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USER'S GUIDE FOR RESOURCE INFORMATION TRACKING SYSTEM (RITS)

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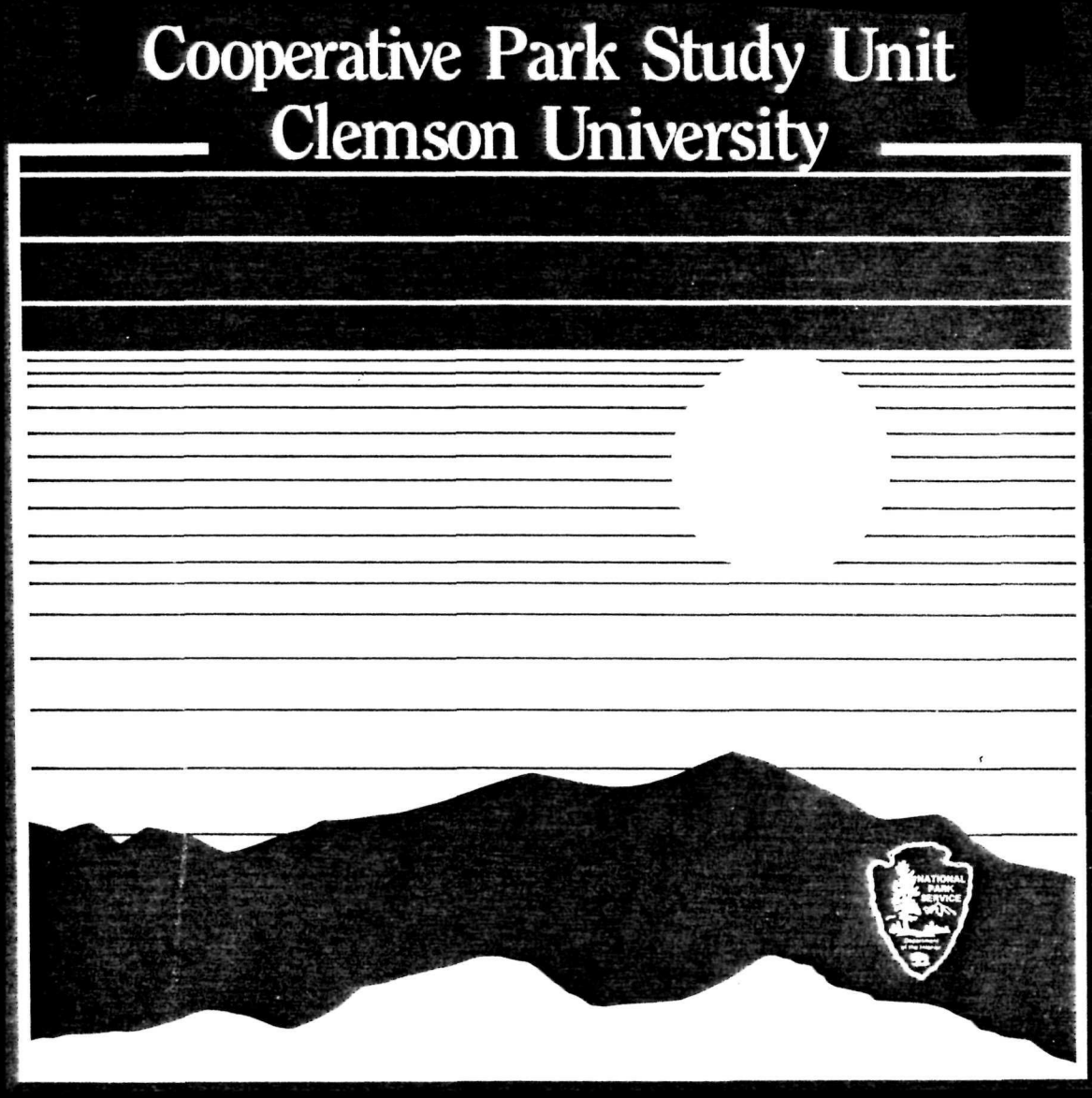

National Park Service

RESOURCE INFORMATION TRACKING SYSTEM

(RITS)

1986

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PREFACE

The purpose of this manual is to provide easy-to-follow instructions regarding the use of the RESOURCE INFORMATION TRACKING SYSTEM (RITS). RITS was designed to provide managers and scientists with a quick and efficient computer-based means of storing, retrieving, and tracking information regarding a park or region's:

1) ongoing and planned natural and cultural resource program;

2) all related projects undertaken by both employees and collaborators;

3) all related reports and publications;

4) five-year programming sheets for the current year and five additional years.

RITS also provides a means of issuing Resource Activity Permits (collecting permits) or RAPs, as well as automated annual reports of a park's resource management, monitoring, and research activities.

RITS was identified as an important need in the National Park Service's 1981 Congressional report, "State of the Parks: A Report to the Congress on a Service-wide Strategy for Prevention and Mitigation of Natural and Cultural Resource Management Problems". RITS was intended to be a significant part of a systematic process of threats identification, assessment and monitoring, plus prevention and mitigation for natural and cultural resources in the National Park Service.

The systematic approach to resource management begins with a comprehensive Resource Management Plan (RMP) required for every National Park Service (NPS) area. Since the principle ingredients of each RMP is a series of Project Statements, these were used as the key ingredients in RITS. Project Statements document all of a park's resource concerns or activities, and may range in detail and importance from critical threats to park values to daily housekeeping activities such as vista-clearing or hazard tree management. RITS was designed to track all of the park activities of management, monitoring, and research that relate to any of the Project Statements. When a project is identified that does not relate to a Project Statement, a new one should be developed.

This manual is divided into three major parts. These include:

1. An introduction which provides the necessary background needed to use the system,

2. An explanation of the five subsystems of the RITS, and

3. An appendix with information for installing RITS on your computer, a keyword organizational scheme, sample printouts and listings, and information on database files.

TABLE OF CONTENTS

TABLE OF CONTENTS (Cont.)

LIST OF FIGURES

INTRODUCTION

A. BASIC MODEL

As illustrated in Figure 1, the Resource Information Tracking System, or RITS as it will be called in this manual, is analogous to the branching structure of a tree. If you recall your childhood tree climbing experiences, you will remember looking up the trunk to decide which major branch to pursue. Once you attained the desired branch, you continued to climb higher and higher on increasingly smaller limbs. The RITS "tree" is composed of <u>five</u> major branches or subsystems. A main menu, like the menu in a restaurant, allows you to select which "branch" you wish to climb. So, if for example, you choose the Project Statement "branch" you must then decide via another menu whether you wanted to select the enter, view/update/print, list, or earch "limb" and perform the corresponding function.

Movement between search five subsystems and their various functions is likewise analogous to tree climbing. In climbing a tree, in order to move from the upper reaches of one part of the tree to another part, you usually must first retrace your steps. Once you have moved back down the tree and attained firmer footing you can then pursue another limb or branch and further explore the tree. RITS operates in much the same manner. If for example, you had finished entering a Project Statement and wanted to enter a related Resource Activity Permit (RAP), you must first quit the Project Statement menu. This returns you to the main menu. From this point, you would have to select the RAP "branch" and via its menu choose the ENTER limb.

In this manner, RITS was specifically designed to be user-friendly. In other words, each part of the system supplies the resource manager with a menu of options that makes it easy to use the system. Once a person becomes comfortable with the movements through the tree-like structure of the system, RITS can be quickly and effectively used.

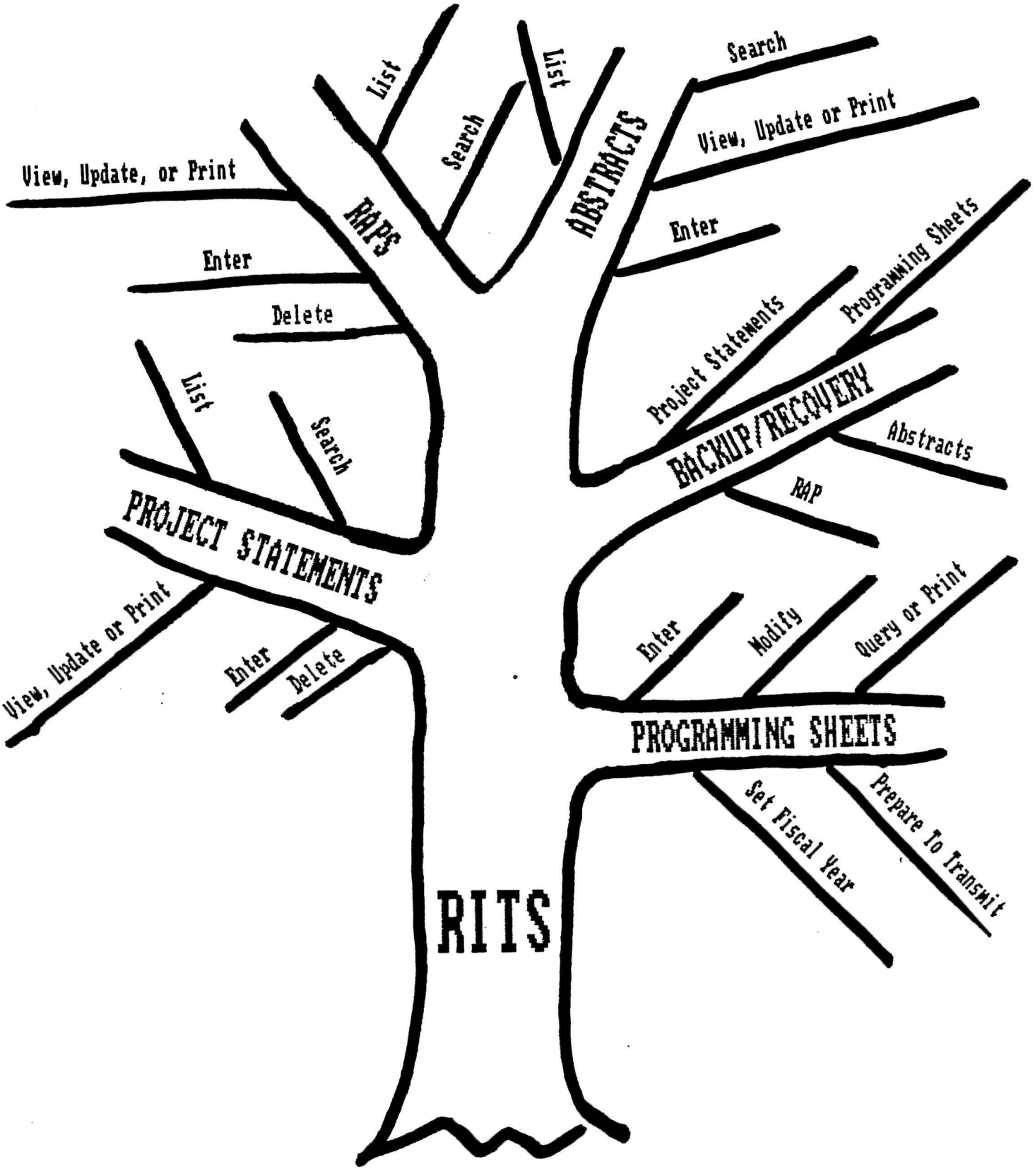


Figure 1. Basic Model of the Resource Information Tracking System (RITS).

B. SYSTEM REQUIREMENTS

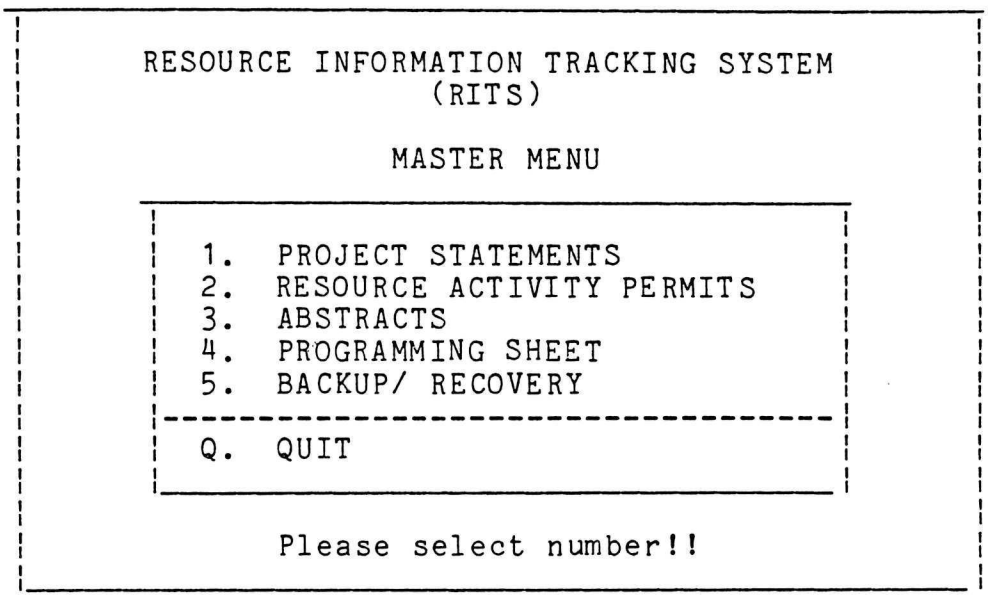
To operate RITS, the following items are required:

- PC-DOS compatible micro-computer which runs dBase III (e.g. IBM PC, IBM XT, IBM AT).
- Hard disk storage device with a minimum of 1 megabyte of storage capacity.
- IBM compatible printer that allows for wide paper with 13 or more characters per inch (CPI) capability (if printout of the whole programming sheet is desired).

C. HELPFUL HINTS

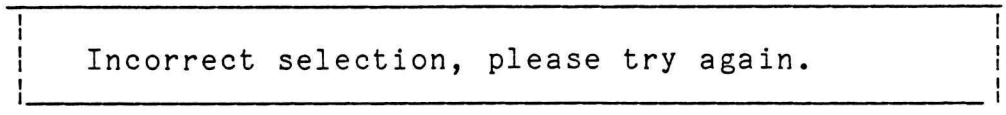
C.1. On Menus:

RITS is a menu-driven system. As you use RITS, you will always be ushered by menus. A menu is a list of options from which you will choose one that suits your needs. To select an option from a menu, simply strike the key with the number corresponding to that option. As an example, the Master Menu from RITS looks like this:



Note the following:

1. If you strike any number that does not appear on the menu, then the following message will appear on the screen for a few seconds:



The original menu will reappear, thereby allowing the user to carefully select a number which does appear on the menu.

2. If options on the menu do not provide the function you want, then you are probably in the wrong menu. Don't panic! By striking "Q" for quit, the previous menu will return and you can choose the correct function.

C.2. On Panels:

A panel is a screen display by which the user enters information or view in the RITS system. Panels are similar to an application sheet; it has a list of data items that should be filled with information. The user will fill out panels by typing relevant information in the bright blank slots that are designed for each piece of data.

Note the following:

1. The only places you can type in information is inside the highlighted slots.

2. Usually, each of the blank slots has a corresponding prompt that tells you what type of data to enter.

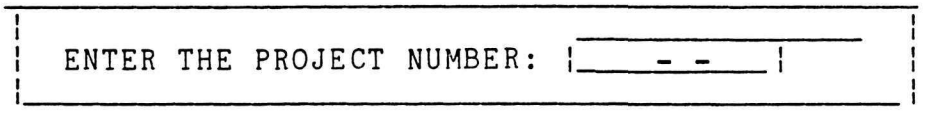
3. The system will tab from one highlighted slot to the next either when you press the <ENTER> key or when you enter the maximum number of characters for the field. You can also go to the bottom of the screen by pressing the <PgDn> key.

4. Certain slots are designed for entering numbers only. These slots will not allow you to type in any letters. For example, you are not allowed to type the letter "A" in a slot designated for a phone number. If you strike the letter "A" it will not be typed in the slot; instead, RITS will gracefully beep at you. RITS does this for your own protection. If the system detects other invalid information has been entered, an error message will be displayed at the bottom of the computer screen.

5. The prompts should be understandable to anyone familiar with Project Statements, Resource Activity Permits, Abstracts, and Programming Sheets. Therefore, this manual will not attempt to explain the meaning of every prompt since this will cloud the manual and make it more cumbersome to read.

C.3 On Keys:

RITS is a system centered around Project Statements. Therefore, it is important that you know certain information that identifies each Project Statement. This identifier is called a "key". In RITS this key consists of a Project Statement number. RITS automatically assigns each Project Statement with a unique key so no two Project Statements will have the same number. In order to deal with a specific Project Statement (e.g. edit or print), RITS requests the user to enter the key as follows:



Section A.1.a (page 14) in the Operations part of this manual will show users the format required for entering a Project Statement.

Upon entering this number, RITS will attempt to find the specified Project Statement. If it cannot find it, RITS will display a message similar to the following:

```
SPECIFIED PROJECT DOES NOT EXIST.  PLEASE TRY AGAIN
```

Users are cautioned to be careful as they type in the key. If the user accidentally misspells the number, RITS will be unable to find the Project Statement.

Note the following:

1. Resource Activity Permits (RAPs) are also identified by a unique key called a RAP number.

2. The word "key" may also be used to identify a unique position on the keyboard of the computer (i.e. the "5" key or "shift" key).

C.4 On Populating the System:

Once RITS has been installed, users must decide how the system should be populated (i.e. which information should be entered first). Since RITS is centered around Project Statements it is recommended that users begin populating the system with Project Statements first. Resource Activity Permits (RAPs), Abstracts, and Programming Sheets (other subsystems within RITS) are tied [with the possible exception of Abstracts] to specific Project Statements and require that the Project Statement number be entered to identify this link. Therefore, if Project Statements are added to the system first, the other subsystems have a foundation upon which to build.

D. GETTING STARTED

It is assumed that the RITS system has been installed at this point; if not refer to Appendix A on SYSTEM INSTALLATION.

To start RITS, type one of the following:

RITS (If you are in the system prompt "C>")

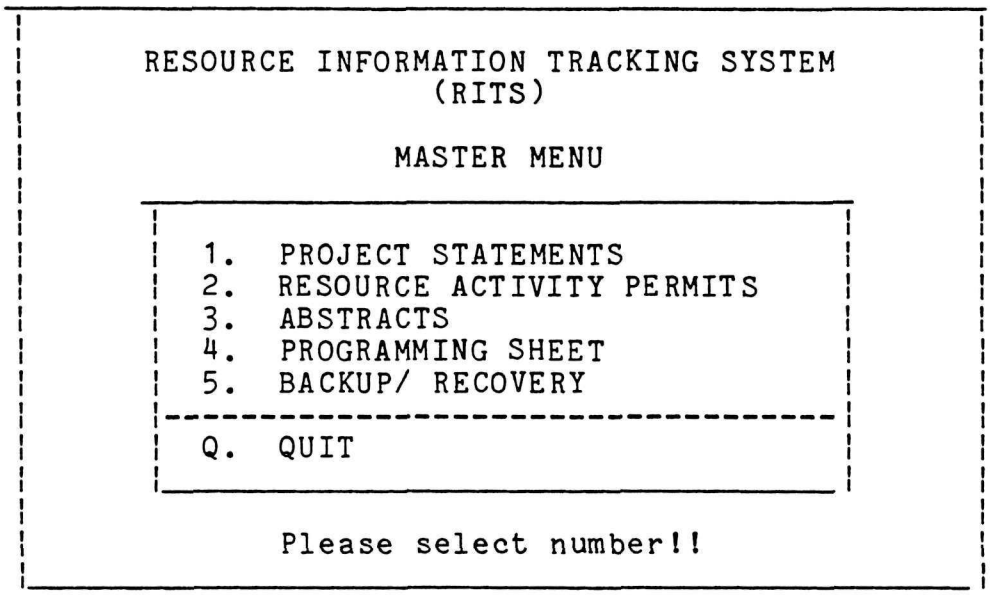
DO RITS (If you are in the dBase prompt ".")

Once you type the above line strike the <ENTER> key. This will display the welcome screen:

```
WELCOME TO THE

RESOURCE INFORMATION TRACKING SYSTEM
(RITS)

FOR THE

GREAT SMOKY MOUNTAINS NATIONAL PARK


(Strike any key to continue . . .)
```

Note that the above welcome screen indicates the system has been installed for the Great Smoky Mountains National Park (see Appendix A). RITS can be installed for either an individual park or for a region. If the system has been installed for the region, the name of the park would be replaced with the region's name. Although examples in this manual will be based on a system installed for a particular park, special mention will be made of any notable differences between systems installed for a park and those for a region.

Upon striking any key, the following Master Menu will appear:



The above menu provides a list of the five subsystems of RITS. To perform functions in any of the listed subsystems, strike the key with the corresponding number. For example, striking the number "2" gives you the Resource Activity Permits (RAPs) menu and a choice of four functions to select.

The Master Menu will be the one to which you return if you "quit" from any of the five subsystems. (It may be helpful to keep in mind the tree-like structure of RITS mentioned in the Basic Model section. Quitting or finishing a subsystem or function automatically drops you to a lower "branch" or menu.) The only way you can quit RITS is by striking "Q" for quit in the Master Menu.

The following section of this manual will discuss the actual operation of RITS and is organized by the five subsystems. Each major operation within the subsystems will be described by a brief introduction, a format and operation section and a remarks section when applicable. Organizational charts will also be included. Examples from the Great Smoky Mountains National Park (GRSM) will be inserted throughout the section to illustrate various aspects of the system. Since this manual will serve as a reference manual with persons using only the sections they need, some information may be repeated several times in the manual. As a result, some parts of the manual seem redundant but this was deemed necessary to accommodate the expected type of use.

OPERATIONS

Project Statements

A. PROJECT STATEMENTS

Background

The Project Statement's subsystem includes five functions that permit the user to enter a Project Statement into the system, and later access the statement for revisions, information retrieval, or printing. The user may also conduct a keyword search to identify those Project Statements which meet specific conditions. The user also has the ability to delete a Project Statement. Figure 2 outlines the basic organization of this major "branch" or subsystem of RITS.

The discussion of this section will be organized by the subsystem's four functions. Accompanying each function will be an organizational chart.

Format and Operation:

Choosing the "Project Statement" subsystem -- done by striking "1" in the Master Menu (p 8) -- will display the following menu:

```
PROJECT STATEMENTS

 1.  ENTER A NEW STATEMENT
 2.  VIEW/UPDATE, OR PRINT A STATEMENT
 3.  LIST AVAILABLE STATEMENTS
 4.  SEARCH FOR SPECIFIC PROJECT STATEMENTS
 5.  DELETE A STATEMENT
 --------------------------------------
 Q.  QUIT

Please Select Number !
```

The Project Statement menu allows the user to choose any of four functions related to Project Statements. Users should press the number of the function they wish to perform. The following discussion will describe each of these four functions or parts in greater detail.

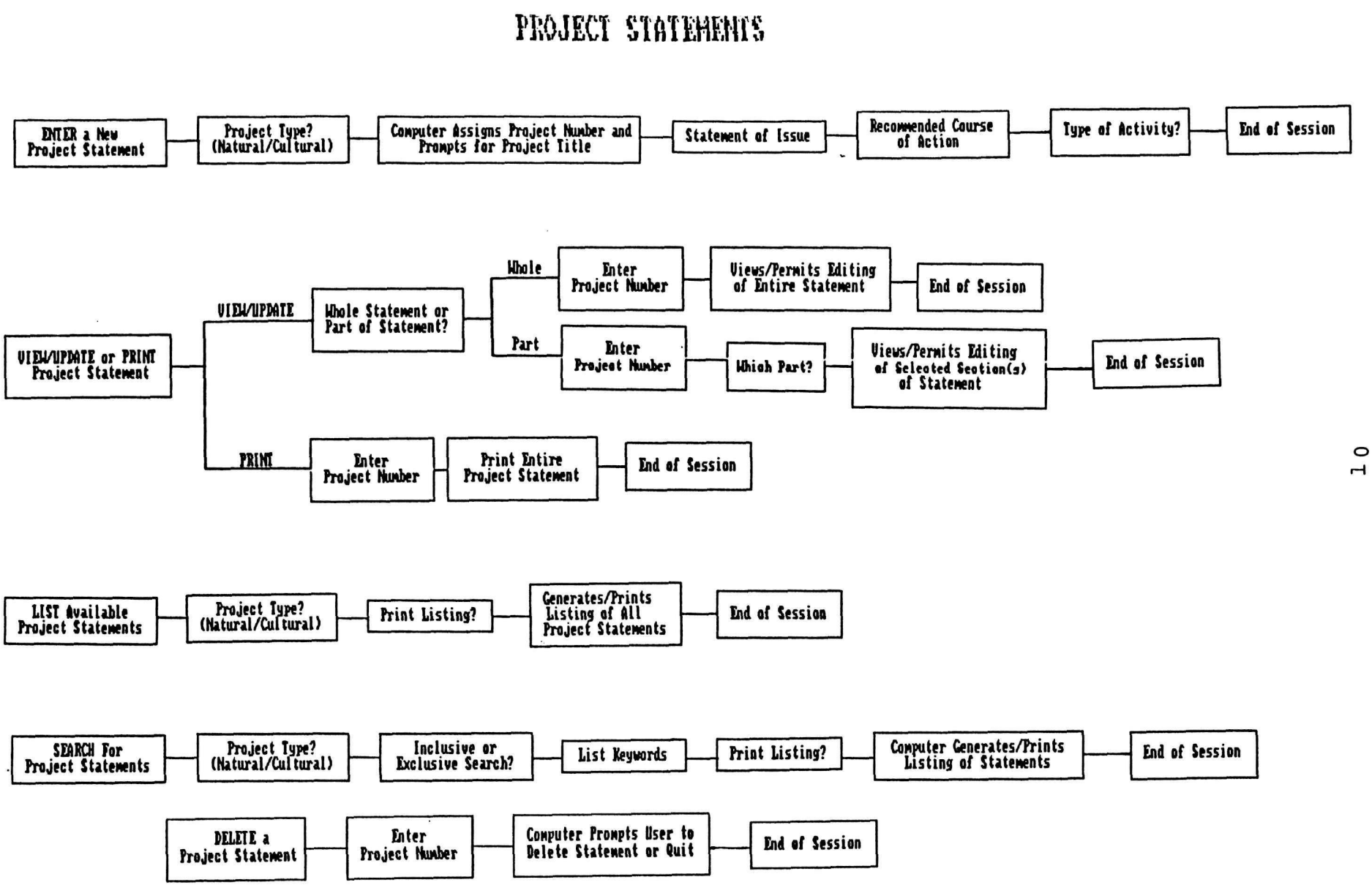


Figure 2. Organizational chart for the Project Statement subsystem.

A. PROJECT STATEMENTS (Cont.)

Remarks:

1. If the user decides at this point not to perform any of these functions, a "Q" should be struck returning the user to the Master Menu.

