

PUBLIC WATER SYSTEM MANAGEMENT TRAINING
Financial Management

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Financial Management

Course Description:

As with any business, sound financial management is critical for water systems to develop and maintain the necessary capacity to operate efficiently, meet customers' expectations, and comply with an ever-changing regulatory environment. This course helps to demystify financial statements by presenting in-depth reviews and explanations of common financial statements and reports used by water systems in Alabama. This course will provide participants with a basic understanding of these reports and provide techniques to use these tools in the financial management of a water system.

Learning Objectives:

After completing this course, participants should be able to do the following:

1. Explain the four levels of a business accounting system.
2. Define the two methods of accounting.
3. Identify elements of the Balance Sheet, Income Statement, and Cash Flow Statement.
4. Summarize financial reporting requirements for water systems in Alabama
5. Determine budgetary compliance.
6. Perform a financial ratio analysis

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Section

A

FINANCIAL MANAGEMENT

CHAPTER 1.

Introduction to Financial Management

Like any business, a small water utility's finances must be managed efficiently in order for the utility to remain financially viable. It is essential that the financial capabilities of a water utility adequately cover the costs of the required technical and managerial capabilities necessary in providing safe drinking water not only now but in the future. In other words, a water utility must have the financial resources to pay for not only the cost of current operations but also provide for the repair and replacement of capital components of the system such as its wells, pumps, tanks, and distribution lines. The 1996 Safe Drinking Water Act through its guidelines for **Capacity Development** authorizes state primacy agencies to develop capacity development strategies to ensure that both new and existing water systems have or acquire the necessary financial capabilities to operate the water system in compliance with current and future regulations.

How do you determine if you presently have the necessary financial capabilities to adequately provide for not only current but also future costs associated with you water system's operations and replacement of capital components?

- First, you need to prepare an annual budget and a long range plan projecting current and future costs of the system.
- By reviewing and analyzing monthly standard financial statements, you can track your budgeted revenues and expenses.
- By reviewing and analyzing annual financial statements, you can track your progress with your long range plan.

'Wait a minute! As long as our water system puts more money in the bank than it spends, don't we have the necessary financial capacity? We have just a small water system and really don't need to prepare a budget and review monthly or annual financial statements. Right?

Not necessarily! While it is essential that a water system realize a sustained positive cash flow, this doesn't guarantee that the system has the adequate financial capacity necessary to operate the water system pursuant to future federal and state standards. Remember, all water utilities regardless of size are required to have the adequate financial capacity to provide safe drinking water to its customers not only now but also in the future. By only



CAPACITY DEVELOPMENT:

*The process of a water system acquiring or maintaining the necessary **Technical, Managerial, and Financial** capabilities to ensure a consistent, reliable, and affordable supply of safe drinking water that meets current and future standards and regulations.*

concentrating on maintaining a positive cash flow now, the "big picture" may be missed! Water utilities that do not operate on a long-range plan or without even an annual budget in effect operate without any financial planning and may be operating in a false economy. Without planning and without regularly reviewing and analyzing financial statements, water system decision-makers can not guarantee that the utility has the necessary financial capacity to sustain system operations and provide safe drinking water in the future.

'Ok. Let's say that I might agree that we probably need to prepare a budget and a long-range plan and to regularly review our water system's financial statements. Exactly what statements other than the bank statements should we be looking at and what should we be looking at?'



SOURCE DOCUMENTS:

The financial records necessary to compile financial statements. These basic records including accounts receivable (computer billing) summary reports, bank statements deposit tickets, cancelled checks, employee earnings reports, and other documents must be safeguarded and accordingly filed so that financial statements and future audits can be compiled.

First, bank statements are not the type of financial statements that water system decision-makers should be reviewing in the first place. Bank statements are **Source Documents** that are used in compiling financial statements but by themselves, are not very valuable in determining the financial condition of a water utility. Listed below are the types of financial statements that you as a decision-maker should have available to review and analyze:

- RD Form 442-2 Reports (Required of water systems which have loans with USDA Rural Utilities Service)
- Financial Statements (Balance Sheet, Income Statement, Cash Flow Statement)

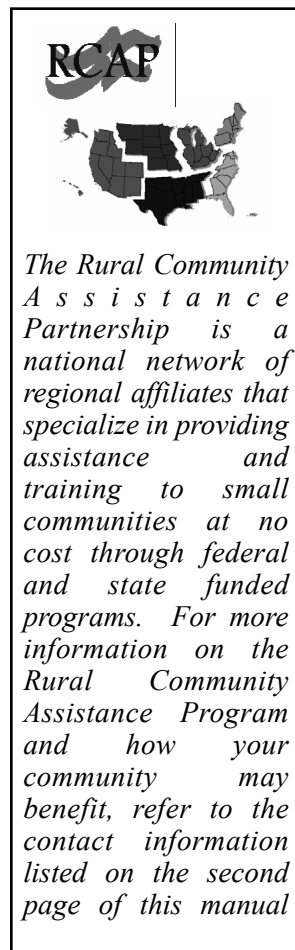
As to how you should analyze these statements, there are actually two different methods. First, as reference earlier, you should compare the information presented in these financial statements with your budget and with your long-range plan. And second, you should periodically conduct a financial ratio analysis of your water system's financial statements. Both of these methods will be demonstrated in this guide.

'Is this guide going to show how to prepare these statements? And if not, where can we get additional information on how to prepare financial statements?'

No. The purpose of this guide is not for decision-makers to learn how to prepare financial statements but rather to learn how to analyze these statements in managing the finances of a water system. If your water system currently does not have monthly financial statements prepared, a certified

public accountant should be consulted. Most community colleges and universities offer adult learning courses in bookkeeping and accounting. Additionally, some technical assistance organizations such as the ***Rural Community Assistance Partnership*** can also offer training and assistance to water system staff members in preparing financial statements. The financial ratios that will be presented in this guide include:

- Operating Ratio
- Coverage Ratio
- Cash Flow Profitability Ratio
- Liquidity Ratio
- Leverage Ratio



CHAPTER 2.

The Four Levels of a Business Accounting System

Whether a business manufactures widgets or sells water, the finances of the business must be adequately managed. Often, businesses fail - not necessarily due to them not having a marketable product, but by failing in the financial management of the business. There is no mystery to understanding how a water utility's financial system should work. There are four basic levels of any business accounting system which include the following:

Level 1 - Source Documents

Level 2 - Transaction Journals

Level 3 - General Ledger

Level 4 - Financial Statements

Although this manual will not address how to compile financial statements, water system decision-makers should have a basic understanding of where the information included in financial statement comes from. The four levels of an accounting system will be briefly explained in the following paragraphs.

LEVEL 1 - SOURCE DOCUMENTS:

The foundation for any business accounting system is its source documents. It is important that source documents are retained and accordingly filed so that financial statements and audits can be prepared. The following source documents are necessary for the compilation of water system financial statements and audits:

- Payment Receipt Books
- Daily Transaction Reports (Computer Billing System) detailing customer payments received & posted
- Bank Deposit Tickets
- Invoices (paid and unpaid)
- Bank Statements (and cancelled checks)

- Employee Earnings Reports
- Current Listing of Directors (term and addresses)
- Long-term Debt (statements and contact information)
- Sales Tax and Employee Tax Records

LEVEL 2 - TRANSACTION JOURNALS

The entry point for your accounting system is your transaction journals. These are detailed monthly reports that your water utility bookkeeper (town clerk, officer manager, or accounts receivable/accounts payable clerks) should compile. Whether or not your water utility has a computerized accounting and/or billing system, the following transaction journals are necessary for the compilation of financial statements:

- Accounts Receivable Summary Journal (Monthly summary of Daily Transaction Journal Reports)
- Accounts Payable Journal (Monthly report of purchase invoices received and posted)
- Cash Disbursement Journal (Check Register for manual accounting systems)
- New Customer Journal (Monthly summary of fees paid by new customers for service installations, security deposits, and membership fees if applicable)




CHART OF ACCOUNTS:

The organization of standard accounting categories that serve as the backbone of an accounting system. In a Chart of Accounts, there are main accounts and subordinate sub-accounts. The Chart of Accounts can be customized and as such, no two water utilities may necessary have an identical chart of accounts.

