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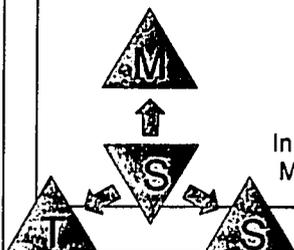
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Financial Report

Assessment of Financial Condition
1990-1991 through 1992-1993

31 March 1994

Cairo Water II - Institutional Development Component
USAID Project No. 263-0193



In Association with:
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منخص تنفيذى

مقدمة

الهدف، من برنامج الحيوية المالية هو مساعدة المرفق فى اتباع و تنفيذ منهج قياسى لتحقيق الاستقلال المالى ومن الناحية الموضوعية فان التوجه نحو الاستقلال المالى عبارة عن عماية ذات خطوتين :- الاولى عبارة عن مراجعة للبيانات التاريخية لتوضيح الموقف المالى للمرفق والثانية عبارة عن مؤشرات للاداء تعتمد على البيانات التاريخية التى تم تحديدها وقياسها ومقارنتها على فترات زمنية محددة لقياس العلاقات والتغيرات المالية ويقوم التقرير المالى بالتعرض للنواحى التنظيمية للادارة المالية وكذلك الشئون المالية وعليه فانه ينقسم الى قسمين رئيسيين هما:-

١- النواحى التنظيمية والادارية.

٢- الشئون المالية.

وقد قدم المرفق البيانات المستخدمة فى عمليات التحليل والتى هى بدورها سوف تعتبر الأساس لوضع السياسات وتخطيط الاداء ووضع نماذج لبرنامج الحيوية المالية ولذلك فان دقة هذه البيانات تعتبر اساس لتحديد الظروف المالية الحالية للمرفق.

الاساس القانونى :

ان تحقيق الاستقلالية الادارية يعتبر حجر الزاوية فى تحقيق اهداف برنامج الحيوية المالية حيث ان المرفق كهيئة اقتصادية يتأثر بالعديد من الأجهزة الحكومية، القوانين، اللوائح التى تحد من قدرته فى اتخاذ القرارات التى تحقق الحيوية المالية. وتتمثل الأجهزة الحكومية التى تؤثر على الجوانب المالية للمرفق تشمل على سبيل المثال لا الحصر فى:-

- * وزارة الاسكان و المرافق.
- * وزارة المالية.
- * وزارة التخطيط.
- * وزارة التعاون الدولى.
- * الجهاز المركزى للتتظيم و الادارة.
- * الجهاز المركزى للمحاسبات.

الهيكل الإدارى و التنظيمى:-

صدر القرار الجمهورى للمرفق كهيئة اقتصادية عام ١٩٦٨ لخدمة القاهرة الكبرى. ويعتبر مجلس الادارة هو السلطة العليا لادارة شئون المرفق. وقد جعل قانون الادارة المحلية رقم ٤٣ لسنة ١٩٧٩ الوحدات المحلية مسنولة عن انشاء و ادارة المرافق العامة التى تقع فى نطاقها. وللسادة محافظى القاهرة والجيزة والقليوبية لهم ارتباط بالمرفق. ويتولى السيد محافظ القاهرة مسنولية اعتماد قرارات مجلس ادارة المرفق. وللسادة محافظى الجيزة والقليوبية حق طلب توسيع نطاق خدمة المرفق فى محافظتهما.

يدار المرفق بواسطة السيد رئيس مجلس الادارة وبمساعدة نائبين احدهما للشئون المالية والادارية والثانى للشئون الفنية. والانشطة المالية اليومية تتم بمعرفة القطاع المالى برئاسة رئيس الادارة المركزية للشئون المالية. وتوجد ثلاث ادارات عامة : الأولى للايرادات والثانية للمصروفات والثالثة للمراجعة. ويتبع السادة مديرى العموم السيد رئيس الادارة المركزية. هذا بالاضافة الى ادارة الميزانية وادارة الحاسب الآلى اللتين يقدمان خدماتهم للمرفق من خلال الادارة المركزية للشئون المالية. وتساعد الادارة المركزية للشئون الادارية فى تنفيذ الميزانية وتتولى ادارة المشروعات عملية تخطيط المشروعات وتتبع ادارة المشروعات السيد نائب رئيس مجلس الادارة للشئون الفنية وكذلك ادارة الشبكات.

الهيكل الإدارى، التخطيط المالى و اتخاذ القرار:

تنوزع اختصاصات ادارة الشئون المالية بين الايرادات والمصروفات والمراجعة. و يتم تدفق المعلومات فى نطاق الادارة المركزية للشئون المالية رأسياً. وتتم عملية تحليل البيانات المالية الحيوية على مستوى الادارة العليا وبالرغم من اهمية ادارة المراجعة الا أن وظيفة مدير عام المراجعة غير ممولة حالياً.

ويتطلب اعداد الموازنة تعاون الافراد من جميع مستويات التشغيل حتى تتحقق الدقة فى التقديرات مما ينتج عنه تقديرات سليمة، يتم مراجعتها من وزارة المالية التى لها الحق فى ادخال تعديلات عليها قبل عرضها على مجلس الشعب.

ويتم تخطيط الاستثمارات بواسطة القطاع الفنى للمرفق بالتعاون مع القطاع المالى. و بمجرد اعتماد المشروعات يتم التمويل.

ولا توجد القوانين او اللوائح التى تستلزم الربط بين المصروفات و عملية وضع تعريفه للمياه تكفى لتغطية تلك المصروفات حيث يقوم المرفق باعداد مشروع موازنته ويتم تعديلها فى وزارة المالية قبل تقديمها الى مجلس الشعب لاقرارها بينما يعرض المرفق تعريفه للمياه

المقترحة على السيد المحافظ الذى يقوم بدوره بعرضها على المجلس الشعبى المحلى للمحافظة.

عملية التخطيط المالى و السياسات و التطبيقات :

ان الاجراءات و السياسات المالية التى تطبقها مرافق المياه ذات الطابع التجارى يتولد عنها تصعد بعيد المدى للتحسينات الرأسمالية و كفيية تمويلها فضلا عن عمليات التشغيل اليومية كما ان اتباع سياسة مالية سليمة بتفاعلها مع ظروف و امكانيات المرفق تضمن تقديم افضل خدمة للمستهلك و بأقل تكلفة.

التخطيط المالى:

ان التخطيط المالى للمرفق يتضمن اجراءات اعداد الموازنة التقديرية و التى تبدأ مراحل اعدادها فى بداية اكتوبر للسنة المالية التى تبدأ فى شهر يوليو. و فى منتصف يناير تقدم الموازنة لوزارة المالية للمراجعة و تشمل الموازنة تقديرات الايرادات و المصروفات. ثم تعرض الميزانية على مجلس الشعب لاعتمادها فى شهر ابريل. و الموازنة مقسمة الى اجزاء بما يسمح بالمناقلة بين اعتمادات الاجزاء المختلفة فى حدود اجمالى الموازنة.

ان تقدير الايرادات يستند الى عملية تقدير المصروفات، ويحدد الفرق بين الايرادات التقديرية و المصروفات التقديرية مقدار العجز المتوقع الذى كان يمول بواسطة وزارة المالية.

الادارة المالية:

كهيئة اقتصادية يتولى مجلس الادارة ادارة الايرادات المتولدة عن مصروفات متعلقة بعملية انتاج و توزيع المياه و يتطلب الأمر ان يقوم المرفق بصفته هيئة اقتصادية باعداد ميزانية عمومية و حسابات ختامية على ان تحدد الادارة المالية السياسات و الاجراءات المرتبطة بالايرادات و المصروفات.

ايرادات المرفق تتولد نتيجة لبيع المياه و الخدمات المتعلقة بها. الايرادات المحصلة تتطلب تعاون ادارات المرفق. تنفيذ الموازنة يتطلب جهود ادارة الميزانية و اللجنة الداخلية.

الايراد:

قائمة التعريفه الحالية مطبقة منذ عام ١٩٩٢/٩١ و يتم حساب المتوسط للمستهلكين على اساس عدد الحجرات.

المشتركين و مناطق الخدمة :-

بلغ عدد المشتركين في عام ١٩٩٣/٩٢ حوالي ٤٨١٠٠٠ مشترك. و يوضح الجدول رقم (١) عدد الحسابات و الإيرادات لكل مجموعة خلال الثلاث سنوات السابقة. ورغم زيادة عدد الحسابات بنسبة ١٧٪ خلال الثلاث سنوات السابقة فقد انخفضت كمية المياه المباعة بنسبة ٢,٥٪ وقد يرجع انخفاض المياه المستخدمة الى عدد من العوامل منها الركود الاقتصادي، اعادة تصنيف المشتركين و التغيير في اساس تقدير التوصيلات بدون عدادات، في حين ان الانخفاض الكلي للمبيعات قد يرجع في بعض الحالات الى عوامل من داخل المرفق وعلينا في هذه الحالة مراجعة بيانات حسابات المشتركين و قراءة العدادات و اجراءات تقدير الاستهلاك لجميع المشتركين بالمرفق و تقوم الحاجة الى تحقيق بيانات المبيعات على بيانات انتاج المياه اذ انه على الرغم من انخفاض حجم المبيعات خلال فترة الدراسة فان انتاج المياه قد زاد خلال نفس الفترة بنسبة ٨,٦٪ (من ١,٢٠٢ مليون متر مكعب في ٩١/٩٠ الى ١,٣٠٦ مليون متر مكعب في ٩٣/٩٢).

و تتوزع حوالي ٩٥٪ تقريبا من كمية المياه المباعة بين ثلاث شرائح من العملاء، الشريحة الأولى (منازل) هي اكبرهم من حيث العدد و الاستخدام و تمثل شريحة المنازل حوالي ٩٠٪ من عدد حسابات المشتركين بالمرفق كما تحصل على ٦٥٪ من مبيعات المياه اما الشريحة التالية من حيث الحجم فهي السادسة و الخاصة بالجهات الحكومية والتي تتبايع ٢٥٪ من اجمالي كمية المياه المباعة و الشريحة التالية (المحلات التجارية الصغيرة) تتبايع ٥٪ من الانتاج و بمراجعة توزيع المياه المباعة يطرح السؤال نفسه عن تصنيف العملاء؟ فانه بينما تتحصر نسبة ٩٪ من المياه المستخدمة في ثلاثة شرائح فان الحاجة تفرض نفسها الى اضافة اربعة شرائح اخرى لمتابعة استخدام الـ ٥٪ الباقية من استهلاك المياه كما يجب دراسة تكوين شريحة الجهات الحكومية لأن كثير من المصانع و الصناعات تدار بمعرفة الحكومة و هي الشريحة السادسة كما يجب الأخذ في الاعتبار تقسيم الشريحة السادسة الى فئات متشابهة في شكل الاستهلاك فمثلا استهلاك المدارس الحكومية و المكاتب يختلف عن المصانع و الصناعات الحكومية.

ومن أجل أغراض المحاسبة و التحصيل أنشئ ١٢ مركز خدمة تابع للمرفق بالاضافة الى اربع مراكز فرعية و يتلخص توزيع مراكز التحصيل و توزيع الفواتير بين جميع شرائح المستهلكين فيما عدا الشريحة السادسة في الجداول رقم ٣,٢.

جدول ١

البيانات الخاصة بالمشاركين للسنة المالية ١٩٩٠ / ٩١ الى ١٩٩٢ / ٩٣ الخاصة بالهيئة

الاتحاد المحصل بالجنيه المصري			الاتحاد المباع بالعملة الكعب			عدد الاشتراكات			فئات المشاركين
٩٣-١٩٩٢	٩٢-١٩٩١	٩١-١٩٩٠	٩٣-١٩٩٢	٩٢-١٩٩١	٩١-١٩٩٠	٩٣-١٩٩٢	٩٢-١٩٩١	٩١-١٩٩٠	
٦٨.٩٣٤.٩١٦	٦٥.٣٠٢.٦٠٩	٤٣.٧٧٩.٩٥١	٦٥٢.٢٠٢.٩٦١	٦٢٧.٠٠٠.٣٤١	٥٦٢.٩٦١.١٧٢	٤٣٥.٤٨٩	٤١١.٩٥٠	٣٧٠.٦٤٠	الفئة الأولى الاستخدام المنزلى أعمال البناء
٦٥٤.٦١٣	١.٤٣٣.٤٢١	٥.٤٣٣.١٦٥	٢.٣٣٧.٩٠٦	٥.٤٠١.٨٦٥	٢٤.٦٩٦.٢٠٧	.	.	١.٠٣٩	الفئة الثانية
٦٦٠.٧٩٠	٦٢٨.٣٥٠	٤٧٤.٤٩١	٨.٢٥٩.٨٨٢	٧.٨٩٩.٠٦٤	٧.٢٩٩.٥٢٧	٣.٢٩٦	٣.١٨٩	٢.٩٨١	أ- دور العبادة و المستشفيات الحكومية و مراكز الشباب
٦٩٣.٠٣٤	٦٩٩.٢٤٢	٣٨٦.٧٩١	٥.٣٥٨.٤٩٣	٥.٥٠٤.٠٩٥	٤.٢٩٧.٦٧٩	٤٥٤	٤٦٦	٤٤٢	ب- سفارات و النوادي الرياضية الهيئات الحكومية و النقابات
١٢.٢٦٢.٧٧٥	١١.٥٣٦.٥٢٢	٧.٤٤٠.١٠٧	٥٣.٣١٦.٤١٤	٥١.٠٦١.٧٧٨	٤٩.٦٠٠.٧١٤	٢٨.٤٣٠	٢٦.٩٨٠	٢٥.٤٧٥	الفئة الثالثة
٦.٠٢٧.٧٧٣	٥.٧٠٠.٥٢٦	.	١٩.٤٤٤.٤٢٨	١٨.٣٨٨.٧٩٦	.	٢٨٥	٣١٢	.	أ - المساجد الصغيرة و المطاعم فنادق الدرجة الثانية و الثالثة و المدارس الخاصة و المقاهي و محطات البنزين المستشفيات الحكومية ب المصانع الكبيرة
٥.٧٠٨.٩٤١	٥.٩٠٢.٠٨٣	٣.٤١٧.٩٠٦	١.٠٣٧٩.٨٩٣	١١.١٢٢.٤٤١	١٠.٢٨٣.٥٢٤	٥٦٢	٥٢٥	٤٦٨	الفئة الرابعة
١٧٤.٨٧٩	١٦٨.٧٤١	١١٦.٩٠٨	٢.١٨٥.٩٩٢	٢.١٨١.٦٢٥	٢.١٢٥.٥١٣	٤٩١	٥٠١	٥٤١	المستشفيات الخاصة و فنادق الدرجة الأولى الملاهي و دور اللعب مطاعم الدرجة الأولى شركات الاستثمار و المناطق الحرة
٤٠.٤٧٦.٣٧١	٣٩.٦٤٢.٤٩٠	٢.٠٩٩٣.٣٣٦	٢٤٩.٢٦٥.٨٥٣	٢٧٩.٩١٥.٧٣٢	٢٤٥.٣٢٠.٠٨٨	١.٠٠٠.٨	٩.٦٦٥	٩.٠٤١	الفئة الخامسة
٢٣.٥٥٧	٢٢.٢٥٩	١٣.١٥٧	٢٣٧.٥٧١	٢٢٢.٥٩٢	١٧٥.٥٨٨	١.٦٩٣	١.٦٩٣	١.٣١٧	الفئة السادسة
.	٤.٠٢٨.٥٢٩	٥.٤٤٧.٢٥٩	.	٦٧.١٤٢.٣٣٠	١٢١.٠٥٠.١٩٠	.	.	٦	أ - مبنى المحافظة
١٣٥.٦١٧.٨٤٩	١٣٥.٠٦٤.٧٨٢	٨٧.٥٠٣.٠٧١	١.٠٠٢.٩٨٩.٣٩٣	١.٠٧٥.٨٤١.٦٥٩	١.٠٢٧.٨١٠.٢٠٢	٤٨٠.٧٠٨	٤٥٥.٢٨١	٤١١.٩٥٠	ب- مصر الجديدة إجمالي

مصادر الإيرادات :-

نوب الإيرادات بصفة عامة تحت الإيرادات الجارية و التحويلات أو الإيرادات الرأسمالية، و تمثل الإيرادات الجارية و التحويلات للمرفق تلك الإيرادات التي تسدد المصروفات اليومية للتشغيل والتي تدرج تحت الجزء الأول و الثاني من المصروفات (الباب الأول والثاني سابقا). أما الإيرادات الرأسمالية فهي تلك التي تأتي من مساهمة الخزانة العامة أو من بنك الاستثمار القومى و من القروض طويلة الأجل المحلية لتمويل التجهيزات و تمويل بصفة عامة الجزء الثالث والرابع.

و قد ارتفعت إيرادات المبيعات من ٨٧ مليون جم فى عام ٩١/٩٠ حتى بلغت ١٣٦ مليون جم فى عام ٩٣/٩٢ و ترجع أهم الزيادة فى الإيرادات الى زيادة التعريفات اعتبارا من أول يوليو ٩١، و لا توجد علاقة متوازنة بين هذه الزيادة فى إيرادات المبيعات خلال الفترة من ٩١/٩٠ حتى ٩٣/٩٢ و بيانات العملاء والتي تشير الى انخفاض المباع من المياه، وقد يرجع جزء من اسباب هذه الزيادة الى التعديل الذى تم على اعادة تصنيف العملاء من الشرائح منخفضة التعريفات الى الشرائح مرتفعة التعريفات.

و تأتي مصادر التمويل الأخرى من الخدمات المباعة مثل التوصيلات الجديدة و تركيب العدادات و فروق قراءات العدادات و ايجار العداد و التعويضات و الغرامات التي يدفعها العملاء و المقاولون عن التأخر فى تنفيذ الأعمال و الفوائد الدائنة و ارباح بيع الاصول و إيرادات عن سنوات سابقة بالاضافة الى ان المرفق يحصل ايرادا لمرفق الصرف الصحى مقابل خدمة الصرف بواقع ٢٠٪ للتوصيلات المنزلية و ٥٠٪ لباقي شرائح الاستهلاك.

بالنسبة للإيرادات الرأسمالية النقدية والتي تتضمن المنح والهبات والقروض ومساهمة الخزانة العامة والدفعات المقدمة للاستثمار فقد ارتفعت من ٢٤٨ مليون جنيه حتى وصلت ٤٩٩ مليون جنيه خلال فترة الدراسة و تنخفض الإيرادات الرأسمالية المقدره فى الحقيقة عن مثلتها الفعلية خلال فترة الدراسة من ٩١/٩٠ حتى ٩٣/٩٢ و تشترك عدة عوامل فى حدوث هذا الاتجاه ومن بينها استخدام مساهمة الحكومة فى تمويل العجز و قروض بنك الاستثمار القومى فى مساهمة المرفق فى مواجهة التزامات التشغيل الجارية.

جدول ٢
عدد المشتركين
من ٧/١ إلى ١٢/٢٧ / ١٩٩٣

مراكز التحصيل للات المشتركين	القاهرة	مصر الجديدة	الزيتون	الملكوتى	عين الصورة	حلوان	المنادى	شبرا الخيمة	مدينة نصر	الكلبكات	الهرم	ساقية منى	عين شمس	مدينة السلام	المنيرة الغربية	اجمالى
اللقعة الاولى ١ - الاستخدام المنزلى	٣١٣٩٥	١٢٤٤٤	٣٧٦٧٧	٦٨٢٤٣	٣٦٤٧٤	٣٨١٦٦	٣٩٥٠٥	١٧٨٦٦	٨٨٦٨	٢٨٣٨٦	٤٦٢٥٤	١٤٢٤٤١	٤٨٦٢١	١٤٢٣٣	١٤٢٥٩	٤٥٩٨١٧
اللقعة الثانية المجموعة أ																
٤ - دور الحياة الاملية و السفن	٥٨٩	١٦٦	٢٥١	٥٢٦	٣٩٨	١٨٨	١٦٢	١٢٠	٦٢	١٥٩	٢٢٧	٤١	٢٥٨	٨٦	٥٢	٣٠٢٣٨
١١ - السدات التصبية	٤	٠	٢	٢	١	٣	٠	١	٠	٠	١	٠	٠	٠	٠	١٧
١٢ - مراكز رعاية الشباب المجموعة ب	٢	٠	٢	٠	٠	٠	٠	٠	١	٠	٠	١	٠	٠	٠	١٢
٥ - السفنات و النوادي الرياضية و مقر الاحزاب	٤٨	٤٠	١١	٧	٢٨	١٢	٣٤	٤	١٢	١٩٩	١٩	١٥	٢	١	٠	٤٢٢
اجمالي اللقعة الثانية	٦٤٣	٢٠٦	٢٦٦	٥٣٥	٤٢٧	٢٠٨	٢٠٠	١٢٥	٧٥	٣٥٨	٢٤٧	١٠٠	٢٦٠	٨٧	٥٢	٣٠٧٨٩
اللقعة الثالثة المجموعة أ																
٦ - الشركات و المحال التجارية ١٠ - صدد ٢ وصلات (توصيلات خاصة)	٩١٢٩	١٠٦٦	١٦٠٦	٤٣١٣	٢٥٠٠	٧٢٩	١٠٨٢	١٥١٠	٥٦٤	١٤٨٢	١٢١٦	٥٩٧	١٠٢٤	٧١٣	٤٢٢	٢٨٩١٨
المجموعة ب	١	١	٠	١	٠	٠	١	٠	٠	٣	١	٠	٠	٢	٠	١٠
٧ - المصانع الانداعية الكبيرة	٢٥	٤	٣٠	١٠	٥	٨٤	١٠	٢٩	١٤	٢٠	١٦	٣	٢	١٤	١	٣٠٨
اجمالي اللقعة الثالثة	٩١٥٥	١٠٦٦	١٦٣٦	٤٣٢٤	٢٥٠٥	٨١٣	١٠٩٣	١٥٣٩	٥٧٨	١٥٠٥	١٢٢٢	٦٠٠	١٠٢٧	٧٢٩	٤٢٢	٢٩١٩٦
اللقعة الرابعة																
٣ - الاستخدام الانتامى و الاستثمارى	٨	١٥	٠	١	٢	٣	٥	٠	٤٠	٦	١	٠	٤	٤	٠	٨٥
٨ - الاستخدام الانتامى و الاستثمارى	١٠٤	٢٧	١٢	١٦	٢٧	١٧	٤٥	٣	١٦	١١٣	٥٩	٦٤	٣	١	٠	٤٦٨
اجمالي اللقعة الرابعة	١١٢	٤٢	١٢	١٧	٢٩	٢٠	٥٠	٣	٥٦	١١٩	٦٠	٢٤	٣	٥	٠	٥٥٢
اللقعة الخامسة																
٩ - المياه المكررة لرى الحدائق	٢٠	٧	١	٠	٢٧	٠	١٦٤	٠	١٣	٣٦٥	٤	٣٩	٠	٠	٠	٦٤٠
اللقعة السادسة	٥٤٩	٣٨٠	١١٧	٢٣٤	٨٨	٧٠	١	٠	٤٨	٩٧	٠	١٩	٦١	٤٧٥	٢١	٢١٦٠
٢ - الربط التفت لمسار محطة																
اجمالي	٤١٨٧٤	١٤٠٠٩٥	٣٩٠٧١٠	٧٣٠٤٥٣	٤٠٠٥٥٠	٣٩٠٢٧٢	٤١٠٠١٣	١٩٠٥٣٣	٩٠٦٣٨	٣٠٠٨٣٠	٥٠٠٧٩٨	١٥٠٠٢٣	٤٩٠٩٨٢	١٥٠٠١١٩	١٤٠٧٦٥	٤٩٦٠١٥٥

جدول ٣
مجم المياه الصبغة
من ١/١ إلى ٢٢/١٢/١٩٩٣

مركز التخصيص قوات المشتركين	القاهرة	مصر الجديدة	الزيتون	الغلاوي	عين الصورة	حلوان	المنادي	شبرا الخيمة	مدينة نصر	الكيت كات	الهرم	ساقية سكي	عين شمس	مدينة السلام	المنيرة الغربية	اجمالي
اللقطة الاولى ١ - الاستخدام المنزلي	٢٢,٩٠١,٢٦٧	٢٥,٠٦٨,٣٩٢	٢٩,٧٨١,٠٩٨	٤٤,٧٦٦,٢٤٤	٢٢,٥٦٩,٢٥٨	١٢,٧١٢,٩٨٦	٢,٠٠٢,٥١٢	١١,٠٧٤,٤٤٠	١٦,٥٧٤,٥٢٤	٢٩,٥١٢,٠٠٢	٢٢,٢٨٨,٨٠٦	٧,٢٥٤,٢٦٨	٢٦,٢٨٩,١٤٢	٦,١٢٠,٩٢٠	٨,٩٠٩,٥٦٢	٢٢٨,٥٨٥,٤٤٩
اللقطة الثانية المجموعة أ ٤ - دور العمارة الاعلى و المنازل ١١ - الساحات الشعبية ١٢ - مراكز رعاية الشباب ٥ - الفنادق و الفنادق الرياضية و منظر الاجزاب	٦١٢,٤٢٦	٢٦١,١٤٧	٢٥٧,٤٩٤	٥٤٢,٦٤٥	٤٥٨,٧٠٢	٢٤١,٢٤٤	١٤٦,٢٥٢	٩٤,٤٨٨	١٤٦,٢٥٢	٢٤١,٢٤٤	٢١٨,١٠٠	١٠٤,١٩٩	٢٢٨,٧٢٦	١١٠,٦٢٠	٢٢,٢٢٧	٤,٠١٨,٨١٠ ٥,٩٤٢ ١٧,٩١٢
الجمالي لللقطة الثانية	٨٢٤,٢٦٦	٦٤٨,٤١٥	٢٠٤,٤٥٩	٥٧٨,٢٥٦	٥٢٨,٤٦٦	٢٩٢,٠٥٩	٢٥٥,٥٦٥	١٧,٢٩٠	٢٩٢,٠٥٩	٢٩٢,٠٥٩	٢٧٥,٢٢٢	١٢٢,٥٠٥	٢٦٧,١٤٢	١١٠,٧٤٠	٢٢,٢٢٧	٦,٢٢٥,٦٠٢
اللقطة الثالثة المجموعة أ ٦ - الشركات و المحال التجارية ١٠ - عدد ٢ وصلات (توصيلات خاصة) ٧ - المصنع الانتاجية الكبيرة	٦,٢٤٠,٤١٢	١,٨٢٢,٧١٨	١,٦٤٨,٨٥٢	٢,٧٤٨,٠٩٦	١,٩٢٥,٠١٨	٤٧١,٧٧٦	٩٠,٥٥٢	١,٢١٥,٢٨٢	١,٩٢٥,٠١٨	١,٢١٥,٢٨٢	١,٢١٥,٢٨٢	٥٥٢,١٤٥	١,٢١٥,٢٨٢	١,٩٢٦,٨١٧	٩٤,٦٧٦	٢٤,٨٢٧,٦٦٦
الجمالي لللقطة الثالثة	٦,٧٨٨,٤١٢	١,٨٤٦,٢٦٢	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠	٢,٠٤٤,٩٦٠
اللقطة الرابعة ٢ - الاستخدام الانتاجي و الاستثماري ٨ - الاستخدام الانتاجي و الاستثماري	١٩٤,٠٨٢	٢٠١,٤٥٢	٢٧,٧٥٤	١٤٤	٧,٤٤٠	٦٤	٢,٨٦٧	١,٧٩٦,١٩٢	٢,٨٦٧	٦٤	٢,٨٦٧	٥٤,٤٧٠	١,٠٠٢	١٦٩,٧٤٢	٠	٢,٤٢٧,٤٧٥ ٢,٥٧٤,٩٢٠
الجمالي لللقطة الرابعة	١٩٤,٠٨٢	٢٠١,٤٥٢	٢٧,٧٥٤	١٤٤	٧,٤٤٠	٦٤	٢,٨٦٧	١,٧٩٦,١٩٢	٢,٨٦٧	٦٤	٢,٨٦٧	٥٤,٤٧٠	١,٠٠٢	١٦٩,٧٤٢	٠	٢,٤٢٧,٤٧٥ ٢,٥٧٤,٩٢٠
اللقطة الخامسة ٩ - المياه العذبة لرى الحدائق	٤٢,٩٠٠	١٤,٤٠٠	١١,٠٠٠	٠	٢٥,٢٢٦	٠	٨٧,٩٦٨	٥١,٧٨٠	٠	٠	٠	٠	٠	٠	٠	٦٨١٧٢٠
اللقطة السادسة ٢ - الربط الثابت لمسكن المعقولة	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	١٨٤
الجمالي	٤٢,٩٠٠	٢٧,٨٧٥,٦٥٩	٢٢,٢٦٨,٢٢٦	٤٨,٢٠٤,٨٤٠	٢٥,٥٢٤,٤٧٠	١٦,٨٨٧,٥٢٢	٢١,٥٨١,٦٦٢	١٢,٨٢٩,٤٨٥	٢٠,٤٠٢,٠٢٥	٢٤,٨١٢,٨٧٢	٢٥,٧٥٩,٧٥٦	٨,٠١٩,٤٦٦	٢٧,٩٢٢,٥٠٩	٨,٨٩٧,٩٩٦	٩,٠٥٧,٤٧٦	٢٨٢,٧٧٢,٧٢٢

المصروفات (الاستخدامات):

وتنقسم الاستخدامات الى اربعة اجزاء الاول هو الاجور والثانى المصروفات والتحويلات الجارية والثالث الاستخدامات الاستثمارية والرابع التحويلات الراسمالية وبشكل عام فان الجزء الاول والثانى يمثلان مصروفات التشغيل (تكلفة التشغيل) والجزء الثالث والرابع يختصان بالمصروفات الرأسمالية.