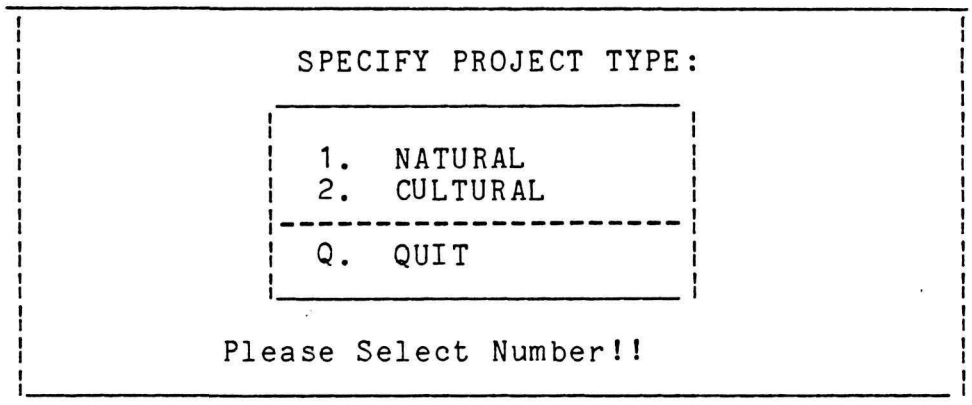
2. For more information on menus refer to page 4.

3. The user can not enter, view/update, print, list, or search for a specific Project Statement until it has been entered into the system. Therefore, entering Project Statement information is usually one of the first functions used in the RITS system.

A.1. ENTER A NEW STATEMENT

This first part of the Project Statements subsystem allows the user to enter a new Project Statement. Figure 3 provides an overview of the basic operations involved with entering a new statement. In other words, Figure 3 illustrates the basic operations involved with this "limb" of the Project Statement "branch".

Format and Operation: Choosing "Enter a New Statement" -- done by striking "1" in the Project Statement menu (page 9) -- will display the following:



At this point, the user must decide if the Project Statement they wish to enter deals with natural or cultural resources. If the statement concerns natural resources, the user will strike "1". If the new Project Statement deals with cultural resources, the user will strike a "2".

Remarks:

1. If at this point the user decides against entering a Project Statement, then hitting a "Q" will return the user to the Project Statement menu (page 9).

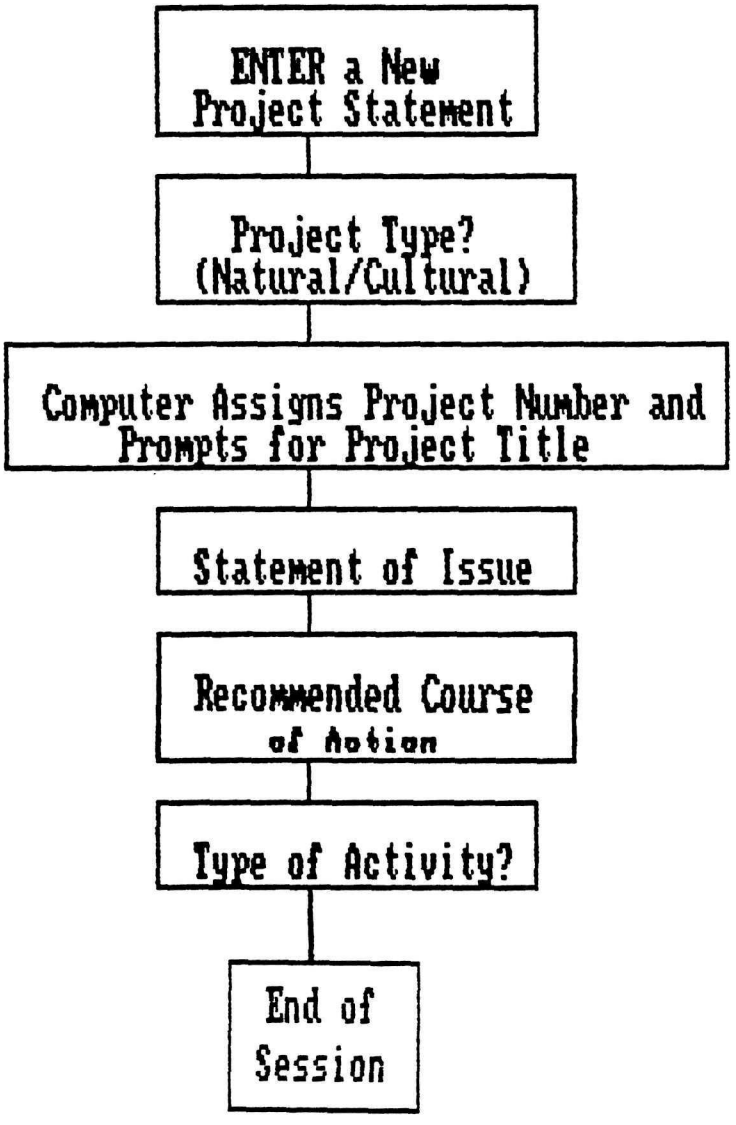


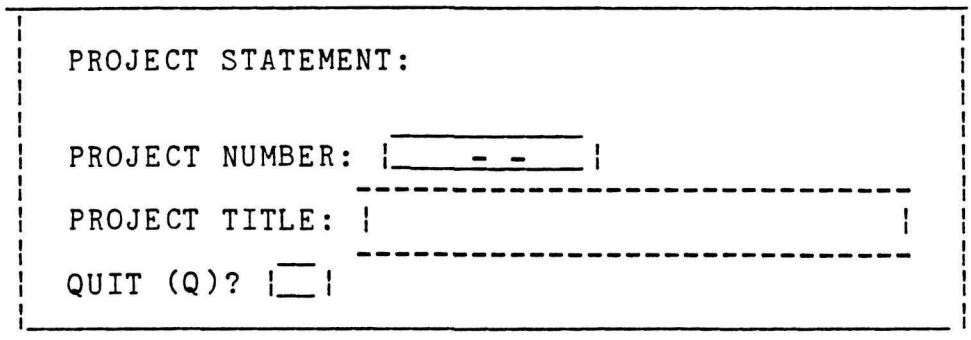
Figure 3. Organizational overview of the basic operations involved with entering a new Project Statement.

A.1.a. PROJECT TITLE

This panel automatically provides a Project Statement number and prompts the user to supply a project title.

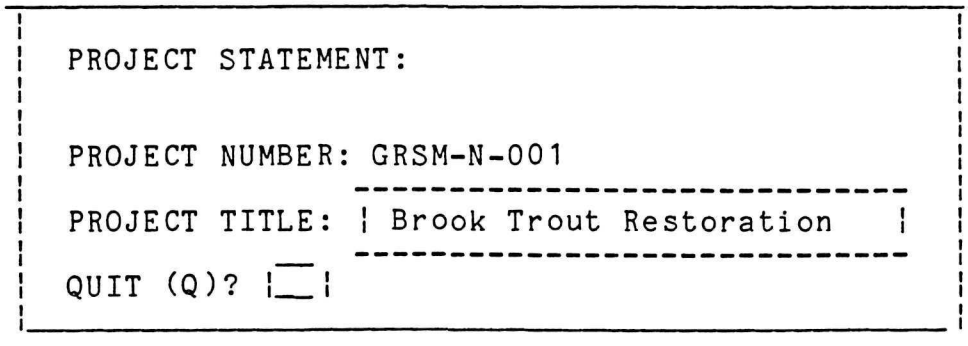
Format and Operation: .

Selecting either a "1" for natural or "2" for a cultural project type will result in the following screen:



The Project Statement number should automatically be assigned by the computer. The first four spaces are reserved for the park code. The next space indicates whether the statement is a natural ("N") or cultural ("C") type of project. The last three spaces are reserved for a unique sequence number that is assigned automatically by RITS. Users should frequently be asked to supply the Project Statement number to perform operations within this subsystem and to tie a Project Statement to its associated Resource Activity Permits, Abstracts, and Programming Sheets.

The boxed area in the above panel (this will be a highlighted area on your computer screen) is used to enter the title for this Project Statement. For the purposes of illustration in this section, let us follow the steps of entering a Project Statement concerning brook trout restoration in the Great Smoky Mountains National Park. After entering the project title, the above screen will look like this:



A.1.a. PROJECT TITLE (Cont.)

Note that a project number has been automatically assigned. In this example, the "GRSM" stands for the Great Smoky Mountains National Park; the "N" indicates we are dealing with a natural project; and the "001" tells us this is the first Project Statement dealing with natural resources that has been entered into the system.

Completing the project title information and pressing <ENTER> produces the following screen after a short wait:

```
IN THE PAGES THAT FOLLOW, PLEASE ENTER THE

APPROPRIATE PROJECT STATEMENT INFORMATION FOR

GRSM-N-001    "Brook Trout Restoration"


 Press any key to continue . . .
```

WAIT

This screen tells us that the computer will prompt the user for needed Project Statement information regarding the brook trout restoration project.

Remarks:

1. If the user decides not to enter a project title at this time, pushing a "Q" and the <PgDn> key will return the user to the previous screen.

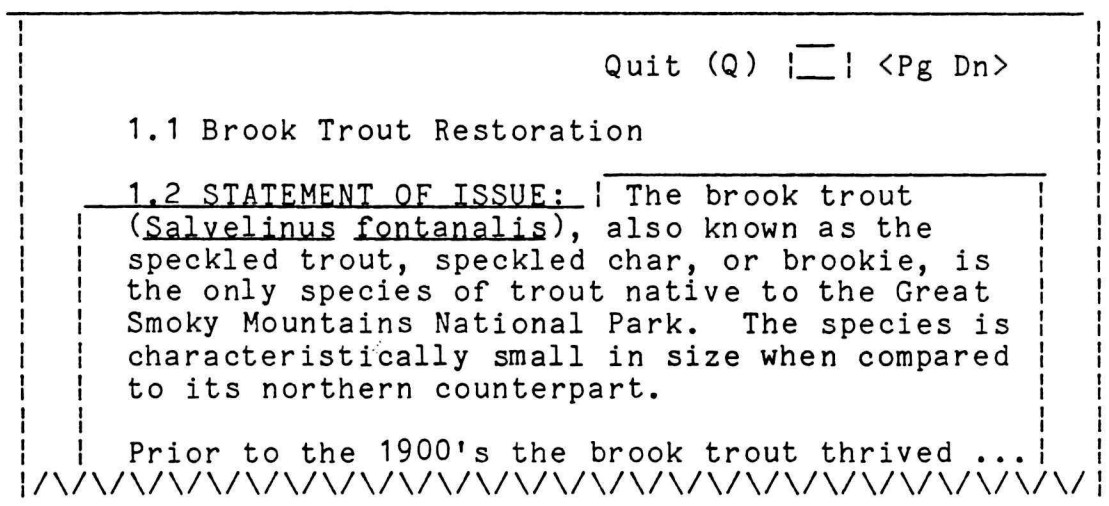
2. The park code, consisting of four letters, will be automatically supplied by RITS if the system has been installed for a particular park. If the system is being used at a regional office, RITS will prompt the user to enter the park code.

A.1.b. STATEMENT OF ISSUE

This allows the user to enter a Statement of Issue for a particular Project Statement. A statement of issue is intended to provide necessary background information surrounding and explaining the issue or problem.

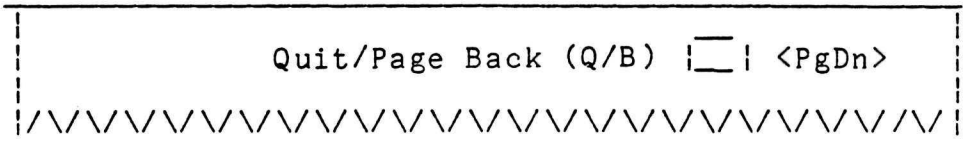
Format and Operation:

The following screen illustrates part of a statement of issue for the brook trout example:



The title of the project is automatically inserted by the computer as in the above example. The Statement of Issue would then be typed in by the user in the highlighted box provided.

Four screens are available for entering the Statement of Issue. When finished with a screen, press <PgDn> to move to the next screen. The top of successive screens will appear as follows:



The ability to move back to previous pages has been added. The user can return to a previous page to view what has been written or make changes by simply entering "B" for page back and pressing <PgDn>.

Word processing capabilities for entering information are limited in RITS since it is not designed to be a word processing system. Users must type in the Statement of Issue like it will appear on the page. RITS does not possess word wrap and many of the other capabilities found in word processing systems. Despite this limitation, several important

A.1.b. STATEMENT OF ISSUE (Cont.)

editing features have been added. These include:

1. To add a line in the narrative enter a .N in the first space on a line and press <PgDn>.

2. To delete a line, enter a .D in the first space on a line and press <PgDn>.

Remarks:

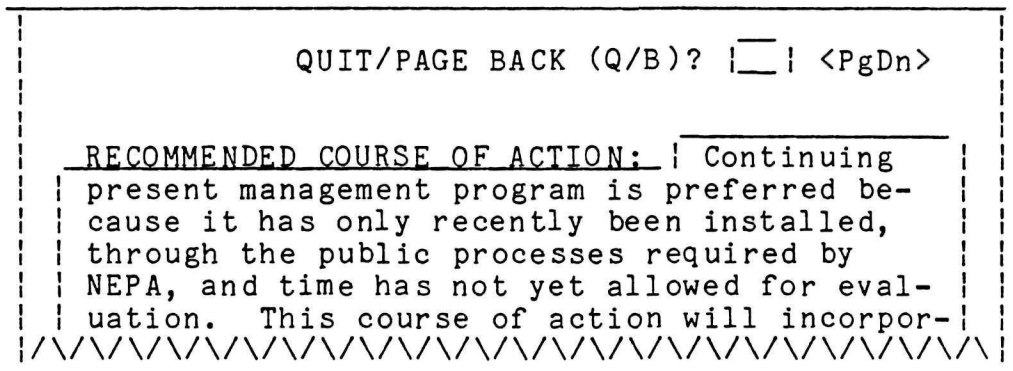
1. The user can quit from this panel and following panels at any time by entering "Q" for quit and the <PgDn> key. It is important, however, to remember that if "Q" is pushed, any narrative on that panel will not be saved. A user should advance to the next panel by pressing <PgDn> and then "Q" to ensure that the information entered on the previous panel is saved.

A.1.c. RECOMMENDED COURSE OF ACTION

This allows the user to enter the Recommended Course of Action to address the Statement of Issue.

Format and Operation:

The following screen illustrates part of a Recommended Course of Action for our brook trout example:



One screen is provided to enter the Recommended Course of Action, which should be a general summary of current and planned activities. Further details should be incorporated in the three Resource Activity Type sections that follow.

Remarks:

1. The same editing capabilities available for the Statement of Issue (see section A.1.b) are available for the Recommended Course of Action and associated Resource Activity Types.

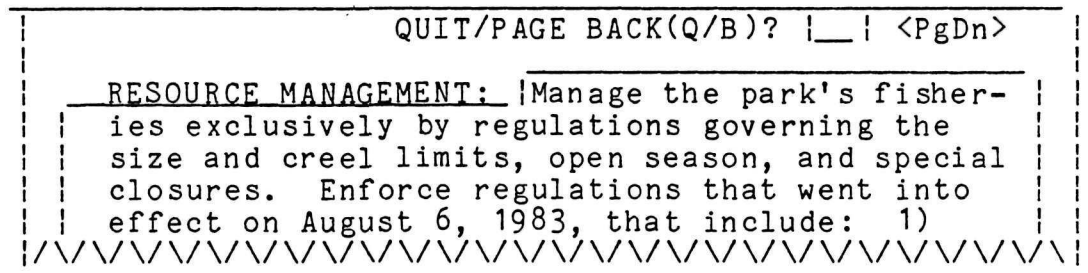
A.1.d. RESOURCE ACTIVITY TYPE

This allows the user to specify the type of resource activity -- resource management, monitoring, and/or research -- relevant to the Project Statement.

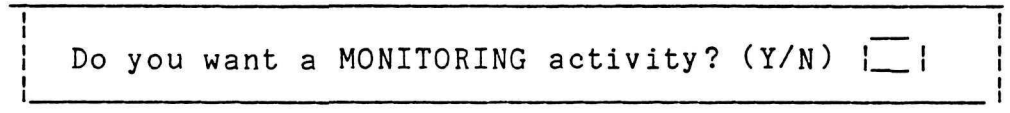
Format and Operation:

Once the Recommended Course of Action is completed and the user presses <PgDn>, the following screen will appear:

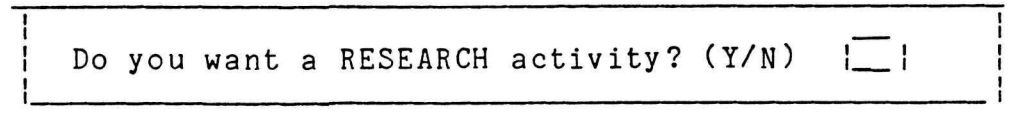
If the user does wish to enter a Resource Management Activity --done by entering "Y" -- two screens are provided to do so. A portion of the resource management statement for our brook trout example would appear as follows:



If "N" for no was entered for the above question or if the information for the resource management activity has been completed, the following question will appear:



Selecting "Y" for yes will provide the user with two screens to enter information regarding the monitoring activity. Finishing the monitoring activity or answering "no" to the above question will yield the following:



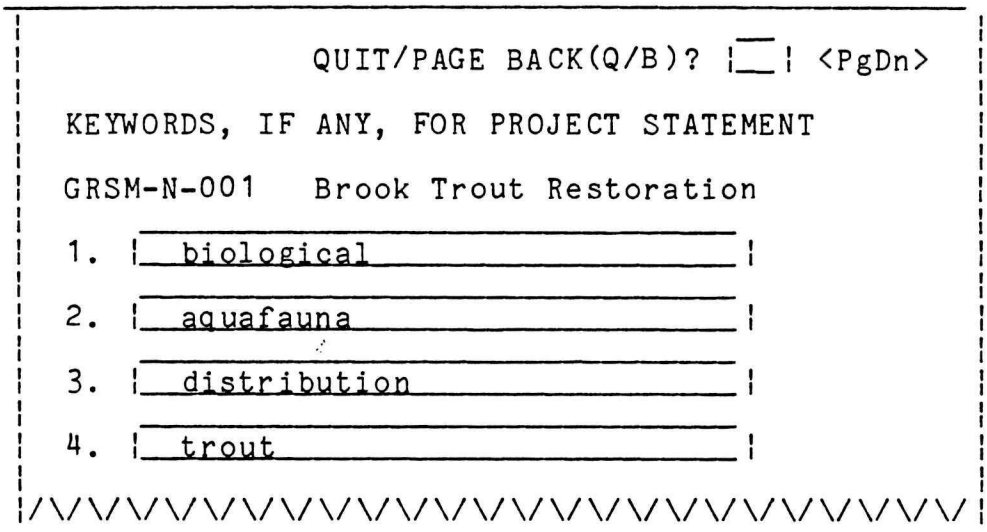
Once again, two screens are provided for entering information on research activities.

A.1.e. KEYWORDS

This allows the user to enter certain Keywords describing the Project Statement. These Keywords are important for allowing users to search for Project Statements dealing with certain topic areas.

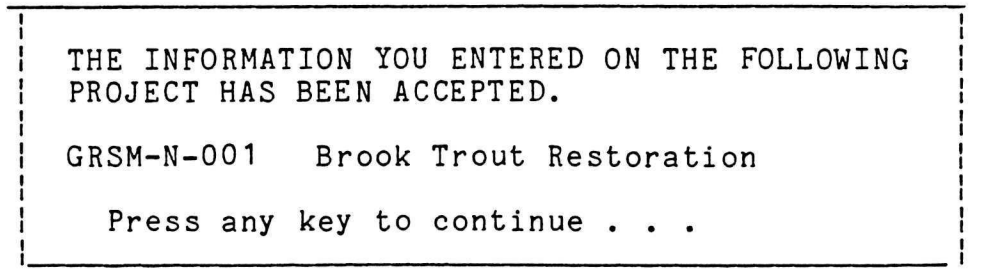
Format and Operation:

Once the the resource activity information is entered, the following information will appear:



Eight keywords may be entered for each Project Statement. The first 3 keywords should be entered by the park when the Project Statement is first entered into the system. Appendix B provides a three-level Keyword Organization Scheme which should be used to maintain a degree of consistency between parks. Three keywords, one from each order should come from this scheme. The remaining keywords can include any words unique to the project. RITS will let you enter any keywords you choose -- they do not have to come from Appendix B.

Once the desired keywords have been entered the following screen will appear:



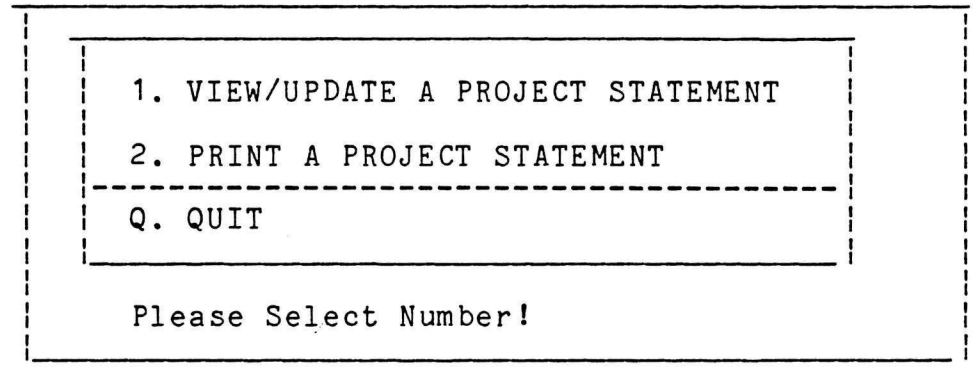
Pressing any key returns the user to the Project Statement menu. For security purposes, Project Statements should be periodically backed up on diskettes (see E.1. Backing Up Databases, page 99).

A.2. VIEW/UPDATE OR PRINT A PROJECT STATEMENT

The second part of the Project Statement subsystem allows the user to either view, update, or print an existing Project Statement. Figure 4 illustrates the basic operations involved with this "limb" of the Project Statement "branch".

Format and Operation:

Choosing "View/Update, or Print" -- done by striking "2" in the Project Statement menu (page 9) -- will display the following:



At this point, the user must select a "1" to view or update a Project Statement or a "2" to print one.

Remarks:

1. Pressing "Q" for quit returns the user to the Project Statement menu.

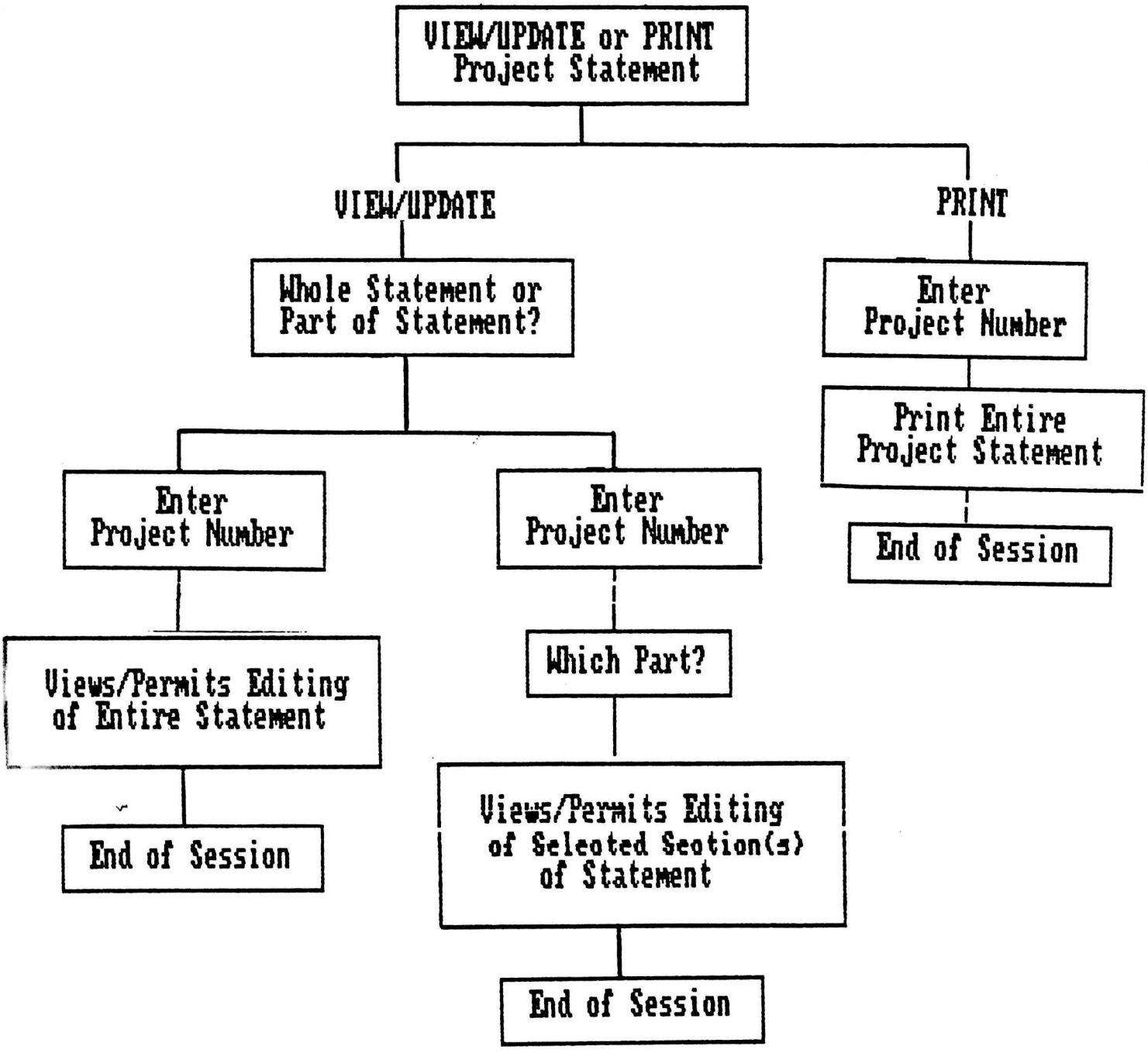


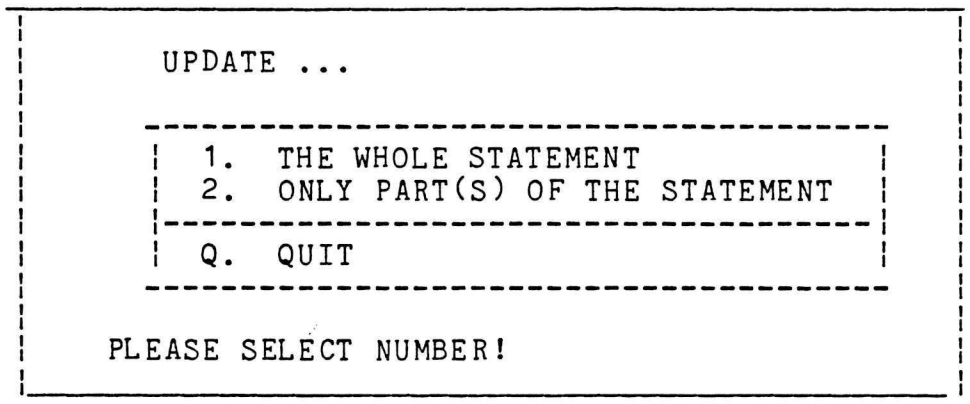
Figure 4. Organizational overview of the basic operations involved with view/update or printing a Project Statement.

