CHAPTER 2

THE RCM PROGRAM IMPLEMENTATION PLAN

Getting Started

Chapter 2 provides a step-by-step approach to help you through your first year as a Resource Conservation Manager. This chapter is designed to help you achieve results while increasing management support and your chances of success. Although the tasks appear in order of progression, many of them overlap and some will be ongoing. You need not complete one task before starting another. In fact, some of them will need to be done simultaneously.

Figure 2.1, Resource Conservation Management Implementation Plan, outlines a schedule of activities you will likely perform during the first year. This is only a recommended approach. You may want to modify the tasks to reflect your personal style and your organization's needs. Your familiarity with staff will also play a part in your approach. Refer to Figure 2.1 as you review the following tasks.

TASK 1

Gain Top-Level Management Commitment and Support

APPENDIX A
Reporting/Communications

RESOURCE DISK R
present.ppt: Sample RCM presentation to top-level management.

It is essential to have commitment and support at the highest management level for your RCM program to be a success. To start this process, you will probably make presentations to management on the value of Resource Conservation Management. The Resource Disk and Appendix provide a sample presentation for you to use.

Get a Written Demonstration of Support

An excellent way to demonstrate high-level management support is to establish an organization-wide RCM policy. Developing a written policy or resolution shows staff and occupants that management is committed to RCM activities. It clarifies expectations and helps avoid miscommunication. It also provides you with guidance in developing your RCM program.

APPENDIX A
Reporting/Communications

RESOURCE DISK R
policy.doc: Sample RCM policy.

The RCM Policy

Your policy should be one or two pages and contain the following:

- *Statement of concern regarding the long-range environmental and financial impacts of energy, water and solid waste*
- *Statement of commitment to Resource Conservation Management*
- *A brief implementation plan*
- *Reporting requirements*
- *Allocation of staff and budget resources to get the job done*

APPENDIX A
Reporting/Communications

RESOURCE DISK R
supt_mem.doc: Sample memo from the superintendent or director to staff.

An alternative, or supplemental, way to demonstrate high-level support for the RCM program is a memorandum from the director or superintendent to staff. This memo should introduce the program, emphasize its importance and ask for staff cooperation. It should also introduce you as the Resource Conservation Manager.

Highlight the Potential Savings

To gain adequate high-level support, it may be necessary to provide an estimate of potential savings and revenues from the RCM program. If there are currently no major efforts being made to conserve energy or other resources, you can expect to save 10 to 15 percent of your organization's total annual energy, sewer,

water and garbage budget. Based on experience from RCM programs in Oregon and Washington, energy savings alone provide 60 to 80 percent of the total resource savings from an RCM program.

APPENDIX A
Worksheets/Spreadsheets

RESOURCE DISK R
eui_savg.xls: Spreadsheet to calculate energy savings potential.

You can make a rough estimate of potential energy savings by comparing the facility's consumption to energy-efficient operation targets. The Energy Use Index (EUI) Comparison table will help you make this estimate.

See **Task 3, page 2-8,** for an explanation of the Energy Use Index.

Consider the Value of Shared Savings

Shared savings is another important element of an RCM program that you may want to consider. Shared savings provides an incentive for staff and occupants to conserve resources. A percentage of the savings from the RCM program may be allocated as "discretionary funds" for each facility or department. These funds can be used as rewards for outstanding achievement and to purchase books, uniforms, computers or other needed equipment.

Shared savings promotes widespread participation in the program because staff receive a return for their efforts. A shared savings plan should be written into the policy and be approved by management. It can then be updated as needed.

APPENDIX A
Reporting/Communications

RESOURCE DISK R
shar_sav.doc: Sample shared savings plan/policy.

What To Include in a Shared Savings Plan

A shared savings plan should provide a Resource Conservation Management savings disbursement for:

- *Facility administrators for items or activities that benefit occupants. This encourages participation in the program.*
- *Operation and maintenance improvements. This further increases savings.*
- *Operation and maintenance training for building operators and maintenance staff. This can have a tremendous impact on energy and water use.*
- *RCM projects (capital improvements), deposited in an account designated for this purpose. Such projects enhance facility comfort, usually result in reduced maintenance costs and additional savings.*
- *The organization. Overall savings should also be shared at the organization level to protect against budget shortfalls.*

Communicate Regularly with Upper Management

After your RCM policy is adopted and program initiated, it is very important that you keep top-level management "in the loop" with regular communication on the status of the program. Many RCMs include status reports in their organization's board or council's meeting packet.

TASK 2

Contact Utility Representatives To Review Program Offerings, Rate Schedules and Billing Histories

Get to know your local utility representatives. They are your gateway to the resources that your facilities use. Contact each of the utilities that serve your facilities. Utilities often provide free or low-cost services that may include assembling resource accounting data or conducting walk-through assessments of your facilities. Ask about grant or loan programs that you can use to help pay for conservation measures. Utility companies may even have resource-use studies on file already prepared for your organization. Get copies, if available.

Understand Utility Rates

Utilities often have several different rates available. More than one rate could be applicable for a particular facility. You can request copies of rate schedules by contacting your utility representatives. They should also be able to provide you with a list of your facilities and the associated rate schedules. Ask your utility representative to explain the different schedules and help determine which ones are best for your facilities.

