

GWA : Entering into a Public Private Partnership

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Overview

- Introduction
 - GWA History - Position of Weakness
 - GWA Today – Position of Strength
- Pursuing Public-Public Partnership & Consolidation
- Privatization Efforts
 - Revisiting Various Models
- Proposal for GWA
- Conclusion



Overview

- Pre-CCU: Position of weakness
 - Violation of Federal Laws
 - Boil water notices
 - System not properly maintained
 - System operators not qualified
 - Operating in the “Red”
 - Lack of Qualified Manager



Situation Analysis

- **2003:** Commission's two-prong approach
 - Assess opportunities to address Financial condition
 - Contract impact study for public-partner-partnerships
- **2004:** Impact Report completed (Concession Model)
- **2005:** QualServe Peer Review Team Report
 - Recommends exploring Public-Public/Private Partnerships
- **2005:** CCU hires GM, CUS
 - To evaluate consolidation and explore alternative partnerships



GWA In a Better Position

- TODAY: A Position of Strength
 - Water Quality and Service Improved
 - Compliance with Drinking Water Standards
 - Operating Expenses reduced
 - Waste Water Operators certified
 - PUC approval and implementation of Rate Increase (Revenue Increase)
 - Bond Issuance (CIP Funding)

- Projected Budgets &
Revenues
-

- Capital Improvement
Projects

**GWA FY 06 Revenue Requirement
CCU BOARD APPROVED (8-23-05)**

Description	FY 06	FY 07	FY 08	FY 09	FY 10
Proforma Income Statement					
Total Revenues	48,906,384	52,209,573	58,791,664	61,393,195	66,284,685
Salaries and Wages	10,839,495	11,056,285	11,277,411	11,502,959	11,733,018
Benefits & Retirement	4,251,663	4,336,696	4,423,430	4,511,899	4,602,137
Total Labor	15,091,158	15,392,981	15,700,841	16,014,858	16,335,155
Power Purchases	10,000,000	9,700,000	9,409,000	9,126,730	8,852,928
Water Purchases	6,424,587	6,296,095	4,504,173	4,414,090	4,325,808
Earth Tech Adjustment		(1,700,000)			
Communications	138,963	141,742	144,577	147,469	150,418
Total Utility Purchases	16,563,550	14,437,838	14,057,750	13,688,289	13,329,154
Total O&M Expenses	47,262,524	45,770,791	46,037,363	46,327,493	46,641,143
Earnings From Operations	1,643,860	6,438,782	12,754,301	15,065,702	19,643,542
Grants	(4,000,000)	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)
Other Expenses	-	-	-	-	-
Privatization Study	-	-	-	-	-
Recoveries of Bad Debts	-	-	-	-	-
AFUDC	(1,155,918)	(882,701)	(2,092,688)	(1,261,022)	(630,511)
Interest Expense - GPA Bridge Loan	57,750	0	0	0	0
Interest Expense - Meters	-	-	-	-	-
Interest Expense - 2005 Bonds	5,522,000	6,024,000	6,004,951	5,926,451	5,843,170
Interest Expense - Future Bonds			6,292,000	6,864,000	6,842,294
Interest Expense - Other	627,026	538,048	445,596	349,509	249,619
Net Earnings	\$ 593,001	\$ 2,759,435	\$ 4,104,442	\$ 5,186,764	\$ 9,338,970

**GWA FY 06 Revenue Requirement
CCU BOARD APPROVED (8-23-05)**

Description	FY 06	FY 07	FY 08	FY 09	FY 10
Internal Cashflow Statement					
Total Cash Generated	\$ 10,393,001	\$ 12,755,435	\$ 14,300,362	\$ 15,586,602	\$ 19,946,805
Revenue Funded CIP	(6,502,930)	(11,000,000)	(12,500,000)	(14,200,000)	(12,050,000)
Grant Funded CIP	(4,000,000)	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)
Principal Payments	-	-	(1,289,000)	(1,367,500)	(2,919,522)
Payments to GPA/Navy	(2,287,071)	(2,373,262)	(2,463,056)	(2,556,609)	(2,654,082)
PY Supp payment/Inc(Dec) Working Cap	(100,000)	(100,000)	(100,000)	(100,000)	(100,000)
O&M, Renovation, Replacement Reserve	(2,000,000)	(2,000,000)	(2,000,000)	(2,000,000)	-
Cap I Fund	5,522,000	6,024,000	6,292,000	6,864,000	0
Inventory Purchases	(1,000,000)	(1,000,000)	-	-	-
Change in Cash (Deficiency/Surplus)	\$ 25,000	\$ 306,172	\$ 240,305	\$ 226,493	\$ 223,201

Guam Waterworks Authority
 Capital Improvement Projects
 2005 Revenue Bond

Report No.	PROJECT DESCRIPTION	Amount
	Wastewater Treatment Facilities	
1	Agana Wastewater Treatment Plant Rehabilitation	\$ 10,475,000
2	Agana WTP Ocean Outfall	\$ 5,030,000
3	Northern District WTP Ocean Outfall	\$ 4,700,000
4	Baza Gardens Wastewater Treatment Plant Upgrade	\$ 500,000
	Subtotals	\$ 20,705,000
	Wastewater Collection Facilities	
7	Old Agat Wastewater Collection (I&I Reduction)	\$ 2,154,900
8	Chaot 36-inch Wastewater Collector Line	\$ 410,000
9	Lift Station Upgrades	\$ 230,000
10	Collection Line Upgrades	\$ 200,000
	Subtotals	\$ 2,994,900
	Ground Water Production/Disinfection	
15	Deep Well Disinfection	\$ 581,300
16	Well Electrical Protection	\$ 1,000,000
17	Well Vulnerability Protection	\$ 600,000
	Subtotals	\$ 2,181,300

Guam Waterworks Authority
 Capital Improvement Projects
 2005 Revenue Bond

Report No.	PROJECT DESCRIPTION	Amount
	Water Distribution and Storage	
19	Distribution Line Replacement	\$ 10,000,000
20	A Series Wells Transmission Line	\$ 2,413,031
21	Santa Rita Booster and Transmission Line	\$ 647,876
23	Storage Additions	\$ 950,000
24	Booster Station Upgrades	\$ 390,000
25	Mangilao Tank Repair	\$ 800,000
26	Ugum Tank Replacement and Repair	\$ 2,500,000
27	Barrigada Tank Replacement	\$ 3,000,000
	Subtotals	\$ 20,700,907
	Efficiency Upgrades	
30	Earthtech Buyout	\$ 5,000,000
32	Water Resources Master Plan	\$ 4,900,000
33	Lab Modernization	\$ 840,000
	Subtotals	\$ 10,740,000
	Miscellaneous	
39	Survey	\$ 800,000
41	Contingency	\$ 5,000,000
	Subtotals	\$ 5,800,000
	TOTALS	\$ 63,122,107

