

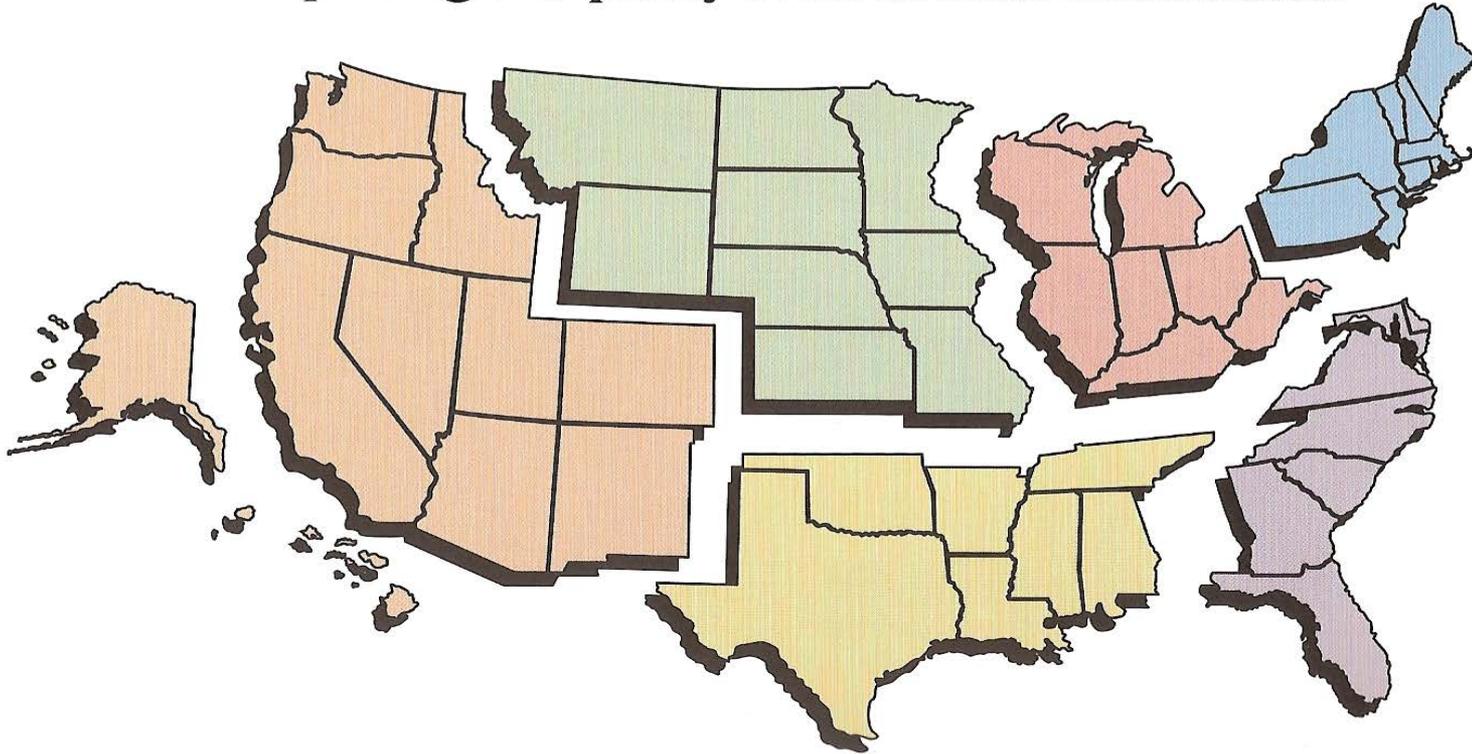


**Good
Afternoon!**



The Rural Community Assistance Partnership

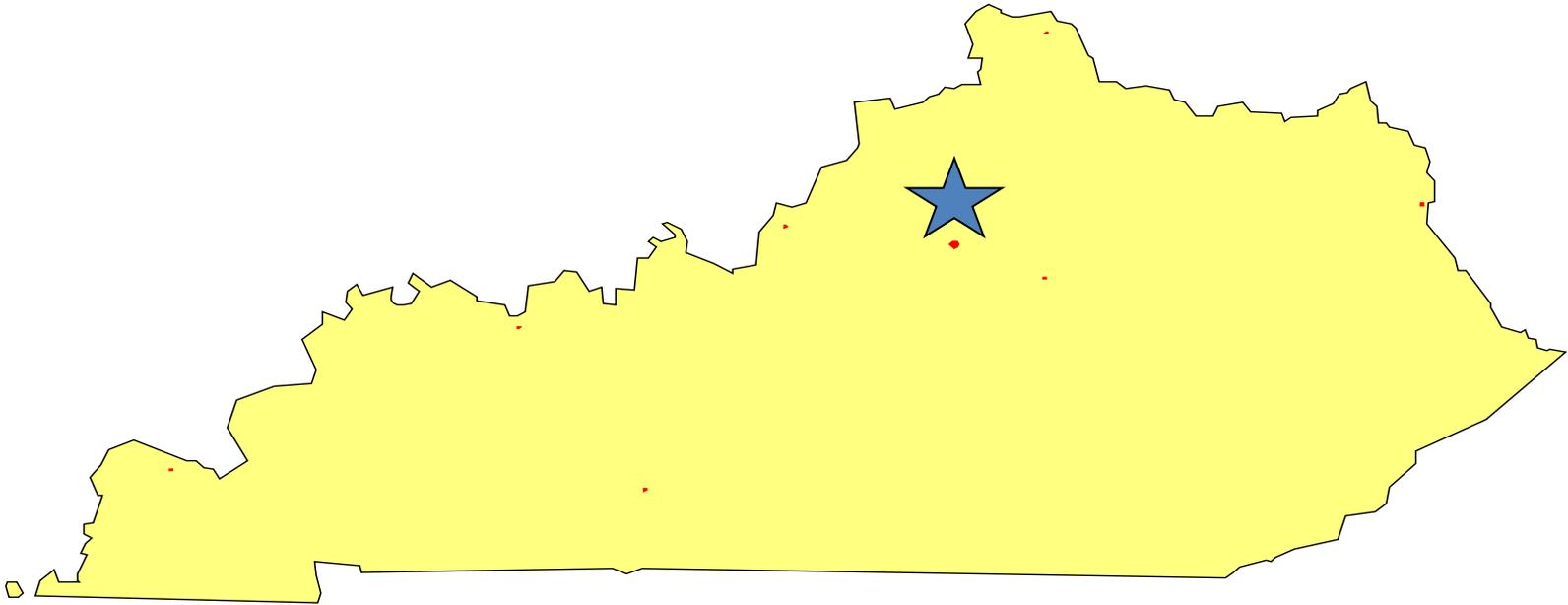
Improving the quality of life in rural communities



Kentucky RCAP



Is administered by Community Action Kentucky.