A.2.a. VIEW/UPDATE A PROJECT STATEMENT

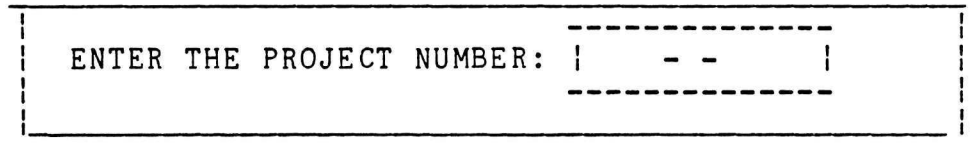
This allows the user to look over all or only selected portions of the desired Project Statement. Additions, changes, or deletions to the Project Statement may be made at this time.

Format and Operation:

Choosing to "View/Update a Project Statement" -- done by selecting a "1" from the previous screen -- will result in the following screen:



The user must decide if the whole Project Statement or some part(s) of this statement is desired. Pressing either number will cause the following screen to appear:



The user must enter the project number of the statement desired. Recall that the first four blanks are reserved for the park code. If the system has been installed for a park, this code will be automatically inserted. For systems installed for a region, the park code must be typed in. The fifth space indicates whether the statement deals with natural ("N") or cultural ("C") resources. The last three spaces are reserved for a sequential number assigned the statement.

Remarks:

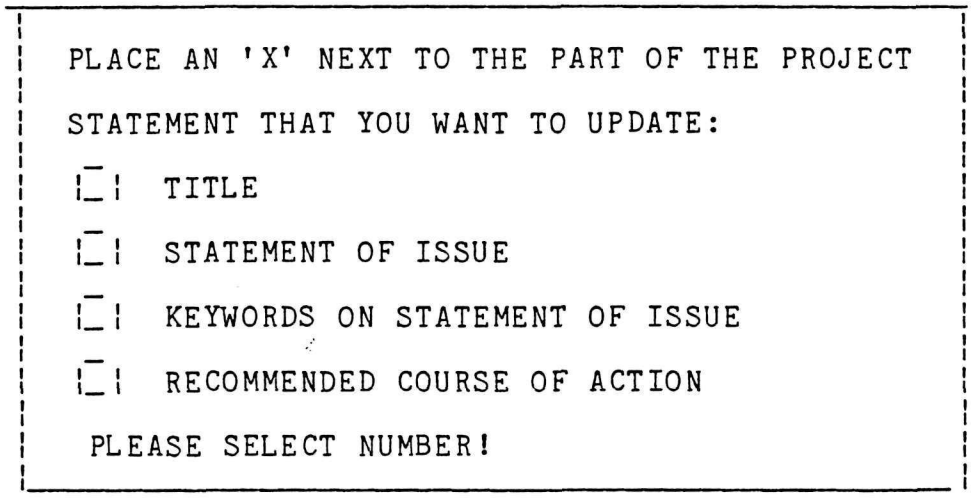
1. If the system has been installed for a park, the park code will automatically be inserted. For systems installed for regional use, this code must be typed in.

The Whole Statement

If the user has decided to view/update the whole statement, RITS will display the four major sections of the Project Statement. These include: 1) a project title, 2) a statement of issue, 3) the recommended course of action, and 4) up to eight keywords.

Part of the Statement

If only a portion of the project statement is desired, the user must choose which portions from the screen below:



Only those portions of the Project Statement specified, will be displayed.

Remarks:

1. Changes may be made to any section of the Project Statement at this time. These changes may include:

   a. typing over existing material,
   b. deleting narrative by using the computer's delete key,
   c. adding lines by typing ".N" in the first space of a line and pressing the <PgDn> key, and
   d. deleting lines by typing ".D" in the first space of a line and pressing the <PgDn> key.

2. To advance through the screens, the user should press <PgDn>. To return to a previous screen, the user should press "B" and <PgDn>

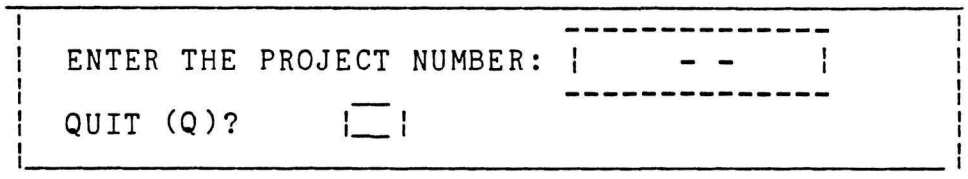
3. The user can quit from the screen at any time by entering "Q" for quit. It is important, however, to remember that if "Q" is pushed, any <u>new</u> narrative added to that page will not be saved. A user should advance to the next blank screen by pressing <PgDn> and then "Q".

A.2.b. PRINT A PROJECT STATEMENT

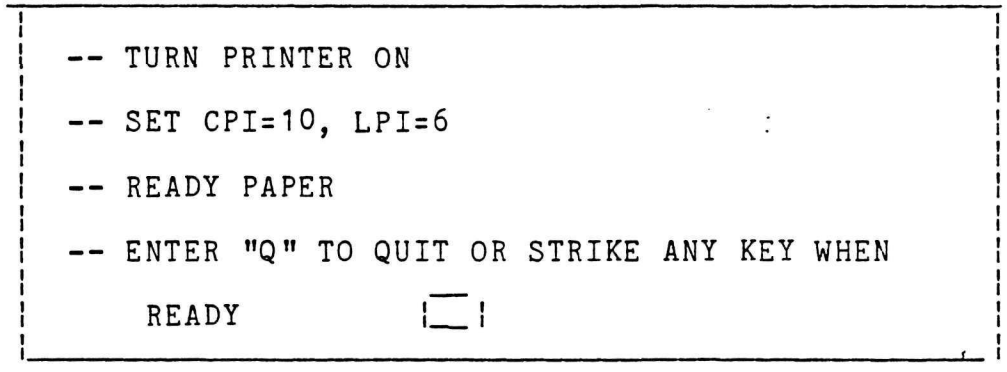
This allows the user to print the entire Project Statement. This printed statement is suitable for inclusion in a park's Resource Management Plan. See Appendix C for an example of a printed Project Statement.

Format and Operation:

Choosing to print a Project Statement -- done by striking "2" on the View/Update or Print menu (page 21) -- will result in the following screen:



Once the appropriate information is entered, the computer will prompt the user to get ready with the following screen:



As indicated, the user should turn on the printer, set the Characters Per Inch (CPI) to 10 and Lines Per Inch (LPI) to 6, set the printer online, and strike any key when ready to actually begin printing the Project Statement.

Remarks:

1. If the user chooses not to print at this time, he or she can strike "Q" for quit.

A.3. LIST AVAILABLE STATEMENTS

The third part of the Project Statement subsystem allows the user to list the natural or cultural Project Statements entered into the system. This listing may also be printed. Figure 5 illustrates the basic operations involved with this "limb" of the Project Statement "branch" of RITS.

Format and Operation:

Choosing "List available Statements" -- done by striking "3" on the Project Statement menu (page 9) -- will display the following menu:

```
SPECIFY TYPE:

  1.  NATURAL
  2.  CULTURAL
  Q.  QUIT

SELECT NUMBER!
```

At this point, the user must decide if a listing of natural or cultural resources is desired. Pressing a "1" for natural resource or a "2" for cultural resources will generate the following:

```
DO YOUR WANT THE LISTING PRINTED? (Y/N)? _
```

Selecting a "Y" for yes will prompt the user to ready the printer.

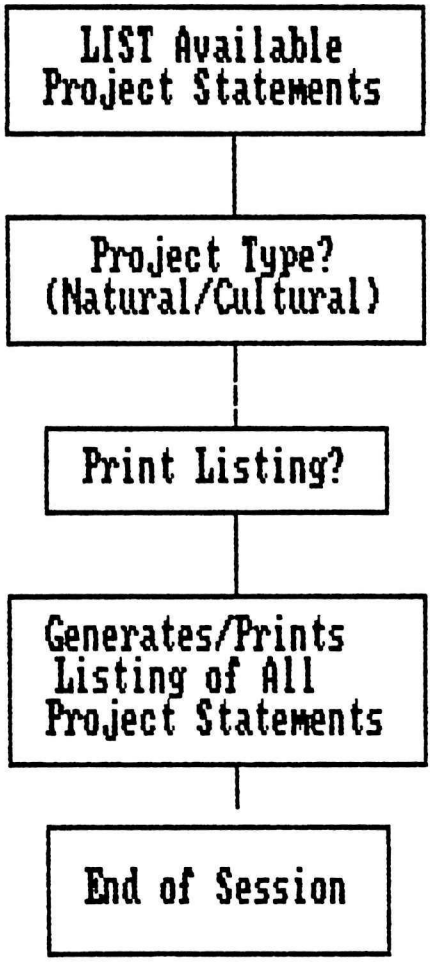
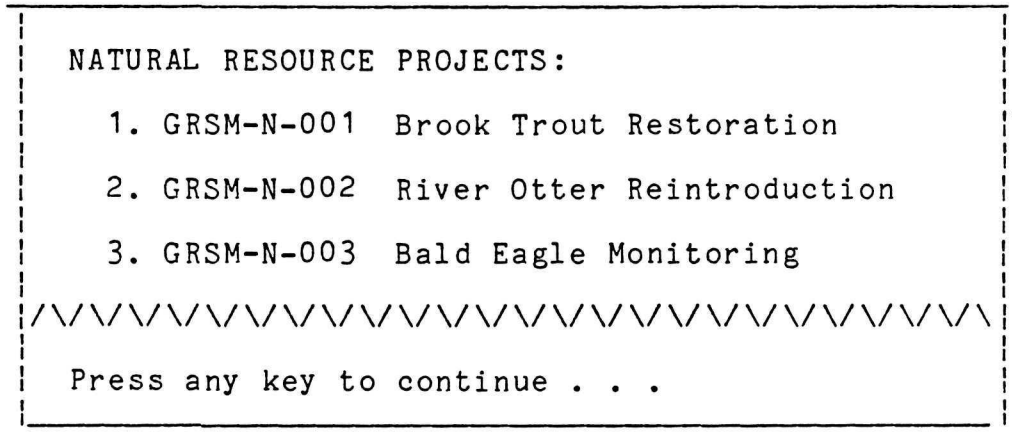


Figure 5. Organizational overview of the basic operations involved with listing a Project Statement.

A response of "N", indicating that the user does not wish to print the listing, will result in a display on the computer screen of all the Project Statements dealing with either natural or cultural resources depending on what the user specified. The following is an example of a listing for natural resources:



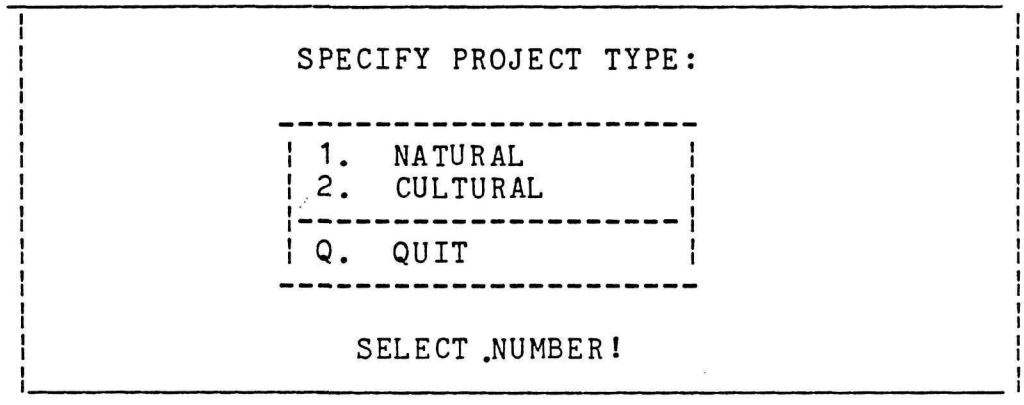
Once the entire listing has been displayed, the user is instructed to press any key. The result is a return to the Project Statement menu.

4. SEARCH FOR PROJECT STATEMENTS

The forth and final part of the Project Statement subsystem allows the user to search for Project Statements within the RITS system. This search is based on keywords entered as part of "entering a Project Statement" (see section A.1.e) and can be either inclusive or restricted. Figure 6 shows the basic operations involved with this "limb" of the Project Statement "branch" of RITS.

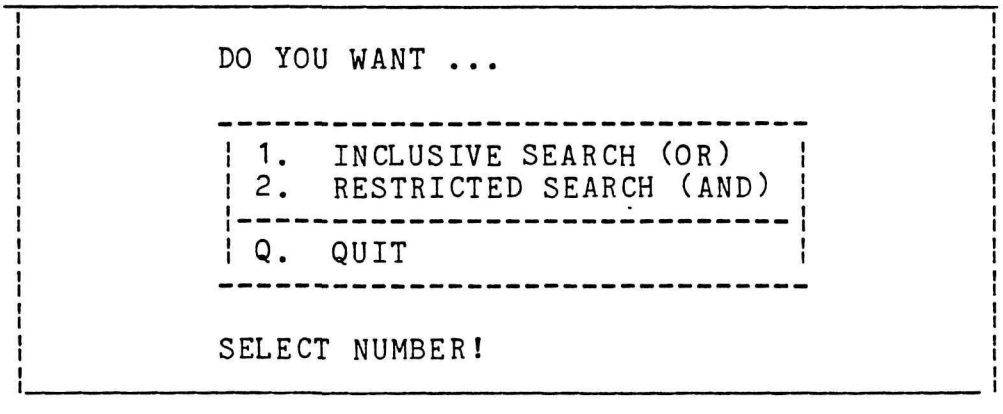
Format and Operations:

Choosing to "Search for Specific Project Statements" -- done by striking "4" of the Project Statement menu (p 9) -- will result in the following menu:



The user must either press "1" to search for Project Statements dealing with natural resources or press "2" for those statements dealing with cultural resources.

The following screen will appear if either a "1" or "2" is selected:



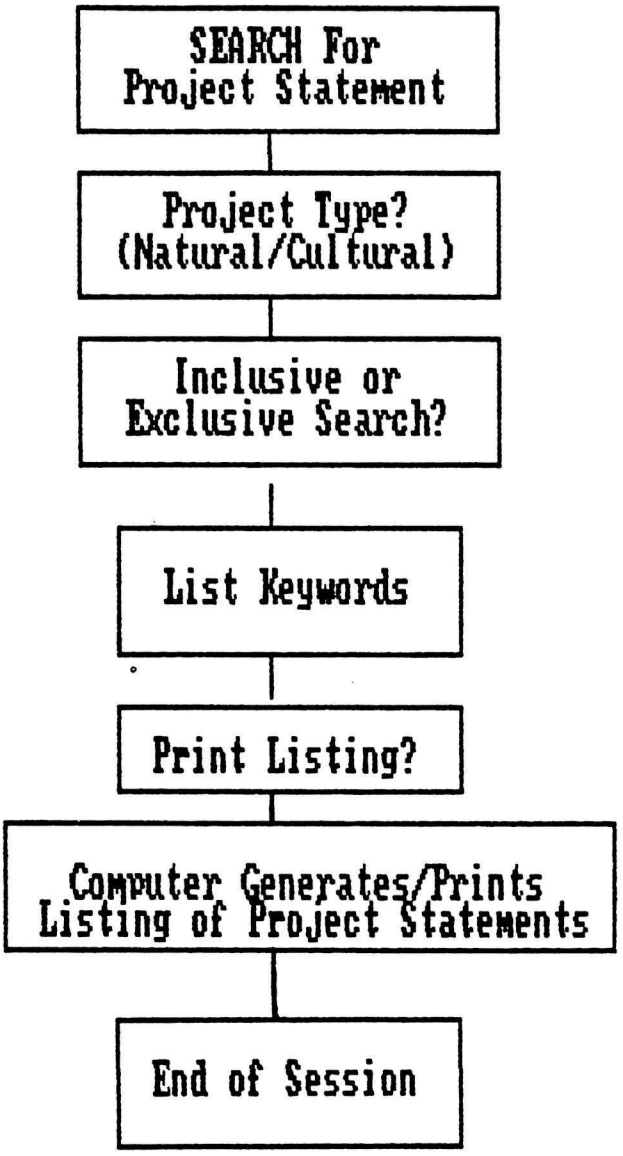


Figure 6. Organizational overview of the basic operations involved with searching for project statement(s).

4. SEARCH FOR PROJECT STATEMENTS (Cont.)

Remarks:

1. RITS has been designed to do substring searches. This means that RITS will search all Project Statements for any words with the specified string of letters. For example, if the user simply enters "bio", the search may yield such Project Statements as:

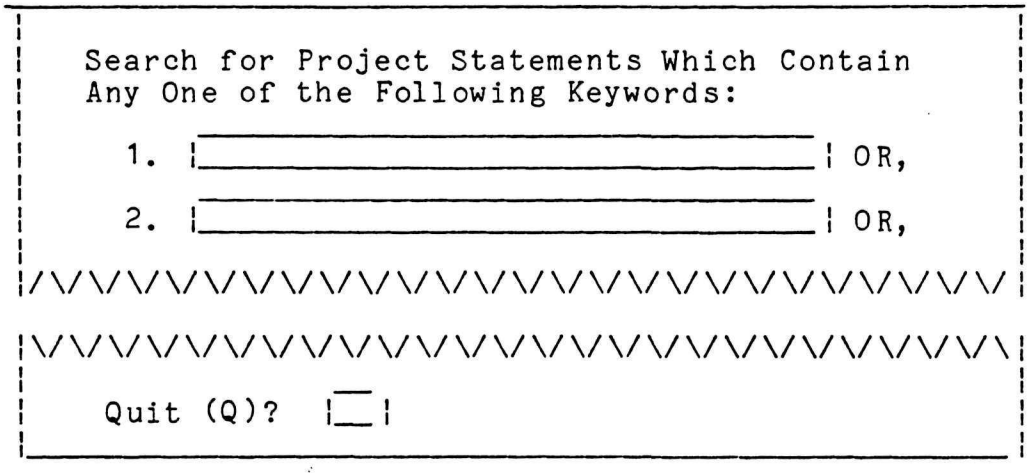
```
NATURAL RESOURCE PROJECTS:

 1. GRSM-N-008    The Biology of the
    White-tailed Deer

 2. GRSM-N-014    Flora and Fauna of the
    Eastern Deciduous Forest Biome

 3. GRSM-N-026    Biological Control of
    the Balsam Wooly Aphid."
```

Notice that "bio" (highlighted here for emphasis) is found in different words somewhere in the project title. Also notice that the Project Statement number is listed.

A.4.a. INCLUSIVE SEARCH

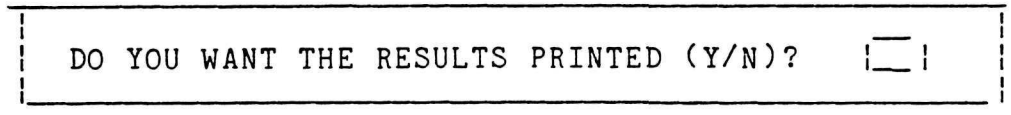
Format and Operations:

Selecting a "1" for an inclusive search indicates that the user wishes to find Project Statements having any combination of the keywords desired. In this case the following screen will appear:



Up to five keywords can be entered. RITS will search all the Project Statements for one(s) that have any combination of the above keywords. For example, the user may be interested in Project Statements which are described by the keywords "physical" or "climate" or "clouds". These keywords would be entered above and RITS would list any statements containing at least one of these words.

Once the desired number of keywords have been entered, the user should advance to the next screen which asks:



Striking a "Y" for yes will result in a prompt instructing the user in how to ready the printer.

Striking a "N" for no will result in a computer listing of Project Statements meeting the desired conditions. For example if the keywords "water" or "trout" are entered the computer listing would look as follows:

```
PROJECTS . . .

  GRSM-N-001  Brook Trout Restoration

  GRSM-N-002  River Otter Reintroduction
```

Notice that while the first Project Statement might be described by both keywords, the second statement probably was only associated with the keyword "water".

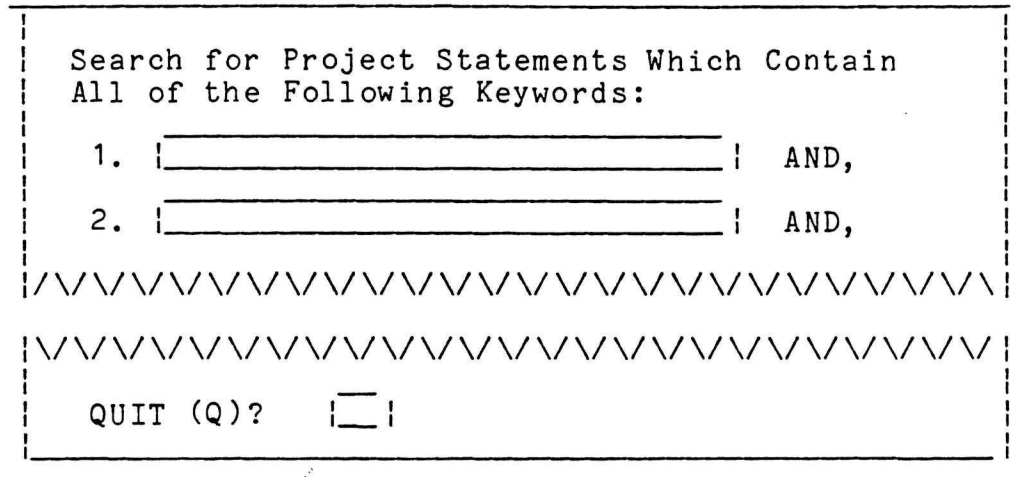
If no Project Statements are found meeting the desired conditions of the search the following screen will appear:

```
        NO PROJECT STATEMENTS FOUND
        MEETING YOUR SPECIFICATIONS.

Press any key to continue . . .
```

A.4.b. RESTRICTED SEARCH

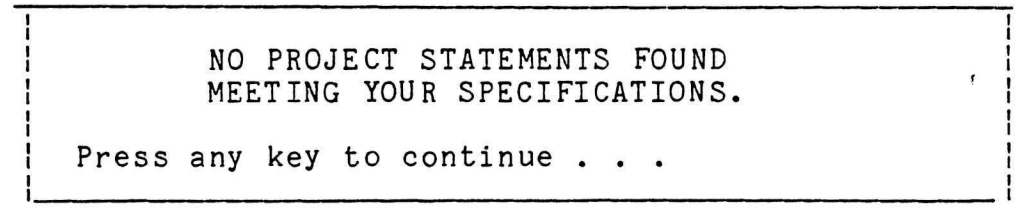
Format and Operation:

Choosing a "2" for a restricted search means that the user is interested in those Project Statements containing all of the keywords desired. In this case, the following panel results:



For example, entering the keywords "trout" and "water" in a restrictive search would only yield those Project Statements described by both the keywords. So in contrast to the inclusive search, only GRSM-N-001 "Brook Trout Restoration" would be listed since it is the only statement where both keywords apply.

If no Project Statements are found meeting the desired conditions of the search the following screen will appear:



A.5. DELETE A STATEMENT

The fifth and final part of the Project Statement subsystem allows the user to delete a Project Statement which has been previously entered.

Format and Operation:

Choosing to "Delete a Statement" -- done by striking "5" of the Project Statement menu (page 9) -- will result in the following:

```
ENTER THE PROJECT NUMBER:

QUIT (Q)?                    |__|
```

The user should enter the project number of the Project Statement that is to be deleted. For park installed systems, the first four spaces (i.e. park code) will automatically be filled in. Upon entering this number, the following screen will appear:

```
PROJECT STATEMENT TO BE DELETED:

PROJECT NUMBER:

PROJECT TITLE:

QUIT (Q)?

HIT <ENTER> TO CONFIRM FOR PROJECT DELETION
OTHERWISE PRESS 'Q' TO QUIT

WARNING: DELETING A PROJECT STATEMENT MAY TAKE
SOME TIME.
```

By pressing <ENTER>, the deletion of the specified Project Statement will proceed. RITS will inform the user when the deletion process has been completed.

Selecting to quit, returns the user to the Project Statement menu (page 9).

Remarks:

1. Since RITS numbers Project Statements with a unique sequential number, the project number of a deleted Project Statement will not be used again.

Resource Activity Permits

B. RESOURCE ACTIVITY PERMITS

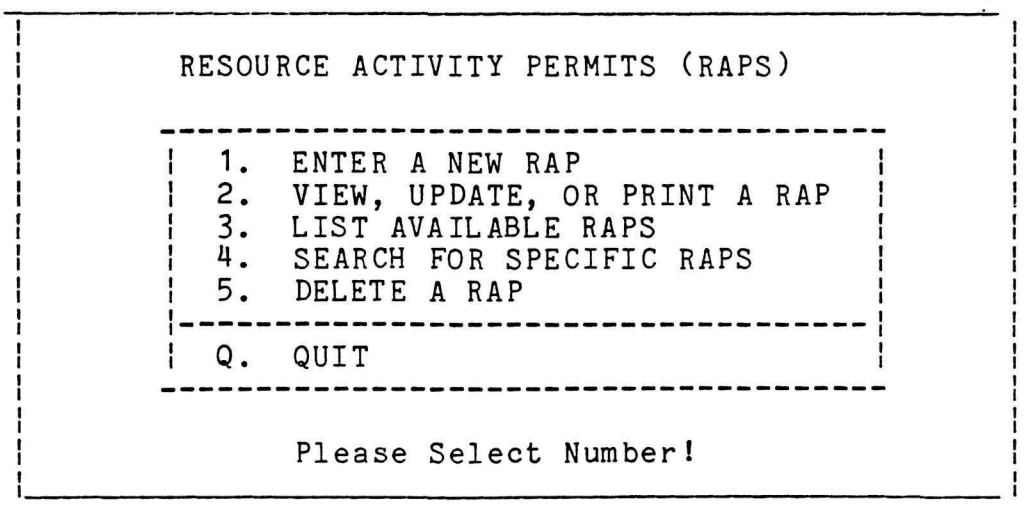
Background:

The Resource Activity Permit (RAP) subsystem produces a permit as well as annual reports on all resource management, monitoring, and research activities and ties those activities directly to specific Project Statements. All employees and collaborators that undertake resource management, monitoring, or research projects in the park should be incorporated into the RAP system. That process begins with an application completed by the employee or collaborator. Information from the application is then utilized by the park to complete RAP Part I, a copy of which is issued to the employee or collaborator as a permit to undertake certain agreed upon activities. Part II is completed with the permittee at the end of the field or research season. The combined data from Part I and II becomes the ingredients for the park's Superintendent's Annual Research Report.

The following section discusses the five parts of this subsystem. Figure 7 gives a basic overview of this "branch" of RITS.