Understanding the different rate schedules can help you identify potential billing errors. It also helps you identify potential resource-saving opportunities. For example, electrical demand costs vary widely from utility to utility. Some utilities don't charge for demand, while others charge more than $6 per kW per month. In a large "all electric" school, demand charges alone could be more than $8,000/month in some cold months. Understanding what makes your bill high is an important part of determining what you can do about it.

Chapter 3 provides information on how to read utility bills and rate schedules.

Water and sewer rates vary widely in different communities. Some utilities show the use but don't indicate what billing units are used. There are three primary units used in billing for water and sewer—gallons, cubic feet (CF) and hundred cubic feet (CCF). If the sewer is not metered, you are likely billed based on the amount of water used at the site. Many cities base sewer rates on winter water usage when irrigation is not used. Other cities keep the same sewer rate all year, so your sewer bill is high in the summer when irrigation occurs. Check with your water utility to make sure summer irrigation is not a part of your sewer bills.

You may see other fees on your water and sewer bills. One is a systems development charge, usually a flat rate, for the actual construction or upgrade of the system. Many cities charge a fee for surface or storm water disposal. This is usually based on the square footage of impermeable (asphalt, concrete, gravel) area on the property. A street fee may also appear on your bill. This fee (to help maintain the streets) may be based on a number of factors, but is usually based on the building type (government, retail, manufacturing, etc.) and includes an estimate of traffic to and from the building. Verifying how you are billed, comparing it with your records and questioning the utility when you find discrepancies may result in lower fees.

Again, understanding your rates can help you decide where to focus your efforts.

APPENDIX A
Audits/Surveys

RESOURCE DISK R
aud_form.xls:
Sample audit form

Document Facility Meters (electric, gas and water)

For each facility, document the meter numbers and account numbers and verify the multiplier applied to each. You will find these on your utility bill or the historical data provided by the utility. During your facility walk–through audits (Task 7 in this chapter), you will want to locate all the meters listed by a utility. In some cases, a utility may be billing for a meter that is no longer in use or has been removed. If such situations are found, there may be opportunities for a utility refund.

If you are using (or will be using) resource accounting software that can accommodate uploading of electronic utility billing data, make arrangements with the utility to do so.

TASK 3

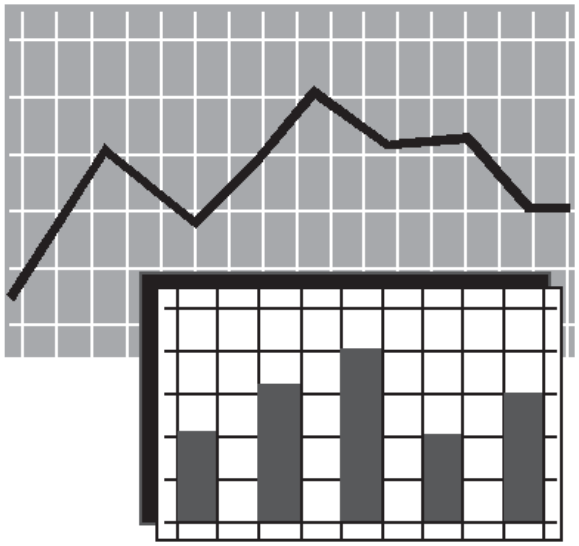
Gather and Organize Resource Accounting Data

Resource Accounting:
Documenting and analyzing operating resource usage and costs.

The next task is to accumulate, analyze and track data from all of your energy, garbage, water and sewer bills. You may want to organize this information by putting it into a software package. This process is called *resource accounting*. Consider providing summary data on each facility to your organization's board or council along with their monthly or quarterly meeting agenda packets.

Base Year:
Calendar year, fiscal year, or school year from which baseline usage or costs are drawn.

Resource accounting is very important because it shows a history of resource consumption and expenditures for your organization and each facility. From the historical data, you will select the *base year* for each facility. When you establish the facility's base year data, you will see the annual consumption



and cost of electricity, gas and water by facility, and how much was spent on garbage and sewer services in a year. This information will allow you to calculate potential savings and revenues from the program. In fact, if you are sharing the savings and revenues with those involved, your organization will have to agree on building-by-building base years as a way to measure savings. Graphs and charts of potential savings and revenue are effective in gaining administrative support.

With resource accounting data and other facility information, you can compare different facilities to target those with the greatest savings potential. Using resource accounting is also very important for tracking the success of your RCM efforts. It is the most practical and objective way to calculate savings and revenues.

Another important use for the historical data is to identify potential billing errors. Most resource accounting software allows you to review the data graphically. A visual comparison of resource consumption from different facilities will help you to see anomalies—some of which could be due to utility errors.