الاستخدامات الجارية:

تتضمن الاستخدامات الجارية الاجور والنفقات الجارية والتحويلات الجارية وتوضح قدرة الاعتمادات المدرجة للنفقات الجارية على تغطية النفقات الجارية الفعلية من واقع الحساب الختامى للفترة من ٩١/٩٠ حتى ٩٣/٩٢ من الرسم البيانى بالشكل رقم (١) و يبين الشكل رقم (١) ان النفقات الجارية الفعلية للفترة من ٩١/٩٠ حتى ٩٣/٩٢ تمثل ١٤٧٪، ١٦٥٪، ١٢٧٪ من الاعتمادات المالية المدرجة لهذا النوع من النفقة على التوالى.

وتتكون الاجور التى تعكس القيمة الاجمالية للجهد الانسانى بالمرفق من الاجور النقدية والبدلات والمزايا العينية والمزايا التأمينية وقد زادت الاجور خلال الفترة من عام ٩١/٩٠ حتى عام ٩٣/٩٢ بنسبة ٣٥٪ حيث بلغت ٤٨,٨ مليون جم فى عام ٩١/٩٠ حتى وصلت الى ٦٥,٨ مليون جم عام ٩٣/٩٢.

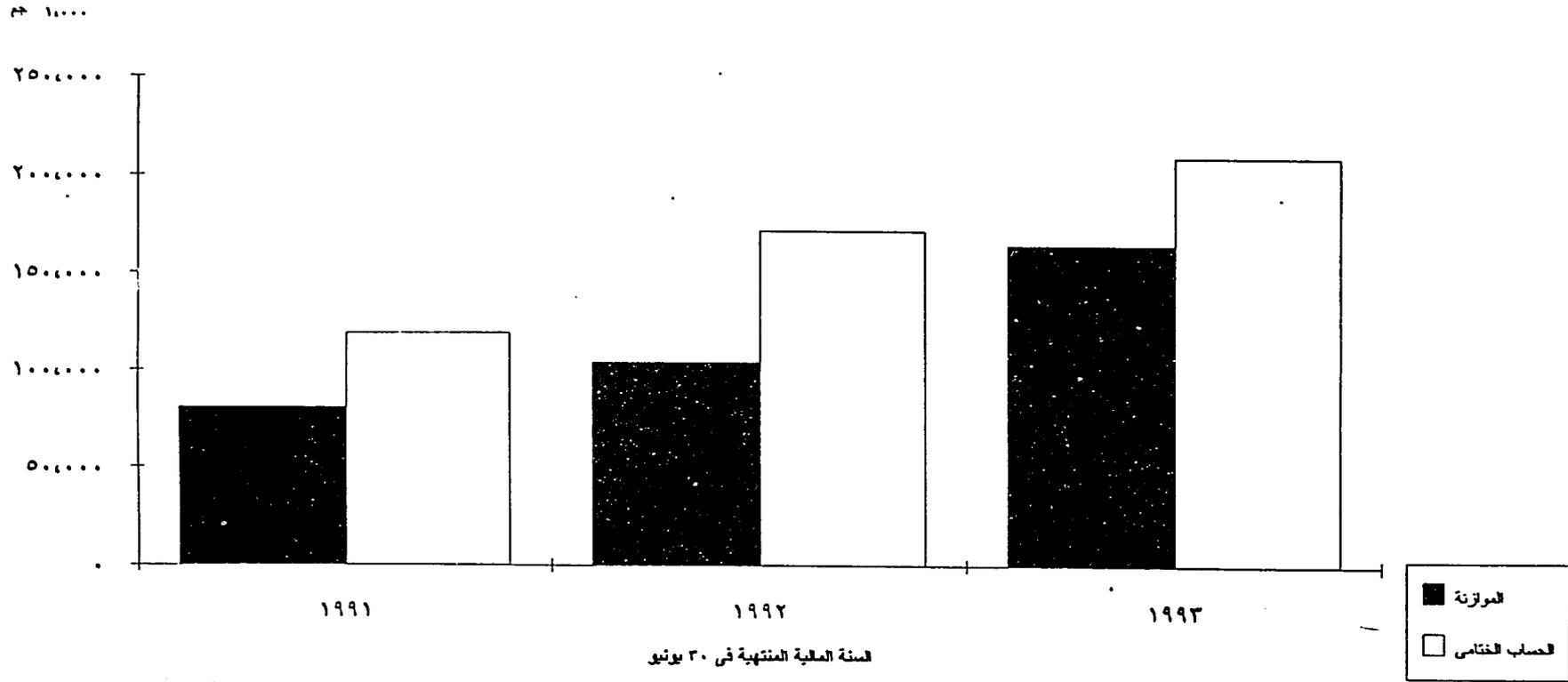
وتتضمن النفقات الجارية والتحويلات الجارية المستلزمات السلعية والخدمية والتحويلات الجارية والتخصيصية بما فيها من مصروفات سنوات سابقة و المبالغ التى يحولها المرفق لحساب الصرف الصحى من ايراداته المحصلة. وقد زادت جملة النفقات والتحويلات الجارية خلال الفترة من ٩١/٩٠ حتى ٩٣/٩٢ بنسبة ١٠٤٪ تقريبا.

وتجدول القروض الاجنبية وقروض بنك الاستثمار القومى فى جداول زمنية طبقا لمواعيد استحقاق اقساطها وتتوقف مصاريف خدمة الدين (من اقساط وفوائد) السنوية على شروط سداد القروض الممنوحة واسعار الفائدة ويدرج الاعتماد والمخصص للفوائد فى الجزء الثانى (النفقات والتحويلات الجارية) وفيما يتعلق بالفوائد الخارجية فان الارقام تعطى مدلولا على ثباتها النسبى أو استقرارها مما يعكس انخفاض التحويل من مصادر اجنبية اما الفوائد المحلية فان الارقام تشير الى زيادتها الواضحة ويرجع ذلك الى عاملين اساسيين هما :-

- ١- زيادة الاستثمارات الممولة من مصادر محلية.
- ٢- جزء من نقص الايرادات للمرفق تم تغطيته بقروض من بنك الاستثمار.

شکل رقم ١

مقارنة بين الموازنة و الحساب الختامي



جدول ٤
مقارنة الأصول الثابتة
في السنوات المالية ٩١ حتى ١٩٩٣

عناصر	٩١-١٩٩٠ جم	٩٢-١٩٩١ جم	٩٣-١٩٩٢ جم
أراضي	٣,٦٠٠,٠٠٠	٣,٦٠٠,٠٠٠	٣,٦٠٠,٠٠٠
مباني	٢٥٣,٩٠٠,٠٠٠	٢٩٩,٧٠٠,٠٠٠	٣٠٣,١٠٠,٠٠٠
مواشير	٤٢٢,٨٠٠,٠٠٠	٤٦٦,٧٠٠,٠٠٠	٥٢٢,٩٠٠,٠٠٠
آبار	٥,٠٠٠,٠٠٠	٥,١٠٠,٠٠٠	٥,٣٠٠,٠٠٠
الات ومعدات	٢٦٣,٠٠٠,٠٠٠	٣٦٢,٩٠٠,٠٠٠	٣٧٢,٧٠٠,٠٠٠
وسائل نقل	١١,٠٠٠,٠٠٠	١٣,٨٠٠,٠٠٠	١٤,٧٠٠,٠٠٠
ادوات	٢,٠٠٠,٠٠٠	٢,٢٠٠,٠٠٠	٢,٢٠٠,٠٠٠
عدادات	٩,٥٠٠,٠٠٠	١١,٥٠٠,٠٠٠	١٣,٣٠٠,٠٠٠
اثاث ومكاتب	٢,٧٠٠,٠٠٠	٤,١٠٠,٠٠٠	٤,٧٠٠,٠٠٠
اجمالي	٩٧٣,٥٠٠,٠٠٠	١,١٦٩,٦٠٠,٠٠٠	١,٢٤٢,٥٠٠,٠٠٠

الاستخدامات الرأسمالية:

الاستخدامات الرأسمالية متضمنة بالجزء الثالث تسوية القروض، التغيير فى ارصدة الدائنين او المدينين، الاستثمارات يحددها ادارة المشروعات، تسوية الديون طويلة الاجل والدفعات المقدمة، زيادة ارصدة المدينين او نقص ارصدة الدائنين هى التزامات نقدية.

الاستثمارات:

الاستثمارات تمثل الموارد التى يستثمرها المرفق، الاصول او الاستثمارات مملوكة بواسطة المرفق وتستمر فى تقديم خدمة لعدد من السنوات. الاصول الثابتة هى تلك التى تستخدم فى الانتاج والتوزيع وتقديم الخدمة.

تحسب قيمة الاصول الثابتة على اساس ربع سنوى ومقسمة على ٩ بنود بناء على النظام المحاسبى الموحد باستخدام التكلفة الاصلية.

جدول رقم(٤) يوضح الاصول الثابتة وقيمتها للعامين الماليين السابقين. وقد زادت قيمة الاصول الثابتة بحوالى ٢٦٩ مليون جم بين عام ١٩٩١/٩٠ حتى عام ١٩٩٣/٩٢.

التحسينات المخططة:

المرافق التي تعمل على اساس تجارى تضع خطط التحسينات طويلة المدى والمتوسطة وقصيرة الاجل. التحسينات قصيرة الاجل تدرج بالموازنة السنوية. هذا ويتضح من الخطة بعيدة المدى والدراسات ان المرفق يحتاج الى استثمارات ضخمة.

الوضع المالى:

يتم اعداد حساب ختامى للمرفق كل عام والحسابات الختامية تبين الوضع المالى للمرفق ولإمكانية تحليل الحيوية المالية يتطلب الامر اعداد قائمة للتدفق النقدى لمقارنة الإيرادات بالمصروفات للسنة المالية وذلك لبيان وتحليل مدى سلامة العمليات المالية.

العمليات الجارية:

قائمة التدفق النقدى للعمليات الجارية والتي تعكس التدفق النقدى بناء على الحساب الختامى موضحة فى جدول رقم (٥) ومن بين الموضوعات الهامة عملية تحصيل الإيرادات حيث انه فى السنة المالية المنتهية ١٩٩٣/٦/٣٠ حوالى ٢٩٪ من الإيرادات لم يتم تحصيلها (٣٩٦٩٩٠٠٠ جم). ويوضح جدول رقم (٦) اثار عدم التحصيل.

وتشمل الإيرادات الجارية حصيلة بيع المياه التى لا تكفى لتغطية المصروفات الجارية وذلك بالنسبة للثلاث سنوات الماضية، وذلك على الرغم من زيادة التعريفية خلال عام ١٩٩٢/٩١ ولكن بمقدار لم يكن كافيا.

النفقات الجارية المرتبطة بالقروض (الفائدة) تمثل عبء اضافى لا تتحمله الإيرادات. ولتحقيق التوازن بين الإيرادات والنفقات فى عام ١٩٩٣/٩٢ كان الامر يتطلب تحصيل اضافى مقداره ١٥١ مليون جم وذلك على اساس نقدى.

جدول ٥

العمليات الجارية

بيان مقارنة بين الإيرادات و المصروفات

(عن كل حساب فعلى)

السنة المالية تنتهى ٣٠ / ٦			
١٩٩٣	١٩٩٢	١٩٩١	
حنيه مصرى	حنيه مصرى	حنيه مصرى	الإيرادات و التحويلات الجارية
١٣٥.٨٨٢.٤٣٣	١٣٥.٠٨٤.٢٢٧	٨٧.٥٠٢.٤٢٣	الانتاج المباع
٩.١٦٠.٩٩٨	١٠.٢٤٤.٥٠١	٨.٧٤٥.٥٧١	الخدمات المباعة
٣١.٥٨٧.٩٦٨	٢٤.٤٥٨.٦٩٨	٩.٤٤٤.٣٦٦	التحويلات
٥.٣١٩.٦٢٤	١.٦٣٣.٩٣٩	٣.٢٥٤	فوائد داننة
.	٣٣٦.٤٩٠	٥٩.٢٦١	أرباح رأسمالية
١٨١.٩٥١.٠٢٣	١٧١.٧٥٧.٨٥٥	١٠٥.٧٥٤.٨٧٥	اجمالى الإيرادات و التحويلات الجارية
			المصروفات الجارية
			الاجور
٤٦.٣٨٣.٦٧٧	٣٨.٧٢٢.٨٨٨	٣٥.٧٣٧.٥٩١	اجور و بدلات و مزايا نقدية
٣.٥٥٩.٧٤٧	٣.٠٠٣.٣٩٨	٢.٠٤١.٦٣٨	مزايا عينية
٨.٤٣٤.١٦٢	٦.٩٧٤.٢٧٧	٦.٣٤٤.٢٤٦	مزايا تأمينية
٧.٤٣٤.٧١٠	٥.٥٤٤.٦٧٨	٤.٧١١.٠١٠	مزايا اخرى
			المصروفات و التحويلات الجارية
١١١.٣٩٠.٢٧٩	٩٣.٤٩٢.١٩٦	٦٠.٨٠٧.٤٢٠	مستلزمات سلعة
٤.٧٧٧.٤٦٨	٢.٦٢٥.٨٢٤	٢.١٦٣.٥٠٤	مستلزمات خدمية
٣٩.٠٢٣	٣٤.٣٦٢	٨.٤٣٦	تحويلات جارية
٢٥.١٤١.٢٧١	٢٠.١٣١.٤٠٣	٦.٣٣٩.٧٤٢	تحويلات تخصصية اخرى
١.٦٩٦.٠١٧	٧٨٦.٨٣٦	٧٣٧.٧٤٥	مصروفات سنوات سابقة
٢٠٨.٨٥٦.٣٥٤	١٧١.٣١٥.٨٦٢	١١٨.٨٩١.٣٣٢	اجمالى مصروفات جارية
(٢٦.٩٠٥.٣٣١)	٤٤١.٩٩٣	(١٣.١٣٦.٤٥٧)	فرق الإيرادات و المصروفات الجارية

٩٠.٠٧٣.٢٧٦	٦٩.٣٣٠.٩٦٣	٥١.٥٨٩.٤٧٤	فوائد محلية و جارية (أ)
(١١٦.٩٧٨.٦٠٧)	(٦٨.٨٨٨.٩٧٠)	(٦٤.٧٢٥.٩٣١)	فرق الإيرادات و المصروفات الجارية و الفوائد

٩٥.١٦٧.١٥٨	٨٤.٣٤٦.٦٩٦	٦٦.٠١٣.٠٣٤	اقساط و قروض طويلة الاجل (ب)
(٢١٢.١٤٥.٧٦٥)	(١٥٣.٢٣٥.٦٦٦)	(١٣٠.٧٣٨.٩٦٥)	فرق الإيرادات و المصروفات الجارية و الفوائد و القروض طويلة الاجل

(أ) تتضمن فوائد القروض الخارجية و فوائد بنك الاستثمار القومى.

(ب) تتضمن قساط القروض الخارجية و بنك الاستثمار القومى و دفعات مقمة للاستثمار.

جدول ٦
بيان مقارنة لعمليات الجارية
الايادات و المصروفات
(على أساس نقدي)

السنة المالية تنتهي ٣٠ / ٦			
١٩٩٣	١٩٩٢	١٩٩١	
جنيه مصرى	جنيه مصرى	جنيه مصرى	الايادات و التحويلات الجارية
٩٦,١٨٣,٢٩١	٩٤,١٧٥,٩٥٥	٦٢,٨٠٢,٥٢٩	المحصل من قيمة المياه المباعة
١٤,٩٥٥,٧٨٢	١٥,١١٢,٨١٤	١٣,٢٠٩,٧٩٣	المحصل من قيمة الخدمات المباعة
٣١,٥٨٧,٩٦٨	٢٤,٤٥٨,٦٩٨	٩,٤٤٤,٣٦٦	التحويلات
٥,٣١٩,٦٢٤	١,٦٣٣,٩٣٩	٣,٢٥٤	فوائد دائنة
.	٣٣٦,٤٩٠	٥٩,٢٦١	أرباح رأسمالية
١٤٨,٠٤٦,٦٦٥	١٣٥,٧١٧,٨٩٦	٨٥,٥١٩,٢٠٣	اجمالي الايرادات و التحويلات الجارية
			المصروفات الجارية
			الاجور
٤٦,٣٨٣,٦٧٧	٣٨,٧٢٢,٨٨٨	٣٥,٧٣٧,٥٩١	اجور و بدلات و مزايا نقدية
٣,٥٥٩,٧٤٧	٣,٠٠٣,٣٩٨	٢,٠٤١,٦٣٨	مزايا عينية
٨,٤٣٤,١٦٢	٦,٩٧٤,٢٧٧	٦,٣٤٤,٢٤٦	مزايا تأمينية
٧,٤٣٤,٧١٠	٥,٥٤٤,٦٧٨	٤,٧١١,٠١٠	مزايا اخرى
.			المصروفات و التحويلات الجارية
١١١,٣٩٠,٢٧٩	٩٣,٤٩٢,١٩٦	٦٠,٨٠٧,٤٢٠	مستلزمات سلعة
٤,٧٧٧,٤٦٨	٢,٦٢٥,٨٢٤	٢,١٦٣,٥٠٤	مستلزمات خدمية
٣٩,٠٢٣	٣٤,٣٦٢	٨,٤٣٦	تحويلات جارية
٢٥,١٤١,٢٧١	٢٠,١٣١,٤٠٣	٦,٣٣٩,٧٤٢	تحويلات تخصصية اخرى
١,٦٩٦,٠١٧	٧٨٦,٨٣٦	٧٣٧,٧٤٥	مصروفات سنوات سابقة
٢٠٨,٨٥٦,٣٥٤	١٧١,٣١٥,٨٦٢	١١٨,٨٩١,٣٣٢	اجمالي مصروفات جارية
(٦٠,٨٠٩,٦٨٩)	(٣٥,٥٩٧,٩٦٦)	(٣٣,٣٧٢,١٢٩)	فرق الايرادات و المصروفات الجارية
٩٠٠,٧٣,٢٧٦	٦٩,٣٣٠,٩٦٣	٥١,٥٨٩,٤٧٤	فوائد محلية و جارية (ا)
(١٥٠,٨٨٢,٩٦٥)	(١٠٤,٩٢٨,٩٢٩)	(٨٤,٩٦١,٦٠٣)	فرق الايرادات و المصروفات الجارية و الفوائد
٩٥,١٦٧,١٥٨	٨٤,٣٤٦,٦٩٦	٦٦,٠١٣,٠٣٤	اقساط و قروض طويلة الاجل (ب)
(٢٤٦,٠٥٠,١٢٣)	(١٨٩,٢٧٥,٦٢٥)	(١٥٠,٩٧٤,٦٣٧)	فرق الايرادات و المصروفات الجارية و الفوائد و القروض طويلة الاجل

(أ) تتضمن فوائد القروض الخارجية و فوائد بنك الاستثمار القومى .
(ب) تتضمن اقساط القروض الخارجية و بنك الاستثمار القومى و دفعات مقدمة للاستثمار .

جدول ٧
مقارنة بين الايرادات والمصروفات الرأسمالية
(وفقا للحساب الختامى)

السنة المالية المنتهية ٣٠ يونيو			
١٩٩٣	١٩٩٢	١٩٩١	
جم	جم	جم	الايرادات والتحويلات الرأسمالية
٧٤,٨٥٠,٠٠٠	٧٢,٣٦٧,٧٦٩	٧٠,٣٢٥,٠٠٠	مساهمة الخزنة
١٦٠,٢٥٠,٧٦٧	٥٤,٨٠٦,٠٠٩	٩,٧٦٣,٠٤٨	منح
١٧٠,١٠٥,١٢٢	١٣٧,٤٩٥,٤٨٠	١١٦,٩٨١,٧٤٤	قروض
١١,٦٣٥,٥٠٠	٤,٣٧٠,٦٤٦	٥,٠٥١,٠٩٠	نقص الارصدة المدينة
٨٠,٧٣٧,٣٣٢	٤٣,٨٩١,٤٨٠	٣٥,٦٩٢,٥٧٧	زيادة الارصدة الدائنة
١,٦٤٦,٨٦٣	.	١٠,٠٦١,٣٢٣	مصادر اخرى
٤٩٩,٢٢٥,٥٨٤	٣١٢,٩٣١,٣٨٤	٢٤٧,٨٧٤,٧٨٢	اجمالي الايرادات والتحويلات الرأسمالية
			مصروفات رأسمالية
٢٥٩,٤٨٩,٦٣١	١٢٥,٥٤٢,١٢٥	٩٨,٦٩٨,٩٦٧	المجموعة ٣ - استثمارات
٧٥,٠٠٤,٢٤٥	٧٢,٣٦٧,٧٦٩	٦٤,٣٦٦,٨٦٧	سداد اقساط
٢٠,١٦٢,٩١٣	١١,٩٧٨,٩٢٧	١,٦٤٦,١٦٧	دفعات مقدمة للاستثمار
٣٧,٧٠٨,٨٩٦	٦٩,٤٢٤,٩٥٣	٢٨,٦٢٦,٩٨٩	زيادة المدينين
٣٣,٤٧٧,٢٣١	١٦,٠٥٧,١٩٠	١٣,٤٦٢,٧٩٧	نقص الدائنين
٥١٤,٧٨٦	٢,٦١٥,٩٧٠	٧,٥٩٧,٨٤٣	مصروفات اخرى
٤٢٦,٣٥٧,٧٠٢	٢٩٧,٩٨٦,٩٣٤	٢١٤,٣٩٩,٦٣٠	اجمالي المصروفات الرأسمالية
٧٢,٨٦٧,٨٨٢	١٤,٩٤٤,٤٥٠	٣٣,٤٧٥,١٥٢	الايرادات ناقص المصروفات

البرنامج الرأسمالى:

بالإضافة الى ادارة العمليات الجارية يقوم المرفق بادارة برنامج للاستثمارات كما هو موضح
بجدول رقم (٧)، الايرادات والتحويلات تزيد عن المصروفات بمقدار ٧٢,٩ مليون جم عام
١٩٩٣/٩٢.

بمقارنة القروض والمنح فى الجزء الثالث تبين ان فى كل سنة من سنوات الدراسة كانت
القروض والمنح تزيد عن النفقات الرأسمالية. ويعنى هذا ان جزء من القروض والمنح استخدم
فى التسويات الخاصة باقساط القروض او تغطية العجز.

تحليل تكلفة الوحدة:

توضح قائمة التدفق المالى الوضع النقدى للعمليات الجارية للمرفق. وبمقارنة تكلفة الوحدة باليرادات يتضح مدى العلاقة بين التكلفة والتعريف- جدول رقم(٨)- وفى عام ١٩٩٣/٩٢ كانت تكلفة الوحدة من النفقات الجارية ٢٠,٦٤ قرش لكل م٣ بالاضافة الى ٨,٩٧ قرش، ٩,٤٨ قرش للفائدة وسداد اقساط القروض فتصل تكلفة الوحدة الى ٣٩,١٠ قرشا. هذه التكلفة كان يقابلها ايراد لكل وحدة منتجة ١٨,٧١ قرش انخفض الى ١٤,٧٥ قرش نتيجة لوجود ايرادات غير محصلة وكان الامر يتطلب زيادة التعريف بنسبة ٦٢٪ لتغطية المصروفات الجارية وبنسبة ١٥٤٪ لدفع الفوائد واقساط القروض.

مؤشرات الاداء:

مؤشرات الاداء تستخدم لقياس التغير فى الوضع المالى للمرفق. لان الادارة المالية السليمة تتحقق حينما يتم تحقيق هدف سبق تحديده بمؤشرات الاداء. هذا وقد تم وضع قائمة لمؤشرات الاداء -جدول رقم ٩ - وتحديد النسب والاتجاهات وتم حساب تلك المؤشرات لعام ١٩٩١/٩٠ حتى عام ١٩٩٣/٩٢ وتحديد الاهداف المنشودة.