LEVEL 3 - THE GENERAL LEDGER

The third level of your accounting system is a cumulative record of every financial transaction during the current fiscal year. For every transaction, there is a credit and a corresponding debit. A water utility's general ledger is constructed around a **Chart of Accounts** organized into these main accounts (there may be many sub-accounts under each of these):

Assets - the liquid and fixed items that are "owned" by your water utility including cash and investments, accounts receivable, property and building, wells, tanks, treatment plants, vehicles and equipment, inventory, and pre-paid expenses or dues.

Liabilities - the amounts that your water utility owes to others including accounts payable, notes payable, employee withholding taxes, customer security deposits.

Capital - the investments of the members (if applicable), contributed capital in the form of government grants, and the accumulation of the profits or losses of the water utility since it began operations.

Income - the sources of how a water utility earns money including water sales, late charges, service charges, meter installation fees, and miscellaneous income and refunds.

- Cost of Sales - the direct and indirect expenses necessary for producing and treating water, including electricity expenses, chemical expenses, depreciation expense and interest expense.
- Operating Expenses - the expenses incurred in operating the water utility. There are many operating expense sub-accounts ranging from salaries to repair parts.
- Other Income - money earned by the water utility from sources other than normal operations, including interest income, recovery of bad debts and discounts earned.
- Other Expenses - expenses not related to normal water utility operations.

LEVEL 4 - FINANCIAL STATEMENTS:

The fourth and final level of your accounting system are the reports (monthly and annual) that should be reviewed and analyzed on a regular basis by the decision-makers of water utilities. It is recommended but not required that all water utilities have financial statements prepared monthly.

CHAPTER 3.

Methods of Accounting

There are two basic methods of accounting for businesses including water utilities. The first, the ***Cash Accounting Method*** is the easiest to understand but is not necessarily the best method for water utilities to use. The second, the ***Accrual Accounting Method*** is more commonly used by water utilities.

With the Cash Accounting Method, accounts receivable and payable are not normally recorded as water sales and other income are recorded as during the period that money is received. Likewise, expenses are recorded during the month that they are paid. However, with the Accrual Accounting Method, expenses are recorded when they are incurred regardless of when they are paid and likewise, water sales are recorded to accounts receivable during the month that the customer charges are posted regardless of when the customers pay their water bills.

With the Accrual Accounting Method, expenses paid on an annual basis can be spread over the entire year whereas with the cash method, these expenses are recorded in the month in which they are paid. Because of these reasons, the Accrual Accounting Method more accurately reflects the true financial condition of a water system than does the Cash Accounting Method.

METHOD 1

Cash Accounting:
Income and Expenses are recorded when they are received and paid.

METHOD 2

Accrual Accounting:
Income and Expenses are recorded when they are incurred regardless of whether or not cash has been received or disbursed.

CHAPTER 4

Financial Statement Elements

All financial statements are not alike! Depending upon your accountant or bookkeeper and the type of report (Monthly, Annual Compilation Report, Annual GA Audit, or A-133 Audit), there will be different elements included in the financial statements. (Refer to Figure 1 shown below).

FIGURE 1

Monthly Financial Statements (Elements)	Annual Compilation Report (Elements)	Annual Audit Report (Elements)
Balance Sheet	Balance Sheet	Balance Sheet
Income Statement	Income Statement	Income Statement
	Cash Flow Statement	Cash Flow Statement
		Notes to Financial Statements
		Management Letter

This guide will define and examine the following elements of financial statements:

Balance Sheet - this statement shows the financial worth of a water utility by listing all assets, liability, and capital (equity). The statement is "balanced" by assets equaling liability plus capital. The net worth of the water utility is the difference between assets and liability which equals capital.

Income Statement - financial statement showing the income and expenses of a water utility over a given time. The net difference between these two elements is net income (or net loss).

Cash Flow Statement - financial statement showing how the water utility is paying for its operations taking into account net income, expense items not effecting cash, capital expenditures and loan/grant proceeds that are not expensed, and principle payments on existing debt.

FIGURE 2 - THE BALANCE SHEET

ASSETS	
Current Assets	2004
Cash on Hand and in Bank	\$430,762
Accounts receivable	60,026
Inventory	14,248
Interest Receivable	2,219
Prepaid Expenses	4,982
Total Current Assets	512,237
Fixed Asset	
Land	6,950
Property, Plant & Equipment at cost	2,915,599
Less: Accumulated Depreciation	(1,628,594)
Total Fixed Assets	1,293,955
Other Assets	
Restricted Reserve Funds	86,660
Total Other Assets	86,660
Total Assets	\$1,892,852
LIABILITIES AND EQUITY	
Current Liabilities	
Accounts Payable	8,432
Current Portion of Long -Term Debt	56,123
Withheld & Accrued Payroll Taxes	3,158
Accrued Interest	13,355
Other Accruals	1,425
Total Current Liabilities	82,493
Long-Term Liabilities	
Meter Deposits	43,504
Long Term Notes Payable	1,354,061
Less: Current Portion of Long -Term Debt	(56,123)
Total Long-Term Liabilities	1,341,442
Equity	
Contributed Capital (Membership)	56,415
Donated Capital (Govt. Grants)	1,720,30
Retained Earnings	(1,307,798)
Total Equity	468,917
Total Liabilities and Net Assets	\$1,892,852

THE BALANCE SHEET

The Balance Sheet is an integral financial report listing what is owned by the water utility, and the net worth of the utility. These three principles are categorized as Assets, Liabilities, and Equity (Capital). The name of this report is derived because Assets balances with Liabilities plus Equity. You can see this in the balance sheet in Figure 2. The total assets equal \$1,892,852 and the total liabilities and equity equals \$1,892,852. The elements of the balance sheet are explained further below:

Assets - what is owned by or owed to the water utility including:

- ❑ Current Assets - those assets that can be utilized within one year including cash (unrestricted), accounts receivable (what is owed to the utility), supply inventory, interest receivable (interest owed to the utility), and prepaid expenses.
- ❑ Fixed Assets - those assets that will last for more than one year including land, property, vehicles, and equipment.

$$\text{(Assets = Liabilities + Equity)}$$

Liabilities - what the water utility owes including:

- ❑ Current Liabilities - those debts that can be paid within one year including accounts payable (money owed to others for non-debt expenses), short-term notes payable (debt to be paid off within one year), taxes payable (employee withholding taxes and other taxes owed), customer security deposits, current portion of long-term debt.
- ❑ Long-Term Liabilities - debts which will take more than one year to retire including long-term notes (mortgages, and/or bonds).

$$\text{(Liabilities = Equity - Assets)}$$

Equity (Capital) - the net worth of the water utility including membership capital (fees paid typically by customers of utilities formed as non-profit cooperatives or associations), donated capital (financial grants made by government or other entities to the water utility), and retained earnings (the cumulative total of the net income or losses of the water utility since operations began.)

$$\text{(Equity = Assets-Liabilities)}$$



ARE ACCOUNTS RECEIVABLE THE SAME AS MONEY IN THE BANK?

Although Accounts Receivable is an asset, it is definitely not an asset that can be easily converted to cash. Water utilities, like all businesses should always stay on top of accounts receivable by enforcing compliance with a strict cut-off and collection policy.

Water utilities that use the accrual method of accounting will show the current portion (last month's billing) as well as the aged (past due and delinquent) portion in the accounts receivable figure listed on the balance sheet. Water utility bookkeepers should provide monthly detailed accounts receivable reports to the decision-makers. If these reports are not available, decision-makers can estimate the aged receivables (the amount that should be of concern) by subtracting the water sales revenue amount from the accounts receivable figure listed on the balance sheet. Although this may not be the most accurate method, it is a quick way to estimate the aged accounts receivable balance.

