMC would be similar to GPA's PMC for the Cabras Power Plants (see Section 16.2.1), and the term of the contract could be for a minimum of five years, with two optional five-year extensions. As with all privatization models chosen by the CCU in the past, the people of Guam would retain water rights.

On December 6, 2005, CCU held a public meeting to discuss and vote on the PMC proposal by Mr. Benavente. Although GWA agreed that the wastewater functions should be turned over to a PMC, management presented its belief that GWA employees should maintain the entire water system. GWA has greatly improved the quality of its performance with the water system over the past three years. Currently, GWA is approximately 70% in compliance with the Clean Water Act and over 99% in compliance with the Safe Drinking Water Act. As a result, CCU waived the requirement for a presentation by GWA in January 2006 to justify maintaining control over the water system. However, the CCU commissioners did approve the concept of a PMC for the wastewater system and are continuing with its implementation in 2006. Invitations to bid were issued in May 2006 and bids were opened on September 11, 2006. Two bids were received.

16.2.1.3 Steps Toward Privatization

Defined Scope – The first step in the implementation of the PMC for the wastewater system was to define the exact scope of services. Each function must be fully and clearly defined and specify who will be responsible for its performance – the public entity or a private entity.

Necessary Legislation – Although the concession model of privatization discussed earlier requires new legislation, the PMC did not because it is only a service contract.

Invitations to Bid – The next step was to develop the Invitation to Bid (ITB) which was publicized to the private sector. Developing an ITB was one of the most important steps in the process. There were many aspects to consider and outline, so that the potential contractors knew exactly what they were bidding for. Some of the key aspects of developing an ITB are as follows.

Key Players in Development – The development of the ITB included GWA employee participation as well as a thorough review by the CCU and PUC. In addition, it included further input and review by a professional consultant with extensive experience in the development of proposals for this type of contract.

Provided Information – The ITB provided as much information regarding the existing utility system as possible so that contractors realized the extent of time, money and personnel necessary to fix any problems and develop a plan for system upgrades. After the completion of this WRMP, most of this information will be available for the ITB.

Development of Performance Standards – Successful competitive contracts require provisions ensuring that specified performance levels are maintained. Therefore, the ITB must clearly define what performance standards are required of potential contractors, so they can incorporate this information in their bid proposals. In addition, the performance standards will be a part of the contract provisions to guarantee against non-performance. Some of these performance standards are listed as follows:

- Quality/Experience
- Potential Cost Savings/Financing
- CIP
- Environmental Compliance Liability
- Incorporation of Past Lessons Learned
- Available Insurance and Bonding
- Performance Improvement Projects

16.3 Consolidation of Guam Utilities – GWA and Military

In 1986, the GTA system and equipment were still quite antiquated, and the Authority was seeking to upgrade the entire system. At that time, it could not provide a service that the U.S. military deemed reliable, survivable, and redundant. Therefore, all military installations on Guam used the Navy's telecommunication services. The civilian population, however, only had access to GTA's services.

Over the next couple of years, GTA was able to digitize and upgrade its entire system through excellent leadership, dedication and hard work. After completing these efforts, GTA was able to convince the Air Force, and later the Navy, to buy its telecommunication services for the military housing areas, thus increasing the GTA's customer base and expanding its business.

The current GWA leadership has "successfully lead GWA in the right direction, with many significant accomplishments in the past two years, including reducing staff, cutting costs, and introducing greater efficiencies into the organization. If such an approach is continued, GWA may have the opportunity to manage the Navy water/wastewater facilities which should further reduce costs and achieve greater levels of efficiencies."[4]

16.3.1 Existing Agreements with US Military

Although it is unlikely that the Navy or Air Force bases on Guam will solely rely on GWA for water and wastewater services in the near future, there are existing agreements between GWA and the Navy and between GWA and Andersen AFB that benefit all parties. The Navy sells water from the Fena WTP to GWA for its customers in the Southern and Central portions of the island. The Navy and GWA jointly built the Orote ocean outfall and discharge their treated effluents through the outfall. Additionally, GWA provides wastewater treatment for Navy facilities, including the Navy Hospital, the Navy housing areas near the hospital, the Naval Computer and Telecommunication Station and the Navy Nimitz Golf Course.

There is considerable dissatisfaction in the Guam community about not having obtained possession of the Fena water system in 1952. A problem occurred when a Guam Government administrative decision was made authorizing GWA to withhold payment to the Navy for water service in order to stake this claim. The Navy initiated a lawsuit against GWA to recover those costs and reach a settlement with the CCU. GWA petitioned the PUC to allow a rate-surcharge to be extended in order to fulfill its financial responsibility to the Navy.