Format and Operations:

Choosing the Resource Activity Permits or RAP subsystem -- done by pressing "2" in the Master Menu (page 8) -- will display the following menu:



The RAP menu allows you to select any of the four functions related to RAPs. Users should press the number of the function they wish to perform. For example, a user wishing to search for a specific type of RAP would strike "4" to begin the search. The following discussion will describe each of the parts of this subsystem in greater detail

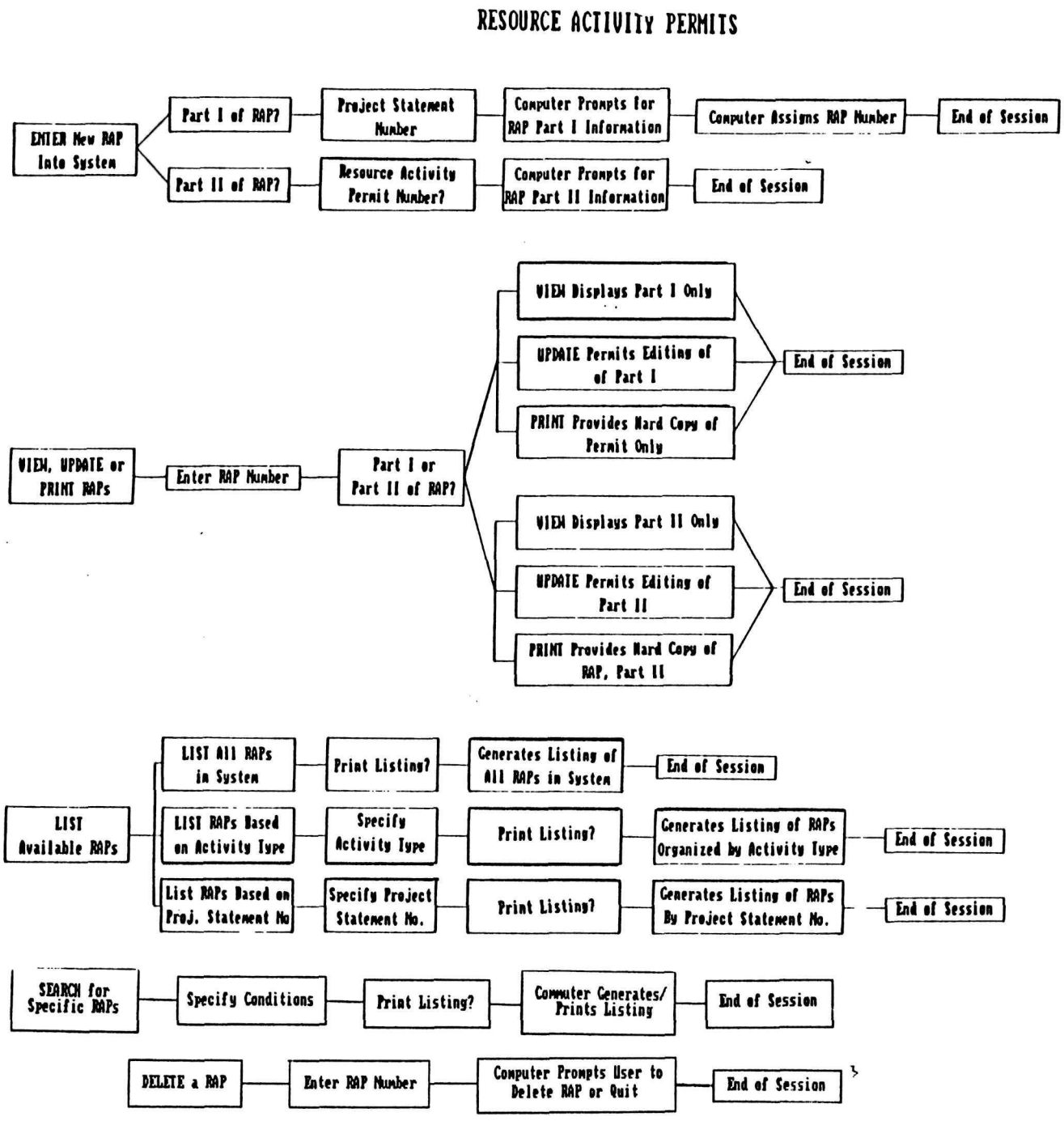


Figure 7. Organizational chart for the Resource Activity Permit (RAPs) subsy

B. RESOURCE ACTIVITY PERMITS (RAPs) (Cont.)

Remarks:

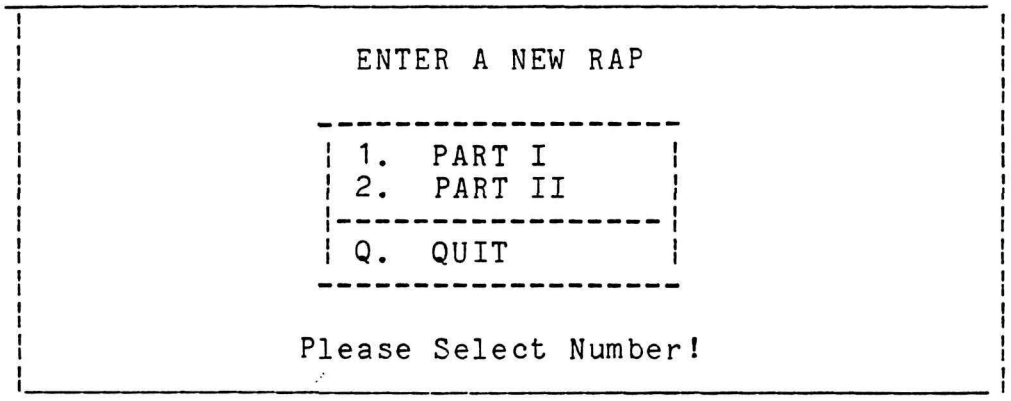
1. If the user decides at this point not to perform any of these functions, a "Q" should be struck returning the user to the Master Menu (page 8).

B.1. ENTER A NEW RAP

The first part of the RAP subsystem allows the user to enter a new RAP. Figure 8 illustrates this "limb" of the RAP subsystem or "branch" of RITS.

Format and Operation:

Choosing "Enter a New RAP" -- done by striking "1" in the RAP menu (page 36) -- will display the following:



At this point, the user must decide if they want to enter Part I or Part II. Part I is selected when the user wishes to enter information from an approved application for performing some type of resource management, monitoring, or research activity within the park. Completion of Part I will result in a permit issued to the collaborator or employee to conduct these activities. Part I of the RAP must be completed before Part II can be entered. Part II is chosen when the user wishes to enter a brief summary of the findings from the field or research season that relate to the activity.

Remarks:

1. Pressing "Q" for quit will return the user to the RAP menu (page 36).

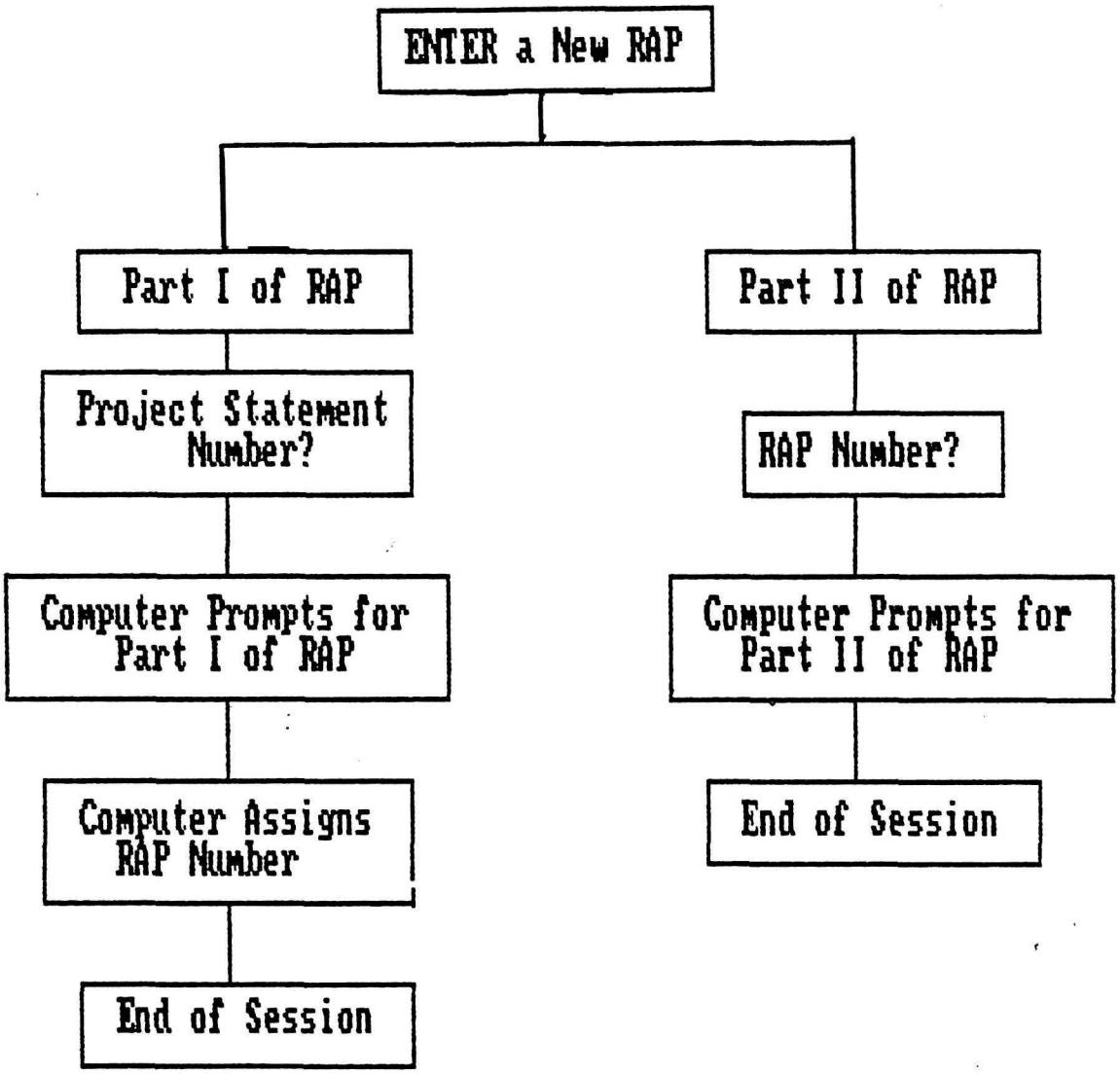


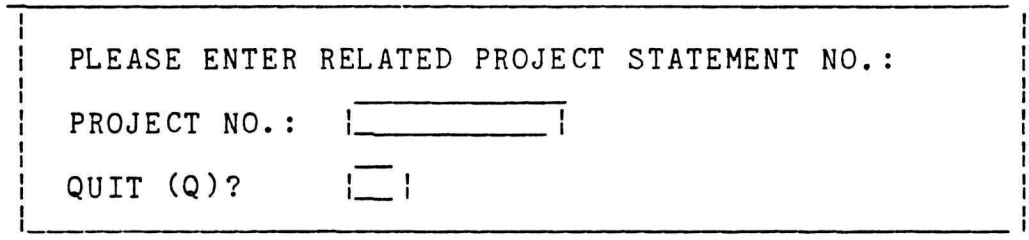
Figure 8. Organizational overview of the basic operations involved with entering a RAP.

B.1.a. ENTERING PART-I OF THE RAP

The following panels allow the user to enter information concerning a resource management, monitoring, or research activity within the park. The resulting information can be printed out as a permit to be given to the collaborator or employee performing the activity.

Format and Operation:

Choosing to enter Part I of the RAP -- done by pressing "1" in the "Enter a New RAP" menu (page 36) -- results in the following:



Since RAPs are generally tied to a specific Project Statement, the related project number is requested. Recall that the first four spaces consist of the park code. If RITS has been installed for a park, this code will be automatically inserted for the user. The 5th space tells whether the project concerns natural (N) or cultural (C) resources; and the last 3 spaces are a unique sequence number that is automatically assigned. For example, a project number of GRSM-C-023 refers to the Great Smoky Mountains National Park's twenty-third Project Statement concerning cultural resources.

All RAPS must relate to a specific Project Statement. If an activity to be approved does not relate to a Project Statement, a new Project Statement must be written and incorporated into RITS prior to the issuance of the specific RAP.

Remarks:

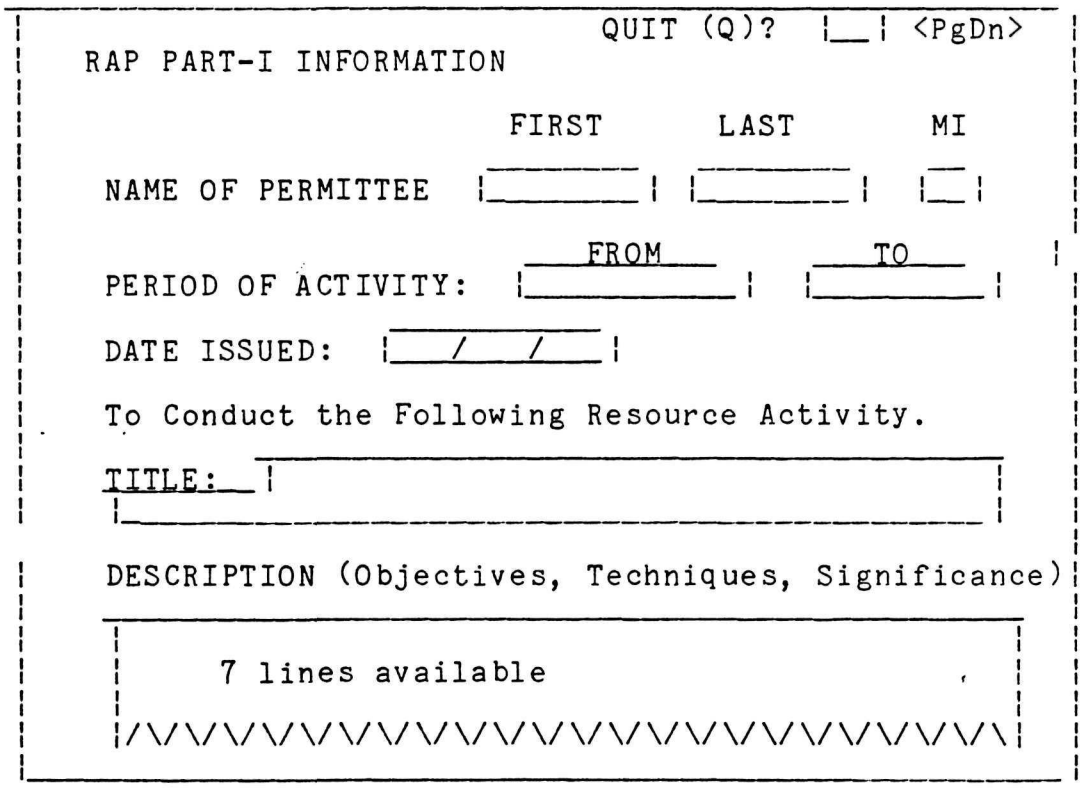
1. If the related Project Statement number is not known, the user may wish to exit this subsystem and enter the Project Statement subsystem (see page 9) to find the number. Within the Project Statements subsystem, the user can select to "List Available Project Statements" (page 26). The listing generated by this function will present the user with the Project Statement number and project title for all entered Project Statements.

B.1.a. ENTERING PART-I OF RAP (Cont.)

The next four panels prompt the user for background information necessary for issuing the permit. The first panel seeks basic information regarding the permittee, period of the activity, title of the activity, and a brief description of the resource activity.

Format and Operation:

Entering the requested Project Statement number in the previous panel results in the following:



RITS expects the user to enter most of the data items listed in the above panel. However, only the first and last name of the permittee are required.

For the purposes of illustration, we will follow the steps of entering a RAP dealing with the research activity of collecting softwood cuttings in the Great Smoky Mountains National Park. This RAP is tied to Project Statement GRSM-N-003, a project dealing with the study of air quality in the park.

Entering the information for our example on the previous panel will result in the following:

```
 ------------------------------------------------------------------
|                               QUIT (Q)?  |__| <PgDn>              |
|   RAP PART-I INFORMATION                                          |
|                                                                   |
|                                 FIRST       LAST        MI        |
|                               ---------   --------     ---        |
|    NAME OF PERMITTEE         |Paul      | |Berrang |   |  |       |
|                               ---------   --------     ---        |
|                                 ---FROM---      --TO----          |
|    PERIOD OF ACTIVITY:       | 5/28/86  |     | 7/30/86|          |
|                                ----------      --------           |
|                          -----------                              |
|    DATE ISSUED:        |  5/25 /86  |                            |
|                          -----------                              |
|                                                                   |
|    To Conduct the Following Resource Activity.                   |
|                   ---------------------------------------         |
|    TITLE:  |Collection of Softwood Cuttings for        |          |
|    | Determining Ozone Tolerance.                      |          |
|    |___________________________________________________|          |
|                                                                   |
|    DESCRIPTION (Objectives, Techniques, Significance)             |
|    ------------------------------------------------------         |
|    | The objective of this activity is to collect     |           |
|    | 50 softwood cuttings of 15 individuals of        |           |
|    | red maple, black cherry and flowering dog-       |           |
|    | wood.  These cuttings will be rooted and         |           |
|    | fumigated in the spring to determine ozone...    |           |
|    |/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\|           |
|                                                                   |
|___________________________________________________________________|
```

Remarks:

1. In order to quit this and the following panels, the user should strike "Q" and press the <PgDn> key. It is important, however to remember that if "Q" is pushed, any narrative on that panel will not be saved. A user should advance to the next blank screen by pressing the <PgDn> key. This saves information from the previous panel and allows the user to quit from a blank panel.

3. Unlike entering a Project Statement, the user is not able to page back to a previous screen. Changes to previous screens must be made from the View/Update/Print function (see page 52).

B.1.a. ENTERING PART-I OF RAP (Cont.)

The next panel to appear allows the user to enter certain restrictions or limitations placed upon the resource activity.

Format and Operation:

The following panel of activity restrictions has been completed with regards to our cuttings example:

```
RESTRICTIONS:                          QUIT(Q)? |__|  <PgDn>

-- Locality:          | None                              |

-- Type/Quantity:     | Listed Above/15 trees             |

-- Time:              | None                              |

-- Other:             | Trees should suffer minimal       |
                      | damage due to activity.           |

FIELD OF SCIENCE CODE:  |__|

ACTIVITY TYPE: (A-Res. Mgt., B-Monitoring,  ----
                C - Research)               |C |
                                            ----

LOGISTICS: Vehicles(s)

| 1969 red pickup (vehicle license number
| NPS 405.

Name of Assistant(s):

| Robert Mickler and Brian Stanton
|_____

Other:

|
|
|_____
```

As shown, the only restrictions concern the type of trees used, the quantity of trees cuttings will be collected from, and that minimal damage will occur as a result of the activity. The activity type is the only required data item on this panel. The field of science code refers to a two-digit National Science Foundation (NSF) code.

ENTERING PART-I OF RAP (Cont.)

The third panel supplies the park with information about the permittee's home address and affiliated institution.

Format and Operation:

Completing the panel with information from our example will result in the following:

```
                                    QUIT (Q)? |__| <PgDn>
   APPLICANTS HOME ADDRESS:

                  | Clemson, South Carolina |
   TOWN:          |_________________________|

                  | 2480-37 Davis Creek Road          |
   STREET:        |___________________________________|

   STATE:         |SC|          ZIP:  | 29678 |
                  ----                ---------
   INSTITUTION REPRESENTED:

                  | Clemson Univ., Cooperative Park   |
   NAME:          |_Study Unit________________________|

                  | Clemson                 |
   TOWN:          |_________________________|

   STATE:         |SC |,          ZIP:  | 29634 |
                  ----                  ---------

   PHONE:         |(803)656-2182 |
                   --------------
```

Although the user should enter as much of the above data as possible, none are required.

B.1.a. ENTERING PART-I OF RAP (Cont.)

The final panel involved in entering Part-I of a RAP prompts the user for funding information, specimens disposition, and related permits needed to carry out this activity.

Format and Operation:

Using our example to complete the final panel would result in the following:

```
                                    QUIT (Q)?  |__|

FUNDING INFORMATION

  SOURCE: |Nat. Science Found.| AMOUNT: |$12,500|

SPECIMENS DISPOSITION: |_____________________|


OTHER APPLICABLE PERMITS

  FEDERAL:
  NO.:    |_______|     EXPIR. DATE: |__/__/__|

  STATE:
  NO.:    |_______|     EXPIR. DATE: |__/__/__|

KEYWORDS: |envir/qual| |___air___| |pollution |
```

As in the Project Statement subsystem, a total of eight keywords can be used to describe a RAP. Three of these keywords are added in Part-I of the RAP (by the RITS user), while the other five are entered in Part-II (by either the principal investigator or the RITS user. To maintain some degree of consistency between parks, the keywords entered above in Part-I should come from the Keyword Organization Scheme (Appendix B). However, RITS will let you enter any keyword you choose -- they do not have to come from Appendix B.

Remarks:

1. Although the user should enter as much of the above data as possible, none are required.

Once all the panels of Part-I are completed for our example, the following will appear:

```
ENTRY OF RESOURCE ACTIVITY PERMIT PART-I IS
  COMPLETE

 PERMIT NUMBER IS: GRSM-N-003-0024

Press any key to continue . . .
```

RITS will automatically assign the permit number. Notice that the first eight spaces (GRSM-N-003 in the example) constitute the Project Statement to which the RAP is tied. The last four digits are a unique number sequence assigned automatically by the system.

Remarks:

1. Once information for a RAP is entered, the only way to add, change, or update that information is through the Update function discussed on page 55.

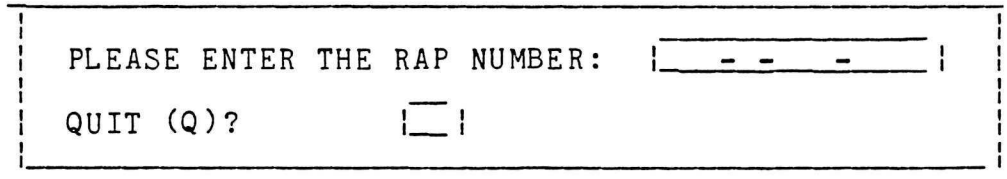
2. Information entered in Part I and II should be periodically backed up on diskettes for security purposes (see E.1. Backing Up Databases, page 99).

B.1.b. PART II of the RAP

Part II of the RAP prompts the user for information regarding the status of the resource activity at the end of the field or research season. Part II consists of three panels.

Format and Operation:

Selecting to enter Part II of the RAP -- done by striking "2" in the "Enter a New RAP" menu (page 39) -- results in the following:



The user should enter the RAP number that was assigned upon completion of Part-I. For park installed systems, the park code will be automatically inserted. In the case of our tree cuttings example, this number would be

GRSM-N-003-0024

For illustration purposes, we will continue to use this example in completing Part-II of the RAP.

Remarks:

1. Part I of a RAP must be completed before Part II can be filled in.

2. If a RAP number is not known, the user may choose to "List Available RAPs" (page 58). This function will provide the user with a listing of all entered RAPs by the RAP number and permittee's name.

B.1.b. PART II of the RAP (Cont.)

The second panel allows the user to enter information on what was accomplished during the field or research season.

Format and Operation:

Entering the RAP number in the previous panel results in the following with information from our tree cuttings example inserted:

QUIT (Q)? [ ] <PgDn>

RESOURCE ACTIVITY PERMIT - PART II

Did the Activity Meet the Prescribed Objectives?

The immediate goal of collecting 50 softwood cuttings was accomplished.

What Progress Was Made on This Activity?

The desired cuttings were collected from 15 species.

Were There Any Significant Findings?

Since this work represents the preliminary phases of this project, there are no findings to date. The cuttings must be fumigated and rooted next spring to determine ozone tolerance.

Do Any of Your Findings Have Management Implications?

Not at this time. See above.

What Percent of the Activity Has Been Completed?

30%

Although the user should enter as much of the above data as possible, none are required.

Remarks:

1. Should the user need to quit entering this and any of the following panels of the RAP, they should strike "Q" and press the <PgDn> key. Recall that any narrative on the panel will not be saved.

B.1.b. PART II of the RAP (Cont.)

The final panel prompts the user to provide information on related references, keywords, and future plans for completing the activity and publishing results.

Format and Operation:

Completing the last panel causes the appearance of the following panel with information from our example inserted:

QUIT (Q)? |__| <PgDn>

CONTINUE RESOURCES ACTIVITY PERMITS - PART-II

List any pertinent references you believe would benefit the park:

Example of the type of work done:

Karnosky, D.F. and K.C. Steiner. 1981. Provenance and family variation in response of Fraxinus americana and F. pennsylvania to ozone and sulfur dioxide. Phytopathology 71:804-811.

List all KEYWORDS you would like to use to reference your activity:

ozone	softwoods	geneology

What are your plans to complete or publish your findings?

We plan to fumigate the rooted cuttings in the spring of 1985 and will do some morphological work as well. Findings will be published later.

Name of Permittee: Paul Berrang Date: 6/12/84

Recall that three keywords were added in Part-I. The above keywords should be supplied by the permittee or RITS user and can include any words applicable to the specific resource activity.

Remarks:

1. Although the user should enter as much of the above data as possible, none are required.

2. Once the user has finished entering Part II, it can only be added to, changed, or updated only from the Update function (see page 55). Should the user attempt to enter information on an existing RAP a message similar to the following will appear:

```
PART-II OF RAP NUMBER GRSM-N-003-0024 HAS ALREADY
BEEN ENTERED.  YOU ARE NOT ALLOWED TO ENTER IT.
CAN MODIFY OR VIEW IT ONLY.
```

Upon completion of the previous panel, the following will appear:

```
ENTRY OF RESOURCE ACTIVITY PERMIT-II IS COMPLETE

PERMIT NUMBER IS:  GRSM-N-003-0024


Press any key to continue . . .
```

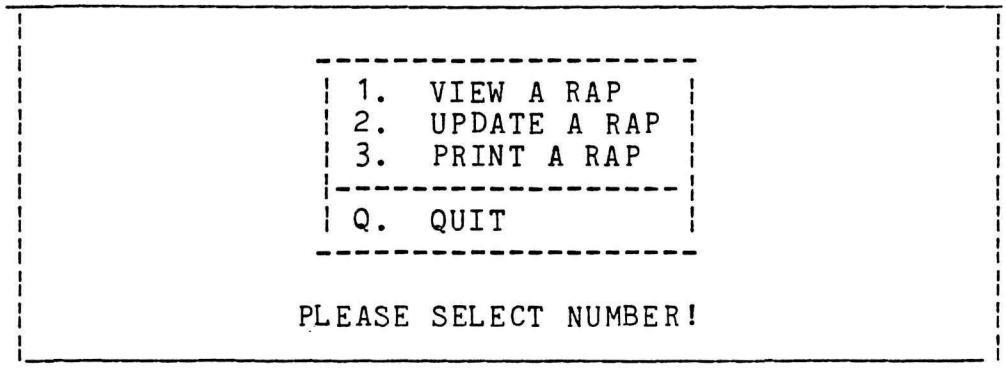
This returns the user to the RAP menu (page 36).

B.2. VIEW/UPDATE, OR PRINT A RAP

The second part of the RAP subsystem allows the user to either view, update, or print an existing RAP. Figure 9 illustrates the basic operations involved with this "limb" of the RAP "branch" or subsystem.

Format and Operation:

Choosing "View, Update, or Print a RAP" --done by striking "2" in the RAP menu (page 36) -- will display the following:



At this point the user must decide what function is appropriate for his or her needs and strike the corresponding key. The following discussion will describe these three operations.