جدول ٨

مقارنة بين تكلفة انتاج الوحدة و ايراداتها

السنة المالية المنتهية في ٣٠ يونيو ١٩٩٣			
ايراد الوحدة قرش/م ^٣	كمية الانتاج المباع ٣م ١٠٠٠	الايرادات ١٠٠٠ جم	الايرادات الجارية قيمة الانتاج المباع
١٣,٥٤	١,٠٠٣,٦٩٩	١٣٥,٨٨٢	
٩,٥٨	١,٠٠٣,٦٩٩	٩٦,١٨٣	قيمة الانتاج المحصل
٥,١٧	١,٠٠٣,٦٩٩	٥١,٨٦٣	الخدمات، التحويلات، الفوائد الدائنة، الارباح الرأسمالية
١٤,٧٥	١,٠٠٣,٦٩٩	١٤٨,٠٤٦	اجمالي الايرادات الجارية
تكلفة الوحدة قرش/م ^٣	كمية الانتاج المباع ٣م ١٠٠٠	التكاليف ١٠٠٠ جم	المصروفات الجارية، الفوائد، سداد اقساط القروض طويلة الاجل جملة المصروفات الجارية (أ)
٢٠,٦٤	١,٠٠٣,٦٩٩	٢٠,٧١٦.٠٠٠	
٨,٩٧	١,٠٠٣,٦٩٩	٩٠,٠٧٣	فوائد محلية و خارجية
٩,٤٨	١,٠٠٣,٦٩٩	٩٥,١٦٧	سداد اقساط القروض طويلة الاجل
٣٩,١٠			اجمالي تكلفة الوحدة

*** لا تتضمن مصروفات سنوات سابقة و قدرها ١,٦٩٦,٠٠٠ جنيه

٣م-متر مكعب

جم- جنيه مصرى

مؤشرات الاداء المالية المقترحة

الهدف المنشود هدف الحيوية المالية	الاتجاه التاريخي			مؤشر الاداء		
	٩٣-١٩٩٢	٩٢-١٩٩١	٩١-١٩٩٠	المدى الزمني	الاتجاه	المؤشر
الانتاج المباع	المؤشر	١٣٥,٩ مليون جم	١٣٥,١ مليون جم	٨٧,٥ مليون جم	كل شهرين	موجب
	الاتجاه	٠,٨ مليون جم	٤٧,٦ مليون جم			
قيمة المبيعات الغير محصلة	المؤشر	٣٩,٧ مليون جم	٤٠,٩ مليون جم	٢٤,٧ مليون جم	كل شهرين	سالبا
	الاتجاه	(١,٢) مليون جم	١٦,٢ مليون جم			
خسائر التشغيل جملة الايرادات	المؤشر	%٤١-	%٢٦-	%٣٩-	كل شهرين	موجب
	الاتجاه	%١٥-	%١٣			
ايرادات التشغيل مصروفات التشغيل	المؤشر	%٧١	%٧٩	%٧٢	كل شهرين	موجب
	الاتجاه	%٨-	%٧			
مصروفات التشغيل الفعلية مصروفات التشغيل التقديرية	المؤشر	١,٢٧	١,٦٥	١,٤٨	شهرية	اقل من ١,٠٠
قيمة الانتاج المحصل قيمة الانتاج المباع	المؤشر	%٧١	%٧٠	%٧٢	كل شهرين	موجب
	الاتجاه	%١	%٢-			
	غير حكومي					
المؤشر	%٩٣	%٨٩	%٨٥	%٨٤		
	الاتجاه	%٤	%١			
المؤشر	%١٠٠	%٢٧	%٣٤	%٣٤		
	الاتجاه	%٧-	%٠			
المؤشر	%٨٠	%٧٧	%٨٥	%٨٥	كل شهرين	موجب
	الاتجاه	%٨-	%٠			

Executive Summary

Introduction

The objective of the Financial Viability Program is to enable and assist the General Organization of Greater Cairo Water Supply (GOGCWS) to endorse and implement an objectively measurable approach to achieve financial viability. Objectively measuring movement towards financial viability is a two step process. First, an audit of historical data illustrating the current financial condition of GOGCWS is needed. Then, performance indicators, based on information from the audit, can be identified, quantified and compared at regular intervals to measure financial movement.

The financial audit reviewed managerial and financial aspects of the GOGCWS. The audit is separated into two major sections, (1) organization and management and (2) financial. Data used in our analysis was provided by the GOGCWS. Because the information and analyses of the financial audit will be used as the building blocks for the policy formulation and performance planning and modeling segments of the Financial Viability Program, accurate data is critical in order to reliably define the current financial condition of GOGCWS.

Statutory Foundation

A key component to achieving financial viability is the development of managerial autonomy. GOGCWS, operating as an economic organization, is impacted by many national governmental agencies, laws and decrees which limit the utility's ability to make independent decisions which will lead to financial viability. National governmental agencies which impact financial aspects of the GOGCWS include but are not limited to the following:

- Ministry of Housing & Utilities
- Ministry of Finance
- Ministry of Planning
- Ministry of International Cooperation
- Central Agency for Organization and Administration
- Central Organization of Accounting

Organizational and Management Structure

In 1968 the presidential decree which established the GOGCWS as an economic organization to serve the Cairo, Qaliubia and Giza Governorates affiliated the organization with the Ministry of Housing and Utilities. A Board of Directors is the supreme power in charge of GOGCWS affairs. In 1979, Local Government System Law No. 43/1979 directs local government units to take charge of establishing and managing all public utilities falling in their circle. The Governors of Cairo, Qaliubia, and Giza are an integral part of the GOGCWS organization. Although an agreement between the Governors delegated the authority for utility operation for the greater Cairo area to the Governor of Cairo, the Governors of Kalioubia and Giza have the authority to require service be provided to areas annexed or connected to their respective governorates.

The GOGCWS is managed by the Presidential appointed position of the Chairman. Two Vice Chairmen, one technical and one financial and administrative, assist the Chairman. The day to day financial activities of the GOGCWS are conducted through the Financial Affairs

Central Department, the head of which is an Under Secretary of State who reports directly to the Financial and Administrative Affairs Vice Chairman. Three General Departments, one for revenues, one for expenses, and one for auditing handle the detailed operations of their respective areas. The General Directors of these General Departments report directly to the Financial Affairs Central Department Under Secretary. In addition, two Departments, Budgeting and Computers, provide specialized services for the GOGCWS through the Financial Affairs Central Department. The Administrative Affairs Central Department provides assistance with budget implementation. Capital planning is provided by the Projects Central Department, which reports to the Technical Affairs Vice Chairman. The installation and repair of meters is the responsibility of the Networks Central Department, also reporting to the Technical Affairs Vice Chairman.

Management Structure/Financial Planning & Decision Making

Managerial duties of the Financial Affairs Central Department are allocated between the functional areas of revenues and expenses, with auditing providing validation. The flow of information within the Financial Affairs Central Department is vertical. Analysis of critical financial data is only performed at the higher levels of management. Although an Audit Department, a key position for any financial operation, exists in the organizational structure, the General Director position is currently unfunded.

The budgeting process involves personnel from all levels of operations, which theoretically results in sound financial projections. However, final review and approval of the budget, prior to submission to the Peoples Assembly, is performed by the Ministry of Finance, which has the authority to overrule financial recommendations of the GOGCWS.

Capital planning at GOGCWS, which identifies major capital expenditures, is performed in the technical branch of the organization with minimal input from the Financial Affairs Central Department, the department responsible for the management of cash flow. Once capital projects have been authorized, financing is decided with minimal input from GOGCWS, even though they are responsible for the payback of loans associated with the financing.

Expenditure budgets, developed by GOGCWS and modified by the Ministry of Finance, are approved by the Peoples Assembly. Tariffs, which should theoretically support expenditures, are approved by the Popular Council at the Governorate level. Laws, rules or regulations do not exist which would require a relationship between the budget approval process and the tariff setting process. A budget, which does not have adequate tariff revenues to support it is the result of these independent processes.

Financial Planning Process, Policies and Practices

Water utilities operating under best commercial practices, implement formal, written financial policies and procedures. This practice generates compatible long-range planning and financing for capital improvements as well as day to day operations. Sound fiscal policies combined with interaction between all facets of an organization provide the consumer with the best possible product for the lowest cost.

Financial Planning

Financial planning at GOGCWS consists of an annual budgeting process. Around the end of

of each October, the budgeting process for a fiscal year beginning 1 July is initiated. By the middle of January, GOGCWS submits its annual budget to the MOF for review, revisions and approval. The budget include both revenue and expenditure projections for the upcoming fiscal year. The reviewed and revised budget is included in the State Budget which is submitted for approval to the Peoples Assembly in April.

Policies and procedures have been established for budgeting current operating and capital expenditures. Expenditures are budgeted using a chapter/group/item accounting system. The chapter accounting system allows for the transfer of budgeted expenditures between the various groups within the specific chapter.

Budgeting of revenues is a by-product of the expenditure budgeting process. Once preliminary expenditures have been quantified, the Revenue Department is informed and requested to submit revenue projections which correspond to the increases in expenditures. The gap between estimated revenues and budgeted expenditures, historically identified as a deficit of current activities, was funded through subsidies and/or local loans.

Financial Management

As an economic organization, the Board of Directors for GOGCWS is charged with the management of the revenues generated from and expenditures associated with the production and distribution of water. An annual balance sheet and final accounts statement is required of an economic organization. Financial management addresses the policies and practices associated with the generation of revenues and the payment of expenditures.

GOGCWS revenues are generated from the sale of water (production billed) and related services. Collecting revenues from the sale of water requires the interaction of numerous General Departments and Departments within the water utility. A consumers request for water service sets into action both technical and financial aspects of the organization. The technical departments provide the connection and where applicable, sets the water meter. The financial departments read the meter, generate the bills, and collect the revenue.

Implementation of the budget approved by the Peoples Assembly is a joint effort of the MOF and the Budget Department. An internal committee, consisting of Central Department personal, MOF personnel, and the Budget Director allocate the approved budget to the various departments within GOGCWS.

Revenue

The current tariff structure, implemented in fiscal year 1991-1992, consists of volume charges per cubic meter of billable usage for customer classes all customers except government housing which is charged a flat rate per number of rooms. The magnitude of the volume charge varies per customer class and also per groupings within each customer class.

Customers, Usage, and Service Areas

During 1992-1993 water service was billed to approximately 481,000 accounts. Table 1 shows the number of accounts, billed usage and billed revenue for each customer class for the last three years. Although the number of accounts has increased approximately 17 percent in the three year period, billed usage has decreased by 2.5 percent. The usage decrease may be due

Table 1

GOGCWS Customer Data Fiscal Years 1990-91 Through 1992-93

CUSTOMER CLASS	Number of Accounts			Billed Usage (M3)			Billed Revenue (L.E.)		
	1990-91	1991-92	1992-93	1990-91	1991-92	1992-93	1990-91	1991-92	1992-93
CLASS 1.									
HOUSEHOLD	370,640	411,950	435,489	562,961,172	627,000,341	652,202,961	43,779,951	65,302,609	68,934,916
CONSTRUCTION	1,039	0	0	24,696,207	5,401,865	2,337,906	5,433,165	1,433,421	654,613
CLASS 2									
RELIGIOUS, HOSPITAL, BAKERIES, YOUTH CENTERS	2,581	3,189	3,296	7,299,527	7,899,064	8,259,882	474,491	628,350	660,790
EMBASSIES, SPORT CLUBS, POLITICAL HEADQUARTERS, SYND.	442	466	454	4,297,679	5,504,095	5,358,493	386,791	699,242	693,034
CLASS 3									
SMALL FACTORIES, RESTAURANTS, 2ND & 3RD CLASS HOTELS, PRIVATE SCHOOLS COFFEE SHOPS, GAS STATIONS GOVT HOSPITALS	25,475	26,980	28,430	49,600,714	51,061,778	53,316,414	7,440,107	11,536,522	12,262,775
LARGE FACTORIES	0	312	285	0	18,388,796	19,444,428	0	5,700,526	6,027,773
CLASS 4									
PRIVATE HOSPITALS, 5 STAR HOTELS, RECREATION, ENTERTAINMENT, 1ST CLASS RESTAURANTS, INVESTMENT COMPANIES, FREE ZONES	468	525	562	10,283,524	11,122,441	10,379,893	3,417,906	5,902,083	5,708,941
CLASS 5									
UNPOTABLE (IRRIGATION)	541	501	491	2,125,513	2,181,625	2,185,992	116,908	168,741	174,879
CLASS 6									
GOVT FACTORIES, GOVT HEADQTRS., GOVT SCHOOLS GENERAL AUTHORITY, LOCAL UNITS	9,041	9,665	10,008	245,320,088	279,915,732	249,265,853	20,993,336	39,642,490	40,476,371
CLASS 7									
GOVT HOUSING	1,317	1,693	1,693	175,588	223,592	237,571	13,157	22,259	23,757
WHOLE SALE	6	0	0	121,050,190	67,142,330	0	5,447,259	4,028,539	0
TOTAL	411,950	455,281	480,708	1,027,810,202	1,075,841,659	1,002,989,393	87,503,071	135,064,782	135,617,848

to a number of factors, including a down turn in the economy, the reclassification of a wholesale customer, and a change in the basis for estimating nonmetered accounts. However, the entire decrease may not be attributed to factors beyond the control of the water utility. Account data, meter reading practices, and procedures for estimating usage should be reviewed for all customer accounts. The need to verify billing data is supported by water production data. While billable volume was decreasing during the study period, water production increased 8.6 percent, from 1,202 million cubic meters in 1990-1991 to 1,306 million cubic meters in 1992-1993.

Approximately 95 percent of the billed usage is attributed to three customer classes. Class 1 - Household, is the largest customer class in both number of accounts and usage. Household customers make up approximately 90 percent of customer accounts, and are billed 65 percent of the billed usage. The other large users are Class 6 (government related accounts) which is billed approximately 25 percent of the usage and Class 3 (small commercials) which is billed approximately five percent of the usage.

Review of distribution of billable usage raises questions about the classification of customers. With three customer classes accounting for 95 percent of the billable usage, the need for an additional four customer classes to monitor and charge for 5 percent of billable usage should be reviewed. The makeup of customers within the government class should also be studied. Because many industries and factories are operated by the government, they are Class 6 customers. Consideration should be given to subdividing the government class into categories with similar usage requirements. For example, water usage requirements for schools and offices differ greatly from requirements of factories and industries.

For billing and collection purposes, the GOGCWS service area consists of 12 major customer centers and four satellite centers. The distribution between the collection centers, of customers and billed usages for all customer classes except Class 6 - Government is summarized in Tables 2 and 3.

Revenue Sources

Revenues are generally categorized as current revenues and exchanges or capital revenues. Current revenues and exchanges are those which pay the day to day operating expenses of the utility, generally classified as Chapter 1 and 2 expenses. Capital revenues are those associated with the Public Treasury, the National Investment Bank, and foreign long-term financing instruments and generally finance Chapter 3 and 4 expenses.

Billed revenue has increased from L.E. 87 million in 1990-1991 to L.E. 136 million in 1992-1993. The significant increase in revenues between 1990-1991 and 1991-1992 was the result of a tariff increase effective 1 July 1991. The relatively minor increase in billed revenue between 1991-1992 and 1992-1993 does not necessarily parallel the customer data which indicated a decrease in water usage. Reclassification of accounts from a low tariff class to a higher tariff class may account for the increase in revenues.

Additional revenues are generated from services such as new customer connection, installation of meters, and meter read verification, meter rent, compensation and penalties paid by contractors for delays in work execution, interest income, profits from the sale of assets, and revenue collected in current year for water sold in past years. In addition, the water utility

Table 2
 Number of Customers
 From 1/7/93 to 27/12/1993

Collection Center Customer Class	Collection Center															
	Cairo	Heliopolis	Zaytoon	Khalafawy	Ain el Seera	Helwan	Madi	Sobra el Khenna	Nasr City	Khatat	Haram	Sher Mekky	An Shams	Salam City	Mouneel Gharba	
Class 1 Household Use	31,395	12,444	37,677	68,343	36,474	38,161	39,505	17,866	8,868	28,386	49,254	14,241	48,621	14,323	14,259	459,6
Class 2																
Class 2 A																
Religious Institutes & Bakeries	589	168	251	526	398	188	162	120	62	159	227	84	258	86	52	3,3
Public areas	4	0	2	2	1	3	3	1	0	0	1	0	0	0	0	0
Gov't Youth Hostels	2	0	2	0	0	5	1	0	1	0	0	1	0	0	0	0
Class 2 B																
Embassies, Clubs & Groups	48	40	11	7	28	12	34	4	12	199	19	15	2	1	0	4
Subtotal Class 2	643	206	266	535	427	208	200	125	75	358	247	100	260	87	52	3,7
Class 3																
Class 3 A																
Companies & Shops	9,129	1,011	1,606	4,313	3,500	729	1,082	1,510	564	1,482	1,216	597	1,034	713	432	28,9
Two Subscriptions (special price)	1	1	0	1	0	0	1	0	0	3	1	0	0	2	0	0
Class 3 B																
Large Factories	25	4	30	10	5	84	10	29	14	20	16	3	3	14	1	2
Subtotal class 3	9,155	1,016	1,636	4,324	3,505	813	1,093	1,539	578	1,505	1,233	600	1,037	729	433	29,1
Class 4																
Prod. & Investment	8	15	0	1	2	3	5	0	40	6	1	0	0	4	0	1
Prod. & Investment	104	27	13	16	27	17	45	3	16	113	59	24	3	1	0	41
Subtotal Class 4	112	42	13	17	29	20	50	3	56	119	60	24	3	5	0	42
Class 5																
Gardens Watering	20	7	1	0	27	0	164	0	13	365	4	39	0	0	0	64
Class 7																
Gov't Habitation	549	380	117	234	88	70	1	0	48	97	0	19	61	475	21	2,16
Total	41,874	14,095	39,710	73,453	40,550	39,272	41,013	19,533	9,638	30,830	50,798	15,023	49,982	15,619	14,765	498,15

Table 3
Quantity of Water Sold
From 1/7/93 to 27/12/1993

IIA

Collection Center Customer Class	Cairo	Heliopolis	Zaytoon	Khalafawy	Ain el Saara	Helwan	Miadi	Shobra el Khenna	Tier City	Kittar	Hazan	Sakiet Nisly	Ain Shams	Salam City	Mounmal Charbia	
Class 1 Household Use	33,901,267	25,068,392	29,781,098	44,796,214	22,563,258	12,713,926	20,031,513	11,074,440	16,574,524	29,512,003	33,388,801	7,254,318	36,389,142	6,620,930	8,909,563	338,585.4
Class 2																
Class 2 A																
Religious Institutes & Bakeries	612,436	361,147	257,494	542,645	458,702	241,344	146,352	94,488	293,390	218,100	338,729	104,199	215,927	110,620	23,237	4,018.81
Public areas	1,304	0	258	339	1,275	1,005	548	471	0	0	745	0	0	0	0	5.94
Gov't Youth Hostels	3,179	0	1,080	0	0	11,748	576	0	730	0	0	600	0	0	0	17.91
Class 2 B																
Embassies, Clubs & Groups	217,447	287,268	45,629	35,387	68,439	38,962	148,089	2,431	81,202	1,211,827	27,669	17,706	780	120	0	2,182.91
Subtotal Class 2	834,366	648,415	304,459	578,351	528,416	293,059	295,565	97,390	375,322	1,429,927	367,143	122,505	216,707	110,740	23,237	6,225.66
Class 3																
Class 3 A																
Companies & Shops Two Subscriptions (special price)	6,240,412	1,822,718	1,648,853	2,748,091	1,935,018	471,776	909,552	1,315,283	1,343,449	1,283,634	1,241,366	553,145	1,312,781	1,976,887	94,871	24,827.81
Class 3 B																
Large Factories	537,381	23,250	1,398,057	152,735	43,908	3,346,075	140,588	350,144	156,178	939,533	187,612	54,042	10,897	63,518	30,000	7,431.89
Subtotal class 3	6,788,413	1,846,313	3,044,910	2,901,058	1,978,926	3,817,851	1,050,984	1,665,427	1,499,627	2,203,471	1,429,042	607,187	1,323,678	1,990,815	124,871	32,272.37
Class 4																
Prod. & Investment	194,082	201,453	0	144	7,440	64	2,887	0	1,796,192	54,470	1,020	0	0	169,743	0	2,427.47
Prod. & Investment	754,750	109,688	27,754	29,073	425,194	62,562	112,845	2,228	105,590	1,270,040	571,903	93,760	3,982	5,783	0	3,574.93
Subtotal Class 4	948,832	311,139	27,754	29,217	432,634	62,626	115,512	2,228	1,901,782	1,324,510	572,923	93,760	3,982	175,508	0	6,002.40
Class 5																
Gardens Watering	42,900	1,400	110,000	0	25,236	0	87,968	0	51,780	343,962	1,847	21,627	0	0	0	688.71
Class 7																
Gov't Habitation	0	0	0	0	0	0	120	0	0	0	0	64	0	0	0	18
Total	42,515,778	27,875,659	33,268,221	48,304,840	25,534,470	18,887,522	21,581,662	12,839,485	20,403,035	34,813,873	35,759,756	8,099,461	37,931,509	8,897,991	9,057,471	383,772.73

collects revenue for the sewer utility through a sewer service charge of 20 percent for household customers and 50 percent for all other classes.

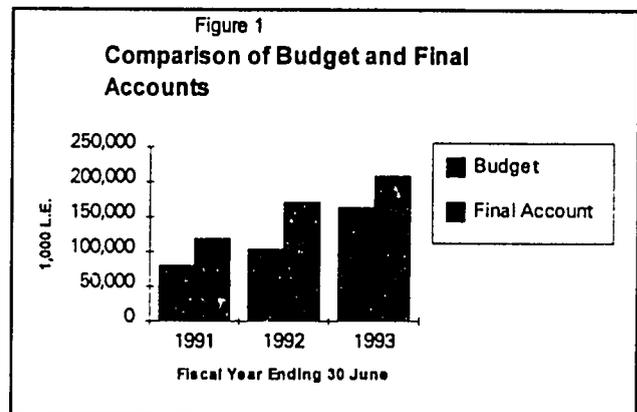
Capital related cash revenues, including grants, loans, shares from the public treasury, and advanced payments for investments, have increased from L.E. 248 million to L.E. 499 million during the study period. Historically, the amount budgeted for capital revenues has been substantially less than the final accounts. Several factors contribute to this trend, including the use of public treasury subsidies and loans from the National Investment Bank to assist the GOGCWS in meeting their current operating obligations.

Expenditures

Expenses are categorized in four chapters, (1) wages; (2) current expenses and exchanges; (3) capital expenses; and (4) capital exchanges. Generally speaking, chapters 1 and 2 have been considered costs associated with operations and chapters 3 and 4 have been associated with capital expenditures.

Current Expenses

Current Expenses include wages and current expenses and exchanges. The ability of the budgeting process to accurately project current expenses is illustrated in Figure 1. Final account expenditures for fiscal year 1991-1992, 1991-1992, and 1992-1993 were 147 percent, 165 percent and 127 percent, respectively, of the budgeted amount.



Wages, which reflect the total value of the employee work effort, consist of cash wages and allowances, advantages in kind, insurance advantages and others. From fiscal year 1990-1991 through fiscal year 1992-1993 wages have increased approximately 35 percent from L.E. 48.8 million to L.E. 65.8 million.

Current expenses and exchanges include commodities, service input, current exchanges, other specialized transfers and past years expense. Total current expenses and exchanges have increase approximately 104 percent (L.E. 70.1 million to L.E. 143 million) from fiscal year 1990-1991 to fiscal year 1992-1993. Also included in the current expenses and exchange category is other specialized transfers which reflect the monthly transfer of revenues collected for the sewer utility.

Loans from the National Investment Bank (NIB) and foreign sources are scheduled to be repaid in a timely manner. The annual debt service (the principal and interest payment) is dependent upon the interest rate and term of the loan. The interest portion of the debt service is budgeted in the Chapter 2 expenses. Interest payments on foreign loans have stayed relatively constant, reflecting a decrease in funding of major capital investment. Interest paid on local loans has increase substantially due to two factors, (1) more capital investment is

being funded with local funds and (2) a portion of the revenue shortfalls of the utility are covered with loans from the NIB.

Capital Expenses

Capital cash expenditures include Chapter 3 capital improvements, the settlement of loans, and changes in debtors or creditors balances. Chapter 3 improvements are identified by the Projects Central Department and funding for such improvements are provided for in the capital cash revenues. The settlement of long term loans and the advance payments for investments account for the repayment of the principal on outstanding local and foreign loans. Increases in debtors and decreases in creditors balances are both a cash requirement of the utility. An increase in debtors balances (accounts receivable) represents an increase in uncollected production billed revenue outstanding. While a decrease in creditors balances (accounts payable) indicates the GOGCWS has used cash to reduce the amount owed to creditors.

Capital Investment

The capital investment of the GOGCWS represents the resources invested by the utility. Assets, or the investments, are acquired by the utility with the expectation that they will remain in service for a number of years. Fixed assets are those used in the production and sale of a product (water) and service (the delivery of that water).

Assets are capitalized, on a quarterly basis, into nine categories based on Central Organization of Accounting (COA) standards. GOGCWS records the original cost of the assets. From time to time, the original cost of assets funded with foreign capital is adjusted to reflect changes in the value of the Egyptian pound. Table 4 identifies the asset categories and corresponding values for the past two fiscal periods. The value of the original cost of the fixed assets increased approximately L.E. 269 million between fiscal years 1990-1991 and 1992-1993.

Table 4
Comparison of Fixed Assets
Fiscal Years 1991 through 1993

Category	1990-1991	1991-1992	1992-1993
	L.E.	L.E.	L.E.
Lands	3,600,000	3,600,000	3,600,000
Buildings	253,900,000	299,700,000	303,100,000
Pipes	422,800,000	466,700,000	522,900,000
Wells	5,000,000	5,100,000	5,300,000
Machines & Equipments	263,000,000	362,900,000	372,700,000
Means of Transportation	11,000,000	13,800,000	14,700,000
Tools	2,000,000	2,200,000	2,200,000
Meters	9,500,000	11,500,000	13,300,000
Furniture & Desks	2,700,000	4,100,000	4,700,000
Total	973,500,000	1,169,600,000	1,242,500,000

Planned Improvements

Utilities operating under best commercial practices identify both long and medium to short

range capital improvements. Short range improvements are identified in annual budgets. Review of the most recent plans and studies for the water system indicates a need for a comprehensive long range, system wide master plan.

Historical Financial Condition

Each year the GOGCWS establishes a budget for the operation and maintenance of the water utility. Throughout the year, as expenses are incurred, they are reviewed and recorded by the General Accounting Department. At the end of each fiscal year the General Accounting Department produces the final accounts, reflecting revenues generated and expenditures paid by the GOGCWS.

The final accounts, or balance sheet, provide a snapshot picture of the financial condition of the water utility. For the purpose of analyzing financial viability, a cash flow of the utility's revenues and expenditures must be developed. A cash flow statement compares revenues and expenses by fiscal year, allowing the utility to analyze the soundness of financial operations.

Current Operations

A cash flow statement for current operations, reflecting final account cash related entries, is presented in Tables 5. A critical issue impacting the financial viability of GOGCWS is the collection of bills. During the fiscal year ending 30 June 1993, approximately 29 percent (L.E. 39,699,000) of the billable revenue was uncollected (L.E. 135,882,000 billed less L.E. 96,183,000 collected). The impact of the uncollected accounts on the cash flow of the utility is shown in Table 6.

Current revenues and exchanges, including revenues from the sale of water (production collected) were inadequate to pay for current expenses for the last three years. Although an increase in tariffs during the 1991-1992 fiscal year provided additional revenue to pay for current expenses, the magnitude of the increase was not sufficient to cover total current costs. In addition, if all revenue from production billed at the existing tariff schedule was collected in 1992-1993, the GOGCWS would have been in better financial condition, however it would have taken in less revenue than its current expenditures. Current costs associated with outstanding loans, i.e. interest expense, provided an additional burden which revenues were unable to bear. Achieving a balance between revenues and expenses in fiscal year 1992-1993, would have required collection of an additional L.E. 151 million in revenues according to the cash basis..

Capital Program

In addition to managing current operations, GOGCWS also manages a capital program. Comparison of cash related capital revenues and exchanges and capital expenses, shown in Table 7, indicates more funds were procured than expended each year of the study period. Revenues and exchanges exceeded expenses by approximately L.E. 72.9 million in 1992-1993.