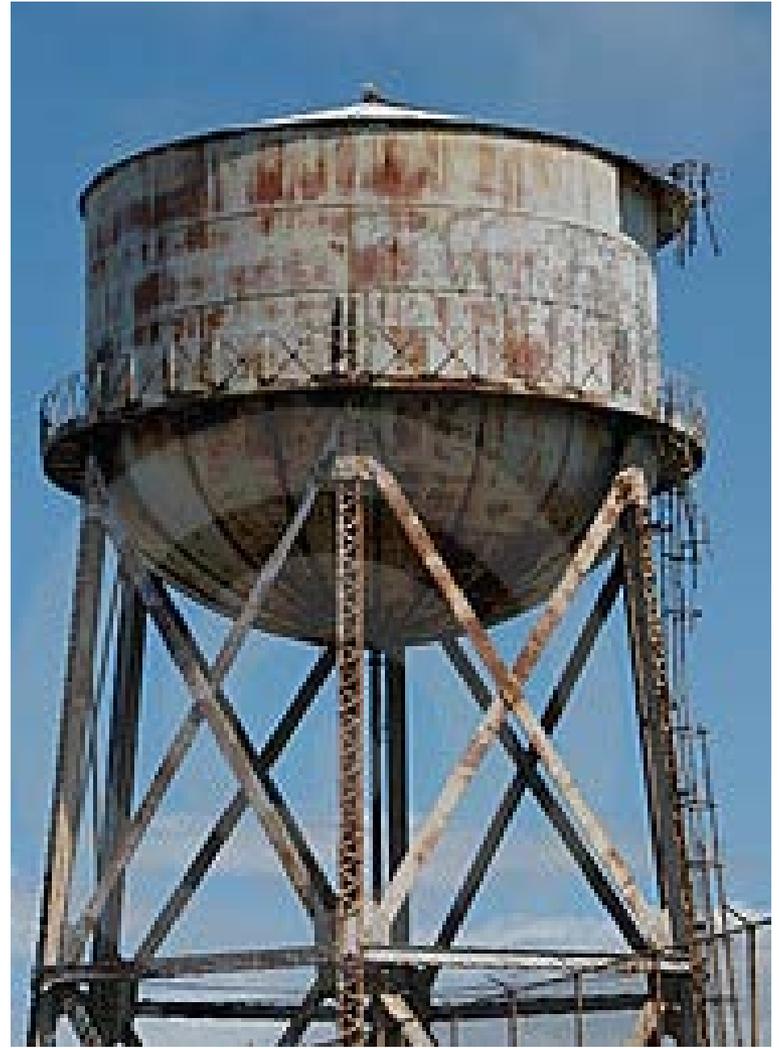
Objectives

- Understand what an asset management plan is and how it is used to prepare the annual budget.
- Understand budget requirements.
- Know where to find resources to prepare a budget and asset management plan.



Asset Management

i.e. Planning and Caring for Important Stuff



Asset Management



A planning process that ensures that you get the most value from each of your assets and have the financial resources to rehabilitate and replace them when necessary.

Benefits of an Asset Management Plan



- Reduces costly repairs – fewer emergency repairs
- Improves customer service – fewer service interruptions
- Protect public health and maintain compliance
- Increases knowledge of system – reduce dependence on expensive consultants
- Prioritizes projects and provides time to explore funding sources
- Shows lenders you are a good credit risk
- **Saves \$\$\$ over time**

Scenario #1

Maintenance: **NONE**

Useful Life: **50,000 Miles**

Cost per Mile: **\$0.36**

Scenario #2

Maintenance: **BASIC**

Useful Life: **150,000 Miles**

Cost per Mile: **\$0.12**

Scenario #3

Maintenance: **PREVENTIVE**

Useful Life: **200,000 Miles**

Cost per Mile: **\$0.09**



Base Price:

\$18,000

Life Cycle Cost



- The total cost of owning and operating an asset over its useful life.
 - The goal of Asset Management is to achieve the lowest possible life cycle cost
 - Reducing the total life cycle cost will require careful maintenance and timely renovation/rehabilitation
 - Asset Management may cost money in the short-term but will pay big long-term dividends

Asset Management Process

1. Take an inventory
2. Prioritize your assets
3. Development an asset management plan
4. Implement your asset management plan
5. Review and revise your plan annually



Knowledge Test

What Assets are in your water system?

Step One: Information Needed When Inventorying Assets:

- Age
- Condition
- Service History
- Useful Life



What is the useful life for
each of your assets?

System Inventory Worksheet



Date Worksheet completed/Updated:

Asset	Useful Life	Condition	Service History	Adjusted Useful Life	Age	Remaining Useful Life
Treatment Plant	40	Good	Rehab (2005)	40	7	33
Lift Station	30	Good		30	5	25
Electrical Components	10	Some corrosion	Rehab (2004)	10	9	1
Valves (45)	40	Unknown	6 valves don't work	40	9	31
6-inch (PVC)	40	Unknown		40	9	31
4-inch (PVC)	40	Unknown		40	9	31
2-inch (PVC)	40	Unknown	Repair breaks (2/yr)	40	9	31

Step Two: Prioritizing Assets



- Which assets are critical to sustained performance?
- How does it fail?
- How can it fail?
- What is the likelihood of failure?
- What does it cost to repair?
- What are the consequences of failure?