The Value of Resource Accounting

Resource accounting is critical to any RCM effort. It helps you:

- *Develop an historical base year of consumption and expenditures for each facility*
- *Estimate savings potential for each facility by comparing to target values*
- *Gain management support through presentation of real data*
- *Target conservation efforts based on historical consumption*
- *Track resource conservation efforts to document successes*
- *Determine shared savings for distribution among participants*
- *Identify billing errors that could result in utility refunds*

Select a Resource Accounting Software Tool

If your organization doesn't already have one, you may want to obtain a resource accounting software tool. There are several good software options available. At a minimum, resource accounting software should provide the following features:

- Logical, convenient procedure for logging billing data
- Ability to generate reports from organization level to meter level
- Ability to track multiple resources
- Ability to calculate energy use index (EUI)
- Ability to calculate savings
- Weather correction
- Graphical representation of data and reports

Other features that may be helpful:

- Ability to electronically download utility data
- Ability to adjust building balance points
- Ability to compare the effects of different utility rates
- Ability to view real-time consumption

When comparing the features of various software packages, make sure you take into account the ease of use, cost comparison for what you are getting (some software may provide a lot of "bells and whistles" that you may not really need) and customer service.

Also contact your local electric utility to see if they are using a particular software. The utility may be able to provide data electronically in a format that will upload more easily into some software tools than others. The ability to upload monthly consumption data from your utilities is a desirable feature that will save you a lot of time inputting data.

Obtain Historical Consumption Data

Most utilities can provide a full list of meters for each facility. You will need this information to accurately organize resource use data. Coordinate with your meter reader to locate every meter on site. This is very useful when assembling and inputting resource accounting data.

Some utilities can provide up to five years of historical consumption data. In some cases, the utility may be able to provide the historic data electronically, allowing you to upload it directly into your resource accounting software. This could be arranged as a one-time uploading of historical information, as well as a monthly uploading of current utility data. If your organization has many facilities that operate from the same utility, the monthly upload is a good idea. You will probably need to manually input garbage, water and sewer billing data.

Develop the Base Year for Each Facility

The facility base year usage is a thorough tabulation of annual electricity, natural gas, fuel oil, water, sewer and garbage. You must account for all utility meters in the base year data. You will also need to determine the building square footage associated with those meters (electric, gas and water).

A form is provided on the Resource Disk to help you record the base year data. The base year for electricity usage should include annual consumption in kWh, monthly demand in kW and, if applicable, power factor.

Establish the Energy Use Index

APPENDIX **A**
Worksheets/Spreadsheets

RESOURCE DISK **R**
baseyear.doc: Form to record base year utility consumption and services at a facility.

Energy Use Index–EUI:
Energy use per square foot per year (Btu/SF/Yr).

Your resource accounting software will allow you to calculate the annual energy use per square foot. This is commonly called the *Energy Use Index* (EUI) , and is given in Btu per square foot per year (Btu/SF/Yr.) Using EUIs, facilities of different sizes can be compared. Water, sewer and garbage comparisons between different facilities can also be made by square foot or by occupant.

The EUI of a facility is independent of cost. This is beneficial because energy savings for a facility should be based on the energy consumed not the cost of the energy. If there is a rate increase, it will not affect the EUI.

Facilities that are expanded can also be compared to the original facility using original and updated EUIs (Btu/SF/Yr).

A Note about Shared Savings and EUIs

Shared savings can get complicated when utility rates change, facilities are expanded or new equipment is added. As the Resource Conservation Manager you will need to document significant changes so that they can be accounted for in the evaluation of shared savings. By subtracting out the effects of these changes, you can equitably calculate savings.

If a utility rate changes, you should use the new rate multiplied by the base year consumption data to determine the shared savings. This will provide the new base year utility cost.

Weather can also affect savings. For example, consider if the base year had a mild winter, and your first year on the job as the Resource Conservation Manager has a harsh winter. You should quantify the differences because weather has a significant impact on energy use. Many resource accounting software tools provide a weather correction.

Check for Anomalies in the Data

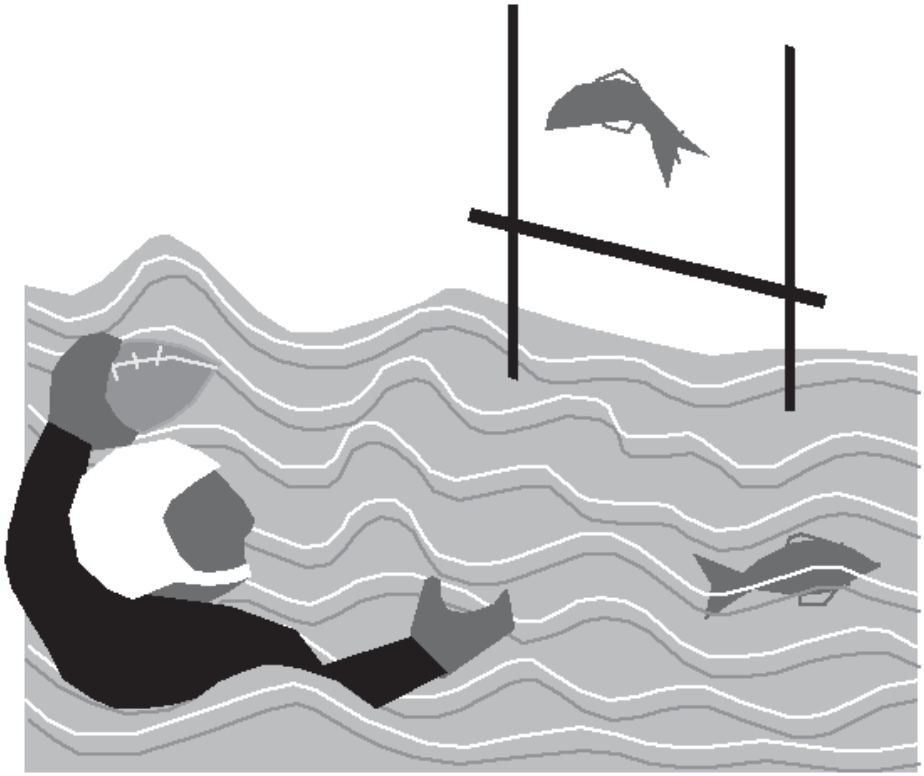
A quick look at graphs of resource accounting data can alert you to anomalies in the data, such as when two facilities with the same function have significantly different EUIs or if the same facility has a substantial change in water consumption for no apparent reason.