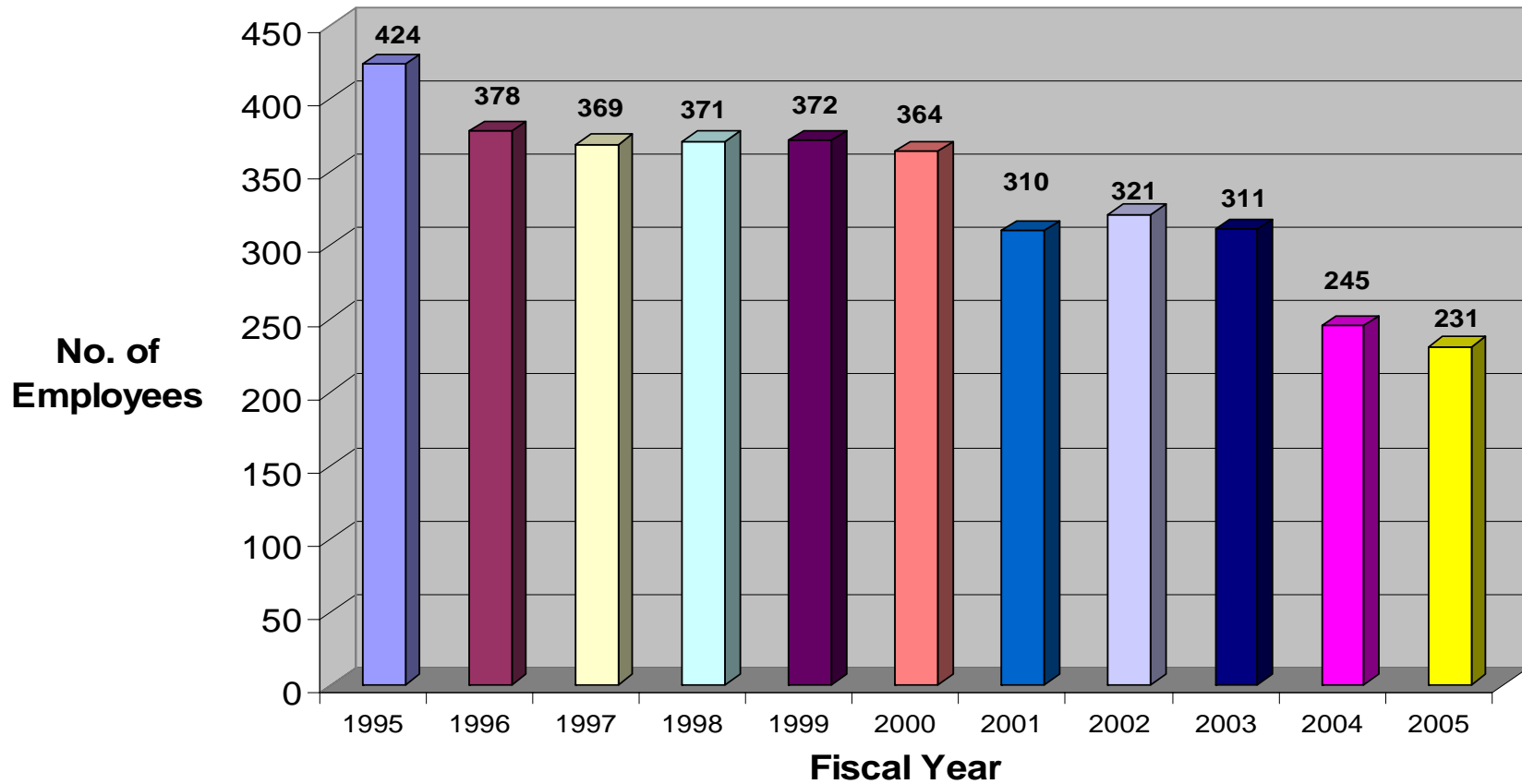


Challenges Facing GWA

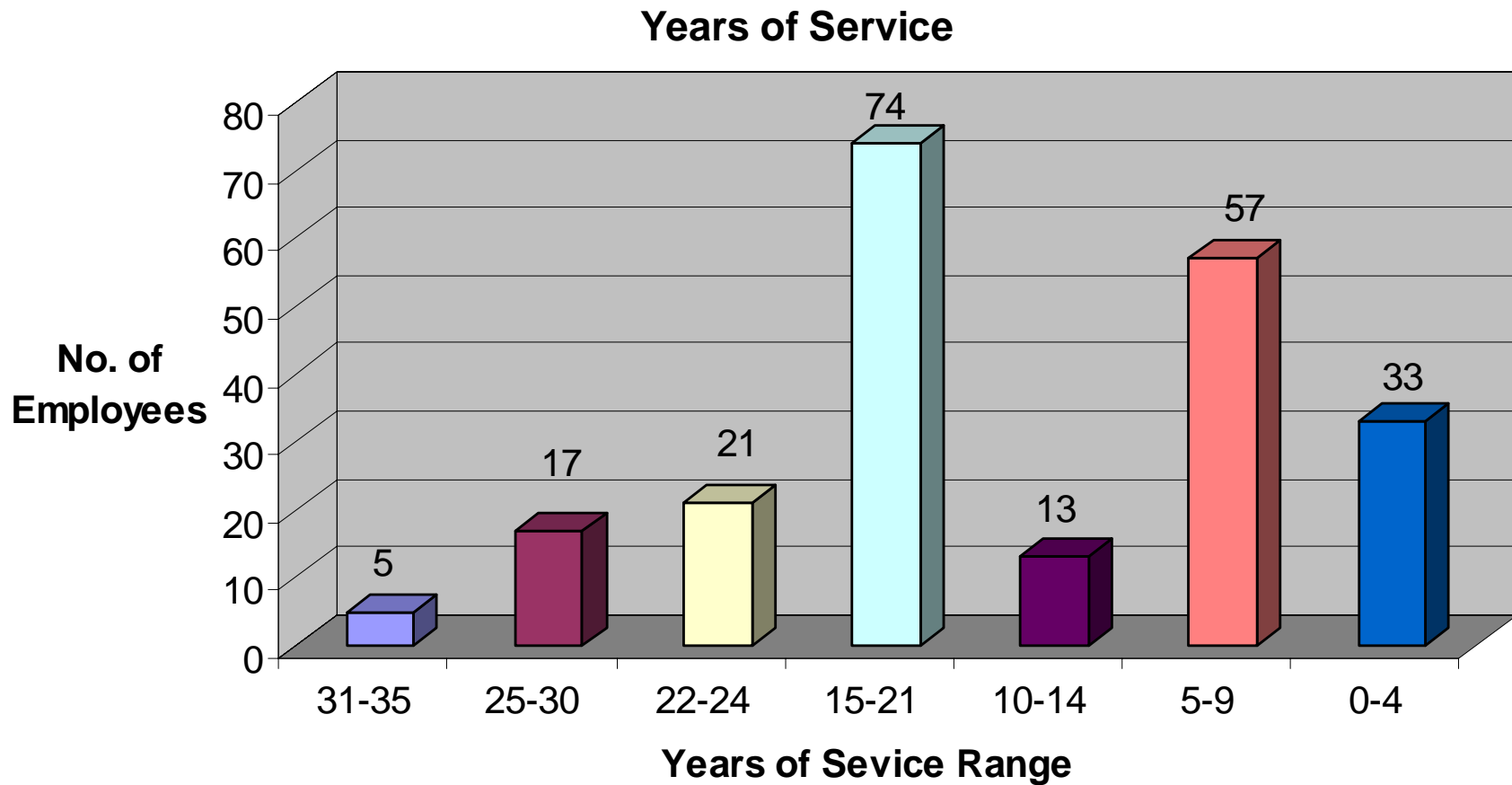
- ❑ Major construction projects to implement
- ❑ Major water production & treatment facilities to upgrade
- ❑ Major wastewater facilities to upgrade
- ❑ Stipulated Order milestones on O&M to meet
- ❑ Public demand for reliable & safe drinking water
- ❑ Infrastructure must be ready to meet load growth
- ❑ Manpower shortage

GWA Employees:

Guam Waterworks Full Time Equivalency



GWA Employees:





Available Tools to Meet Challenges

- A Stronger GWA Team
- Public-Public Partnership (Consolidation)
- Public-Private Partnership

Pursuing Public-Public Partnership & Consolidation

Using GPA Support Services and migrating similar work functions for other GWA sections



Synergy of a GPA/GWA Partnership

GPA/GWA Task Force:

- Dispatching Centralization
- Emergency Repairs to Critical Wells
- Cross training within Water System Diesel
- Support of specialized work groups

GPA/GWA Task Force Specialization Elements:

- Electrical
- Mechanical
- Environmental
- Safety
- SCADA



Consolidation Efforts

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

Privatization Status & Models



Status Of Privatization Efforts

Revisit Various Models:

- B&V Concession
- GPA BOT
- GPA Performance Management Contracts

PPP OPTION REVIEW – COMMON MODELS

1. **Service/Management Contracts.** Government hires private sector to perform specific services for the utility.
2. **Leases.** Government leases the assets of a utility to the private sector which takes on the responsibility for operating and maintaining them.
3. **Concessions.** Government transfers entire water utility business, including capital investment, to the private sector.
4. **Build-Operate-Transfer Contracts (BOT).** Private Sector constructs an asset, operates it for a number of years and then transfers it to the public utility.