Prioritization Worksheet



Date Worksheet Completed/Updated:

Asset	Remaining Useful Life	Importance	Redundancy	Priority (1 is high)
Treatment Plant	33	Needed for service	No redundancy	1
Lift Station	25	Needed for service	No redundancy	1
Electrical Components	1	Needed for control	No redundancy-corrosion	1
Valves (45)	31	Needed for isolation	Other valves, but some don't work	2
6-inch (PVC)	31	Needed for delivery	No redundancy	3
4-inch (PVC)	31	Needed for delivery	No redundancy	3
2-inch (PVC)	31	Needed for delivery	No redundancy	3

Step Three: Developing an Asset Management Plan



- How much will it cost to rehabilitate and replace my assets?
- What alternative management options exist and which are the most feasible for my organization?



Step Three: Developing an Asset Management Plan (cont.)

- When will action be required on my assets?
- What preventative maintenance programs are in place for my assets?



Step Four: Implementing Your Asset Management Plan

- What is my required sustained Level of Service?
- What budget reserves will I need for maintaining my assets?
- What is the demand for my services from my stakeholders?



Step Four: Implementing Your Asset Management Plan

- What do regulators require?
- What is my performance?

Required Reserve Worksheet



Date Worksheet Completed/Updated:

Asset (list highest to lowest priority)	Activity	Years until action needed	Cost (s)	Reserve required current year
Treatment Plant	Replace	33	\$1,200,00	\$36,363
Pump Station	Replace	25	\$150,000	\$6,000
Electrical Components	Replace with controller	1	\$2,000	\$2,000
Valves	Replacement (54 valves at \$500 each)	31	\$22,500	\$726
Pipe: 6-inch (PVC)	3600 ft. at \$20/ft.	31	\$72,000	\$2,323
4-inch (PVC)	9500 ft at \$20/ft.	31	\$190,000	\$6,129
2-inch (PVC)	2000ft. at \$20/ft.	31	\$40,000	\$1,290

Total reserve in the current year: \$54,831

Step Five: Reviewing & Revising Your Asset Management Plan



- What are the processes for reviewing and updating my asset programs and plans?
- What are my best long-term funding/planning strategies?

Paying for it all

- In most cases, it is not realistic or prudent to expect publicly owned systems to fund capital replacement 100% from reserves.
- Identify which items will be funded 100% from reserves, and which items will be funded in part using other sources (primarily loans).
- The useful life of any items that are funded using other sources (loans, bonds) should meet or exceed their terms (i.e. a 20-year loan should not fund equipment with a useful life of 15 years).



Who needs to be involved with preparing the asset management plan?

Unexpected Scenario!

Replacement

- Cost: **\$18,000**
- Useful Life: **200,000 Miles**
- Cost per Mile: **\$0.09**



Rehabilitate

- Cost: **\$3,000**
- Useful Life: **60,000 Miles**
- Cost per Mile: **\$0.05**



Software

- CUPSS for water and wastewater
- CAP Finance – for water and wastewater, routine repair and inspection schedules not included
- TEAMS – for wastewater only, comprehensive but less user friendly

All of these programs are free!