Check with facility operators and maintenance staff when anomalies are identified. They may be aware of an event, such as an operational change, that explains the data. For example, high gas usage could result from high ventilation rates of heated air to exhaust odors from new carpets.

On the other hand, an anomaly could be due to a mechanical failure that was not detected—a water leak under a floor slab, for example. Maintenance staff can act immediately to correct the problem.

An example of a billing error by the utility may be the use of the wrong multiplier on a meter. This could result in an overcharge that may have continued for years. Discovery of this type of error can result in a sizable reimbursement by the utility.

A school district discovered that a middle school athletic field was being billed for enough irrigation water to submerge it under 40 feet of water each year. The Resource Conservation Manager was able to get the error corrected and negotiate a refund, too.



TASK 4

Contact Recyclers and County Recycling Coordinators

Recycling is good for the environment, and it's good for business. It reduces garbage and will likely allow you to reduce garbage service either by size of dumpster or frequency of pickup. Even if you are not paid for the value of the recyclable materials, you will cut your garbage expenses. Plus, you'll be easing the load on the local landfill.

Contact local recyclers to determine what commodities they recycle and the current rates. If your quantities are high enough, some recyclers may provide pickup service. Shop around for the best deals. In some cases, it may be more cost-effective to hire a hauler to deliver your recyclables to the recycler that pays the highest price.

APPENDIX A
Helpful Contacts

Most counties have recycling coordinators. They can help you locate recyclers and may provide assistance with initiating a recycling program at your facilities. Check out Helpful Contacts in the Appendix for the recycling coordinator nearest you.

TASK 5

Cultivate the Support of Facility Operations and Maintenance Staff

Every year, state and local governments spend millions of dollars on the construction of schools, prisons, office buildings and other facilities. The operation and maintenance of these large capital investments is, for the most part, the job of custodians and maintenance staff. These people are the first line of defense against energy and overall resource waste. Their budgets, however, are often the targets of cuts. As a result, maintenance and custodial staff typically are expected to do more with less.

Because of their unique position as the operators of the facilities, custodians and maintenance staff can be invaluable allies. Their involvement is critical to your RCM's program success. If you are not part of the maintenance and custodial staff yourself, you will need to cultivate their support. Respect for their concerns and ideas is a key element in developing these very important relationships.

Partner with Facility Operators and Maintenance Staff

As the Resource Conservation Manager, acting with top-level administrative support, you can be of great value to maintenance and custodial staff. They often lack adequate resources to do their

job. These resources include tools, funds for repairs, replacement of equipment beyond its useful life and training.

You can help them acquire the resources, equipment and training they need. You can also help them earn greater recognition and respect for the importance of their job. You are their conduit to management commitment, and the vehicle is the RCM program. The shared savings resulting from resource conservation management can unleash the funds they need.

Maintenance and custodial staff are a valuable resource for you. They are likely to identify several opportunities for saving energy and other resources. They will also be the people largely responsible for implementing resource conservation measures.

Set Up Introductory Meetings

Organize introductory meetings with facility operators, kitchen supervisors and maintenance supervisors. You may want to meet with some staff casually at first during their work day to get a feel for their perspective. This is where personal style may dictate your approach. Eventually, you want to meet with all the facility operators, and kitchen and maintenance supervisors. However, if you choose to have meetings, limit the number of people at the meetings to a manageable number. This allows for good interaction and keeps you from getting overwhelmed.

Use these meetings to:

- Introduce yourself
- Introduce the program
- Learn their operational habits or discuss conservation ideas methods and concerns
- Collect the facility operations checklists (see below)
- Get feedback from staff

When you schedule these meetings, don't underestimate the POWER OF DOUGHNUTS and coffee. Refreshments of some kind will show you care about them, and it helps to break the ice at that first meeting.

APPENDIX **A**
Reporting/Communications

RESOURCE DISK **R**
supt_mem.doc: Sample memo from the superintendent or director to staff introducing the RCM program.

rcm_mem.doc: Sample memo from the Resource Conservation Manager to staff discussing program startup and asking for staff help.