Remarks:

1. Entering a "Q" for quit returns the user to the RAP menu (page 36).

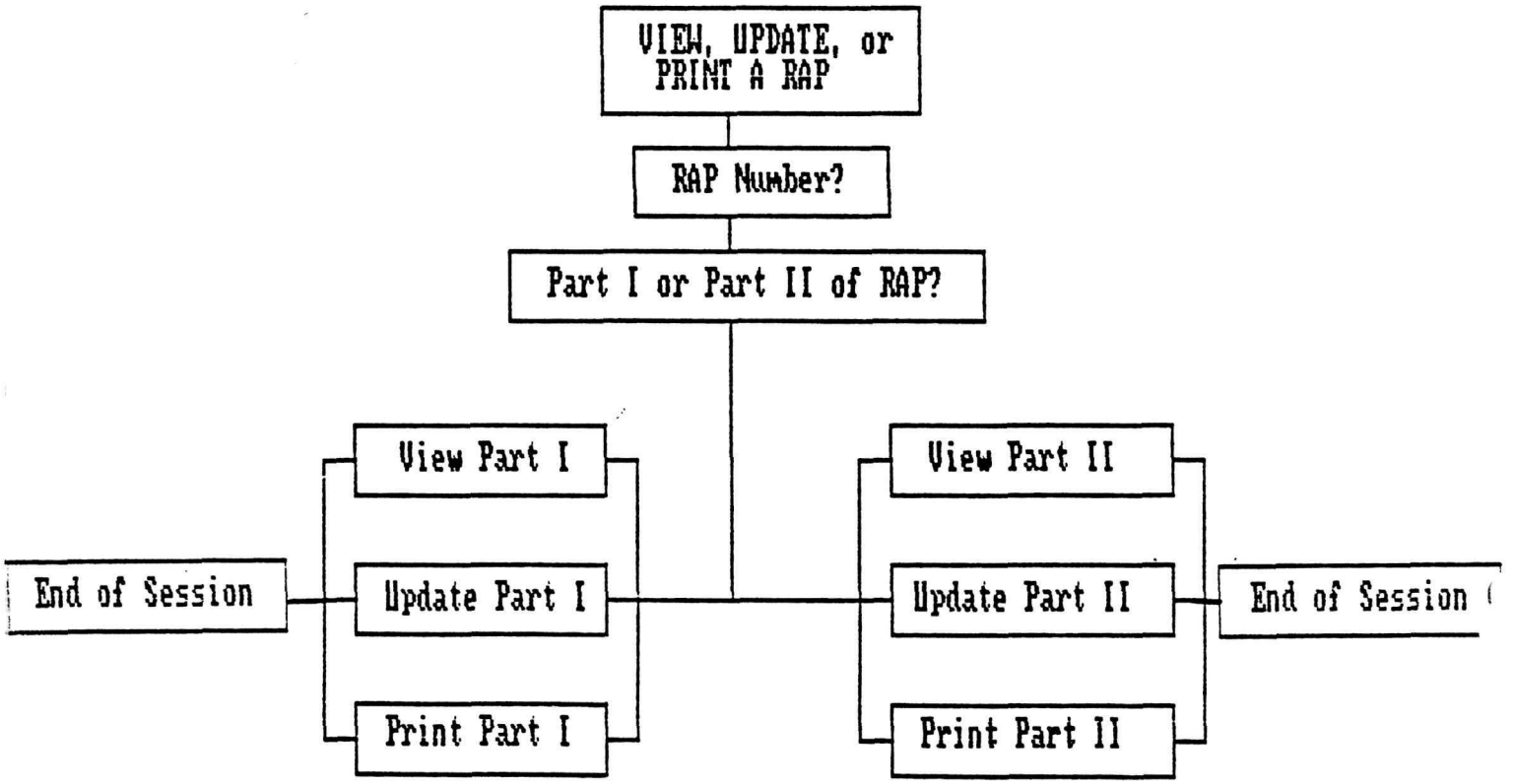


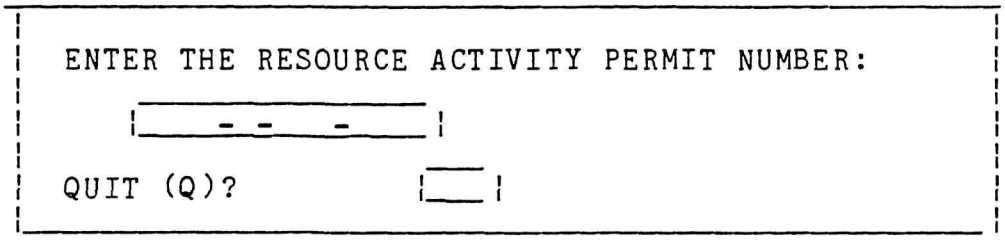
Figure 9. Organizational overview of the basic operations involved with viewing, updating, or printing a RAP.

B.2.a. VIEW A RAP

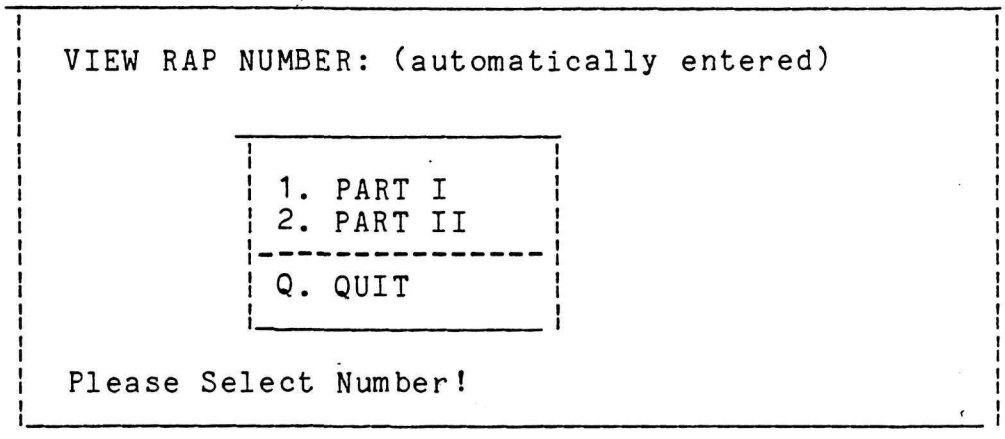
Viewing a RAP allows the user to check over information found in either Part-I or Part-II of the RAP.

Format and Operation:

Choosing to "View a RAP" -- done by pressing "1" in the previous screen -- will result in the following:



This prompts the user to enter the number of the desired RAP and upon entry of the number results in the following:



The user must decide if Part-I or Part-II of the RAP is desired. Selection of either part will result in the desired panels being displayed. Users should press the <PgDn> key to move through the panels. Four panels will be displayed for Part-I while two exist for Part-II.

Remarks:

1. Although a user is able to make changes on the screen, these changes will not be saved into the system.

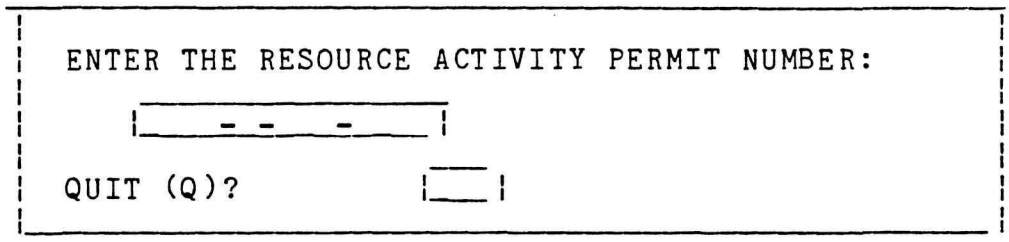
2. If the RAP number is not known, the user can "List Available RAPS" (see page 58) which will display all RAPS by the RAP number and permittee's name.

B.2.b. UPDATE A RAP

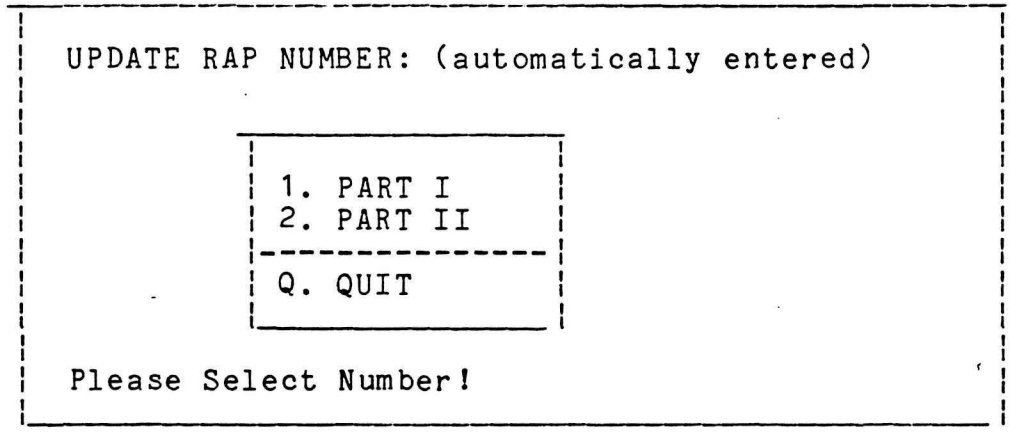
This allows the user to make any needed changes or additions to the RAP.

Format and Operation:

Choosing to "Update a RAP" -- done by pressing "2" in the menu on page ___ -- will result in the following:



The user should enter the desired RAP number. Upon entry of this number, the following will appear:



The user must decide if Part-I or Part-II of the RAP is desired. Selection of either part will result in the desired panels being displayed. Changes can be made by either typing over existing material, by deleting undesired material or by adding new material. A user can move from one highlighted box to another by pressing the <ENTER> key. To move from one panel to the next, the user must press the <PgDn> key.

Remarks:

1. In order to quit the panel, the user should press "Q" for quit and the <PgDn> key. Any information entered on that specific panel will not be saved.

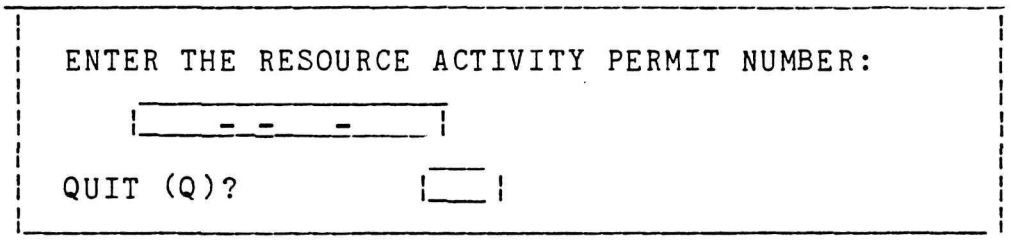
2. Updates to RAPs should be periodically backed up on diskettes (see E.1. Backing Up Databases, page 99).

B.2.c. PRINT A RAP

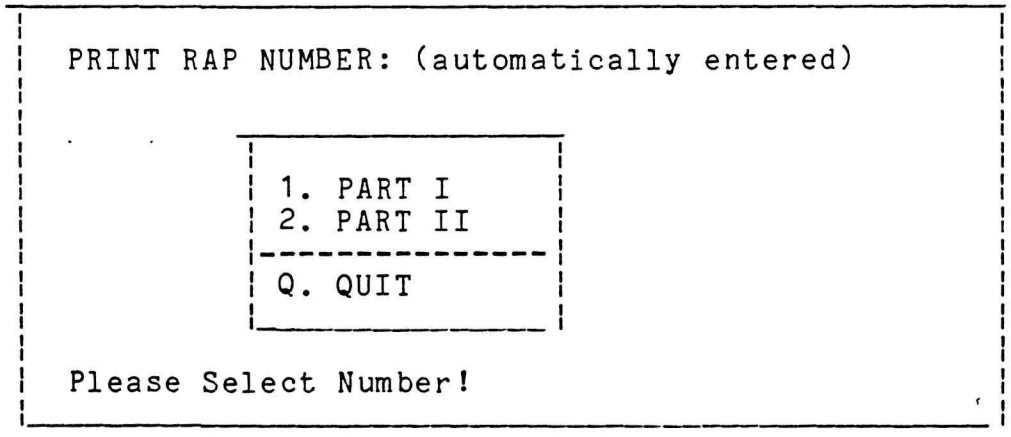
This allows the user to print a RAP.

Format and Operation:

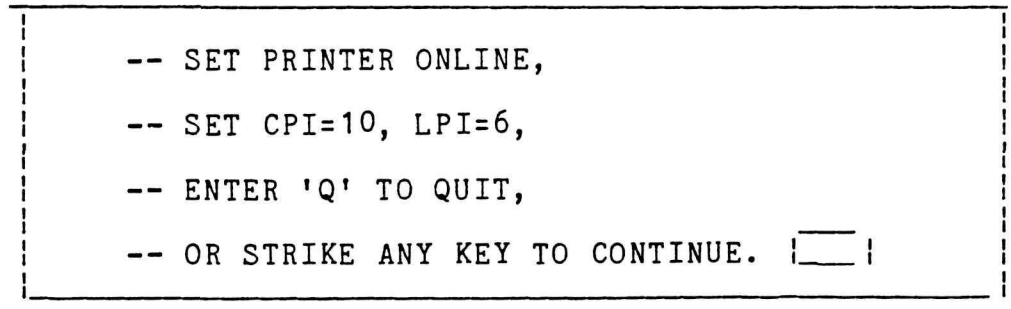
Choosing to "Print a RAP -- done by pressing "3" in the menu on page 52C -- will result in the following:



The user should enter the RAP number of the desired Resource Activity Permit. Upon entry of the number the following will appear:



At this point, the user must decide if Part-I or Part-II needs to be printed. Selecting to print either part will cause the following to appear:



This prompts the user to ready the printer accordingly.

B.3. LIST AVAILABLE RAPS

The third part of the RAP subsystem allows the user to list all or only selected RAPs. Figure 10 illustrates the basic operations involved with this "limb" of the RAP "branch".

Format and Operation:

Choosing to "List Available RAPs" -- done by striking "3" on the RAP menu (page 36) will result in the following:

```
LIST AVAILABLE RAPS

1.  LIST ALL AVAILABLE RAPS
2.  LIST BASED ON AN ACTIVITY TYPE
3.  LIST BASED ON PROJECT NUMBER
Q.  QUIT

Please Select Number!
```

At this point, the user must decide which type of listing is desired and strike the corresponding key. The following discussion will describe the three types of listings.

Remarks:

1. Entering a "Q" for quit returns the user to the RAP menu (page 36).

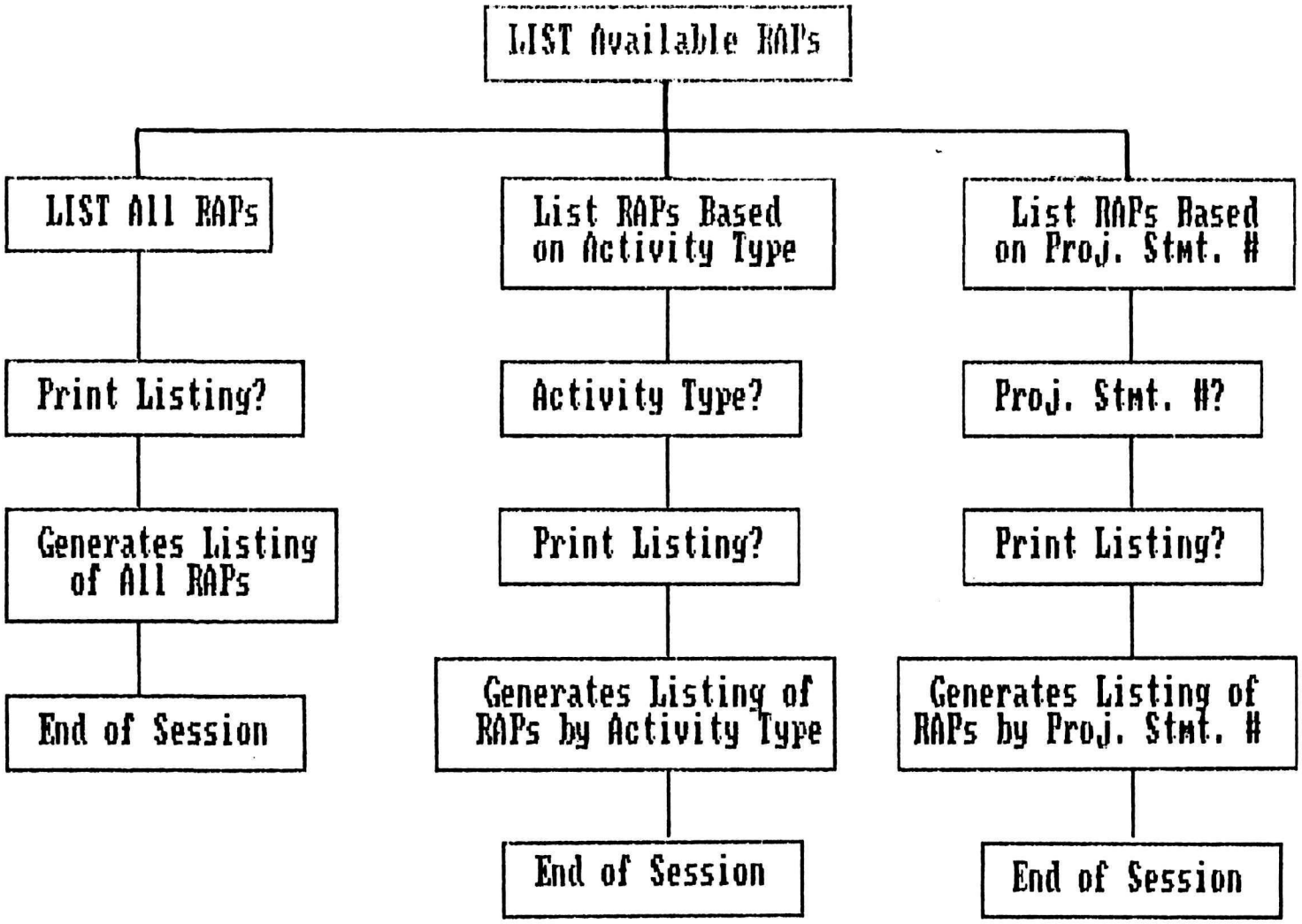


Figure 10. Organizational overview of the basic operations involved with listing RAPs.

B.3.a. LIST ALL AVAILABLE RAPS

The first option of the list function allows the user to list all RAPs currently in the system.

Format and Operation:

Choosing to "List All Available RAPs -- done by striking "1" in the previous menu (page 58) -- will result in the following question:

```
DO YOU WANT THE LISTING PRINTED (Y/N)? [__]
```

If the listing is to be printed, the user will be prompted to ready the computer by 1) setting the printer online, 2) setting the characters per inch (CPI) to 10 and lines per inch (LPI) to 6, and 3) pressing any key when ready to print.

Should the user select "N" for no, RITS will display on the computer screen a listing of all available RAPs. The following illustrates part of a listing from the Great Smoky Mountains NP:

```
THE FOLLOWING IS A LISTING OF THE AVAILABLE
RAPS IN SYSTEM:

  RAP NUMBER                PERMITTEE NAME

1. GRSM-N-001-0001          Cindy Huber

2. GRSM-N-001-0006          Sami Marcos

3. GRSM-N-002-0010          Jan McKelvey
/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\
\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/

  Press any key to continue . . .
```

Notice that the listing includes the RAP number and the permittee's name.

B.3.b. LIST RAP BASED ON ACTIVITY TYPE

This option enables the user to selectively list RAPs based on whether a resource management, monitoring, or research type activity is desired.

Format and Operation:

Selecting to "List RAPs based on Activity Type" -- done by pressing "2" in the menu on page 58 -- results in the following:

```
PLEASE SPECIFY ACTIVITY TYPE:

TYPE:  |_|  (A=Res. Mgmt., B= Monitoring,
             C= Research)

QUIT (Q)?  |_|
```

Users should enter the letter of the desired activity type. RITS will then ask the user:

```
DO YOU WANT THE LISTING PRINTED (Y/N)?
```

Entering "Y" for yes will prompt the user to ready the printer.

Selecting not to print the listing will display on the computer screen a listing similar to the following:

```
THE FOLLOWING IS A LISTING OF THE AVAILABLE
RAPS IN SYSTEM:

  RAP NUMBER                PERMITTEE NAME

1. GRSM-N-001-0001          Cindy Huber

2. GRSM-N-004-0016          Pam Alexander
/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\

\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/

  Press any key to continue . . .
```

Only those RAPs of the desired activity type are included in this listing.

B.3.c LIST RAPS BY PROJECT STATEMENT

The third option allows the user to list all RAPs associated with a particular Project Statement.

Format and Operation:

Choosing to "List RAPs by Project Statement" -- done by pressing "3" in the menu on page 58 -- will result in the following:

```
PLEASE SPECIFY PROJECT STATEMENT NUMBER:

STATEMENT NUMBER:  ___-_-___

QUIT (Q)?          _
```

Upon entering the desired Project Statement, RITS will ask:

```
DO YOU WANT THE LISTING PRINTED (Y/N)?
```

Entering "Y" for yes will prompt the user to ready the printer for printing.

Selecting not to print the listing will generate a listing of all RAPs associated with the desired Project Statement. For example, selecting all RAPs tied to the Project Statement GRSM-N-001 would result in the following:

```
THE FOLLOWING IS A LISTING OF THE AVAILABLE
RAPS IN SYSTEM:

  RAP NUMBER                  PERMITTEE NAME

1. GRSM-N-001-0010            Jan McKelvey

2. GRSM-N-001-0018            Joe O'Leary
/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\

\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/

  Press any key to continue . . .
```

Remarks:

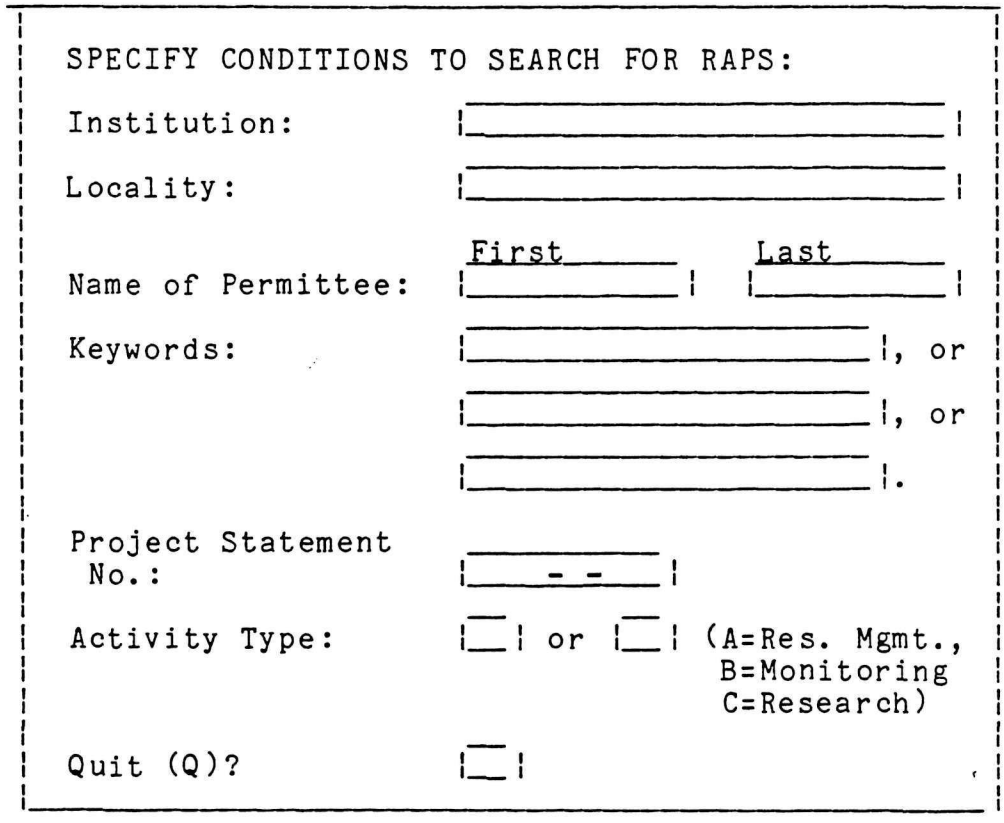
1. If the related Project Statement number is not known, the user may wish to exit this subsystem and enter the Project Statement subsystem (see page 9). Within the Project Statements subsystem, the user can select to "List Available Statements" (page 26). The listing regenerated by this function will present the user with the Project Statement number and project title for all entered Project Statements.

B.4. SEARCH FOR SPECIFIC RAP

The forth part of the RAP subsystem allows the user to search for RAPs based on specified conditions. Figure 11 illustrates the basic operations of this "limb" of the RAP "branch".

Format and Operation:

Choosing to "Search for Specific RAPs -- done by striking "4" in the RAP menu (page 36) will result in the following:



The above panel provides the user with a seemingly endless number of options for locating the desired type of RAP(s). The user should keep in mind that the more conditions (or constraints) placed upon the system, the narrower the search. Since it is almost impossible to exhaust the combination of conditions a user may specify, the following will discuss some general examples to clarify how this query system operates:

1. Leaving the highlighted boxes empty implies that no constraints are placed upon the system and the result will be a listing of all available RAPs. On the other hand, entering information in all the highlighted boxes will probably yield very few RAPs since a large number of constraints are directing the search.

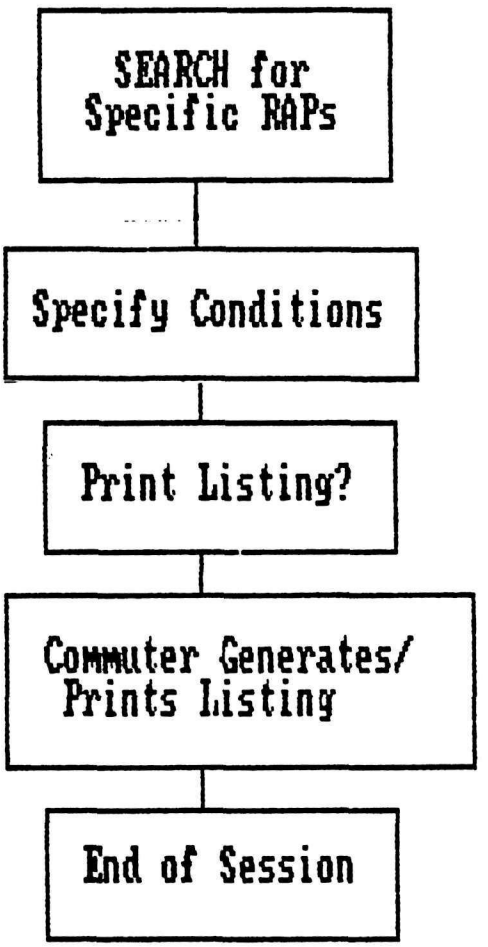


Figure 11. Organizational overview of the basic operations involved with searching for RAPs.

2. Typing "A" in the first slot of activity type and "C" in the second will have the effect of searching for only those RAPs which are resource management or research oriented.

3. The keyword search for RAPs is similar to the inclusive search for Project Statements described on page 32. The "or" implies that RITS will search for RAPs described by any combination of the entered keywords. For example, entering the keywords "biological", "terrefauna" and "bear" will result in RAPs having at least one of the desired keywords.

4. Entering a particular institution and Project Statement number will yield only those RAPs satisfying <u>both</u> constraints.