FIGURE 3 - THE INCOME STATEMENT

Soggy Bottom Water Authority- Income Statement		
December 31, 2004		
	<u>2004</u>	<u>2003</u>
<u>Revenue</u>		
Water Sales	\$ 591,964	\$ 599,460
Contracted Maintenance	69,399	65,631
Misc. Const. & Meter Connections	19,293	10,831
Membership Fees Received	1,200	1,305
Total Revenue	681,856	677,227
<u>Operating Expenses</u>		
Water Purchases	\$ 34,165	\$ 19,997
Electricity and Utilities	45,647	40,634
System Repair	13,764	10,151
Service Supplies	61,460	70,555
Testing and Analysis	2,662	2,941
Bad Debt Expense	6,646	2,663
Bank Charges	132	90
Contract Labor	35,545	29,484
Continuing Education	2,913	3,603
Depreciation	112,598	118,338
Fuel and Oil	13,408	11,990
Insurance	40,786	33,702
Legal and Accounting	4,829	5,585
Miscellaneous	4,385	4,294
Office Expense	3,320	3,699
Postage	4,374	4,659
Repairs and Maintenance	11,052	9,347
Retirement Expense	3,464	556
Salaries	142,752	133,147
Taxes and Licenses	16,696	17,482
Telephone	9,701	7,761
Truck Expense	2,094	4,452
Uniforms	2,841	3,226
Total Operating Expenses	575,234	538,356
Net Operating (Loss) Profit	106,622	138,871
<u>Other Income and Expenses</u>		
Interest Income	\$ 20,000	\$ 12,230
Gain on Sale of Equipment	13,295	-0-
Interest Expense	(71,671)	(75,113)
Total Other Income & Exps	(37,762)	(62,883)
Increase in Net Assets from Operations	68,860	75,988

THE INCOME STATEMENT

The Income Statement lists what the water utility has earned and the expenses incurred over a period of time (month, quarter, or annual). At the header of the Income Statement, a closing date is always listed. There are usually two columns of figures in Income Statements. On monthly and quarterly reports, the column on the left is the current month (or quarter) and the column on the right represents the year-to-date figures. With an annual report, the column on the left represents the current year and the column on the right includes figures from the previous year.

It is important to remember that the figures listed in the Income Statement may actually differ from the water utility's operating account bank statement. First, as explained earlier of this guide, most utilities use the accrual method of accounting. Revenue (Income) listed in the Income Statement may not have actually been deposited in the bank by the date shown on the report. Likewise, expenses incurred and listed on the Income Statement may not have been paid during the month. Also, other factors effecting cash flow may or may not be listed in the Income Statement. Does this mean that the information listed in the Income Statement is not accurate? No. The Income Statement represents an accurate snapshot of the water utility's revenues and expenses taking into account information that may not be reflected on bank statements and other source documents. Elements of a typical Income Statement include:

- ❑ **Revenues** - income that is received by the water utility, including water sales to customers, late charges, service charges, management fee (charged to other utilities receiving O & M Services by the water utility)
- ❑ **Operating Expenses** - expenses incurred during the normal operation of the water utility including water purchases (wholesale water purchased from other water utilities for redistribution), electrical and chemical expenses (production costs), salaries, insurance, supplies, vehicle repairs, depreciation (estimated amount of the wear and tear of utility's assets), and office expenses (postage, supplies, telephone).
- ❑ **Net Operating Income (Loss)** - the difference calculated by subtracting operating expenses from revenues. Negative amounts represent losses and are usually listed in parentheses.

- ❑ **Other Income/Expenses** - income and expenses not normally received or incurred as a result of the operation of the utility.
- ❑ **Net Income (Loss)** - the bottom line calculated by adding (subtracting) other income (expenses) to the Net Operating Income (Loss).

FIGURE 4 - THE CASH FLOW STATEMENT

Soggy Bottom Water Authority - Cash Flow Statement December 31, 2004		
<u>Cash Flows from Operating Activities</u>		
Change in Net Assets	\$ 68,860	\$ 75,988
Adjustments to reconcile change in net assets to net cash		
Provided by operating activities:		
Depreciation	112,598	118,338
Gain on Sale of Equipment	(13,295)	
(Increase)Decrease in Accounts Receivable	(7,484)	(7,395)
(Increase)Decrease in Prepaid Expenses	1,188	(1,485)
(Increase)Decrease in Interest Receivable	1,936	(3,053)
(Increase)Decrease in Inventory	(518)	6,938
Increase(Decrease) in Accrued Expenses	(1,658)	870
Increase(Decrease) in Payroll Tax Liabilities	(862)	624
Increase(Decrease) in Accrued Interest	(1,791)	10,243
Increase(Decrease) in Other Accruals	(104)	28
Total Adjustments	93,125	128,288
Net Cash Provided by Operating Activities	161,985	204,276
<u>Cash Flows from Investing Activities</u>		
Purchase of Property and Equipment	(68,732)	(19,857)
Sale of Property and Equipment	26,400	-0-
Net Cash Provided by Investing Activities	(42,332)	(19,857)
<u>Cash Flows from Financing Activities</u>		
Retirement of Long Term Debt	(63,155)	(37,106)
Net Cash Provided by Financing Activities	(63,155)	(37,106)
<u>Net Increase in Cash</u>	56,498	147,313
<u>Cash Balance, Beginning of year</u>	460,924	313,611
<u>Cash Balance, End of Year</u>	\$517,422	\$460,924

THE CASH FLOW STATEMENT

The Cash Flow Statement lists the increases and decreases of the water utility's cash over a set period. The Cash Flow Statement is included in the annual financial reports but is usually not included with monthly or quarterly financial statements. As noted earlier, some figures listed in the Income Statement don't actually effect cash flow while others that do effect cash flow are not listed. One example is depreciation expense. Because this is an expense that does not effect cash, it is added back in the Cash Flow Statement. On the other hand, the principal portion (debt retirement) of the mortgage notes are not included in the income statement but are subtracted from the cash balances in the Cash Flow Statement. The common elements of a Cash Flow Statement include:

- ❑ **Cash Flows from Operating Activities** - adjustments to cash from operating activities. The first item always listed is the Net Income (Loss) that is listed on the Income Statement. Decreases on Accounts Receivable, Prepaid Expenses, Interest Receivable, and Inventory are also added to the Net Income (Loss) figure. If these items are increased, they are subtracted. On the other hand, increases in Accrued Expenses, Payroll Tax Liabilities, Accrued Interest, and Meter Deposits are added to the cash flow but decreases are deducted.
- ❑ **Cash Flows from Investing Activities** - adjustments to cash from the purchase (deduct from cash flow) of land and equipment or the liquidation of these assets (add to cash flow).
- ❑ **Cash Flows from Financing Activities** - adjustments to cash flow from the retirement of debt (deduct portion) or the receipt of funds from new debt (add).
- ❑ **Net Increase (Decrease) to Cash** - the sum of all adjustments to cash flow which represent a negative amount either signifies that the water utility uses existing cash to help pay for operations (true if the income statement reflects a net loss) or to self-fund capital improvements, asset replacement, or the retirement of debt.