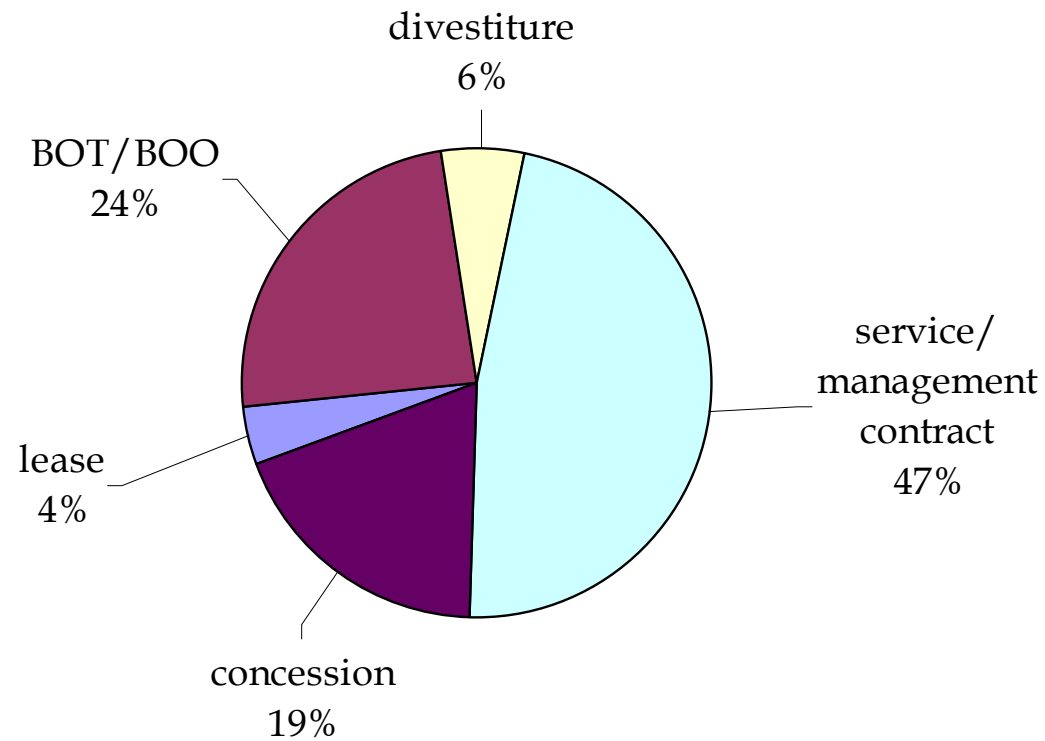


PPP OPTION REVIEW - COMMON MODELS (cont.)

5. **Build-Operate-Own Contracts (BOO).** Similar to the BOT except the asset remains the property of the private entity and does not transfer to the public utility.
6. **Divestitures.** Government sells assets to private sector which assumes full responsibility for the assets.



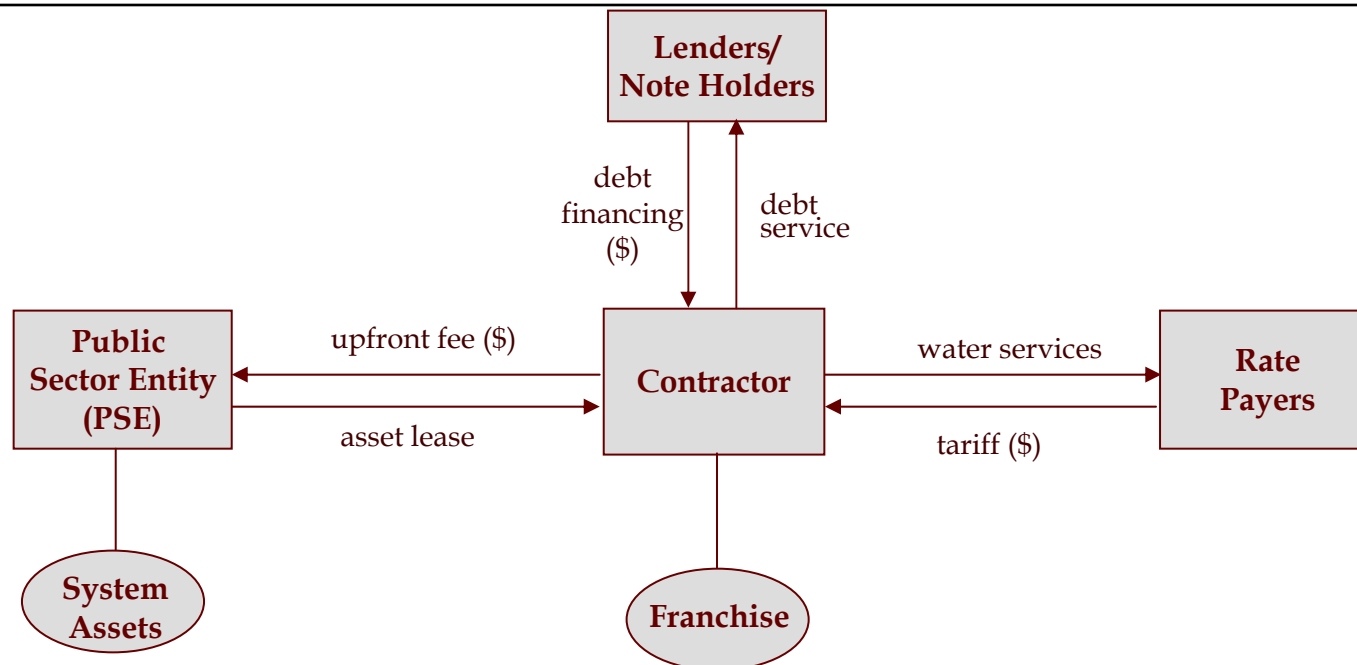
PPP MODELS ADOPTED IN MIDDLE AND LOW-INCOME COUNTRIES



Source: Franceys 2000

PPP OPTIONS

CONCESSION MODEL



Advantages

1. PSE retains title to system assets.
2. Contractor finances all capital improvements and otherwise fully assumes responsibility for utility business.
3. Contractor has full incentives to efficiently manage every aspect of utility business.
4. Concessions work well in circumstances where existing system need significant investment and PSE seeks to improve quality of service.

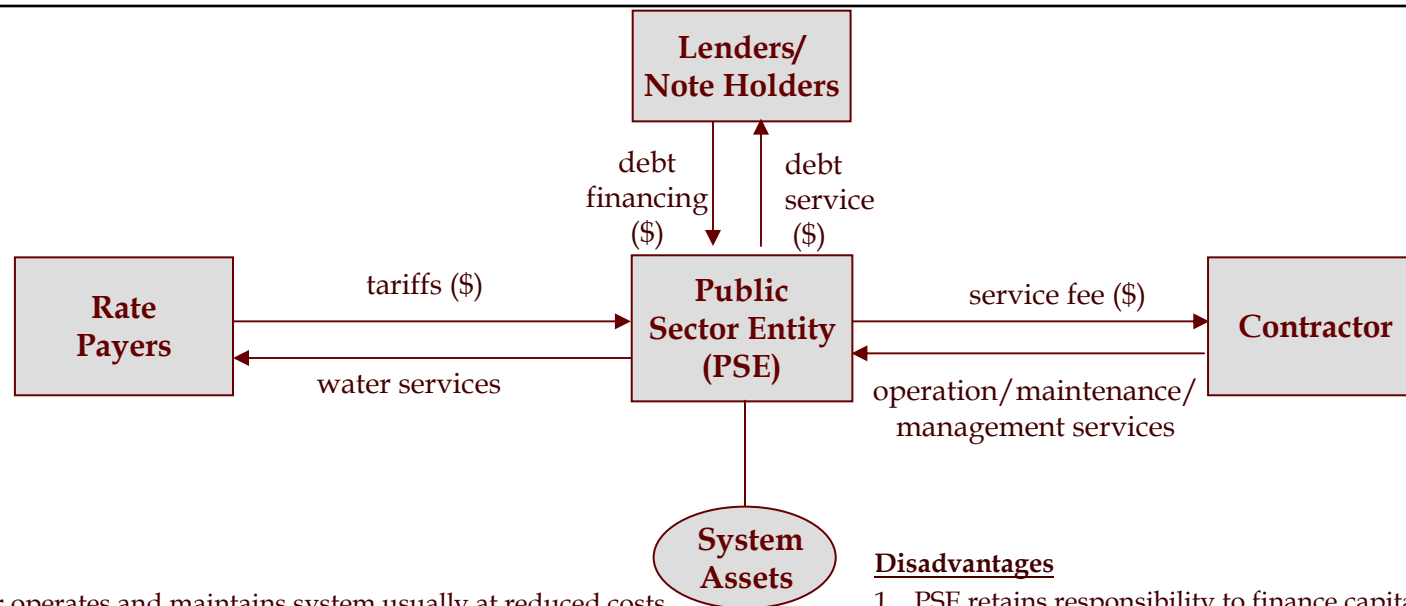
Disadvantages

1. PSE administers very complex contractual arrangement for extended period (25-30 yrs.)
2. Option requires strong independent regulator that regulates monopoly over water services held by contractor.
3. Option requires high quality regulatory framework that balances contractor's need for profits and rate payers' need for high quality, low priced service.



PPP OPTIONS

SERVICE/MANAGEMENT CONTRACT MODEL



Advantages

1. Contractor operates and maintains system usually at reduced costs.
2. Relatively easy to implement. PSE can rapidly improve specific system issues.
3. Sometimes used as interim measure in preparation for greater private involvement (Mexico, Trinidad and Tobago have adopted this approach).
4. Model works best in situations where (i) public sector has already installed adequate water/sewerage connections, and (ii) PSE seeks to improve operating efficiency.
5. Most common PPP model in the United States.

