

RAMS

Risk Assessment And Mitigation Strategies

User Guide

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I. Introduction

A. Fire Prevention

The RAMS fire prevention element is designed to determine the number of personnel and program dollars needed to accomplish a fire prevention program level. The process consists of an inventory of the fire prevention activities that are implemented to mitigate damages resulting from unwanted fire occurrences. These activities include all the Education, Engineering, Enforcement and Administration approaches that wildland fire managers consider when developing a fire prevention plan.

In the workload analysis, fire prevention activities have been grouped into areas of general or specific actions. This grouping allows the activities to be inventoried by type and by where they occur and have effect.

General Actions include activities that affect the entire planning unit, i.e., National Forest, District, etc. Examples of these activities are public relations programs intended to create public awareness of prevention symbols and slogans, planning, training, etc. General Action activities are grouped into like categories in the areas of:

- Education
- Enforcement
- Engineering
- Administration

Specific Actions include activities that affect a specific geographical area. These activities are targeted programs developed for ignition problems identified in the assessment process. These programs are discretionary at the field level in that, of the ignition problems identified, implementation priority is established by the unit manager on the basis of the analysis, and personnel and/or budgetary constraints. Examples of Specific Action are cause specific signing, inspections, individual contacts, patrol, etc.

Specific Actions activities are grouped into like categories in the areas of:

- Patrol
- Signs
- Law Enforcement
- Hazards
- Public Contact
- Inspection
- Administration

Work Standards and Workload Factors have been developed to standardize the outputs for each of these prevention categories. The Work Standard is the activity to be performed and the Workload Factor is the average time that it would take to accomplish

the activity. The Work Standards and the Workload Factors used were adapted from approximately ten years worth of field data from numerous units and field personnel.

Though some of the tasks in a specific location may require more or less time than is indicated by the Workload Factor, it is important not to worry about the exact amount of time. It should be assumed that the ending result will balance out. This is similar to the line production rates that have been established for suppression modeling purposes.

The workload analysis can be used to calculate the total prevention workload for various geographical areas including:

- Fire Prevention Compartment
- Fire Management Analysis Zone
- Ranger District/Resource Area
- Forest/District/Park
- Etc.

RAMS is a key in helping to determine fire prevention program levels. Program levels are determined by utilizing spreadsheets to inventory and translate the volume of work to be accomplished into the number of fire prevention personnel or increments for each of the programs evaluated. It is assumed that the Workload Analysis would be utilized to assist in developing alternative program budget options of fire prevention including:

Historical (Base) Level - the prevention program that best represents the average prevention organization for the period of years for which the fire occurrence data is being considered. This would basically be the organization that was used in the calibration of selected fire management planning processes.

Minimum Level - the prevention program necessary to accomplish the mandated and awareness activities. This level consists of all the prevention activities that a unit identifies as "must be done."

Current - the prevention program that is currently implemented. This could be similar to any of the other options.

Plan Level - this is the optimum level of prevention activities that have been described in the prevention planning process, which focuses on preventing large and damaging fires.

B. Fuels Program

In the United States, the fuel on wildland landscapes are probably more continuous and hazardous than ever before. Wildland fuel continuity has increased since the exclusion of frequent fire. Higher fire frequencies prior to the 20th century are believed to have kept fuel loadings low and variable as a patchwork across the landscape. Evidence suggests this patchiness and low-load fuel structure would have limited the spread and extreme behavior of wildland fires. By excluding fire for at least a century, dead woody fuel and duff have accumulated, live shrubs and seedling trees have grown (often creating ladder fuel in forested areas), and forest crown fuel have become more dense. Together, these conditions constitute a hazard for larger fires of higher intensities that are difficult to control.

As natural resource values increase and human development intrudes further into wildland areas, high values are exhibiting increasing contact with the high hazards. This scenario results in the need for considering fuel management at landscape scales more urgent and economically justified because of potentially high damages and loss of life. Furthermore, forest health and ecological damages are greater because of the more extreme fire behavior.

It is well known that forest residue and fuel management practices can be effective at lowering fire hazard on particular sites. Effective fuel management treatments range from removing light surface fuel with prescribed fire to thinning crown fuel by mechanical means. While these treatments are temporarily effective, the overwhelming extent of the hazardous fuel buildup problem makes it unlikely that even emergency action can produce a broad remedy in the short term (i.e., 5 to 10 years). The constraints on project development, smoke and air quality impacts, personnel time for environmental assessments, and local political/economic concerns, probably prohibit treating vast blocks of land and huge annual acreage on a short rotation basis. Thus, a more measured approach is required if we are to see "significant" effects on fire spread, fire effects, and fire economics at a landscape scale. The ultimate objective and challenge is to design a fuel management planning process that will identify, analyze, evaluate and compare a range of fuel management strategies and treatment alternatives at a local scale so that it contributes to a collective benefit at a larger landscape scale.

The RAMS planning process is developed for fire managers to be a holistic approach to analyzing wildland fuel Hazard, Ignition risk, Value and Protection Capability across the wildland landscape. It considers the effects of fire on unit ecosystems by taking a coordinated approach to planning at a landscape or compartment level.

This approach recognizes that all facets of the Fire Management organization (prevention, suppression and fuel) are interdependent and must work toward a common purpose and complement one another toward sustaining healthy and productive ecosystems and protecting human life and property.

The evaluation process will be used to identify priority areas where fire management actions, resources and budget should be focused to reduce costs and losses. Losses include undesirable changes in ecosystems as well as resource and property damage and injury to loss of life.

II. Program Installation

In order to properly run RAMS (Risk Assessment and Mitigation Strategies), the following computer specifications are required. *Recommended* specifications are also listed:

Item	Required	Recommended
Operating System	Windows 9x/NT	(same)
CPU	Pentium Class	(same)
Monitor Colors	256	65,536
Monitor Resolution	800 x 600	(same)
RAM	32 MB	64 MB
Hard Disk Available	80 MB	(same)
Mouse	Yes	(same)
Printer	Any - configured for Windows	Laser

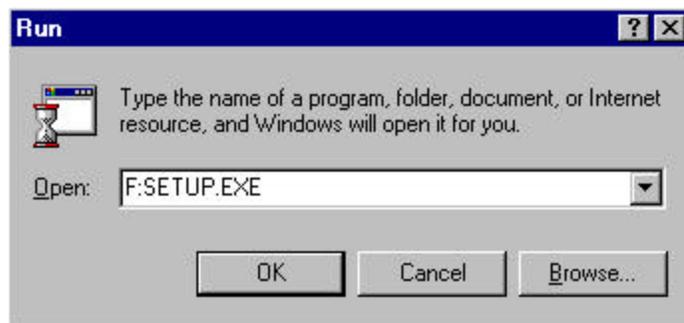
The steps to install software onto your Windows machine are:

Step 1: Start Windows

Start your computer, and if necessary, start Windows running.

Step 2: Insert CD, Start Installation

Insert the CD into your computer's CD drive. Push the "Start" button, and select "Run".



Type d:SETUP.EXE, replacing the "d" with the correct drive letter for your CD drive. Hit OK.

Step 3: Respond to Prompts

The installation routines will ask you a number of questions about things such as placement of files, icons, etc. For all of these questions, accept the defaults.

Step 4: Reboot If Requested

Important: The setup program first checks to see if your computer's "system files" are up-to-date. If they are not, *SETUP cannot even continue*. If that is the case, SETUP will inform you that your system files are being updated, after which you must reboot. Let SETUP reboot your machine, and then **start over again with Step 2 above**.

Note: As of April 2000, Microsoft has acknowledged a bug that may prevent you from getting beyond this Step 4. If you repeatedly see the message that your system files are not current, Microsoft recommends the following actions¹:

1. Open a DOS prompt window
2. Type: MD C:\TEMP (OK if message "Directory already exists")
3. Type: SET TEMP=C:\TEMP
4. Type: SET TMP=C:\TEMP

You may then start over with step 2.

Step 5: Respond to "Version Conflict" - "Replace Newer File" Questions

If SETUP informs you that you are about to replace a newer file, accept the default answer "YES", which is to KEEP your existing, newer file.

Step 6: Allow Windows To Restart

If asked, respond YES (or OK) to the question about whether or not it is OK to restart Windows.

To start RAMS, use START-Programs-RAMS. You may wish to create a shortcut on your desktop for RAMS.

¹ From Microsoft web site Knowledge Base Q191096.

III. Software Overview

The purpose of RAMS is to provide a consistent process for developing prevention and fuels management programs. RAMS allows users to prioritize areas within their planning unit, consider various prevention and/or fuels treatment alternatives, and develop a budget.

RAMS is a replacement for previously released prevention and fuels programs including:

- WPAP - Wildfire Prevention Assessment and Plan
- PWA/PWA2 - Prevention Workload Analysis
- BuildFBD - Build Fire Behavior Data
- FATE - Fuels Assessment and Treatment Evaluation

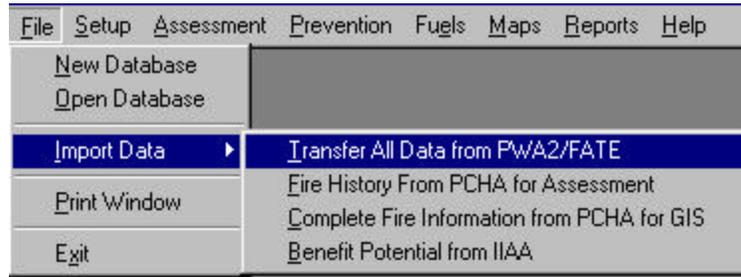
The steps involved in using RAMS include:

- Designate “Compartments”, which are subdivisions of the planning unit that will be studied in depth. Compartments might be Representative Locations from the FMP process, or they might be the prevention compartments. In order for economic benefits of fuels treatments to be calculated, Compartments must reside within one Fire Management Zone (FMZ) and one or more Representative Locations.
- Complete an assessment of each Compartment, considering:
 - Fuels Hazard
 - Ignition Risk
 - Historical Fire Ignition
 - Fire Return Interval
 - Values, and
 - Protection Capability
- Prepare a report, which summarizes the Compartment assessment process, and rates each Compartment as a “Low”, “Medium”, or “High” priority for fuels treatment consideration.
- Define historical, current, and/or potential future Prevention Program Options.
- Develop a list of General Actions and Specific Actions for each Prevention Option
- View reports showing costs and benefits for alternative prevention programs.
- For each Compartment, list existing management objectives, citing their source. Considering the prioritization from the assessment process and management objectives, develop Fuels Treatment Zones (FTZs) within which alternative fuels strategies will be considered.

- From a list of known fuels treatment strategies, pick those, which might be applicable for each FTZ. Evaluate each strategy according to its inherent management risk.
- Develop various specific fuels projects, focusing on high priority Compartments with applicable management objectives. Calculate financial benefit based on data within IIAA.
- Considering costs, benefits, Compartment priorities, and management objectives, select fuels projects for inclusion in the planning unit's Fuels Management Plan.

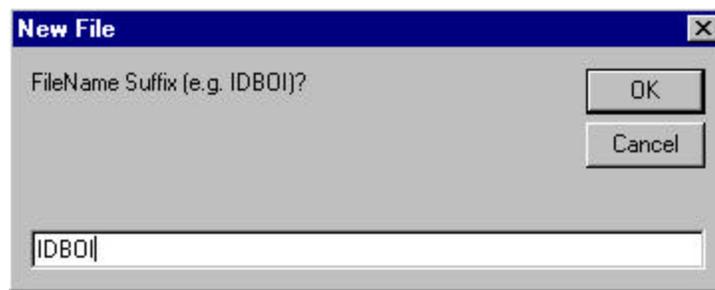
A checklist of specific software steps follows in the next section.

IV. File Menu



A. Start New Database

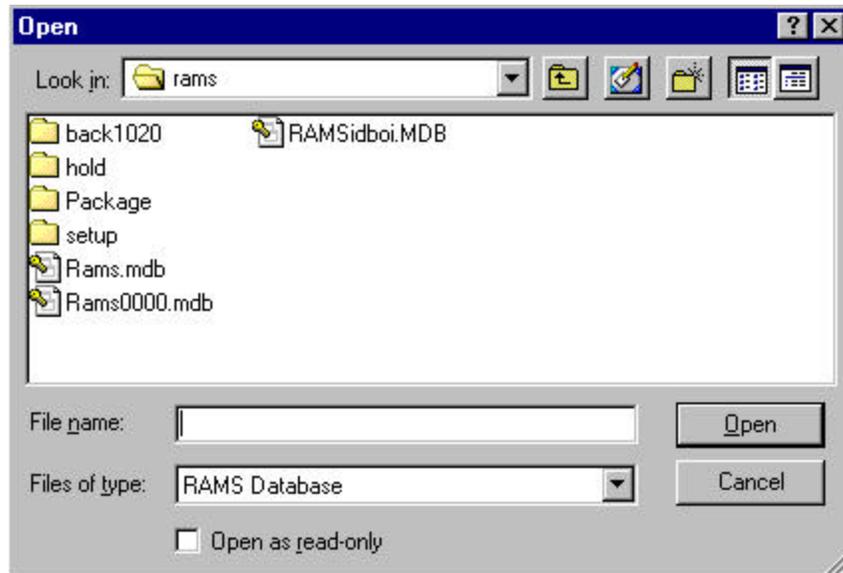
Use this menu item to begin work in RAMS with a new, empty database. You will be able to provide a unique name for the file:



Whatever "FileName Suffix" you enter will become the filename after "RAMS". For example, if you enter IDBOI, then your new RAMS database will be called RAMSIDBOI.MDB.

B. Open Existing Database

You may work with any previously created RAMS databases. You will see a list of existing databases:

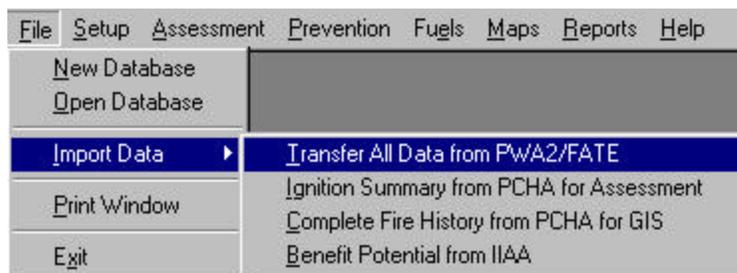


Select the desired file by clicking on it, and then click on “Open”. You will notice that RAMS displays the current database on the top of the screen:

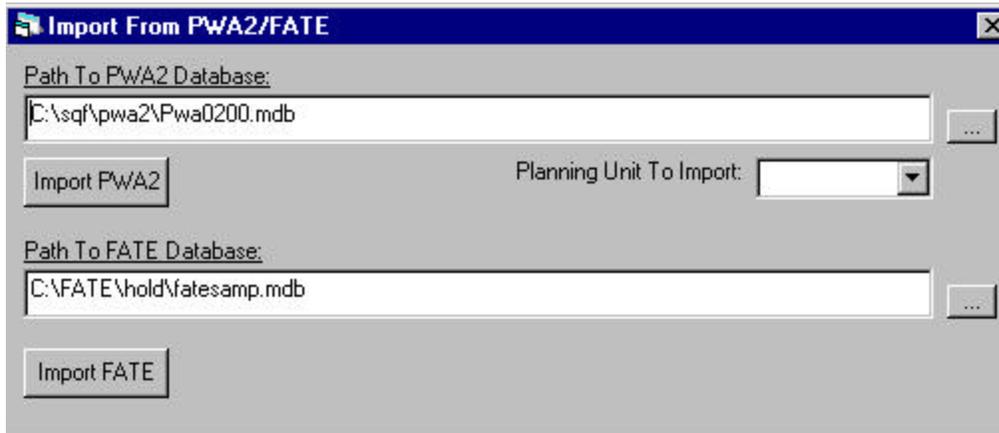


C. Import

RAMS allows you to import a variety of information from other programs:



D. Transfer All Data From PWA2/FATE



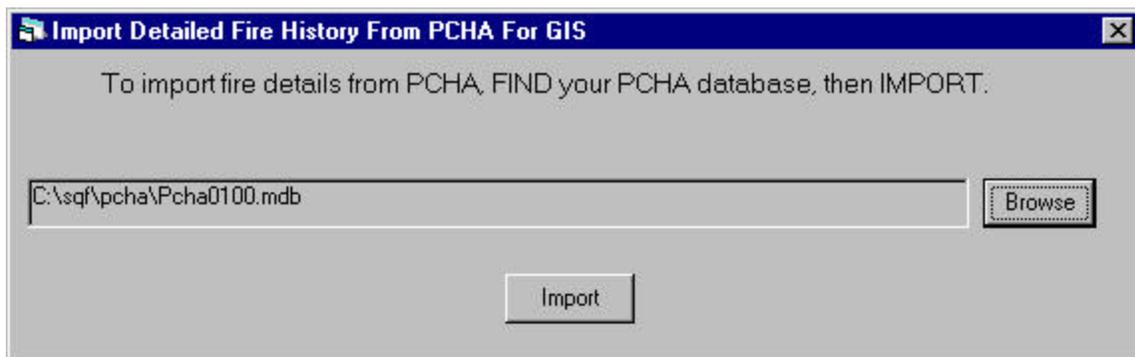
Push the button with the three dots  to search for your PWA2 database or your FATE database.

PWA2 allowed you to have multiple planning units in the same database.² If you are importing from PWA2, you must tell RAMS which planning unit to import into this database.

Hit the "Import PWA2" or "Import FATE" button to complete the import.

IMPORTANT: If you import from both PWA2 and FATE, the list of compartments from both will be imported - possibly creating some duplication. You will need to edit your compartment list to eliminate duplicates.

E. Ignition Summary From PCHA For Assessment



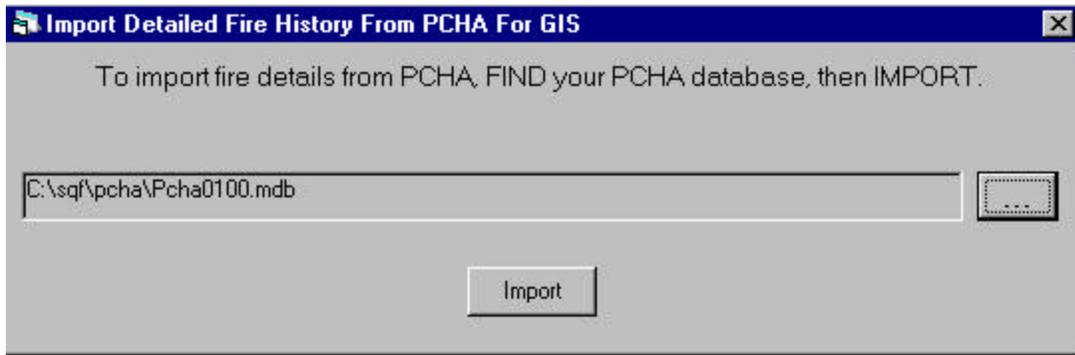
As above, first locate your database, and then hit the "Import" button. Important: import fire information only *after* you have created your compartments in RAMS.

² RAMS allows you to manage multiple databases, each with one planning unit.