FIGURE 6 - USDA -RURAL DEVELOPMENT 442-2 ANNUAL REPORT

USDA -FmHA

Form FmHA 442-2

STATEMENT OF BUDGET, INCOME AND EQUITY

(Rev. 9-89)

Schedule 1

Name **Soggy Bottom W.A.**

Address **P.O. Box 101, Denton, MS 36530**

(1)	Prior Year Actual (2)	ANNUAL BUDGET BEG JAN 1, 2001 END DEC 31, 2001 (3)	For the <u>12</u> Months Ended <u>DEC 31, 2001</u>		
			CURRENT YEAR		Actual YTD (Over) Under Budget Col 3-5 = 6 (6)
			Actual Data		
			Current Quarter (4)	Year To Date (5)	
OPERATING INCOME					
1. Water Sales		\$ 605,000	\$ 145,938	\$ 591,964	\$ 13,036
2. Contracted Maintenance		\$ 70,000	\$ 18,463	\$ 69,399	\$ 601
3. Misc. Construction / Meters		\$ 12,000	\$ 5,213	\$ 19,293	\$ (7,293)
4. Membership Fees		\$ 1,500	\$ 275	\$ 1,200	\$ 300
5. Miscellaneous					
6. Less: Allowances and Deductions					
7. Total Operating Income (Add lines 1 through 6)		\$ 688,500	\$ 169,889	\$ 681,856	\$ 6,644
OPERATING EXPENSES					
8. Salaries & Contract Labor		\$ 190,000	\$ 46,879	\$ 187,515	\$ 2,485
9. Repairs & Supplies		\$ 90,000	\$ 32,813	\$ 101,778	\$ (11,778)
10. Water Purchases / Utilities		\$ 72,500	\$ 23,147	\$ 79,812	\$ (7,312)
11. Office, Postage, Admin.		\$ 26,000	\$ 5,328	\$ 25,018	\$ 982
12. Insurance		\$ 38,900	\$ 8,304	\$ 40,786	\$ (1,886)
13. Taxes		\$ 17,500	\$ 4,174	\$ 16,696	\$ 804
14. Other Expenses		\$ 10,500	\$ 3,847	\$ 11,031	\$ (531)
15. Interest (FmHA)		\$ 72,000	\$ 17,918	\$ 71,671	\$ 329
16. Depreciation		\$ 113,000	\$ 28,150	\$ 112,598	\$ 402
17. Total Operating Expense (Add Lines 8 Through 16)		\$ 630,400	\$ 170,559	\$ 646,905	\$ (16,505)
18. NET OPERATING INCOME (LOSS) (Line 7 less 17)		\$ 58,100	\$ (670)	\$ 34,951	\$ 23,149
NONOPERATING INCOME					
19. Interest Income		\$ 18,000	\$ 5,732	\$ 20,614	\$ (2,614)
20. Sale of Equipment				\$ 13,295	\$ (13,295)
21. Total Nonoperating Income (Add 19 and 20)		\$ 18,000	\$ 5,732	\$ 33,909	\$ (15,909)
22. NET INCOME (LOSS) (Add Lines 18 and 21)		\$ 76,100	\$ 5,062	\$ 68,860	\$ 7,240
23. Equity Beginning of Period		\$ 400,057	\$ 463,855	\$ 400,057	
24. _____					
25. _____					
26. Equity End of Period (Add lines 22 through 25)		\$ 476,157	\$ 468,917	\$ 468,917	\$ 7,240

Budget and Annual Report Approved by Governing Body

Jan Doe Jan 28, 2002

Secretary

Date

Quarterly Reports Certified Correct

John Doe 1/28/02

Approving Official

Date

FIGURE 7 - USDA -RURAL DEVELOPMENT 442-2 SUPPLEMENTAL DATA

Schedule 1

SUPPLEMENTAL DATA

The Following Data Should Be Supplied Where Applicable

1. ALL BORROWERS

- | | |
|---|-------------------|
| | <u>Circle One</u> |
| a. Are deposited funds in institutions insured by the Federal Government? | Yes No |
| b. Are you exempt from Federal Income Tax? | Yes No |
| c. Are Local, State and Federal taxes paid current? | Yes No |
| d. Is corporate status in good standing with State? | Yes No |
| e. List kinds and amounts of insurance and fidelity bond: Complete <u>Only</u> when submitting annual budget information: | |

Insurance Coverage and Policy Number	Insurance Company and Address	Amount of Coverage	Expiration Date of Policy
Property Insurance			
Policy # _____	_____	_____	_____
Liability			
Policy # _____	_____	_____	_____
Fidelity			
Policy # _____	_____	_____	_____

2. RECREATION AND GRAZING ASSOCIATION BORROWERS ONLY

	<u>Current Month</u>	<u>Year To Date</u>
a. Number of Members	_____	_____

3. WATER AND/OR SEWER UTILITY BORROWERS ONLY

a. Water purchased or produced (CU, ET - GAL)	14,678,000 Gal	178,432,000 Gal
b. Water sold (CU, ET - GAL)	10,943,000 Gal	128,597,000 Gal
c. Treated waste (CU, ET - GAL)	_____	_____
d. Number of users - water	_____	1,978
e. Number of users - sewer	_____	_____

4. OTHER UTILITIES

a. Number of Users	_____	_____
b. Product purchased	_____	_____
c. Product sold	_____	_____

5. HEALTH CARE BORROWERS ONLY

a. Number of beds	_____	_____
b. Patient days of care	_____	_____
c. Percentage of occupancy	_____	_____
d. Number of outpatient visits	_____	_____

6. DISTRIBUTION OF ALL CASH AND INVESTMENTS*

Indicate balances in the following accounts:

	<u>Date</u>	<u>Revenue</u>	<u>(Restricted)</u> <u>Debt Service</u>	<u>Operation &</u> <u>Maintenance</u>	<u>(Net Dep)</u> <u>Reserve</u>	<u>(Savings)</u> <u>All Others</u>	<u>Grand Total</u>
Cash	09/30/01	_____	\$86,600	\$53,780	\$49,125	\$321,576	\$511,141
Savings and Invest- ments	_____	_____	_____	_____	_____	_____	_____
Total	12/31/01	_____	\$86,600	\$54,004	\$49,450	\$327,308	\$517,422

7. AGE ACCOUNTS RECEIVABLE AS FOLLOWS:

	<u>Days</u>					
	<u>0 - 30</u>	<u>31 - 60</u>	<u>61 - 90</u>	<u>90 and Over</u>	<u>* Total</u>	
Dollar Values	\$ 47,325	\$ 9,843	\$ 1,537	\$ 0	\$ 60,026	
	1,978	312	18	0	1,978	

* Totals must agree with those on Balance Sheet

CHAPTER 6

Comparing Financial Statements to the Annual Budget

A proven method of analyzing a water utility's financial statements is by comparing the figures with the budget estimates. The Monthly Income Statement presented on the next page has three columns, including the Current Month, Year to Date, and Budget column.

The Monthly Income Statement on the preceding page is a good example of the format necessary for the comparison of the monthly and year-to-date revenues and expenses to the annual budget. Most computer accounting software programs can be set up to prepare this type of detailed budget comparison in the income statements. However, if your water utility's software does not support this type of detail, you can still compare the income statements to the budget. To compare the monthly revenue or expense figures to your budget use the following formula:

$$\frac{\text{Monthly Revenue (or Expense) Item}}{\text{Annual Budget Item}/12} \quad (-1.0)$$

Example:

Monthly Revenue Item (Water Sales) = \$42,378

Annual Budget Item (Water Sales) = \$600,000

Step 1: $\$600,000/12=50,000$

Step 2: $42,378/50,000=0.85$

Step 3: $0.85-1.0=-0.15$ (or -15% under budget)

To compare the year to date figures with the annual budget, you can use the following formula:

$$\left[\frac{\text{YTD Revenue (or Expense) Item}}{(\text{Corresponding Budget Item}/12) * \text{Month Completed}} \right] \quad (-1.0)$$

Example:

YTD Expense Item (Service Supplies) = \$12,784

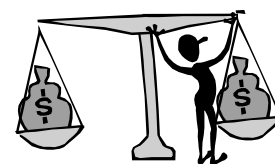
Annual Budget Item (Service Supplies) = \$70,000

Step 1: $\$70,000/12=\$5,833$

Step 2: $\$5,833 * 3(3\text{rd Month}) = \$17,500$

Step 3: $\$12,784/\$17,500 = 0.73$

Step 4: $0.73 - 1.0 = -0.17$ (or -17% under budget)



WHAT DOES OVER/UNDER BUDGET MEAN?

As a general rule if revenues are under budget and / or if expenses are over budget, your budgeted net income and corresponding cash flow projections are probably not going to be realized.

On the other hand, if revenues are over budget and / or if expenses are under budget, you will probably exceed your budget and corresponding cash flow projections.