Sound financial operations recommend sources of funds such as loans and grants be used for capital improvements, as identified in Chapter 3. A comparison of loans and grants with Chapter 3 expenditures indicated, in each year of the study period, loans and grants

Table 5

Current Operations
Comparison of Revenues and Expenditures
(Per Final Accounts)

Line No.		Fiscal Year Ending June 30		
		1991	1992	1993
	Current Revenues & Exchanges	L.E.	L.E.	L.E.
1	Production Billed	87,502,423	135,084,227	135,882,433
2	Services Budgeted	8,745,571	10,244,501	9,160,998
3	Exchanges	9,444,366	24,458,698	31,587,968
4	Credit Interests	3,254	1,633,939	5,319,624
5	Capital Profits	59,261	336,490	0
6	<i>Total Current Revenues & Exchanges</i>	105,754,875	171,757,855	181,951,023
	Current Expenses			
	Wages			
7	Cash Wages & Allowances	35,737,591	38,722,888	46,383,677
8	Advantages in Kind	2,041,638	3,003,398	3,559,747
9	Insurance Advantages	6,344,246	6,974,277	8,434,162
10	Other	4,711,010	5,544,678	7,434,710
	Current Expenses & Exchanges			
11	Commodities Input	60,807,420	93,492,196	111,390,279
12	Service Input	2,163,504	2,625,824	4,777,468
13	Current Exchanges	8,436	34,362	39,023
14	Other Specialized Transfer	6,339,742	20,131,403	25,141,271
15	Past Years Expenses	737,745	786,836	1,696,017
16	<i>Total Current Expenses</i>	118,891,332	171,315,862	208,856,354
17	Revenues Less Current Expenses	(13,136,457)	441,993	(26,905,331)
18	<i>Local & Foreign Interest (a)</i>	51,589,474	69,330,963	90,073,276
19	Revenues Less Current Expenses and Interests	(64,725,931)	(68,888,970)	(116,978,607)

(a) Includes interest expense on outstanding foreign loans & Investment Bank loans

Table 6
Comparison of Current Operations
Revenues and Expenditures
(Cash Basis)

Line no.		Fiscal Year Ending June 30		
		1991	1992	1993
	Current Revenues & Exchanges	L.E.	L.E.	L.E.
1				
2				
3	Exchanges	9,444,366	24,458,698	31,587,968
4	Credit Interests	3,254	1,633,939	5,319,624
5	Capital Profits	59,261	336,490	0
6	Total Current Revenues & Exchanges	12,855,192	26,429,127	37,046,665
	Current Expenses			
	Wages			
7	Cash Wages & Allowances	35,737,591	38,722,888	46,383,677
8	Advantages in Kind	2,041,638	3,003,398	3,559,747
9	Insurance Advantages	6,344,246	6,974,277	8,434,162
10	Other	4,711,010	5,544,678	7,434,710
	Current Expenses & Exchanges			
11	Commodities Input	60,807,420	93,492,196	111,390,279
12	Service Input	2,163,504	2,625,824	4,777,468
13	Current Exchanges	8,436	34,362	39,023
14	Other Specialized Transfer	6,339,742	20,131,403	25,141,271
15	Past Years Expenses	737,745	786,836	1,696,017
16	Total Current Expenses	118,891,332	171,315,862	208,856,354
17	Revenues less Current Expenses	(106,036,140)	(144,886,735)	(171,809,689)
18	Local & Foreign Interest (a)	51,589,474	69,330,963	90,073,276
19	Revenues less Current Expenses and Interests	(54,446,666)	(75,555,772)	(81,736,413)

(a) Includes interest expense on outstanding foreign loans & Investment Bank loans

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Table 7

**Comparison of Current Capital
Revenues and Expenditures
(Per Final Accounts)**

Line No.		Fiscal Year Ending June 30		
		1991	1992	1993
	Capital Revenues and Exchanges	L.E.	L.E.	L.E.
1	Public Treasury	70,325,000	72,367,769	74,850,000
2	Grants	9,763,048	54,806,009	160,250,767
3	Loans	116,981,744	137,495,480	170,105,122
4	Decrease in Debited Balances	5,051,090	4,370,646	11,635,500
5	Increase in Credit Balances	35,692,577	43,891,480	80,737,332
6	Other Sources	10,061,323	0	1,646,863
7	Total Capital Revenues & Exchanges	247,874,782	312,931,384	499,225,584
	Capital Expenses			
8	Chapter III Capital	98,698,967	125,542,125	259,489,631
9	Principal Payments	64,366,867	72,367,769	75,004,245
10	Advanced Payments for Investment	1,646,167	11,978,927	20,162,913
11	Increase in Debited Balances	28,626,989	69,424,953	37,708,896
12	Decrease in Credit Balances	13,462,797	16,057,190	33,477,231
13	Other Expenses	7,597,843	2,615,970	514,786
14	Total Capital Expenses	214,399,630	297,986,934	426,357,702
15	Revenues Less Expenses	33,475,152	14,944,450	72,867,882

exceeded actual capital expenditures. This implies that loan and grant funds were used to finance the settlement of outstanding loans (principal payments) and/or other cost deficits.

Unit Cost Analysis

A cash flow shows the overall cash position of the water utility's current operations. A comparison of unit cost per billable volume with unit revenue will illustrate the impact of costs as they relate to the tariff. The unit revenue from production billed, shown on Line 1 of Table 8, closely parallels the current P.T. 13 tariff for the household customer.

The ability of existing tariffs and revenue from other sources to cover costs is illustrated in the comparison of the unit revenue from total current revenues, Line 4, with the unit cost of current expenditures, Line 5; interest expense, Line 6; and settlement of long term loans, Line 7. In fiscal year 1992-1993, the unit cost for current expenditures totaled P.T. 20.64 per cubic meter. Interest and principal payments added an additional P.T. 8.97 and P.T. 9.48, respectively, for a total cubic meter cost of P.T. 39.10.

These costs were financed with revenues from tariffs and other services which produce a total unit revenues of P.T. 18.71, consisting of billed production unit revenue of P.T. 13.54 and other services revenues of P.T. 5.17 per cubic meter. The impact from uncollected bills reduced the unit revenue to P.T. 14.75 per cubic meter.

For 1992-1993 fiscal year current expenditures to have been fully financed, the tariffs should have increased of approximately 62 percent, based on the production revenue collected. To cover both current operating expenditures and principal and interest payments, the tariff should have been increased by approximately 154 percent.

Performance Indicators

A method for objectively measuring the change in financial condition of a utility is to develop and calculate performance indicators on a regularly scheduled basis. Sound financial operation is realized when an organization's performance indicators achieve a target predefined by experts in the respective areas. An initial listing of financial viability performance indicators has been developed for GOGCWS and are listed in Table 9. For each proposed indicators, a ratio, trend, and frequency has been identified. In addition, the indicator, based on year end figures for 1990-1991 through 1992-1993, has been calculated. Financial viability targets have also been identified

Table 8
Comparison of Unit Costs With Unit Revenues

Line No		Fiscal Year Ending June 30		
		1993		
		Revenues	Billable Usage	Unit Revenue
Current Revenues		1000 L.E.	1000 m3	P.T./m3
1	Production Billed	135,882	1,003,699	13.54
2	Production Collected	96,183	1,003,699	9.58
3	Services, Exch., Credit Int., Cap. Profits	51,863	1,003,699	5.17
4	<i>Total Current Revenues</i>	148,047	1,003,699	14.75
		Costs	Billable Usage	Unit Cost
		1000 L.E.	1000 m3	P.T./m3
5	<i>Total Current Expenditures (a)</i>	207,160	1,003,699	20.64
6	Local & Foreign Interests	90,073	1,003,699	8.97
7	Settlement of Long Term Loans	95,167	1,003,699	9.48
8	<i>Total Unit Cost</i>			39.10

m3-cubic meter

P.T.- piasters

L.E.-pounds

**Table 9
Financial Viability Performance Indicators**

Performance Indicator			Historical Trend			Financial Viability Target		
Indicator	Trend	Frequency	1990-1991	1991-1992	1992-1993			
Operation Profits (losses) / Total Revenues	Positive	Bimonthly	Indicator:			Indicator: 5%		
			(39%)	(26%)	(41%)			
			Trend:					
			NA	13%	(15%)			
Operating Revenues / Operating Expenses	Positive	Bimonthly	Indicator:			Indicator: 105%		
			72%	79%	71%			
			Trend:					
			NA	7%	(8%)			
Actual / Budgeted Operating Expenses	Less than 1.00	Monthly	Indicator:			Indicator: 1.00		
			1.48	1.65	1.27			
Collected / Billed Revenues	Positive	Bimonthly	Total			Indicator: 95%		
			Indicator:					
			72%	70%	71%			
			Trend:					
			NA	(2%)	1%			
			Non-Governmental				Indicator: 93%	
			Indicator:					
			84%	85%	89%			
			Trend:					
			NA	1%	4%			
			Governmental					Indicator: 100%
			Indicator:					
34%	34%	27%						
Trend:								
NA	0%	(7%)						
Production Billed / Water Produced	Positive	Bimonthly	Indicator:			Indicator: 80%		
			85%	85%	77%			
			Trend:					
			NA	0%	(8%)			

1. Introduction

GOGCWS Objectives and the MTSS Project

The General Organization for Greater Cairo Water Supply (GOGCWS) was established in 1968 as an economic organization authorized to provide potable water and other water services to residential, commercial, industrial and governmental consumers in the urban areas of the Governorates of Cairo, Giza and Qaliubia. Over the past twenty five years the GOGCWS has improved the quality of services and extended the water treatment and transmission network to accommodate urban growth and development. The characteristics of physical system for water service in Greater Cairo reflects the technical accomplishments of the organization:

Treatment Plants	15
Pipelines	3500 km
Water Produced	1,250,000,000 cu.m/yr.
Population Served	9,300,000

This concentration on service delivery and system expansion could only be accomplished through massive financial subsidies from the central government. Subsidies for both operating and maintaining urban water systems and constructing new facilities was the national policy and GOGCWS performed its role very well in that policy context.

A new national policy is now being implemented in which subsidies will be replaced by market principles and economic considerations. Economic organizations such as GOGCWS will be encouraged by the central government to operate in a business-like manner so that recurring expenditures are covered by water tariff revenues and future capital expansion is determined on economic principles. This condition is termed "financial viability".

To achieve and sustain financial viability and operate on a commercial basis, the Board of Directors and top management of GOGCWS will need the authority to act independently with respect to plans, budgets, personnel actions, financial affairs, equipment purchases and a host of other matters. This condition is termed "managerial autonomy".

To help it achieve these two interrelated conditions of financial viability and managerial autonomy, GOGCWS requested assistance from the United States Agency for International Development (USAID) which provided funds for an institutional support project entitled, "Management, Training & Systems Strengthening" (MTSS). The MTSS project is a vehicle to help GOGCWS operate as a managerially autonomous and financially viable organization, first in actual practice under its existing legal mandate and then under a new legal/institutional arrangement, if required.

The MTSS project will be implemented over a 45 month period (1 July 1993 - 31 March 1997) under a phased approach, as follows:

- Phase 1: Planning and Policy Formulation
- Phase 2: Performance Improvement and Policy Reform
- Phase 3: Institutionalization of Reforms

Phase 4: Sustainability and Planning

The MTSS project is organized into five programs which are closely related to the internal organization of GOGCWS (in order to achieve the partnership relationship required for successful implementation) and which are each geared to enable GOGCWS to achieve both the financial viability and managerial autonomy objectives. The five programs are:

- Financial Viability
- Management Development
- Technical Support for Operations & Maintenance
- Materials Management & Procurement
- Project Management & Administration

One of the basic tenets of the MTSS project is that the foundation for financial viability and managerial autonomy must be constructed by the GOGCWS management. The contractors advise, train and assist; GOGCWS managers develop, adopt and implement.

This report, *Assessment of Financial Condition - 1990-1991 through 1992-1993*, a) describes the process and results of a management survey conducted by the GOGCWS with the advice and support of the Management Development program and b) recommends an action plan to capitalize on survey findings.

Financial Viability Overview

The objective of the Financial Viability Program is to enable and assist the General Organization of Greater Cairo Water Supply (GOGCWS) to endorse and implement an objectively measurable approach to achieve financial viability. Objectively measuring movement towards financial viability is a two step process. First, an audit of historical data illustrating the current financial condition of GOGCWS is needed. Then, performance indicators, based on information from the audit, can be identified, quantified and compared at regular intervals to measure financial movement. Performance indicators which illustrate the move towards financial viability will address such issues as:

- Billing for a percentage of water produced
- Collecting a defined percentage of bills issued
- Generating adequate revenues to cover annual operating costs
- Developing a reserve fund
- Contributing to a repair and replacement fund

The financial audit will determine if data is available to calculate the proposed indicators. If the audit determines such data is available, that data will provide the bench mark for the performance indicator. In addition, reviews of the historical trend of the indicators will provide guidelines for proposed levels of improvement. In the following financial audit, the financial condition of GOGCWS was studied for the fiscal years 1990-1991, 1991-1992 and 1992-1993.

The financial audit reviewed managerial and financial aspects of the GOGCWS. The audit is separated into two major sections, (1) organization and management and (2) financial. The

organization and management section reviews the financial structure of GOGCWS and the operational practices, policies and planning processes which affect financial viability. The financial section of the audit reviews the budgets and final accounts for revenues and expenditures. Operating data such as number of accounts and billed usage, as they relate to financial concerns, were also reviewed.

Source of Data

The following published documents combined with written documents from and interviews with the Financial Viability Program counterparts provided the basis for the analysis included in this report.

- 30 June 1991, 30 June 1992, and 30 June 1993 Final Accounts
- 1990-91, 1991-92, and 1992-93 Budgets
- Master Plan (1990-2010)
- Five-Year Plan (1992/93 through 1996/97)

Data used in our analysis was provided by the GOGCWS. Because the information and analyses of the financial audit will be used as the building blocks for the policy formulation and performance planning and modeling segments of the Financial Viability Program, accurate data is critical in order to reliably define the current financial condition of GOGCWS. Multiple sources for the same basic data and manual transferring of data, combined with logical and mathematical checks, raised questions as to the accuracy of some of the data. Independent verification procedures addressing the accuracy of the financial data were not performed by the project team. Because independent verification procedures were not performed by the project team, the data provided by this report cannot be relied upon as an exclusive basis for determining the financial condition of GOGCWS.

Statutory Foundation

A key component to achieving financial viability is the development of managerial autonomy. GOGCWS, operating as an economic organization, is impacted by many national governmental agencies, laws and decrees which limit the utility's ability to make independent decisions which will lead to financial viability. National governmental agencies which impact financial aspects of the GOGCWS include but are not limited to the following:

- Ministry of Housing & Utilities
- Ministry of Finance
- Ministry of Planning
- Ministry of International Cooperation
- Central Agency for Organization and Administration
- Central Organization of Accounting

A general description of the conditions identified in the decrees, laws, and rules governing the financial aspects of GOGCWS are identified and summarized below.

GOGCWS Decree

Presidential Decree 1638 established the General Organization For Greater Cairo Water System (GOGCWS) in 1968. The decree changed the water utility from a company to an

economic organization. As an economic organization, the GOGCWS was charged with the management and utilization of the potable water utilities in the Cairo, Qaliubia and Giza Governorates. Because the Decree directs GOGCWS to serve three independent Governorates and areas which are annexed, connected or complementary to them, GOGCWS is unable to autonomously limit its service area. Inability to limit a service area significantly impacts an organization's ability to effectively plan for capital and operational changes.

Although Section 3 of Article 4 of the Decree allows the Board of Directors for GOGCWS to establish by-laws and regulatory resolutions pertaining to financial and administrative affairs without being restricted to governmental rules, Section 7 of Article 4 limits the Board of Directors to proposing, not implementing tariffs for the sale of water.

Tariffs

The approval procedures for adjusting water tariffs is governed by Local Governmental System Law No. 43/1979. According to the second division of article 12 of the law, the Local Popular Council for the Governorate shall be responsible for imposing the duties having the local character, i.e. the water tariffs, after approval of the Cabinet. Changes in the water tariffs can include amending the tariffs, shortening the period they are valid, providing exemption from, or cancelling them. An agreement between the Governors of Cairo, Qaliubia and Giza delegates the authority for utility operation for the greater Cairo area to the Governor of Cairo.

Budgeting

National Budget Law No. 53/1973 and its amendments, Law No.11/1979 and Article 13 of Law No. 104/1980 authorizes the Minister of Finance to issue an annual decree outlining the principles to be followed by economic organizations when preparing their budgets. Law No. 53/1973 also gives the Ministry of Finance the authority to adjust the budgets of the economic organizations prior to submission to the Peoples Assembly for approval.

Accounting Procedures

GOGCWS is required to conform to accounting guidelines specified in the Unified Accounting System which was established by Presidential Decree No. 4723/1968. The system provides the guidelines for analysis, planning, monitoring, and control of revenues, expenditures, and assets. The current uniform chart of accounts was established for general governmental accounting and is not the most effective way to track costs for a utility practicing best commercial accounting. Use of the system does provides a link between the economic organization and the national accounts, which facilitates the collection and classification of expenses on a national level.

Capital Financing

Article 9 of the National Budget Law No. 53/1973 and its amendments identifies sources of funds available for financing major capital improvements. Included in sources are foreign and local loans. The law does not appear to restrict or limit the source of revenues for repayment of loans to water utility operation revenues.

Review of Existing Reports

The institutional needs of GOGCWS were address in two prior studies, one conducted in the late 1970's and the other in the mid 1980's. In addition, a financial study has recently been completed for the sewer utility, General Organization for Sanitary Drainage (GOSD.) The results and recommendations of those studies have been reviewed and information which would be relevant to the MTSS study has been identified and summarized below. An in-depth analysis on the status of the recommendations of the reports has been prepared in a separate memorandum. Reports which have been reviewed include:

Management and Tariff Studies Relative to Water/Sewerage Systems
BVI-ATK Associates with Sabbour Associates
October 1979

Assistance in Upgrading Services
James M. Montgomery
March 1986

Wastewater Rate Study and Five Year Financial Plan - GOSD
Ernst & Young, CH2M Hill International/OMI
Draft - Dated September 30, 1993

Management and Tariff Studies Relative to Water/Sewerage Systems

The *Management and Tariff* report addressed eight general topics. Although all topics are interrelated, the physical assets, inventory and valuation; procedures and methods; and tariffs sections of the study most closely relate to the financial viability analysis.

Meter reading and billing procedures were discussed in the *Procedures and Methods* report. Many interim period recommendations identified in the report have been implemented. However recommendations on some critical issues, specifically those addressing uncollectible accounts have not been addressed. One subject that was emphasized in the *Procedures and Methods* report was the installation and reading of meters. Although many meters have been installed, a corresponding maintenance program has not been implemented. The use of meters for non-commercial customers should be reviewed for applicability and cost effectiveness in today's market.

The *Physical Assets and Inventory and Valuation* reports address the value of the assets as well as programs needed to improve record keeping and management of the assets. A comprehensive inventory of the water utility assets was performed in 1979. Since that time, asset records have been recorded in general accounting categories of buildings, networks, and equipment as opposed to the functional categories of source of supply, treatment, network, and administration, as identified in the report. Under current operating procedures, assets capitalized at original cost, may be adjusted during their life reflecting the changing value of the Egyptian pound. The need for standardizing asset valuation and recording procedures, including the recording of assets using a functional basis, is dependent upon long-range goals of the utility. If the utility's long range plans include commercial practices such as utilizing assets as a security for issuing debt, recording and valuation procedures may need modifying.

The report on *Tariffs* addressed both cost issues and management issues. Tariff structures and adjustments recommended in the 1979 report were not implemented. The 1979 reports' recommendations would have resulted in financial viability by 1984. Changes in economic conditions and high inflation combined with non-action by authorized governmental agencies has produced a financial condition in 1994 worse than that experienced in 1979. A critical management issue raised in the 1979 report is the contractual requirement to calculate tariffs using the utility rate base. Based on interviews with GOGCWS staff, the contractual requirements are associated with the acceptance of foreign grants and loans. According to the reports, operating expense, depreciation expense, other legal requirements, and a return on investment must contractually be covered by the tariffs. Existing tariffs do not meet the utility rate base requirements. Applicability and enforceability of the contractual requirements should be reviewed by GOGCWS legal department. Contractual requirements may provide a base for limited autonomy in tariff setting.

Assistance in Upgrading Services

The report on upgrading services covered multiple aspects of utility management. Financial viability review efforts were concentrated on two reports, the *Financial Systems Automation Plan* and the *Project Summary Final Report*. Recommendations identified in the areas of budgeting, reporting, billing and collection are still applicable. Specific budgeting concerns identified in 1986, including the Ministry of Finance having the final decision on the GOGCWS budget and inability of GOGCWS to modify rates to meet budget requirements, continue to impact the financial viability of the utility.

In 1986, many financial reports which had the potential for identifying critical performance indicators were generated annually. Recommendations for increasing the frequency of the reports have been followed, the results of which are quarterly reports. However due to manual operations, up to three months are needed to generate most reports, resulting in insufficient time for management to react to problems and implement corrective actions.

Billing and collection recommendations concentrated on producing valid data. The need for the Computer Department to provide reports and system support and an assurance that consumption and billable usage data is correct were two areas of concern which are still valid today.

Wastewater Rate Study and Five Year Financial Plan - GOSD

Although the financial plans of the wastewater utility do not directly impact the financial viability of the water utility, actions taken by the wastewater utility may adversely impact the public's perception of GOGCWS. Current Government of Egypt political actions are encouraging the managerial and financial autonomy of GOSD. With this autonomy may come the ability to independently adjust wastewater tariffs. Charges for both water and wastewater service are included on the utility bill generated by GOGCWS. For GOSD to approach financial viability, the wastewater rate study recommends significant increases in wastewater tariffs for the next five years. With the utility bill coming from the GOGCWS, the public may attribute the increased bills entirely to the water utility, thus limiting the magnitude of water tariff adjustments. Adjustments in utility tariffs will require coordination between the water and wastewater utilities.

Wastewater charges are based on billable water usage. Consistency between customer and water usage data, water production data, and treated wastewater flows is a concern of the water utility. Communication between water and wastewater plant operations is encouraged

Coordination With Counterparts

The key to a successful and sustainable MTSS project is "buy-in" of the findings and recommendations from the management and workers at GOGCWS. The teaming of MTSS project staff with corresponding counterparts from GOGCWS provided the "buy-in" for the MTSS project. GOGCWS financial basic data, which was the basis for the *Assessment of Financial Condition Report*, was provided by the Financial Viability counterparts. In addition to ongoing one-on-one meetings, formal counterpart meetings provided critical input and analysis for the financial analysis. The following counterparts provided assistance in the development of the financial analysis and recommendations in this report.

Financial Viability Counterparts	
Name	Department
Mr. Mahmoud Abdel Aziz Ahmed	General Department for Revenues
Mr. Farouk Mahmoud Allam	Customers Accounts
Mr. Abdel Aziz Abul Fadl	Govt.& Auth. Accounts
Mr. Mohamed Ahmed El Khozami	Meters Department
Mr. Ezz El Din Farghali	Meters Department
Mr. Fathi El Tohami	Receivables & Expenditures
Mr. Hafez Abul Fettouh Hemdan	Debits & Credits Department
Mr. Osama Abdel Razek Soltan	Debits & Credits Department
Mr. Safwat Ismail Ahmed	General Accounts Department
Mr. Ismail Hussien Ali	General Accounts Department
Mr. Mohamed Yehia El Feki	Expenditure Audit Department
Mr. Hosni Abdel Al Haridi	Revenue Audit Department
Mrs. Dorreya Hassan Abdel Ghaffar	Budget Department
Mr. Moawad Abul Ela	Budget Department
Mrs. Salwa Ahmed Amin	Financial Statistics and Cost Department
Mr. Mohamed Ali Nabet	Gen. Dept for Expenditures
Mrs. Nagwa Youssef Antoun	Government & Inspections Account Department
Mr. Hamdi Refaei	General Account Department
Mr. Abdel Samad Mahmoud Hussein	Customer Department

2. Organizational and Management Structure

In 1968 Presidential Decree 1632 established the GOGCWS as an economic organization to serve the Cairo, Qaliubia and Giza Governorates. The Decree affiliated the organization with the Ministry of Housing and Utilities. A Board of Directors, the members of which are listed in Table 2.1, is the supreme power in charge of GOGCWS affairs.

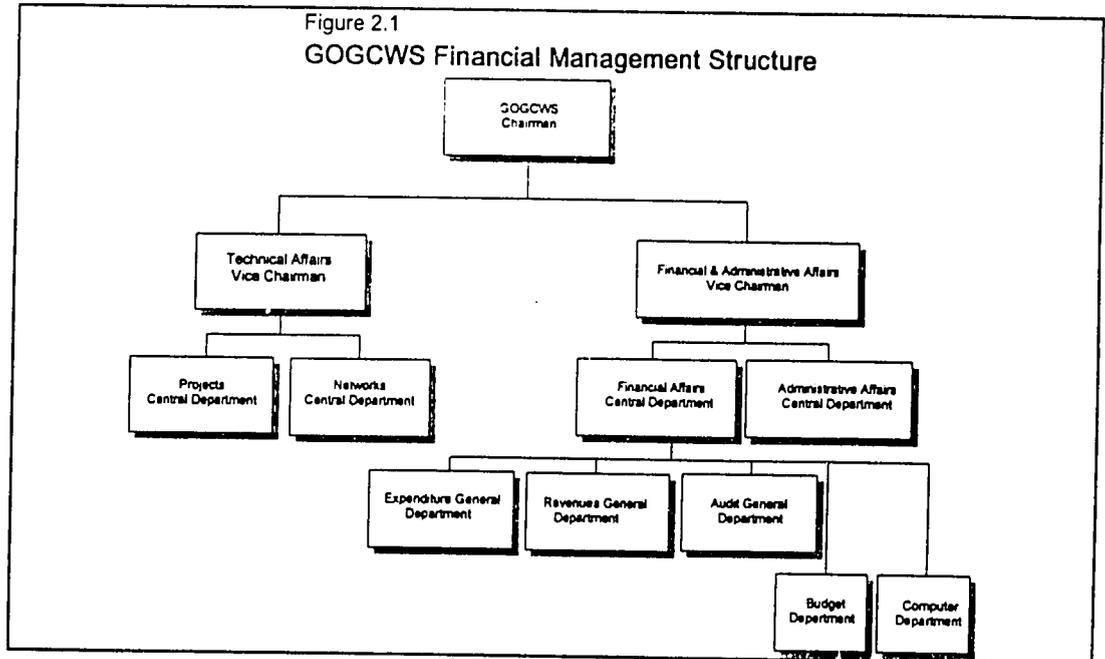
Table 2.1 Board of Directors
•The Chairman
•Two Vice Chairmen
•Six Central Department Under Secretaries
•The State Advisor for the Ministry of Housing and Utilities
•The Director of Housing and Utilities at Cairo Governorate
•The Director of Housing and Utilities at Qaliubia Governorate
•The Director of Housing and Utilities at Giza Governorate
•Three Former Chairmen
•Ministry of Planning Under Secretary of State
•Deputy Chairman of NOPWASD
•A representative for the Ministry of Health
•Two GOGCWS technical directors
•Two potable water experts

In 1979, Local Government System Law No. 43/1979 directed local government units to take charge of establishing and managing all public utilities falling in their circle. Local government units impacting GOGCWS are the Governorates of Cairo, Qaliubia, and Giza. Each local government unit is represented by its Governor and has a local popular council. Therefore, the Governors of Cairo, Qaliubia, and Giza are an integral part of the GOGCWS organization. Although an agreement between the Governors delegated the authority for utility operation for the greater Cairo area to the Governor of Cairo, the Governors of Qaliubia and Giza have the authority to require that water service be provided to areas annexed or connected to their respective governorates.

