

ICARS-2004

Incident Cost Accounting & Reporting System

Users Guide

Updated 6/10/04

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CHAPTER 1

Introduction

The **I**ncident **C**ost **A**ccounting and **R**eporting **S**ystem (ICARS) is designed to allow you to easily track individual resources in a database format. The system creates a line for every resource for every day. The ICARS user can then analyze, manipulate, and create outputs of this information in a variety of report formats.

ICARS has been integrated into the I-Suite of applications and is now capable of running networked with many PC's all working from the same database. I-Suite also includes the Incident Resource Status System (IRSS), Incident Time System (ITS) and Incident Action Plan (IAP). All of these programs now function off the same set of common tables. Thus common data only needs to be entered one time and can be used by all programs.

The system is designed to track any and all incident resource costs that are assigned to that particular incident. The INCIDENT table contains basic incident information and the RESOURCE table is where header record information for all resources assigned to the incident are input. ICARS ties the RESOURCE table to a variety of lookup tables, which contain acceptable entries for the fields in the RESOURCE table. These lookup tables include the AGENCY, KIND, DIVISION, HOME UNIT, OBLIGATION and RATES tables.

The system involves the daily creation of records in the DAILY and AIRDAY tables, for each RESOURCE table record. At the end of the incident the combined records of the DAILY and AIRDAY tables will contain a line for every resource for every day.

What's New With ICARS

ICARS-04 Updates

- Obligations
 - Update Obligation buckets to remove lines 3 Fixed Wing and 7—Misc.
 - Allow reversal of current day finalization.
 - Split AD's out of mixed crews, so only the AD personnel will be included in the obligation bucket for AD's.
 - Correctly identifies Rural, County and City resources to the correct STO or STL category based on the Home Unit.
 - Correctly identifies PVT resources based on the contracting agency.
 - Adds Cost Share category, which can be manually used to identify resources that should not be obligated because they are covered under a cost share agreement.
- *Projections*
 - Allow updating of prior days projections to the current day.
 - Allow editing of per unit costs.
 - Add flow down of data entry in lower section.
 - Corrects error in support calculation
 - Corrects graphing error for projections over 46 days
- Other
 - Add Business Ratio/Analysis reports
 - Add Fire characteristics to acres burned table for future use in calculating weighted costs per acre.
 - Add weekly/monthly rate type, which will only allow daily cost to be created once a week/month.
 - Fixed Incident End date in Incident table so it will stop the creation of daily records.
 - Added function to pick up an AD crew rate from the rates table if the crew is >50% AD's.
 - Corrects error in add screen.
 - Added ability to drag and drop resources into the add resources screen

ICARS-03 Updates

- Addition of an Obligations module used to track and report expenditures, by obligation categories.
- Changes ITS updates to:
 - Interpret R&R, travel home and COP as 8 hours of work time.
 - Lock feature in ICARS will lock out ITS updates
 - ICARS will ignore deductions in ITS where commodity=Partial Pay.
 - The Assign date is equal to the hire date in ITS.

- Updates from ITS for crews is changed to only bring in average hours. The dollars will be left as the default rate from the rates table. This corrects a problem where AD crew rates were not functioning correctly.
- An Incident Start date has been added to the Incident table. Dates prior to that date will not be allowed in any I-Suite applications.
- Fixed bug where costs auto generate to incident start date.
- The Creation of Daily records and ITS updates have been placed in the database as procedures, thus dramatically improving performance times.
- Modifications to reports screen to summarize as either sort categories or other.
- Request Number is now required.
- You can now export a graph as a .jpg file.
- Various new Kinds were added to the Kind table.
- Added OAS agency, to track costs for Office of Aircraft Services.
- Replace Access, as the database engine, with Microsoft Database Engine (MSDE)

Where to Get ICARS

The ICARS application is available for Downloading, as a part of the I-Suite software from the Internet at: <http://www.fs.fed.us/r6/fire/i-suite>.

How to get help

There is a National ISuite helpdesk, which should be your first call for support 916-799-3586. Support for bugs, etc. can also be obtained from the websites listed above. Other support can be obtained from other ICARS users. Any comments or questions not answered by those sources can be directed to Jeff Park at the Region 6 Regional Office in Portland, Oregon.

Phone: 503-808-2978

Fax: 503-808-2467

e-mail: jgpark@fs.fed.us

Mailing Address:

Jeff Park

c/o Financial Management

333 SW First Avenue, Box 3623

Portland, OR 97208-3623

CHAPTER 2

Installing and Starting ICARS

This chapter contains instructions for installing and starting ICARS. Preferably, installation and a quick start-up test should be done prior to a call to an incident, but can be done once arriving at the incident.

Running Setup

Obtain I-Suite Final Release CD and follow the instructions on the CD or use the one step network install from the download site. The advantage of the network install is that the installation wizard will first look to your PC, to see what files are already there. It will only download files that are not already loaded on your PC.

Set Date/Time

You will want to be sure that the date and time is properly set for any PC running ICARS. You can change the date and time from within ICARS menu options (UTILITIES | SET SYSTEM DATE/TIME) or from the Window's Control Panel. Some computers have dead batteries; thus, the correct date and time are lost when the computer is turned off. The correct date is critical to the proper running of the ICARS application.

Starting ICARS

At the conclusion of the install, there will be an ICARS icon placed on your desktop. To use ICARS in the MSDE environment it is necessary to use the admin tools provided to attach a database. Please see the Administrators Guide for these instructions.

CHAPTER 3 General Cost Collection and Analysis Techniques

This chapter discusses what to do before leaving your home unit. It also talks about cost collection and analysis techniques.