The Resource Disk contains a sample memo you can use to introduce yourself to staff before the meetings. It's a good idea to also attach the memo of introduction from the superintendent or director about the RCM program. You could also attach the appropriate checklist (see below) to get staff thinking about resource conservation prior to your meeting—or save them for distribution and discussion at the initial meeting.

APPENDIX **A**
Audits/Surveys

RESOURCE DISK **R**

guid_fo.doc: Checklist to be completed by facility operators.

guid_mnt.doc: Checklist to be completed by the maintenance staff at each facility.

guid_kit.doc: Checklist to be completed by the kitchen supervisor at each facility.

guid_gnd.doc: Checklist to be completed by the grounds supervisor at each facility.

Ask Staff To Comment on Checklists

The Resource Disk contains several checklists to be reviewed by facility operators, maintenance staff, kitchen supervisors and grounds supervisors at each facility. Each checklist allows for staff input to be included in the facility-specific operation guidelines. They will do these checklisted activities in support of resource conservation management. You may want to refer to these checklists as you follow along in this section.

After reviewing the checklists, the staff should check each item. Items that are "not applicable" (NA) or that "can't be done" should be accompanied by an explanation or left for discussion at the initial meeting.

Allow at least two to three working days for the checklists to be completed. Be sure staff keep their checklists and give a copy to you.

Similar checklists should be developed for other specialized facilities not covered above, such as pools, laundries and wastewater treatment plants.

APPENDIX **A**
Audits/Surveys

RESOURCE DISK **R**

wint_brk.doc: Winter shutdown/setback checklist.

sprg_brk.doc: Spring shutdown/setback checklist.

summ_brk.doc: Summer shutdown/setback checklist.

Schedule Monthly Meetings

You should schedule regular meetings with facility operations staff for the subsequent three to nine months. These meetings allow you to work with facility operators and maintenance staff as allies and to glean their knowledge of operation and maintenance issues. They present opportunities to share experiences, review accounting data and get general feedback about the program. After a time, bi-monthly meetings will likely be sufficient. However, resource accounting reports should continue on a monthly schedule. The resource accounting reports will graphically illustrate progress and will show facility operators and others that their efforts do have an impact.

Special meetings prior to extended vacancy periods are also appropriate. For schools, this would be before winter and spring breaks and before summer vacation. A special shutdown/setback checklist for the different seasons should be developed (in brainstorm fashion with staff) and provided to the facility operators and maintenance crews to help them with this effort.

TASK 6

Develop RCM Teams

Early development of RCM teams is critical to program acceptance. These teams foster ownership in the program. They are an effective way to disseminate information. Team members also provide different points of view.

You should assemble teams at the facility and organization level. RCM program acceptance is typically easier when teams are involved early.

Organization-wide Team

The initial meeting at the organization level may be the one in which the RCM policy is passed. At the upper management level, involvement will likely be minimal compared to the facility RCM teams. However, upper-level input, support and authority is very important. It's imperative that you keep this team informed of the progress of the RCM program. Work with upper management to determine if reporting should be monthly or quarterly.

Facility and District Level Teams

At the facility level, try to get a representative from each of the main occupant groups.

In a school, this might include:

- Principal
- Student
- Teacher
- Head custodian
- Kitchen supervisor (facility specific)
- Grounds staff member
- Maintenance staff member

At a district level, the team could include:

- Superintendent or assistant superintendent
- Business manager
- Facilities manager
- Operations manager
- School board representative

At the facility level you will likely have considerable interaction and involvement with facility operators as well as maintenance, kitchen and grounds staff. The other team members, however,

will provide a broad perspective and will bring in concerns that should also be addressed. Early involvement with the local team members will speed the development of the facility-specific operation guidelines discussed below.

At school facilities you can also recruit the assistance of students to help with the program. RCM patrols in the elementary schools are a good way to get assistance, instill some resource conservation values and make the program visible. Student patrols have been more successful in some schools than in others. You may want to try them as a pilot first. Involve some students in the program to make sure lights are turned off in vacant classrooms, water is not left running, etc.

Involve Occupants in Facility-Specific Operations Guidelines

See **Task 7** for more information on RCM audits and guidelines.

After completion of the RCM audit (discussed in Task 7), facility operation guidelines will be developed for each facility and the different areas of that facility, such as the kitchen. Because the guidelines will affect all building occupants, everyone should participate in their development. Each group, whether they be facility operators or teachers, should be asked to help develop and implement ideas. It can be as simple as turning lights out when they leave a room and bringing a reusable lunch container. Be sure to recognize occupants' efforts, no matter how small.

A copy of the occupant guidelines should be posted in an area frequented by occupants, such as the lunch room or lounge. It can also be made available electronically, if applicable.

APPENDIX A
Audits/Surveys

RESOURCE DISK R
guid_occ.doc: RCM guidelines for facility occupants.

Work with Other Staff

You will also be working with other members of your organization that are outside the established RCM teams. After RCM measures have been identified, for example, you may work with the capital programs staff to ensure that these measures will be a part of other capital projects.

TASK 7

Conduct RCM Audits of Facilities

APPENDIX A
Audits/Surveys

RESOURCE DISK R
question.doc: Interview Questionnaire for facility operators.