F. Complete Fire History From PCHA For GIS

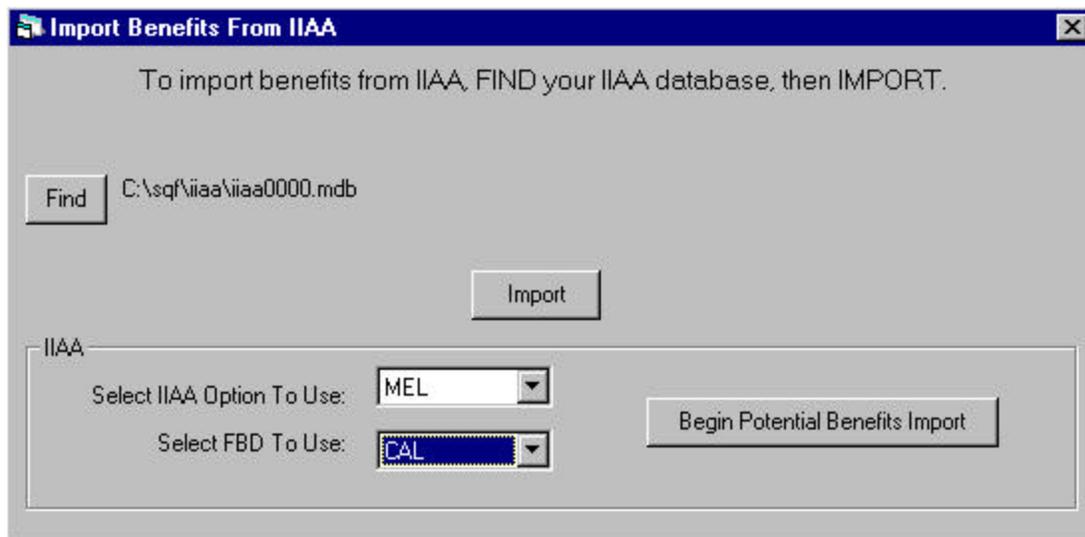
RAMS allows you to create reports counting historical fires by GIS polygons. You must have fire history data in PCHA in order to perform this step.

Use this menu item to import this detailed fire history.



G. Benefit Potential From IIAA

If you have IIAA data available to you, RAMS will import the results of runs and use this information to calculate changes in consequences resulting from your prevention and fuels programs.



You must first find your database, and then select the desired IIAA Option and Fire Behavior Data table (normally CAL). Important - complete this step only after you have created the list of FMZs in RAMS.

H. Print Window

Whenever you have a working data entry form displayed in RAMS, you may print that form by using this menu item.

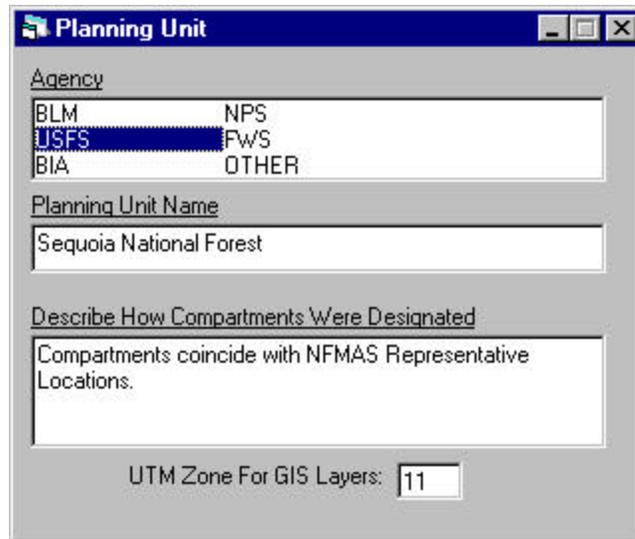
I. Exit

Exit from RAMS with this menu item.

V. Setup Menu



A. Planning Unit



Agency	
BLM	NPS
USFS	FWS
BIA	OTHER

Planning Unit Name
Sequoia National Forest

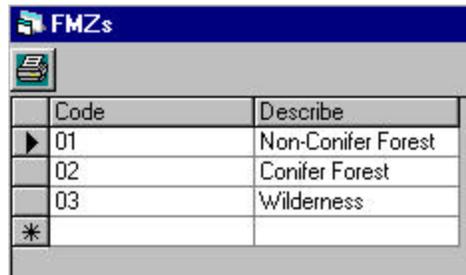
Describe How Compartments Were Designated
Compartments coincide with NFMAS Representative Locations.

UTM Zone For GIS Layers: 11

Select the Agency, enter the Planning Unit Name, and describe the origin of your Compartments. Use a complete sentence when entering this information, since it will appear in your final report just the way you enter it. If using GIS, enter the UTM Zone, which will enable RAMS to display latitude and longitude coordinates as you move around on your map layers. Your GIS Coordinator can help you determine the UTM Zone used in your area.

When done, click on the small “x” in the upper right corner of the form.

B. FMZs



	Code	Describe
▶	01	Non-Conifer Forest
	02	Conifer Forest
	03	Wilderness
	*	

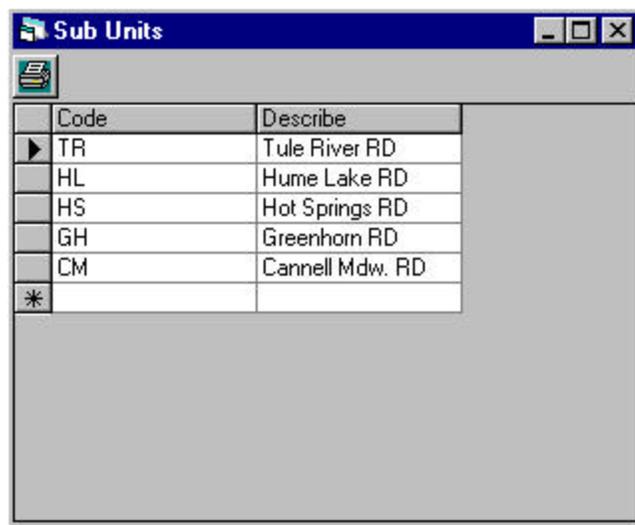
Enter the list of Fire Management Zones for your Planning Unit. The 2-character "Code" must match the code used in PCHA and IAA if you intent to import from those programs. If you are not using IAA, enter a single FMZ with any code and name.

This "grid" or "spreadsheet style" of data entry format is used in several places in RAMS. To enter a new row, just start typing at the bottom to the right of the asterisk (*). To delete a row, highlight the desired row by clicking on it to the far left, and then hit the delete key on your keyboard.

You can use the small printer icon in the upper left to prepare a report of this data table. It will first be shown on the screen. You may then hit the printer icon on this screen report to send it to the printer.

C. Sub-Units

Create a list of sub-units, if desired.



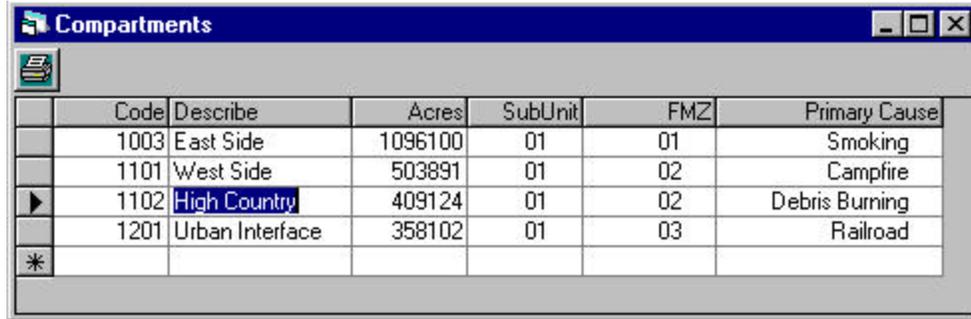
	Code	Describe
▶	TR	Tule River RD
	HL	Hume Lake RD
	HS	Hot Springs RD
	GH	Greenhorn RD
	CM	Cannell Mdw. RD
	*	

If you do not desire to track sub-units, enter a single sub-unit of "ALL".

D. Compartments

Edit Compartments

Enter a list of your Compartments.



	Code	Describe	Acres	SubUnit	FMZ	Primary Cause
	1003	East Side	1096100	01	01	Smoking
	1101	West Side	503891	01	02	Campfire
▶	1102	High Country	409124	01	02	Debris Burning
	1201	Urban Interface	358102	01	03	Railroad
*						

For each Compartment, enter a Compartment number, description, and number of acres. Enter the 2-character FMZ identifier which matches the IDs in PCHA and IIAA.

To add a new row, type at the bottom of the grid next to the asterisk (*).

To delete a row, highlight the row by clicking to the left of the row you wish to delete, and then hit your delete (DEL) key. Caution – there is no “undo” - deleted Compartments may not be recovered.

Click the small printer icon on this report window to send the report to the printer.

There are numerous reports available in this same method throughout RAMS. The data in these listing reports are stored in text files. The name of the text file being viewed is displayed at the top of the form, in this example “C:\RAMS\COMPARTMENT.LST”. You may make note of these file locations and print them in the future using your own word processor.

Entry of Compartment information is done using a “grid” user interface. You may use the mouse to move around, or you may use keys. Use the four arrow keys to move around. If you start typing to edit a “cell” on the grid, the arrow keys may not move you to a new cell until you hit “Enter” to notify RAMS that you have completed your edits.

Assign Compartments To RLs

Use this screen to list the Representative Locations (RL) for each Compartment. Each Compartment must reside entirely within one Fire Management Zone (FMZ), but it may reside within more than one RL. This is particularly helpful if you have co-located Representative Locations.

RL	Percent
1	100
2	10
*	*

Summary of Compartments Assigned To FMZ/RL:

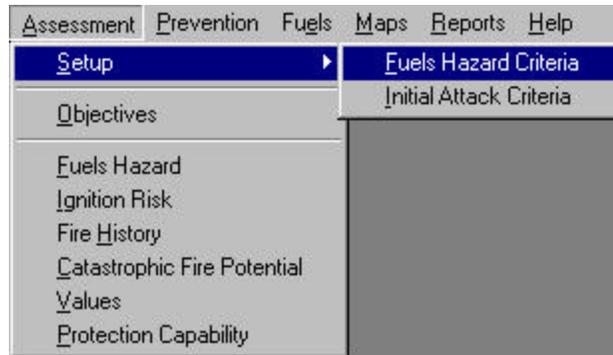
01-2 10%: 1003
01-3 50%: 1003
02-1 100%: 1101
02-2 100%: 1101 1102
03-1 100%: 1201

Select each Compartment, one at a time, from the list at the left. Notice that RAMS lists the FMZ. In the block in the upper right, enter the RL number and the percent of that RL included within this Compartment. If the RL is exactly equal to the RL (same exact area), then the percent would be 100. You may enter more than one RL if the Compartment crosses RL boundaries.

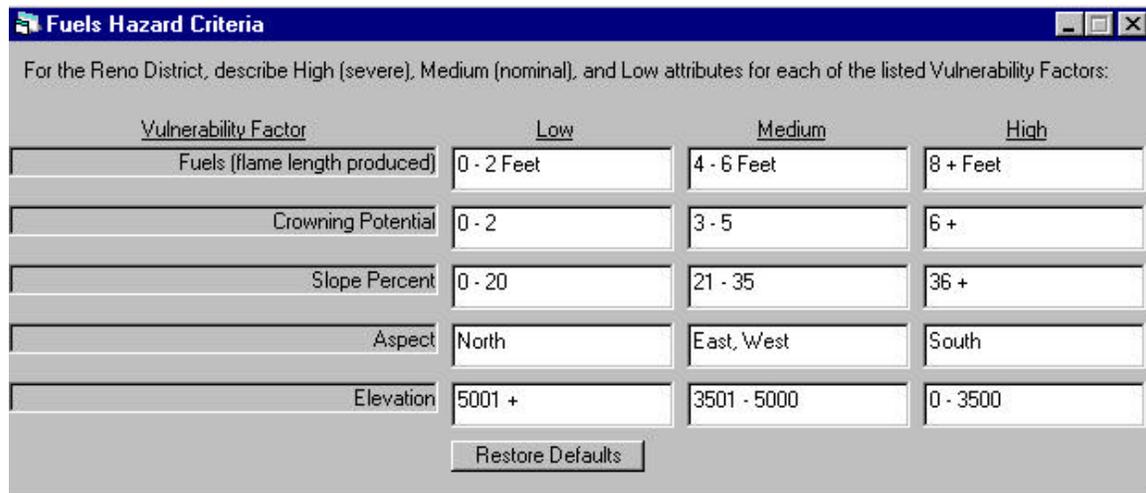
In the bottom right portion of this screen, RAMS keeps you informed about the totals for each FMZ/RL combination. A listing of "02-2 100%: 1101 1102" means that 100% of FMZ 02, RL 2 is used by RAMS Compartments 1101 and 1102.

VI. Assessment Menu

The Assessment Menu is where you analyze each Compartment according to Fuels, Risk, Fire Return Interval, Values, and Protection Capability:



A-1. Hazard Matrix Criteria

A screenshot of a dialog box titled 'Fuels Hazard Criteria'. It contains a table for defining vulnerability factors for the Reno District. The table has four columns: Vulnerability Factor, Low, Medium, and High. The rows are: Fuels (flame length produced), Crowning Potential, Slope Percent, Aspect, and Elevation. A 'Restore Defaults' button is at the bottom.

Vulnerability Factor	Low	Medium	High
Fuels (flame length produced)	0 - 2 Feet	4 - 6 Feet	8 + Feet
Crowning Potential	0 - 2	3 - 5	6 +
Slope Percent	0 - 20	21 - 35	36 +
Aspect	North	East, West	South
Elevation	5001 +	3501 - 5000	0 - 3500

Later on, as part of the Assessment, you will rate each Compartment as “Low”, “Medium”, or “High” for several fuels hazard criteria, including flame length, crowning potential, slope percent, aspect, and elevation.

RAMS recognizes that each planning unit is different, and that a description of “High” flame length on one planning unit might be “Medium” on another.

On this hazard matrix form, enter brief descriptions for “Low”, “Medium” and “High” for each of the listed criteria. You will see these descriptions later in the process when you are ranking each Compartment.

You may revert to the default descriptions at any time by hitting the “Restore Defaults” button. Note: the default descriptions for crowning are the ratings which result from Fahnestock’s Crowning Potential algorithm.

A-2. Initial Attack Criteria

Initial Attack Criteria

For the Sequoia National Forest, describe High (severe), Medium (nominal), and Low attributes for your Initial Attack response:

Vulnerability Factor	Low	Medium	High
Initial Attack (arrival time of first suppression resource)	0 - 20 minutes	21 - 30 minutes	31+ minutes

Restore Defaults

You may also create descriptions for “Low”, “Medium” and “High” initial attack response times in your planning unit, where “Low” means quick response and “High” means lengthy response time.

B. Unit Objectives

Order	Source	Objective
10	FMP 1998	Maximize firefighter safety during unwanted fire situations.
20	CDCA Plan 1980	Utilize fire, including prescribed fire, to achieve various vegetation management goal
30	FMP 1998	Utilize fuels management techniques to restore fire to its natural role in the ecosystem
40	FMP 1998	Implement a Fire Prevention program to prevent unwanted fire.

On this form, enter management objectives, which apply to the entire planning unit. List their source.

The number you enter under “Order” is used to tell RAMS the order in which you wish to have these objectives listed on the final report. You may use 1, 2, 3 or 100, 200, 300 etc.

C. Fuels Hazard

Compartment Fuels Hazard							
Comp	Compartment	Fuels (flame length produced)	Crowning Potential	Slope Percent	Aspect	Elevation	
▶ 1003	East Side	Mod: : 4 - 6 Feet	Low: : 0 - 2	Low: : 0 - 20	Low: : North	High: : 0 - 3500	
1101	Lake McClellan	High: : 8 + Feet	Mod: : 3 - 5	Mod: : 21 - 35	Mod: : East, West	Mod: : 3501 - 5000	
1102	High Country	Mod: : 4 - 6 Feet	High: : 6 +	Mod: : 21 - 35	Mod: : East, West	Mod: : 3501 - 5000	
1201	Western Slopes	High: : 8 + Feet	High: : 6 +	High: : 36 +	Mod: : East, West	Low: : 5001 +	

The Fuels Hazard form is the first of several on which you will rate each Compartment according to a list of criteria. On this form, you use the fuels hazard ratings you established on the Setup Menu. Select “Low”, “Medium” or “High” for each criterion for each Compartment.

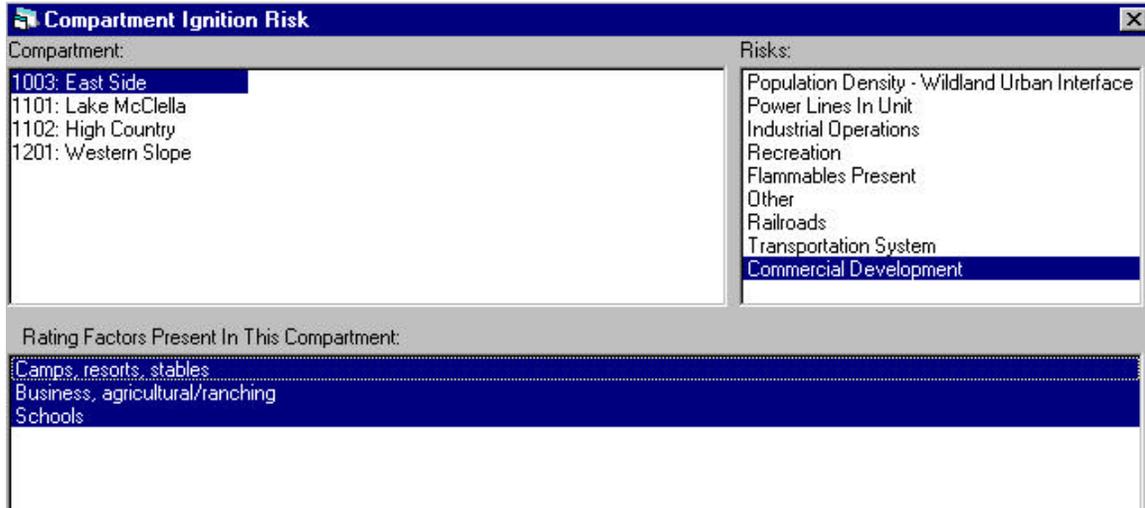
You may use the mouse to open up the list of choices and select one, or you may use the keyboard. To use the keyboard, hold “Alt” and hit the down arrow. Use the up and down arrows to select the appropriate level, and then hit “Enter” to complete your edit.

D. Ignition Risk

Compartment Ignition Risk	
Compartment: 1003: East Side 1101: Lake McClella 1102: High Country 1201: Western Slope	Risks: Population Density - Wildland Urban Interface Power Lines In Unit Industrial Operations Recreation Flammables Present Other Railroads Transportation System Commercial Development
Rating Factors Present In This Compartment: 0-100 Dwellings/structures 101-300 Dwellings/structures 301-500 Dwellings/structures 501-1000 Dwellings/structures 1001+ Dwellings/structures	

You rate each Compartment’s risk of ignitions on this form. Select the first Compartment, and the first Risk (Population Density, Power Lines, etc). You will see a list of Rating Factors in the bottom window. For “Population Density”, select the one factor in the bottom which best describes the population density in the Compartment.

For all other Risks, you may select more than one (or none). For example, you may have all three types of Commercial Development in a particular Compartment:



Be sure to consider all of the Risks for all of your Compartments.