CUPSS Check-up Program for Small Systems



CUPSS Check-Up Program for Small Systems
Set-up | Switch Utility | Create User | Help | Exit

Check-Up Program for Small Systems
Fill Your CUPSS
Search

My Home

My Inventory

My O & M

My Finances

My Check-up

My CUPSS Plan

Welcome Back Joe, Asset Management for Virginia Water Authority

Welcome Back Joe. What would you like to do today? [\[General Review\]](#)

Do Some Training

Enter a New Task or Work Order

Create or Update My Schematic

Search Asset and Maintenance Data

Create or Update My Inventory

Enter My Finances

Print My Check-Up Reports

Work on My CUPSS Plan

My Calendar

Mouse over the tasks to view information

August 2007						
S	M	T	W	T	F	S
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1

My Messages and Alerts

[Review]

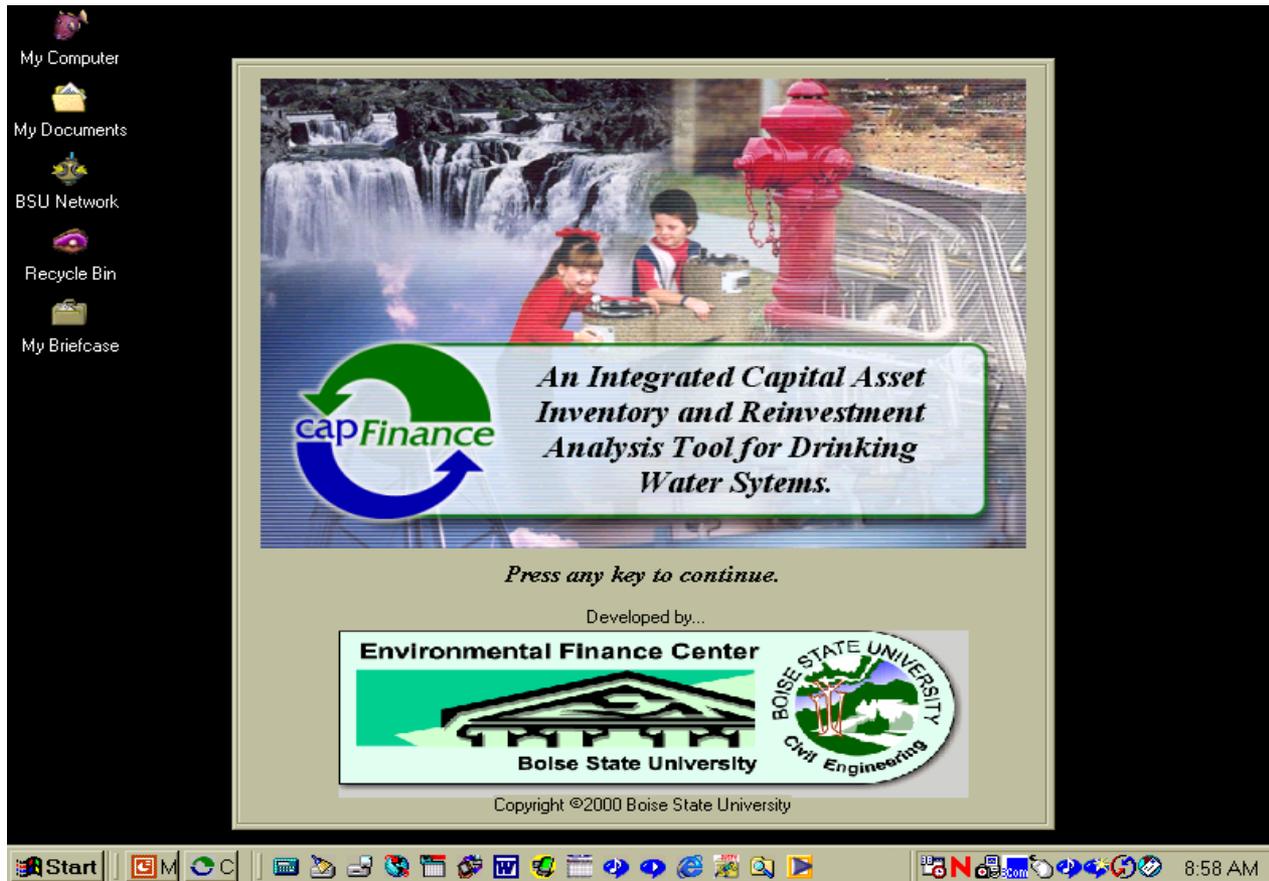
Pop-Up Messages Are Off Click To Turn On

CUPSS Plan Ticker	50%
Tasks Past Due	7
Assets Needing Update	5
A Work Order Due	2

U.S. Environmental Protection Agency

CAP Finance

Asset Management Software for Water and Wastewater Utilities



Call (208) 426-1567 or email bjarock@boisestate.edu to request a copy of CAP Finance.