The RCM audit is a documentation and investigation exercise to uncover resource conservation opportunities and other money-saving strategies. It consists of an interview with building operators and an on-site review of the facility. You will "walk through" the facility to inventory facility systems, conditions and resource conservation opportunities. You will also identify training needs of staff.

Products Developed from the RCM Audit

- *Facility-specific operations guidelines (facility operations, maintenance, kitchen, grounds and occupant) that will help facility operators, cooks, maintenance staff and grounds staff operate their facilities most efficiently*
- *List of maintenance-related items for maintenance staff*
- *List of efficiency improvements (capital projects) for each building*
- *List of training needs, especially for facility operators and maintenance staff*

Decide Which Facilities to Audit First

Use your resource accounting data to determine the facilities with the greatest savings potential. This will typically be the larger facilities with the highest EUI (Energy Use Index). These facilities are likely to be the ones you want to concentrate on first when performing RCM audits.

How To Do the Audit and Report

Figure 2.2 on page 18 illustrates the procedures before, during and after the actual RCM audit. After the initial meetings conduct the pre-audit interview with the facility operator. Then the audit follows.

APPENDIX A
Audits/Surveys

RESOURCE DISK R
aud_form.xls: Sample audit forms.

measures.doc: Annotated list of the operation, maintenance and RCM measures found on the audit form.

The Appendix contains sample audit forms that will step you through the process. The Appendix also contains descriptions of resource conservation opportunities that you can refer to during the walk-through audit and report preparation. On the Resource Disk, you will find an annotated list of the operation, maintenance and RCM measures found on the audit form. This list corresponds to the numbering on the audit form and provides some "rules of thumb" guidance for recommending and implementing measures.

APPENDIX A
Audits/Surveys

RESOURCE DISK R
aud_rpt.doc: Audit report format.

An audit report should be prepared using the information gathered during the audit. Use the sample format found on the Resource Disk. Again, refer to the descriptions of resource conservation opportunities. A copy of the report and the completed audit form should be retained at each site. This will serve as a reference for "site-based" RCM efforts.

As part of your audit report, you will need to calculate the cost-effectiveness of some of the resource conservation measures. The Appendix directs you to spreadsheets, worksheets and other analysis tools that will help you.

Develop Facility-Specific Operation Guidelines

With the RCM audit completed and the return of the checklist forms mentioned in Task 6, work can begin on development of facility-specific operation guidelines to be used by facility operators, kitchen personnel, maintenance crews and grounds staff. These guidelines should address the operational opportunities identified in the audit. They should also include a facility-specific reduction goal as outlined in Task 9.

Measures:
Improvements, either capital or behavioral, that lead to resource efficiency.

APPENDIX A
Helpful Contacts: A list of contacts for technical and financial assistance.

List the maintenance items and low-cost RCM *measures* identified in the audit and pass them on to the maintenance staff. The higher cost RCM measures identified should be discussed during the capital planning process. Some of the higher cost RCM measures may require additional analysis. An engineering firm or your local utility could provide the needed analysis. Also check with your local utility and/or State Energy Office for information on engineering studies that may have been conducted for your site.

How It All Fits Together

Figure 2.2 illustrates the relationship between different tasks. These tasks move from awareness to assessment to implementation of opportunities identified in the facility audit report. Bulleted items in the Awareness and Assessment sections of Figure 2.2 have files in the Appendix and on the Resource Disk associated with them. Reviewing the figure will give you a better feel for how you will use these tools in your own implementation strategy.

The main concept illustrated in Figure 2.2 is to move toward implementation of resource conservation opportunities. These are behavior changes (Facility Operations), no- and low-cost items (Maintenance and Administrative) and efficiency measures (Capital Projects).

The RCM guidebook and the tools contained within it will help you develop your systematic approach for moving your recommendations to implementation.

TASK 8

Provide Training for All Staff

The RCM audit will identify training needs for facility operators, maintenance personnel and occupants. The facility-specific operation guidelines you developed will provide the framework for involving facility operators, other staff and occupants.

Technical Training

The need for additional training on energy management control systems is not uncommon and can enhance the facility operator and maintenance staff's ability to generate greater savings. Optimization of HVAC operation can save hundreds, if not thousands, of dollars per year at a single facility without additional capital expenditure. This is done by simply using the full capabilities of the existing energy management control system.