Andersen AFB does not have its own wastewater treatment plant, and pays GWA approximately $600,000 a year to process its wastewater at the jointly built Northern District STP. Andersen AFB does have its own collection system and lift stations to collect and transport approximately 2 mgd to the GWA system. In 2005, GWA submitted a proposal to

own and operate Andersen's wastewater collection system. However, this opportunity has been put on hold as a result of the Navy's takeover of the Andersen base services.

There are no agreements, however, whereby GWA provides water for either military installation.

16.3.2 Present Consolidation Initiatives

In addition to exploring PPP, the CCU also began evaluating consolidation opportunities with GPA. As noted above, John Benavente was hired as GMCUS in June 2005. A joint task force of GPA and GWA employees is responsible for repairing or replacing generators and electrical controls, as well as increasing efficiency at the water wells to prevent power variances from completely disabling the entire water system. An independent review in 1998 suggested hiring outside technical assistance in reference to the many projects GWA is undertaking.[3]

Danny Santos, the former general manager of GTA, hired by GWA as Assistant General Manager, has been assigned the task of investigating how to further partner with GPA. He found that combining the specialized elements of GWA and GPA, they could combine support services that have similar work functions. For instance, GPA has the expertise pertaining to the electrical components of the water and wastewater systems, such as well pumps, lift and booster stations, generators and wastewater treatment plants. An Electrical Assessment Report (Brown and Caldwell Consultants and Morikawa & Associates, LLC) was presented on August 24, 2005, that identified the problems with these electrical components and recommended that GWA continue working with GPA and even turn over the operations and maintenance of all standby generators to GPA.[6]

Santos's plan proposes to consolidate the following functions of GWA and GPA:

- PIO Office
- Dispatch
- Human Resources
- Planning & Regulatory
- Safety
- Customer Service
- Transportation
- Engineering

The major purpose of the consolidation is to provide one leader who will be responsible for both systems. An organizational chart was devised as part of the consolidation plan. Once the plan is in full proposal form, it will be presented to the CCU Commissioners for their review and approval

16.3.3 Existing Military Consolidation Examples

GWA's current water and wastewater systems should comply with the Stipulated Order as the first step to improve the two systems for future demands. It is possible that in the near future GWA could approach the Navy Base and Andersen AFB with a plan for providing their water and wastewater services, much like GTA's effort in the late 1980s. The U.S. military will require a reliable, survivable and redundant service to meet their needs.

Three examples of military-civilian joint-use water or wastewater facilities are briefly discussed below. These facilities are located at China Lake near Ridgecrest, California; Whidbey Island near Oak Harbor, Washington; and the Naval Air Station in Fallon, Nevada. In two cases, both military and civilian facilities required some type of major repair or upgrade. Therefore, the two entities combined resources to provide a joint-use facility to benefit military and civilian customers.

- **China Lake/Ridgecrest, California**

In the 1970s, the Navy and the City of Ridgecrest, California agreed to consolidate their treatment facilities into a single system to be operated by the City. At the time of the agreement, the City owned and operated a treatment plant, consisting of oxidation ponds for the treatment of City sewage, and the Navy owned and operated a treatment plant for the treatment of its sewage. Both plants required upgrade. In developing a regional approach to wastewater treatment that would comply with the requirements ordered by the California Regional Water Quality Control Board, sewage flows from the Navy base and the City were to be treated at the existing Navy sewage treatment plant, which featured an optimal elevation for collection of flows. To implement a joint-use facility, two interceptor lines were constructed to transport sewage from the City to the treatment plant. The existing Navy treatment plant, originally constructed in the 1950s, was expanded from 2.0 mgd to 2.86 mgd to accommodate additional influent and provide additional treatment. The City discontinued treatment at its plant, but continued to use the City lagoons for extra storage of treated effluent.

In 1974, the original agreement (a sole-source procurement with the City) granted the City of Ridgecrest a 50-year easement for the purpose of operating and maintaining the sewage treatment facilities, including the influent lines, oxidation ponds and associated facilities located on Navy real property. Later in 1976, title to the Navy wastewater treatment facility was vested in the City and the treatment facility was expanded by the City. The City owns, operates, and maintains the combined sewage treatment plant and charges the federal government for the actual cost incurred in treating its portion of influent. The City of Ridgecrest expended several million dollars on capital improvements and upgrades for the wastewater facility. The government paid a non-refundable connection charge of $188,000 to enlarge the treatment plant, based on its share of influent. A refundable connection charge of $390,000 was paid by the government to the City for the construction of the City's share of the combined facilities. The City refunded the connection charge by reducing the government's rate for treatment and disposal services by $39,000 per year for a period of 10 years commencing twelve months after the start of service.

The agreement between the Navy and the City of Ridgecrest entitled the Navy to deliver an average daily quantity of 1.65 mgd of wastewater, and a peak daily quantity of 2.83 mgd, to the facility for treatment. The Government reserved the right to use 750 acre feet of treated effluent per year for irrigation or for other purposes on base.