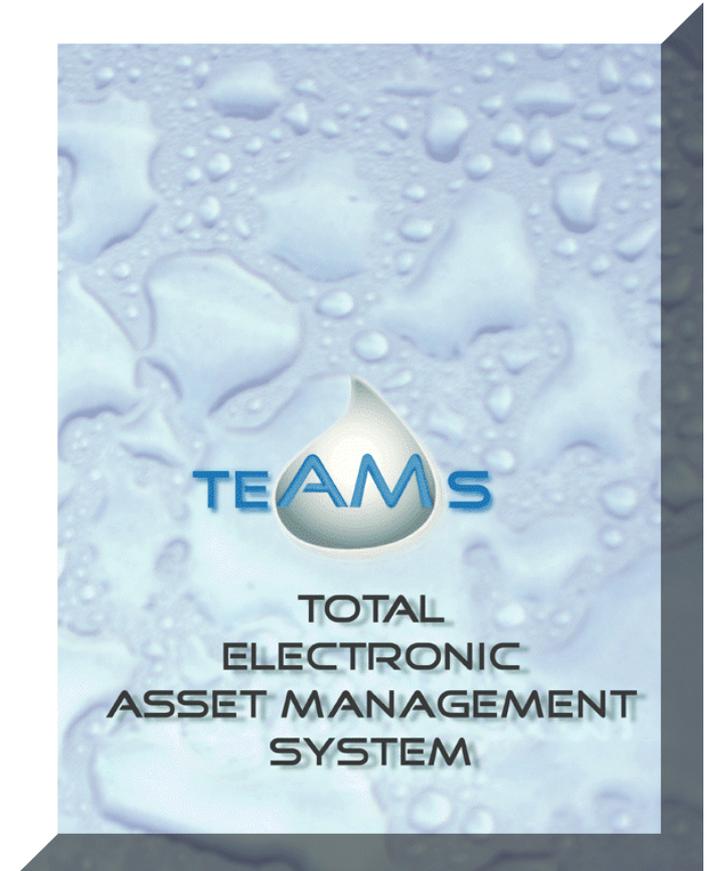
TEAMS

Total Electronic Asset Management System

Asset Management Software for Wastewater Systems



- Comprehensive maintenance scheduling, asset management and budgeting tool
- Requires Microsoft Office software
- Developed by Maryland Center for Environmental Training
- Go to <http://www.mcet.org/Technical/environment/teamsAM.html>





Budgeting



What is a Budget?



Budget Definition Simplified

Expenses + Future = Revenue (Income)

Adopting the Budget



Annual budgets are required every year by all funding agencies, PSC, DOW, **and KRS 65.065.**

Review the budget on a monthly basis.



KRS 65.065(1)

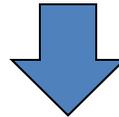
- Must prepare a budget annually.
- Submit the budget to the fiscal court in the county in which it is located.
- Budget is not effective until filed with the fiscal court.
- **NO** monies may be expended **from any funds or any sources** except in accordance with a filed budget.

KRS 65.065(1)

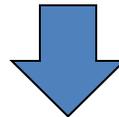


- If a water district fails to file within 30 days of the start of **the water district's fiscal year**:

Fiscal Court



Water District



Prevent Spending

Who prepares the budget?

Ideally - a committee

- Members of the governing body
- Clerk
- Manager
- Operator
- Consultants



All too often, the clerk or secretary is directed to prepare it without input from the governing body.