Disadvantages

1. PSE retains responsibility to finance capital improvements.
2. PSE retains change-in-regulation risk.
3. Model does not fully take advantages of private sector's ability to reduce operation costs because PSE retains risk of utility business performance.

Public Private Partnership Success History



- **1996 – GPA Independent Power Producer Contracts:**
 - **BOT - Construction, operation and maintenance**
 - Marianas Energy Company (MEC)
Piti 8&9 - 88 MW Slow Speed Diesel
 - Taiwan Electrical and Mechanical Engineering Services (TEMES)
Piti #7 - 40 MW Combustion Turbine
 - **BOT / PMC Hybrid - Rehabilitation, operation, maintenance, and management of GPA Employees**
 - Pruvient Energy Guam Inc.
Tanguisson Power Plant - 53 MW Steam

*Public Private Partnership
Success History (continued)*



□ IPP Performance Guarantees:

- MEC
 - Heat Rate
 - Availability
- TEMES
 - Heat Rate
- Pruvient
 - Heat Rate
 - Availability
 - EFOR

*Public Private Partnership
Success History (continued)*



□ GPA Performance Management Contracts

- 2003 – Taiwan Electrical and Mechanical Engineering Services (TEMES)

Cabras 1&2 – 132MW Steam

- 2005 - Doosan Engine

Cabras 3&4 – 88MW Slow Speed Diesel

*Public Private Partnership
Success History (continued)*



PMC Concepts:

- ❑ Financing
- ❑ Budgeting
- ❑ Compensation Structure
- ❑ Staffing
- ❑ Training
- ❑ Operations
- ❑ Maintenance
- ❑ Capital Improvement Projects (CIPs)
- ❑ Performance Improvement Projects (PIPs)
- ❑ Contract Terms
- ❑ Communications
- ❑ Reporting
- ❑ Outsourcing

*Public Private Partnership
Success History (continued)*



PMC Overall Benefits

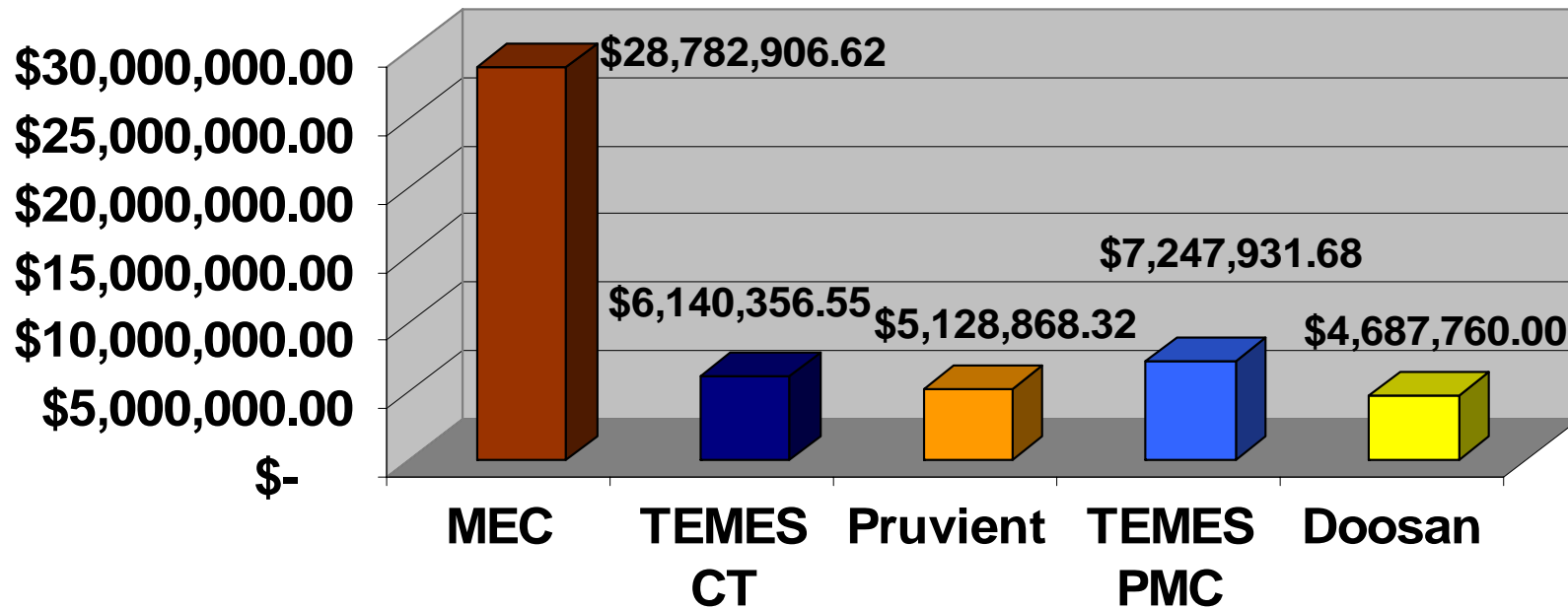
- Significant Plant Performance Improvements
 - Staffing Optimization
 - Expedited completion of CIP/PIP
 - Heat Rate, efficiency gains
 - Reliability improvements
 - Skills improvement of O&M Personnel
 - Process efficiency enhancements
- Results:
 - \$ Savings to GPA and its ratepayers

Public Private Partnership Success History (continued)



Contract Fees:

IPP/PMC Annual Fees

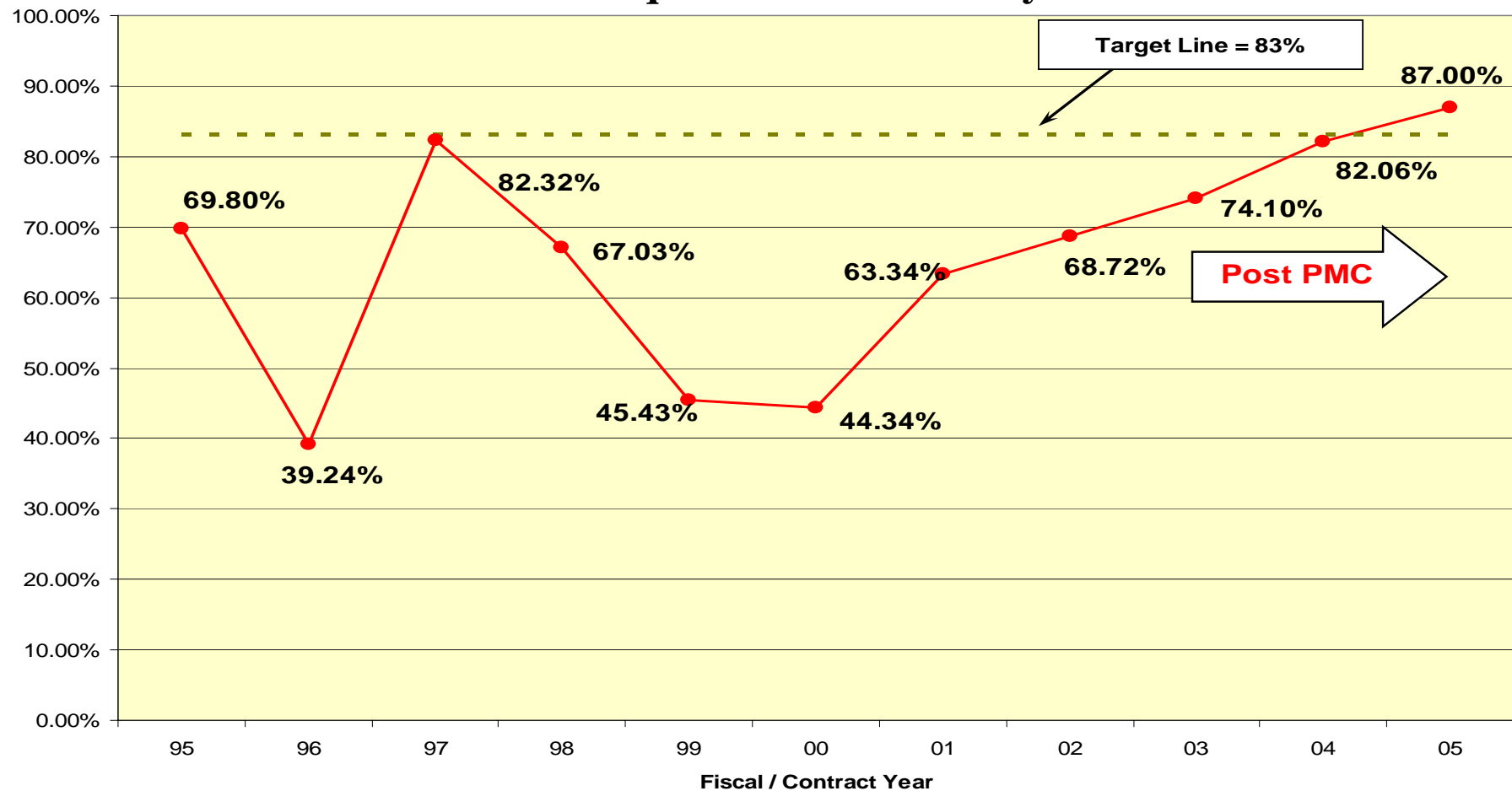


Public Private Partnership Success History (continued)