In general, this joint-use facility at Ridgecrest has been successfully operated for more than 25 years. While the location of the plant is ideal from a hydraulic perspective (gravity sewer flow), City staff has had some difficulties operating a plant located on military property. One major problem cited is the presence of hazardous material in the base wastewater. The Navy has not been able to keep hazardous waste out of the domestic wastewater system, and the City has no authority to implement a pretreatment program on base. Recently, fire retardant has shown up in the sludge.

In general, City staff did not perceive the Navy command as being easy to deal with. An agreement with one commanding officer might not be honored by a successor. Other specific issues pertained to reclamation. Although the base does not draw more than its allocated amount of reclaimed water, the timing often leaves an insufficient amount of

reclaimed water to support the City's alfalfa program during summer months. To meet quality requirements, the City has added filtering systems over the years to improve the effluent quality for reclamation. (The City treats the wastewater to meet secondary treatment requirements.) An additional issue mentioned was the inconvenience of the badge process required for visitors to the plant because it is located in a secure area of the base.

In regard to capital improvements, equipment is replaced as necessary to maintain the plant. Improvements are funded through sewer rates and connection charges. The initial joint-use agreement provided that the base's portion be collected through its rate. For the City, rates were raised in 1994. There are no immediate plans for expansion. Although average flow increased to 4 mgd sometime between 1987 and 1993, it has since declined to 2.6 mgd and has remained static. (The population of Ridgecrest decreased from 28,000 to 26,000 during the 1990s.) Recent capital improvements at the plant include the installation of auger monsters (comminutors), and additional improvements at the headworks are planned to accommodate lower flows. Should expansion be necessary in the future, the City would likely build more oxidation ponds off the base. Should the base close, the City of Ridgecrest would continue running the plant.

- **Whidbey Island/Oak Harbor, Washington**

The City of Oak Harbor, Washington, operates and maintains a wastewater treatment plant at the Naval Air Station Whidbey Island. In 1987, the Navy granted the City a 50-year easement for the purpose of operating and maintaining a sewage lagoon and associated facilities located on Navy property. The City upgraded the facility to comply with Washington Department of Ecology discharge standards and to increase capacity from 885,000 gallons per day (gpd) to 2.5 mgd to allow treatment of City flows. In 1990, the original contract was amended. The Navy retained the right to the original capacity of the plant--885,000 gpd. The City was given title to the upgrades and the exclusive right to operate and maintain the new facilities. Recently, the City of Oak Harbor has submitted a proposal to buy out the facility in response to the federal government's privatization solicitation.

- **Naval Air Station/Fallon, Nevada**

The Naval Air Station at Fallon, Nevada, has contributed $6.15 million to construct a new water treatment plant to be built by the City of Fallon, Nevada. The total project cost of approximately $13 million includes installation of new pipe and a water treatment facility to supply water to both the City of Fallon and the Naval Air Station. The project responds to two compliance orders issued by the State of Nevada, one to the Naval Air Station and one to the City, pertaining to reduction of arsenic levels in drinking water. The City population is approximately 8,300, and the population of the Naval Air Station is approximately 3,000. Both the air station and the City draw water from the same aquifer. Residents at the air station currently get their water from the Navy's public well system (three wells). Average day demand at the air station is approximately 0.58 mgd. The treatment plant was completed in fall 2003. The Navy supplies well water to and receives finished water from the City-owned treatment plant.

Two documents were developed to govern the agreement between the Naval Air Station and the City of Fallon. A Memorandum of Understanding was developed initially, followed by a contractual agreement detailing the scope of work, water rights, point of

delivery and specific project requirements. The second document served as a means of transferring funds from the Navy to the City for construction of the project. Apart from stipulating pressure requirements for fire fighting water and security standards, the Navy "stayed out of the design." The main legal issue in the contractual agreement was water rights. As part of the agreement, the Navy agreed to continue to maintain the well heads at the air station in order to retain full water rights (maximum appropriation from the state is 2 mgd). The City agreed to provide all the water that the air station requires. Together, the Navy and the City negotiated a billing rate for the Naval Air Station, taking into consideration the generous initial investment supplied by the Navy for construction of the project.

These case studies identified several key elements to successful consolidation initiatives:

- The need for good contracts with specified protocols for access and payments.
- The need to monitor and control trade wastes.
- Well-defined means of being able to update and renegotiate agreements for changed circumstances on commercial terms.
- Well-defined water use rights.

16.4 Conclusions

Outsourcing of certain GWA functions in the form of PMCs is planned to proceed in 2006. Consolidation of GWA with the U.S. military in some form is possible when there is a strong consensus on both sides.