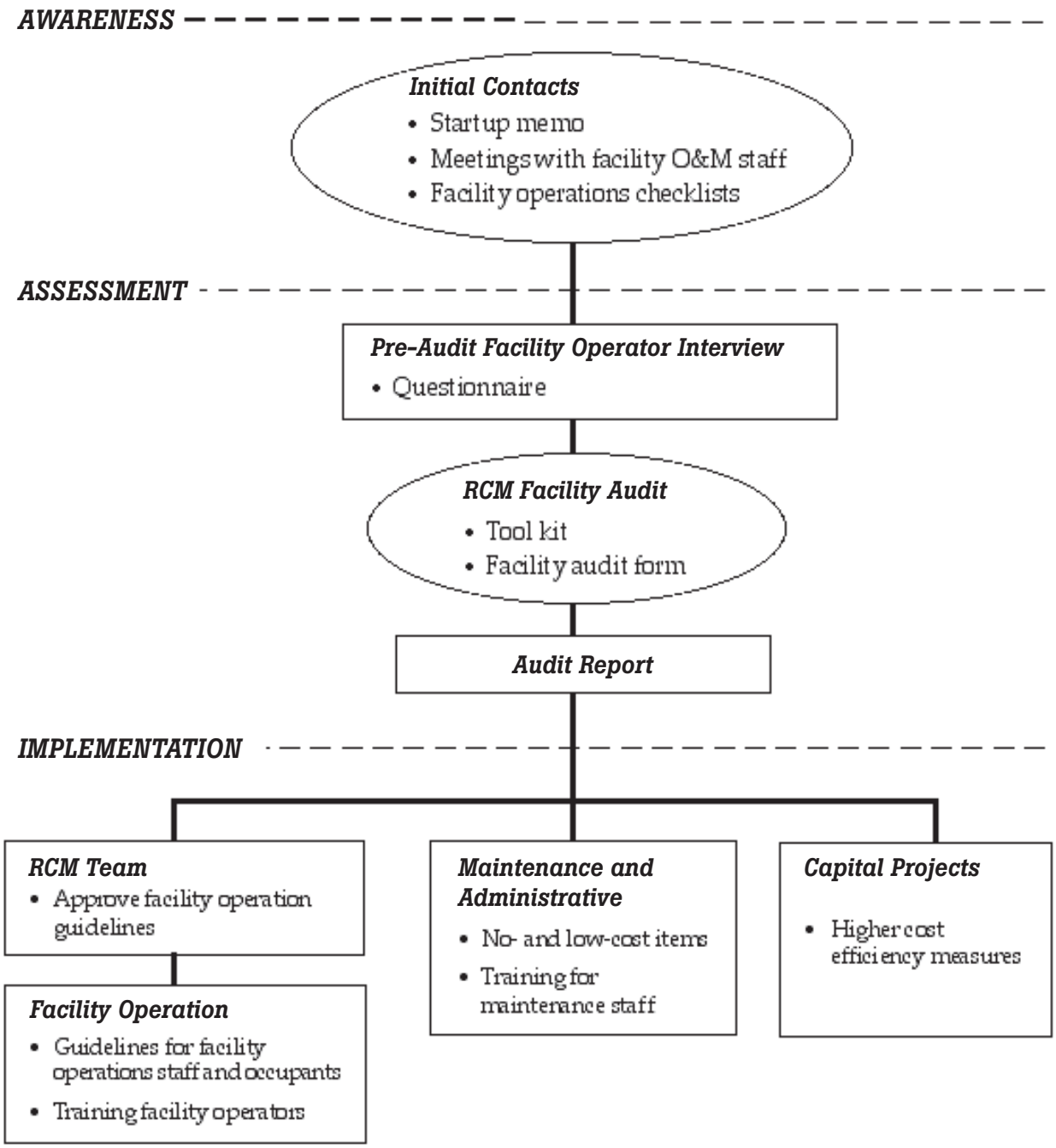
Training in proper maintenance and testing of HVAC components, such as boilers, chillers, heat pumps, dampers and actuators, also can result in significant savings and make operations easier.

APPENDIX **A**
Helpful Contacts: Contacts that may be able to provide technical training assistance.

Those involved with recycling and composting will likely need additional training. There are experts in these areas that may be available to assist you in training efforts.

FIGURE 2.2

RCM Awareness, Assessment and Implementation Strategy



Awareness Training

You will want to bring all building occupants "on board" with the RCM program. A presentation to teachers (in the case of a school district) or supervisors (in the case of an agency or local government) is a good way to get information disseminated.

APPENDIX A
Reporting/Communications

RESOURCE DISK R
guid_occ.doc: Sample occupant guidelines.

The Resource Disk contains sample RCM occupant guidelines. They can be customized for your occupant groups. This is an excellent tool to help train occupants. It provides a list of items that each of the occupants can do to gain efficiency. To set a resource conservation example, use electronic means and bulletin boards to post guidelines and other information. Display them in areas frequented by occupants, such as a lunch room or lounge.

The facility-based RCM teams will benefit from general training on Resource Conservation Management. Awareness training is an effective way to promote the RCM program and gain allies that will increase your chance of success. Schools, in particular, provide a unique setting for involvement of staff, teachers and students. By participating in RCM practices, students learn a life-long lesson—respect for the environment. They will carry this message into their homes and communities, spreading the Resource Conservation Management ethic.

TASK 9

Set Facility-Specific Goals

Setting annual facility-specific reduction goals provides program direction and gives management an idea of the magnitude of the RCM program's potential. Annual reduction goals also call attention to the RCM program and renew the commitment of all involved.

Set Initial Goals

APPENDIX A
Reporting/Communications

RESOURCE DISK R
goalstmt.doc: Facility-specific goal statement.

Based on the resource accounting data, responses to the checklists, development of the facility-specific operation guidelines, and RCM audits you will be able to develop individual resource reduction goals for each facility. The Resource Disk contains a sample goal statement. This statement could contain historical perspectives and comparisons with other facilities.