E. Fire History

	Comp #	Describe	Annual Fires	Annual Acres Burned
▶	1003	East Side	12.3	1000
	1101	Lake McClellan	10.4	4
	1102	High Country	12.8	38
	1201	Western Slopes	3.8	413

Use this form to enter the number of fires and acres burned per year in each Compartment.

F. Catastrophic Fire Potential

Catastrophic Fire Potential			
Comp #	Compartment	Catastrophic Fire Potential	
1003	East Side	Catastrophic Fire Possible	
1101	Lake McClellan	Catastrophic Fire Likely	
1102	High Country	Catastrophic Fire Unlikely	
1201	Western Slopes	Catastrophic Fire Possible	
		Catastrophic Fire Likely	
		Catastrophic Fire Possible	
		Catastrophic Fire Unlikely	

For each Compartment, rate the Catastrophic Fire Potential.

G. Values

Compartment Values	
Compartment:	Values:
<ul style="list-style-type: none"> 1003: East Side 1101: Lake McClella 1102: High Country 1201: Western Slope 	<ul style="list-style-type: none"> Recreation Administrative Wildlife/Fisheries Range Use Watershed Timber/Woodland Plantations Private Property Cultural Resources Special Interest Areas Visual Resources T&E Species Soils (Erosion) Airshed Vegetation
<p>Rating Other</p> <p>Rating Factors Present In This Compartment:</p> <ul style="list-style-type: none"> Undeveloped average recreation use Undeveloped high recreation use Developed recreation site within or adjacent to area 	

For each Compartment, evaluate each of the listed Values. From the list below, pick the one statement that best describes the Compartment. The three choices represent “Low”, “Medium”, and “High” for the listed Value.

You may also switch to the “Other” tab, where you can list additional resource values. You may list them as having “Low”, “Moderate”, or “High” significance. For each, enter a “Count”, which tells RAMS how many additional items you have listed.

Compartment Values

Compartment:

- 1001: FMZ 01, R
- 1002: FMZ 01, R
- 1003: FMZ 01, R
- 1101: FMZ 02, R
- 1102: FMZ 02, R**
- 1201: FMZ 03, R

Values Vulnerability Factors:

- Recreation
- Administrative
- Wildlife
- Range Use**
- Watershed
- Timber
- Plantations
- Private Property
- Cultural Resources
- Special Interest Areas

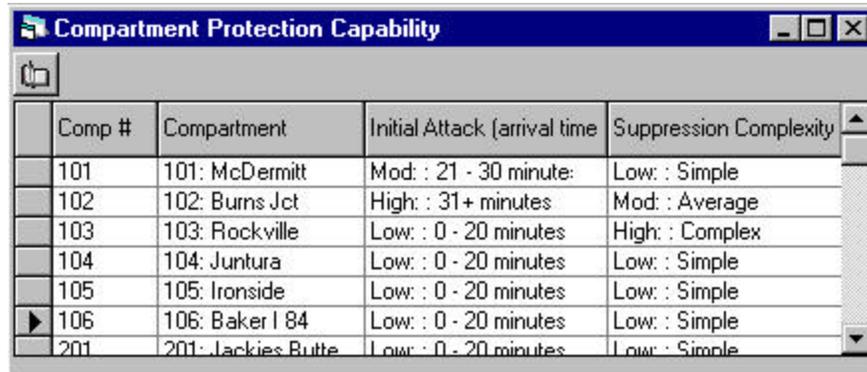
Other

Describe Other Significant Values In This Compartment, Including a Count:

Low Value	Moderate Value	High Value
Count: <input type="text"/>	Count: <input type="text"/>	Count: <input type="text" value="1"/>
<input type="text"/>	<input type="text"/>	High concentration of designated Areas of Critical Environmental Concern (ACECs).

H. Protection Capability

The final step in the assessment portion of RAMS is to rate each Compartment according to its Protection Capability. There are two factors.



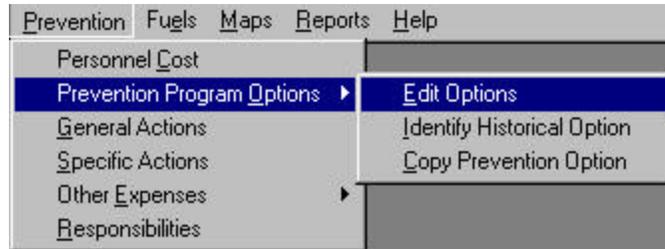
Comp #	Compartment	Initial Attack (arrival time)	Suppression Complexity
101	101: McDermitt	Mod: : 21 - 30 minute:	Low: : Simple
102	102: Burns Jct	High: : 31+ minutes	Mod: : Average
103	103: Rockville	Low: : 0 - 20 minutes	High: : Complex
104	104: Juntura	Low: : 0 - 20 minutes	Low: : Simple
105	105: Ironside	Low: : 0 - 20 minutes	Low: : Simple
106	106: Baker I 84	Low: : 0 - 20 minutes	Low: : Simple
201	201: Jackies Butte	Low: : 0 - 20 minutes	Low: : Simple

First, rate the Compartment according to your initial attack response time. Note that the descriptions are those, which you created on the Setup Menu.

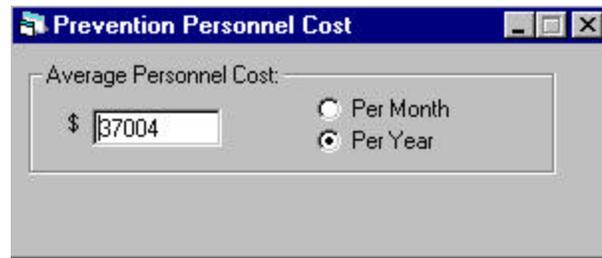
Next, rate each Compartment according to its Suppression Complexity, considering access, barriers, structure problems, etc. In this category, “Low – Simple” means low complexity, “High – Limited” means limited suppression capability (complex), and “Mod – Reasonable” is between the two.

VII. Prevention Menu

The Prevention Menu is where you will develop alternative Fire Prevention programs:



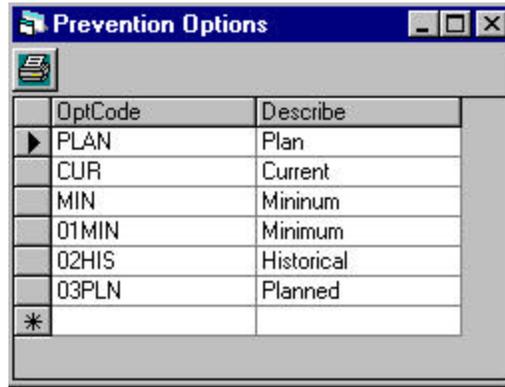
A. Personnel Cost



In the following steps, you will be creating a list of tasks within various prevention options. Each list of tasks will lead to a total number of hours spent.

The Prevention Program Cost screen lets you list the average program cost per month or per year. At the top, you enter the percent of funded time spent on prevention work. If, for example, you estimate that 30% of your prevention staff's time is spent doing other than actual on-the-ground prevention work, you would enter 70.

B-1. Edit Options

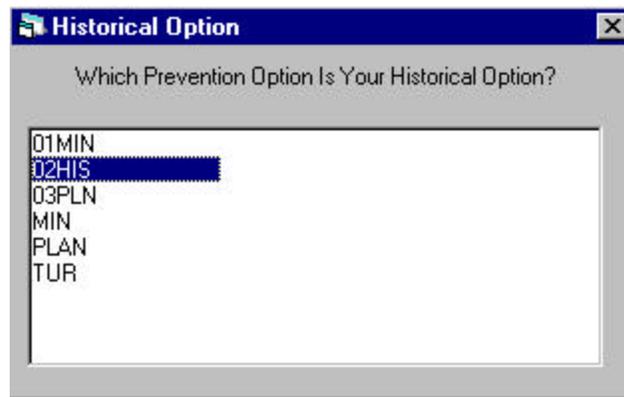


OptCode	Describe
▶ PLAN	Plan
CUR	Current
MIN	Minimum
01MIN	Minimum
02HIS	Historical
03PLN	Planned
*	

You must now create a list of Prevention Program Options which you want to develop in RAMS.

B-2. Identify Historical Option

If you are using PCHA and IIAA, and want RAMS to calculate the dollar benefit changes which would result from your different Prevention Programs, then one of the options you develop must be the Historical Plan.

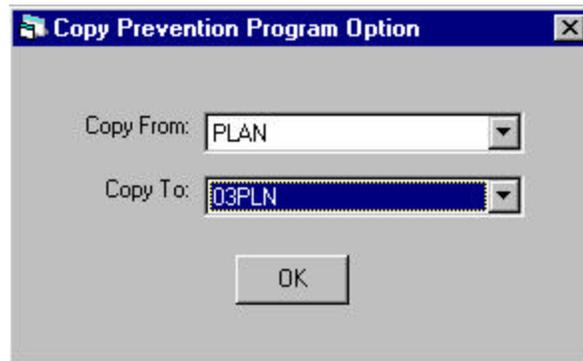


Historical Option

Which Prevention Option Is Your Historical Option?

01MIN
02HIS
03PLN
MIN
PLAN
TUR

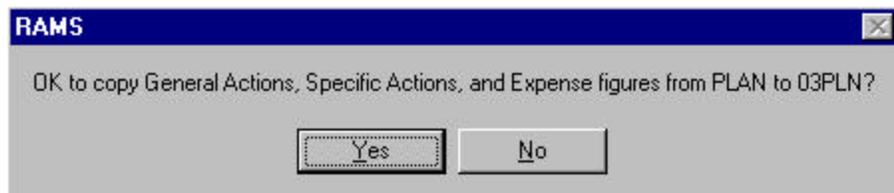
B-3. Copy Prevention Option



You might find that, after developing one Prevention Program Option in RAMS, you want to develop another which is similar to the first.

You can use this screen to copy all information from one Program Option to another. This gives you a starting point, from which you can make the necessary changes in the new program option.

Click on "OK", and you will be asked to verify:



Answer "Yes", and the information will be copied.

C. General Actions

The General Actions are those tasks which do not apply to just one Compartment, but apply to most or all. Examples might be participating at a County Fair.

The screenshot shows a software window titled "GeneralActions" with a "Category:" dropdown menu set to "Education". Below the menu is a table with 11 columns: Group, Action, Unit, Hours, PLAN, TUR, MIN, 01MIN, 02HIS, and 03PLN. The table lists various actions such as "Signs Prepare Plan", "Fire Danger F Adjunctives To Field", "Mass Media Media Contacts", etc., with corresponding numerical values in each column.

Group	Action	Unit	Hours	PLAN	TUR	MIN	01MIN	02HIS	03PLN
Signs	Prepare Plan	plans	40	14	1	1	1	1	14
Signs	Maintain Plan	plans	4	15	2	2	2	2	15
Fire Danger F	Adjunctives To Field	days	0.25	1423	540	540	540	540	1423
Mass Media	Media Contacts	each	1	38	19	19	19	19	38
Volunteers	Plan For Volunteers	plans	40	4					4
Wilderness T	Train, Equip Employee	# of emp	2	8	7	6	7	7	8
Public Educa	Prev Pgms	event	8	29	6	6	6	6	29
School Progr	Lvl 1 Team Teaching	event	40	136	121	121	121	121	136
School Progr	Lvl 2 Presentation	event	8	55	20	20	20	20	55
Parade	Prep Time, Parade	event	40	12	3	3	3	3	12
Fair	Days of Booth Time	day	20	39	1	1	1	1	39
Sports Activit	Sports/Rodeo Activity	event	48	8	3	3	3	3	8
CFFP	Fire Prevention Materials	order	8	5	2	2	2	2	5
Exhibits	# of Exhibits	each	16	11	3	3	3	3	11
Character Ap	# of Appearance	each	8	31	19	4	19	19	31
Poster Conte	# of Contests	event	40	7	6	2	6	6	7
Public Conta	3 Hr/Group	group	3	69	59	1	59	59	69
Public Conta	2 Hr/Key Person	each	2	51	48	2	48	48	51

Pull down the "Category" list, and select the first item: Education. Enter the quantity of each line which will be accomplished for each of your Prevention Program Options.

Switch to the next Category, and enter its information. Complete data entry for all Categories, and then exit from this form.

Note that each of the Options you earlier created is displayed across the top. If you have more than four, you may need to scroll to the right to see them all.

Note, also, that the list of Actions extends below and out of sight. Scroll down to view/edit the lower portion of the list.

The third column lists the "Unit of Measure" for each line. For example, some Actions are expressed in "Plans", and others in "Events". The entry you make to the right is the number of these listed units included in the Option.

The fourth column lists the number of hours required for each Plan, Event, etc. In our Public Education example, each Prevention Program takes 8 hours. Our "Plan" Option will therefore budget for 232 hours (29 times 8).

These "costs" in terms of number of hours are fixed and may not be edited. If you are attempting to depict a Public Education effort which you know will require 40 hours, you have two choices.

First, and preferably, examine the other listed Actions, to see if a different one better fits your project. (e.g. Level 1 Team Teaching?)

If not, you always have the opportunity to enter "5" instead of "1" for each Public Education activity which will in fact require 40 hours.

Once you have entered data for each line, change the "Action" category at the top and complete the screen for the next. Continue until all have been completed.

The following is line item entry instructions for General Actions.

1. Education

Complete the following entries as required by option:

Signs	Prepare Plan	plans	40
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1. Enter the number of unit wildfire prevention sign plans that need to be prepared, new plans or a complete plan re-write.

Signs	Maintain Plan	plans	4
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2. Enter the number of unit wildfire prevention sign plans that need to be updated, revised or maintained. Enter here only if a sign plan currently exists.

Fire Danger Rating	Adjectives To To Field	day	.25
--------------------	------------------------	-----	-----

3. Enter the number of days that the fire danger rating and adjectives are provided to the field, usually from a central location, i.e. Dispatch Center. This usually occurs each declared fire season day.

Mass Media General	Media Contacts	each	1
--------------------	----------------	------	---

4. Enter the average number of fire prevention general media contacts that normally occur each year. These include telephone and e-mail contacts.

Mass Media	Media Contacts Radio	each	2
------------	-------------------------	------	---

5. Enter the average number of fire prevention radio news releases/contacts that are made annually.

Mass Media	Media Contacts Written	each	2
------------	---------------------------	------	---

6. Enter the average number of fire prevention written news releases/contacts that are made annually.

Mass Media	Media Contacts General	each	2
------------	---------------------------	------	---

7. Enter the average number of fire prevention television news releases/contacts made annually.

Volunteers in Prevention	Plan For Volunteers	plans	40
-----------------------------	------------------------	-------	----

8. Enter the number of plans to be developed for the purpose of utilizing Volunteers In Prevention. These are volunteers that are assigned specific wildfire prevention responsibilities.

Wilderness Train/Equip	Train & Equip Employee	# of emp	2
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9. Enter the number of wilderness employees that will be trained and equipped to conduct fire prevention activities.

Public Education	Wildfire Prev Pgms	event	8
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10. Enter the number of times someone will be involved in wildfire prevention programs. These are generally interagency and are those programs that are not covered in the other categories.

Interagency Campaigns	Campaign Plans	each	24
--------------------------	----------------	------	----

11. Enter the number of interagency fire prevention campaigns developed annually or planned for development during this planning period.

- | | | | |
|-----------------------------------|-----------------------|-------|----|
| Interagency Campaigns Implemented | Campaigns Implemented | event | 80 |
|-----------------------------------|-----------------------|-------|----|
12. Enter the number of interagency fire prevention campaigns that are planned for implementation for this planning period.
- | | | | |
|----------------------|-------------------|------|----|
| Campaign Development | Specific Campaign | plan | 24 |
|----------------------|-------------------|------|----|
13. Enter the number of specific fire prevention campaign plans that are going to be developed this planning period.
- | | | | |
|----------------------|----------------|------|---|
| Programs - Bilingual | # of Campaigns | each | 8 |
|----------------------|----------------|------|---|
14. Enter the number of programs designed specifically to be bilingual that are to be implemented this planning period.
- | | | | |
|---------------------|----------------|------|---|
| Children's Programs | Cause Specific | each | 8 |
|---------------------|----------------|------|---|
15. Enter the number of cause specific fire prevention programs designed specifically for children to be implemented this planning period.
- | | | | |
|----------------|---------------------|-------|----|
| School Program | Lvl 1 Team Teaching | event | 40 |
|----------------|---------------------|-------|----|
16. Enter the number of team teaching school programs that will be performed. Level 1 - These are complicated programs, requiring numerous participants and several presentations are conducted at a time.
- | | | | |
|----------------|--------------------|-------|---|
| School Program | Lvl 2 Presentation | event | 8 |
|----------------|--------------------|-------|---|
17. Enter the number of school programs that consist of a short presentation. Level 2 - General presentations to a classroom.
- | | | | |
|--------|-------------------|-------|----|
| Parade | Prep Time, Parade | event | 40 |
|--------|-------------------|-------|----|
18. Enter the number of parades that enhances fire prevention awareness. This entry includes time required to prepare, plan and organize the parade event.

Fair	Days of Booth Time	day	20
------	-----------------------	-----	----

19. Enter the number of days involved at fairs where fire prevention activities are planned. This entry considers necessary fire prevention staffing which displays a 20-hour increment per day. This increment includes several personnel involved.

Sports Activity	Sports/Rodeo Activity	event	48
-----------------	--------------------------	-------	----

20. Enter the number of sports events that involve fire prevention participation. This includes: major sports, minor league sports, rodeo and youth sports programs.

CFFP	Fire Prevention Materials	order	8
------	------------------------------	-------	---

21. Enter the number of fire prevention education material orders that will be made. This includes CFFP, CFPM, open market, etc. The cost of the materials will be accounted for later in the process.

Exhibits	# of Exhibits	each	16
----------	---------------	------	----

22. Enter the number of fire prevention exhibits/displays that will be utilized. This includes organizations, set-up and any necessary monitoring.

Character Appearance	# of Appearances	each	8
-------------------------	------------------	------	---

23. Enter the number of events with a Smokey or character appearance. (Do not include parades, fairs, sports, school programs or other appearances that have already been identified.) This could include Arbor Day, hospital visits, safety days, etc.

Poster Contest	# of Contests	event	40
----------------	---------------	-------	----

24. Enter the number of fire prevention poster or similar contests to be conducted. This includes planning, organizing and implementation.

Public Contact	Group Contact	each	3
----------------	---------------	------	---

25. Enter the number of group contacts such as Boy/Girl Scout camps, church camps, resort employees, outfitter groups, homeowner associations, etc. Remember that this is for each contact, so if a contact is made four different times at the same camp, count this as four contacts.

Public Contact	Key Person	each	2
----------------	------------	------	---

26. Enter the number of key contacts made with the fire chief, mayor, community professional, private campground hosts, other agency personnel, cooperators, outfitters, etc. Count each contact made even if it is the same person contacted more than once.

2. *Engineering*

Public Utility Management	Inform of Reqs	each	40
------------------------------	----------------	------	----

1. Enter the number of companies that will be notified of annual fire prevention requirements for power lines, railroads, etc. This could be annual meetings, written notification, etc.

Gov't Agency	Gov't Agency Coord.	each	40
--------------	------------------------	------	----

2. Enter the number of road departments/agencies that will be contacted regarding compliance with fire prevention requirements related to road maintenance and hazard reduction. This includes meetings, on-site visits and written documentation. This also would include other government agencies; military.