**Soggy Bottom Water Authority - Income Statement
For the Third Month Ending March 31, 2004**

Revenue	Month	YTD	% Budget	Budget
Water Sales	\$42,378	\$ 124,386	-17%	\$600,000
Contracted Maintenance	4,550	14,790	-15%	70,000
Misc. Const. & Meter Con.	350	2,850	-43%	20,000
Total Revenue	\$47,293	\$142,146	-18%	\$691,200
Operating Expenses				
Water Purchases	\$2,230	\$5,945	-37%	\$38,000
Electricity & Utilities	2,816	8,139	-32%	48,000
System Repair	438	438	-88%	15,000
Service Supplies	3,674	12,784	-27%	70,000
Testing and Analysis	-	-	-100%	2,800
Bad Debt Expense	-	-	-100%	3,500
Bank Charges	20	40	7%	150
Contract Labor	-	1230	-84%	30,000
Continuing Education	485	485	-35%	3,000
Depreciation	9,167	27,501	0%	110,000
Fuel and Oil	973	3,238	-7%	14,000
Insurance	1,017	3,051	-73%	45,000
Legal and Accounting	425	1,275	2%	5,000
Miscellaneous	369	985	-21%	5,000
Office Expense	293	1,235	-24%	4,000
Postage	374	1,107	-2%	4,500
Repairs and Maintenance	987	2,874	-4%	12,000
Retirement Expense	294	882	-7%	3,800
Salaries	11,487	37,834	0%	152,000
Taxes and Licenses	1,232	3,845	-10%	17,000
Telephone	584	1,947	-13%	9,000
Truck Expense	-	789	5%	3,000
Uniforms	217	651	-13%	3,000
Total Operating Expenses	\$37,082	\$116,275	-22%	\$597,750
Net Operating (loss) Profit	\$10,211	\$25,871	11%	\$93,450
Other Income and Expenses				
Interest Income	\$6,230	\$6,230	4%	\$24,000
Gain on Sale of Equipment	-	-	-	-
Interest Expense	(5,667)	(17,001)	0%	(68,000)
Total Other Income & Exp.	\$563	\$(10,771)	-2%	\$(44,000)
Net Income (Loss)	\$10,744	\$15,100	22%	\$49,450

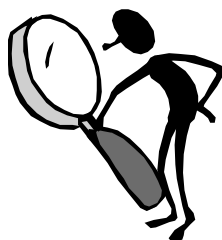
Reviewing the Monthly Income Statement, you can see that the year-to-date revenues are \$18% below budget. While this is not a good sign, you should consider that the fiscal year for this hypothetical water utility begins on January 1 and that most water utilities sell less water and install less meters in the winter months. The good news for this hypothetical utility is that the corresponding operating expenses for the same period is 22% below budget and the net operating income is 11% above budget. Several expense items show no activity, probably because these are annual expenses. Sooner or later, these expenses will be incurred which will in turn bring the total operating expenses closer in line with the budgeted expenses.

CHAPTER 7

Using Ratios to Analyze Financial Statements

Ratio analysis is another proven method of determining the financial health of your water utility. By performing a ratio analysis periodically, the financial statements can be put into perspective and you can quickly determine if a negative pattern is occurring that may threaten the financial stability of the water utility. In the following text, the following five financial ratios will be explained and examples given using the financial statements listed on the preceding pages of this guide:

- Operating Ratio
- Coverage Ratio
- Cash Flow Profitability Ratio
- Liquidity Ratio
- Leverage Ratio



The **Operating Ratio** is a simple calculation that is used to measure the water utility's financial management and profitability. Normally, a water utility that has an Operating Ratio of less than 1.0 is considered financially distressed. However, some state primacy agencies, when assessing the financial capacity of a water utility, consider a water utility to be distressed if the Operating Ratio is below 1.22. The Operating Ratio is calculated by the following formula:

$$\text{OR} = \frac{\text{Operating Revenues (Excluding Interest)}}{\text{Operating Expenses (Excluding Interest)}}$$

Example:

(Refer to the Income Statement, 2004 Year Ending)

Operating Revenues = \$681,856

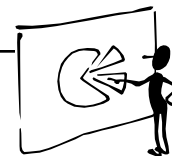
Operating Expenses = \$575,234

$681.856/575,234 = 1.18$ (OR)

Note:

This Operating Ratio of 1.18 is indicative of a financially viable water utility (unless measured by higher benchmark standards common in some states.)

WHAT IS AN ACCEPTABLE OPERATING RATIO?

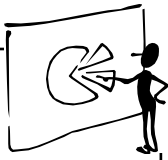


As a general rule, an Operating Ratio of 1.0 or greater indicates the water utility receives the necessary revenues to cover expenses.

WHAT IS NEEDED IF YOUR WATER UTILITY DOES NOT HAVE AN ACCEPTABLE OPERATING RATIO?

By decreasing operating expenses (costs cutting measures) and / or by increasing revenues (rate increases), a water utility can increase its Operating Ratio

WHAT IS AN ACCEPTABLE COVERAGE RATIO?



As a general rule, a Coverage Ratio of 1.25 or greater indicates the water utility has the necessary funds after paying for operational costs to pay the debt service.

WHAT IS NEEDED IF YOUR WATER UTILITY DOES NOT HAVE AN ACCEPTABLE COVERAGE RATIO?

By decreasing operating expenses (cost cutting measures) and / or by increasing revenues (rate increases), a water utility can increase its Coverage Ratio. Also, by retiring debt, this ratio can be improved.

The **Coverage Ratio** is another common ratio that is used to measure the water utility's ability to pay its debt. Normally, a water utility that has a Coverage Ratio of less than 1.25 may be considered financially distressed. The Coverage Ratio is calculated by the following formula:

$$\text{CR} = \frac{\text{Operating Revenues} - \text{Operating Expenses}}{\text{Debt Service (Principle + Interest + DS Reserve)}}$$

Example:

(Refer to the Income Statement on, 2004 Year Ending)

Operating Revenue = \$681,856

Operating Expense = \$575,234

Interest Expense = \$71,671

Annual Principal Payments = \$56,123

Annual DX Reserve Payment = \$740

Step 1: \$681,856 - \$575,234 = \$106,622

Step 2: \$71,671 + \$56,123 + 740 = \$128,534

Step 3: 106,622/128,534 = 0.83 (CR)

Note:

This Coverage Ratio of 0.83 indicates that this water utility is not able to pay its debt with its operating profit. A more thorough analysis of the financial statements will reveal that the utility is using a significant portion of its depreciation expense to cover this shortfall. If this trend continues and the water rates are not increased, ultimately the utility will begin to negatively cash flow by using its cash assets to repay the debt. Also, by not fully funding a depreciation escrow reserve, the water utility will not have the necessary funds to replace worn-out equipment and other fixed asset system components. Because this coverage ratio is significantly below the benchmark of 1.24, this utility would be considered financially distressed.

The **Cash Flow Profitability Ratio** is calculated to measure the percentage of a water utility's revenues remaining after adding back major non-cash expenses (depreciation). Normally, a water utility that has a Cash Flow Profitability Ratio of less than 0.2 may be considered financially distressed. The Cash Flow Profitability Ratio is calculated by the following formula:

$$\text{CFR} = \frac{\text{Net Income} + \text{Depreciation}}{\text{Operating Revenues}}$$

Example:

(Refer to the Income Statement 2004 Year Ending)

Net Income = \$68,860

Depreciation Expense = \$112,598

Operating Revenues = \$681,856

Step 1: \$68,860 + \$112,598 = \$181,458

Step 2: 181,458/681,856 = 0.27(CFR)

Note:

This Cash Flow Profitability Ratio is indicative of a financially viable water utility that has the necessary revenues to positively cash flow.

The **Liquidity Ratio (Quick Ratio)** is calculated to measure the ability of a water utility to pay back its current liabilities when due. Normally, a water utility that has a Liquidity Ratio of less than 1.5 may be considered financially distressed. The Liquidity Ratio is calculated by the following formula:

$$\text{QR} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Example:

(Refer to the Balance Sheet)

Current Assets = \$512,237

Current Liabilities = \$82,493

Step 1: 512,237/82,493 = 6.2 (QR)

Note:

This Liquidity Ratio of 6.2 far exceeds the benchmark of 1.5 and signifies the utility's ability to pay its current liabilities.