A 10 percent reduction goal for the first year is a reasonable target. During program start-up and the development of your resource accounting system you may discover billing errors, refund negotiation opportunities (such as sewer charges on irrigation water), and opportunities for utility rate schedule changes that will provide immediate income and/or billing reductions.

Set New Goals Annually

As you empower facility operators and RCM program teams with knowledge and duties, reductions will gain momentum. So set new goals annually.

This will do three things:

- Renew participants' commitment to Resource Conservation Management
- Re-focus attention on the RCM program
- Maintain visibility of the program to management and others

TASK 10

Conduct Follow-up Facility Efficiency Surveys

After facility-specific operation guidelines have been developed and distributed, check facilities for efficiency.

Perform Periodic Surveys

Conduct periodic facility efficiency surveys to check interior temperatures in different areas, lighting operation (interior and exterior) and other operational characteristics. Surveys should be done during:

- Normal operating hours
- The evening of an operation day (during cleanup and partial setback)
- A weekend or holiday period (total setback)

You may also want to perform facility efficiency surveys during a late-night period, especially if there is a black-out campus policy that goes into effect around midnight and extends to 5 or 6 a.m. As an alternative, your utility may be able to monitor after-hour consumption.

APPENDIX A
Audits/Surveys

RESOURCE DISK R
fac_surv.doc: Sample facility efficiency survey form.

The Resource Disk contains a sample survey form. The original form goes to the individuals responsible for facility operations, with a copy distributed to the facility administrator (principal, in the case of a school) and a copy retained for your records. The form also has space to document completion of the maintenance recommendations.

Using these surveys, along with the resource accounting data, will help you understand the effects of operational actions on resource consumption. Understanding these relationships will aid in targeting RCM efforts in all facilities under your responsibility.

Make Impromptu Visits

Make quarterly, or at least semi-annual, visits to each facility to check for efficiency. These visits should not be scheduled. This will ensure that special efforts are not being made to meet facility operation guidelines solely because an efficiency survey is scheduled. Keep the survey periods random.

The idea is to make efficiency activities, as indicated in the facility-specific operation guidelines, part of the normal operating procedure.

TASK 11

Provide Incentives and Recognition

Based on past experience, building occupants and operators put forth more effort when they benefit from the fruits of their labor. Therefore, incentives and recognition should be included in your RCM program from the outset. Set up a small fund to allow distribution of promotional items for awards and incentives, such as T-shirts, mugs, pens, etc.

APPENDIX **A**
Reporting/Communications

RESOURCE DISK **R**
shar_sav.doc: Sample shared savings plan.

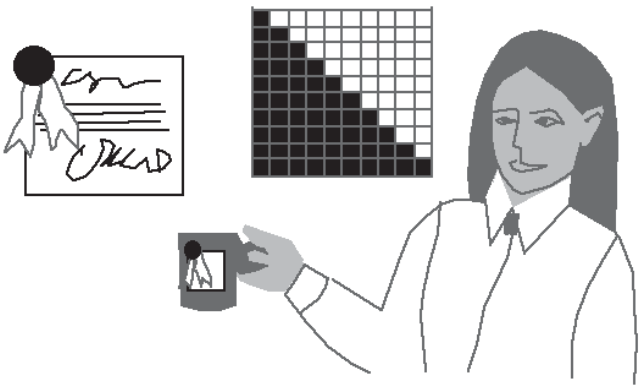
A shared savings plan could be developed so that a portion of the savings and revenues obtained at each facility (or in the organization as a whole) is set aside as discretionary funds to be used by the facility.

Recognition of efforts and successes is another way to keep the program visible and reward participants. Recognition ceremonies and certificates are good motivators. They bolster support and keep commitment strong.

APPENDIX **A**
Reporting/Communications

RESOURCE DISK **R**
award.doc: A sample award for excellence in resource conservation.

Consider hosting a resource conservation celebration to thank everyone for their efforts. This is also a casual way to create interaction between RCM teams, building operators, kitchen staff, occupants and maintenance personnel of different facilities. It provides an opportunity to exchange success stories.



TASK 12

Communicate Program Status

See **Chapter 1** for more on communications.

The RCM program should be visible to both the general public and the members of your district or agency. Develop strategies to involve and inform the public and the staff. Early involvement with these groups could pay off in extra support when facing personnel and funding issues.

Successful communication:

- Bolsters support for the program
- Gets more people involved in Resource Conservation Management
- Provides feedback to participants on the impacts of their efforts
- Keeps key individuals and groups informed on RCM program activities
- Makes the program visible

APPENDIX A
Reporting/Communications

RESOURCE DISK R
newsltr.doc: Sample newsletter format.

You can make the program visible through newsletters; presentations to occupants, management and local citizen groups; bulletin boards; and contests between facilities. The Resource Disk contains a sample newsletter format.

Prepare Regular Reports

Plan to submit monthly or quarterly status reports to management at the facility and organization level. Facility operators should receive monthly progress reports.

These reports can be in written form, or you can make in-person presentations. Choose a method that will keep the program visible and in the forefront. Highlight successes and provide recognition where appropriate.