Historical Vs. Post PMC Performance

Cabras 1&2 Equivalent Availability Factor

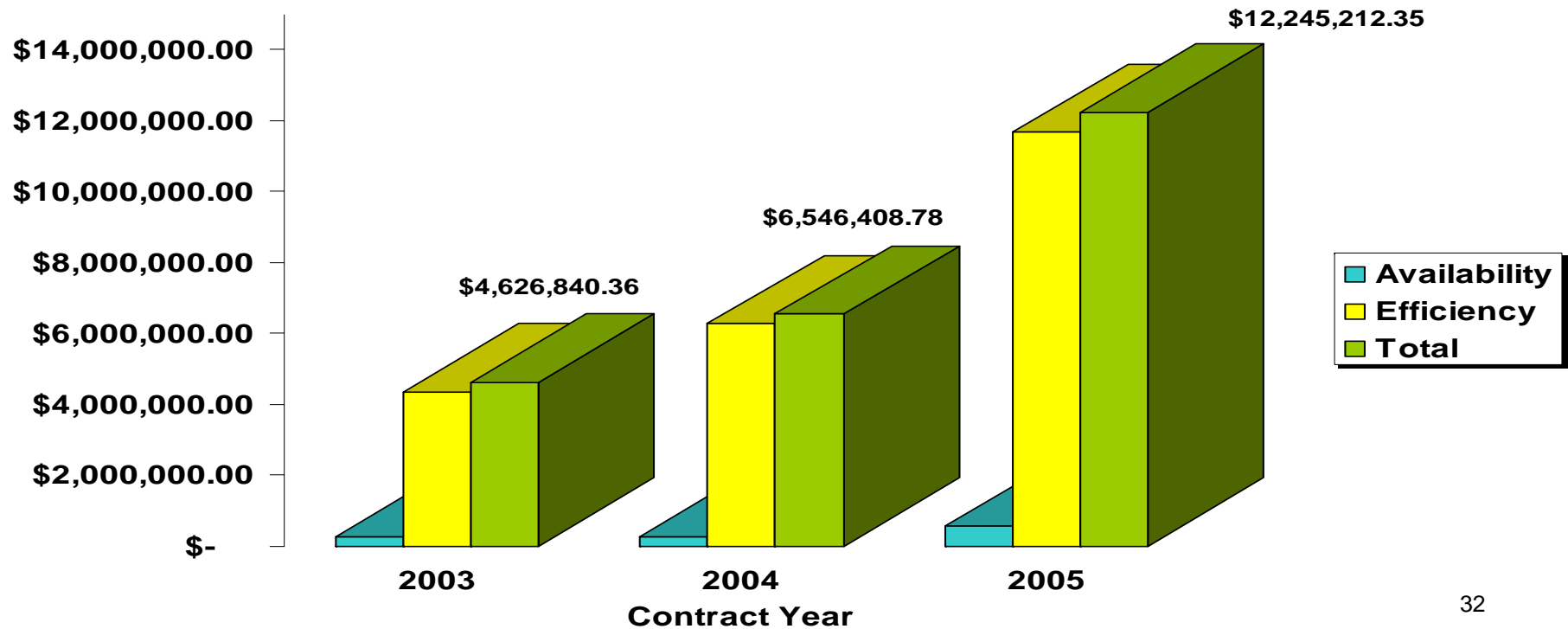


Public Private Partnership Success History (continued)



Historical Vs. Post PMC Performance

Cabras 1&2 Annual Savings

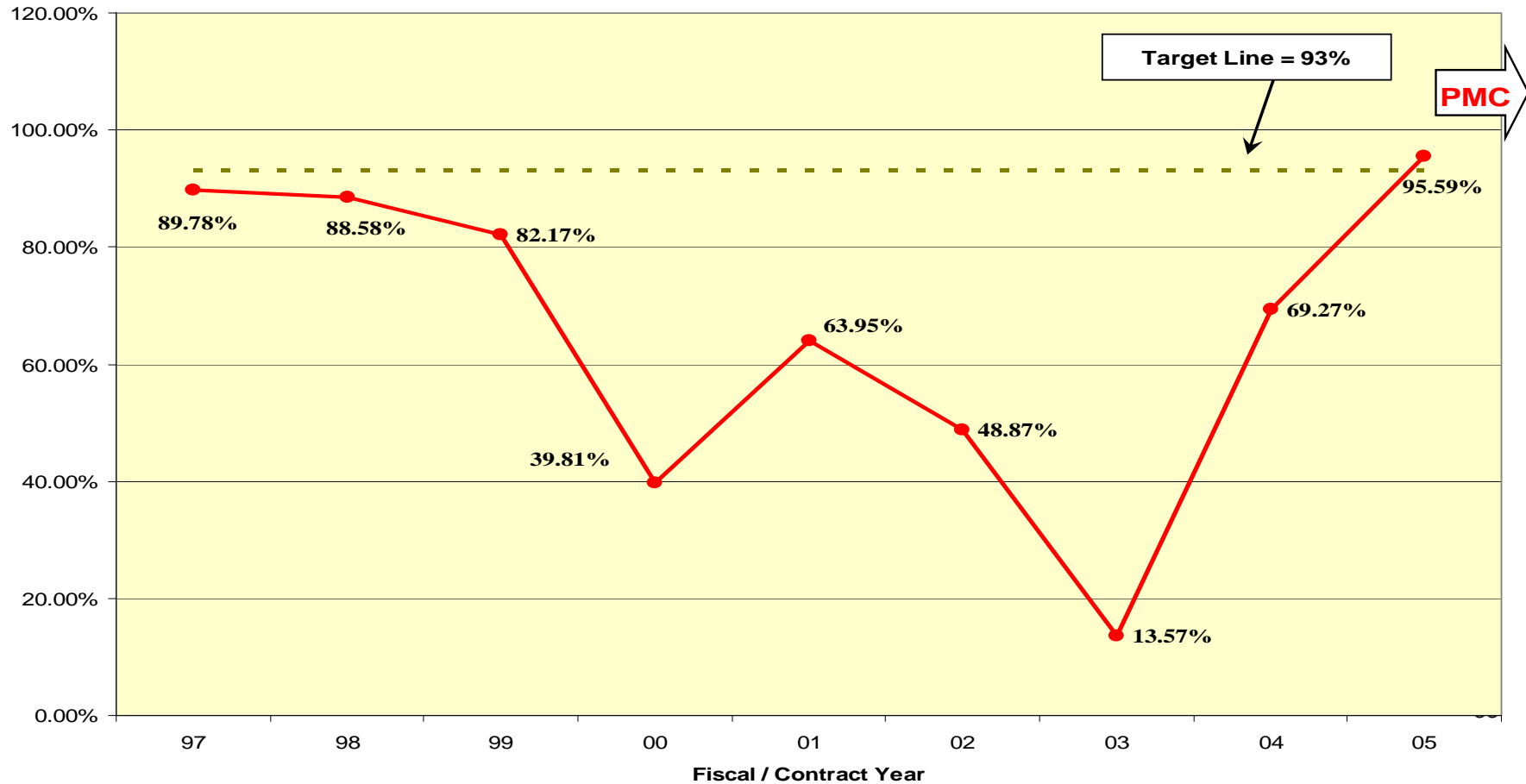


Public Private Partnership Success History (continued)