3. Enforcement

Permits	Burn, Blast, Weld Campfire	each	.5
---------	-------------------------------	------	----

1. Enter the estimated number of burning, blasting, welding and campfire permits that are issued each year. If accurate data is not available, use best estimate. Use only data generated by fire personnel.

Training Permits	Training Issuing Employees	# of emp.	4
---------------------	-------------------------------	-----------	---

2. Enter the number of employees who will be trained to issue burning, blasting, welding and campfire permits.

Restriction Closure	Restrict Plan/ Procedures	plans	8
------------------------	------------------------------	-------	---

3. Enter the number of fire restriction and procedures plans that will be prepared. This plan covers public use restrictions and implementation procedures.

Spark Arresters	Train Inspectors	# of emp.	8
-----------------	------------------	-----------	---

4. Enter the number of personnel that will be trained to inspect spark arresters. This includes formal training, field-testing and use of the spark arrester guide.

Spec. Use Inspection	Fire Criteria in Permit	each	1
-------------------------	----------------------------	------	---

5. Enter the number of special use permits that will be reviewed to ensure that adequate fire precaution criteria for the activity are included in permit stipulations.

Indust. Ops. Inspections	Fire Criteria in Contract	each	2
-----------------------------	------------------------------	------	---

6. Enter the number of industrial operations contracts that will be reviewed to ensure adequate fire precaution criteria for the activity is included.

Structure Improvements	Develop Struct. Imp. Plan	each	8
---------------------------	------------------------------	------	---

7. Enter the number of structure and improvement fire inspection plans to be written. This is a specific plan for complex urban interface areas. This covers scheduling, routes, enforcement, criteria, types of inspections, etc.

Fire Prevention	Patrol	each	16
Patrol	Plan		

8. Enter the number of patrol plans that are required for patrol implementation. Normally the entry will be 1, if patrol is a consideration.

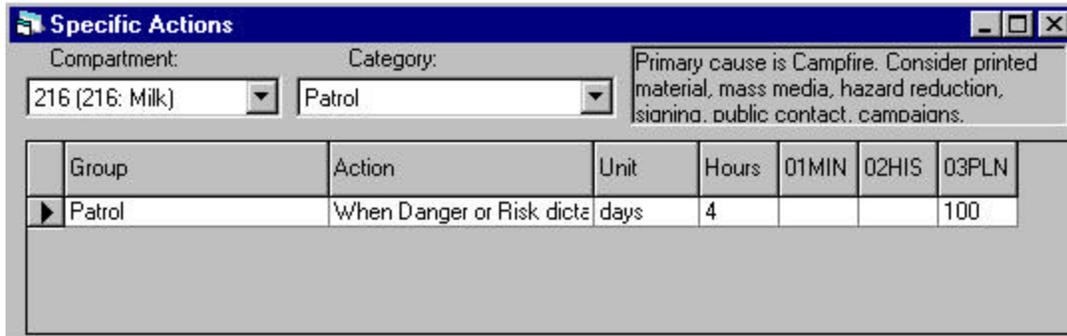
4. Administration

- | | | | |
|-----------------|-------------------|-------|-----|
| Prevention Plan | Prepare Unit Plan | plans | 120 |
|-----------------|-------------------|-------|-----|
1. Enter the number of unit wildfire prevention plans to be written or updated.
- | | | | |
|-----------------------|-------------------------|---------|---|
| Prevention Committees | Participate in Meetings | meeting | 8 |
|-----------------------|-------------------------|---------|---|
2. Enter the number of fire prevention committee meetings that will be attended. This includes interagency, fire safe councils, cooperatives and other national, regional or local organizations.
- | | | | |
|----------|------------------------|-------|---|
| Training | Provide Intro Training | event | 8 |
|----------|------------------------|-------|---|
3. Enter the number of times that "An Introduction to Wildfire Prevention" training will be conducted. This entry can also include other training to enhance wildfire prevention.
- | | | | |
|----------------------|-------------------|------|---|
| Early Warning System | Preparedness Plan | plan | 8 |
|----------------------|-------------------|------|---|
4. Enter the number of preparedness plans required for fire prevention, normally the entry will be 1.
- | | | | |
|--------------------|--------------|------|----|
| Corporate Programs | Program Plan | plan | 16 |
|--------------------|--------------|------|----|
5. Enter the number of corporate involvement plans that will be prepared for the planning period.

When you are done entering General Actions, exit.

D. Specific Actions

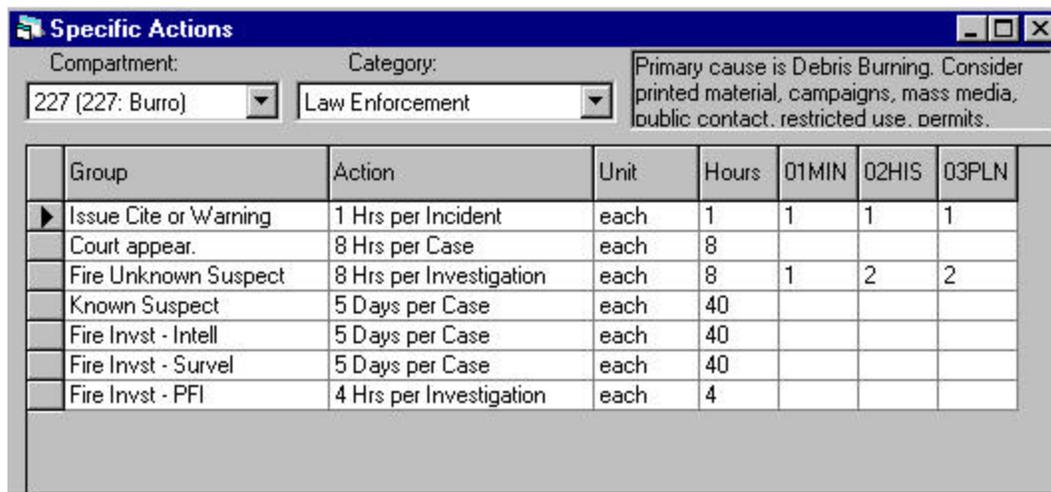
Specific Actions are those tasks which can be planned for individual Compartments. Examples include patrol and signing.



Group	Action	Unit	Hours	01MIN	02HIS	03PLN
▶ Patrol	When Danger or Risk dict	days	4			100

For Specific Actions, select the Compartment and the Category. Enter the quantity of each line which will be accomplished in that Compartment for each Prevention Program Option.

Note that some Categories contain many more lines than others.



Group	Action	Unit	Hours	01MIN	02HIS	03PLN
▶ Issue Cite or Warning	1 Hrs per Incident	each	1	1	1	1
	Court appear.	each	8			
	Fire Unknown Suspect	each	8	1	2	2
	Known Suspect	each	40			
	Fire Invst - Intell	each	40			
	Fire Invst - Survel	each	40			
	Fire Invst - PFI	each	4			

If you told RAMS about the primary Statistical Cause for the fires in this Compartment, it will give you some thoughts to consider about how to most effectively treat fires of that cause.

1. Patrol

Complete the following entries as required by option:

Patrol	When Danger or Risk Dictates	days	4
--------	---------------------------------	------	---

1. Enter the number of days where fire danger or risk indicates that patrolling is the best method for fire prevention. Note that although full days are entered the workload factor only credits four hours, this takes into account that the Fire Prevention Specialist will also make some public contacts and/or change posters, etc. Days that should be included in this CATEGORY would be holidays, holiday weekends, special events occurring on the forest, opening of hunting season, high fire danger days due to temperatures, humidity or winds, etc. Note: Enter only the % of days spent within a specific compartment. Patrol routes generally cover more than one compartment, so adjust as necessary.

2. Signs

Maintenance	Maintain Existing Signs	each	6
-------------	-------------------------	------	---

1. Enter the number of prevention signs that will be maintained. These are existing signs.

Construction	Build Additional Signs	each	12
--------------	------------------------	------	----

2. Enter the number of signs that will be built. These are either new signs or replacement signs for existing signs. The user should consider what the average life expectancy is for a sign and average the replacement into the number of signs. For example, a district has 56 signs, each has a life expectancy of seven years, this means eight signs should be constructed annually to keep up with replacement. In addition, an average of two signs per year are either stolen or badly damaged, add this to the eight signs on replacement rotation for a total of ten new signs to be constructed each year.

3. Enforcement

Issue, Site or Warning	Per Incident	each	1
---------------------------	-----------------	------	---

1. Enter the number of fire related written warnings or citations that are expected to be issued. This is based on the historical average for the selected compartment.

Court Appearances	Per Case	each	8
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2. Enter the number of court appearances related to fire law violations that are expected to occur. This is based on the historical average for the selected compartment.

Fire Unknown Suspect	Per Investigation	each	8
-------------------------	----------------------	------	---

3. Enter the number of fire investigations that are expected to be performed where there is an unknown suspect. This is based on the historical average number of fires in the selected compartment.

Known Suspect	Per Case	each	40
------------------	-------------	------	----

4. Enter the number of fire investigations that are expected to be performed where there will be a known suspect. This is based on the historical average number of fires in the selected compartment.

Fire Invest.- Intelligence	Per Case	each	40
-------------------------------	-------------	------	----

5. Enter the number of fire intelligence activities that can be expected to occur within the selected compartment.

Fire Invest.- Surveillance	Per Case	each	40
-------------------------------	-------------	------	----

6. Enter the number of fire surveillance activities that can be expected to occur within the selected compartment.

Fire Invest.- PFI	Per Investigation	each	4
----------------------	----------------------	------	---

7. Enter the number of preliminary fire investigations that can be expected in the selected compartment.

4. *Hazards/Engineering*

Recurring Projects	10 Days Per Year	each	80
-----------------------	---------------------	------	----

1. Enter the number of large hazard reduction projects to be accomplished. Include projects such as hazard reduction around work centers, recreation areas, areas of concentrated public use, and other unit facilities.

Special Projects	# of Hours	hours	1
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2. Enter the number of hours that will be spent on larger hazard reduction projects, such as around dispersed campsites, campsites, roadside piling, prescribed burning etc.

Hazard Reduction	High Risk Area	hours	1
---------------------	-------------------	-------	---

3. Enter the number of person hours required to complete planned tasks. Do not include allocated funds from other sources here.

Hazard Reduction	Prescribed Fire	hours	1
---------------------	--------------------	-------	---

4. Enter the number of person hours required to complete the planned tasks. Do not include allocated funds from other sources.

5. Public Contact

Individual	Per Contact	each	.25
------------	----------------	------	-----

1. Enter the number of individual contacts that will be made. The number should be defensible, for example, using a percent of the number of visitors based on recreation counts. This number could also be increased/decreased based on trends shown in recreation counts.

Group	Per Contact	each	3
-------	----------------	------	---

2. Enter the number of group contacts such as Boy/Girl Scout camps, church camps, resort employees, outfitter groups, homeowners associations, etc. Remember that this is for each contact, so if a contact is made four different times at the same camp, count this as four contacts.

Key People	Per Contact	each	3
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3. Enter the number of key contacts made with store owners, private campground hosts, other agency personnel, cooperators, outfitters, fire chief, mayor, etc.

Neighborhood Programs	Programs Implemented	event	16
--------------------------	-------------------------	-------	----

4. Enter the number of programs implemented specifically for neighborhoods; clean up days, etc.

Urban Interface	Programs Implemented	event	16
--------------------	-------------------------	-------	----

5. Enter the number of fire prevention programs implemented in the wildland urban interface, do not duplicate #4.

Printed Material	Distribution	hours	1
---------------------	--------------	-------	---

6. Enter the number of hours required to distribute fire prevention material that is not already covered in other task elements.

6. Inspections

Electronic Site	Initial	each	4
-----------------	---------	------	---

1. Enter the number of electronic sites to be inspected. This would include radio, TV, telephone, microwave, and two-way radio repeater facilities.

Residence	Initial	each	.5
-----------	---------	------	----

2. Enter the number of residences that will be inspected.

Residence	Follow-Up	each	.25
-----------	-----------	------	-----

3. Enter the number of residences that will require a follow-up inspection.

Power Line	Miles Per Hour	mile	1
------------	----------------	------	---

4. Enter the number of miles of power line that will be inspected.

Railroad	Miles Per Hour	mile	1
----------	----------------	------	---

5. Enter the number of miles of railroad that will be inspected.

Resorts/Camps	Initial	each	4
---------------	---------	------	---

6. Enter the number of organized resorts or camps that will be inspected, include outfitter camps.

Resorts/Camps	Follow-Up	each	2
---------------	-----------	------	---

7. Enter the number of organized resorts or camps that will require a follow-up inspection.

Sites	Other	each	4
-------	-------	------	---

8. Enter the number of other sites that will require an inspection. This would include temporary sites that are used by transient workers, special events (movie sets, Native American ceremonies, scouting events), rock quarries, etc.

Improved Campgrounds	Annual Inspection	each	1
----------------------	-------------------	------	---

9. Enter the number of improved campgrounds to be inspected.

Unimproved Campgrounds	Individual Unit Inspection	each	.25
------------------------	----------------------------	------	-----

10. Enter the number of sites at unimproved campgrounds (those sites that are generally used as overflow for regular campgrounds or historically have high use). Hunter camps, etc.

Special Risk	Inspection/ Prob. Analysis	each	8
--------------	-------------------------------	------	---

11. Enter the number of special risk areas that will be inspected and have a problem analysis prepared for. This would include such things as shoreline along rivers that have heavy rafting use, OHV routes that are heavily used or are part of an event. This may require a more complex evaluation and problem analysis.

Timber Sales	Initial	each	2
--------------	---------	------	---

12. Enter the number of active timber sales that will be inspected.

Timber Sales	Follow-Up	each	1
--------------	-----------	------	---

13. Enter the number of active timber sales that will be re-inspected. This would include all inspections that are done on a regular basis during the life of an active timber sale.

Sawmills	Initial	each	4
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14. Enter the number of sawmills to be inspected.

- | | | | |
|----------|-----------|------|---|
| Sawmills | Follow-Up | each | 2 |
|----------|-----------|------|---|
15. Enter the number of sawmills that will require a follow-up inspection.
- | | | | |
|-------------------|---------|------|---|
| Mining Operations | Initial | each | 4 |
|-------------------|---------|------|---|
16. Enter the number of mining operations to be inspected.
- | | | | |
|-------------------|-----------|------|---|
| Mining Operations | Follow-Up | each | 4 |
|-------------------|-----------|------|---|
17. Enter the number of mining operations that will require a follow-up inspection.
- | | | | |
|---------------|---------|------|---|
| Gas/Oil Wells | Initial | each | 1 |
|---------------|---------|------|---|
18. Enter the number of gas and oil wells, fuel (gasoline, diesel & propane) storage sites and service stations to be inspected.
- | | | | |
|---------------|-----------|------|----|
| Gas/Oil Wells | Follow-Up | each | .5 |
|---------------|-----------|------|----|
19. Enter the number of gas and oil wells, fuel (gasoline, diesel & propane) storage sites and service stations that will require a follow-up inspection.
- | | | | |
|--------------------|---------|------|---|
| Large Construction | Initial | each | 4 |
|--------------------|---------|------|---|
20. Enter the number of large construction projects to be inspected. Include road construction, dam construction, power line construction, etc.
- | | | | |
|--------------------|-----------|------|---|
| Large Construction | Follow-Up | each | 2 |
|--------------------|-----------|------|---|
21. Enter the number of large construction projects that will require a follow-up
- | | | | |
|--------------------|------------|------|---|
| Small Construction | Inspection | each | 2 |
|--------------------|------------|------|---|
22. Enter the number of small construction projects that will require an inspection and each of the follow-up inspections that will be required. Include building construction, small road projects, etc.

Dumps	Per Dump	each	1
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23. Enter the number of dumps that will be inspected.

Spark Arresters	Per Arrester	each	.5
--------------------	--------------	------	----

24. Enter the number of spark arrestors that will be inspected. Include off highway vehicles, chainsaws, generators, etc., that are not part of a timber sale or industrial operation.

Burning Permit	Per Inspection	each	.5
-------------------	-------------------	------	----

25. Enter the number of burning permit sites that will be inspected.

Target Range	Per Inspection	each	2
-----------------	-------------------	------	---

26. Enter the number of target ranges that will be inspected. These could be designated sites or areas of concentrate use.

7. Administration

Recruit, Train, Equip/Supervise	Volunteered Hours	hours	.15
------------------------------------	----------------------	-------	-----

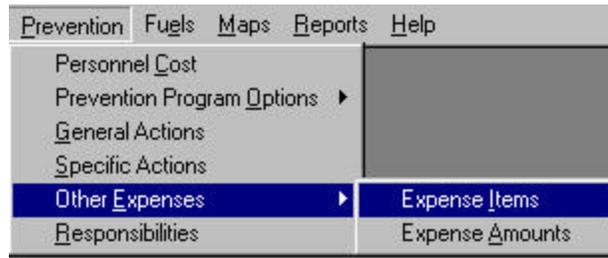
1. Enter the number of hours between 0 and 100 that are expected to be contributed by volunteers. For each hour that is contributed it is expected that .25 hours of instruction/training will be required.

Planning	Compartment Specific Plan	each	8
----------	------------------------------	------	---

2. Enter the number of prevention plans that will be developed or updated for a specific compartment. This entry would be completed if the analysis indicated that special treatment would be required for that specific compartment.

When complete, exit from the Specific Actions form.

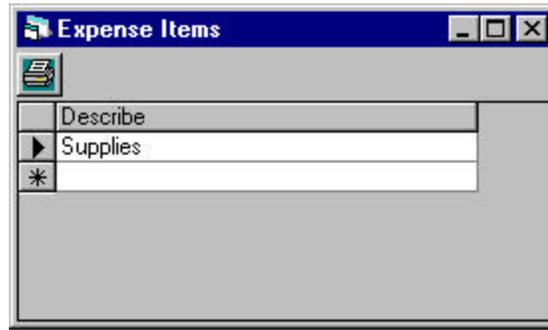
E. Other Expenses



Other Expenses are any items other than labor which should be included in your prevention budget.

1. Expense Items

You first create a "laundry list" of expense items.



2. Expense Amounts

Next, you may include any of your expense items in any of the Prevention Program Options.

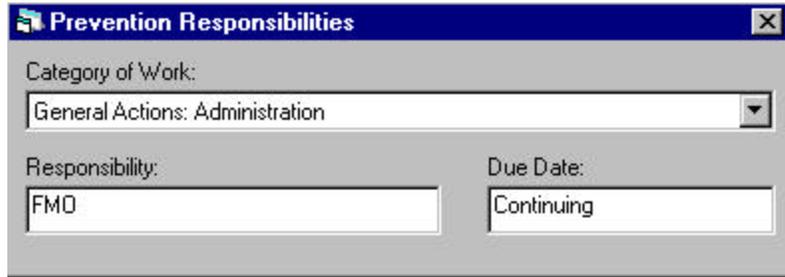
A screenshot of the 'Expense Items' dialog box showing a table with three columns: 'Expense Item', 'Option', and 'Amount'. The table contains three rows of data, all with 'Supplies' in the 'Expense Item' column. The 'Option' column contains '01MIN', '02HIS', and '03PLN'. The 'Amount' column contains '38760', '40800', and '42840'. There is also an asterisk (*) in the first column of the last row.