The **Leverage Ratio** is calculated to measure the water utility's reliance on debt. A water utility having a Leverage Ratio of less than 0.30 may be considered financially distressed. The Leverage Ratio is calculated by the following formula:

$$\text{LR} = \frac{\text{Equity}}{\text{Total Assets}}$$

Examples:

(Refer to the Balance Sheet)

Equity = \$468,917

Total Assets = \$1,892,852

Step 1: $468,917/1,892,852 = 0.25(\text{LR})$

Note:

This Leverage Ratio indicates that this water utility is overly reliant on debt. Due to this system also having a severely distressed coverage ratio and using its depreciation to repay its debt, future capital improvements to the water system will probably have to be funded entirely by additional debt which will further weaken both the coverage ratio and the leverage ratio.

RATIO ANALYSIS SUMMARY

It is important to periodically perform a financial ratio analysis of your water utility's financial statements. The six ratios that have been presented in this guide are excellent tools to measure the financial health of a water utility. As evident when calculating the ratios using the example financial statements in this guide, one ratio may be higher than the industry benchmark while another may be lower. Thus, it is important to use all of these ratios when performing an analysis. By the way, would you consider the water utility illustrated in the sample financial statement of this guide to be financially viable or financially distressed? Look at the results again in the summary below:

Operating Ratio	1.18	1.0	(Excellent)
Coverage Ratio	0.83	1.25	(Distressed)
Cash Flow Profitability Ratio	0.27	0.20	(Marginal)
Liquidity Ratio	6.2	1.5	(Excellent)
Leverage Ratio	0.25	0.30	(Marginal)

By taking into account all of the ratios and the difference between the results and the benchmarks, you would probably agree that this water utility is marginally distressed. While the utility is currently positively cash flowing, it is overly reliant on debt which will become a perpetual problem if the utility continues to use its depreciation expense to pay its debts. This utility should consider either reducing expenses or increasing rates enough to fully fund a depreciation escrow account.

CONCLUSION

It is an important responsibility of the decision-maker of a water utility to efficiently manage the finances of the utility. A utility lacking the necessary financial capabilities to adequately pay the costs associated with the technical and managerial capacity components. Hopefully, this guide has helped to demystify financial statements and empower you with a basic understanding of how to read, understand, and analyze water utility financial statements. Remember, if your water utility is not currently compiling financial statements, you should first consult with a competent accountant who can advise your utility on how to establish a financial reporting system.

Section

B

LEARNING EXERCISES

LEARNING EXERCISE 1 - BALANCE SHEET

Purpose: The purpose of this exercise is to give you the opportunity to apply what you have learned about reading and understanding a Balance Sheet.

Instructions: This is an individual exercise - but you may work with your neighbors if you would feel more comfortable. Using the example Balance Sheet provided with this exercise, answer the ten questions to the best of your ability. You may refer back to the manual for review during this exercise. You may also use your calculator if necessary.

Review the sample balance sheet and answer the questions below - you may refer to the Small System Guide to "Understanding Financial Statements" for more information. Note: You will need to calculate some of the answers.

1. How much money does this system have? _____
2. How much money is restricted and is not easily accessible? _____
3. How much money is owed to Soggy Bottom W.A. by its customers? _____
4. How much money does Soggy Bottom owe to vendors and for other non-debt claims? _____
5. How much money does Soggy Bottom W.A. owe currently that will have to be paid within one year? _____
6. If Soggy Bottom W.A. would have taken \$100,000 out of the bank and paid that amount on a long-term debt, what would be the balance for the following accounts:
Cash on Hand and in Bank _____
Total Assets _____
Long Term Notes Payable _____
Total Equity _____
7. How much is Soggy Bottom W.A. worth? _____
8. Soggy Bottom W.A. has been in operation for 28 years. What is the average annual net income (or net loss) for this utility? _____
Looking at the Income Statement, is the current year's net income above (or below) this annual average? _____
9. If a water system had Total Assets of \$1,290,530 and Total Liabilities of \$1,232,680, what would be the net worth of the utility? _____
10. One method of quickly estimating Aged Accounts Receivable is to subtract the average monthly revenue from the total Accounts Receivable balance. Referring to the Income Statement on Page 9, what is the total annual revenue for the current year? _____
What is the average monthly revenue? _____
Subtracting this figure from the total Accounts Receivable on the Balance Sheet, what is the estimated Aged Accounts Receivable? _____

BALANCE SHEET**ASSETS**

Current Assets	2004
Cash on Hand and in Bank	\$430,762
Accounts receivable	60,026
Inventory	14,248
Interest Receivable	2,219
Prepaid Expenses	4,982
Total Current Assets	\$512,237
Fixed Assets	
Land	6,950
Property, Plant & Equipment at cost	2,915,599
Less: Accumulated Depreciation	(1,628,594)
Total Fixed Assets	\$1,293,955
Other Assets	
Restricted Reserve Funds	86,660
Total Other Assets	\$86,660
Total Assets	\$1,892,852

LIABILITIES AND EQUITY

Current Liabilities	
Accounts Payable	8,432
Current Portion of Long -Term Debt	56,123
Withheld & Accrued Payroll Taxes	3,158
Accrued Interest	13,355
Other Accruals	1,425
Total Current Liabilities	\$82,493
Long-Term Liabilities	
Meter Deposits	43,504
Long Term Notes Payable	1,354,061
Less: Current Portion of Long -Term Debt	(56,123)
Total Long-Term Liabilities	\$1,341,442
Equity	
Contributed Capital (Membership)	56,415
Donated Capital (Govt. Grants)	1,720,30
Retained Earnings	(1,307,798)
Total Equity	\$468,917
Total Liabilities and Net Assets	\$1,892,852

LEARNING EXERCISE 2 - INCOME STATEMENT

Purpose: The purpose of this exercise is to give you the opportunity to apply what you have learned about reading and understanding an Income Statement.

Instructions: This is an individual exercise - but you may work with your neighbors if you would feel more comfortable. Using the example Income Statement provided with this exercise, answer the ten questions to the best of your ability. You may refer back to the manual for review during this exercise.

Review the sample income statement and answer the questions below. Note: You will need to calculate some of the answers. Most of these questions will compare/contrast the current and previous fiscal year-ending balances shown on the Income Statement.

1. Looking at the Revenue section of the Income Statement, you can see a slight increase in revenues from 2003 to 2004. What percentage did the revenues increase from 2003 to 2004? _____ (2004 Rev / 2003 Rev) - 1

2. What percentage did Water Sales decrease? _____ (2004 WS / 2003WS) - 1 Assuming that the water rates were not reduced and that there was no significant increase in Accounts Receivable, how would you categorize the growth of this water utility?

(Circle One) A. Declining B. Stagnant C. Growing

3. If Soggy Bottom W.A. was not planning a rate increase for the next fiscal year and did not expect any significant change in population decline, what would you estimate the Water Sales for 2005? _____

4. What percentage did Total Operating Expenses increase from 2003 to 2004? _____ (2004 TO Expense / 2003TOExpense) - 1

5. If Operating Expenses continue to increase at a higher percentage than Revenue, will the utility be able to sustain a positive cash flow without raising its water rates? _____ Other than raising water rates, what other alternative can the utility use? _____

6. What is the total amount of Salaries and Contract Labor?

2003 Salaries + Contract Labor _____
2004 Salaries + Contract Labor _____
What percentage growth in the labor costs does this represent? _____
Does this exceed the total revenue growth (Question 1 Answer)? _____
Does this exceed the total operating expense growth (Question 5)? _____

7. Looking at Other Income and Expenses, it is apparent that with the tremendous increase in Interest Income, Soggy Bottom W.A. transferred a significant portion of its cash assets to interest bearing accounts.