GOGCWS Organization

The GOGCWS is managed by the Presidential-appointed position of the Chairman. Two Vice Chairmen, one technical and one financial and administrative, assist the Chairman. The day to day financial activities of the GOGCWS are conducted through the Financial Affairs Central Department, the head of which is an Under Secretary of State who reports directly to the Financial and Administrative Affairs Vice Chairman. Three General Departments, one for revenues, one for expenses, and one for auditing handle the detailed operations of their respective areas. The General Directors of these General Departments report directly to the

Financial Affairs Central Department Under Secretary. In addition, two Departments, Budgeting and Computers, provide specialized services for the GOGCWS through the Financial Affairs Central Department. The Administrative Affairs Central Department provides assistance with budget implementation. Capital planning is provided by the Projects Central Department, which reports to the Technical Affairs Vice Chairman. The installation and repair of meters is the responsibility of the Networks Central Department, also reporting to the Technical Affairs Vice Chairman. The following chart illustrates the managerial organization associated with the financial operations of the GOGCWS.



Financial Affairs Central Department

Expenditure General Department

The purpose of the Expenditure General Department is to supervise expenditures and administer fixed assets records. Four Departments report to the General Director of Expenditures.

- The Supply Accounts Department supervises expenditures associated with Chapter 2 of the GOGCWS annual budget and stock control. Expenditures are budgeted using the chart of accounts dictated by the Central Organization of Accounting (COA.)
- The Financial Statistics and Cost Department reallocates expenses into the cost centers of plants, production and distribution, and finance and administration. The reallocation of expenses establishes a utility based system of accounts for monitoring costs. The Financial Statistics and Cost Department also administers the fixed assets, including the recording of capitalized expenditures on a quarterly basis and the calculation of annual depreciation requirements. Assets are recorded and depreciation calculated using the accounts and guidelines

dictated by the COA. Annual depreciation expense is included as a line item in the annual budget.

- The General Accounts Department generates quarterly reports, final accounts, and the balance sheet. It also issues checks for payments of expenditures.
- The Debits and Credits Department administers payment of foreign and local loans.

Revenues General Department

The Revenues General Department administers activities associated with the generation of revenues and the uses of financial resources. Its activities include bi-monthly meter reading, bill distribution, and revenue collection as well as ongoing cash management. It is also responsible for follow-up on uncollected bills and identification of potential shut-offs associated with nonpayment of bills. Four Departments report to the General Director of Revenues.

- The Customers Accounts Department manages existing services, reviewing bills prior to distribution and addressing customer inquiries.
- The Meters Department is responsible for bi-monthly meter reading.
- The Collection and Cashier Department distributes bills and collects revenues from non-governmental accounts.
- The Government and Institution Accounts Department administers governmental account billing and collections.

Audit General Department

Providing auditing services for both revenues and expenditures is the Audit General Department. A comparison of revenues collected with bills issued, which provides the audited cash receipts also referred to as bills collected, is the major revenue function of the Audit General Department. Supply orders, special contracts, as well as monthly operational expenses are also audited by the Audit General Department.

Budget and Computer Departments

Providing specialized financial services to the GOGCWS are two departments, Budget and Computer. The Budget Department collects and summarizes budgeting information from the various departments responding to the Chairman's Budget Decree. The Department also monitors the implementation of the budget after it has been approved and identifies savings or overdraws for individual line items.

The Computer Department produces computerized payroll and billing information based on manual entry data supplied by other departments. Water bills are produced bi-monthly based on meter read data provided by the Meters Department. Bill collection data, provided by the Revenues General Department, is returned to the Computer Department and once a year a revenue collections report is generated. Payroll information is supplied to the Personnel Affairs General Department prior to the distribution of the monthly payroll.

Administrative Affairs Central Department

The Personnel Affairs General Department and the other administrative departments of the Administrative Affairs Central Department provide budget implementation services associated with personnel issues such as wages, incentives, sick leave and related incidences.

Expenditures associated with such personnel issues are reviewed and approved by the central department prior to payment.

Projects Central Department

The Projects Central Department's responsibilities relating to financial activities include the identification of major capital improvements, project implementation and supervision, and authorization of contractual payments and certificates. Working with an approved master plan, the Department develops a five-year capital improvement plan. Each year the five-year plan is reviewed and the current fiscal year's authorized capital improvements are identified in detail and submitted to the Ministry of Planning for processing.

Networks Central Department

The Networks Central Department provides new subscription services through its Customers Department and meter installation and repair services through its Meters and Leakage Department.

Other Agencies

The financial operations of GOGCWS are impacted by many national governmental agencies. A brief explanation of the relationship between GOGCWS and the other agencies follows.

Governorates of Cairo, Qaliubia, and Giza

As mentioned earlier, local government units and their respective Governors and popular councils are responsible for establishing and managing all public utilities falling in their circle. The Governors are responsible for GOGCWS compliance with provisions of the law concerning economic organizations. The Governors have the right to attend and may convene the GOGCWS Board of Directors meetings. The Governors also have the authority to ratify or contest actions taken by the Board of Directors.

Ministry of Housing and Public Utilities

The Ministry of Housing and Public Utilities provides technical coordination and advisory services for GOGCWS. The Ministry also coordinates sectoral capital improvement project planning and implementation. The Ministry convenes the High Committee of Utilities concerning sectoral utility related issues on a monthly basis.

Ministry of Finance

The operational budgeting, capital planning, and revenue collection for the water utility involves the participation of both the GOGCWS and the Ministry of Finance. The Ministry of Finance, responsible for 54 economic organizations, one being the GOGCWS, supervises the financial activities of the utility. Three divisions within the Ministry of Finance, a Budget Division, a Performance of Budget Division, and a Final Accounts Division oversee their respective areas within the utility.

- The Budget Division reviews the proposed annual operating budget and, upon approval of the budget, assists in the allocation of it to individual utility departments.

- The Performance of Budget Division works on a daily basis with GOGCWS, approving expenditures and providing a second signature on cash related expense items.
- The Final Accounts Division participates in the preparation of the year end balance sheet.

Ministry of Planning

All GOGCWS capital planning is coordinated with the Ministry of Finance and the Ministry of Planning. The Ministry of Planning (MOP) approves capital plans, including any modifications not identified in the approved master plan. The Ministry of Planning works with the Ministry of Finance and National Investment Bank to identify and commit funds for capital projects.

Ministry of International Cooperation

Foreign funds, both loans and grants, are coordinated through the Ministry of International Cooperation (MIC) and MOP. Identification of projects and approval of the use of funds must be provided by the MIC. Repayment of foreign loans requires coordination between the MIC, GOGCWS, MOF, MOP, and the Central Bank.

National Investment Bank

The National Investment Bank (NIB) provides local funds for financing capital improvements and meeting a portion of the deficiencies in annual operating revenues. Loan conditions are negotiated between GOGCWS and the NIB. Implementation of major capital projects is coordinated between GOGCWS and the NIB.

Central Agency For Organization and Administration

Rules and regulations impacting government employees are enforced by the Central Agency for Organization and Administration (CAOA). The rules and regulations address such matters as hiring and firing, promotions, salary levels, and related matters.

Central Organization for Accounting

Like the Ministry of Finance, the Central Organization for Accounting (COA) also provides administrative services to the GOGCWS. By law, the COA is required to audit the budget, expenditures, and performance of all economic organizations. Included in the audit are reviews of compliance with decrees of employment addressing the issues of salaries, wages, promotions, bonuses and other related matters. COA also audits the revenues of the organization. Representatives of the COA are located within the GOGCWS offices.

Management Structure/Financial Planning & Decision Making

The span of control in the financial and administrative branch of the GOGCWS is appropriate for the Financial Affairs Central Department. Allocation of duties between the functional areas of revenues and expenses, with auditing providing validation, is a sound organizational structure. However, the flow of information within the Financial Affairs Central Department is vertical. The decision making process and distribution of information operate independently within the functional areas of revenues and expenditures. Minimal information is exchanged between functions. Analysis of critical financial data is only performed at the higher levels

of management. Although an Audit Department, a key position for any financial operation, exists in the organizational structure, the General Director position is currently unfunded.

The budgeting process involves personnel from all levels of operations, which theoretically results in sound financial projections. However, final review and approval of the budget, prior to submission to the Peoples Assembly, is performed by the Ministry of Finance, which has the authority to overrule financial recommendations of the GOGCWS.

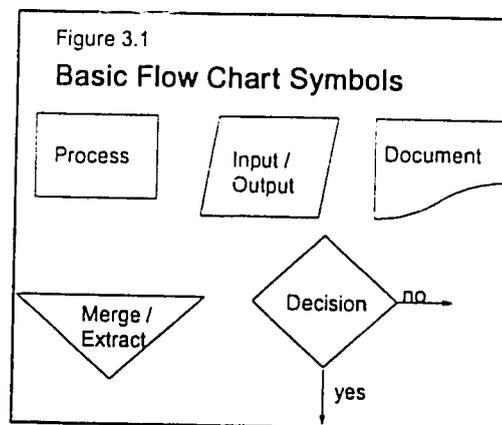
Financing of major capital expenditures impacts the revenue requirements of a utility. Capital planning at GOGCWS, which identifies major capital expenditures, is performed in the technical branch of the organization with minimal input from the Financial Affairs Central Department, the department responsible for the management of cash flow. Once capital projects have been authorized, financing is decided independent of GOGCWS, even though they are responsible for the payback of loans associated with the financing.

Expenditure budgets, developed by GOGCWS and modified by the Ministry of Finance, are approved by the Peoples Assembly. Tariffs, which should theoretically support expenditures, are approved by the Popular Council at the Governorate level. Laws, rules or regulations do not exist which would require a relationship between the budget approval process and the tariff setting process. A budget, which does not have adequate tariff revenues to support it is the result of these independent processes.

3. Financial Planning Process, Policies and Practices

Water utilities operating under best commercial practices, implement formal, written financial policies and procedures. This practice generates compatible long-range planning and financing for capital improvements as well as day to day operations. Sound fiscal policies combined with interaction between all facets of an organization provide the consumer with the best possible product for the lowest cost.

An overview of the GOGCWS's organization structure and management practices have been discussed in Section 2. Review of GOGCWS documents followed by interviews with the Financial Viability Program counterparts provided the bases for the following interpretation and explanation of policies and procedures associated with the utility's financial planning, management and reporting. Major processes have been illustrated with flow charts. Figure 3.1 provides a legend for the flow chart symbols.



Although the Ministry of Finance (MOF) annually publishes written guidelines for budgeting the upcoming fiscal year expenditures, interviews with counterparts implied that for mid-level managers fiscal policies and procedures are based on oral communication and interpretation, as well as standard written documents.

Financial Planning

Financial planning at GOGCWS consists of an annual budgeting process. Around the end of October, the budgeting process for a fiscal year beginning the following 1 July is initiated. By the middle of January, GOGCWS submits its annual budget to the MOF for review, revisions and approval. The budget includes both revenue and expenditure projections for the upcoming fiscal year. The reviewed and revised budget is included in the State Budget which is submitted for approval to the Peoples Assembly in April.

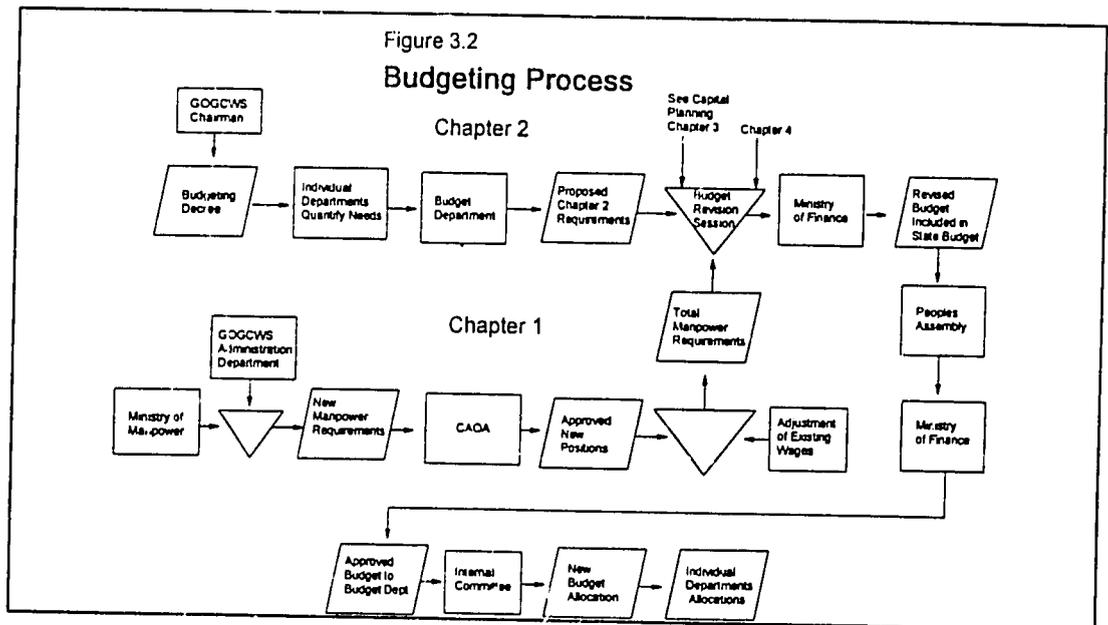
Historically, water utility expenditures were budgeted using the "bab" accounting system. The expenditure budget was divided into four babs:

- (1) wages
- (2) current expenses and exchanges
- (3) capital expenses
- (4) capital exchanges

Budgeted expenditures in each bab were restricted to expenses associated with the respective bab. Due to the inflexibility of bab accounting system, the MOF changed to a chapter/group/item accounting system in 1993-94. The chapter accounting system allows for the transfer of budgeted expenditures between the various groups within the specific chapter. Classification of chapter expenditures parallels the bab system.

Budgeting of revenues is a by-product of the expenditure budgeting process. Once preliminary expenditures have been quantified, the Revenue Department is informed and requested to submit revenue projections which correspond to the increases in expenditures. For example, if chemicals and electricity expenditures per unit of production are anticipated to increase more than anticipated inflation, a corresponding increase in water production sold is projected. The projected increase in production sold translates to a projected increase in production billed. The gap between estimated revenues and budgeted expenditures, historically identified as a deficit of current activities, was funded through subsidies and/or local loans.

In general, Chapter 1 and 2 expenditures are associated with annual operating expenses and Chapters 3 and 4 expenditures deal with capital expenses. An exception is the funding of the deficit of current activities, which is funded through Chapter 4. An explanation of the process associated with developing the budget is addressed in the following sections. Figures 3.2 and 3.4 flow chart the operations and capital budgeting process, respectively.



Operations Budget

Development of budgeted expenditures in Chapter 1 - Wages, Substitutions and Cash Advantages involves the Ministry of Manpower, the Central Agency for Organization and Administration (CAOA), and the Ministry of Finance. Chapter 2 - Current Expenses and Exchanges budgeted expenditures are developed by individual operating departments, the Budget Department and the Ministry of Finance.

Chapter 1 - Wages, Substitutions and Cash Advantages

Step 1 The Ministry of Manpower identifies new positions and manpower requirements for the water utility. The GOGCWS Administrative Affairs Central Department identifies promotions, new positions, and other changes impacting the budgeting of Chapter 1. The new manpower requirements are presented to CAO for review and approval. Concurrent with this process is a review of existing wages. Increases in existing wages

GOGCWS

Decree no. 25 x ,1992
To all divisions & departments

To be able to prepare and submit to the ministry of finance and the Central Agency for Organization and Administration the budgeting project of the GOGCWS for the fiscal year 1993/1994 on time, all divisions and departments should present to the budgeting planning department with the following:

I- Detailed information on the number of jobs required for 1993/1994 related to chapter one in addition to the classes, job group, and the reasons why this job is required in detail so that the Central Agency for Organization and Administration can approve it.

II- The necessary data concerning the estimation of the revenue & expenditure items (Chapter 2 - Current revenues, Chapter III - investment expenditures, Chapter 4 - exchange expenses) according to every department's job prescriptions. This is based upon the actual revenues and expenses of the previous year and upon the names and items of budgeting of fiscal year 1992/93. Increases, decreases or modifications and the operating circumstances are to be taken into consideration, and a detailed report justifying the sums required to be added in the budget of 1993/94 must be prepared. The ministry of finance should get a report of this data and justifications, which are important and necessary for it to be able to approve the required sums and include them in the 1993/94 budget. The censoring department of the stock control should estimate the value of the assignments required to be added to the stocks to maintain the minimum level for continuation of operation.

The dead line for presentation of this data is October 30 th, 1992.

Remark :

The petitions presented beyond this date will not be taken into consideration. Also, the precision of the reports should be highly considered.

Chairman

Engineer Saad Eldeen Eldeeb

Date: 12/10/1992

Figure 3.3
Chairman's Budgeting Decree

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are impacted by two elements. An annual pay increase is stated in the employee law and an adjustment for inflation which is controlled by the central government.

- Step 2 Budgets for approved new positions are combined with budgets for existing position and submitted to the MOF as the total manpower requirements.
- Step 3 A budget review session with the MOF is scheduled and comments on the revised budgets are presented by the GOGCWS Chairman and/or appropriate representatives.
- Step 4 The total manpower requirements are incorporated into the GOGCWS budget and submitted to MOF for inclusion in the State Budget, which is submitted to the Peoples Assembly for approval.
- Step 5 The budget is returned, through the MOF, to the Budget Department. An internal committee, consisting of Central Department personnel, MOF personnel, and the Budget Director allocate the total approved budget to the individual departments taking into account original budget requests.

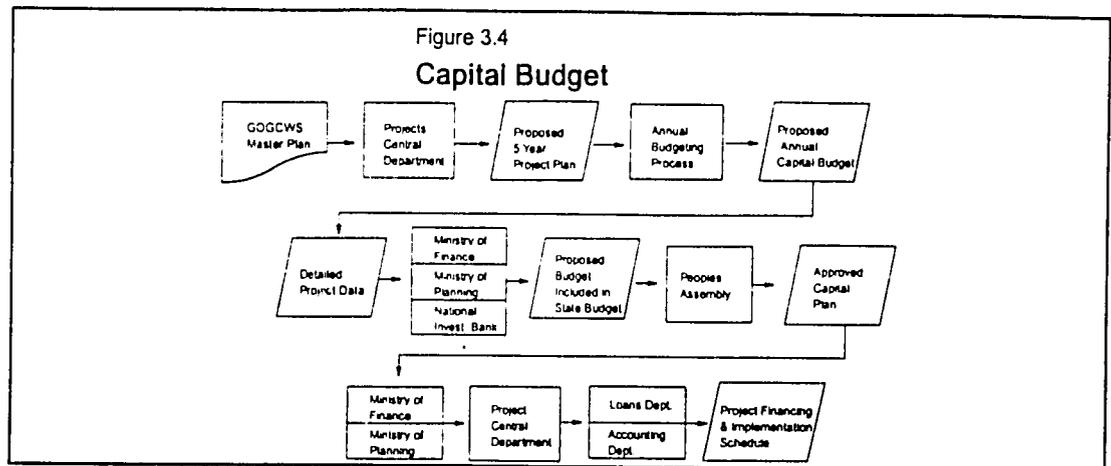
Chapter 2 - Current Expenses and Exchanges

- Step 1 A budgeting decree, signed by the Chairman, is distributed to individual departments requesting an estimation of expenditures for the upcoming fiscal year. Costs that are quantified include, but are not limited to, chemicals and electricity. A copy of an English translation of the 1993-1994 budgeting decree is shown in Figure 3.3.
- Step 2 The departmental requests are compiled and reviewed by the Budget Department, resulting in a proposed budget for Chapter 2 expenditures.
- Step 3 A budget review session with the MOF is scheduled and comments on the revised budgets are presented by the GOGCWS Chairman and/or appropriate representatives. The MOF reviews, revises and modifies the budget as needed, depending on various factors, including miscellaneous revenues and central government regulations.
- Step 4 The revised budget is incorporated into the GOGCWS budget and submitted to MOF for inclusion in the State Budget, which is submitted to the Peoples Assembly for approval.
- Step 5 The budget is returned, through the MOF, to the Budget Department. An internal committee, consisting of Central Department personnel, MOF personnel, and the Budget Director allocate the total approved budget to the individual departments taking into account original budget requests.

Capital Budget

Capital planning and associated budgeting involves the technical branch of GOGCWS, the Ministry of Planning (MOP), the Ministry of Finance (MOF), Ministry of International Cooperation (MIC), and the National Investment Bank (NIB). Identification of the capital needs and specific projects is provided by the Projects Central Department. Capital financing of the projects is provided through the coordination of the MOF, MIC, MOP, and the NIB. Proposed project costs and associated financing are incorporated into Chapter 3 of the budget,

for approval of the Peoples Assembly. Figures 3.4 flow charts the Capital Expenditures budgeting process.



Chapter 3 - Capital Expenditures

- Step 1 The Projects Central Department, under the direction of the Technical Affairs Vice Chairman, reviews existing master plans and develops a five-year capital improvement program. If projects not identified in the five-year plan are needed, an amendment to the plan can be requested of the MOP. In order to include any non-five-year plan projects in the proposed capital improvement plan, the project must have the approval of the MOP. Projects identified in the five-year capital improvement plan are general in nature and a specific breakdown of costs associated with design and construction for each project are not quantified.
- Step 2 During the annual budgeting process, the Projects Central Department analyzes the capital requirements for the upcoming year and identifies specific capital improvement requirements to be included in the proposed annual capital budget.
- Step 3 The Projects Central Department is directed to prepare detailed project data for individual projects identified in the annual capital budget. Project data includes project location, project allocation in the five-year plan, project phases, project costs for each year of the design and construction, and socioeconomic returns.
- Step 4 The detailed plan is presented to the MOP for identification of funding. The MOP works with the NIB, MOF, and if applicable MIC, to develop a financing plan for the proposed improvements.
- Step 5 The proposed capital improvements and associated financing plan is submitted by MOF as part of the State Budget to the Peoples Assembly for approval.
- Step 6 The approved capital plan is returned through the MOF and MOP to the Projects Central Department for implementation.

Step 7 The Projects Central Department coordinates with the Loans Department and Accounting Department concerning the availability and applicability of foreign financing.

Chapter 4 - Capital Exchanges

Expenditures associated with Chapter 4 include principal payments for outstanding local and foreign loans. All outstanding loans have debt repayment schedules. Some foreign loans are tied to a set exchange rate while others float with the current market exchange. Each year, both local and foreign debt repayment requirements are calculated by the Loans Department and included in Chapter 4 expenditures. Historically the deficit between revenues and expenditures, including uncollected accounts, has been identified and included in Chapter 4 expenditures.

Financial Management

As an economic organization, the Board of Directors for GOGCWS is charged with the management of the revenues generated from and expenditures associated with, the production and distribution of water. An annual balance sheet and final accounts statement is required of an economic organization. Financial management addresses the policies and practices associated with the generation of revenues and the payment of expenditures.

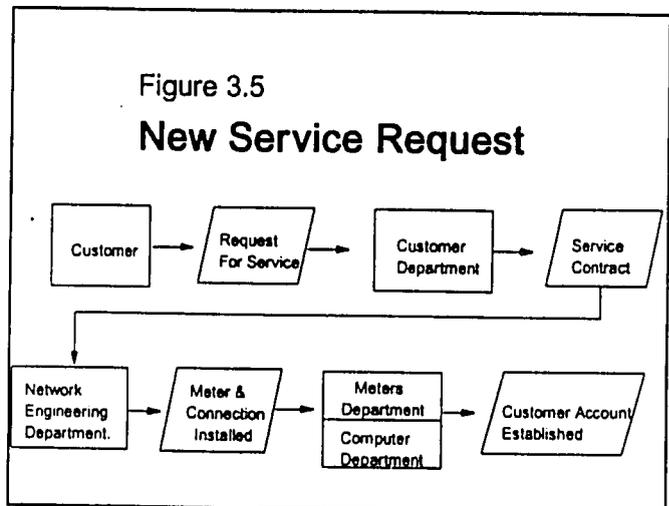
Revenues

GOGCWS revenues are generated from the sale of water (production billed) and related services. Collecting revenues from the sale of water requires the interaction of numerous General Departments and Departments within the water utility. A consumer's request for water service sets into action both technical and financial aspects of the organization. The technical departments provide the connection and where applicable, set the water meter. The financial departments read the meter, generate the bills, and collect the revenue. Figures 3.5, 3.7, 3.8 and 3.9 flow chart the new service request, meter reading, billing procedure and collection procedure, respectively.

New Services

Step 1 The customer presents to the Customer (Subscription) Department, for review, documents required to request water service. A representative of the Department examines the site and estimates costs associated with the installation of the service. A down payment is required prior to entering into a service contract.

Step 2 A service contract is entered into and an account



is opened which includes data about the building, connection size, the funds paid, and the payment date. The Customer Department notifies the Network Engineering Department to begin installation.

Step 3 The Network Engineering Department executes a start-up work order and the connection is made and a meter installed, if meters are available. The balance of the installation costs are paid. The customer account is now established and the Meters Department and the Computer Department are informed.

Step 4 The Computer Department establishes an account in the billing data base. A hard copy of the account information is generated, sent to the Meters Department, and included in the appropriate meter reader's route book. A copy of the information contained in a typical account and printed in a meter read book is shown in Figure 3.6.

Meter Reading

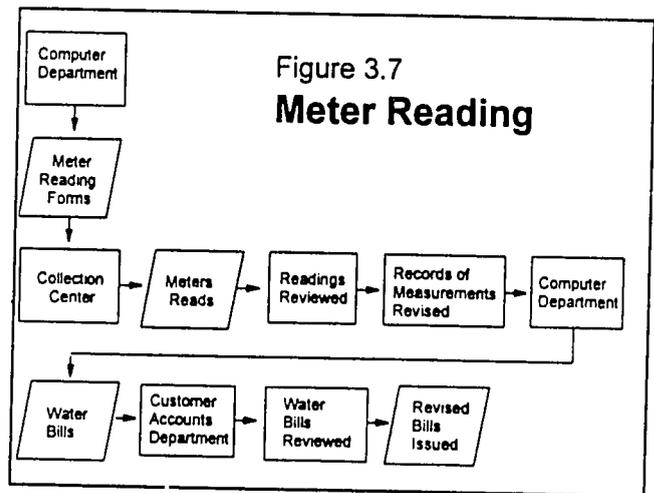
Step 1 At the start of each bi-monthly billing period, the Computer Department generates meter reading forms which are distributed to the appropriate collection centers.

Step 2 Meter readers spend the next four weeks reading meters. Where meters have been installed, the amount of consumption is recorded. Where meters have not been installed, an average usage of

eight (8) cubic meters per room is used to estimate billable usage. Meter readings are manually recorded in meter books. Each account has an individual page which includes the following information:

- account number
- customer's name
- customer classification
- kind of building
- building address
- number of apartments, floors, and rooms,
- kind of meter and connection diameter

If a meter stops working, the reader records such information in the meter book. An average consumption is calculated for the account and used for billing purposes until the meter is repaired or changed. Average usages are also used when the reader is unable to read the meter, such as when buildings are closed or nobody is present to give access to the meter. When a reader obtains the actual reading for an account with a malfunctioning or unreadable meter, the reading is balanced with the previously recorded averages.



No. of permission	باذن رقم	Installed in	ركب في	meter diameter	قطر العداد	Kind of meter	نوع العداد
" "	باذن رقم	/ /	ركب في	"	قطر العداد	Meter changed	استبدال بعداد
" "	باذن رقم	/ /	ركب في	"	قطر العداد	Meter changed	استبدال بعداد

ملاحظات Remarks	جملة المطلوب Total Request	المتوسط Average	كمية الاستهلاك Quantity of consumption	قراءة العداد Meter reading	تاريخ القراءة Date of reading
					آخر رقم في / / Last number
					الدورة الأولى / First cycle
					الدورة الثانية / Second cycle
					الدورة الثالثة / Third cycle
					الدورة الرابعة / Fourth cycle
					الدورة الخامسة / Fifth cycle
					الدورة السادسة / Sixth cycle

Figure 3.6
Sample Meter Book Data.