	Expense Item	Option	Amount
▶	Supplies	01MIN	38760
	Supplies	02HIS	40800
*	Supplies	03PLN	42840

In this example, we are including the "Supplies" Expense Item in three of our Prevention Program Options.

F. Responsibilities

RAMS allows you to assign responsibilities and due dates for different categories of prevention work. Select a category, and enter the person or group who is responsible, and the due date:

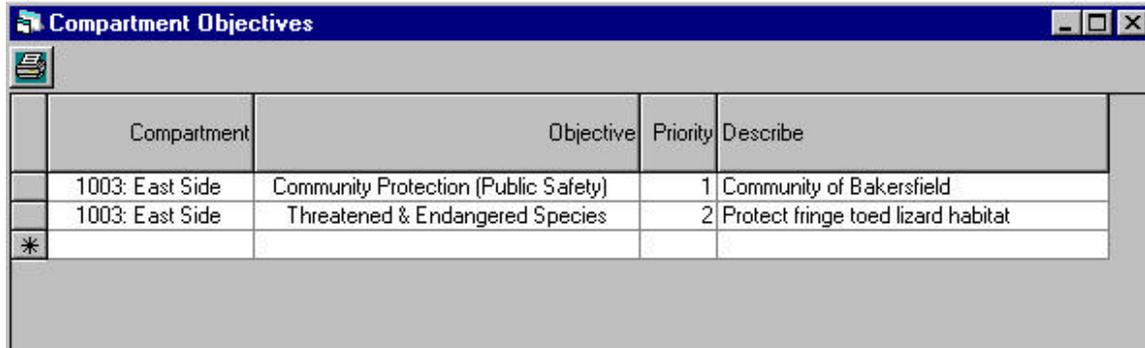


The image shows a screenshot of a software dialog box titled "Prevention Responsibilities". The dialog box has a blue title bar with a close button (X) in the top right corner. Below the title bar, there are three input fields. The first field is labeled "Category of Work:" and contains the text "General Actions: Administration" with a dropdown arrow on the right. The second field is labeled "Responsibility:" and contains the text "FMO". The third field is labeled "Due Date:" and contains the text "Continuing".

VIII. Fuels Menu

A. Compartment Objectives

On the Assessment Menu, you entered management objectives, which applied, to the entire planning unit. On the Fuels Menu, you will now list fuels management objectives for each Compartment:

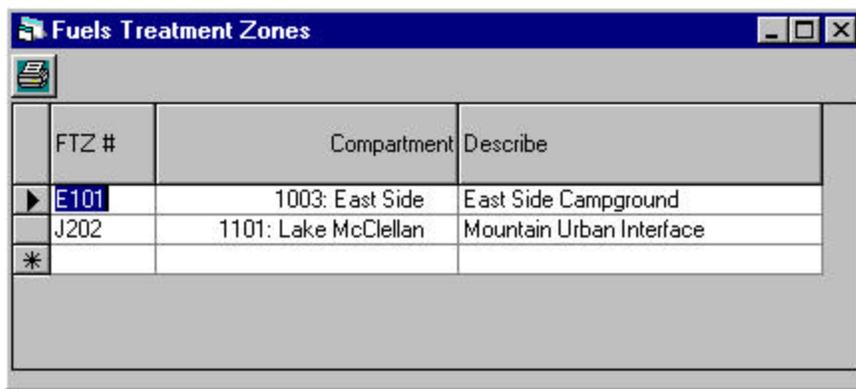


	Compartment	Objective	Priority	Describe
	1003: East Side	Community Protection (Public Safety)	1	Community of Bakersfield
	1003: East Side	Threatened & Endangered Species	2	Protect fringe toed lizard habitat
*				

Select the Compartment, choose from the list of Objectives, assign a report Priority, and enter a Description. If you have a management objective, which does not fit one of the built-in Objective categories, select “Other”, and describe it under “Describe”.

B. Fuels Treatment Zones

Compartments were used to focus attention on high priority areas during the assessment portion of RAMS. As we now prepare to consider more site-specific fuels treatments, the Compartments may be too large. Projects will be developed for smaller, subdivisions of Compartments called Fuels Treatment Zones (FTZs).



	FTZ #	Compartment	Describe
▶	E101	1003: East Side	East Side Campground
	J202	1101: Lake McClellan	Mountain Urban Interface
*			

Use this form to enter information about your Fuels Treatment Zones. Enter an identifier, pick the Compartment, and describe the FTZ. You may have more than one FTZ per Compartment. You may also have many Compartments for which you define no FTZs, due to low priority or lack of management objectives.

D. Management Risk and Impact Analysis

Management Risk And Impact Analysis

Fuels Treatment Zone (Compartment) - Fuels Treatment Strategy:

Fuels Treatment Zone	Compartment	Fuels Treatment Strategy
E101: East Side Ca	(1003: East Side)	- Mechanical Treatment
E101: East Side Ca	(1003: East Side)	- Fire Defense Systems
E101: East Side Ca	(1003: East Side)	- Prescribed Fire
J202: Mountain Urb	(1101: Lake McClell)	- Mechanical Treatment
J202: Mountain Urb	(1101: Lake McClell)	- Prescribed Fire

Risk & Impact Factor:	Low	Mod	High	Management Risk & Impact Factor:	Low	Mod	High
Public Safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Economic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Political/Social	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Air Quality/Public Health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Firefighter Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Level of Management Risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TE Species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Legal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For each combination of FTZ and Strategy, complete the Management Risk and Impact Assessment (MRIA) at the bottom of the screen. Note that the Strategies accompanying each FTZ are only those you selected in the previous step.

A “Low” rating means low risk. A “High” ranking means a high management risk.

E. Projects

You are now ready to define possible fuels Projects for your planning unit.

Project Alternatives			
Fuels Treatment Zone	{ Comp# }	{MRIA}	Fuels Treatment
E101: East Side Campground	{ 1003: }	{1}	Mechanical Treatment
E101: East Side Campground	{ 1003: }	{4}	Fire Defense Systems
E101: East Side Campground	{ 1003: }	{11}	Prescribed Fire
J202: Mountain Urban Interface	{ 1101: }	{1}	Mechanical Treatment
J202: Mountain Urban Interface	{ 1101: }	{11}	Prescribed Fire

To define a Project, first select its Fuels Treatment Zone and fuels treatment Strategy from the list at the top. Within the square brackets you will find a relative ranking of the Management Risk and Impact Assessment you completed. An entry of “1” means the least risk, while higher numbers indicate more relative risk.

Considering the management objectives for the area, the MRIA risk, and the Compartment’s priority, select an FTZ/Strategy combination for which you wish to develop a possible project.

You will then select, lower on the screen, the more specific type of fuels Treatments for the fuels Strategy you selected:

Add New Project:	
Piling	Brushland Plow
Bury	Green Stripping
Yarding (YUM)	
Chip & Removal	
Mastication	
Discing	
Chaining	

To build a Project, complete the requested information to the right:

Edit:	Cost Per Acre:	Other Costs		
# of Acres:	Planning	Implementation	Costs	FY:
5	30	274	1000	
Describe:	Duration	% of Comp	Save	
Jack Fuel Break	20	10		
Piling				

The information you will enter includes:

- # of Acres – for the project
- Cost per Acre (Planning) – dollars
- Cost per Acre (Implementation) – dollars
- Other Costs – fixed costs, will not be multiplied times Acres
- FY – leave blank to indicate potential Project. Fill in to include in Fuels Program
- Describe – name or Project number
- Duration – number of years of hazardous fuels benefit
- % of Comp – what percent of the Compartment’s fires will be affected

If you do not enter an amount for “Implementation”, the acres will not be counted as treated acres on the final RAMS report.

Hit “Add” when you are done.

You will generally leave the FY blank when you first create Project alternatives. Once you decide which Projects to include in your final Fuels Program, you indicate the appropriate fiscal year. Any Project with a fiscal year is included in your final Fuels Program. Any Project with no fiscal year is considered to have been a Project alternative, which was rejected.

Once you have created Projects, you may edit them by selecting them at the bottom of the screen, where you will see a list of Projects you created for the selected Compartment and Strategy:



Edit the information as you did when you added the project. Hit “Save” when done.

In the lower right corner, you may enter actual accomplishments:

Actual Accomplishments Per FY:		
FY	Acres	\$\$
▶ 1998	100	12000
1999	20	2100
*		

To delete an entire project, select it and then hit the "Delete" button.

F. Project Alternatives

1.1 Prescribed Fire - General

Planned acres to be accomplished by management ignited wildland fire and is confined to a predetermined area.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$8.00	\$70.00					

1. Size Class of Fuel: 1" to 10" diameter fuel can be effectively treated by prescribed burning, with the smaller fuel being consumed more readily. For this technique to be most effective, the fuel should be arranged to form a rather continuous fuelbed.
2. Terrain: With proper planning and preparation, prescribed burning can be applied to practically any terrain; however, it can be most easily and effectively executed on gentle slopes.
3. Environmental Considerations: Damage can occur to timber if the fire gets too hot and destruction of some small trees in thick reproduction stands is possible. There may be some siltation of nearby streams following a burn. Visual quality may suffer for a few years following a burn as the result of browned pine needles and blackened tree trunks but should be minimal after one or two seasons. Air quality will be adversely affected for the duration of the burn project.
4. Recommendation: Prescribed burning should be used in areas where fuel in the 1" to 10" size-class contribute significantly to the unacceptable fuel hazard rating. This technique will require careful burning prescription preparation to achieve the desired fuel removal results while protecting the environment. A limiting factor is the critical dependence on weather conditions to meet the prescription. On favorable terrain with favorable weather conditions, fuel loading and fuel arrangement, this is a very effective and relatively inexpensive technique.

1.2 Prescribed Fire – Pile Burn

Enter the number of planned acres at selected sites - Pile Burn.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$25.00	\$224.00					

1. Size Class of Fuel: 1" to 18" diameter fuel can be effectively treated by prescribed pile burning, with the smaller fuel being consumed more readily. For this technique to be most effective, the fuel should be arranged to form tight, compact piles.
2. Terrain: With proper planning and preparation, prescribed burning can be applied to practically any terrain; however, it can be most easily and effectively executed on gentle slopes.
3. Environmental Considerations: Damage can occur to timber if the fire gets too hot and destruction of some small trees in thick reproduction stands is possible if piles are not properly located. There may be some siltation of nearby streams following a burn. Air quality will be adversely affected for the duration of the burn project.
4. Recommendation: Prescribed pile burning should be used in areas where fuel in the 1" to 18" size-class contribute significantly to the unacceptable fuel hazard rating. This technique will require careful burning prescription preparation to achieve the desired fuel removal results while protecting the environment. A limiting factor can be dependent on weather conditions to meet the prescription. On favorable terrain with favorable weather conditions, fuel loading and fuel arrangement, this is a very effective and relatively inexpensive technique.

1.3 Prescribed Fire – Hand Fire

Enter the number of planned acres at selected sites - Hand Fire.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$3.00	\$22.00					

1. Size Class of Fuel: 1" to 10" diameter fuel can be effectively treated by prescribed burning, with the smaller fuel being consumed more readily. For this technique to be most effective, the fuel should be arranged to form a rather continuous fuelbed.
2. Terrain: With proper planning and preparation, hand prescribed burning can be applied to practically any terrain; however, it can be most easily and effectively executed on gentle slopes.
3. Environmental Considerations: Damage can occur to timber if the fire gets too hot and destruction of some small trees in thick reproduction stands is possible. There may be some siltation of nearby streams following a burn. Visual quality may suffer for a few years following a burn as the result of browned pine needles and blackened tree trunks but should be minimal after one or two seasons. Air quality will be adversely affected for the duration of the burn project.
4. Recommendation: Prescribed burning should be used in areas where fuel in the 1" to 10" size-class contribute significantly to the unacceptable fuel hazard rating. This technique will require careful burning prescription preparation to achieve the desired fuel removal results while protecting the environment. A limiting factor is the critical dependence on weather conditions to meet the prescription. On favorable terrain with favorable weather conditions, fuel loading and fuel arrangement, this is a very effective and relatively inexpensive technique.

1.4 Prescribed Fire – Aerial Fire

Enter the number of planned acres at selected sites – Aerial Fire.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$4.00	\$35.00					

1. Size Class of Fuel: 1" to 10" diameter fuel can be effectively treated by prescribed burning, with the smaller fuel being consumed more readily. For this technique to be most effective, the fuel should be arranged to form a rather continuous fuelbed.
2. Terrain: With proper planning and preparation, prescribed aerial burning can be applied to practically any terrain; however.
3. Environmental Considerations: Damage can occur to timber if the fire gets too hot and destruction of some small trees in thick reproduction stands is possible. There may be some siltation of nearby streams following a burn. Visual quality may suffer for a few years following a burn as the result of browned pine needles and blackened tree trunks but should be minimal after one or two seasons. Air quality will be adversely affected for the duration of the burn project.
4. Recommendation: Prescribed burning should be used in areas where fuel in the 1" to 10" size-class contribute significantly to the unacceptable fuel hazard rating. This technique will require careful burning prescription preparation to achieve the desired fuel removal results while protecting the environment. A limiting factor is the critical dependence on weather conditions to meet the prescription. On favorable terrain with favorable weather conditions, fuel loading and fuel arrangement, this is a very effective and relatively inexpensive technique.

1.5 Prescribed Fire – Broadcast

Enter the number of planned acres of intentional burning within well-defined boundaries for reduction of fire hazards.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$15.00	\$136.00					

1. Size Class of Fuel: 1" to 10" diameter fuel can be effectively treated by broadcast burning, with the smaller fuel being consumed more readily. For this technique to be most effective, the fuel should be arranged to form a rather continuous fuelbed.

2. Terrain: With proper planning and preparation, broadcast burning can be applied to practically any terrain; however, it can be most easily and effectively executed on gentle slopes.

3. Environmental Considerations: Damage can occur to timber if the fire gets too hot and destruction of some small trees in thick reproduction stands is possible. There may be some siltation of nearby streams following a burn. Visual quality may suffer for a few years following a burn as the result of browned pine needles and blackened tree trunks but should be minimal after one or two seasons. Air quality will be adversely affected for the duration of the burn project.

4. Recommendation: Broadcast burning should be used in areas where fuel in the 1" to 10" size-class contribute significantly to the unacceptable fuel hazard rating. This technique will require careful burning prescription preparation to achieve the desired fuel removal results while protecting the environment. A limiting factor is the critical dependence on weather conditions to meet the prescription. On favorable terrain with favorable weather conditions, fuel loading and fuel arrangement, this is a very effective and relatively inexpensive technique.

1.6 Prescribed Fire – Understory

Enter the number of planned acres by burning under a forest canopy consuming surface fuel.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$15.00	\$136.00					

1. Size Class of Fuel: 1" to 10" diameter fuel can be effectively treated by understory burning, with the smaller fuel being consumed more readily. For this technique to be most effective, the fuel should be arranged to form a rather continuous fuelbed.

2. Terrain: With proper planning and preparation, understory burning can be applied to practically any terrain; however, it can be most easily and effectively executed on gentle slopes.

3. Environmental Considerations: Damage can occur to timber if the fire gets too hot and destruction of some small trees in thick reproduction stands is possible. There may be some siltation of nearby streams following a burn. Visual quality may suffer for a few years following a burn as the result of browned pine needles and blackened tree trunks but should be minimal after one or two seasons. Air quality will be adversely affected for the duration of the burn project.

4. Recommendation: Broadcast burning should be used in areas where fuel in the 1" to 10" size-class contribute significantly to the unacceptable fuel hazard rating. This technique will require careful burning prescription preparation to achieve the desired fuel removal results while protecting the environment. A limiting factor is the critical dependence on weather conditions to meet the prescription. On favorable terrain with favorable weather conditions, fuel loading and fuel arrangement, this is a very effective and relatively inexpensive technique.

1.7 Prescribed Fire – Fuel Reduction Zone (General)

Enter the number of planned acres of selected sites – General.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$8.00	\$70.00					

1. Size Class of Fuel: All size classes can be treated with this technique.
2. Terrain: This can be applied to all types of terrain, but the steepest and roughest terrain will be difficult to treat.
3. Environmental Considerations: The same factors discussed for fuelbreak construction would apply to fuel reduction zones. The primary concern is the technique of construction chosen; whether it be handwork, machine pushing and manipulation or prescribed burning.
4. Recommendation: Fuel reduction zones should be used to isolate and/or partition unacceptable fuelbeds. This technique will be used in situations similar to those described for fuelbreak use. They differ from fuelbreaks in that there will be a reduction in fire intensity within the scope of the fuel reduction zone but not necessarily at strategic fire control locations. There would be a reduction in rate-of-spread and resistance-to-control enabling better suppression capability.

1.8 Prescribed Fire – Fuel Reduction Zone (Wildland Urban)

Enter the number of planned acres of selected sites – Wildland Urban.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$11.00	\$100.00					

1. Size Class of Fuel: All size classes can be treated with this technique.
2. Terrain: This can be applied to all types of terrain, but the steepest and roughest terrain will be difficult to treat.
3. Environmental Considerations: The same factors discussed for fuel reduction zone (general) construction would apply to fuel reduction zones. The primary concern is the technique of construction chosen; whether it be handwork, machine pushing and manipulation or prescribed burning.
4. Recommendation: Fuel reduction zones should be used to isolate and/or partition unacceptable fuelbeds. This technique will be used in situations similar to those described for fuelbreak use. They differ from fuelbreaks in that there will be a reduction in fire intensity within the scope of the fuel reduction zone but not necessarily at strategic fire control locations. There would be a reduction in rate-of-spread and resistance-to-control enabling better suppression capability.

2. Appropriate Response

2.1 Appropriate Management Response – Wildland Fire

Enter the number of planned acres by management decision to utilize wildland fires regardless of ignition source.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$6.00	\$50.00					

☆ Refer to agency specific standards and implementation criteria.

3. Fire Defense Improvements

3.1 Fire Defense Improvements – Fuelbreak

Enter the number of planned acres of change in fuel characteristics that can affect fire behavior – Prescribed Fire.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$8.00	\$70.00					

1. Size Class of Fuel: All size classes of fuel can be treated.
2. Terrain: Fuelbreaks can be an effective treatment for all types of terrain.
3. Environmental Considerations: Care must be taken in the planning and construction of fuelbreaks to protect the visual quality of an area. Other environmental impacts depend primarily on the method of construction. The various techniques available will have to be evaluated to determine which is most applicable to a particular fuelbreak or segment of a fuelbreak. Local experience shows that fuelbreaks can be constructed with very little environmental damage and, in fact, may improve local conditions.
4. Recommendation: A fuelbreak may be used to interrupt the continuity of fuel that are economically or physically impractical to treat directly. For example, by constructing 10 acres of fuelbreak, it may be possible to isolate 40 acres of land with an unacceptable fuel loading.

In some areas identified with an unacceptable fuel hazard rating where brush has encroached upon the site. Fuelbreaks may prove very useful in isolating these areas from the general ecosystem zone.