What percentage did Interest Income increase? _____ (2004 Int Inc/2003 Int Inc) - 1

Can Soggy Bottom W.A. expect to see this type of increase next year? _____

8. Soggy Bottom W.A. also realized income from the sale of a piece of equipment (sale price exceeded depreciated value). Would you project additional non-operational income for the next fiscal year? _____
9. How much should Soggy Bottom be putting aside each year for future capital for the repair / replacement of fixed assets? _____

**Soggy Bottom Water Authority - Income Statement
December 31, 2004**

	<u>2004</u>	<u>2003</u>
<u>Revenue</u>		
Water Sales	\$ 591,964	\$ 599,460
Contracted Maintenance	69,399	65,631
Misc. Const. & Meter Connections	19,293	10,831
Membership Fees Received	<u>1,200</u>	<u>1,305</u>
<u>Total Revenue</u>	681,856	677,227
<u>Operating Expenses</u>		
Water Purchases	\$ 34,165	\$ 19,997
Electricity and Utilities	45,647	40,634
System Repair	13,764	10,151
Service Supplies	61,460	70,555
Testing and Analysis	2,662	2,941
Bad Debt Expense	6,646	2,663
Bank Charges	132	90
Contract Labor	35,545	29,484
Continuing Education	2,913	3,603
Depreciation	112,598	118,338
Fuel and Oil	13,408	11,990
Insurance	40,786	33,702
Legal and Accounting	4,829	5,585
Miscellaneous	4,385	4,294
Office Expense	3,320	3,699
Postage	4,374	4,659
Repairs and Maintenance	11,052	9,347
Retirement Expense	3,464	556
Salaries	142,752	133,147
Taxes and Licenses	16,696	17,482
Telephone	9,701	7,761
Truck Expense	2,094	4,452
Uniforms	<u>2,841</u>	<u>3,226</u>
<u>Total Operating expenses</u>	575,234	538,356
Net Operating (Loss) Profit	106,622	138,871
<u>Other Income and Expenses</u>		
Interest Income	\$ 20,000	\$ 12,230
Gain on Sale of Equipment	13,295	-0-
Interest Expense	<u>(71,671)</u>	<u>(75,113)</u>
<u>Total Other Income & Exps</u>	(37,762)	(62,883)
Increase in Net Assets from Operations	68,860	75,988

LEARNING EXERCISE 3 - CASH FLOW STATEMENT

Purpose: The purpose of this exercise is to give you the opportunity to apply what you have learned about reading and understanding a Cash Flow Statement.

Instructions: This is an individual exercise - but you may work with your neighbors if you would feel more comfortable. Using the example Cash Flow Statement provided with this exercise, answer the following five questions to the best of your ability. You may refer back to the manual on Page 17 for review during this exercise. You may also use your calculator if necessary.

1. What is the adjusted cash ending balance for Soggy Bottom W.A. at the end of 2004? _____

What is the adjusted cash ending balance for Soggy Bottom W.A. at the end of 2003? _____

What is the percentage increase (decrease) in the adjusted cash flow balance from 2003 to 2004? _____ (Cash Balance EOY 2004 / Cash Balance BOY 2004) - 1

What is the adjusted cash ending balance for Soggy Bottom W.A. at the end of 1999? _____

What is the percentage increase (decrease) in the adjusted cash flow balance from 1999 to 2003? _____ (Cash Balance EOY 2003 / Cash Balance BOY 2003) - 1

2. Soggy Bottom W.A. purchased a new backhoe and trailer in 2004. This was the only equipment purchased in 2004. How much did it pay for this equipment? _____

Why did this expense not appear on the Income Statement? _____

3. This water utility sold its old backhoe and trailer during 2004. How much did it receive for this equipment? _____ (Hint: Refer to the Income Statement on Pg 9)

Why did not all of the proceeds from the sale of this equipment appear on the Income Statement? _____

4. Soggy Bottom W.A. makes scheduled principal and interest payments for its mortgage in the amount of \$7,914 each month or \$94,970 each year. In 2004, this water utility made additional principle payments to retire one of its smaller loans. How much in additional principle payments did Soggy Bottom W.A. make in 2004? _____ (Hint: Refer to the Income Statement on Pg 9)

5. Soggy Bottom W.A. had a depreciation expense in 2004 of \$112,598. Assuming that all of the increase in cash flow went into a repair / replacement reserve account, at what percentage of its depreciation expense did this water utility set aside for the future? _____

Soggy Bottom Water Authority - Cash Flow Statement December 31, 2004		
<u>Cash Flows from Operating Activities</u>		
Change in Net Assets	<u>\$ 68,860</u>	<u>\$ 75,988</u>
Adjustments to reconcile change in net assets to net cash		
Provided by operating activities:		
Depreciation	112,598	118,338
Gain on Sale of Equipment	(13,295)	
(Increase)Decrease in Accounts Receivable	(7,484)	(7,395)
(Increase)Decrease in Prepaid Expenses	1,188	(1,485)
(Increase)Decrease in Interest Receivable	1,936	(3,053)
(Increase)Decrease in Inventory	(518)	6,938
Increase(Decrease) in Accrued Expenses	(1,658)	870
Increase(Decrease) in Payroll Tax Liabilities	(862)	624
Increase(Decrease) in Accrued Interest	(1,791)	10,243
Increase(Decrease) in Other Accruals	(104)	28
Total Adjustments	<u>93,125</u>	<u>128,288</u>
Net Cash Provided by Operating Activities	<u>161,985</u>	<u>204,276</u>
<u>Cash Flows from Investing Activities</u>		
Purchase of Property and Equipment	(68,732)	(19,857)
Sale of Property and Equipment	<u>26,400</u>	<u>-0-</u>
Net Cash Provided by Investing Activities	<u>(42,332)</u>	<u>(19,857)</u>
<u>Cash Flows from Financing Activities</u>		
Retirement of Long Term Debt	(63,155)	(37,106)
Net Cash Provided by Financing Activities	<u>(63,155)</u>	<u>(37,106)</u>
<u>Net Increase in Cash</u>	56,498	147,313
<u>Cash Balance, Beginning of year</u>	<u>460,924</u>	<u>313,611</u>
<u>Cash Balance, End of Year</u>	<u>\$517,422</u>	<u>\$460,924</u>

LEARNING EXERCISE 4 - DETERMINING BUDGETARY COMPLIANCE

Purpose: The purpose of this exercise is to allow you the opportunity to "practice" evaluating a monthly income statement to determine budgetary compliance and to work together as a group to identify possible solutions to any problems found.

Instructions: Compare the sample Monthly Income Statement with the Budget to answer the following questions - work as a group just as you would if you were reviewing your own water utility's financial information at a board meeting. In determining budgetary compliance, divide the annual budget by twelve (12) and multiply by the number of months that have elapsed in the current fiscal year (7). Then compare the year-to-date items with these figures. Formula:

Step 1: Budget Item / 12 = Monthly Budget

Step 2: Monthly Budget x Number of Months Elapsed (7) = YTD Budget

Step 3: YTD Revenue (Expense) Item - YTD Budget = Over (Under)

1. Is the Year-to-Date Total Revenues over or (under) budget?

By what amount is the Total Revenues over / (under) budget? _____

2. Is the Year-to-Date Total Operating Expenses over (under) budget?

By what amount is the Total Operating Expenses over / under budget? _____

3. How much is the YTD Net Income (under) budget? _____
4. With over half of the fiscal year already elapsed, do you as a group believe that this water utility will meet its budget? _____
5. What measures (if any) would you take to make adjustments so that Soggy Bottom W.A. might improve its ability to comply with the budget. Be specific but also be realistic. List the expenses that you would like to reduce. Would you consider a rate increase at this point?

Income Statement - Soggy Bottom Water System, Inc.

For the 7th Month Ending July 31, 2005	Current Month	Year-to-Date
<u>Revenue</u>		
Water Sales	\$ 51,346	\$ 329,748
Contracted Maintenance	6,596	42,753
Misc. Construction & Meter Connections	1,144	7,349
Membership Fees Received	115	715
Total Revenue	59,202	380,565
<u>Operating Expenses</u>		
Water Purchases	\$ 3,072	\$ 19,728
Electricity and Utilities	4,085	25,760
System Repair	1,530	9,074
Service Supplies	8,114	43,692
Testing and Analysis	2,580	2,580
Bad Debt Expense	0	0
Bank Charges	20	60
Contract Labor	4,500	18,200
Continuing Education	45	1,383
Depreciation	9,167	64,167
Fuel and Oil	1,780	8,902
Insurance	0	47,962
Legal and Accounting	50	5,270
Miscellaneous	148	1,167
Office Expense	239	1,890
Postage	375	2,573
Repairs and Maintenance	4,886	27,454
Retirement Expense	310	2,172
Salaries	12,287	86,007
Taxes and Licenses	992	6,942
Telephone	791	4,410
Truck Expense	79	1,278
Uniforms	260	1,820
Total Operating Expenses	55,310	382,489
Net Operating (Loss) Profit	3,892	(1,924)
<u>Other Income and Expenses</u>		
Interest Income	\$ -	\$ 11,03
Gain on Sale of Equipment	0	0
Interest Expense	(5,667)	(39,667)
Total Other Income & Expenses	(5,667)	(28,630)
Net Income (Loss)	\$ (1,774)	(30,554)

Annual Budget - Soggy Bottom Water System, Inc.