Check consumption انظر استهلاك

Page No. ص Zone منطقه Year عام Year عام

Page No. ص Zone منطقه Year عام Year عام

Average Consumption متوسط استهلاك م ^٣ M3 Based on duration على أساس المدة		Average Consumption متوسط استهلاك م ^٣ M3 Based on duration على أساس المدة		Average Consumption متوسط استهلاك م ^٣ M3 Based on duration على أساس المدة	
١٩٩ starting from cycle من اندلاع ١٩٩		١٩٩ starting from cycle من الدورة ١٩٩		١٩٩ Starting from cycle من الدورة ١٩٩	
١٩٩ to الى الدورة		١٩٩ to الى الدورة		١٩٩ to الى الدورة	
ملاحظات Remarks	جملة المطلوب Total request	المتوسط Average	كمية الاستهلاك Quantity of consumption	قراءة العداد Meter reading	تاريخ القراءة Date of reading
					آخر رقم في Last number
					الدورة الاولى First cycle
					الدورة الثانية Second cycle
					الدورة الثالثة Third cycle
					الدورة الرابعة Fourth cycle
					الدورة الخامسة Fifth cycle
					الدورة السادسة Sixth cycle

Instructions تنبيهات

Next meter in page no.
العداد الألاحق بصفحة

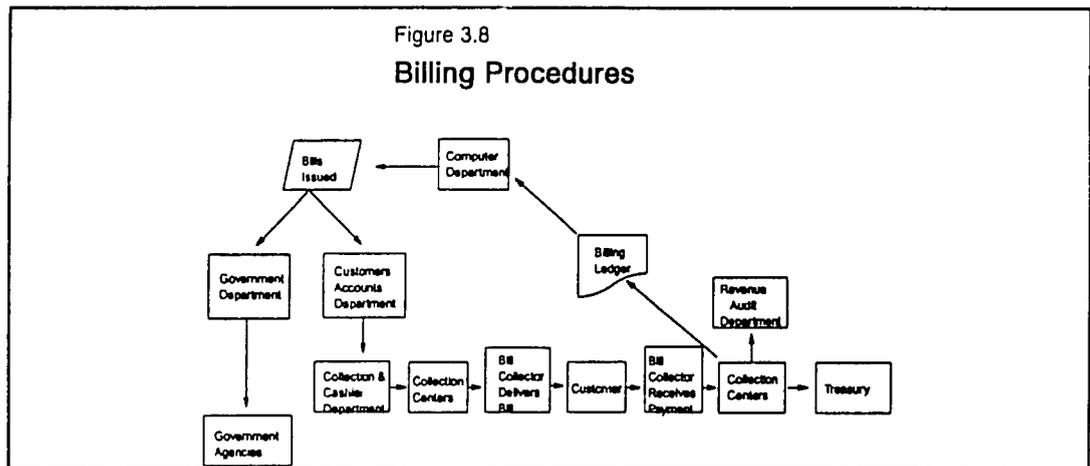
the previous meter in page
العداد السابق بصفحة

Figure 3.6
Sample Meter Book Data

In the event of disputed metered usage, meters will be examined upon a customer's request. If the meter is in order, the customer pays for the metered usage plus L.E. 5 for the testing. If the meter is in error, an average usage is applied to the account for billing purposes and the meter is scheduled for repair or replacement. Small meters are tested by vehicles equipped for testing and large meters are sent to the workshops to be tested.

Step 3 Meter reads are reviewed and records of measurement revised prior to returning the meter reading forms to the Computer Department for calculation of billing invoices. The water bills are reviewed and revised by the Accounts Department prior to distribution. Revised bills are returned to the Computer Department for reprinting.

Billing Procedures



Step 1 Water bills, generated at the Computer Department, are distributed through two Departments:

a) Government Department:

The Government Department processes water bills for all governmental agencies and public sector units. Water bills are sent by mail or hand delivered to individual agencies. Each agency has a line item budget for water service. When the budgeted amount is adequate, payment is made by check. If the budget is inadequate to cover the entire bill, total payment is not made, and the unpaid portion of the bill is recorded as outstanding. If the agency has a budget amount in excess of the water bill, they may make payment on outstanding balances.

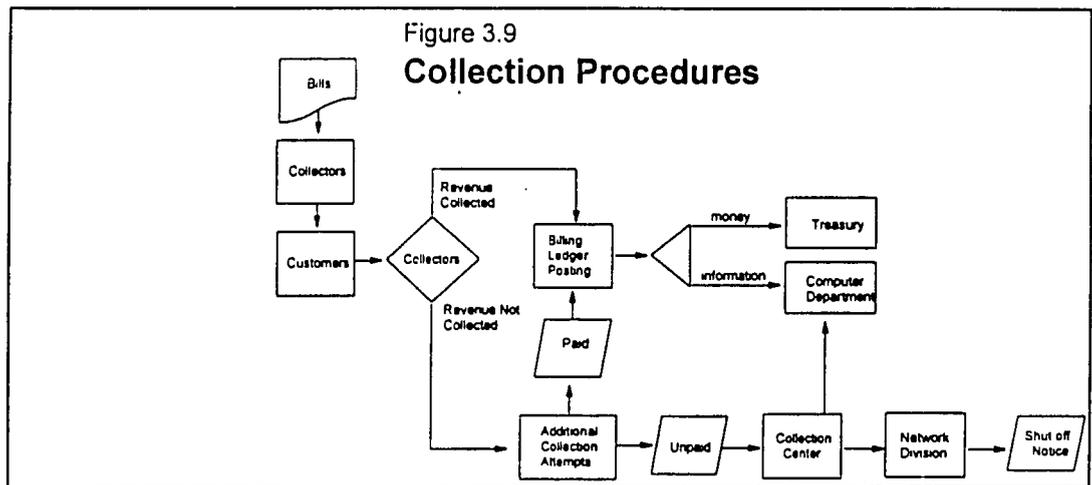
b) Consumers Accounts Department:

The Consumers Accounts Department administers non-governmental accounts. Bills are distributed, through the Collection and Cashier Department, to bill collectors, located at 12 major and four satellite collection centers, for delivery to and collection of payments from the consumers. Each collector is given a ledger and corresponding invoices with the days collection listed. When a customer pays, the bill is left with a customer and the payment is recorded on

the ledger. When the customer is not present, a bill stub is left at the residence to be paid at the collection center window. At the end of the day, the collector returns the billing ledger and corresponding payments to the collection center.

Step 2 Billing ledger information is returned to the Computer Department for input into the billing software. The Computer Department prepares an annual report on amount of revenues collected. Revenues that are received from customers at collection center windows are recorded daily and forwarded to the treasury. Information on revenues collected is also submitted to the Revenues section of the Audit Department.

Collection Procedure



Step 1 Bill collectors spend approximately four week of a billing period distributing bills and collecting payments. As mentioned in the *Billing Procedures* section, when a customer pays the water bill, the payment is recorded by the bill collector on the billing ledger. At the end of each day, the collector returns the billing ledger and corresponding payments to the collection center. This information is forwarded to the Computer Department.

Step 2 When the customer is not present, a bill stub is left at the residence to be paid by the customer at a collection center window.

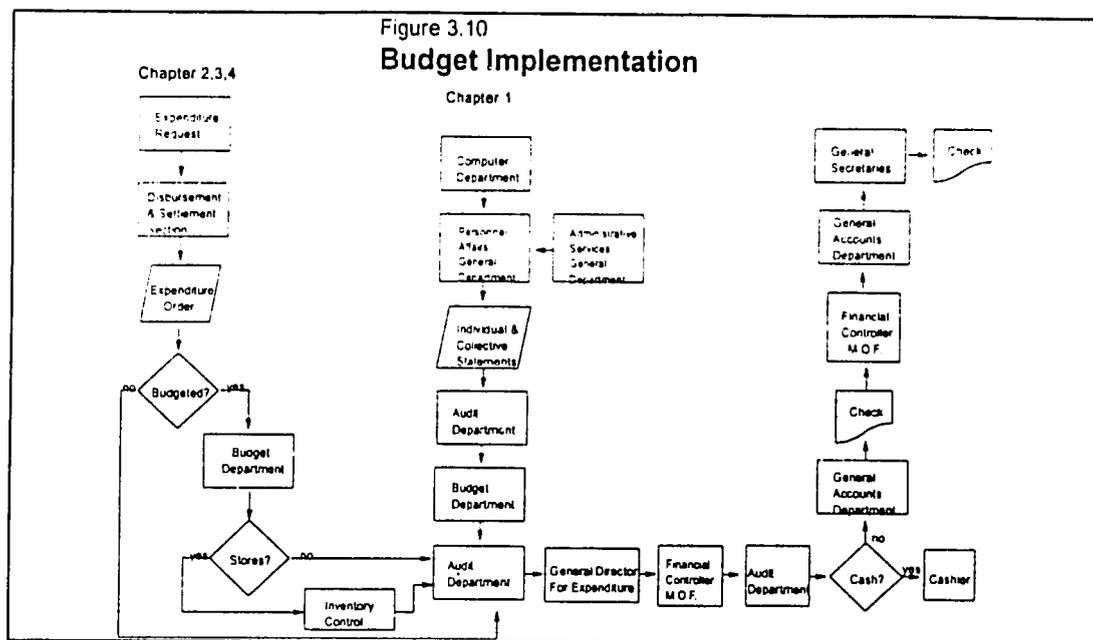
Step 3 If payment is not made by the customer within the first four weeks, additional collection attempts are performed during the second four weeks of the bi-monthly billing period.

Step 4 Bills that are unpaid for six billing periods are identified by the collection center, which notifies the Network Department to begin shut-off procedures.

Expenditures

After the budget has been approved by the Peoples Assembly, it is returned, through the MOF, to the Budget Department. An internal committee, consisting of Central Department

personal, MOF personnel, and the Budget Director implement the budget. Expenditures for Chapter 1 are handled separate from Chapters 2, 3, and 4. A flow chart illustrating the implementation of the budget is shown in Figure 3.10.



Budget Implementation

Chapter 1 - Wages, Substitutions and Cash Advantages

Step 1 The Computer Department generates pay statements, listing wages and salaries, for all GOGCWS employees. The pay statements are forwarded to the Personnel Affairs General Department for review.

Step 2 The Personnel Affairs General Department reviews all pay statements against information supplied by the Administrative Services General Department concerning employee deductions for sick leave, leave without pay and related incidents which may effect the employee's pay.

Step 3 The Personnel Affairs General Department forwards the collective (unadjusted) pay statements and the individual (adjusted) pay statements to the Audit Department. The Audit Department reviews the employee's salary and insurance number, and the amount due for each pay statement. The reviewed statements are forwarded to the Budget Department for commitment of funds.

Step 4 The Budget Department forwards the approved payroll to the Audit Department which forwards it to the General Director for signature.

Step 5 Signed payroll is forwarded to the Financial Controller of the Ministry of Finance for review. The Financial Controller is responsible for making sure payroll complies with State laws and regulations. One of the regulations checked is confirmation of commitment and adequacy of funds from the Budget Department.

Step 6 The approved payroll is returned to the Audit Department for final payment approval. If payment is made in cash, the expense is forwarded to the Cashier. If payment is made with a check, the expenditure is forwarded to Central Accounts.

Step 7 The General Accounts Department prepares the checks and forwards them to the Financial Controller for the second signature. The checks are returned to the General Accounts Department for the first signatures and forwarded to the General Secretaries for distribution.

Chapter 2, 3, and 4 - Current and Capital Expenses and Exchanges

Expenditures associated with Chapters 2, 3 and 4 consist of material and supplies, services and capital related expenditures.

Step 1 A department wishing to incur such expenses, submits an expenditure request or supply form for materials, supplies or related expenditure to the Disbursement and Settlement Section of the General Accounts Department. The requests are of one of two types, budgeted and not budgeted.

Step 2 Budgeted requests are forwarded to the Budget Department for commitment of funds. If the request includes inventory related items, the request is also forwarded to the Inventory Control Department. Expenses not budgeted are forwarded directly to the Audit Department. For budgeted costs, if requested expenditures exceed a budgeted amount, for example chemicals are more expensive than anticipated, a written request is submitted through the Audit Department to the MOF Performance of Budget Division representative requesting funds for the overruns. The representative submits the request to the Chairman for approval. The Chairman advises the MOF of cost overruns which may result in a subsidy from the government. The chapter accounting system allows for an inter-group transfer if costs are less than budgeted .

Step 3 Expenditure requests are forwarded to the Audit Department for review and the General Director for signature.

Step 4 Once the General Director has signed for the expenses, the approval process is similar to that for Chapter 1 expenses, as described in Steps 5 through 7 above.

4. Revenue

Tariff Structure

The existing tariff structure, shown in Table 4.1, consists of volume charges per cubic meter of billable usage for customer classes 1 through 6 and flat rates per number of rooms for the government housing customer class. The magnitude of the volume charge varies per customer class and also per groupings within each customer class. The current tariff structure was implemented in fiscal year 1991-1992. For comparison purposes, the previous tariffs are also shown in Table 4.1.

Customer Data

During 1992-93 water service was billed to approximately 481,000 accounts which were categorized within the seven major customer classes. A discussion of growth patterns, usage distribution, and service areas is presented below.

Growth Patterns

Table 4.2 shows the number of accounts and billed usage for each customer class for the last three years. Although the number of accounts has increased approximately 17 percent (411,950 in fiscal year 1990/91 to 480,708 in fiscal year 1992-1993) in the three year period, billed usage has decreased by 2.5 percent. Billed usage for fiscal year 1990-1991 was 1,028 million cubic meters, while billed usage was 1,003 million cubic meters in fiscal year 1992-1993. The usage decrease may be due to a number of factors, including a down turn in the economy, the reclassification of a wholesale customer, and a change in the basis for estimating nonmetered accounts. However, the entire decrease may not be attributed to factors beyond the control of the water utility. Account data, meter reading practices, and procedures for estimating usage should be reviewed for all customer accounts. The need to verify billing data is supported by water production data. While billable volume was decreasing during the study period, water production increased 8.6 percent, from 1,202 million cubic meters in 1990-1991 to 1,306 million cubic meters in 1992-1993.

Analyses of Classes 1A and 4 indicated irregular growth and billable usage trends. From 1990-1991 through 1992-1993 the number of accounts in Customer Class 1A increased approximately 18 percent. During this study period, the GOGCWS service area expanded to serve areas previously not served by the utility and illegal connections were converted to new water accounts. However, total billable usage corresponding to the account numbers increased only 16 percent. While the number of household accounts increased, usage per account decreased by 1.4%. The difference between account and usage growth can be attributed to the processes associated with recording new accounts and estimating household billable usage. Review of computer billing data identified a duplication of some new accounts data due to the manual processing of new service requests. When an address has more than one account number, multiple accounts are recorded but usage for only one account is recorded and billed. This process results in account numbers with no billable usage. The analyses of estimated billable usage indicated that in general, where meters have been installed, billable usage for household accounts has decreased. In addition, household accounts without meters have the opportunity to dispute billable usage estimates, an option customers exercised in response to the tariff increase implemented in 1991-1992. Another factor impacting Class 1A customer

Table 4.1

**Existing Tariff and Charges
Water Tariff Per Cubic Meter**

NO.	CUSTOMER CLASS	1991-93	1990-91
1.	House Hold	P.T.	P.T.
	A. 30 Cubic Meter .	10	7.5
	B. More than 30 Cubic Meter.	13	9
	C. Construction	28	22
2.	Services Consumption		
	A. Religion,Hospital,Bakeries, Youth Centers Gov't Schools.	8	6.5
	B. Embassies,Sport Clubs,Parties head	13	9
3.	Factories and Commercial Stores		
	A. Small Factories,Public Rest, Coffee Shops,Gas Stations,Hotels (2nd & 3rd class), Private Schools, Hospital (medi- cal insurance), Garage.	23	15
	B. Big Factories .	31	22
4.	Production and Investment Consumption		
	Private hospitals, 1st class hotels, Recreation, Entertainment, Investment companies, Free Zones	55 55	32 40
5.	Nonpotable Water	8	5.5
6.	Potable Water for Non-Household Consumption:		
	A- Gov't factories. B- Gov't Headquarters , Authorities, Local Units.	20	15 9
7.	Fixed Rate or Amount For Gov't Housing:		
	• One Room	100	65
	• Two Rooms	125	75
	• Three Rooms	150	100
	• More Than Three Rooms	200	130
	The hall is considered to be a room in all cases.		

Table 4.2

GOGCWS Customer Data Fiscal Years 1990-91 Through 1992-93

BEST AVAILABLE DOCUMENT

CUSTOMER CLASS	Number of Accounts			Billed Usage (M3)		
	1990-91	1991-92	1992-93	1990-91	1991-92	1992-93
CLASS 1						
HOUSEHOLD	370,640	411,950	435,489	562,961,172	627,000,341	652,202,961
CONSTRUCTION	1,039	0	0	24,696,207	5,401,865	2,337,906
CLASS 2						
RELIGIOUS, HOSPITAL, BAKERIES, YOUTH CENTERS	2,981	3,189	3,296	7,299,527	7,899,064	8,259,882
EMBASSIES, SPORT CLUBS, POLITICAL HEADQUARTERS, SYND.	442	466	454	4,297,679	5,504,095	5,358,493
CLASS 3						
SMALL FACTORIES, RESTAURANTS, 2ND & 3RD CLASS HOTELS, PRIVATE SCHOOLS, COFFEE SHOPS, GAS STATIONS, GOVT HOSPITALS	25,475	26,980	28,430	49,600,714	51,061,778	53,316,414
LARGE FACTORIES	0	312	285	0	18,388,796	19,444,428
CLASS 4						
PRIVATE HOSPITALS, 5 STAR HOTELS, RECREATION, ENTERTAINMENT, 1ST CLASS RESTAURANTS, INVESTMENT COMPANIES, FREE ZONES	468	525	562	10,283,524	11,122,441	10,379,893
CLASS 5						
UNPOTABLE (IRRIGATION)	541	501	491	2,125,513	2,181,625	2,185,992
CLASS 6						
GOVT FACTORIES, GOVT HEADQTRS., GOVT SCHOOLS GENERAL AUTHORITY, LOCAL UNITS	9,041	9,665	10,008	245,320,088	279,915,732	249,265,853
CLASS 7						
GOVT HOUSING	1,317	1,693	1,693	175,588	223,592	237,571
WHOLE SALE	6	0	0	121,050,190	67,142,330	0
TOTAL	411,950	455,281	460,708	1,027,810,202	1,075,841,659	1,002,989,393

data is the fiscal year 1990-1991 and 1991-1992 reclassification of customers within the wholesale class to household customers.

Billable usage for Class 1B construction customers decreased substantially between the beginning and ending of the study period. This was the result of a policy change in the basis for charging for construction water from accounts to square meters.

The decrease in water consumption per account for Customer Class 4 may be associated with decrease in tourism. Tourism has been important to the economy of the Cairo for many years and recent political activities have nurtured safety concerns of tourist, resulting in a decrease in economic activity at large hotels, resorts and related entertainment industry, all Class 4 customers. Although 92 accounts were added to Customer Class 4 between 1990-1991 and 1992-1993, usage per account has decreased by 16 percent, from 22 cubic meters per account in 1990-1991 to 18.5 cubic meters per account in 1992-1993.

Each customer class usage and account data has experienced some irregular trends. Although some irregularities are explainable, the unexplainable require a detailed review of customer information data base and billing policies and procedures.

Usage Distribution

Approximately 95 percent of the billed usage is attributed to three customer classes. Class 1 - Household, is the largest customer class in both number of accounts and usage. Household customers make up approximately 90 percent of customer accounts, and are billed 65 percent of the billed usage. The other large users are Class 6 (government related accounts) which is billed approximately 25 percent of the usage and Class 3 (small commercials) which is billed approximately five percent of the usage.

Review of distribution of billable usage raises questions about the classification of customers. With 95 percent of the billable usage accounted for in three customer classes, the need for an additional four customer classes to monitor and charge for 5 percent of billable usage should be reviewed.

The makeup of customers within the government class should also be studied. Because many industries and factories are operated by the government, they are Class 6 customers. Consideration should be given to subdividing the government class into categories with similar usage requirements. For example, water usage requirements for schools and offices differ greatly from requirements of factories and industries.

Service Area

For billing and collection purposes, the GOGCWS service area consists of 12 major customer centers and four satellite centers. The collection centers are identified on the water service area map shown in Figure 4.1. As of January 1994, the Computer Department had the computer memory capacity to retain six months of billing data for all customer classes except Class 6 - Government Accounts. Class 6 customers are processed manually in the Government and Institution Accounts Department. As part of this study, a request was made to the Computer Department which generated billing information by collection center for the first six months of the 1993-94 fiscal year. Fifteen billing centers operate within the GOGCWS service area. Customer data from the 15th May collection center is currently complied with

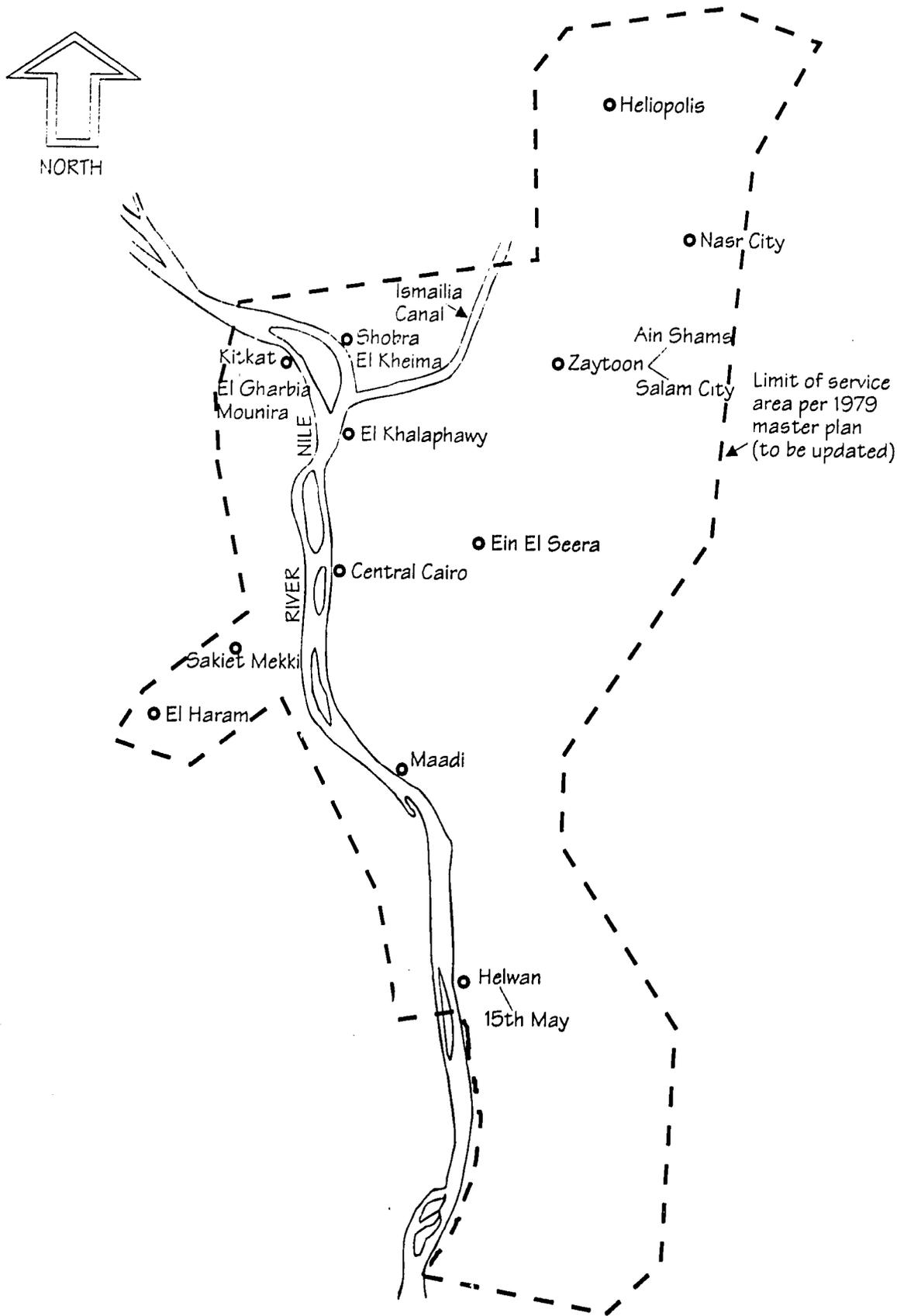


Figure 4.1
Cairo Water Bill Collection Centers

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the Helwan collection center data. The distribution of customers, billed usages, and monthly usage per account among the collection centers is summarized in Tables 4.3, 4.4 and 4.5 respectively. As mentioned above, statistics and comparisons discussed below do not contain Class 6 - Government Accounts.

The largest customer class within each collection center is the household accounts. On average 93 percent of a collection center's accounts are household customers. Only one collection center, Cairo comprised of approximately 75 percent households, has less than 88 percent of accounts classified as household. Three collection centers, Helwan, Ain Shams, and Haram have over 97 percent of their accounts in the household class. Usage per household account averages 123 cubic meters per month. Usage per household account is greatest in the collection centers of Heliopolis and Nasr City (averaging 324 cubic meters) and smallest in the collection centers of Helwan and Salam City (averaging 66 cubic meters.) The usage per account statistic is the product of many factors. Information on the number of flats per account and the number of rooms per flat is needed prior to drawing conclusions on the water usage patterns of household customers. In addition factors such as a commercial establishment in a building classified as Household or a functioning water meter will also impact usage patterns.

Customer Class 3 - Companies and Shops is the other significant customer class. On average six percent of a collection center's accounts are Class 3 customers. With the exception of the Cairo Collection Center which has 22 percent of its accounts in Class 3, companies and shops comprise from two to eight percent of the customer base. On average eight (8) percent of the total water billed is attributed to Class 3. Collection centers with an unusually high percent of consumption in Class 3 include Salam City and Helwan, each with 22 percent and Cairo, with 16 percent.

Revenues

Revenues are generally categorized as current revenues and exchanges or capital revenues. Current revenues and exchanges are those which pay the day to day operating expenses of the utility, generally classified as Chapter 1 and 2 expenses. Capital revenues are those associated with the National Investment Bank and foreign long-term financing instruments and generally finance Chapter 3 and 4 expenses. The revenues discussed in this section are as stated in the final accounts, which reflect billed or budgeted amounts, not collected amounts. In addition, noncash revenues have been identified for balance sheet purposes. A comparison of the budget and final accounts for current and capital revenues for the last three fiscal years is shown in Table 4.6.

Current Revenues and Exchanges

Current revenues include current activity revenues, current exchange revenues, and noncash revenues.