Historical Vs. Post PMC Performance

Cabras 3&4 Equivalent Availability Factor

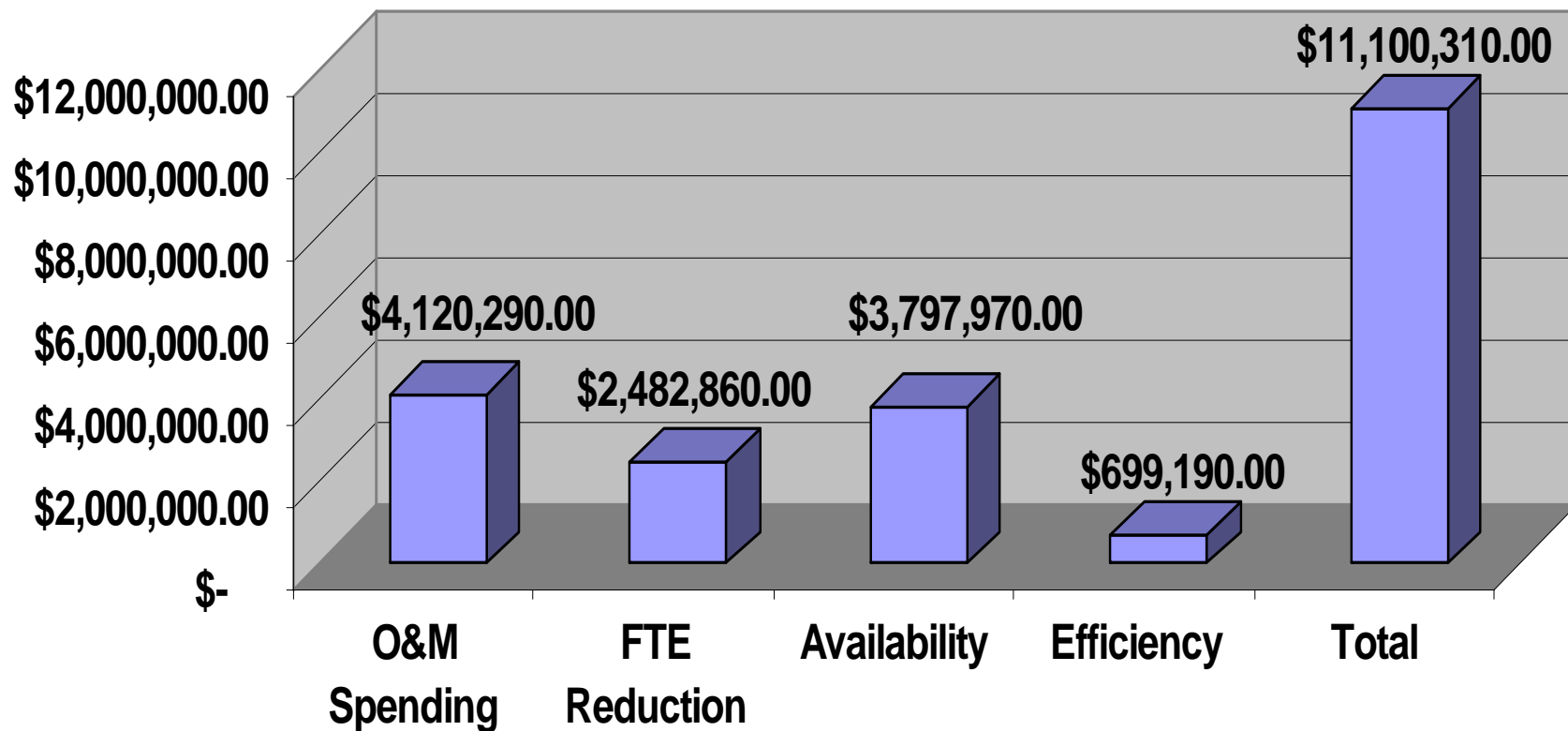


Public Private Partnership Success History (continued)



Historical Vs. Post PMC Performance

PMC Cabras 3&4 Projected Savings



Proposed GWA Model



GWA Proposal

- Develop Performance Management Contracts for:
 - Water Production, Treatment, Booster Stations, & Storage Tanks
 - Wastewater Stations, Sewage Treatment, & Outfalls
- Structure:
 - Similar to GPA PMC for Cabras Power Plants
- Term:
 - Base Contract - Minimum five (5) year contract
 - Two (2) optional five-year extensions



Why PMC?

- Performance based contract structure
 - Standards & results in substantial reliability improvement
- Quick implementation
 - 6 months – 1 year
- Responsive to immediate needs
- Focused efforts
- Addressing QualServe Peer Review recommendations
- Better fit for GWA's new Position of Strength

PMC Overview



PMC Responsibilities

- ❑ Procurement of Materials & Services
- ❑ Personnel Management
- ❑ Management of Capital Improvement Projects
(SCADA System, Station Upgrades)
- ❑ Inventory Management
(Standardization, Identifying Critical Spares, Restocking Triggers)
- ❑ Environmental Compliance
- ❑ Training Development
(Succession Plans, Apprenticeship Programs)
- ❑ Performance Standards



Additional Responsibilities

- ❑ Develop Maintenance Program SOP
- ❑ Implement Maintenance Management System
- ❑ Financing Options
- ❑ Reporting / Record Keeping
- ❑ Root Cause Analysis
- ❑ Performance Testing
- ❑ Assist in Developing Quality Management Plans/Systems

PMC

Performance Measures



Performance Standards

- ❑ Station Availability & Output
- ❑ O&M Expense
- ❑ Station Efficiency
(i.e. Production, Power Consumption)
- ❑ Environmental Compliance
(i.e. Mandates, Water Quality)
- ❑ Incident Occurrences (Penalties)
(i.e. Sewer Overflows, Treatment Equipment Failures)
- ❑ Labor
(i.e. Overtime, Staffing Optimization)

Facilities Considered for PMC

Water Supply System

Facilities

- ■ 110 wells
- 2 springs
- ■ Surface water supply and water treatment plant
- ■ 24 booster pump stations
 - 750 miles of distribution pipelines
 - 2,500 fire hydrants

Capacity

- Average daily supply requirement is 32 MGD*
- Billed Demand: 19 MGD
- Minimum reliable water supply is 40-44 MGD
- Storage Capacity: 35 MG
- ■ 31 Reservoirs and Tanks

* Will decrease as water losses are reduced due to implementation of CIP. Based on a 5-year average.

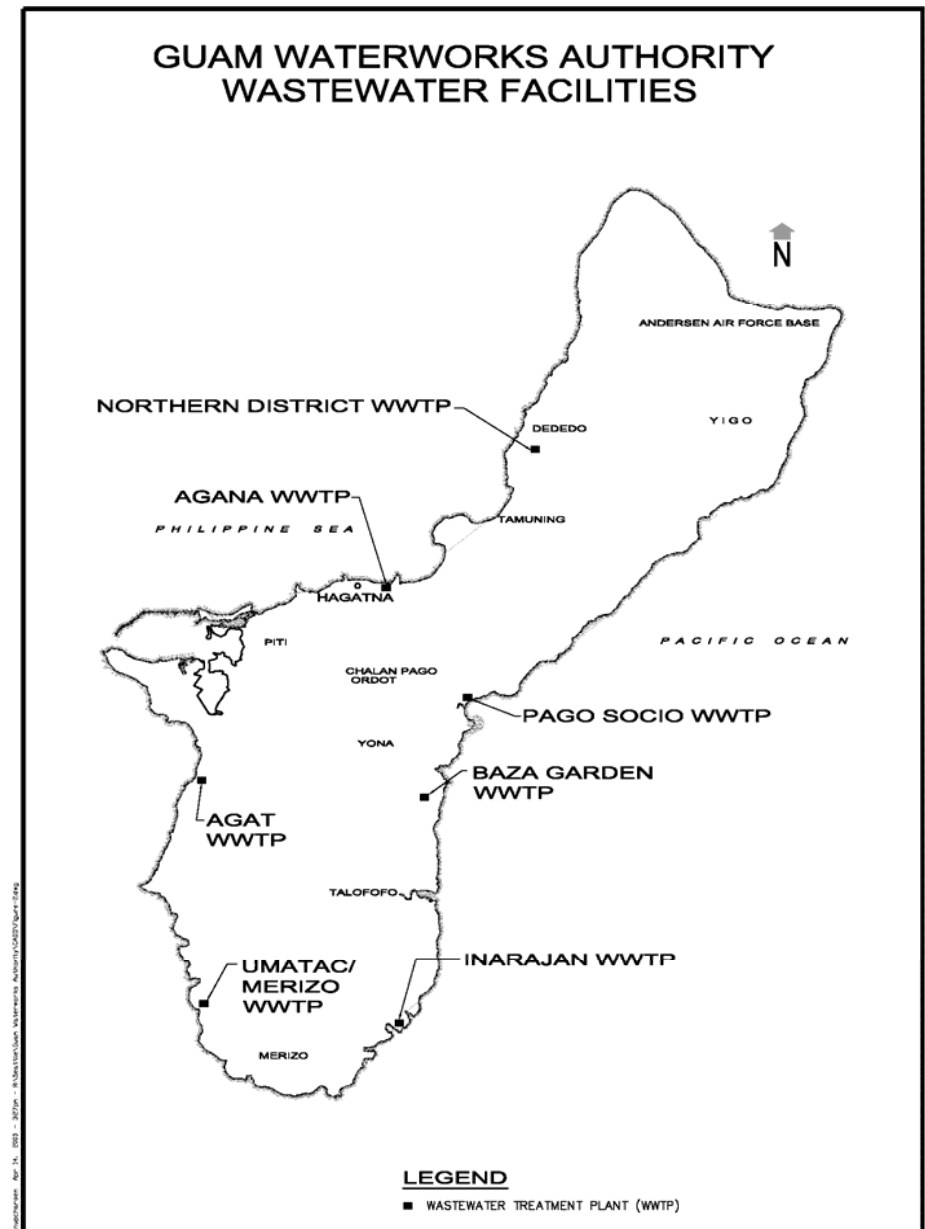
Wastewater System

Facilities

- 145 miles of Sewer Lines
- ➔ ■ 72 Pumping Stations
- ➔ ■ 7 Treatment Plants
- ➔ ■ 2 Ocean Outfall