Fiscal Year 2005	2004 Actual	2005 Budget	% Change
Revenue			
Water Sales	\$ 591,964	\$ 600,000	1.36%
Contracted Maintenance	69,399	70,000	0.87%
Misc. Construction & Meter Connections	19,293	20,000	3.66%
Membership Fees Received	1,200	1,200	0.00%
Total Revenue	681,856	691,200	1.37%
Operating Expenses			
Water Purchases	\$ 34,165	\$ 38,000	11.22%
Electricity and Utilities	45,647	48,000	5.15%
System Repair	13,764	15,000	8.98%
Service Supplies	61,460	70,000	13.90%
Testing and Analysis	2,662	2,800	5.18%
Bad Debt Expense	6,646	3,500	-47.34%
Bank Charges	132	150	13.64%
Contract Labor	35,545	30,000	-15.60%
Continuing Education	2,913	3,000	2.99%
Depreciation	112,598	110,000	-2.31%
Fuel and Oil	13,408	14,000	4.42%
Insurance	40,786	45,000	10.33%
Legal and Accounting	4,829	5,000	3.54%
Miscellaneous	4,385	5,000	14.03%
Office Expense	3,320	4,000	20.48%
Postage	4,374	4,500	2.88%
Repairs and Maintenance	11,052	12,000	8.58%
Retirement Expense	3,464	3,800	9.70%
Salaries	142,752	152,000	6.48%
Taxes and Licenses	16,696	17,000	1.82%
Telephone	9,701	9,000	-7.23%
Truck Expense	2,094	3,000	43.27%
Uniforms	2,841	3,000	5.60%
Total Operating Expenses	575,234	97,750	3.91%
Net Operating (Loss) Profit	106,622	93,450	-12.35%
Other Income and Expenses			
Interest Income	\$ 20,614	\$ 24,000	16.43%
Gain on Sale of Equipment	13,295	0	-100.00%
Interest Expense	(71,671)	(68,000)	-5.12%
Total Other Income & Expenses	(37,762)	(44,000)	16.52%
Net Income (Loss)	\$ 68,860	\$ 49,450	-28.19%

LEARNING EXERCISE 5 - PERFORMING A RATIO ANALYSIS

Purpose: The purpose of this exercise is to allow the you the opportunity to "practice" performing a Financial Ratio Analysis. The example financial statements used in this exercise is for a hypothetical municipality providing water, wastewater, and waste disposal services. This is an individual exercise, but you may work together if necessary.

Instructions: Read the Purpose of the Exercise listed above and make sure that everyone has the sample balance sheet, the sample income statement, and the questions for this exercise. You may refer to the formulas listed earlier for each of the five ratios used in the questions.

1. What is the Operating Ratio for the Year-to-Date for the Town of Purple Valley? _____
Is the Operating Ratio above or below the benchmark Operating Ratio of 1.1?
A. Above B. Below

2. What is the Coverage Ratio for the Year-to-Date for the Town of Purple Valley?: _____ (Note: Principle Paid YTD = \$1,259; Debt Reserve Payments = \$0.00)
Is the Coverage Ratio above or below the benchmark of 1.25?
A. Above B. Below

3. What is the Cash Flow Profitability Ratio for the Year-to-Date for the Town of Purple Valley? _____ (Note: Depreciation = Repair & Replacement)
Is the Cash Flow Profitability above or below the benchmark of 0.20?
A. Above B. Below

4. What is the Liquidity Ratio for the for the Town of Purple Valley? _____
Is the Liquidity Ratio above or below the benchmark of 1.5?
A. Above B. Below

5. What is the Leverage Ratio for the for the Town of Purple Valley? _____

Is the Leverage Ratio above or below the benchmark of 0.30?

A. Above B. Below

6. Based upon the ratio analysis that you have performed, would you consider the utility operations (enterprise fund) of the Town of Purple Valley to be financially excellent, marginal, or distressed? _____

Why (explain): _____

Town of Purple Valley - Enterprise Fund Balance Sheet
November 30, 2004

ASSETS

Current Assets

Enterprise Operating Account	\$ 47,930
Short-Term Savings	49,074
Repair & Replacement Account	184,537
Accounts Receivable	39,230
Inventory	4,789
Interest Receivable	-0-
Prepaid Expenses	-0-

Total Current Assets **325,560**

Fixed Asset

Water System (at Cost)	2,798,000
Sewer System (at Cost)	3,410,000

Total Fixed Assets **6,208,000**

Other Assets

USDA Restricted Reserve Funds	74,440
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Total Other Assets **74,440**

Total Assets **\$6,608,000**

LIABILITIES AND EQUITY

Current Liabilities

Accounts Payable	4,802
Current Portion of Long-Term Debt	15,779
Withheld & Accrued Payroll Taxes	764
Other Accruals	4,036

Total Current Liabilities **25,381**

Long-Term Liabilities

Meter Deposits	72,350
Long Term Notes Payable	1,482,875
Less: Current Portion of Long-Term Debt	(21,036)

Total Long-Term Liabilities **1,534,189**

Equity

USEPA Grants	1,750,000
CDBG Grants	620,000
USDA-RD Grant	1,550,000
Enterprise Fund Retained Earnings	1,128,430

Total Equity **5,048,430**

Total Liabilities & Net Assets **\$6,608,000**

Town of Purple Valley - Enterprise Fund Statement of Income

For the Month Ending November 30, 2004	Current Month	Year-to-Date	YTD Budget
<u>Revenue</u>			
Water	\$ 14,759	\$ 43,072	\$ 42,000
Sewer	9,358	29,471	30,000
Sanitation	8,596	25,833	26,000
Late Fees, Tap Fees, & Other Charges	295	1,578	1,050
Total Revenue	33,008	99,954	99,050
<u>Operating Expenses</u>			
Town Clerk Salary (50% Enterprise Fund)	\$ 750	\$ 2,250	\$ 2,250
Public Works Salaries	4,850	14,550	14,550
Contract Operator Fees	600	1,800	1,800
Employer Taxes	428	1,285	1,285
PERS Employer Contribution	112	336	336
Electrical Purchases for Wells / Lagoon	3,845	11,689	9,000
Chemical Purchases for Wells / Lagoon	345	1,283	1,200
Testing Fees	0	0	2,250
Analytical Lab Fees for Wastewater Tests	300	900	900
Contract Garbage Collection	8,500	25,500	25,500
Service Supplies	2,478	7,310	7,500
Contract System Repairs	1,247	1,247	3,750
Truck and Equipment Repairs	0	480	1,500
Fuel	942	2,644	2,400
Repair & Replacement Escrow	4,500	13,500	13,500
Insurance	1,538	4,613	4,613
Professional Fees (Legal, Accounting, Eng.)	300	300	500
Office Supplies	184	273	300
Postage	525	1,632	1,530
Telephone	684	2,102	1,800
Total Operating Expenses	32,128	87,694	90,464
Net Operating (Loss) Profit	880	6,261	2,586
<u>Other Income and Expenses</u>			
Interest Income	\$ 683	\$ 683	\$ 750
Interest Expense	(1,485)	(4,455)	(4,455)
Total Other Income & Expenses	(802)	(3,772)	(3,705)
Increase (Decrease) in Assets	\$ 78	\$ 2,489	\$ (1,119)