3.2 Fire Defense Improvements – Fuelbreak - Hand

Enter the number of planned acres of change in fuel characteristics that can affect fire behavior – Hand.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$110.00	\$1,000.00					

1. Size Class of Fuel: All size classes of fuel can be treated.
2. Terrain: Fuelbreaks can be an effective treatment for all types of terrain.
3. Environmental Considerations: Care must be taken in the planning and construction of fuelbreaks to protect the visual quality of an area. Other environmental impacts depend primarily on the method of construction. The various techniques available will have to be evaluated to determine which is most applicable to a particular fuelbreak or segment of a fuelbreak. Local experience shows that fuelbreaks can be constructed with very little environmental damage and, in fact, may improve local conditions.
4. Recommendation: A fuelbreak may be used to interrupt the continuity of fuel that are economically or physically impractical to treat directly. For example, by constructing 10 acres of fuelbreak, it may be possible to isolate 40 acres of land with an unacceptable fuel loading.

In some areas identified with an unacceptable fuel hazard rating where brush has encroached upon the site. Fuelbreaks may prove very useful in isolating these areas from the general ecosystem zone.

3.3 Fire Defense Improvements – Fuelbreak - Mechanical

Enter the number of planned acres of change in fuel characteristics that can affect fire behavior – Mechanical.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$22.00	\$200.00					

1. Size Class of Fuel: All size classes of fuel can be treated.
2. Terrain: Fuelbreaks can be an effective treatment for all types of terrain.
3. Environmental Considerations: Care must be taken in the planning and construction of fuelbreaks to protect the visual quality of an area. Other environmental impacts depend primarily on the method of construction. The various techniques available will have to be evaluated to determine which is most applicable to a particular fuelbreak or segment of a fuelbreak. Local experience shows that fuelbreaks can be constructed with very little environmental damage and, in fact, may improve local conditions.
4. Recommendation: A fuelbreak may be used to interrupt the continuity of fuel that are economically or physically impractical to treat directly. For example, by constructing 10 acres of fuelbreak, it may be possible to isolate 40 acres of land with an unacceptable fuel loading.

In some areas identified with an unacceptable fuel hazard rating where brush has encroached upon the site. Fuelbreaks may prove very useful in isolating these areas from the general ecosystem zone.

3.4 Fire Defense Improvements – Helispot Development

Enter the number of planned construction of improved take off and landings for temporary or occasional use.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment

1. The proper selection and construction of landing areas is essential to both the safety and efficiency of helicopter operations. Landing areas that are poorly located or constructed may contribute to or be the cause of an accident. At a minimum, inadequate areas heighten risk, increase Pilot workload and result in inefficient operations.

Prior to reading this chapter, consult the Glossary for definitions of terms commonly used with reference to helicopter landing areas. These include:

- Permanent helibase
- Temporary helibase
- Helispot
- Unimproved landing site
- Safety circle
- Touchdown pad
- Approach-departure path

This chapter establishes the requirements and specifications for helibases, helispots, and unimproved landing sites. As clarification for when a helispot should be staffed, managed and operated as a helibase, the general rule, as applied elsewhere in this guide, is that when a site is used for more than one day as an operational base for two or more helicopters, it should be classified and operated as a helibase.

2. Planning: The selection of an area or areas on which to land the helicopter(s) is an important planning activity. When possible, the Pilot(s) should have input. The following general requirements should always be considered.
 - The types of activity and volume of traffic will affect selection, as well as initial and later development of the landing area(s).
 - The site should lend itself to economic and environmentally-sensitive development to the size which will accommodate the type of helicopters and volume of traffic is expected in both the short- and long-term. Anticipate future needs.
 - Weather (potential for smoke or fog inversions, winds) also plays a significant role in location of facilities, both long- and short-term.
 - Site planning and construction of all sites, both permanent and temporary, shall be in accordance with local agency land management policy.

3. Permanent Helibase: A careful study should be made of local, state and federal laws, rules and regulation relating to construction of a permanent helibase. Site selection should provide for adequate approach and departure paths which avoid housing areas, schools, churches and any other facilities that might be disturbed by low-flying helicopters.
4. Accommodation for Different Helicopter Types (Sizes): All permanent facilities should, at a minimum, be built to accommodate one Type 2 (medium) helicopter.

3.5 Fire Defense Improvements – Heliport Development

Enter the number of planned construction of a permanent facility for operations of helicopters built to FAA standards.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment

The same considerations addressed with helibases to the use of helispots, especially those that will require improvement.

1. Hand Construction: Hand construction methods are best since there is less ground disturbance than that created by mechanized construction. There are measures which can be implemented during construction of a helibase or helispot that will lessen the workload during rehabilitation and help ensure that the objective of restoration to as close to a natural state as possible is achieved. These include:
 - Cut trees or snags close to the ground, leaving stump heights of 0-3 inches. (It is recognized that this may not always be possible during initial construction; follow up flush cutting will be necessary.)
 - If possible, and only if it can be performed safely, fell trees or other vegetation so that some cut trees and snags will be in a crisscrossed or natural appearing arrangement.
 - Buck up only what is necessary to achieve a safe operation in and around the touchdown pad and in the approach-departure path(s). Excessive bucked-up pieces are unnatural. They also increase the workload of camouflaging cutfaces during helispot rehabilitation.
 - Limb only what is necessary to achieve a safe operation in and around the touchdown pad and in the approach-departure path(s). If possible, breaking of limbs is preferred to sawing. Excessive limbing results in additional smooth-cut spots along the boles. It also creates an increased amount of limbs to either dispose of in the timbered area or to arrange in a fashion that resembles a natural ecosystem floor.

2. Mechanized Construction: Basic requirements are the same as those for hand construction. If large rocks are dislodged, they should be removed and placed in an area where they appear to be natural. Hand work is frequently necessary to cut the fringe of brush left by bulldozers. Dozer-constructed landing areas generally have soil that is disturbed, requiring dust abatement procedures. Unless absolutely necessary, mechanized construction or improvement is to be avoided.

3. General Locations for Helispots and Unimproved Landing Site.
 - Ridge Tops: An exposed knob on a ridge offers the best location, especially if approach/departure is available from all or several directions. Consider the following:
 - Minimum approach/departure path should be no less than the required safety circle.

3.6 Fire Defense Improvements – Firebreak - Hand

Enter the number of planned acres of constructed barriers used to stop or check fires or provide a control line from which to work – Hand.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$110.00	\$1,000.00					

1. Size Class of Fuel: All size classes of fuel can be treated.
2. Terrain: Firebreaks can be an effective treatment for all types of terrain.
3. Environmental Considerations: Care must be taken in the planning and construction of firebreaks to protect the visual quality of an area. Other environmental impacts depend primarily on the method of construction. The various techniques available will have to be evaluated to determine which is most applicable to a particular firebreak or segment of a firebreak. Local experience shows that firebreaks can be constructed with very little environmental damage and, in fact, may improve local conditions.
4. Recommendation: A firebreak may be used to interrupt the continuity of fuel that are economically or physically impractical to treat directly. For example, by constructing 10 acres of firebreak, it may be possible to isolate 40 acres of land with an unacceptable fuel loading.

In areas identified with an unacceptable fuel hazard rating where brush has encroached upon the site, firebreaks may prove very useful in isolating these areas from the general ecosystem zone.

3.7 Fire Defense Improvements – Firebreak - Mechanical

Enter the number of planned acres of constructed barriers used to stop or check fires or provide a control line from which to work – Mechanical.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$110.00	\$1,000.00					

1. Size Class of Fuel: All size classes of fuel can be treated.
2. Terrain: Firebreaks can be an effective treatment for all types of terrain.
3. Environmental Considerations: Care must be taken in the planning and construction of firebreaks to protect the visual quality of an area. Other environmental impacts depend primarily on the method of construction. The various techniques available will have to be evaluated to determine which is most applicable to a particular firebreak or segment of a firebreak. Local experience shows that firebreaks can be constructed with very little environmental damage and, in fact, may improve local conditions.
4. Recommendation: A firebreak may be used to interrupt the continuity of fuel that are economically or physically impractical to treat directly. For example, by constructing 10 acres of firebreak, it may be possible to isolate 40 acres of land with an unacceptable fuel loading.

In areas identified with an unacceptable fuel hazard rating where brush has encroached upon the site, firebreaks may prove very useful in isolating these areas from the general ecosystem zone.

4. Mechanical Treatment

4.1 Mechanical Treatment – Piling

Enter the number of planned acres of slash removal resulting from logging or fuel treatment activities – Piling.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$30.00	\$274.00					

1. Size Class of Fuel: Machine piling is very effective on all size classes of fuel.
2. Terrain: This method is limited to slopes of less than 35 percent. Rocky terrain also inhibits the use and effectiveness of machine piling.
3. Environmental Considerations: A certain amount of soil movement can be expected with the use of this technique. There could also be adverse visual effects in some areas and possible physical damage to trees if their spacing is close together. There will be a short-term decrease in air quality while the piles are being burned.
4. Recommendation: Machine piling should be proposed in areas that have problem fuel in the 10+" diameter category located on slopes of less than 35 percent where the visual resource objective is "partial retention" or less restrictive. It is an especially effective single treatment, since it treats all size classes of slash at the same time.

4.2 Mechanical Treatment – Bury

Enter the number of planned acres of slash removal resulting from logging or fuel treatment activities – Bury.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$30.00	\$274.00					

1. Size Class of Fuel: Fuel burying can be very effective on all size classes of fuel.
2. Terrain: This method is limited to slopes of less than 20 percent. Rocky terrain also inhibits the use and effectiveness of this technique.
3. Environmental Considerations: A certain amount of soil movement can be expected with the use of this technique. There could also be adverse visual effects in some areas.
4. Recommendation: Fuel burying should be proposed in areas that have problem fuel in the 10+" diameter category located on slopes of less than 20 percent where the visual resource objective is less restrictive. It is an especially effective single treatment, since it treats all size classes of fuel at the same time.

4.3 Mechanical Treatment – Yarding (YUM)

Enter the number of planned acres of slash removal resulting from logging or fuel treatment activities – Yarding.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$18.00	\$170.00					

1. Size Class of Fuel: This technique would involve removing and decking sound logs at least 6" in diameter and 10' or more long for utilization as fuelwood or for later burning.
2. Terrain: Yarding can be accomplished on any slope that has been logged. However, if the area has been logged by skyline, highlead cable or helicopter logging, yarding would most likely have to be accomplished using the same type of system. These systems are extremely expensive to set up and use; therefore, for treatment of backlog slash, yarding will be considered only on slopes of 35 percent where a tractor or rubber-tired skidder can operate.
3. Environmental Considerations: Skid trails used for yarding could channel water and contribute to soil erosion as off-site soil erosion may occur. This effect could be minimized by construction of water bars along the skid trails. There will also be some degradation of visual quality until the log decks are disposed of. A temporary degradation of air quality can be expected if decks require burning.
4. Recommendation: This method may be applied in areas where large logs are the primary problem fuel. In addition, it may be utilized in conjunction with other methods that reduce small fuel in environmentally sensitive areas if both large and small fuel contribute significantly to the unacceptable fuel hazard rating.

4.4 Mechanical Treatment – Chip & Remove

Enter the number of planned acres of slash removal resulting from logging or fuel treatment activities – Chip & Remove.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$12.00	\$103.00					

1. Size Class of Fuel: Fuel in the 1" to 10" size-class is effectively treated by thinning. Larger material takes a long time to be cut down to chunks small enough to be managed by hand and is, therefore, inefficiently treated by hand.
2. Terrain: This technique is applicable to all types of terrain, but can be very difficult to accomplish on slopes over 70 percent.
3. Environmental Considerations: The visual quality should not suffer at all if this method is applied properly. Likewise, very little, if any, off-site soil movement will occur. Overall, there should be no significant change in the environmental quality of an area treated by hand piling except for a short-term decrease in air quality while the piles are being burned.
4. Recommendation: Chip and remove should be proposed in areas where fuel in the 1" to 10" size-class create an unacceptable fuel hazard rating. Since this method causes little environmental impact, it will be given preference in sensitive areas over methods that cause greater disturbance. If large quantities of 10+" diameter fuel are also present, other methods may have to be used in conjunction with thinning to achieve a medium rating for the fuelbed.

4.5 Mechanical Treatment – Mastication

Enter the number of planned acres to be accomplished by this selected activity – Mastication.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$12.00	\$110.00					

1. Size Class of Fuel: This varies considerably with individual machines; however, the maximum size of slash that can be treated effectively is 4”-6” in diameter with smaller sizes being treated more readily.

2. Terrain: These machines are limited to slopes of about 30 to 35 percent and would not be very effective in areas with large rocks.

3. Environmental Considerations: The most significant impact will be caused by the addition of debris to the duff layer. This would result in a faster decomposition rate for the treated fuel and a more rapid nutrient cycling of the soil. In areas of thick regeneration or heavy stand densities, some damage to or destruction of the residual stand is to be expected. No other significant negative impacts are apparent at this time.

4. Recommendation: Mastication should be used in areas with small diameter fuel. This technique appears to be especially applicable as a means of thinning timber reproduction and treating areas being encroached upon by brush. These cutters can accomplish thinning and treatment of thinning slash a the same time.

4.6 Mechanical Treatment – Chaining

Enter the number of planned acres to be accomplished by this selected activity – Chaining.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$15.00	\$180.00					

1. Size Class of Fuel: This varies considerably with individual machines; however, the maximum size of slash that can be treated effectively is 2”-4” in diameter with smaller sizes being treated more readily.
2. Terrain: These machines are limited to slopes of about 30 to 35 percent and would not be very effective in areas with large rocks.
3. Environmental Considerations: The most significant impact will be caused by the addition of down and dead debris that will, in all probability, require a second treatment. In areas of thick regeneration or heavy stand densities, some damage to or destruction of the residual stand is to be expected. No other significant negative impacts are apparent at this time.
4. Recommendation: Mastication should be used in areas with small diameter fuel. This technique appears to be especially applicable as a means of thinning timber reproduction and treating areas being encroached upon by brush. These cutters can accomplish thinning and treatment of thinning slash at the same time.

4.7 Mechanical Treatment – Brushland Plow

Enter the number of planned acres to be accomplished by this selected activity –
Brushland Plow.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$15.00	\$150.00					

1. Size Class of Fuel: This varies considerably with individual machines; however, the maximum size of slash that can be treated effectively is 2”-4” in diameter with smaller sizes being treated more readily.
2. Terrain: These machines are limited to slopes of about 30 to 35 percent and would not be very effective in areas with large rocks.
3. Environmental Considerations: The most significant impact will be caused by the addition of debris to the duff layer. This would result in a faster decomposition rate for the treated fuel and a more rapid nutrient cycling of the soil. In areas of thick regeneration or heavy stand densities, some damage to or destruction of the residual stand is to be expected. No other significant negative impacts are apparent at this time.
4. Recommendation: Mastication should be used in areas with small diameter fuel. This technique appears to be especially applicable as a means of thinning timber reproduction and treating areas being encroached upon by brush. These cutters can accomplish thinning and treatment of thinning slash a the same time.

4.8 Mechanical Treatment – Green Stripping

Enter the number of planned acres to be accomplished by this selected activity – Green Stripping.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$15.00	\$250.00					

1. Size Class of Fuel: This varies considerably with individual machines; however, the maximum size of slash that can be treated effectively is 1”-4” in diameter with smaller sizes being treated more readily.
2. Terrain: These machines are limited to slopes of about 30 to 35 percent and would not be very effective in areas with large rocks.
3. Environmental Considerations: The most significant impact will be caused by the addition of debris to the duff layer. This would result in a faster decomposition rate for the treated fuel and a more rapid nutrient cycling of the soil. In areas of thick regeneration or heavy stand densities, some damage to or destruction of the residual stand is to be expected. No other significant negative impacts are apparent at this time.
4. Recommendation: Mastication should be used in areas with small diameter fuel. This technique appears to be especially applicable as a means of thinning timber reproduction and treating areas being encroached upon by brush. These cutters can accomplish thinning and treatment of thinning slash a the same time.

5. Handwork

5.1 Handwork – General

Enter the number of acres planned to be accomplished by general handwork.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$110.00	\$1,000.00					

1. Size Class of Fuel: Fuel in the 1" to 10" size-class is effectively treated by hand. Larger material takes a long time to be cut down to chunks small enough to be managed by hand and is, therefore, inefficiently treated by hand.
2. Terrain: This technique is applicable to all types of terrain, but can be very difficult to accomplish on slopes over 70 percent.
3. Environmental Considerations: The visual quality should not suffer if this method is applied properly by locating piles away from green trees to prevent scorching and following the burning prescription closely. Likewise, very little, if any, off-site soil movement will occur. Overall, there should be no significant change in the environmental quality of an area treated by hand piling except for a short-term decrease in air quality while the piles are being burned.
4. Recommendation: Hand piling should be proposed in areas where fuel in the 1" to 10" size-class create an unacceptable fuel hazard rating. Since this method causes little environmental impact, it will be given preference in sensitive areas over methods that cause greater disturbance. If large quantities of 10+" diameter fuel are also present, other methods may have to be used in conjunction with handwork to achieve a medium rating for the fuelbed.

5.2 Handwork – Thin & Remove

Enter the number of acres planned to be accomplished by fuel thinning and removal.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$24.00	\$225.00					

1. Size Class of Fuel: Fuel in the 1" to 10" size-class is effectively treated by thinning. Larger material takes a long time to be cut down to chunks small enough to be managed by hand and is, therefore, inefficiently treated by hand.
2. Terrain: This technique is applicable to all types of terrain, but can be very difficult to accomplish on slopes over 70 percent.
3. Environmental Considerations: The visual quality should not suffer at all if this method is applied properly. Likewise, very little, if any, off-site soil movement will occur. Overall, there should be no significant change in the environmental quality of an area treated by hand piling except for a short-term decrease in air quality while the piles are being burned.
4. Recommendation: Thinning should be proposed in areas where fuel in the 1" to 10" size-class create an unacceptable fuel hazard rating. Since this method causes little environmental impact, it will be given preference in sensitive areas over methods that cause greater disturbance. If large quantities of 10+" diameter fuel are also present, other methods may have to be used in conjunction with thinning to achieve a medium rating for the fuelbed.

6. Roadside Hazard Reduction

6.1 Roadside Hazard Reduction – Hand

Enter the number of acres planned to be accomplished by hand.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$110.00	\$1,000.00					

1. Size Class of Fuel: Fuel in the 1" to 10" size-class is effectively treated by hand. Larger material takes a long time to be cut down to chunks small enough to be managed by hand and is, therefore, inefficiently treated by hand.
2. Terrain: This technique is applicable to all types of terrain, but can be very difficult to accomplish on slopes over 70 percent.
3. Environmental Considerations: The visual quality should not suffer if this method is applied properly by locating piles away from green trees to prevent scorching and following the burning prescription closely. Likewise, very little, if any, off-site soil movement will occur. Overall, there should be no significant change in the environmental quality of an area treated by hand piling except for a short-term decrease in air quality while the piles are being burned.
4. Recommendation: Hand piling should be proposed in areas where fuel in the 1" to 10" size-class create an unacceptable fuel hazard rating. Since this method causes little environmental impact, it will be given preference in sensitive areas over methods that cause greater disturbance. If large quantities of 10+" diameter fuel are also present, other methods may have to be used in conjunction with handwork to achieve a medium rating for the fuelbed.