5. RITS has been designed to do "substring" searches. This means that RITS can search based on only a specified string of letters. For example, let's say the user is interested in locating any RAPs by a particular person. Unfortunately, the user is not sure what the permittee's name is although it is believed to begin with a "McN". By entering just this string of 3 letters, RITS can search the available RAPs for any with the permittee's name having this string of 3 letters. The resulting search may yield a list similar to the following:

```
THE FOLLOWING IS A LISTING OF RAPs THAT MEET
SPECIFICATIONS:

  RAP NUMBER                PERMITTEE NAME

1. GRSM-C-003-0012          Chuck McNichols

2. GRSM-N-012-0038          Susan McNair
```

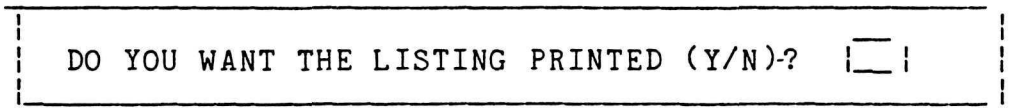
This substring search applies to other blanks such as institution, locality, keywords, and Project Statement number.

6. Should RITS be unable to find a RAP satisfying your conditions the following message will appear:

```
SORRY!  NO PROJECT STATEMENT AVAILABLE.
```

B.4. SEARCH FOR SPECIFIC RAP (Cont.)

After entering the desired search constraints, RITS will ask:



Striking "Y" for yes will prompt the user to get ready for printing by 1) setting it online, 2) setting characters per inch (CPI) to 10 and lines per inch (LPI) to 6, and 3) pressing any key when ready to print. A listing will appear on the computer screen as it is being printed.

Striking a "N" for no will result in a computer listing of RAPs on the computer screen meeting the desired conditions of the search.

B.5. DELETE A RAP

The fifth and final part of the RAP subsystem allows the user to delete a RAP which had been previously entered.

Format and Operation:

Choosing to "Delete a RAP " -- done by striking "5" of the RAP menu (page 36) -- will result in the following:

```
ENTER THE RESOURCE ACTIVITY PERMIT TO BE DELETED:

QUIT (Q)?                          |__|
```

The user should enter the RAP number of the Resource Activity Permit that is to be deleted. For park installed systems, the first four spaces (i.e. park code) will automatically be filled Upon entering this number, the following screen will appear:

```
RESOURCE ACTIVITY PERMIT TO BE DELETED:

RAP NUMBER:

QUIT (Q)?

HIT <ENTER> TO CONFIRM FOR RAP DELETION
OTHERWISE PRESS 'Q' TO QUIT

WARNING: DELETING A RAP MAY TAKE SOME TIME.
```

By pressing <ENTER>, the deletion of the specified RAP will proceed. RITS will inform the user when the deletion process has been completed.

Selecting to quit, returns the user to the RAP menu (page 36).

Remarks:

1. Since RITS numbers RAPs with a unique sequential number, the RAP number of a deleted Resource Activity Permit will not be used again.

Abstracts

C. ABSTRACTS

Background:

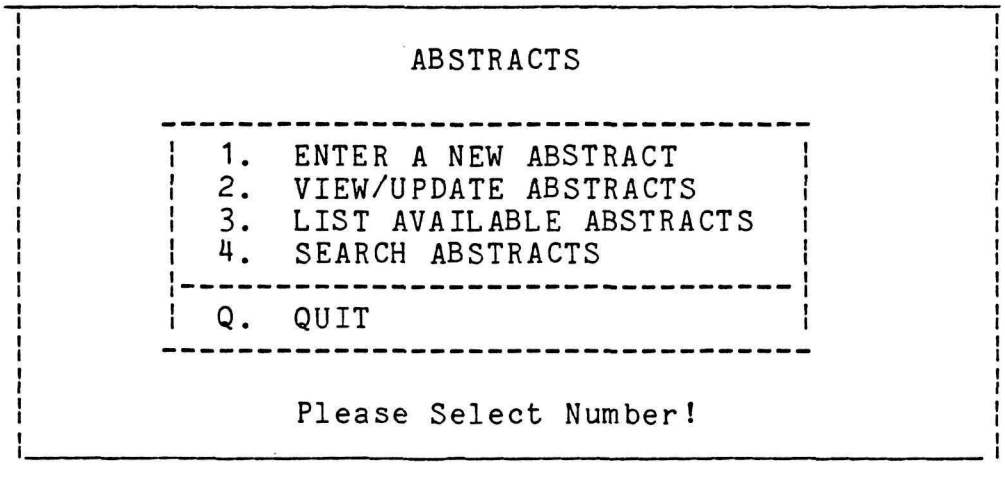
All relevant and/or resultant reports and publications that may be included in either the RAP process or evolve directly from the project can be incorporated into the Abstract subsystem. This data base serves as a reference to all of the changes and additions to the Project Sheets reflected here. All abstracts entered relate to one or more of the Project Statements and RAPs. Access to abstracts can be through specific Project Statement numbers, titles, authors, date, RAP numbers, or keywords.

All abstracts are designed to include a National Technical Information Service (NTIS) access number so that anyone can obtain a hard copy of microfiche of the desired document directly from NTIS. NTIS is a branch of the Department of Commerce, located in Springfield, VA with the responsibility for archiving and making available all government and related publications and reports for users. The DSC (Denver Service Center) number can also be included. The Denver Service Center of the National Park Service has a series of publications of mostly plans and reports available as well.

The discussion of this section will be organized by the subsystem's four functions or parts.

Format and Operation:

Choosing the Abstract subsystem -- done by striking "3" in the Master Menu (page 8) -- will result in the following:



Users can select any one of the above four functions related to Abstracts by striking the corresponding number.

Remarks:

1. If the user decides not to perform any of these functions, a "Q" should be pressed, returning the user to the Master Menu.

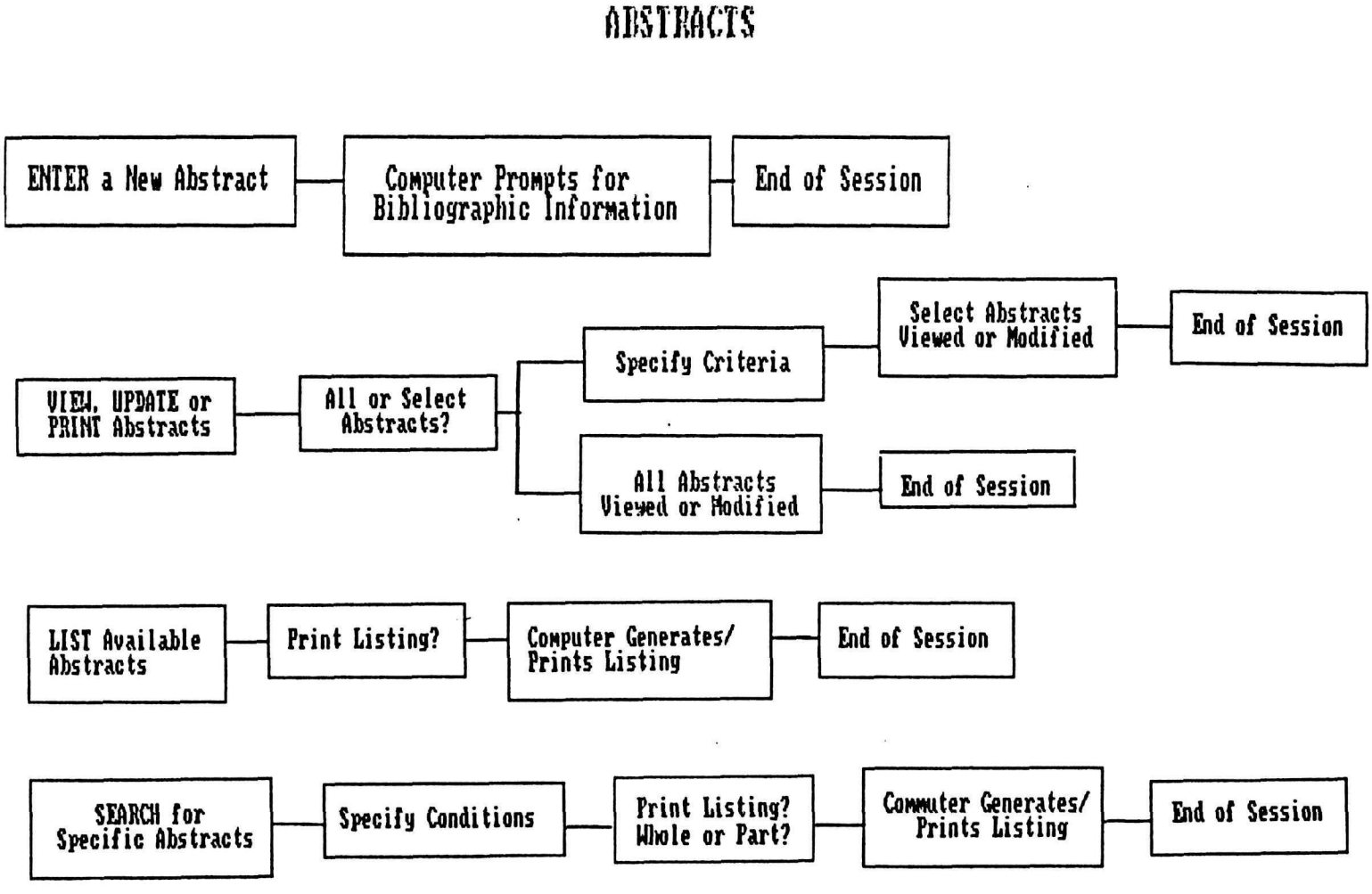


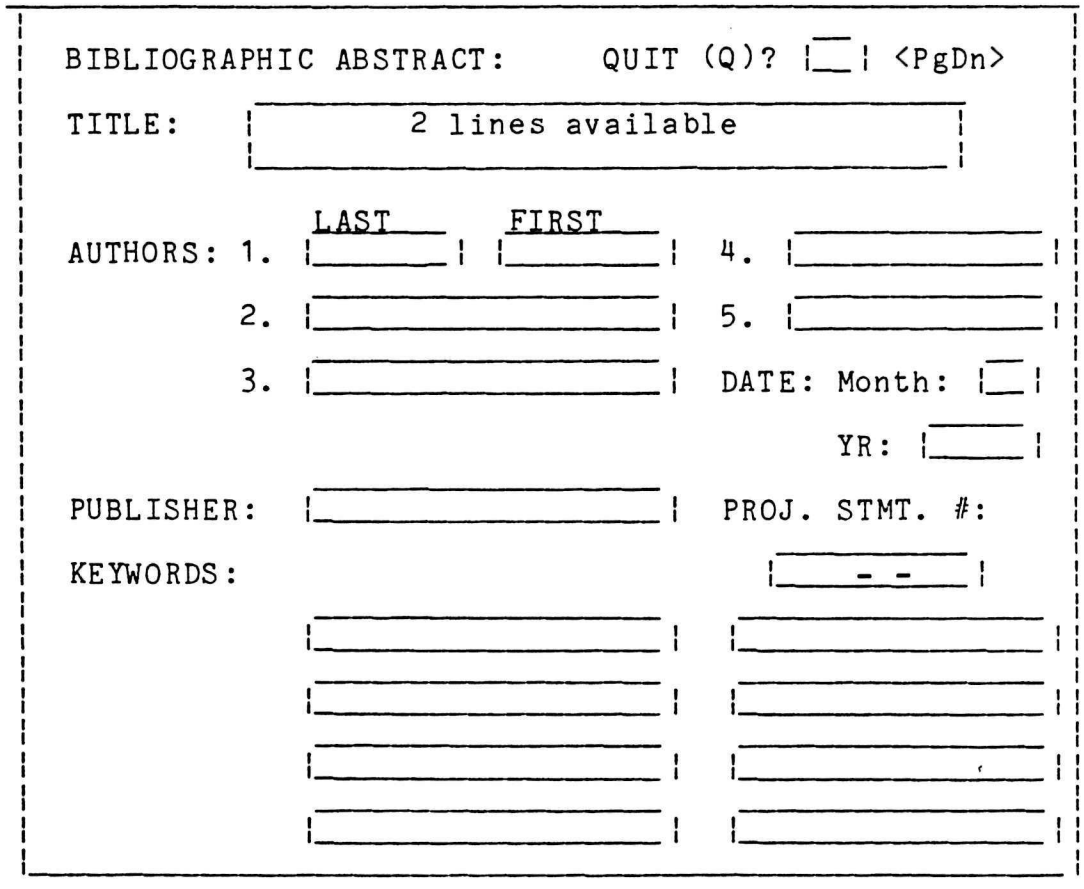
Figure 12. Organizational chart for Abstract subsystem.

C.1. ENTER A NEW ABSTRACT

The first part of the Abstract subsystem allows the user users to enter a new Abstract. Two panels are provided to enter information.

Format and Operation:

Choosing to "Enter a New Abstract" -- done by striking "1" in the Abstract menu (page 69) -- will result in the following:



Users should fill in as many of the above data items as possible. The title, first author, and year are required. If the Abstract is tied to a particular Project Statement, the number of that statement should be entered. Of the eight keywords available, three should be selected from the Keyword Organizational Scheme (see Appendix B). The first three keywords should be chosen from each of the scheme's three orders. The other 5 keywords can include anything applicable to the situation.

Remarks:

1. In order to quit from a panel, the user should press "Q" for quit and the <PgDn> key. However, information on that panel will not be saved.

2. RITS is designed so that users can later request a listing of all abstracts (see page 78) or search for specific abstracts (see page 79). These listings of abstracts will include information on the 1) author(s), 2) date of abstract, 3) title , and 4) publisher in that order. RITS does not automatically insert punctuation in this listing (except a comma after the first author's last name and a period after the date) . Therefore, users have the flexibility to add the desired level of punctuation and connecting words (i.e. conjunctions) when entering information. For example, entering the following information:

BIBLIOGRAPHIC ABSTRACT: QUIT (Q)? | | <PgDn>

TITLE: | The effects of ozone on Acer rubrum, Prunus serotina, and Cornus florida. |

	LAST	FIRST
AUTHORS: 1.	Berrang	P.J.,
2.	D.T. Tarbox, .	
3.	and N.K. Cochran.	
4.		
5.		

DATE: Month: | | YR: |1986|

PUBLISHER: |Phytopathology. | PROJ. STMT. #: |GRSM-N-003|

Notice how the above punctuation, etc. translates into the following listing:

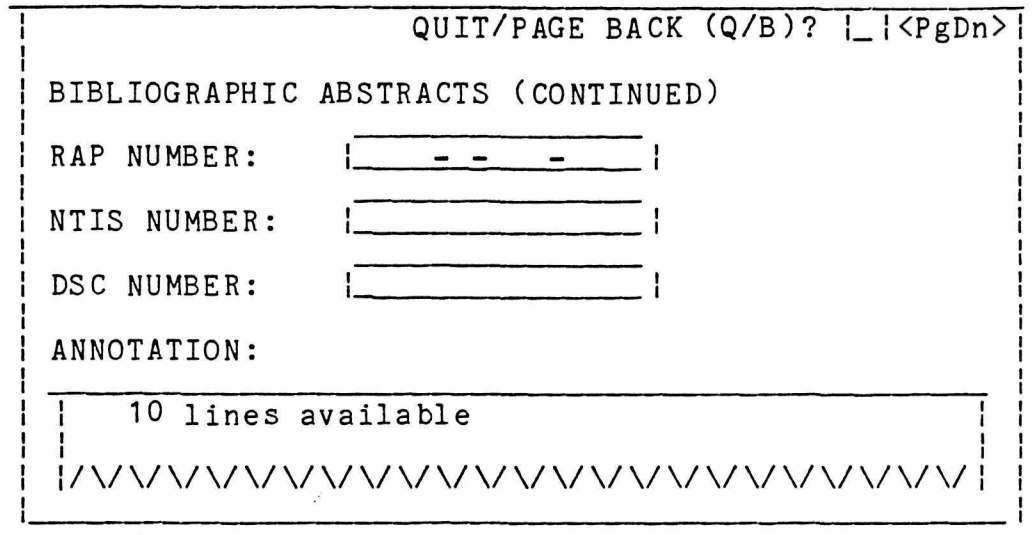
Berrang, P.J., D.T. Tarbox and N.K. Cochran. 1986. The effects of ozone on Acer rubrum, Prunus serotina and Cornus florida. Phytopathology.

The arrows point out punctuation automatically inserted by the system. All other punctuation and conjunctions were manually typed in.

C.1. ENTER A NEW ABSTRACT (Cont.)

Format and Operation:

Completing the information from the previous panel will yield the following:



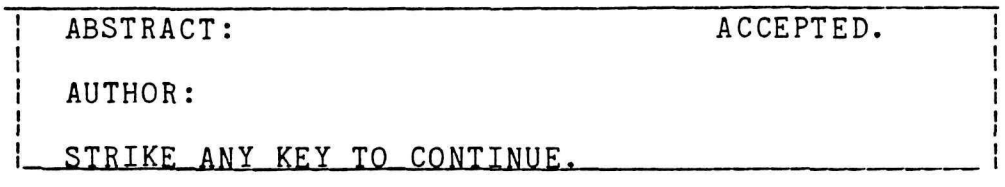
Although the user should enter as much of the above information as possible and applicable, none is required. If the Abstract is associated with a particular resource activity, the user should enter the RAP number. The NTIS (National Technical Information Service) and DSC (Denver Service Center) numbers should be added when applicable. Ten lines are available for a brief description or annotation of the paper.

Remarks:

1. Systems installed for a park will not require the user to enter the complete RAP number. Since the first four letters consist of the park code which does not change, only the remaining part of the number is requested. (See page 41 for a complete discussion of the RAP number.)

2. The Abstract database should be periodically backed up on diskettes for security purposes (see E.1. Backing Up Databases, page 99).

Once the Abstract has been entered the following message will appear:



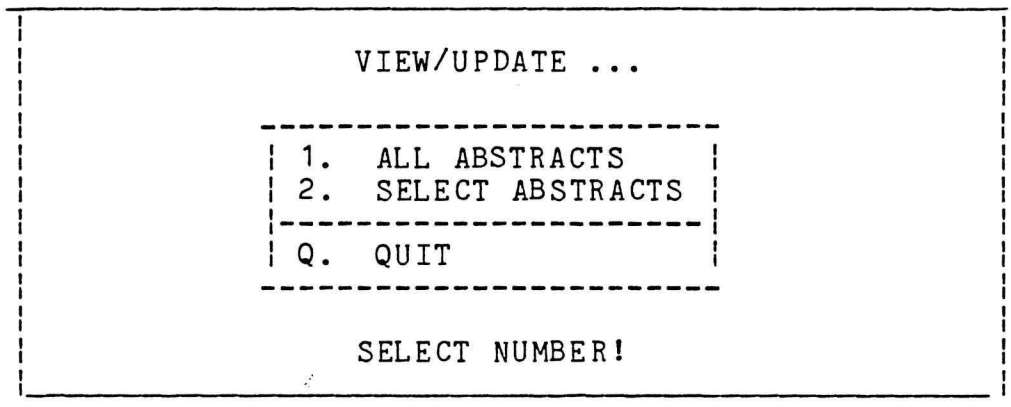
RITS automatically inserts the name of the Abstract and author.

C.2. VIEW/UPDATE ABSTRACTS

The second part of the Abstract subsystem allows the user to look at existing abstracts and make any necessary changes to their contents.

Format and Operation:

Choosing to "View/Update an Abstract" -- done by striking "2" in the Abstract menu (page 69) -- will result in the following:



This screen asks users to decide if they want to view/update all abstracts or select ones based on specified criteria. The following discussions will describe these two options.

C.2.a. VIEW/UPDATE ALL ABSTRACTS

This option allows the user to view all the Abstracts.

Format and Operation:

Striking a "1" for All Abstracts will result in the completed panels for all available Abstracts being displayed. Each Abstract entry has two panels. Changes to the Abstracts can be made by 1) typing over existing material, 2) deleting existing material, and 3) inserting new information. Once a panel has been viewed or updated, the user should press the <PgDn> key. This saves any changes to the panel and causes the next panel to appear.

Between abstracts the following messages appears:

```
ABSTRACT _____________________   VIEWED/MODIFIED.
AUTHOR   _____________________.
```

The name of the abstract and the author are automatically inserted.

Pressing "D" for delete in the first panel of an Abstract results in the deletion of that Abstract. In the second panel, the user has the option to return to the previous panel by pressing "B" for page back and the <PgDn> key. Once all the Abstracts have been displayed, the following will appear:

```
     NO MORE SPECIFIED ABSTRACTS FOUND.

     (HIT ANY KEY TO CONTINUE.)
```

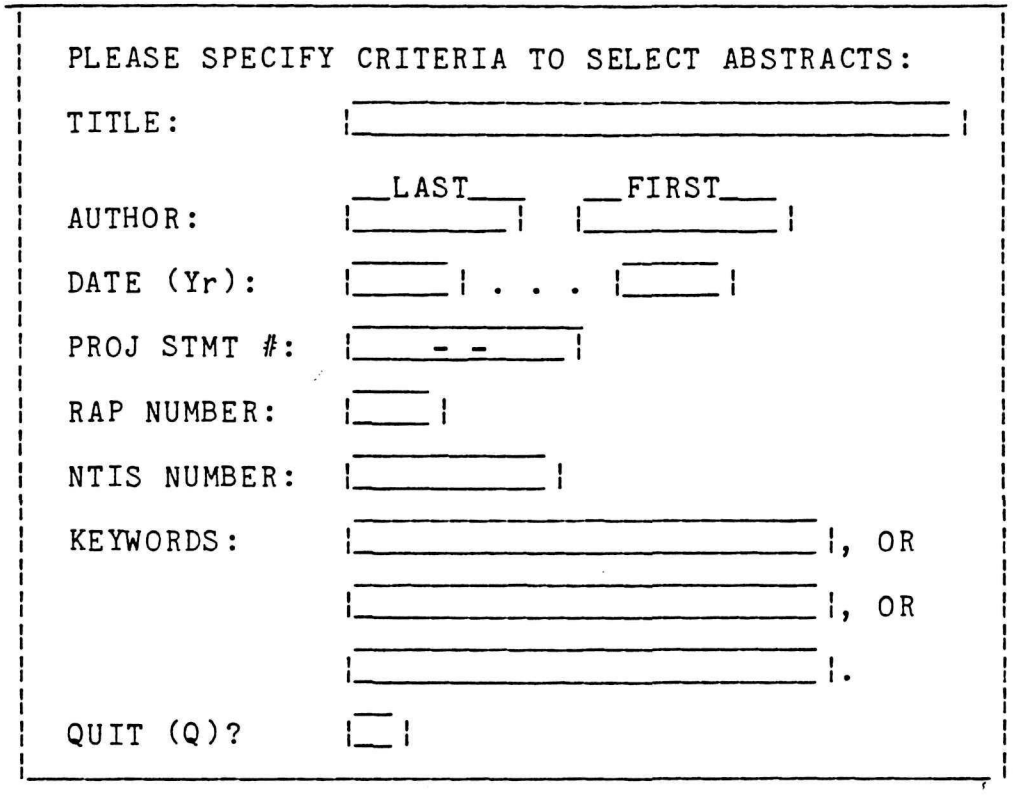
This returns the user to the Abstracts menu.

C.2.b. VIEW/UPDATE SELECT ABSTRACTS

This option allows the user to specify certain conditions or constraints when selecting Abstracts.

Format and Operation:

The second option of the View/Update function -- selected by striking "2" for "Select Abstracts" (page 73) -- will result in the following:



This panel provides the user with a seemingly endless number of options for locating desired Abstracts. Since it is impossible to describe all the combination of options available, the following will discuss some examples to clarify how this system operates:

1. Leaving the highlighted boxes empty implies that no constraints are placed upon the system and will result in a listing of all available Abstracts. On the other hand, entering information in all of the boxes will probably yield very few Abstracts since a large number of constraints have been placed on the system.

2. Typing "Jones" in the space for author's last name will result in a listing of all Abstracts having "Jones" as an author. Adding "K.P." in the blank for author's first name narrows the listing to only those Abstracts with "K.P. Jones" as an author.

3. Two blanks are provided for date information. The first blank corresponds to the earliest date from which abstracts will be listed while the second blank corresponds to the latest date. Therefore, entering 1981 in the first blank and 1986 in the second blank will result in RITS displaying any abstracts with dates from 1981 to 1986. Entering only the 1981 will give Abstracts dated 1981 and later. Likewise, entering only the 1986 and leaving the first space blank results in Abstracts before and including 1986.

4. The keyword search for Abstracts is similar to the inclusive search for Project Statements described on page 32. The "or" implies that RITS will search for Abstracts described by any combination of the entered keywords. For example, entering the keywords "socioecon", "sociology" and "evaluation" will result in Abstracts having at least one of the desired keywords.

5. RITs has been designed to do "substring" searches. This means that RITS can find Abstracts based only on a specified string of letters. For example, let's say the user is interested in locating studies by certain researcher. Unfortunately, the user is not sure what the person's name is although it is believed to begin with a "Ki". By entering just this string of 2 letters, RITS can search the available Abstracts for any in which the researcher's name has this string of letters. This substring search applies to any of the highlighted boxes.

Once the desired conditions have been specified, RITS will display the two panels from each of the desired Abstracts. Changes can be made by 1) typing over existing material, 2) deleting existing material, and 3) inserting new information. Once a panel has been viewed/updated, the user should press the <PgDn> key. This saves any changes to the panel and causes the next panel to appear.

Pressing "D" for delete in the first panel of an abstract results in the deletion of that abstract. In the second panel, the user has the option to return to the previous panel by pressing "B" for page back and the <PgDn> key. Once all the Abstracts have been displayed, the following will appear:

```
NO MORE SPECIFIED ABSTRACTS FOUND.

(HIT ANY KEY TO CONTINUE.)
```

This returns the user to the Abstracts menu.

Remarks:

1. See Remarks #2 page 71 for a discussion of punctuating procedures.

2. Note that the RAP number has space for only 4 digits. This is due to the fact that the Project Statement number is also requested in the same panel. Since the Project Statement number constitutes the first 8 spaces of the RAP number, only the last four digits of the RAP number is necessary.

C.3. LIST AVAILABLE ABSTRACTS

The third part of the Abstracts subsystem allows the user to list all available Abstracts.

Format and Operation:

Choosing to "List Available Abstract" -- done by striking "3" on the Abstracts menu (page 69) -- will result in the following:

```
DO YOU WANT THE LISTING PRINTED (Y/N): [_]
```

Pressing "Y" for yes will prompt the user to prepare for printing by 1) turning the printer on, 2) setting it online, and 3) striking any key to begin the printing process.