Coverage

- Serves the Civilian Population and Andersen Air Force Base
- 58% of the customers are connected to the Wastewater System



Considered Divisions: O&M Expenses

Summary of Expenses (Non-Labor)

Division	Section Code	Section Description	FY 2004 Actual	FY 2005 Actual	FY 2006 Budget	FY 05 & FY 06 Average
Wastewater	5236	Pumping FacWW	\$ 1,984,829	\$ 1,677,499	\$ 1,808,911	\$ 1,743,205
Wastewater	5352WW	Tech Fac/Supp (WW)	\$ 19,148	\$ 48,971	\$ 12,587	\$ 30,779
Wastewater	5360	Treat/Disp		\$ 574,744	\$ 6,991,095	\$ 3,782,919
Wastewater - O&M Total			\$ 2,003,977	\$ 2,301,213	\$ 8,812,593	\$ 5,556,903
Water	5235	Pumping Fac/Wtr		\$ 6,723,550	\$ 1,662,403	\$ 4,192,976
Water	5310	Ground Prod/Treatment		\$ 8,137,292	\$ 7,645,487	\$ 7,891,389
Water	5311	Surface Prod/Treatment	\$ 8,057,774	\$ 610,246	\$ 565,821	\$ 588,033
Water	5352W	Tech Fac/Supp (W)	\$ 19,148	\$ 48,971	\$ 12,587	\$ 30,779
Water - O&M Total			\$ 8,076,923	\$ 15,520,058	\$ 9,886,298	\$ 12,703,178
Wastewater and Water - O&M Total			\$ 10,080,900	\$ 17,821,271	\$ 18,698,891	\$ 18,260,081

Considered Divisions: Employees

Division	Section Code	Section Description	Filled:	Vacant:	Grand Total
Wastewater	5236	Pumping FacWW	24	6	30
Wastewater	5352WW	Tech Fac/Supp (WW)	2	-	2
Wastewater	5360	Treat/Disp	16	7	23
Wastewater - Employee Count			42	13	55
Water	5235	Pumping Fac/Wtr	11	3	14
Water	5310	Ground Prod/Treatment	14	-	14
Water	5311	Surface Prod/Treatment	8	-	8
Water	5352W	Tech Fac/Supp (W)	3	-	3
Water - Employee Count			36	3	39
Wastewater and Water - Employee Count Total			78	16	94

Conclusion

Benefits of PMC



Benefits of PMC Contract

- ❑ Expertise Accessibility
- ❑ Station Availability
- ❑ Station Reliability
- ❑ Procurement Efficiencies
- ❑ Financing Alternatives
- ❑ Training & Certifications
- ❑ Asset Retention
- ❑ Investment & Retention of Employees
- ❑ Structured Maintenance Program
- ❑ Functional Inventory System



Expected Contract Amounts

- Fixed Management Fees
 - PMC Labor & Administration Costs
- Performance Compensation
 - Penalties / Bonuses
- PMC Labor & Administration Costs
- Reimbursable O&M Costs
 - O&M Budget
- Reimbursable CIPs/PIPs Costs
 - CIP Budgets & Revenue Bond Funded Projects

Projected Timeline

Process Description	Duration	Start	Finish
Prepare Bid Documents	90 days	Dec 15	Mar 14
Bid Process	73 days	Mar 15	May 26
STEP 1 - Selection of Qualified Bidders	70 days	Mar 15	May 23
Bid Documents Available		Mar 15	Mar 28
Pre-Bid Conference			Mar 28
Cut Off Date for Receipt of Bids		May 9	May 9
Technical Proposal Evaluation		May 10	May 23
STEP 2 - Evaluation of Price Proposals	3 days	May 24	May 26
Price Proposal Evaluation		May 24	May 26
Approval & Finalizing Contract	23 days	May 29	Jun 20
Management Review & Approval		May 29	May 30
Contract Terms Negotiation		May 31	Jun 13
CCU Presentation		Jun 16	Jun 20
Contract Award			Jun 20

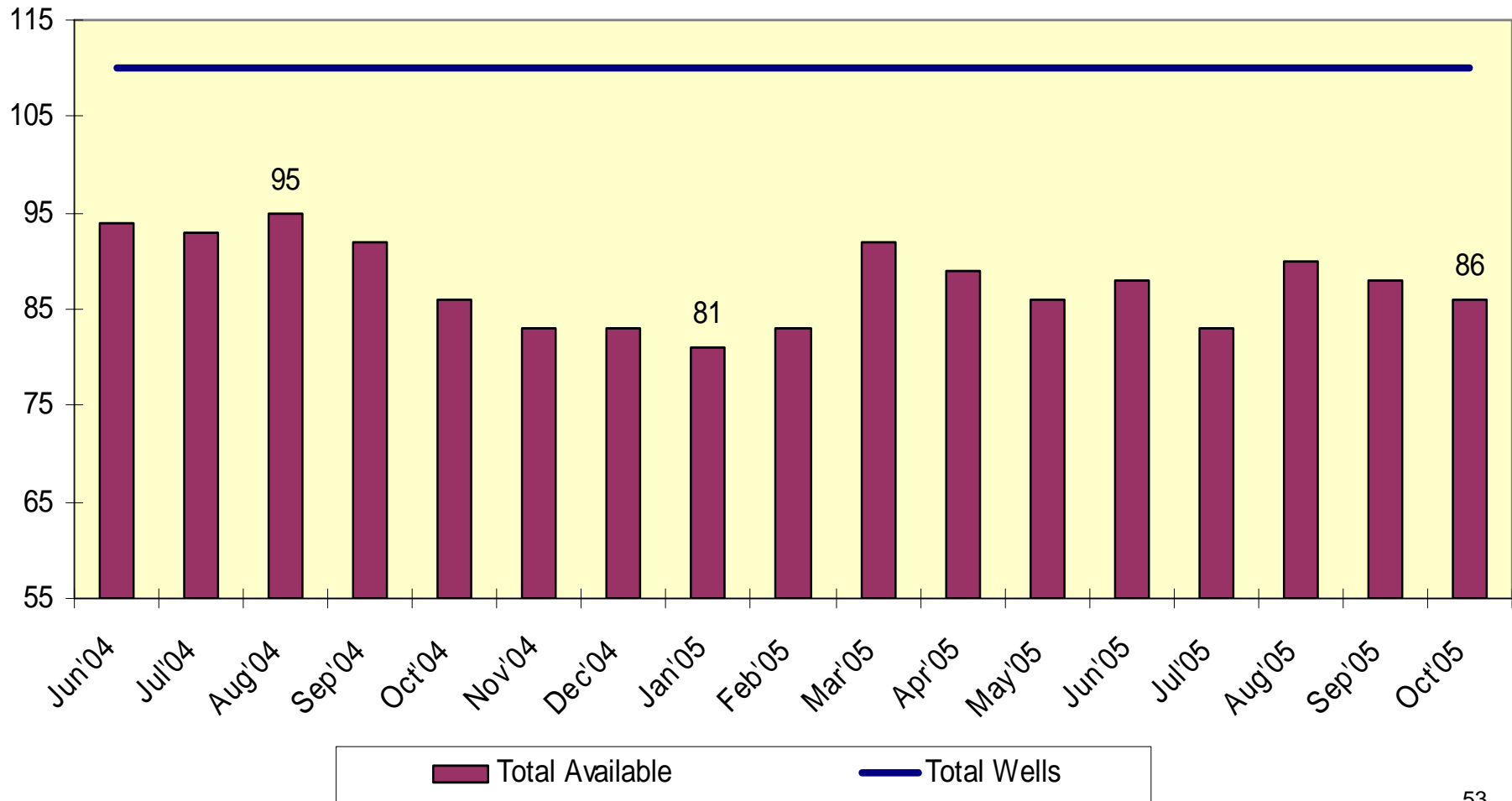
Bid Process Timeframe ~ 188 Days



Potential Savings & Other Benefits

- O&M Expenses
 - Prevention of reoccurring problems (contracts/materials)
- Purchased Water Costs Reduction
 - Availability & Production of Stations
- Reduction in EPA Fines
 - PMC Responsibility
- Reduction of Loss of Revenue
- Reduction of Energy Costs
 - Station Equipment Efficiency Improvements
- Customer Satisfaction
 - Reliable & Quality Service