Current Activity Revenue

Production billed revenue can be calculated by applying the tariff structure to the number of accounts and usages. Table 4.1 shows the current and most recent historical tariff structure. Application of the tariffs to the customer data identified in Table 4.2 results in revenue per customer class, as shown in Table 4.7. The difference between the revenues calculated from

Table 4.3

Number of Customers
As of 27/12/1993

Collection Center Customer Class	Cairo	Heliopolis	Zaytoon	Khalafahy	Aln el Sawa	Helwan	Misadi	Shobra el Khayma	Nasr City	Khalai	Helam	Sahel Mabky	An Shams	Salem City	Moynat Gharba	Total
Class 1 Household Use	31,395	12,444	37,677	68,343	38,474	38,181	39,505	17,866	8,868	28,386	49,254	14,241	48,621	14,323	14,259	459,817
Class 2																
Class 2 A																
Religious Institutes & Bakeries	589	166	251	526	398	188	182	120	62	159	227	84	258	86	52	3,328
Public areas	4	0	2	2	1	3	3	1	0	0	1	0	0	0	0	17
Gov't Youth Hostels	2	0	2	0	0	5	1	0	1	0	0	1	0	0	0	12
Class 2 B																
Embassies, Clubs & Groups	48	40	11	7	28	12	34	4	12	199	19	15	2	1	0	432
Subtotal Class 2	643	206	266	535	427	208	200	125	75	358	247	100	260	87	52	3,789
Class 3																
Class 3 A																
Companies & Shops	9,129	1,011	1,608	4,313	3,500	729	1,082	1,510	584	1,482	1,218	597	1,034	713	432	28,918
Two Subscriptions (special price)	1	1	0	1	0	0	1	0	0	3	1	0	0	2	0	10
Class 3 B																
Large Factories	25	4	30	10	5	84	10	29	14	20	16	3	3	14	1	268
Subtotal class 3	9,155	1,016	1,638	4,324	3,505	813	1,093	1,539	578	1,505	1,233	600	1,037	729	433	29,196
Class 4																
Prod. & Investment	8	15	0	1	2	3	5	0	40	6	1	0	0	4	0	85
Prod. & Investment	104	27	13	16	27	17	45	3	18	113	59	24	3	1	0	468
Subtotal Class 4	112	42	13	17	29	20	50	3	58	119	60	24	3	5	0	553
Class 5																
Gardens Watering	20	7	1	0	27	0	164	0	13	385	4	39	0	0	0	640
Class 7																
Gov't Habitation	549	380	117	234	88	70	1	0	48	97	0	19	81	475	21	2,180
Total	41,474	14,095	39,710	73,453	40,550	38,272	41,013	19,532	9,638	30,830	50,798	15,023	49,982	15,619	14,785	498,155

Table 4.4
Quantity of Water Sold
From 1/7/93 to 27/12/1993

Collection Center Customer Class	Collection Center																
	Cairo	Heliopolis	Zaytoon	Khalafawy	Ain el Beers	Heliwan	Mardi	Shobra el Khayma	Near City	Killat	Haram	Sabret/Melly	Ann Shant	Salem City	Mountal Gharbia		
Class 1 Household Use	33,901,267	25,068,392	29,781,098	44,796,214	22,569,258	12,713,986	20,031,513	11,074,440	16,574,524	29,512,003	33,386,601	7,754,318	36,389,142	6,620,930	8,909,563	338,585,4	
Class 2																	
Class 2 A Religious Institutes & Bakeries	812,436	381,147	257,494	542,645	458,702	241,344	146,352	94,488	293,390	218,100	338,729	104,199	215,927	110,620	23,237	4,018.8	
Public areas	1,304	0	258	339	1,275	1,005	548	471	0	0	745	0	0	0	0	5,9	
Gov't Youth Hostels	3,179	0	1,080	0	0	11,748	576	0	730	0	0	600	0	0	0	17,9	
Class 2 B Embassies, Clubs & Groups	217,447	287,268	45,829	35,367	68,439	38,962	148,089	2,431	81,202	1,211,827	27,619	17,708	780	120	0	2,182.9	
Subtotal Class 2	834,368	648,415	304,459	578,351	528,416	293,059	295,565	97,390	375,322	1,429,927	367,143	122,505	216,702	110,740	23,237	8,225.6	
Class 3																	
Class 3 A Companies & Shops Two Subscriptions (special price)	6,240,412	1,822,718	1,848,853	2,748,091	1,935,018	471,778	909,552	1,315,283	1,343,449	1,263,634	1,241,366	553,145	1,312,781	1,928,867	94,871	24,827.6	
Class 3 B Large Factories	537,381	23,250	1,398,057	152,735	43,908	3,346,075	140,568	250,144	156,178	939,533	187,512	54,042	10,897	63,518	30,000	12,8	
Subtotal class 3	6,778,413	1,846,313	3,044,910	2,901,058	1,978,926	3,817,851	1,050,984	1,665,427	1,499,627	2,203,471	1,429,042	607,187	1,323,678	1,990,815	124,671	32,272.3	
Class 4 Prod. & Investment Prod. & Investment Subtotal Class 4	194,082 754,750 948,832	201,453 109,688 311,139	0 27,754 27,754	144 79,073 29,217	7,440 425,194 432,634	64 62,562 62,626	2,867 112,645 115,512	0 2,228 2,228	1,798,192 105,590 1,901,782	54,470 1,270,040 1,324,510	1,020 571,903 572,923	0 93,760 93,760	0 3,982 3,982	0 169,743 175,508	0 5,783 0	0 2,427,4 3,574.9	
Class 5 Gardens Watering	42,900	1,400	110,000	0	25,236	0	87,968	0	51,780	343,962	1,847	21,627	0	0	0	686.7	
Class 7 Gov't Habitation	0	0	0	0	0	0	120	0	0	0	0	64	0	0	0	1.8	
Total	42,515,778	27,875,659	33,268,221	48,304,840	25,534,470	18,887,522	21,581,662	12,839,485	20,403,035	34,813,873	35,759,756	8,099,461	37,933,509	8,897,991	9,057,471	383,772,7	

Table 4.5

Monthly Usage per Account (m3 per customer)
From 1/7/93 to 27/12/1993

Collection Center Customer Class	Cairo	Heliopolis	Zaytoon	Khalafayeh	Ain el Suez	Heliwan	Miadi	Shobra el Khayma	Near City	Kinok	Ilarem	Sakret Mithly	Ain Shama	Salam City	Mouninef Gharbe	
Class 1 Household Use	180	336	132	109	103	56	85	103	312	173	113	85	125	77	104	1
Class 2																
Class 2 A Religious Institutes & Bakeries	173	363	171	172	192	214	151	131	789	229	249	207	139	214	74	2
Public areas	54	0	21	28	213	56	30	79	0	0	124	0	0	0	0	
Gov't Youth Hostels	285	0	90	0	0	392	96	0	112	0	0	100	0	0	0	
Class 2 B Embassies, Clubs & Groups	755	1,197	691	842	407	541	726	101	1,128	1,015	241	197	65	20	0	
Subtotal Class 2	218	525	191	180	206	235	246	130	834	666	248	204	139	212	74	2
Class 3																
Class 3 A Companies & Shops Two Subscriptions (special price)	114	300	171	108	92	108	140	145	397	142	170	154	212	450	37	1
Class 3 B Large Factories	3,583	969	7,756	2,546	1,464	6,639	2,343	2,012	1,859	7,829	1,354	3,502	605	756	5,000	4,6
Subtotal class 3	124	303	310	112	94	783	160	180	432	244	193	162	213	455	48	1
Class 4 Prod. & Investment Prod. & Investment	4,043	2,238	0	24	620	4	98	0	7,484	1,513	170	0	0	7,073	0	4,7
Subtotal Class 4	1,210	677	356	303	2,625	613	417	124	1,100	1,871	1,616	651	221	961	0	1,2
Class 5 Gardens Watering	1,412	1,235	356	286	2,486	522	385	124	5,660	1,855	1,531	651	221	5,850	0	1,6
Class 6 Gov't Habitation	358	33	18,333	0	156	0	89	0	664	157	77	92	0	0	0	1
Class 7																
Average	169	330	140	110	105	72	88	110	353	188	117	90	126	95	102	1

Table 4.6

**Comparison of Budget and Final Accounts for
Current Revenues and Capital Revenues**

		Fiscal Year Ending 30 June								
		1991			1992			1993		
Line No.	Current Revenues & Exchanges	Budget LE	Final Account LE	Difference LE	Budget LE	Final Account LE	Difference LE	Budget LE	Final Account LE	Difference LE
1	Current Activity Revenue									
2	Production Billed	95,500,000	87,502,423	(7,997,577)	110,834,000	135,084,227	24,250,227	160,000,000	135,882,433	(24,117,567)
3	Services Budgeted	7,300,000	8,745,571	1,445,571	8,500,000	10,244,501	1,744,501	10,000,000	9,360,000	(839,000)
	Total Current Activity	102,800,000	96,247,994	(6,552,006)	119,334,000	145,328,728	25,994,728	170,000,000	145,242,433	(24,956,569)
4	Current Exchange Revenue									
5	Rent	650,000	607,532	(42,468)	700,000	789,412	89,412	650,000	842,777	192,777
6	Compensation & Penalties	100,000	119,340	19,340	300,000	224,042	(75,958)	200,000	205,310	5,310
7	Other Various Revenues	7,800,000	7,053,847	(746,153)	10,000,000	21,168,262	11,168,262	34,000,000	29,207,199	(4,792,801)
8	Credit Interests	5,000	3,254	(1,746)	5,000	1,633,939	1,628,939	5,000	5,319,624	5,314,624
9	Capital Profits	1,000	59,261	58,261	1,000	336,490	335,490	1,000	0	(1,000)
10	Past Years Revenues	1,800,000	1,663,647	(136,353)	1,800,000	2,276,982	476,982	1,500,000	1,325,182	(474,818)
	Total Current Exchange Revenues	10,356,000	9,506,881	(849,119)	12,806,000	26,429,127	13,623,127	36,556,000	36,677,592	251,592
11	Total Current Revenues	113,156,000	105,754,875	(7,401,125)	132,140,000	171,757,855	39,617,855	206,656,000	181,951,023	(24,704,977)
12	Noncash Current Revenues									
13	Internal Production	0	425,112	425,112	0	432,592	432,592	0	450,256	450,256
14	Difference of Calculated Rent	3,000,000	12,613,441	9,613,441	6,000,000	8,792,069	2,792,069	12,000,000	9,091,825	(2,908,175)
15	Difference of Calculated Interests	5,000,000	8,540,872	3,540,872	6,000,000	12,122,969	6,122,969	10,000,000	10,857,202	857,202
	Total Noncash Revenues	8,000,000	21,579,425	13,579,425	12,000,000	21,347,630	9,347,630	22,000,000	20,399,783	(1,600,217)
16	Deficit of Current Operations									
17	Financed Deficit	27,591,000	29,367,000	1,776,000	42,504,000	43,568,000	1,064,000	41,540,000	43,925,000	2,385,000
18	Carried Forward Deficit	35,762,000	80,938,754	45,176,754	40,500,000	77,356,333	36,856,333	57,000,000	135,174,227	78,174,227
	Total Deficit of Current Operations	63,353,000	110,305,754	46,952,754	83,004,000	120,924,333	37,920,333	98,540,000	179,099,227	80,559,227
19	Capital Revenue									
20	Cash Revenue									
21	Advance Payments For Investment	0	10,061,323	10,061,323	0	0	0	0	0	0
22	Public Treasury Share	65,379,000	70,325,000	4,946,000	73,463,000	72,367,769	(1,095,231)	74,850,000	74,850,000	0
23	Grants	3,730,000	9,763,048	6,033,048	10,420,000	54,806,009	44,386,009	22,000,000	160,250,767	138,250,767
24	National Investment Bank Loan	59,340,000	116,391,552	56,851,552	59,580,000	127,675,524	68,095,524	55,000,000	136,880,968	81,880,968
25	Foreign Loans	4,060,000	590,192	(3,469,808)	2,000,000	9,819,956	7,819,956	3,000,000	33,224,154	30,224,154
26	Decrease In No. of Debtors & Debited Balances	20,000,000	5,051,090	(14,948,910)	20,000,000	4,370,646	(15,629,354)	0	11,635,500	11,635,500
27	Increase In No. of Creditors & Credit Balances	25,000,000	35,692,577	10,692,577	25,000,000	43,891,480	18,891,480	0	80,737,332	80,737,332
28	Miscellaneous (Other) Debtors	0	0	0	0	0	0	0	1,646,863	1,646,863
	Total Cash Revenue	177,709,000	247,874,782	70,165,782	190,463,000	312,931,384	122,468,384	154,850,000	499,225,584	344,375,584
29	Noncash Capital Revenue									
30	Increase Price Reserve	1,200,000	1,160,757	(39,243)	1,200,000	1,268,466	68,466	1,200,000	1,500,770	300,770
31	Other Reserves	0	1,565,589	1,565,589	0	2,535,983	2,535,983	0	0	0
32	Depreciation Provision	35,762,000	41,649,178	5,887,178	40,500,000	50,999,484	10,499,484	57,000,000	60,859,754	3,859,754
	Other Provision	0	3,088,076	3,088,076	0	7,607,950	7,607,950	0	(54,178)	(54,178)
	Total Noncash Capital Revenue	36,962,000	47,463,600	10,501,600	41,700,000	62,411,883	20,711,883	57,200,000	62,306,346	4,106,346

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Table 4.7

GOGCWS Customer Data Fiscal Years 1990-91 Through 1992-93

CUSTOMER CLASS	Number of Accounts			Billed Usage (M3)			Billed Revenue (L.E.)		
	1990-91	1991-92	1992-93	1990-91	1991-92	1992-93	1990-91	1991-92	1992-93
CLASS 1									
HOUSEHOLD	370,640	411,950	435,489	562,961,172	627,000,341	652,202,961	43,779,951	65,302,609	68,934,916
CONSTRUCTION	1,039	0	0	24,696,207	5,401,865	2,337,906	5,433,165	1,433,421	654,613
CLASS 2									
RELIGIOUS HOSPITAL, BAKERIES, YOUTH CENTERS	2,981	3,189	3,296	7,299,527	7,899,064	8,259,882	474,491	628,350	660,790
EMBASSIES, SPORT CLUBS, POLITICAL HEADQUARTERS, SYND.	442	466	454	4,297,679	5,504,095	5,358,493	386,751	699,242	693,034
CLASS 3									
SMALL FACTORIES, RESTAURANTS, 2ND & 3RD CLASS HOTELS, PRIVATE SCHOOLS COFFEE SHOPS, GAS STATIONS GOVT HOSPITALS	25,475	26,980	28,430	49,600,714	51,061,778	53,316,414	7,440,107	11,536,522	12,262,775
LARGE FACTORIES	0	312	285	0	18,388,795	19,444,428	0	5,700,526	6,027,773
CLASS 4									
PRIVATE HOSPITALS, 5 STAR HOTELS, RECREATION, ENTERTAINMENT, 1ST CLASS RESTAURANTS, INVESTMENT COMPANIES, FREE ZONES	468	525	562	10,283,524	11,122,441	10,379,893	3,417,906	5,902,083	5,708,941
CLASS 5									
UNPOTABLE (IRRIGATION)	541	501	491	2,125,513	2,181,625	2,185,992	116,908	168,741	174,879
CLASS 6									
GOVT FACTORIES, GOVT HEADQTRS., GOVT SCHOOLS GENERAL AUTHORITY, LOCAL UNITS	9,041	9,665	10,008	245,320,088	279,915,732	249,265,853	20,993,336	39,642,490	40,476,371
CLASS 7									
GOVT HOUSING	1,317	1,693	1,693	175,588	223,592	237,571	13,157	22,259	23,757
WHOLE SALE	6	0	0	121,050,150	67,142,330	0	5,447,259	4,028,539	0
TOTAL	411,950	455,281	480,708	1,027,810,202	1,075,841,859	1,002,989,393	87,503,071	135,064,782	135,617,849

tariffs and the final accounts data is due to adjustments made during the final audit.

Billed revenue has increased from L.E. 87 million in 1990-1991 to L.E. 136 million in 1992-1993. The significant increase in revenues between 1990-1991 and 1991-1992 was the result of a tariff increase effective 1 July 1991. The relatively minor increase in billed revenue between 1991-1992 and 1992-1993 does not necessarily parallel the customer data which indicated a decrease in water usage. Reclassification of accounts from a low tariff class to a higher tariff class may account for the increase in revenues.

Revenues from services such as new customer connection, installation of meters, and meter read verification (GOGCWS charges to verify a meter at the customer's request) are included in services budgeted. Because revenues from services budgeted are partially dependent upon new customers, the magnitude of the amount budgeted varies from year to year and is somewhat dependent upon local economic conditions. Since 1990-1991 services budgeted have varied from a high of L.E. 10.2 million to a low of L.E. 8.7 million.

Current Exchange Revenue

Current exchange revenues include meter rent, compensation and penalties paid by contractors for delays in work execution, interest income, profits from the sale of assets, and revenue collected in current year for water sold in past years. In addition, the water utility collects revenue for the sewer utility through a sewer service charge of 20 percent for household customers and 50 percent for all other classes. Sewer service charge revenues are transferred to the sewer utility on a monthly basis.

Noncash Revenue

A balance sheet provides a snapshot of the water utility's financial condition as of the date shown on the balance sheet. In order to recognize savings realized by the utility that are a result of management practices, noncash revenue such as internal production and differences in calculated rent and interests are identified and recorded as revenues in the balance sheet. A corresponding noncash expenditure is budgeted for rents and interest. The difference in calculated rent represents the difference between the rent value of GOGCWS buildings if they were rented by others and the actual net value of the buildings to GOGCWS. Differences in calculated interests are determined as the difference between the interests of money invested according to the bank loan rate and the value of interests due from borrowing money from others.

Deficit of Current Operations

When budgeted expenditures exceed estimated revenues, the gap is identified as a deficit and funded through subsidies, loans or is carried forward. Final accounts deficits have increased from L.E. 110 million in 1990-91 to L.E. 179 million in 1992-1993.

Capital Revenues

Capital revenues include cash and noncash revenues.

Cash Revenue

Capital related cash revenues, including grants, loans, shares from the public treasury, and advance payments for investments, have increased from L.E. 248 million to L.E. 499 million during the study period. Historically, the amount budgeted for capital revenues has been

substantially less than the final accounts. Several factors contribute to this trend, including the use of public treasury subsidies and loans from the National Investment Bank to assist the GOGCWS in meeting their current operating obligations.

Noncash Capital Revenue

Like noncash current revenues, noncash capital revenues provide an input into the balance sheet to illustrate a financial snapshot of capital related revenues. For example, depreciation and recognition of price reserve increases do not provide cash for the financing of capital related expenses, however the change in the amounts from year to year does illustrate changes in financial condition of the utility.

Alternative Revenue Sources

GOGCWS uses traditional revenue sources to finance current operations and the capital program. When the budgeting process indicates a need for additional revenues, the options available to GOGCWS are limited to increasing tariffs, incurring debt, and/or requesting subsidies from the central government. Developing alternative sources of revenues would provide GOGCWS with additional revenues thus reducing the impact on existing sources.

Current Operations

Revenues generated from current operations should be related to the service provided by the charge. For example, water tariffs are related to the customers consumption. Likewise, charges for testing meters at the customer's request are related to the costs associated with providing the specialized service. GOGCWS should review services and work effort provided to customers which are outside normal service areas and should be charged accordingly. In addition, new services could be provided by the utility. A list of potential services could include, but not be limited to:

- Turn on/turn off charges
- Illegal turn-on charge
- Special meter readings/final readings
- Temporary hydrant permits
- Water audits

When developing a charge for additional services, the full cost for providing such service must be determined and reflected in the charge. If the full cost is not recovered, the net financial impact of providing additional services will be negative.

Capital

Alternative capital financing techniques should meet the long-range goals of a utility as well as provide a more effective and less costly way to finance capital requirements. GOGCWS currently uses the traditional revenues sources of loans and grants to finance capital expenditures. Alternative revenue sources which may be available to the utility include, but are not limited to:

- General property tax
- Special assessments against properties directly benefiting from improvements
- Impact fees for new developments

- Joint use agreements whereby the public and private investment is coordinated
- Tax credits for private investors who construct infrastructure

Prior to implementation of any alternative capital financing tool, the tool should be defined and described, the purpose identified and the requirements of participating parties outlined. The financial impact on all parties should also be reviewed.

5. Expenditures

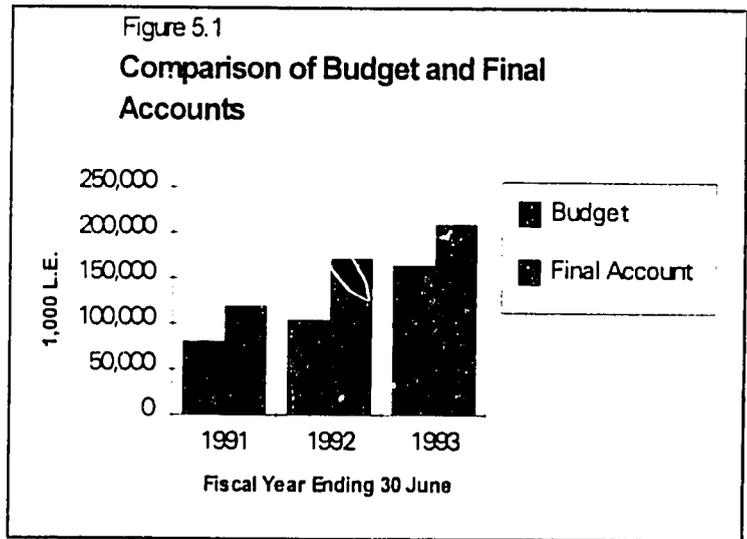
Expenses are categorized in four chapters, (1) wages; (2) current expenses and exchanges; (3) capital expenses; and (4) capital exchanges. Generally speaking, chapters 1 and 2 have been considered costs associated with operations and chapters 3 and 4 have been associated with capital expenditures. The expenses discussed in this section are as stated in the final accounts, which reflect actual cash expenditures. In addition, noncash expenditures have been identified for balance sheet purposes. A comparison of the budget and final accounts for operating and capital expenditures for the last three fiscal years is shown in Table 5.1.

Operating Expenses

Operating expenses include current expenses, interest expense, and noncash expenditures.

Current Expenses

Current Expenses include wages and current expenses and exchanges. As explained in Section 3 of this audit, many parties are involved in the development of the GOGCWS operating budget. The ability of the budgeting process to accurately forecast current expenses is illustrated in Figure 5.1. Final account expenditures for fiscal year 1991-1992, 1991-1992, and 1992-1993 were 147 percent, 165 percent and 127 percent, respectively, of the budgeted amount.



Wages, which reflect the total value of the employee work effort, consist of cash wages and allowances, advantages in kind, insurance advantages and others. On average, salaries associated with permanent posts account for 19 percent of total wage expense. The remaining 81 percent is associated with rewards, allowances, cash advantages, and insurances. From fiscal year 1990-1991 through fiscal year 1992-1993 wages have increased approximately 35 percent from L.E. 48.8 million to L.E. 65.8 million.

Current expenses and exchanges include commodities, service input, current exchanges, other specialized transfers and past years expense. Total current expenses and exchanges have increased approximately 104 percent (L.E. 70.1 million to L.E. 143 million) from fiscal year 1990-1991 to fiscal year 1992-1993. Commodities, the largest element of current expenses and exchanges including expenditures associated with electricity and chemicals as well as fuel, oil, and spare parts, has increased 83 percent, from L.E. 60.8 million to L.E. 111.4 million during the same time period. Also included in the current expenses and exchange

Table 5.1

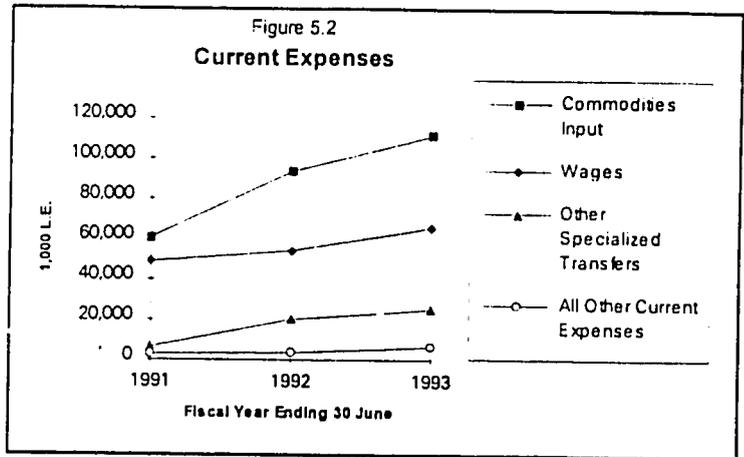
Comparison of Budget and Final Accounts for
Current Expenses and Capital Expenses

Line No.	Fiscal Year Ending 30 June									
	1991			1992			1993			
	Budget	Final Account	Difference	Budget	Final Account	Difference	Budget	Final Account	Difference	
	LE	LE	LE	LE	LE	LE	LE	LE	LE	
	Operating Expenses									
	Current Expenses									
	Wages									
1	Cash Wages & Allowances	29,138,483	35,737,591	6,599,108	32,365,685	38,722,888	6,357,203	34,523,471	46,381,677	11,860,206
2	Advantages in Kind	956,000	2,041,638	1,085,638	956,000	3,003,398	2,047,398	956,000	3,559,747	2,603,747
3	Insurance Advantages	4,594,321	6,344,246	1,749,925	5,252,808	6,974,277	1,721,469	5,607,259	8,434,162	2,826,903
4	Other	3,911,196	4,711,010	799,814	4,325,507	5,544,678	1,219,171	8,189,270	7,434,710	(754,560)
	Current Expenses & Exchanges									
5	Commodities Input	33,500,000	60,807,420	27,307,420	50,000,000	93,492,196	43,492,196	78,625,000	111,290,279	32,765,279
6	Service Input	2,000,000	2,163,504	163,504	2,300,000	2,625,824	325,824	2,400,000	4,777,468	2,377,468
7	Current Exchanges	102,000	8,436	(93,564)	102,000	34,362	(67,638)	902,000	39,023	(862,977)
8	Other Specialized Transfer	6,002,000	6,339,742	337,742	8,002,000	20,131,403	12,129,403	32,002,000	25,141,271	(6,860,729)
9	Past Years Expenses	5,000	737,745	732,745	0	786,836	786,836	0	1,696,017	1,696,017
10	Total Current Expenses	80,209,000	118,891,332	38,682,332	103,304,000	171,315,862	68,011,862	163,205,000	208,856,354	45,651,354
	Interest Expense									
11	Local Interests	45,343,000	41,152,944	(4,190,056)	53,986,000	56,826,829	2,840,829	69,072,000	78,346,399	9,274,399
12	Foreign Interests	15,000,000	10,436,530	(4,563,470)	17,154,000	12,504,134	(4,649,866)	15,919,000	11,726,877	(4,192,123)
13	Total Interest Expense	60,343,000	51,589,474	(8,753,526)	71,140,000	69,330,963	(1,809,037)	84,991,000	90,073,276	5,082,276
14	Total Operating Expenses	140,552,000	170,480,806	29,928,806	174,444,000	240,646,825	66,202,825	248,196,000	298,929,630	50,733,630
	Noncash Expenditures									
15	Depreciation	35,762,000	42,809,934	7,047,934	40,500,000	52,267,951	11,767,951	57,000,000	62,420,877	5,420,877
16	Difference in Calculated Interests	5,000,000	8,540,872	3,540,872	6,000,000	12,122,969	6,122,969	10,000,000	10,857,702	857,702
17	Difference in Calculated Rents	3,000,000	12,613,441	9,613,441	6,000,000	8,792,069	2,792,069	12,000,000	9,091,825	(2,908,175)
18	Provision Other Than Depreciation	195,000	3,195,000	3,000,000	200,000	200,000	0	0	150,000	150,000
19	Total Noncash Expenditures	41,957,000	67,159,247	25,202,247	52,700,000	73,382,989	20,682,989	79,000,000	82,520,404	3,520,404
	Capital Expense									
	Cash Expenditures									
20	Chapter 3 Capital Expenditures	67,330,000	98,698,967	31,368,967	72,000,000	125,542,125	53,542,125	80,000,000	259,489,631	179,489,631
21	Settlement of Long Term Local Loans	0	0	0	0	0	0	0	0	0
22	To National Investment Bank	29,375,000	29,375,000	0	36,223,000	36,223,000	0	40,941,000	40,941,000	0
23	To Others	4,000	3,935	(65)	4,000	3,935	(65)	4,000	3,935	(65)
24	Settlement of Foreign Loans	31,000,000	34,987,932	3,987,932	37,236,000	36,140,834	(1,095,166)	35,105,000	34,059,310	(1,045,690)
25	Increase in No. of Debtors & Balances	30,000,000	28,626,989	(1,373,011)	25,000,000	69,424,953	44,424,953	0	37,708,896	37,708,896
26	Decrease in No. of Creditors & Balances	20,000,000	13,462,797	(6,537,203)	20,000,000	16,057,190	(3,942,810)	0	33,477,231	33,477,231
27	Advance Payments for Investment	0	1,646,167	1,646,167	0	11,978,927	11,978,927	0	20,162,913	20,162,913
	Total Cash Expenditures	177,709,000	206,801,787	29,092,787	190,463,000	295,370,964	104,907,964	156,050,000	425,842,916	269,792,916
	Noncash Capital Expenditures									
28	Increase in Articles Stored	1,200,000	7,597,843	6,397,843	1,200,000	2,615,970	1,415,970	0	514,786	514,786
29	Deficit of Current Activities (Forward)	35,762,000	80,938,754	45,176,754	40,500,000	77,356,333	36,856,333	57,000,000	135,174,228	78,174,228
30	Total Noncash Expenditure	36,962,000	88,536,597	51,574,597	41,700,000	79,972,303	38,272,303	57,000,000	135,689,014	78,689,014

category is other specialized transfers which reflect the monthly transfer of revenues collected for the sewer utility. These transfers to the sewer utility increased from L.E. 6.3 million to L.E. 25.1 million between fiscal year 1990-1991 and 1992-1993.