Pressing "N" for no will result in a listing on the computer screen similar to the following:

```
Berrang, P.J. and D.T. Tarbox. 1986. The effects of
ozone on Acer rubrum, Prunus serotina, and Cornus
florida. Phytopathology.

Johnson, P.T. 1985.  Communicating with the park
visitor.  J. of Envir. Ed.

Smith, F.H., R.D. Adams, and J.P. Prine. 1983.
Family interaction within the national park setting.
Leisure Sciences.

/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/
/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/\/
   Press any key to continue . . .
```

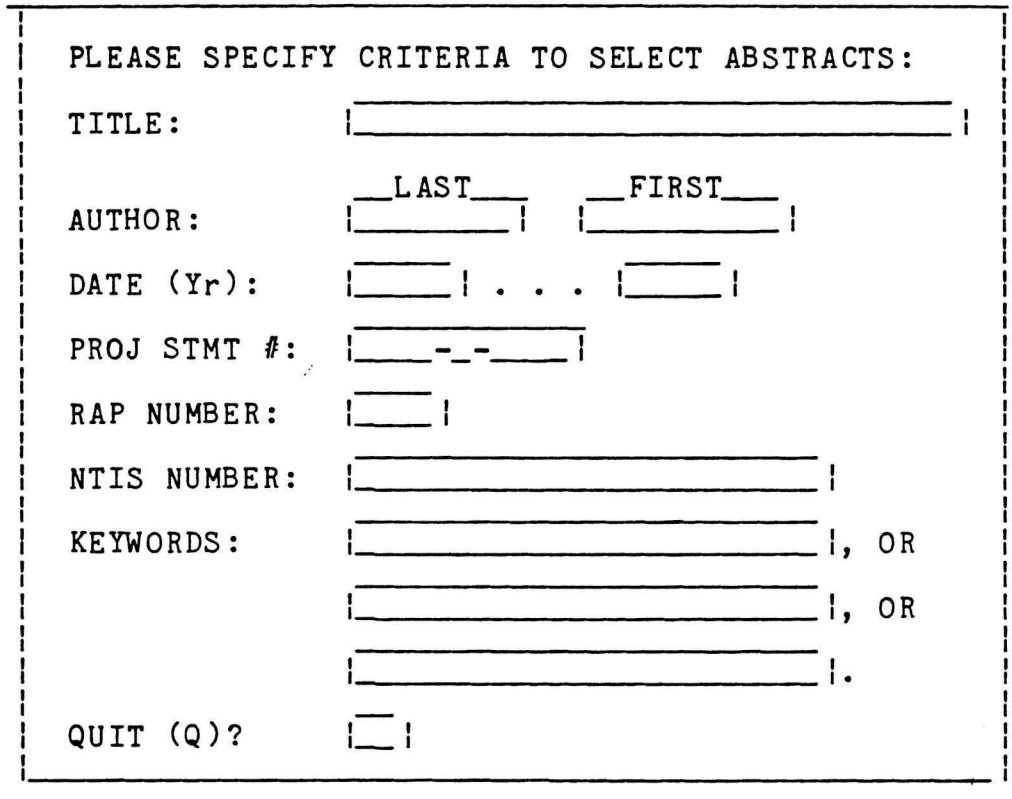
As shown, the listing is alphabetically arranged similar to a bibliography.

C.4. SEARCH

The final part of the Abstract subsystem allows the user to search for abstracts based on specified conditions or constraints.

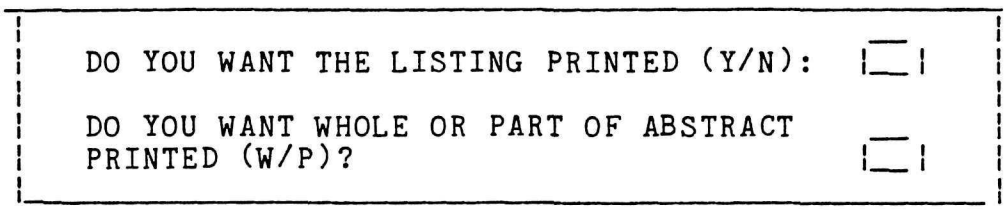
Format and Operation

Choosing to "Search for Abstracts" -- done by selecting "4" in the Abstracts menu (page 69) -- will result in the following:



Although the end results differ, the techniques used in this section to search for desired Abstracts is identical to that which selected certain Abstracts for viewing and updating. See section C.2.b View/Update Select Abstract on page ___ for a complete discussion of the search techniques. The results of the View/Update Select Abstract option results in completed panels with all the entered Abstract information, while the results of this search are a listing with only the author(s), date, title, and publisher displayed.

Once the conditions of the search have been specified and entered, the following question will appear:



The first question asks the user if the screen should be printed. Pressing "Y" for yes will prompt the user to prepare for printing. Pressing "N" for no will result in a listing of Abstracts on the computer screen.

The second question asks the user if the whole or only a part of the Abstract is desired. Selecting to print the whole Abstract -- done by pressing "W" -- results in a one page Abstract which include: 1) the authors, 2) publishers, 3) date, 4) associated Project Statement number (if any), 5) associated RAP number (if any), 6) keywords, and 6) the annotation.

Selecting to print only a portion of the desired Abstracts results in a listing similar to that on page 78.

Programming Sheets

PROGRAMMING SHEETS

Background: Programming Sheets, the forth subsystem of RITS, includes a five-year programming subsystem that can be utilized to document and track available and required funds and work years [or full-time equivalent employees (FTEs)] for every project during the current and following five years. This system also includes project types (resource management, monitoring, and research) and areas of responsibility within the park. Compilations of dollar amount by project types and years can be obtained. Figure 13 outlines the basic organization of this major "branch" or subsystem of RITS. The discussion of this section will be organized by the subsystem's six functions.

Format and Operation:

Choosing the "Programming Sheet" subsystem -- done by striking "4" in the Master Menu (page 8) -- will result in the following:

```
PROGRAMMING SHEET

  1.  ENTER NEW INFORMATION ON SHEET
  2.  MODIFY PREVIOUS INFORMATION ON SHEET
  3.  QUERY/ PRINT PORTION OF THE SHEET
  4.  PRINT THE WHOLE SHEET
  5.  SET FISCAL YEAR/ HEADINGS FOR SHEET
  6.  PREPARE TO TRANSMIT SHEET

  Q.  QUIT

PLEASE SELECT NUMBER!
```

The above menu allows the user to select (by pressing the corresponding number) any of the six parts or functions related to Programming Sheets. The following discussion will describe each of these parts in greater detail.

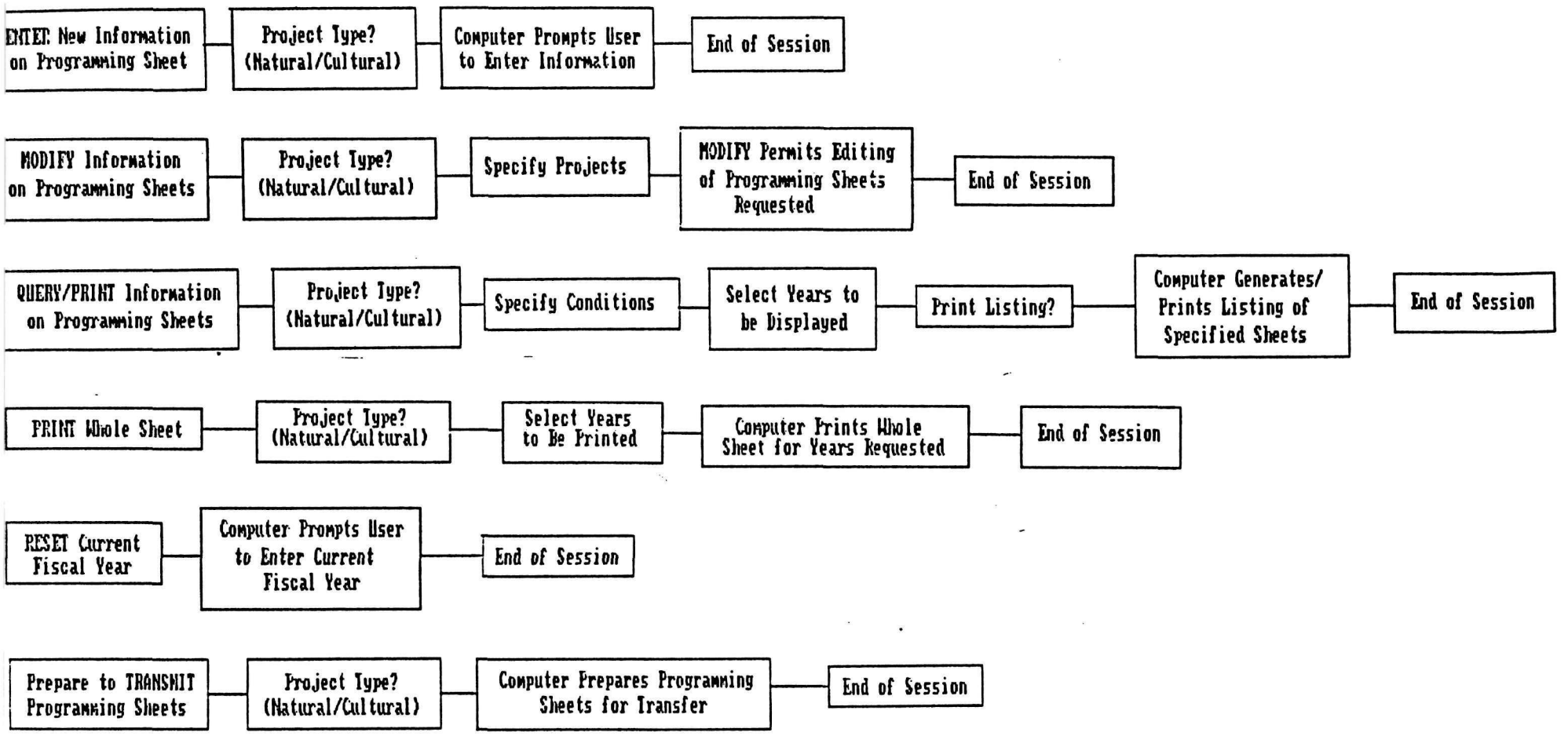


Figure 13. Organizational chart for the Programming Sheet subsystem.

D.1. ENTERING NEW INFORMATION ON PROGRAMMING SHEETS

The first part of this subsystem allows users to enter on Programming Sheets information regarding the funding aspects of an activity.

Format and Operation:

Selecting to "Enter New Information on Sheet" -- done by striking a "1" in the Programming Sheet menu (page 8) -- will result in the following:

```
ENTER NEW INFORMATION IN PROGRAMMING SHEET

        1.  NATURAL RESOURCES
        2.  CULTURAL RESOURCES
        Q.  QUIT

          PLEASE SELECT SHEET!
```

At this point, the user must choose to enter funding information for natural or cultural resources. Selecting either will result in the following panel:

```
                                  QUIT (Q)? |__| <PgDn>
PROGRAMMING SHEET INFORMATION:
PROJECT STATEMENT NO.: |_____|     PKG. #: |_____|
PROJ. & ACTIVITY DESCRIP.: |_____________________________|
ACTION TYPE:               |___|
DIVISION RESPONSIBILITY:   |_|, |_|, |_|, |_|, |_|
CURRENT FY 1986:  FS|_|  WY|_|  $1000|____|  PK.PRTY.|__|

                                                PRIORITY
FISCAL YEAR 1987: FS|_|  WY|_|  $1000|____|  PK.|_|REG.|_|
FISCAL YEAR 1988: FS|_|  WY|_|  $1000|____|
FISCAL YEAR 1989: FS|_|  WY|_|  $1000|____|
FISCAL YEAR 1990: FS|_|  WY|_|  $1000|____|
FISCAL YEAR 1991: FS|_|  WY|_|  $1000|____|
```

Although users should enter as much of the panel's information as possible only the Project Statement number, park code number, and project and activity type are required. The following will describe each of the headings of this panel.

1. PKG. #: Users should enter the package number of all related 10-237 or 10-238s used by the park to justify one-year or multi-year funding.

2. PROJECT STATEMENT NO.: Users should give the number of the Project Statement number which contains the described activity. Only the last three digits of this number are required.

3. PROJECT ACTIVITY DESCRIPTION: Users should enter the title for a project described within the Project Statement. This title should be consistent with the wording in the Project Statement and on any pertinent budget document (e.g. 10-237 and 10-238). Titles should be concise yet clearly describe the activity. There can be as many project activities as necessary to address all the various requirements or needs listed in the Project Statements.

4. ACTION TYPE: This refers to the type of resource activity involved. Users should enter the following letter codes:

A = Resource Management
B = Monitoring
C = Research

Up to three different action types may be entered in the space provided.

5. DIVISION RESPONSIBILITY: Users should enter a letter code representing the different park divisions responsible for conducting, accomplishing, or overseeing the activity. Since division titles vary within the NPS, letter assignments will be left to individual parks. For example the Great Smoky Mountains NP will use the following letter codes: A=Administration, M=Management, P=Protection, R=Resource Management, S=Science, and V=Visitor Services. Five spaces are available, although most projects will involve only one or two divisions.

6. CURRENT FY
a. FS: Funding source refers to the activity's known or existing funds spent or programmed to accomplish the activity. Since consistency of funding source information is necessary, the following will be designated for use:

PARK FUND SOURCES = P

PB = Park Operating Base (ONPS)
PR = Increase (recurring) to Park Base
PN = Increase (non-recurring) to Park Base
PS = Special Accounts (Historic Leasing, Agriculture)

REGION FUND SOURCES = R

RS = Natural Science
RM = Resource Management
RR = Repair - Rehabilitation
RC = Cyclic Maintenance of Cultural Resources
RY = Regular Cyclic
RV = Volunteer-in-Parks (VIP)

SERVICEWIDE FUND SOURCES = S

SN = Natural Resource Preservation
SW = Water Resources
SA = Air Quality
SP = Acid Precipitation
SG = Geographic Information Systems
SE = Energy, Mining and Minerals
SF = Fire Accounts
SI = Forest Insects and Disease Control
SC = Cultural Resource Preservation
SD = Construction (Development) Program
SU = Emergency and Unscheduled Projects (Lum Sum Construction)

NON-NPS FUND SOURCES = N

NF = Other Federal
NS = State
NU = University or College
NE = Eastern National Park & Monument Association
NF = Financial Donations
NL = Free Labor and Independent Studies
NO = Other Cooperative Associations

Users may use the general one-letter code or the more specific two-letter code. Users are also free to designate their own specific two-letter codes as long as the restricted letters above are not used. However, these two-letter codes should be categorized into one of the four major funding sources and begin with the corresponding letter (e.g. "P", "R", "S", or "N").

b. WY: To the nearest hundredth, users should estimate the park FTEs required to conduct or manage the activity. Only account for Park Service personnel time.

c. $1000: Users should include the total cost of the activity for the current fiscal year in terms of thousands of dollars. Include both salary and project costs, if applicable.

d. PARK PRIORITY: Users should enter the resource priority assigned to the activity for the current fiscal year.

7. FIVE-YEAR FUTURE PROGRAMMING

a. FS: Users should enter the probable source of funding. (See discussion of FS in current fiscal year for codes.)

b. WY: Estimate the required work years (FTEs).

c. $1000: Estimate the funds (in thousands of dollars) required for conducting and/or managing the activity.

d. PK. PRIORITY: Users should give the resource priority assigned to the activity for the five-year fiscal period starting with the next fiscal year. This priority may be different from the activity's current year priority.

e. REG. PRIORITY: Users should leave this item blank. Each project or increase-to-base request will be assigned a fund source priority by the Regional Director.

Users should also keep these additional instructions in mind when completing the Programming Sheet panel.

1. When requesting a recurring increase-to-base for WY or $1000, the figure should be entered only under that fiscal year for which the request is being made. For the next year, users are to assume the request was granted, so then it becomes part of the base.

2. Requests for funding from Servicewide or Region source should be for short-term projects (3-5 years) only.

3. When setting five-year programming priorities, all activities that are to start in a given year must be higher priority than activities starting in a following year. That is, an activity scheduled to start in 1989 can not be a higher priority than an activity scheduled to begin in 1988.

Upon completion, RITS will inform the user that the project has been accepted.

Remarks:

1. To quit the Programming Sheet information panel, users should press "Q" and the <PgDn> key.

2. Once new funding information has been accepted, it can only be changed through the "Modifying Previous Information About Programming" part of this subsystem (see page 88).

3. Systems installed for regional use will have an additional space for entering the four-letter park code.

4. Programming Sheets should be periodically backed up (see E.1. Backing Up Databases, page 99).

D.2. MODIFYING PREVIOUS INFORMATION ON PROGRAMMING SHEET

The second part of the Programming Sheets subsystem allows the user to change information previously enter on the Programming Sheet panel. Users may specify which projects to modify based on Project Statement number, park priority, and a description of the project.

Format and Operation:

Choosing to "Modify Previous Information on Sheet" -- done by selecting "2" on the Programming Sheet menu (page 81) -- will result in the following:

```
MODIFY INFORMATION IN PROGRAMMING SHEET

        1.  NATURAL RESOURCES
        2.  CULTURAL RESOURCES
        Q.  QUIT

          PLEASE SELECT SHEET!
```

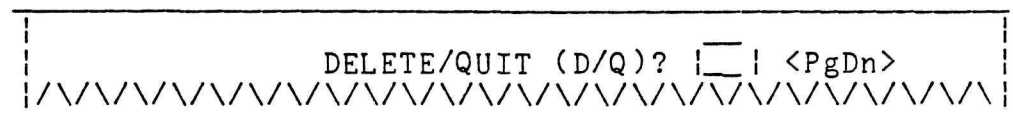
Users should press the number corresponding to the desired type of resource. This results in the following screen:

```
SPECIFY PROJECTS TO MODIFY WITHIN PROGRAMMING
SHEETS.

PROJECT STMT. NO.: ____

PARK PRIORITY:     ____

DESCRIPTION:       ________________________________

QUIT (Q)?          _
```

This panel provides users with a great deal of flexibility for locating the Programming Sheets needing modification. Users can enter information in all, none, or any combination of the above blanks. For example, entering "001" for Project Statement number will yield all the Programming Sheets related to this Project Statement. Further specifying a "1" under park priority will result in only those Programming Sheets meeting both constraints being displayed. Users can also enter a Project Activity description that can be as specific or general as desired. It

is recommended that users keep information entered in this space as brief as possible. Since RITS searches for the exact string of letters and words specified, a slight error in the description may result in the desired Programming Sheet(s) not being located.

Once the constraints have been specified, RITS will search the system for the desired Programming Sheets. Users can modify the resulting panel(s) by 1) adding information, 2) deleting information, or 3) typing over existing information. As shown below, users also have the option to delete the whole sheet by pressing "D" and the <PgDn> key.



Remarks:

1. Systems installed for regional use will also have the option of modifying Programming Sheets based on the four-letter park code.

2. In order to quit from a panel, the user should press "Q" for quit and the <PgDn> key. However, any new information added to that panel will not be saved.

D.3. QUERYING/PRINTING INFORMATION ON PORTION OF PROGRAMMING SHEET

The third part of this subsystem allows the user to display selected portions of a Programming Sheet based on specified constraints.

Format and Operation:

Choosing to "Query/Print Information on Portion of Sheet" -- done by pressing "3" in the Programming Sheet menu (page 81) -- will result in the following:

```
QUERY INFORMATION IN PROGRAMMING SHEET

        1.  NATURAL RESOURCES
        2.  CULTURAL RESOURCES
        Q.  QUIT

          PLEASE SELECT SHEET!
```

Users should decide whether they wish to deal with natural or cultural resources and press the appropriate number. Selecting either a "1" or a "2" will result in the following screen:

```
                                QUIT (Q): |__|  <PgDn>

SPECIFY CONSTRAINTS FOR PROGRAMMING SHEET:

PROJ. STMT. NO.: |__|, |__|, or |__| PARKS: |__| or |__|

PACKAGE NO.:     |__|, |__|, or |__|

DESCRIPTION:     |____________________________________|

ACTION TYPE:     |_| or |_|.

CURRENT FY 1986: FUND SOURCE:   |__|, or |__|, |__|

                 PARK PRIORITY: |____| ...  |____|

                 WY:            |_____| ...  |_____|

                 $1000:         |_____| ...  |_____|

FUTURE FISCAL YEARS: REGIONAL PRTY.: |___| ... |___|

                     PARK PRTY.:     |___| ... |___|
```

The above panel provides the user with a multitude of options for locating the desired Programming Sheet information. Users can specify constraints in any or all the blanks. However, the user should keep in mind that the more conditions specified, the narrower the search. Since it would be impossible to discuss all the available combinations of options, specific examples will be used to clarify this query system.

1. Leaving the highlighted boxes empty implies that no constraints are placed upon the system and will result in a listing of all projects on the Programming Sheet

2. Entering "001", "012", and "038" in the PROJ STMT NO. blanks will result in a Programming Sheet listing all activities or projects associated with any of these Project Statements. The "or" implies an inclusive search where data meeting <u>any</u> combination of the specified constraints will be located.

3. RITS has been designed to do "substring" searches. This means that RITS can search for information based on only a specified string of letters. Users can use this ability to enter information in the DESCRIPTION blank. For example, entering the word "water" will locate any projects which have "water" somewhere in their descriptions.

4. The "|___| ... |___| " (associated with the PARK PRIORITY, WY, $1000, and REGIONAL PRTY blanks) indicate the range of the search. Entering information in the first blank tells RITS to begin the search at this point and the last blank tells where to end the search. For example, entering "5" in the first blank of PARK PRIORITY will yield a Programming Sheet with only those projects having a priority of 5 or greater since no upper constraint was specified. Adding "10" to the second blank will result in a Programming Sheet with all projects rating a five to ten priority.

Once the desired constraints have been specified, RITS will ask which years the user wishes displayed with the following screen:

```
SELECT PARTS OF PROGRAMMING SHEETS YOU WISH TO
SEE DISPLAYED.

  [_] Current Fiscal Year: 1986

  [_] Next Fiscal Year: 1987

  [_] Fiscal Year: 1988

  [_] Fiscal Year: 1989

  [_] Fiscal Year: 1990

  [_] Fiscal Year: 1991

  [_] Quit (Q)?
```

Placing an "X" next to the desired fiscal year(s) will result in those year(s) being displayed on the Programming Sheet. Users will be asked:

```
DO YOU WANT THE RESULTS PRINTED (Y/N)?
```

Pressing "Y" for yes will prompt the user to ready the machine for printing. Since Programming Sheets can consist of a number of columns, wide paper must be used.

Pressing "N" for no will display the Programming Sheet on the computer screen. Since the desired information may be larger than the screen, some items may be forced to the next line making the screen difficult to read.

Appendix C illustrates an example of a printed (or listed) Programming Sheet.

Remarks:

1. Systems installed for regional use have the added option of entering up to three park codes in the constraints panel on page 90.

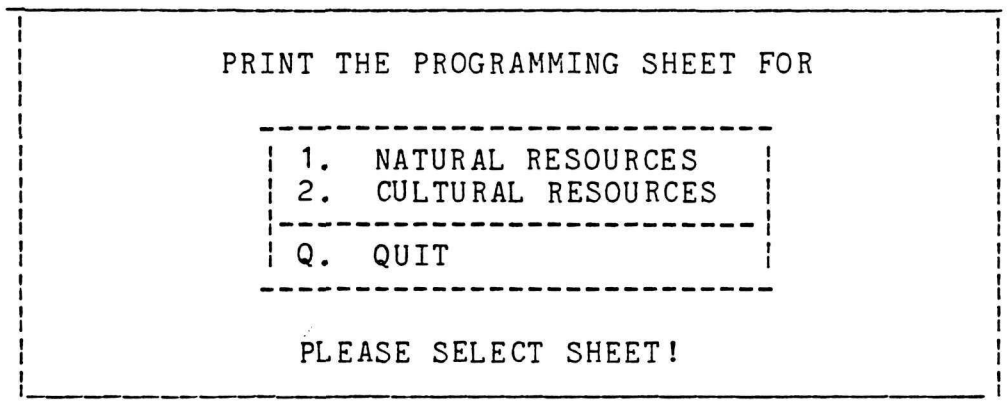
2. Programming Sheets for regions will have an additional column called park code since entries from a number of different parks is possible

D.4. PRINTING THE WHOLE SHEET

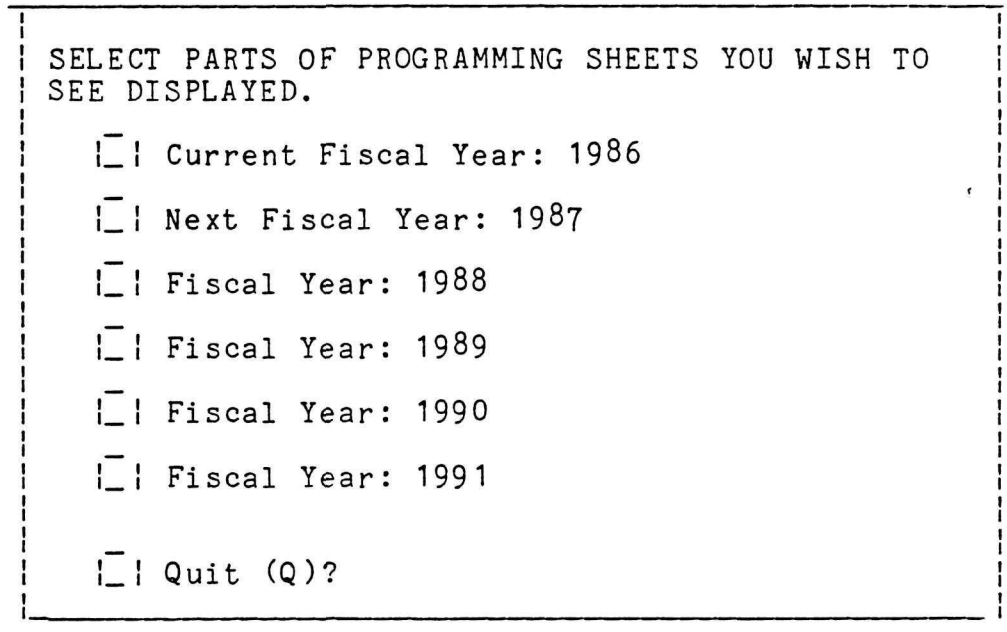
The forth part of this subsystem allows the user to print all resource activities on a Programming Sheet. Users can select which fiscal year(s) are included.

Format and Operation:

Choosing to "Print the Whole Sheet" -- done by pressing "4" in the Programming Sheet menu (page 81) -- will result in the following:



Upon selecting the number of the resource type desired, the following screen will appear:



Users should enter an "X" next to the fiscal year(s) desired on the Programming Sheet. RITS will then prompt the user to get ready for printing with the following screen:

```
-- SET PRINTER ONLINE.

-- SET CPI=12 OR HIGHER.

-- SET LPI=6 OR HIGHER.

-- MAKE SURE YOU HAVE WIDE PAPER

-- ENTER 'Q' TO QUIT,

    OR STRIKE ANY KEY TO CONTINUE
```

The resulting programming sheet will information on the package number, Project Statement number, Project Activity description, Activity Type, division responsibility, and the current and future fiscal years specified (see Appendix F). The fiscal years included on the sheet depend on what the user has selected on page 93.

D.5. RESETTING CURRENT FISCAL YEAR

The fifth part of the Programming Sheet allows the user to reset the current Fiscal Year.

Format and Operation:

Choosing to "Reset the Current Fiscal Year" -- done by striking "5" in the Programming Sheet menu (page 81) -- will result in the following:

```
MODIFY THE HEADING AND FISCAL YEAR FOR
PROGRAMMING SHEET:

FISCAL YEAR:  [__]

QUIT (Q)?     [_]
```

The current fiscal year will automatically appear in the highlighted box beside FISCAL YEAR. Users should type over this year with the appropriate year. Entering the new date results in the following:

```
FISCAL YEAR FOR PROGRAMMING SHEET HAS BEEN
MODIFIED.

STRIKE ANY KEY TO CONTINUE.
```

This returns the user to Programming Sheet menu. The Programming Sheet will now reflect the new "current fiscal year".

Remarks:

1. Although resetting the fiscal year changes the dates on the Programming Sheets, any data previously entered remains static. For example, information previously appearing in current fiscal year 1986 will now fall under current fiscal year 1987. As a result, users must update information in the current and future fiscal years using the modify function (page 88).