Benefits of a Budget

- Helps to reduce unnecessary costs
- Determines if costs are being incurred appropriately
- Controls spending
- Ensures accountability
- Improves the ability to anticipate costs



What methodology does PSC deem to be reliable and accurate in determining expenses for the upcoming budget?



Data based **actual**
expenses...and additional
known and measurables...



What are the Revenues in a
water system?

Two Types of Income

Operating Revenue

- Water/Wastewater Service
- Non reoccurring Fees: Connection Fees, Late payments, penalties, and reconnection fees

Nonoperating Revenue

- Interest on checking accounts
- Interest on reserve accounts
- Forfeited deposits
- Providing services for other utilities



What are the expenses of a drinking water system?



Typical Expenses

- Employee Salaries
- Utilities
- Pipe
- Repair Parts
- Insurance
- Equipment Leases
- Gasoline
- Debt Payments
- Postage
- Benefits
- Frequency of Repairs
- Professional Services (audits, legal, engineering, etc.)
- Vehicle Insurance
- Laboratory Testing
- Chemicals
- Purchased Water

Expenses



- Debt Service Payments
- Reserve Accounts
- Operation and Maintenance Expenses



Reserve Accounts

- Depreciation/Reserve Account (RD & KIA)
- Short Lived Asset Account (Replacement Fund Reserves)
- Emergency Operating Reserves

Budgeting vs. Accounting



- Budgeting is a forecast of revenues and a plan of expenditures.
- Accounting is recording actual revenues and expenditures – information used to help prepare the next budget.
- Poor accounting practices make it difficult to prepare good budgets.

Five Points of Budget Development



- Establishing required Debt Service levels.
- Establishing System Financial Reserve levels.
- Estimating the full cost of operating your system for one full year.
- Estimating system revenue for water and/or wastewater services.
- Adjusting revenues to cover estimated expenses.

Example Budgeting Worksheet

Date _____

Revenues	Expenses	Net Income
Service Fees _____ Fees and Service Charges (Non reoccurring charges: late fees, connection fees, etc.) _____ Interest _____ Other _____	Maintenance _____ Utilities (electricity, telephone, Internet, etc.) _____ Salaries and Benefits _____ Equipment Costs _____ Chemicals _____ Monitoring and Testing _____ Rent or Mortgage _____ Insurance _____ Professional Services (legal, accounting, engineering, etc.) _____ Training _____ Billing _____ Other Fees (Water withdrawal, etc.) _____ Security _____ Other _____ Debt Service _____	Total Revenue _____ 0 Total Expenses _____ 0 Net Income (Revenue - Expenses) _____ 0
		Reserves Needed Debt Service Requirements (RD, KIA) _____ Short Lived Asset _____ Other _____ Total Required Reserves _____
		Additional Reserves Needed (Net Income-Required Reserves) _____ 0
Total Revenues	Total Expenses	



Quiz



Questions:

How many loans do you have?

List them.

What are the terms of each?

How much do you owe on each?



What can we do to balance
the budget without **raising**
rates?

Ways to Help Balance the Budget Without Raising Rates



- Collect overdue accounts.
- Make sure your cash registers (water meters) are working.
- Improve customer billing. (Make sure everyone who is receiving service is getting a bill.)
- Update fees, deposits, and service charges.
- Put your money to work. (Shop around for bank services.)
- Buy in quantity.
- Add new customers.

Rate Structure



- Water: Rates must produce revenues to cover full cost of producing, treating, storing, and distributing water.
- Wastewater: Rates must provide revenue to cover full cost of collecting and treating wastewater.



Future??



Sometimes being a community leader is like parenting...the best decision is not always the most popular one.

A dramatic landscape with a dark, stormy sky and a green field in the foreground. The sky is filled with heavy, dark clouds, with a bright light source breaking through near the horizon, creating a silhouette of a city or town. The foreground shows a green field, possibly corn, and a road on the left side.

KyWARN

**Mutual Aid Response Network
For Water and Wastewater Systems**

Kentucky



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