6.2 Roadside Hazard Reduction – Mechanical

Enter the number of acres planned to be accomplished by mechanical.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment
	\$22.00	\$200.00					

1. Size Class of Fuel: Machine piling is very effective on all size classes of slash.
2. Terrain: This method is limited to slopes of less than 35 percent. Rocky terrain also inhibits the use and effectiveness of machine piling.
3. Environmental Considerations: A certain amount of soil movement can be expected with the use of this technique. There could also be adverse visual effects in some areas and possible physical damage to trees if their spacing is close together. There will be a short-term decrease in air quality while the piles are being burned.
4. Recommendation: Machine piling should be proposed in areas that have problem fuel in the 10+" diameter category located on slopes of less than 35 percent where the visual resource objective is "partial retention" or less restrictive. It is an especially effective single treatment, since it treats all size classes of slash at the same time.

7. Biomass Harvest

7.1 Biomass Harvest

Enter the number of planned acres of change in fuel characteristics that can affect fire behavior – Biomass Harvest.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment

☆ Refer to agency standards.

8. Biological Treatment

8.1 Biological Treatment

Enter the number of planned acres to be accomplished by this selected activity –
Biological Treatment.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment

☆ Refer to agency standards.

8.2 Biological Treatment - Chemical

Enter the number of planned acres to be accomplished by this selected activity –
Chemical.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment

☆ Refer to agency standards.

8.3 Biological Treatment - Other

Enter the number of planned acres to be accomplished by this selected activity – Other.

# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment

☆ Refer to agency standards.

8.4 Biological Treatment - Livestock

Enter the number of planned acres to be accomplished by this selected activity – Livestock.

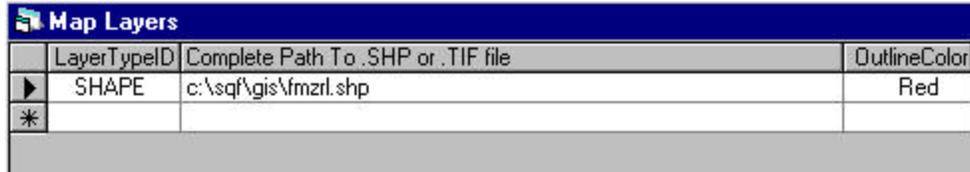
# of Acres	Planning Cost/Acre	Implementation Cost/Acre	Other Costs Cost/Acre	FY	Description	Project Duration	% of Compartment

☆ Refer to agency standards.

IX. Maps Menu



A. Define Layers

A screenshot of the 'Map Layers' dialog box. It features a table with three columns: 'LayerTypeID', 'Complete Path To .SHP or .TIF file', and 'OutlineColor'. The first row contains the values 'SHAPE', 'c:\sqf\gis\fmzrl.shp', and 'Red'. There are also some icons (a triangle and an asterisk) in the first column of the table.

	LayerTypeID	Complete Path To .SHP or .TIF file	OutlineColor
▶	SHAPE	c:\sqf\gis\fmzrl.shp	Red
*			

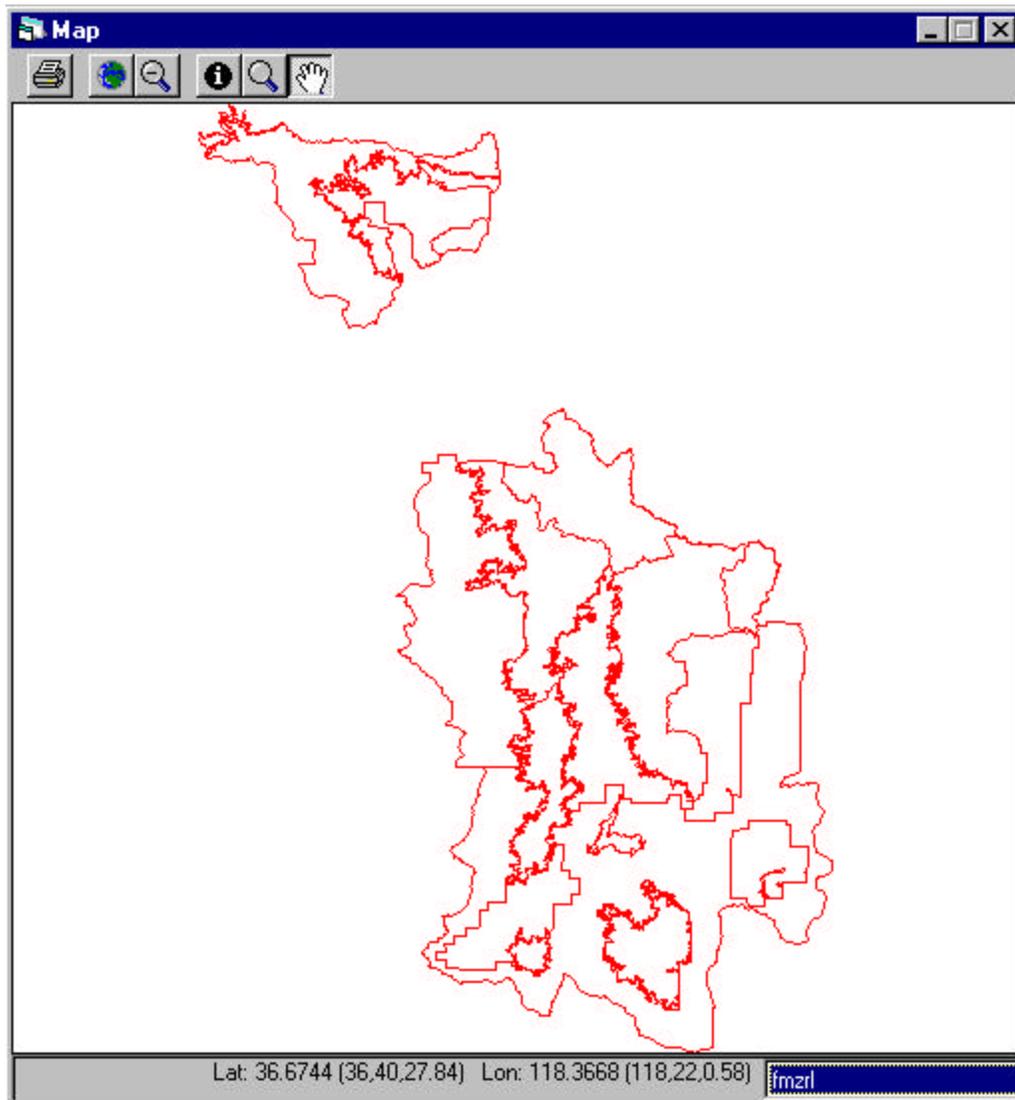
An optional feature of RAMS allows you to display GIS layers. You might want to include a base map, fuels or vegetation, historical fires, population density, resource values, Compartments and FTZs.

You may display both Image files and Shape files. Image files are “.TIF” files, and Shape files are “.SHP” files with the associated .SHX and .DBF.

To display a file, select its type and enter its file path. For Shape files, you may choose the display color.

It is important to realize that all layers must be in the same “projection”. If you use a UTM projection and have listed the UTM Zone back on the Setup-Planning Unit menu item, then RAMS can convert the mouse location to latitude/longitude when you display the map.

B. View Map

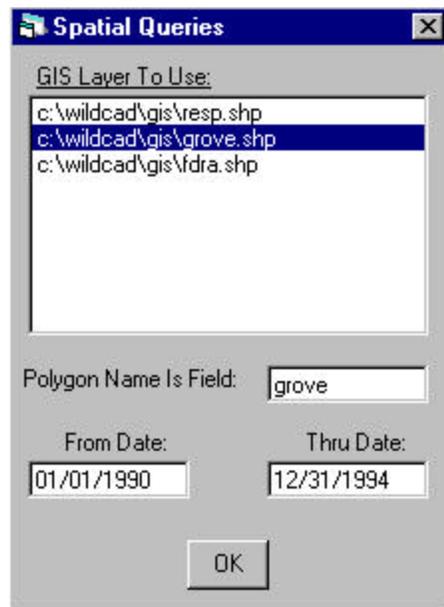


At the top of the map display are several buttons:

- Print – prints visible display to printer
- Full Extent – returns to full map display
- Zoom Out – zooms out to 200% of present
- Information – displays information about layer selected at bottom
- Zoom In – zooms in to rectangle you select with mouse
- Pan – allows you to click and drag display

C. Count PCHA Fires By Polygon

This utility allows you to view a report of fires by cause for each separate polygon in a polygon "shape file" which you must create outside of RAMS. Suppose, for example, that you can create a shape file of your RAMS Fuels Treatment Zones. Provided that you have imported your fires from PCHA, you may then use this utility to receive a report showing numbers of fires and acres burned within each FTZ.



Select the polygon shape file you wish to use. In this example, we are using a shape file called "grove.shp". Tell RAMS the name of the field in that file which is to be used to label the polygons (grove), and a date range.

The program will start its calculations by taking you into the map display. You do not need to do anything during this process.

After a few minutes, a report like the one below will be displayed. The first portion counts fires, and the second half shows acres burned.

Hit the printer icon in the upper left corner to send the report to your printer.

Fires By Polygon report Part I: Fire Frequency

Reno District
RAMS
Fire History By GIS Polygon: 01/01/1990-12/31/1994
c:\wildcad\gis\grove.shp
Part I: Fire Frequency

grove	Unknown	Lightning	Equipment	Smoking	Campfire	Debris Bu	Railroad	Arson	Children	Miscellan	TOTALS
N/A		300	39	27	71	31	1	102	19	129	719
BELKNAP										1	1
CONVERSE		4	1		1					1	7
DILLONWOOD		1	1								2
EVANS		3			1						4
FREEMAN		2								1	3
INDIAN			1							1	2
LONGMEADOW				1							1
MT_HOME		2								1	3
Totals:		312	42	28	73	31	1	102	19	134	742

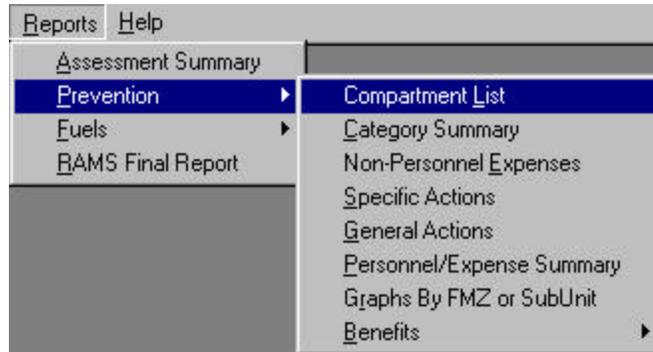
Fires By Polygon report Part II: Acres Burned

Reno District
RAMS
Fire History By GIS Polygon: 01/01/1990-12/31/1994
c:\wildcad\gis\grove.shp
Part II: Acres Burned

grove	Unknown	Lightning	Equipment	Smoking	Campfire	Debris Bu	Railroad	Arson	Children	Miscellan	TOTALS
N/A		33,266	789	9	2,056	150		3,973	3,102	3,610	46,955
BELKNAP											
CONVERSE											2
DILLONWOOD			2								2
EVANS		2									2
FREEMAN										2	2
INDIAN											
LONGMEADOW											
MT_HOME											
Totals:		33,580	833	37	2,129	181	1	4,075	3,121	3,746	47,703

X. Reports Menu

View and/or print a variety of reports from this menu:



A. Assessment Summary

RAMS
Reno District
Compartment Assessment Summary

Comp #	Total	Hazard	Ign Risk	Values	Protectn	Interval	Fire Hist
1102	HIGH	MODERATE	HIGH	HIGH	MODERATE	MODERATE	HIGH
1201	MODERATE	HIGH	LOW	HIGH	HIGH	MODERATE	LOW
1003	MODERATE	LOW	HIGH	MODERATE	LOW	HIGH	HIGH
1101	LOW	MODERATE	MODERATE	LOW	HIGH	MODERATE	MODERATE

The Assessment Summary report shows you how the Compartments were ranked relative to each other. Higher priority Compartments are listed first, followed by those with a lower priority.

B-1. Prevention - Compartment List

Prior to running this report, make sure (in Setup-Compartments) that every Compartment is assigned to an FMZ and to a Sub-Unit.

RAMS
Compartment Listing

Comp #	Describe	Acres	Pct FMZ	RL SubUnit
1003	FMZ 01, RL 3: Non-Conifer/Non-	1096100	100 01	3 01
1101	FMZ 02, RL 1: Conifer/Non-Wild	503891	100 02	1 01
1102	FMZ 02, RL 2: Conifer/Non-Wild	409124	100 02	2 01
1201	FMZ 03, RL 1: Wilderness	358102	100 03	1 01

B-2. Prevention - Category Summary

This report is one of several which allows you to enter criteria on the following screen:

Prevention Report Criteria

Prevention Options:

First Option: MIN (Minimum)

Second Option: PLAN (Plan)

Show Difference

Compartments:

All Compartments

Only In FMZ: []

Only In SubUnit: []

One Compartment: []

OK

Select the desired Prevention Options, and indicate the Compartments to utilize.

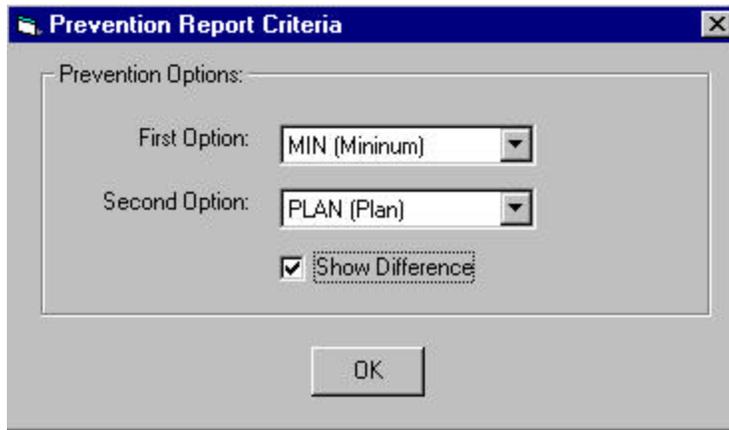
The report is a summary of the number of planned hours by Specific Action category and by General Action:

RAMS
Sequoia National Forest
Category Summary (Hours)

Category	MIN	PLAN	Difference
Patrol	3,476	6,960	-3,484
Signs	5,484	11,748	-6,264
Law Enforcement Hazards	1,031	2,222	-1,191
Public Contact	5,176	13,589	-8,413
Inspections	3,248	6,413	-3,165
Administration		56	-56
General Actions	4,049	14,023	-9,974
Totals	22,464	55,011	-32,547

B-3. Prevention - Non-Personnel Expenses

This report also allows you to pick one or two Prevention Options before showing the report:



RAMS
Sequoia National Forest
Non-Personnel Expenses (Dollars)

Expense Item	MIN	PLAN	Difference
Supplies	\$6,500	\$42,840	-\$36,340
Totals	\$6,500	\$42,840	-\$36,340

B-4. Prevention - Specific Actions

This report lists all Specific Actions which you included in your Prevention Options:

RAMS
Sequoia National Forest
Specific Actions

CATEGORY	Description	Units	Hours	01MIN	02HIS	DIFC
Work Standards	=====	=====	=====	=====	=====	=====
Patrol						
	Patrol					
	When Danger or Risk dictates	days	4	7	34	-27
Signs						
	Maintenance					
	Maintain Existg Signs	each	6	2	2	
	Construction					
	Build Add'l Signs	each	12	1	5	-4
Law Enforcement						
	Issue Cite or Warning					
	1 Hrs per Incident	each	1	2	3	-1
	Court appear.					
	8 Hrs per Case	each	8	1	1	
	Fire Unknown Suspect					
	8 Hrs per Investigation	each	8	1	2	-1
	Known Suspect					
	5 Days per Case	each	40	1	2	-1

The entries on the report under the Prevention Options (e.g. 01MIN) are the number of items planned. In the above example, we are planning 7 days of patrol at the minimum option level, and 34 in the plan level. Each day of patrol requires 4 hours.

B-5. Prevention - General Actions

We may also view a report of our General Actions:

RAMS
Sequoia National Forest
General Actions

CATEGORY	Description	Units	Hours	01MIN	02HIS	DIFC
Work Standards	Work Standards	Units	Hours	01MIN	02HIS	DIFC
=====	=====	=====	=====	=====	=====	=====
Education						
Signs						
	Prepare Plan	plans	40		14	-14
	Signs					
	Maintain Plan	plans	4		15	-15
	Fire Danger Rating					
	Adjectives To Field	days	0.25		1,423	-1,423
	Mass Media					
	Media Contacts	each	1		38	-38
	Volunteers					
	Plan For Volunteers	plans	40		4	-4
	Wilderness Train/Equip					
	Train, Equip Employee	# of emp	2		8	-8
	Public Education					
	Prev Pgms	event	8		29	-29
	School Program					
	Lvl 1 Team Teaching	event	40		136	-136

As with Specific Actions, the entries are the number of each listed action to be completed.

B-6. Prevention - Personnel & Expense Summary

This report gives you a summary of labor and expense budget amounts:

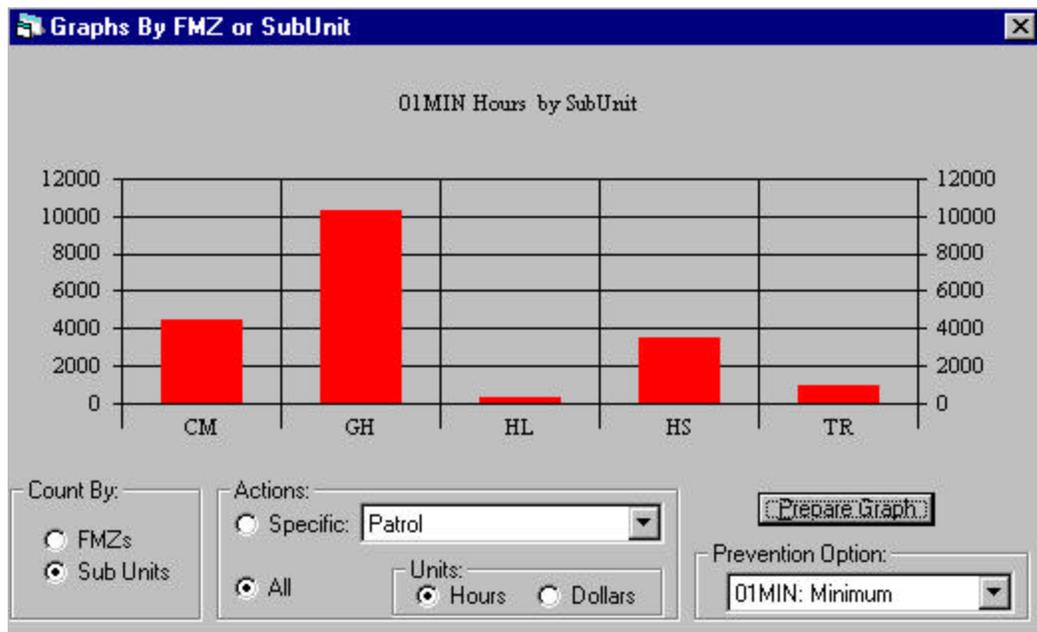
RAMS
Sequoia National Forest
Personnel & Expense Summary

Sub Unit	Option MIN		Option PLAN	
	Years	Cost	Years	Cost
(N/A)	.0	\$.0	\$
1: Tule River RD	1.0	\$35,743	1.5	\$55,264
2: Hume Lake RD	.0	\$1,454	5.1	\$190,082
3: Hot Springs RD	2.0	\$72,734	3.5	\$128,400
4: Greenhorn RD	6.5	\$242,016	8.1	\$300,096
5: Cannell Mdw. RD	1.3	\$47,696	5.8	\$215,680
Personnel:	10.8	\$399,643	24.	\$889,522
Expenses:		\$6,500		\$42,840
Total:		\$406,143		\$932,362

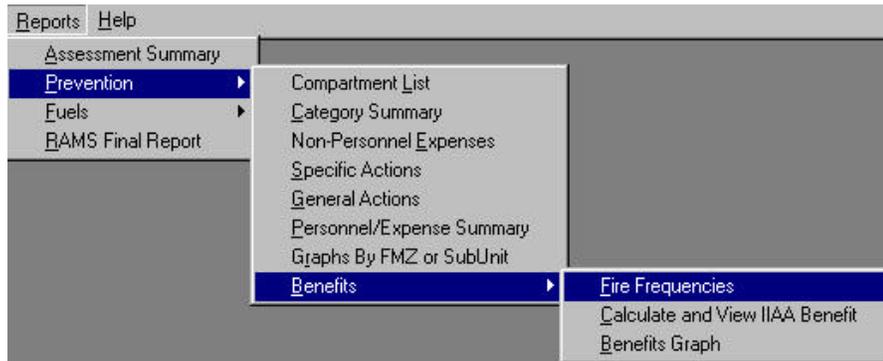
Required years (rounded) and dollars are shown on this report.