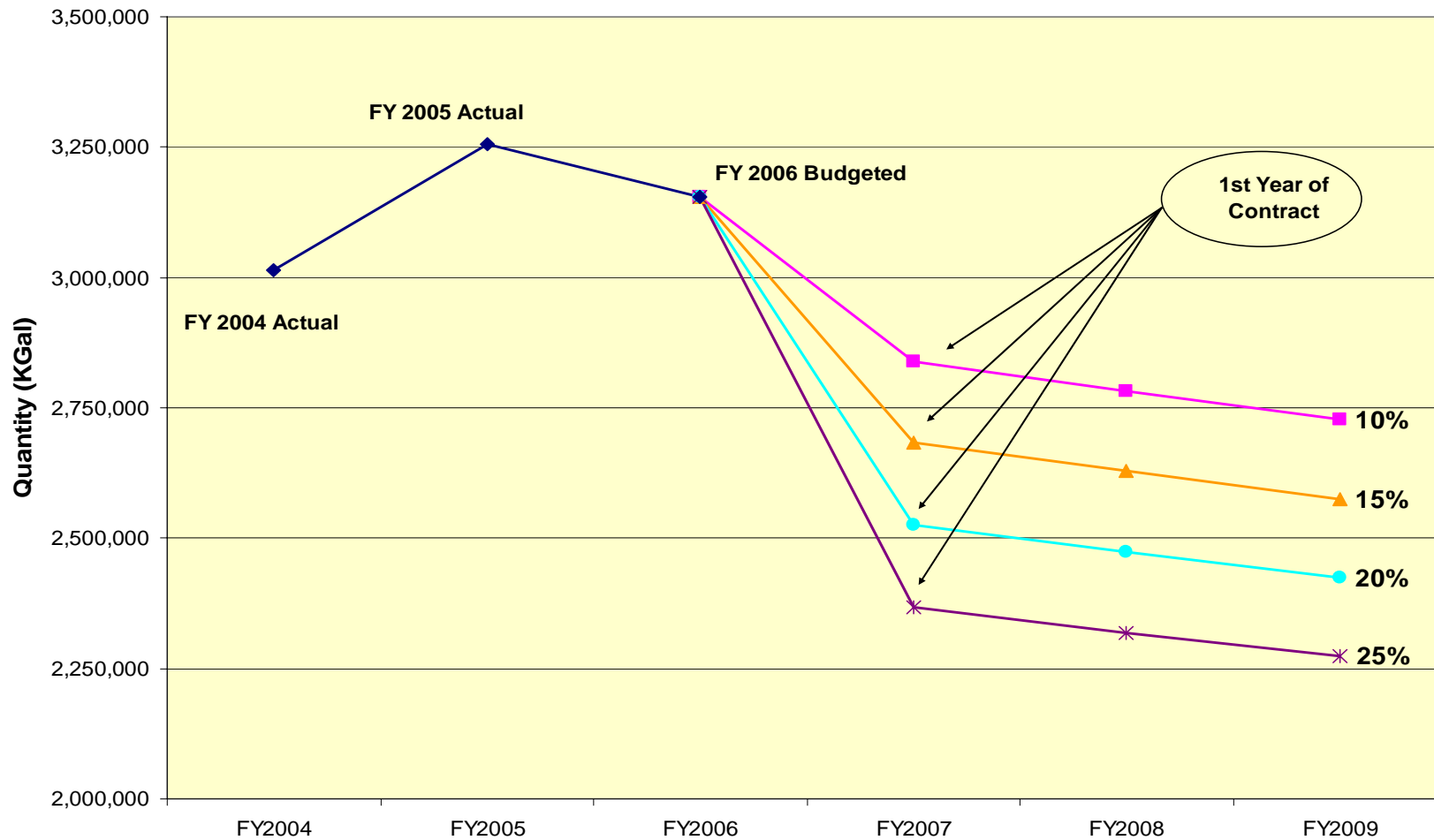
GWA Waterwell Availability Summary



Note: Nov'04 & Dec'04 data is average of prior and after months due to data unavailable.

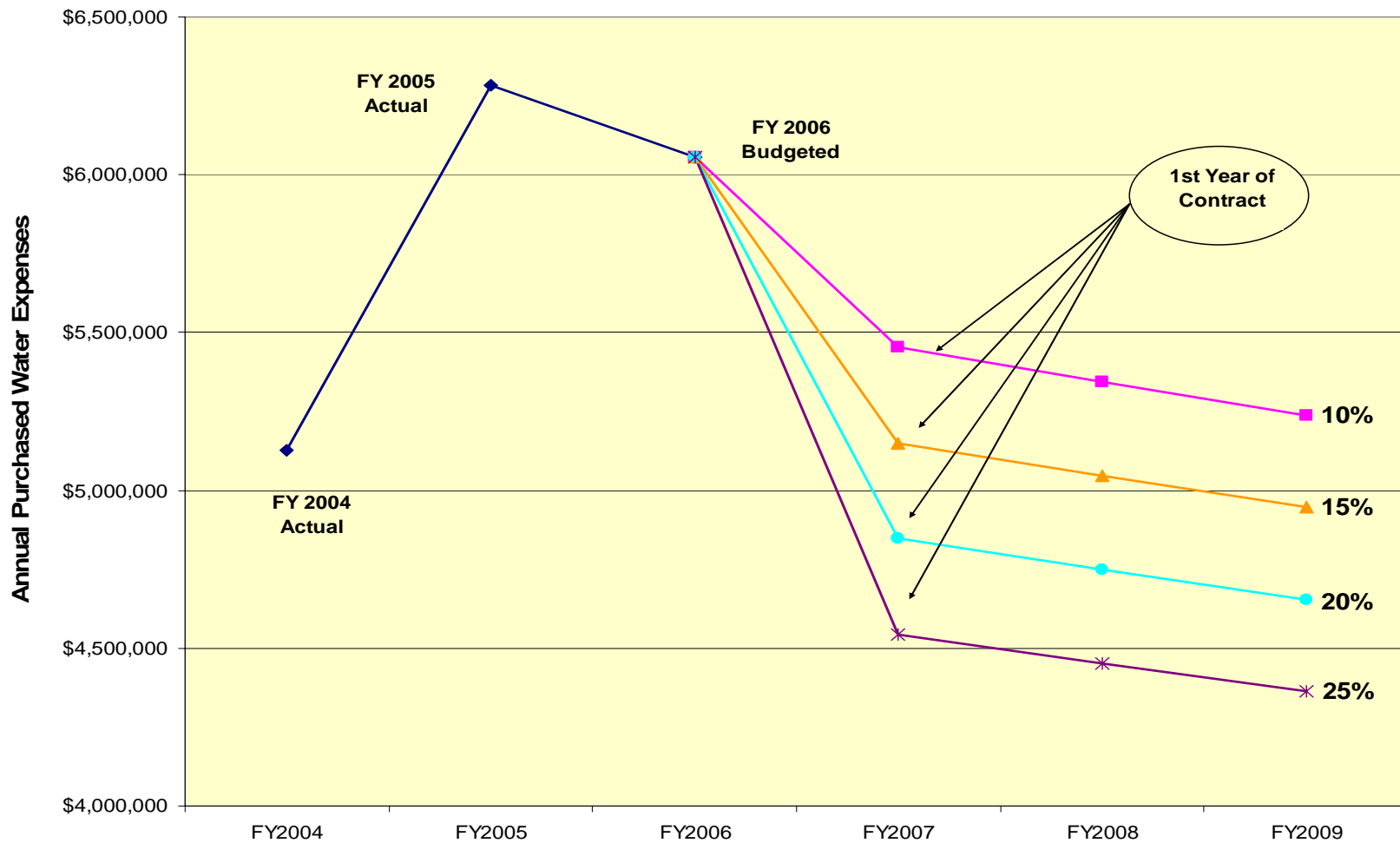
Potential Savings - Water Purchase Quantities (kgal)

(10%-25% Reduction of Purchased Qty for 1st Year & 2% Thereafter)



Potential Savings - Water Purchase Expenses

(10%-25% Reduction of Purchased Qty for 1st Year & 2% Thereafter)





Summary

- Utilizing Available Tools:
 - Strengthened GWA core
 - Consolidated Efforts
 - Public-Private Partnership
 - GWA Employees

The End