16.4.1 Privatization

Regardless of the model, privatization at times has proven successful for various public utilities throughout the United States. However, there are also significant examples of failures where public entities have gone private and later returned to the public utility model. The failure of privatization can occur for a variety of reasons, related in part to the type of utility or authority. Some of the failure modes consist of:

- **Cuts in Service** – A privately owned company could refuse service to those that cannot afford the cost or could discontinue service in areas that are not profitable.
- **Monopolies** – Natural monopolies are common with resources, such as water supply, and do not allow for a competitive environment.
- **Downsizing** – A privately owned company may downsize staff and service in order to increase profits.

Privatization may be an alternative solution to comply with the Stipulated Order and could eliminate the water problems that have occurred over the years. GWA will continue to face challenges providing reliable wastewater treatment until the major outfall and facility renovations projects are completed in the next two years.

If the CCU and GWA want to implement some type of privatization venture, it is recommended that public relations be improved. In a Department of Defense 1998 memo, it was observed that: "The process to date for developing a public/private partnership model may have been more successful had the community been more involved. GWA and its

governing board need to more actively involve its employees and ratepayers in the public/private decision making process, so that the most effective model is selected to meet the needs of the ratepayers. This is critical to avoid divisiveness and loss of productivity at a critical turning point when significant improvements have been made under new leadership and a newly empowered work force is emerging."[3]

Another public relations problem occurs when the local newspapers publish information regarding GWA before GWA and the CCU have a chance to explain their position. As a result, the news articles sway public opinion regarding the competence of GWA. To remedy these situations, the QualServe Peer Review recommended that GWA "develop a community liaison group comprised of business, media, other governmental and community representation, to keep the outside communities aware of GWA activities and progress, and to receive input."[3]

The decision to privatize could be driven by legislation. As an example, the Guam legislature passed a law to privatize the Port Authority of Guam, which is currently being undertaken as proposals from private operators are evaluated.

16.4.2 Consolidation

Because of its size, Guam is a possible candidate for consolidating with the military installations on Guam that own and operate separate water and wastewater facilities. Currently, there are four EPA-designated water systems, two water facilities and eight wastewater facilities in Guam that serve GWA, Andersen AFB and Navy Base. Given Guam's population of only 168,000 people, one operator should be able to control and operate all the water and wastewater facilities for the entire island. However, barriers against consolidation stem from both real and perceived limitations by the respective system operating entities.

There are some examples throughout the United States where a small community has successfully consolidated its utility functions with a military installation to the benefit of both parties. However, these situations typically occur when both the community and the military installation require either a major repair or an upgrade. In those cases, consolidation benefits both parties. The military installations on Guam currently have adequate facilities to support their own bases and housing areas. Consolidation with GWA would benefit the military if its systems were disabled.

On the other hand, GWA has made significant strides in the past few years, and continued success will improve public perceptions of GWA and persuade the military installations to consider a possible consolidation that could benefit both parties. In addition, the continued efforts by the CCU to consolidate service functions with GPA will provide greater efficiencies within the two agencies.

16.4.3 Combination of Privatization and Consolidation

The U.S. military is turning over water and wastewater activities to private operators in order to focus on core defense missions, as long as these services can be done more efficiently and effectively by others. As discussed above, GWA's record of managing its water and wastewater facilities have transitioned from that of an unreliable utility to becoming a respected utility. The water and wastewater system improvements planned for the next two years will further improve GWA's utility performance. At this time, the military may be open to considering GWA's assumption of their operations.

At this time, the Navy has already privatized its water and wastewater facility management to the BOS contractor, DZSP 21. One of the provisions of the 2005 Base Realignment and Closure (BRAC) initiative is to realign Andersen AFB, Guam, by relocating the installation management functions to Commander, U.S. Naval Forces, Marianas Islands, Guam. Water and wastewater functions will fall under this provision, and it is the military's ultimate goal to have one BOS contractor manage both military base facilities. If all four water systems and the three large wastewater systems on the island were to be consolidated, it would likely happen as a result of a successful longer history of CCU management succession and performance, or by a change in the Organic Act to require an independent autonomous utility and policy direction board.

In 2005, the U.S. Air Force advertised a privatization initiative for the wastewater and power systems at Andersen AFB. The ITP included the transfer of title for the privatized facilities to the selected contractor. This initiative is currently on hold pending a review by the U.S. Navy, which sells power to the Air Force through its BOS contractor. The only entities to submit bids were the GPA and the American Samoa Power Authority.

The implementation of the WRMP is heavily reliant on a competent organization(s) being present for the next 20 years to finance, construct, operate and maintain the water and wastewater systems. Private companies already assist GWA in fulfilling this role, and an expanded role for private companies would assist implementation if it is sensibly arranged.

16.5 Recommendations

Recommendations based on this chapter are summarized below:

- Continue the process for selection of a PMC contractor.
- Define a process for improving the relationship between GWA and the military.
- Continue the pursuit of both privatization and consolidation initiatives in accordance with the conditions defined in the Stipulated Order.

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