B-7 Graphs By FMZ or Sub-Unit

Several graphical views of your Prevention data are available from this menu item:

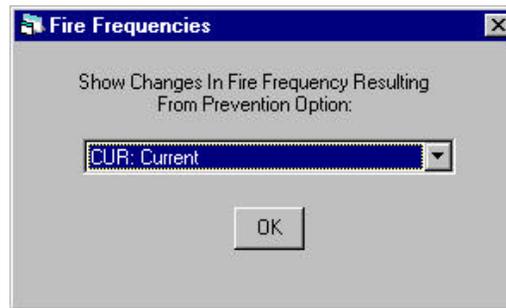


B-8. Prevention - Benefits

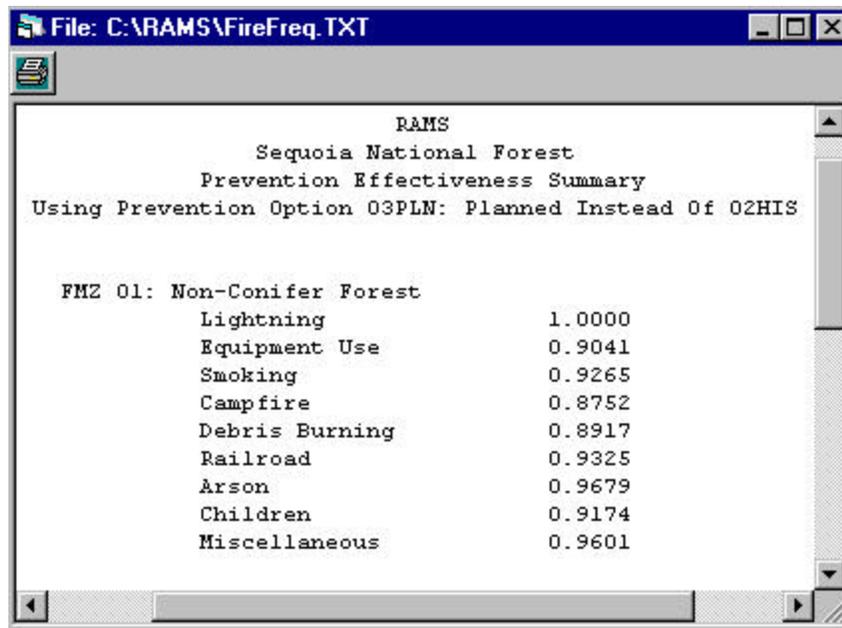


a) Fire Frequencies

You may view the expected changes in fire frequency resulting from your Prevention Program(s) in RAMS. Select the Program Option to view, and click OK:

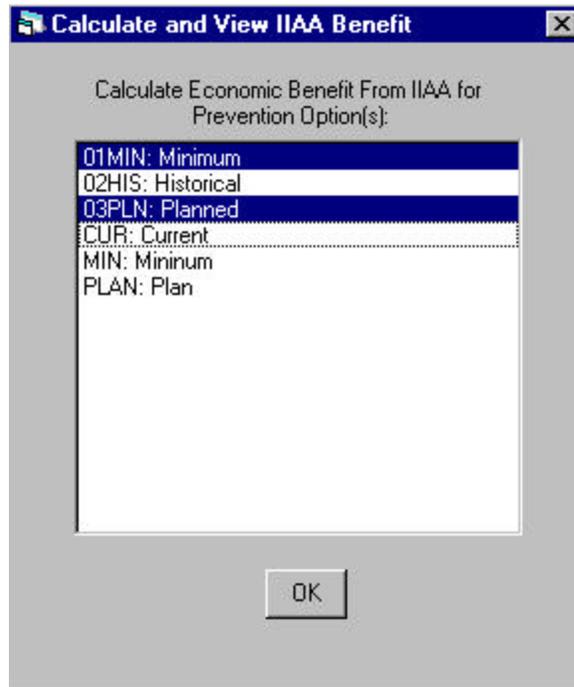


The resulting report shows the factors by which your fire starts will be changed:

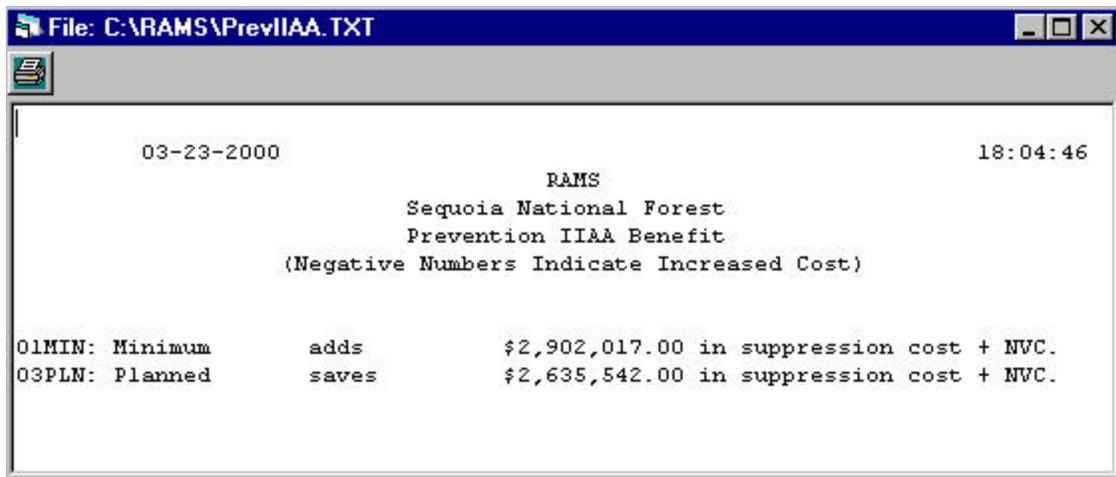


b) Calculate and View IIAA Benefit

If you have imported data from IIAA (see FILE-IMPORT Menu description), you may also view a report of expected changes in economic consequences of switching Prevention Programs. Select one or more Prevention Options, and click OK:

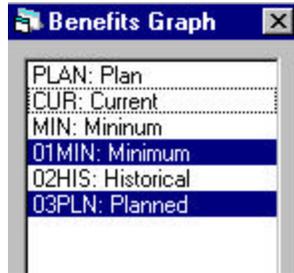


The report shows expected changes in suppression plus Net Value Change:

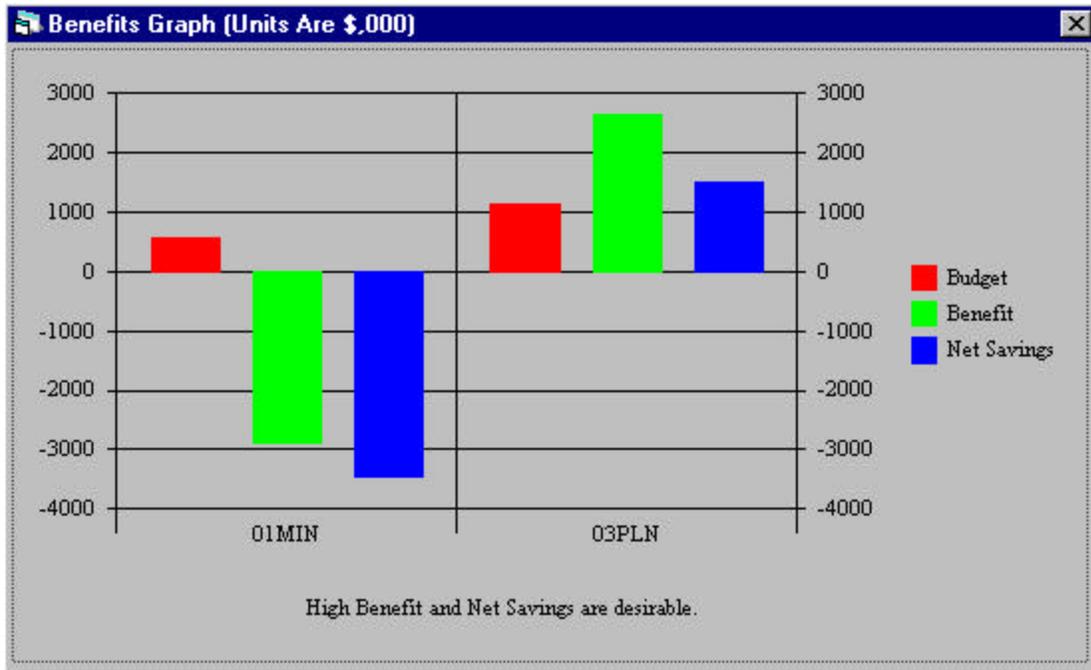


c) Benefits Graph

Finally, you may view a graph of the Prevention Program benefits. Select one or more options and click OK:



The graph will show Prevention budget, changes in Suppression + Net Value Change, and the net benefit (benefit - cost):



C. Fuels Reports

Two additional fuels reports are available:



C-1. Project Summary

This report first shows a list of projects with their FY, acres, and dollars:

RAMS
Reno District
Project Listing

Project Description	FY	Acres	\$Plan	\$Imp	\$Other
Strategy - Treatment					
NH Project Prescribed Fire - General	N/A	200	1600	14000	0
BIA's Cheap Burn Prescribed Fire - General	N/A	100	800	2500	1000
Jack Fuel Break Mechanical Treatment - Piling	N/A	5	150	1370	1000
Campground Fuelbreak Fire Defense Systems - Fuelbreak - Prescribed Fire	1999	200	1600	6000	0
Afton - 1 Prescribed Fire - General	2000	500	4000	0	0
Piling around CG Mechanical Treatment - Piling	2000	100	3000	27400	1000
Afton - 2 Prescribed Fire - General	2001	500	0	100000	1000

The second part of this report shows a summary by fiscal year:

RAMS
Reno District
Project Summary

FY	\$ Planning	\$ Implement	\$ Other	\$ Total	Acres
N/A	\$2,550	\$17,870	\$2,000	\$22,420	305
1999	\$1,600	\$6,000	\$	\$7,600	200
2000	\$7,000	\$27,400	\$1,000	\$35,400	600
2001	\$	\$100,000	\$1,000	\$101,000	500

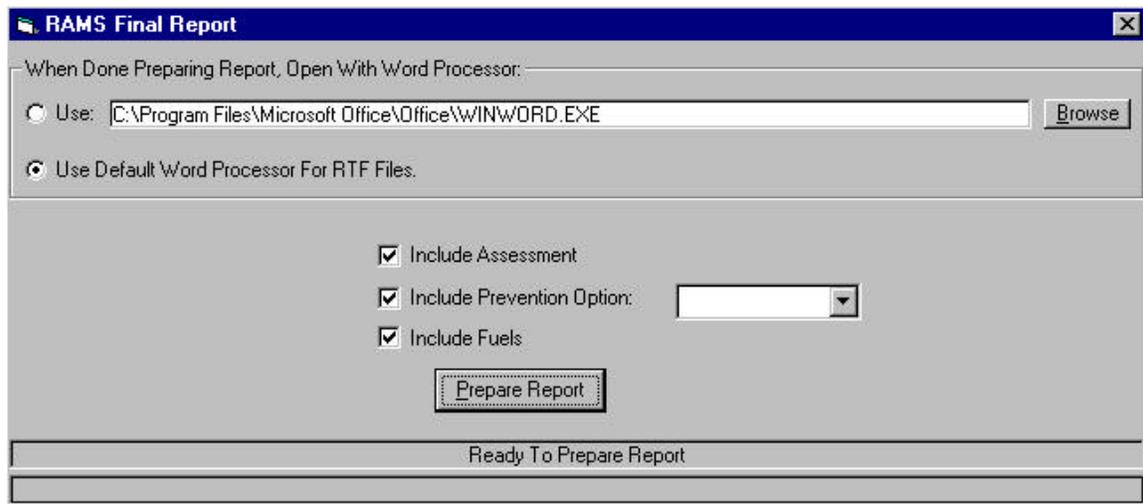
C-2. IIAA Benefits

If you have imported potential IIAA benefits, (File-Import-Benefit Potential From IIAA), you may view this report which shows changes in NVC and suppression costs which result from your fuels programs:

Project Description	FY	Acres	\$Cost	\$Benefit
Afton - 1	2000	500	\$4,000	\$
Afton - 2	2001	500	\$101,000	\$38,845
BIA's Cheap Burn	N/A	100	\$4,300	\$38,845
Campground Fuelbreak	1999	200	\$7,600	\$291,337
E.S. Burn	N/A	1000	\$78,500	\$19,422
Jack Fuel Break	N/A	5	\$2,520	\$38,845
Mtn Area Piling	N/A	100	\$30,400	\$15,879
NH Project	N/A	200	\$15,600	\$194,225
Piling around CG	2000	100	\$31,400	\$77,690

D. RAMS Final Report

The final, formatted report is prepared from this screen:



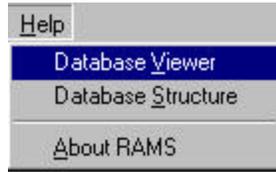
The report is saved in a “Rich Text” format (.RTF), which can be manipulated by most word processors.

If you “Browse” (see button above) to your word processor prior to generating the report, RAMS will automatically open the report for you so that you may edit it (if needed) and print it. You may also ask RAMS to use your default word processor.

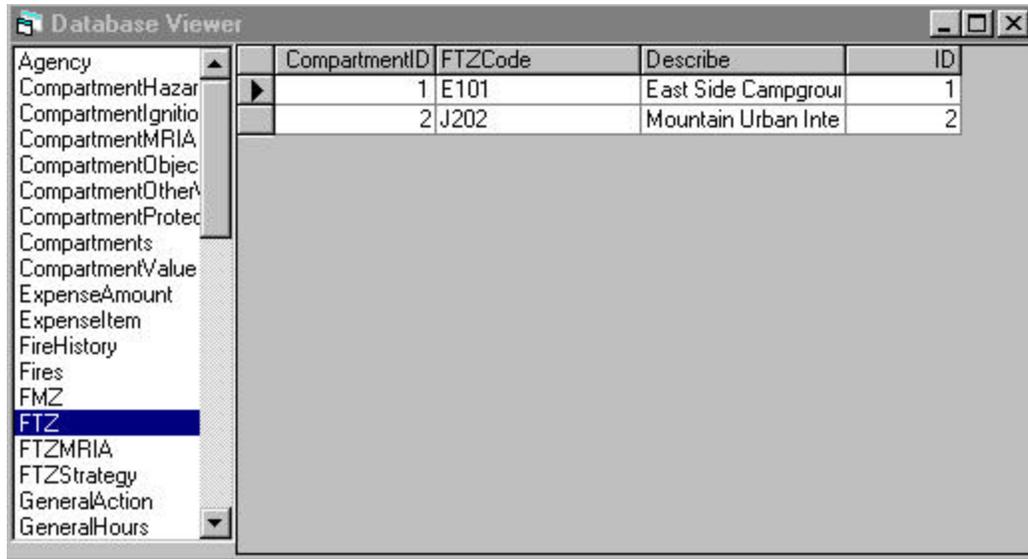
RAMS does not, itself, print the report – you must utilize a word processor.

Prior to printing, you may wish to insert a Signature Page, headers or footers (e.g. page numbers), or may wish to include an outline box around each page. If you make any changes to the document, save it as a different filename, since RAMS will otherwise overwrite it the next time you prepare the report from RAMS.

XI. Help Menu



A. Database Viewer



The database viewer allows you to examine the raw data inside RAMS' Microsoft Access database. You may not make any edits to the data – merely examine it.

Click on a table at the left to view its data. Click on a column heading (e.g. "Acres" above) to sort the data. Click on it a second time to reverse the sort.

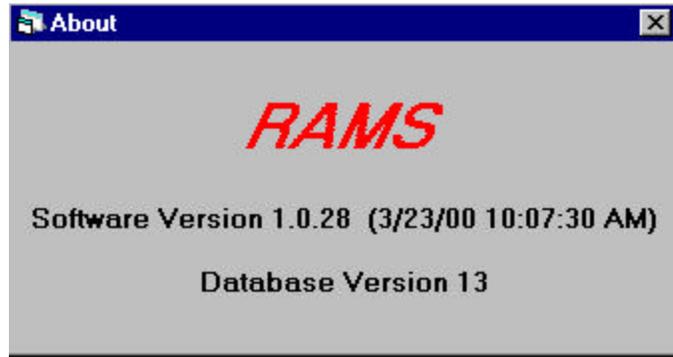
B. Database Structure

03-23-2000 18:19:32
C:\rams\RAMSfuels.MDB

Table	Field	Type	First Record
=====			
TABLE: Agency			
	FIELD: ID	(LONG)	1
	FIELD: Sequence	(LONG)	1
	FIELD: Code	(STRING 10)	BLM
	FIELD: Describe	(STRING 50)	Bureau of Land Manag
	FIELD: Selected	(BOOLEAN)	True
	INDEX: ID (+ID PRIMARY)		
	INDEX: Sequence (+Sequence)		
TABLE: CompartmentHazard			
	FIELD: CompartmentID	(LONG)	1
	FIELD: HazardID	(LONG)	1
	FIELD: RatingID	(LONG)	2
	INDEX: CompartmentID (+CompartmentID;+HazardID PRIMARY)		
TABLE: CompartmentIgnitionRisk			
	FIELD: CompartmentID	(LONG)	3
	FIELD: IgnitionRiskTextID	(LONG)	2
	INDEX: CompRisk (+CompartmentID;+IgnitionRiskTextID PRIMARY)		
TABLE: CompartmentMRIA			
	FIELD: CompartmentID	(LONG)	
	FIELD: MRIAID	(LONG)	
	FIELD: RatingID	(LONG)	
	INDEX: CompartmentID (+CompartmentID;+MRIAID PRIMARY)		
	INDEX: LevelID (+RatingID)		

The database structure shows the field types for each column in each table, and may be of interest if you plan to prepare your own custom reports in Access.

C. About



The Help-About screen shows the version number, compilation date and time, and database version.