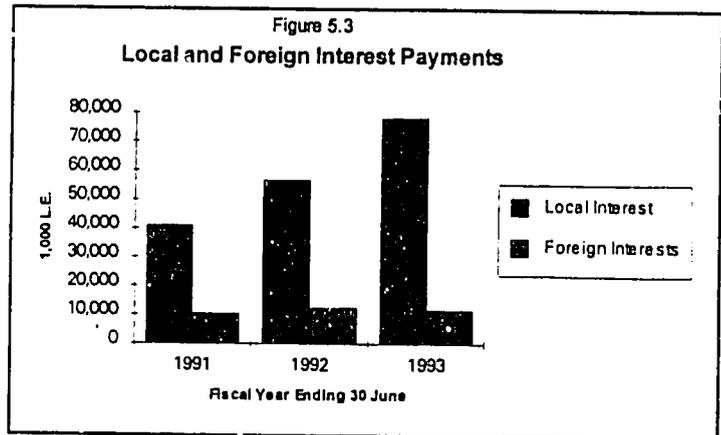
The increase in the various current expense categories is shown in Figure 5.2. Because commodities represents the largest element of current expenses and exchanges, the rate of increase for this expense category in comparison to other current expenses is a concern. Over half of the commodities input expenditures is related to fuel, oil, and electrical power for plant operations. These

three items have increased 110% from L.E. 32.5 million to L.E. 68.3 million between fiscal year 1990-1991 and 1992-1993. Electrical power price increases have been substantial over this period. Cost containment measures and a review of operations may be necessary to help control the amount of commodities used.



Interest Expenses

Loans from the National Investment Bank (NIB) and foreign sources are scheduled to be repaid in a timely manner. The annual debt service (the principal and interest payment) is dependent upon the interest rate and term of the loan. The interest portion of the debt service is budgeted in the operating expenses on Lines 11 through 13 of Table 5.1.



Interest payments on foreign loans have stayed relatively constant, reflecting a decrease in funding of major capital investment. Interest paid on local loans has increase substantially due to two factors, (1) more capital investment is being funded with local funds and (2) a portion of the revenue shortfalls of the utility are covered with loans from the NIB. As shown in Table 4.6 in the Revenue section of this audit, the magnitude of NIB loans has increased from L.E. 116 million to L.E. 137 million between 1990-1991 and 1992-1993. Likewise, interest payment have increased from 41 million L.E. in 1990-1991 to 78 million L.E. in 1993. A comparison of foreign and local interest payments is shown in Figure 5.3.

Noncash Expenditures

Noncash expenditures include two major elements, 1) depreciation and 2) differences in calculated rents and interest. Like noncash revenues the differences in calculated rents and interest reflect management practices and are included in the balance sheet to reflect those practices. Depreciation accounts for the cost of a long-lived physical asset to the period in which services are received from the asset. As most assets are financed by loans, payment of the principal of the outstanding loan should account for the funding of the assets depreciation.

Capital Expenses

Capital Expenses are subdivided into cash expenditures and noncash expenditures.

Cash Expenditures

Capital cash expenditures include major capital improvements listed under Chapter 3 of the budget, the settlement of loans, and changes in debtors or creditors balances. Chapter 3 improvements are identified by the Projects Central Department and funding for such improvements are provided for in the capital cash revenues. The settlement of long term loans and the advance payments for investments account for the repayment of the principal on outstanding local and foreign loans. Increases in debtors and decreases in creditors balances are both a cash requirement of the utility. An increase in debtors balances(accounts receivable) represents an increase in uncollected production billed revenue outstanding. While a decrease in creditors balances (accounts payable) indicates the GOGCWS has used cash to reduce the amount owed to creditors.

Noncash Expenditures

Noncash capital expenditures consist of increase in articles stored and deficit of current activities. When the value of articles stored (inventory) increases due to inflationary factors, the additional value of the stores (inventory) is recorded. This value is not an actual cash requirement of the utility, however it does reflect costs associated if the stores would have to be purchased at current market prices.

The deficit of current activities reflects the difference between budgeted revenues and expenditures.

6. Capital Investment

The capital investment of the GOGCWS represents the resources invested by the utility. Assets, or the investments, are acquired by the utility with the expectation that they will remain in service for a number of years. Fixed assets are those used in the production and sale of a product (water) and service (the delivery of that water).

Existing Fixed Assets

In general, fixed assets can be valued in many different ways, each way providing an alternative value to be used in a specific financial application. The value of fixed assets most useful for the GOGCWS is the original cost less depreciation (OCLD). The original cost reflects the value of the asset at the time it was acquired by the utility. Subtracting the accumulated depreciation results in the actual value of the plant available to serve current and future customers.

Original Cost

Assets are capitalized, on a quarterly basis, into nine categories based on Central Organization of Accounting (COA) standards. GOGCWS records the original cost of the assets. From time to time, the original cost of assets funded with foreign capital is adjusted to reflect changes in the value of the Egyptian pound. Table 6.1 identifies the asset categories and corresponding values for the past two fiscal periods. The value of the original cost of the fixed assets increased approximately L.E. 269 million between fiscal years 1990-1991 and 1992-1993.

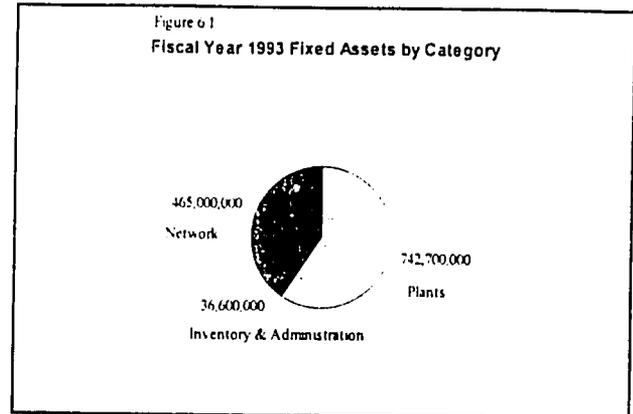
Table 6.1
Comparison of Fixed Assets
Fiscal Years 1991 through 1993

Category	1990-1991	1991-1992	1992-1993
	L.E.	L.E.	L.E.
Lands	3,600,000	3,600,000	3,600,000
Buildings	253,900,000	299,700,000	303,100,000
Pipes	422,800,000	466,700,000	522,900,000
Wells	5,000,000	5,100,000	5,300,000
Machines & Equipments	263,000,000	362,900,000	372,700,000
Means of Transportation	11,000,000	13,800,000	14,700,000
Tools	2,000,000	2,200,000	2,200,000
Meters	9,500,000	11,500,000	13,300,000
Furniture & Desks	2,700,000	4,100,000	4,700,000
Total	973,500,000	1,169,600,000	1,242,500,000

One of the major assets of many water utilities is land, because reservoirs, plant sites, building locations right of way, easements and other land holdings are essential to water treatment and distribution. According to the asset inventory, GOGCWS has a small investment in land. By law, GOGCWS assets are recorded according to the Unified Accounting System as published by the COA. According to the Unified Accounting System, the value of land is based on (1) the purchased value and (2) expenditures to make the land

useful. The value of the land identified in the fixed assets reflects only land the GOGCWS has purchased. Lands given to the GOGCWS by government entities has a token purchase value and therefore the recorded value of the asset does not reflect actual value.

For comparative purposes, assets were assigned to functional categories of plants, inventory and administration, and network. As illustrated in Figure 6.1, approximately 60 percent of the capital investment as of 1993 is for plants, 37 percent for the network and the remaining for administration and inventory.



Depreciation

Assets are depreciated on a quarterly basis using the COA standard depreciation rates. The value of an asset equals the cost of purchase or construction plus additional costs associated with installation and implementation. Assets that are fully depreciated and still in service, may either be revalued so that a new cycle of depreciation begins or valued at 50 percent the original cost and depreciated according to the COA depreciation rate. A summary of depreciation rates and the 1993 annual depreciation per category is shown in Table 6.2

Table 6.2
Standard Depreciation Rates,
1993 Annual and Cumulative Depreciation

Category	Standard Depreciation Rates (percent)	1993 Fiscal Year Annual Depreciation (L.E.)	Cumulative Depreciation (L.E.)
Lands	0.0	0	0
Buildings	2.5	7,578,000	
Pipe	3.0	16,280,000	
Wells	10.0	615,000	
Subtotal		24,473,000	149,460,000
Machines & Equipments	7.5	33,393,000	161,155,000
Means of Transportation	20.0	2,302,000	12,647,000
Tools	10.0	1,825,000	
Meters	15.0	0	
Subtotal		1,825,000	9,739,000
Furniture & Desks	10.0	428,000	1,970,000
Total		62,421,000	334,971,000

Original Cost less Depreciation

Total depreciation through fiscal year 1993 equals 334,971,000 L.E., resulting in an OCLD value of 907,529,000 L.E.

Capital Planning

Long range major capital planning for expansion and upgrades of a water system is usually provided by a master plan. A master plan also identifies the specific projects which provide the facilities to meet the expansion and upgrade requirements of the utility. Over the years, GOGCWS has had many studies and master plans analyzing different segments of the water system.

Planned Improvements

Utilities operating under best commercial practices identify both long and medium to short range capital improvements. Long range improvements are general in nature with no specific timing or costs identified. Medium to short range capital improvement plans are for a period of five to seven years and identify timing and costs associated with projects identified in detail.

Long Range Improvements

Review of the most recent plans and studies for the water system indicates a need for a comprehensive long range, system wide master plan.

Five-Year Capital Improvement Program

The Projects Central Department develops five year capital improvement plans (CIP) from existing master plans and studies. Projects are summarized as rehabilitation, completion of existing projects, and new projects and extensions. Projects are also categorized in eight functional areas. The five year CIP, shown in Table 6.3 summarizes the CIP for fiscal years 1993 through 1997 and is the basis for identifying specific projects budgeted for Chapter 3 expenditures.

Table 6.3
FIVE YEAR PLAN CAPITAL IMPROVEMENT PLAN
Fiscal Years 1993 through 1997

Function	Rehabilitation	Completion of Existing Projects	New Projects and Extensions	Total
	1,000 L.E.	1,000 L.E.	1,000 L.E.	1,000 L.E.
Constructions	76,360	114,300	52,480	243,140
Machines & Equipment	56,400	163,380	76,030	295,840
Tools	0	0	7,000	7,000
Means of Transportation	0	0	5,000	5,000
Furniture	0	0	780	780
Costs of First Cycle of Operations	0	600	0	600
Researches	0	0	600	600
Previous Interest	11,540	6,720	8,380	26,640
Total	144,300	285,000	150,300	579,600

Proposed Financing

The five-year capital improvement program is proposed to be financed with foreign loans and grants and local loans. The summary of proposed financing is shown in table 6.4. The National Investment Bank (NIB) will be the main source of local loans. NIB funds include

both local and foreign funds. Use of NIB loans for capital expenditures must be approved by the Ministry of Planning in coordination with the bank, based on the availability of funds.

Table 6.4
FIVE YEAR PLAN CAPITAL IMPROVEMENT PLAN
Fiscal Years 1993 through 1997

Funding Source	Rehabilitation	Completion of Existing Projects	New Projects and Extensions	Total
	1,000 L.E	1,000 L.E	1,000 L.E.	1,000 L.E.
Investment Bank (Local)	86,800	63,000	72,350	222,150
Investment Bank (Foreign)	57,500	16,000	32,500	106,000
Foreign Grants	0	173,000	35,000	208,000
Foreign Loans	0	33,000	10,450	43,450
Total	144,300	285,000	150,300	579,600

Foreign loans and grants are processed through Ministry of International Cooperation in coordination with the Ministry of Planning. Final approval for participation in foreign agreements must come from the people's assembly.

7. Historical Financial Condition

Performance of a financial audit for the last three years began with an analysis of the final accounts data, the GOGCWS equivalent to an annual financial report. Each year the GOGCWS establishes a budget for the operation and maintenance of the water utility. Throughout the year, as expenses are incurred, they are reviewed and recorded by the General Accounting Department. At the end of each fiscal year the General Accounting Department produces the final accounts, reflecting revenues generated and expenditures paid by the GOGCWS. The final accounts are simultaneously audited by the Central Department for Final Accounts of Economic Organizations, a department of the Ministry of Finance, and the Central Organization of Accounting. Questions and comments generated by the audits are responded to by the General Accounting Department of the GOGCWS. The final accounts are presented to the People Assembly for approval.

Cash Flow Analysis

The final accounts - or balance sheet - provide a snapshot picture of the financial condition of the water utility. For the purpose of analyzing financial viability, a cash flow of the utility's revenues and expenditures must be developed. A cash flow statement compares revenues and expenses by fiscal year, allowing the utility to analyze the soundness of financial operations. Cash flow statements for current operations and the capital program, reflecting final account cash related entries, were identified and analyzed for the financial audit. Noncash entries needed for balancing financial statements have been identified and discussed in the revenue and expenditure sections of this report.

Current Operations

For *the initial analysis* of the financial condition of the water utility's current operations, a cash flow has been developed *using data from the final accounts*. In general, current operations address Chapter 1 and 2 expenditures. The cash flow has been subdivided to show the incremental ability of revenues and exchanges to pay for current expenses and interests. Table 7.1 summarizes the cash flow of current operations as identified in the final accounts.

A critical issue impacting the financial viability of GOGCWS is the collection of bills. During the fiscal year ending 30 June 1993, approximately 29 percent (L.E. 39,699,000) of the billable revenue was uncollected (L.E. 135,882,000 billed less L.E. 96,183,000 collected). Examination of the details indicate that of the approximate L.E. 40 million uncollected, L.E. 30 million was related to governmental accounts. Actual cash receipts for sale of water, production collected, and services collected were determined. Table 7.2 illustrates the impact of the uncollected accounts on the cash flow of the utility.

As illustrated in the following graph and detailed in Table 7.2, current revenues and exchanges, including revenues from the sale of water (production collected) were inadequate to pay for current expenses for the last three years. Although an increase in tariffs during the 1991-1992 fiscal year provided additional revenue to pay for current expenses, the magnitude of the increase was not sufficient to cover total current costs. In addition, if all revenue from production billed at the existing tariff schedule was collected in 1992-1993, the GOGCWS would have been in better financial condition, however it would have taken in less revenue than its current expenditures. Current costs associated with outstanding loans, i.e. interest

Table 7.1

Current Operations
Comparison of Revenues and Expenditures
 (Per Final Accounts)

Line No.		Fiscal Year Ending June 30		
		1991	1992	1993
	Current Revenues & Exchanges	L.E.	L.E.	L.E.
1	Production Billed	87,502,423	135,084,227	135,882,433
2	Services Budgeted	8,745,571	10,244,501	9,160,998
3	Exchanges	9,444,366	24,458,698	31,587,968
4	Credit Interests	3,254	1,633,939	5,319,624
5	Capital Profits	59,261	336,490	0
6	Total Current Revenues & Exchanges	105,754,875	171,757,855	181,951,023
	Current Expenses			
	Wages			
7	Cash Wages & Allowances	35,737,591	38,722,888	46,383,677
8	Advantages in Kind	2,041,638	3,003,398	3,559,747
9	Insurance Advantages	6,344,246	6,974,277	8,434,162
10	Other	4,711,010	5,544,678	7,434,710
	Current Expenses & Exchanges			
11	Commodities Input	60,807,420	93,492,196	111,390,279
12	Service Input	2,163,504	2,625,824	4,777,468
13	Current Exchanges	8,436	34,362	39,023
14	Other Specialized Transfer	6,339,742	20,131,403	25,141,271
15	Past Years Expenses	737,745	786,836	1,696,017
16	Total Current Expenses	118,891,332	171,315,862	208,856,354
17	Revenues Less Current Expenses	(13,136,457)	441,993	(26,905,331)
18	<i>Local & Foreign Interest (a)</i>	51,589,474	69,330,963	90,073,276
19	Revenues Less Current Expenses and Interests	(64,725,931)	(68,888,970)	(116,978,607)

(a) Includes interest expense on outstanding foreign loans & Investment Bank loans

Table 7.2
Comparison of Current Operations
Revenues and Expenditures
(Cash Basis)

Line no.		Fiscal Year Ending June 30		
		1991	1992	1993
	Current Revenues & Exchanges	L.E.	L.E.	L.E.
1				
2				
3	Exchanges	9,444,366	24,458,698	31,587,968
4	Credit Interests	3,254	1,633,939	5,319,624
5	Capital Profits	59,261	336,490	0
6	Total Current Revenues & Exchanges	85,519,203	135,717,896	148,046,665
	Current Expenses			
	Wages			
7	Cash Wages & Allowances	35,737,591	38,722,888	46,383,677
8	Advantages in Kind	2,041,638	3,003,398	3,559,747
9	Insurance Advantages	6,344,246	6,974,277	8,434,162
10	Other	4,711,010	5,544,678	7,434,710
	Current Expenses & Exchanges			
11	Commodities Input	60,807,420	93,492,196	111,390,279
12	Service Input	2,163,504	2,625,824	4,777,468
13	Current Exchanges	8,436	34,362	39,023
14	Other Specialized Transfer	6,339,742	20,131,403	25,141,271
15	Past Years Expenses	737,745	786,836	1,696,017
16	Total Current Expenses	118,891,332	171,315,862	208,856,354
17	Revenues Less Current Expenses	(33,372,129)	(35,597,966)	(60,809,689)
18	Local & Foreign Interest (a)	51,589,474	69,330,963	90,073,276
19	Revenues Less Current Expenses and Interests	(84,961,603)	(104,928,929)	(150,882,965)

(a) Includes interest expense on outstanding foreign loans & Investment Bank loans

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expense, provided an additional burden which revenues were unable to bear. Achieving a balance between revenues and expenses in fiscal year 1992-1993, would have required collection of an additional L.E. 151 million in revenues according to the cash basis.

Capital Program

In addition to managing current operations, GOGCWS also manages a capital program. Whereas current operations addressed expenditures in Chapters 1 and 2, the capital program addresses Chapters 3 and 4 expenses. As explained in Section 5 of this report Chapter 3 expenditures are for major capital improvements and Chapter 4 expenditures are associated with the settlement of loans and other miscellaneous expenses. Table 7.3 summarizes the capital program cash flow.

Comparison of cash related capital revenues and exchanges and capital expenses indicates more funds were procured than expended each year of the study period. Revenues and exchanges exceeded expenses by approximately L.E. 72.9 million in 1992-1993.

The financial operations of the capital program can be evaluated by comparing key elements of the cash flow. Revenues from the changes in debits and credits should exceed expenditures associated with debits and credits. In 1990-1991 and 1991-1992 expenditures were greater than revenues. However, this negative trend was reversed in 1992-1993 when revenues exceeded expenditures by L.E. 21 million..

Sound financial operations recommend sources of funds such as loans and grants be used for capital improvements, as identified in Chapter 3. A comparison of loans and grants with Chapter 3 expenditures indicated, in each year of the study period, loans and grants exceeded actual capital expenditures. This implies that loan and grant funds were used to finance the settlement of outstanding loans (principal payments) and/or other operating cost deficits.

Unit Cost Analysis

Table 7.1 shows the overall cash position of the water utility's current operations. [A comparison of cost per billable volume with unit production billed revenue and unit production collected revenue will illustrate the impact of costs as they relate to the tariff]. Billable volume is used for the development of the comparison as that is the basis for calculation of customer bills and the corresponding revenues. The unit revenue from production billed, shown on Line 1 of Table 7.4, closely parallels the tariff for the household customer. For example, in fiscal year 1990-1991 the unit tariff for household customers using more than 30 cubic meters per month totaled P.T. 9. The tariff increase, effective 1 July 1991 for the 1991-1992 fiscal year, increased the household unit cost to P.T. 13, which parallels the P.T. 13.54 unit revenue per billable volume calculated in 1992-1993.

Total current expenses were summarized in the functional categories of production, network, support, and administration. In addition, unit costs were developed for interest and principal (settlement of long term loans) payments. The ability of existing tariffs to cover costs is illustrated in the comparison of the unit production billed revenue with the unit cost of current expenditures, interest, and principal payments. In fiscal year 1993, the unit cost for current expenditures totaled P.T. 20.64 per cubic meter. Interest and principal payments added an additional P.T. 8.97 and P.T. 9.48, respectively, for a total cubic meter cost of P.T. 39.10.

Table 7.3
**Comparison of Current Capital
 Revenues and Expenditures**
 (Per Final Accounts)

		Fiscal Year Ending June 30		
		1991	1992	1993
1	Capital Revenues and Exchanges	L.E.	L.E.	L.E.
1	Public Treasury	70,325,000	72,367,769	74,850,000
	Grants	9,763,048	54,806,009	160,250,767
3	Loans	116,981,744	137,495,480	170,105,122
4	Decrease in Debited Balances	5,051,090	4,370,646	11,635,500
	Increase in Credit Balances	35,692,577	43,891,480	80,737,332
6	Other Sources	10,061,323	0	1,646,863
7	Total Capital Revenues & Exchanges	247,874,782	312,931,384	499,225,584
	Capital Expenses			!
8	Chapter III Capital	98,698,967	125,542,125	259,489,631
	Principal Payments	64,366,867	72,367,769	75,004,245
9	Advanced Payments for Investment	1,646,167	11,978,927	20,162,913
11	Increase in Debited Balances	28,626,989	69,424,953	37,708,896
12	Decrease in Credit Balances	13,462,797	16,057,190	33,477,231
13	Other Expenses	7,597,843	2,615,970	514,786
14	Total Capital Expenses	214,399,630	297,986,934	426,357,702
5	Revenues Less Expenses	33,475,152	14,944,450	72,867,882

Table 7.4

Comparison of Unit Costs With Unit Revenues

Line No	Current Revenues	Fiscal Year Ending June 30								
		1991			1992			1993		
		Revenues	Billable Usage	Unit Revenue	Revenues	Billable Usage	Unit Revenue	Revenues	Billable Usage	Unit Revenue
		1000 L.E.	1000 m3	P.T./m3	1000 L.E.	1000 m3	P.T./m3	1000 L.E.	1000 m3	P.T./m3
1	Production Billed	87,502	1,027,810	8.51	135,084	1,075,931	12.56	135,882	1,003,699	13
2	Production Collected	62,803	1,027,810	6.11	94,176	1,075,931	8.75	96,183	1,003,699	9.3
3	Services, Exch., Credit Int., Cap. Profits	22,717	1,027,810	2.21	41,542	1,075,931	3.86	51,863	1,003,699	5.5
4	Total Current Revenues	85,519	1,027,810	8.32	135,718	1,075,931	12.61	148,047	1,003,699	14.3
	Current Expenses, Interests, and Settlement of Long Term Loans	Costs	Billable Usage	Unit Cost	Costs	Billable Usage	Unit Cost	Costs	Billable Usage	Unit Cost
		1000 L.E.	1000 m3	P.T./m3	1000 L.E.	1000 m3	P.T./m3	1000 L.E.	1000 m3	P.T./m3
5	Production	72,177	1,027,810	7.02	104,673	1,075,931	9.73			
6	Network	20,536	1,027,810	2.00	24,299	1,075,931	2.26			
7	Support	3,109	1,027,810	0.30	3,399	1,075,931	0.32			
8	Administration	21,515	1,027,810	2.09	37,170	1,075,931	3.45			
9	Total Current Expenditures (a)	117,336	1,027,810	11.42	169,541	1,075,931	15.76	207,160	1,003,699	20.6
10	Local & Foreign Interests	51,589	1,027,810	5.02	69,331	1,075,931	6.44	90,073	1,003,699	8.9
11	Settlement of Long Term Loans	66,013	1,027,810	6.42	84,347	1,075,931	7.84	95,167	1,003,699	9.4
12	Total Unit Cost			22.86			30.04			39.1

(a) Does not include costs associated with servicing wholesale customers.

Costs total approximately 818,000 L.E. in 1991 and 938,000 L.E. in 1992

m3-cubic meter

P.T. - piasters

L.E.-pounds

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**Table 7.5
Financial Viability Performance Indicators**

Performance Indicator			Historical Trend			Financial Viability Target	
Indicator	Trend	Frequency	1990-1991	1991-1992	1992-1993		
Production Billed	Positive	Bimonthly	Indicator:				
			L.E. 87.5 M	L.E. 135.1 M	L.E. 135.9 M		
			Trend:				
			NA	L.E. 47.6 M	L.E. 0.8 M		
Uncollected Bills	Negative	Bimonthly	Indicator:				
			L.E. 24.7 M	L.E. 40.9 M	L.E. 39.7 M		
			Trend:				
			NA	L.E. 16.2 M	L.E. (1.2) M		
Operation Profits (losses) / Total Revenues	Positive	Bimonthly	Indicator:			Indicator: 5%	
			(39%)	(26%)	(41%)		
			Trend:				
			NA	13%	(15%)		
Operating Revenues / Operating Expenses	Positive	Bimonthly	Indicator:			Indicator: 105%	
			72%	79%	71%		
			Trend:				
			NA	7%	(8%)		
Actual / Budgeted Operating Expenses	Less than 1.00	Monthly	Indicator:			Indicator: 1.00	
			1.48	1.65	1.27		
Collected / Billed Revenues	Positive	Bimonthly	Total			Indicator: 95%	
			Indicator:				
			72%	70%	71%		
			Trend:				
			NA	(2%)	1%		
			Non-Governmental				Indicator: 93%
			Indicator:				
			84%	85%	89%		
			Trend:				
			NA	1%	4%		
			Governmental				
			Indicator:				
34%	34%	27%					
Trend:							
NA	0%	(7%)					
Production Billed / Water Produced	Positive	Bimonthly	Indicator:			Indicator: 80%	
			85%	85%	77%		
			Trend:				
			NA	0%	(8%)		