D.6. PREPARING TO TRANSMIT SHEET

The final part of the Programming Sheet subsystem allows the user to ready funding information in the system for transfer to other locations such as the regional office.

Format and Operation:

Choosing to "Prepare to Transmit Sheet" -- done by pressing "6" in the Programming Sheet menu (page 81) -- will result in the following:

```
PREPARE PROGRAMMING SHEETS FOR TRANSFER:

        1.  NATURAL RESOURCES
        2.  CULTURAL RESOURCES
        Q.  QUIT

          SELECT NUMBER!
```

Users should press the number of the resource type desired. For example, selecting "1" for natural resources would prepare the records for transfer and then inform the user:

```
THE NATURAL PROGRAMMING SHEET HAS BEEN SET UP
FOR TRANSFER.

THE NAME OF THE FILE TO BE TRANSFERRED IS '_____'.

STRIKE ANY KEY TO CONTINUE.
```

RITS would automatically enter the file name based on the type of resources and the park involved. For example, the file name for a natural Programming Sheet from the Great Smoky Mountains National Park would be "NGRSM". The "N" indicates this is a natural Programming Sheet while the last four letters are the park's code.

Once the information is prepared, users should exit RITS and use the appropriate means available for transmission of data such as Crosstalk.

Backup/Recovery

E. BACKUP/RECOVERY

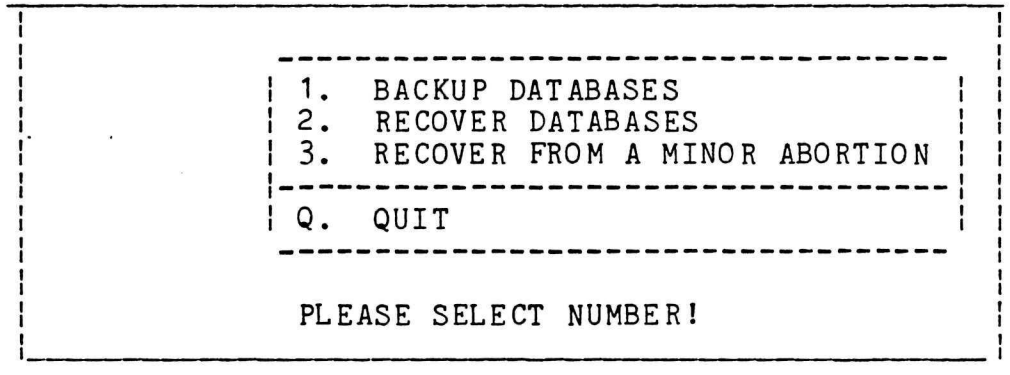
Background:

The final subsystem called Backup/Recovery permits the user to copy the data entered into RITS onto floppy disks. These backups are used to restore (or recover) any part of the system in cases of a system failure, destruction of the computer memory storage, or system crash. RITS also has been equipped with the ability to recover from a minor abortion. These problems may never occur; however the user should be prepared to handle them if they occur. Therefore, it is important to keep backups updated. Backup copies should be stored in a safe place.

Figure 14 outlines the basic organization of this major "branch" or subsystem of RITS. The discussion of this section will be organized by the subsystem's three functions.

Format and Operation:

Choosing the Backup/Recovery subsystem -- done by pressing "5" in the Master Menu (page 8) -- will result in the following:



Users must decide whether they wish to backup databases or recover databases and press the appropriate number. The following discussion will describe these two options in greater detail.

Remarks:

1. Pressing a "Q" for quit will return the user to the Master Menu (page 8).

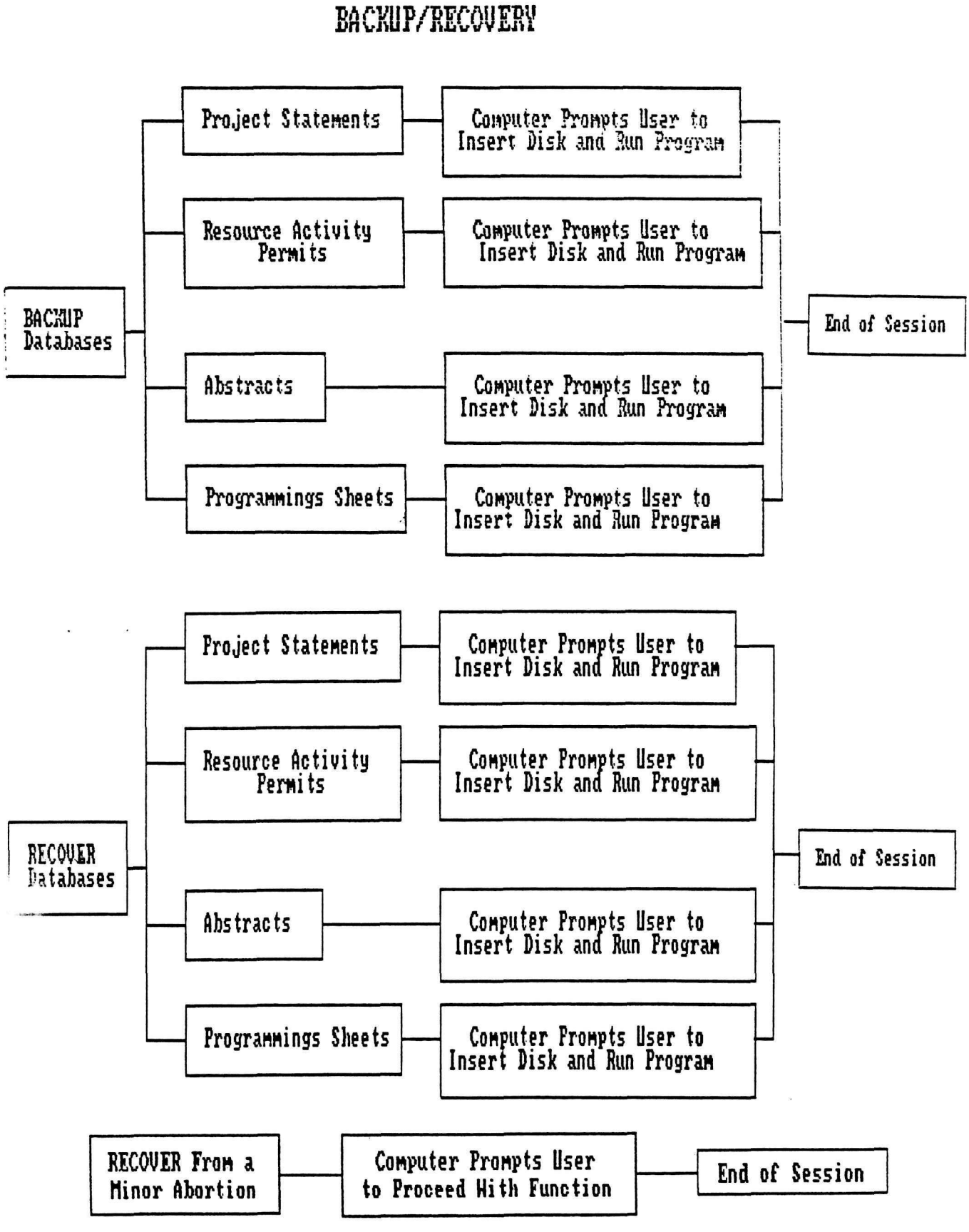


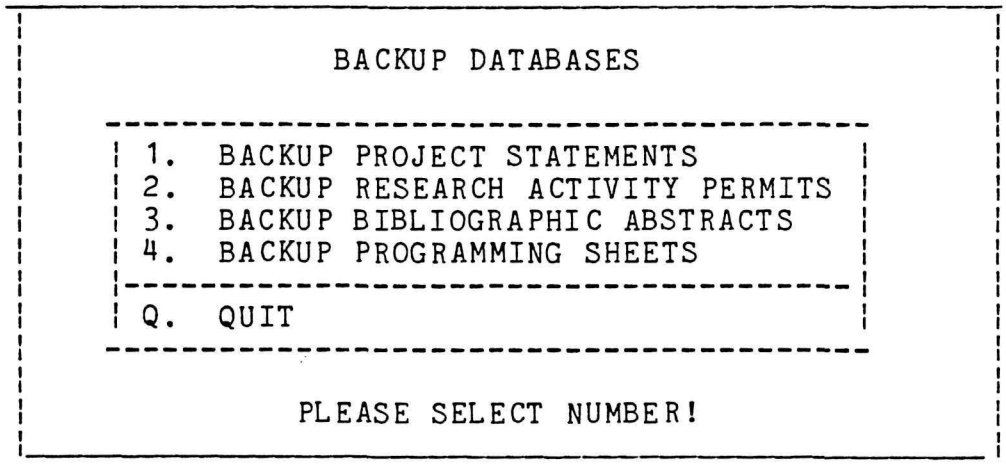
Figure 14. Organizational chart for the Backup/Recovery subsystem.

E.1. BACKING UP DATABASES

The first option of this subsystem enables users to copy data entered in any of the four databases onto floppy disks. Users will need to periodically back up all databases.

Format and Operation:

Choosing to "Backup Databases" -- done by pressing "1" in the Backup/Recovery menu (page 98) -- will result in the following:



Users should select the number of the databases which need to be backed up. Only those databases which have been added to or changed (since the last backup) need to be backed up. The frequency with which users should backup their databases depends on the amount of information added. Users should keep in mind that if the system crashes or fails, any information not previously backed up will be lost and must be reentered.

Selecting to backup any of these four databases results in a prompt to users to enter the backup diskette in drive A. So for example, if the user decides to backup new RAPs by pressing "2" in the Backup Databases menu, the following prompt would appear:

```
-- Enter BACKUP DISKETTE #1 FOR RAPS in drive A:

-- Make sure drive door is closed.

-- Enter 'Q' to quit, or

-- Strike any key when ready.
```

If more than one diskette is needed for backup, RITS will prompt the user to enter additional diskettes one at a time until the backup procedure is complete.

Once the records have been copied to the diskettes, the following message will appear:

```
BACKUP FOR RAPS IS COMPLETE.

STRIKE ANY KEY TO CONTINUE.
```

This returns the user to the Backup/Recovery menu (page 97).

E.2. RECOVERING DATABASES

The second part of this subsystem permits the user to recover any of the four databases if the system has crashed or failed.

Format and Operation:

Choosing to "Recover Databases" -- done by selecting "2" in the Backup/Recovery menu (page 97) -- will result in the following:

```
RECOVER DATABASES

1.  RECOVER PROJECT STATEMENTS
2.  RECOVER RESEARCH ACTIVITY PERMITS
3.  RECOVER BIBLIOGRAPHIC ABSTRACTS
4.  RECOVER PROGRAMMING SHEETS
Q.  QUIT

PLEASE SELECT NUMBER!
```

Users should select which database to recover by pressing the appropriate number. For protection purposes, RITS will then ask that the user enter a password with the following panel:

```
ENTER PASSWORD PLEASE: |_ _ _ _|
```

Upon entering the password "R-I-T-S", the following prompt will appear:

```
Enter BACKUP DISKETTE #1 for _____
in drive A:

Make sure door is closed.

Enter 'Q' to quit, or

Hit any key to continue.  |_|
```

RITS will automatically enter the name of the database selected for recovery in the above blank. As instructed, users should enter the backup diskettes.

E.3. RECOVERING FROM A MINOR ABORTION

The final option of this subsystem allows the user to recover from a minor abortion such as a power surge.

Format and Operation:

Choosing to "Recover From a Minor Abortion" -- done by selecting "3" in the Backup/Recovery menu (page 97) -- will result in the following:

```
THIS PROCESS ATTEMPTS TO FIX THE SYSTEM FROM
SOME POSSIBLE MINOR PROBLEMS.

IF THE 'RITS' SYSTEM IS SOMEWHAT MISBEHAVING --
FOR SOME UNKNOWN REASON --  THEN APPLY THIS
FUNCTION.

IF THIS FUNCTION DOES NOT HELP THEN YOU
PROBABLY NEED TO APPLY THE RECOVER DATABASE
FUNCTION (SELECTION 2).

THIS FUNCTION MAY TAKE A LITTLE WHILE
DO YOU WANT TO CONTINUE (Y/N)?
```

To proceed with the recovery process, users should press "Y". This function will then attempt to fix the system.

Selecting "N" returns the user to the Backup/Recovery menu.

APPENDICES

Appendix A

SYSTEM INSTALLATION

To install any of the versions of RITS you need to have the three system diskettes (RITS 01, RITS 02, RITS 03) and a copy of dBase III.

Follow the procedure listed below:

I. Create a subdirectory called RITS and install dBase III into it. This could be done as follows:

   A. Create subdirectory "RITS" by typing the following highlighted commands from the DOS promt (A:, B:, or C:):

      C: and hit <ENTER>.

      MD RITS and hit <ENTER>.

      CD RITS and hit <ENTER>.

   B. Install dBase III into the RITS subdirectory. Follow installation procedure given in the dBase III manual.

II. Copy the RITS software system into the hard disk by doing the following:

   A. Insert diskette #1 (RITS 01) in drive A and type

      A:COPY1 and hit <ENTER>.

   B. Insert diskette #2 in drive A (replacing diskette 01) and type

      A:COPY2 and hit <ENTER>.

   C. Insert diskette #3 in drive A and type

      A:COPY3 and hit <ENTER>.

III. Install the system for a specific park or a region by typing

      C:INSTALL and hit <ENTER>.

   The system will now ask you a sequence of questions in order to configure the system for a specific park or region.

IV. To start up the system type the following from the DOS promt:

      RITS and hit <ENTER>.

Appendix B

KEYWORD ORGANIZATIONAL SCHEME

1st Order	2nd Order	3rd Order
PHYSICAL	CLIMATE	Atmospheric (moisture)
		Classification
		Climatic (systems)
		Clouds
		Evaporation
		FireDanger
		Fog
		Lightning
		Maps
		Precip (drought, rain)
		Pressure
		Radiation (solar)
		Storms
		Temperature
	Wind	
	HYDROLOGY	Aquatic
		Beaches
		Estuaries
		Glaciers
		Groundwater
		Intertidal
		Lakes (incl. ponds)
		Limnology
		Maps
		Marine
		Reservoirs
		Rivers (incl. streams)
		Springs
		Watersheds
		WaterUse
		Wetsheds
		Wells
		Wetlands
	TOPOGRAPHY	Aspect
		Maps
		Relief
		Slope
		Structures
	SOILS	Association
		Classification
		Decomposition
		Maps
		Properties

KEYWORD ORGANIZATIONAL SCHEME (Cont.)

1st Order	2nd Order	3rd Order
	GEOLOGY	Events (catastrophic, gradual) Features (caves, unique, etc.) Geomorphology Hazards Historical (stratigraphy) Maps Materials Minerals Structural Themes
BIOLOGICAL	AQUAFAUNA	Adaptations Anatomy
	AQUAFLORA	Behavior Biome
	TERREFAUNA	Conditions Community
	TERREFLORA	Distribution Ecosystem
	UNDERGRFAUNA	Ethno- Exotic
	UNDERGRFLORA	Habitat Inventory Maps LifeHistory Morphology Paleo- Pathology Physiology Population Taxonomy T/E Techniques Utilization
ENVIR/QUAL	AIR	Classification Historic Monitoring Pollution Quality Source
SOCIOECON	SOCIOLOGY	Behavior Classification Communications Demographic

KEYWORD ORGANIZATIONAL SCHEME (Cont.)

1st Order	2nd Order	3rd Order
		Education
		Maps
		Programs
		Transportation
		UsePatterns
		Subsistence
	ECONOMIC	Activity
		Budget
CULTURAL	ARCHEOLOGY	Classification
		Inventory
	HISTORICAL	Maps
		Sites
		Themes
	PARKS	Administration
		Development
		History
		Interpretation
		Legislative
		Maintenance
		Management
		Maps
		Planning
		Protection
		Research

Appendix C

1.1 BROOK TROUT RESTORATION MANAGEMENT

1.2 STATEMENT OF ISSUE. The brook trout (Salvelinus fontinalis), also known as the speckled trout, speckled char, or brookie, is the only species of trout native to the Great Smoky Mountains. The species is at the southern end of its range and is characteristically small in size when compared to its northern counterpart.

Prior to the 1900s, the brook trout thrived in nearly every stream of the park above the 2000 foot elevation (King 1937). But from 1903 to the early 1930s, 65% of the mountain lands now comprising the park were heavily logged. This practice led to unfavorable conditions and the reduction of brook trout range. King (1937) stated that by 1935, the reproducing populations of brook trout had moved from an elevation of 2000 feet, loosing more than 160 miles of stream in that 30 year period. In the mid-1950s, Lennon found that the brook trout range had further declined by about 14%. During the last two decades, the brook trout range has further declined. At the present, the native brook trout occupies only about 123 miles or its former range (a decrease of 70-75 percent) with only 40 miles above functional bariers (Kelly 1980). The brook trout has been protected against any fishing harvest since 1975. The native can ill afford to lose further habitat.

The questions of whether the GRSM brook trout is a distinct strain or subspecies of its northern counterpart still remains an issue. Stoneking et al (1981) reported that the southern brook trout, particularly those in the park, are a subspecies of the northern trout and may be taxonomically irreplaceable. But White (1978) found the character variations they observed were not significantly different to classify populations of the brook trout in the GRSM as a unique taxonomic unit. The issue of subspecies is complicated by earlier stockings of over 750,000 brook trout in park waters, most of which included New England strain as well as unknown hatchery origins.

1.3 RECOMMENDED COURSE OF ACTION. Continuing the present management program is preferred because it has only recently been installed, through the public processes required by NEPA, and time has not yet allowed for evaluation. This course of action will incorporate the following activities:

A. RESOURCE MANAGEMENT.
Manage the park's fisheries exclusively by regulations governing the size and creel limits, open seasons, and special closures. Enforce regulations that went into effect on August 6, 1983, that include: 1) year-round fishing from sunrise to sunset of all park waters below the designated brook trout waters and Abrams Creek; Abrams Creek is designated experimental water during a limited fishing season from April 15, when a 12 inch size limit and four fish creel will be in effect; all brook trout above approximately 2000' are closed to angling; 2)seven inch limit; 3) five fish creel; 4) prohibition of any brook

trout; 5) fishing license required in compliance with state regulations, with the exception that a valid North Carolina or Tennessee fishing license is acceptable on either side of the park; and 6) only artificial flies and lures with a single hook may be used; the use of any double, triple or gang hook is prohibited; the use or possession of any form of fish bait other that artificial flies or lures on or along any park stream while in possession of fishing tackle is prohibited; fishing is permitted only by use of one hand-held rod.

Responsibility: Division of Ranger Activities.

B. MONITORING.
This program will consist of two major parts, a creel census and a stream survey, that will be conducted simultaneously on the same stream. Six of the heaviest fished streams in the park have been selected for survey. These streams are Abrams Creek, Oconaluftee River, Deep Creek, Hazel Creek, Little River, and the Middle Prong of the Little Pigeon River. Two of these streams will be sampled each year on a 3-year rotation so that all are sampled once every 3 years.

1. CREEL CENSUS. A creel census will be conducted weekly during the fishing season on each of the two streams sampled each year. Each census will last for 8 hours, with the time, day, and location on the stream randomly selected by computer. This census will provide information on catch per unit (number and size of fish taken), fishing pressure, and a variety of socioeconomic variables.

2. STREAM SURVEY. A survey of the fish populations present in each stream will be sampled on a number of permanently marke 200-meter sections. Each section will be electroshocked to determine the number and type of fish present, age structure , sex ratio, growth rates, and food habits. In addition, benthic insects, water quality, and stream characteristics will be sampled to monitor the overall health of the stream and illustrate trends. Each stream will be sampled in the fall of every third year, with two streams sampled each year.

Responsibility: Division of Resources Management.

C. RESEARCH.
The following research projects have been identified:

1. Refine survey techniques for monitoring the population struc ture of sport fish. It is most important that the technique will provide the park with consistent and reliable data so that long-term indices can be developed that will provide early warnings of perturbations and that the techniques

can be readily implemented by Resource Management personnel. This project is nearing completion.

Appendix D

USDI, National Park Service, SE Region — RESOURCE ACTIVITY PERMIT, Part I
GREAT SMOKY NATIONAL PARK — No. GRSM-N-003-0002

In accordance with the conditions and restrictions herein, permission is granted to (permittee name, complete address, telephone no.:
Berrang Paul , 2480-37 Davis Creek Rd., Clemson SC 29678
Tel: (803)654-2777
Representative Institution/Contractor; complete address, telephone no.
Clemson Univ.,Dept. of Forest., Rm 263 Lehotsky Hall, Clemson, SC 29634
Tel: (803)656-3400

To conduct the following activities within the park:

TITLE: Collection of Softwood Cuttings for Determining Ozone Tolerance.

DESCRIPTION (Objectives, Techniques, Significance):
The objective of this activity is to collect 50 softwood cuttings of 15 individuals of red maple, black cherry, and flowering dogwood. These cuttings will be rooted and fumigated in the spring to determine ozone tolerance. This study will provide data to determine ozone effects on the vegetation of the Great Smoky Mts.

Period of Activity, From: 5 /28/86 To: 7 /30/86

RESTRICTIONS: Locality : None

Specimen Type/Quantity: Listed Above/15 trees

Specimen Dispositon:

Other: Collector will provide Resource Management Division with a map of approximate sampling locations and species sampled

---

LOGISTICS: Vehicle(s):
One Park Service vehicle (4-wheel drive) will be needed to get to sampling sites.
Names of Assistant(s):
Robert Mickler and Brian Stenton

Other:

OTHER APPLICABLE PERMITS:

Federal: No: Expir.Date: / /
State: No: Expir.Date: / /

Approval for Superintendent: _____ Date: _____

Activity Type: (C) Research

Keywords: (1) ENVIR/QUAL (2) AIR (3) POLLUTION

THIS PERMIT MUST BE CARRIED AT ALL TIMES WHEN WORKING WITHIN THE PARK.

USDI, National Park Service, SE Region — RESOURCE ACTIVITY REPORT (Yr): 12
RESOURCE ACTIVITY PERMIT, Part II. — No. GRSM-N-003-0002
Keywords: (1) ENVIR/QUAL (2) AIR (3) POLLUTION

To be completed by permitee at the end of the field season and prior to departing from the park.

---

1. PROJECT TITLE: Collection of Softwood Cuttings for Determining Ozone Tolerance.

2. NAME OF PERMITEE (PI, Employee):
   Berrang Paul
3. REPRESENTATIVE INSTITUTION/CONTRACTOR:
   Clemson Univ.,Dept. of Forest.
4. CURRENT PERMITEE ADDRESS (street, city, state, zip code, telephone no.):
   2480-37 Davis Creek Rd., Clemson, SC 29678 (803)654-2777
5. DATE STARTED: 5 /28/86 6. PRESENT DATE: 6 /12/86
7. DATE EST. COMPLETION: 7 /30/86 8. PERCENT COMPLETION: 30%
9. FUNDING SOURCES/AMOUNTS (A) NPS: _____ (B) Other Fed: _____
   (C) State: _____ (D) University: _____ (E) Other: _____

SUMMARIZE PROJECT PROGRESS/FINDINGS IN NARRATIVE FORM:

DID THE ACTIVITY MEET THE PRESCRIBED OBJECTIVES? HOW?
Our immediate goal of collecting 50 softwood cuttings was accomplished.

WHAT PROGRESS WAS MADE ON THIS ACTIVITY?
The desired cuttings were collected.

WERE THERE ANY SIGNIFICANT FINDINGS?
Since this work represents the preliminary phases of this project, there are no findings to date. The cuttings must be fumigated and rooted next spring to determine ozone tolerance.

LIST ANY PERTINENT REFERENCES YOU BELIEVE WOULD BENEFIT THE PARK:
Karnosky, D.F. and K.C. Steiner. 1981. Provenance and family variation in response of Fraxinum americana and F. pennsylvania to ozone and sulfur dioxide. Phytopathology 71:804-811.

DO ANY OF YOUR FINDINGS HAVE MANAGEMENT IMPLICATIONS?
Not at this time. See above.

LIST ADDITIONAL KEYWORDS (5) YOU BELIEVE WOULD LIKE TO USE TO REFERENCE YOUR ACTIVITIES:
OZONE GENOLOGY RED MAPLE
BLACK CHERRY DOGWOOD

WHAT ARE YOUR PLANS TO PUBLISH YOUR FINDINGS?
We plan to fumigate the rooted cuttings in the spring of 1987 and will do some morphological work as well. Findings will be published later.

Appendix E

AUTHOR(S): R.H. Becker
F.D. Dottavio
N.L. Menning

TITLE: Threats to Coastal National Parks:
A Technique for Establishing Management Priorities

PUBLISHER: Leisure Sciences

DATE: 1986

PROJ STMT: GRSM N-023

KEYWORDS: THREATS, PARKS

TAP NO.: GRSM N-023-0038

ANNOTATION:
This paper describes a technique, the Cross-Impact Assessment Process (CAP), which was used to understand these threats. CAP allowed the National Park Service to identify and analyze a core group of threats and associated relationships, and to develop priorities for ameliorating those threats.

Appendix F

NATURAL RESOURCES

NATIONAL PARK SERVICE
RESOURCE PROGRAMMING SHEET
GREAT SMOKY NATIONAL PARK

PKG NO.	PROJ STMT NO.	PROJECT ACTIVITY DESCRIPTION	ACT. TYPE	DIVISION RESPON.	CURRENT FY: 86 PRK PRT	FS	WY	$1000	FUTURE NEEDS PRIO-RITY PRK	REG	FY: 87 FS	WY	$1000	FY: 88 FS	WY	$1000
0	001	TROUT RESTORATION	A		1	0	2.50	44.0	0	0	0	0.00	0.0	0	0.00	0.0
0	001	water management	A		4	0	1.40	222.0	0	0	0	0.00	0.0	0	0.00	0.0
12	003	Monitoring Swaps in the Park.	A	A B C	4	0	1.23	122.0	6	9	5	3.30	34.5	33	34.30	343.2
5	007	Tree Management	A,C	A B	7	0	1.10	1.1	9	12	22	2.20	2.2	22	3.30	3.3
126	005	Bear Management	B,C	A B C E E	12	0	12.34	123.4	23	4	0	12.34	123.4	12	12.34	123.4
8	007	Buying Computers	A,B	A B C	99	0	99.99	999.9	9	999	2	99.99	999.9	99	99.99	999.9
0	000	SOMETHING OR ANOTHER	ABC	A B C E E	111	0	11.11	111.1	222	222	11	11.11	222.2	33	33.33	333.3
0	001	THIS IS TEST 3 x	A,B	A B C E E	111	0	11.11	111.1	111	111	22	22.22	222.2	33	33.33	333.3
999	000	THIS IS JUST A TEST xxxxxxxxxxxxxxxxxxx.	ABC	X X X X X	999	0	99.99	999.9	999	999	99	99.99	999.9	99	99.99	999.9
TOTALS (WY):							251.88					273.37			349.91	
TOTALS ($1000):								2845.6					2826.5			3469.6

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environment and cultural value of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

U.S. Department Of The Interior
National Park Service
Clemson Cooperative Park Study Unit
263 Lehotsky Hall
Clemson University
Clemson, SC 29634-1005

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