Prework

What to bring

The following equipment should be available when arriving on an incident:

- IBM-compatible computer (computer rentals are readily available).
 - Printer (May not be necessary if networked to a printer).
 - Blank disks for backups and sharing information.
 - I-Suite application on a CD-ROM.
 - Surge Protector Power strip and extension cord.
 - Office supplies--paper, stapler, highlighters, pens, pencils, clipboard, folders and envelopes.
 - Calculator.
 - Boise Interagency Fire Center (BIFC) contract rates manual.
 - ICARS manual and Quick Reference Guide
 - Field Operations Guide (FOG) Handbook (Definitions).
-

Computer Site Preparation

1. As dust free an environment as possible to reduce computer wear and tear.
 2. Electricity availability. An extension cord will afford you more flexibility.
 3. Since you may need to network to computers and information from personnel time, equipment time and IRSS, proximity to the finance unit and the IRSS unit will be necessary.
-

Empty tables

If you are using an I-Suite database that has been previously used it will be necessary to assure the data from the previous incident has been removed. The best approach is to start with a clean database, which is loaded when you install the software, or is available from the web site. If you want to re-use a database you can simply Delete All the Incident records in the Incident Table. Because of the built-in relationships, deleting an Incident record will delete all records associated to that Incident. This essentially, empties the I-Suite database"

Data Collection

Evaluate Sources

Upon arriving on a fire, one of your first tasks is to evaluate the sources of cost data you will be using in your cost analysis. You must determine what sources are available and decide what data appears to be the most accurate. Following are some sources of data that will be used both to build your *RESOURCE* table and to use for daily updating.

1. **T-Cards** from Resource Unit to verify resources, names and assignments.
2. **Resource Orders** from Ordering Manager or Supply Unit Leader; also Expanded Dispatch.
3. **Check In** - Has anything new come in during the last 24 hours?
4. **DEMOB** - What left yesterday, today and is planned for tomorrow?
5. **ICS-209** - Previous day numbers used for overhead and total personnel for supplies.
6. **IRSS Reports** - Some IRSS reports or **RESOURCE.DB** file can help fill ICARS gaps.
7. **I.A.P. (Incident Action Plan)** - Used to verify resources on the ground; especially critical in a Cost Share agreement where division assignments play a part of the agreement.
8. **Equipment rental agreements and use invoices** from Equipment Time for identification of contract resources and actual rates.
9. **Time sheets** from Time Unit for actual crew hours worked.
10. **Air Cost** - Summaries from Air OPS for previous day. Also used to estimate current day.
11. **Caterer** - Costs from Food Unit Leader for previous day. Also used to estimate current day.
12. **Bus** - Count from Ground Support
13. **Pickup** - Count from Equipment time, Equipment Manager or Ground Support.
14. **Crew** - Updates from Time Unit.
15. **Claims** - From Claims (Comp/Claims normally list all injuries).
16. **Unit Logs** for other misc records.

Initial Data Entry

The table called INCIDENT contains Incident information and should be updated to reflect the basic information about this incident. You can track multiple Incidents within a single database by assigning different numbers in the incident table (IE: 1,2,3). Another option is to store different Incident information in two separate ICARS database files.

The table called RESOURCE is where all basic information on resources assigned to the incident will be entered. If you are using ICARS as a stand-alone application you will have to enter all resources. If using ICARS, in a networked Isuite setup, resources will be entered into the RESOURCE table through IRSS and ITS as explained below.

If IRSS and/or ITS are being used on the Incident then you will need to work with the Computer Technical Specialist to get networked with the other PC's. Once you are networked

you will use the same I-Suite database, as IRSS and ITS and all your ICARS tables will be filled with the data entered through check in by IRSS, and Time System through ITS. The IRSS/ITS data can be supplemented and verified by data from the other sources as listed above. Of course you will need to enter all cost information not supplied by ITS. You will need to work closely with the IRSS/ITS personnel and communicate on any changes to the common database. Generally IRSS will be the owner of the resource information and any changes will be either entered by or communicated to the IRSS personnel. This may vary from incident to incident depending on the working relationship that is built. See Chapter 12 for a further discussion of I-Suite.

General Data Input Information

Level of detail

When inputting information different levels of detail may be used, depending on the incident size, predicted length, management needs, etc. Of course if IRSS is entering the data you will not need, or have the option to summarize, as all individual records will be entered into the system through check in. Examples of different levels of detail are:

1. Summarize overhead personnel into support and direct instead of entering every person. Direct overhead are defined as the Incident Commander and direct staff as well as any individual that has direct duties on or around the fire line. This information can be generated from the shift plan, T-cards, or ICS-209
2. Summarize crews into hotshots, regulars and ADs as opposed to entering crews by crew name.
3. Summarize buses into cost categories as opposed to entering every bus by name.

Use of actual vs. estimates

Included in ICARS is a standard rates table, which includes estimated rates for most resources that will be found on an incident. ICARS will automatically enter these rates into the DAILY table, when you enter a resource.

Since these rates are only estimates they can be updated to actual rates at any time. If no rate is available in the rates table, it is best to enter estimates at the outset with the plan to update to an actual cost later. This is usually the case with costs such as aircraft and caterers. The current day's cost will be entered as a projection based on the prior day's cost (or other information, if available) and then updated with the actual cost when it becomes available. Such updates are accomplished by editing the *DAILY and AIRDAILY records for a particular resource*. When entering actual costs, you can use the Locked field to flag that entry as an actual cost and locking edit access to that particular Daily record.

Strike Teams

A strike team will be entered in IRSS as a Parent record (the strike team name) with various children records (individual crews or engines). The parent record will show in ICARS, but you will not be able to add costs to it. The costs will show with the individual children records. This process allows strike teams to be built and dismantled. All the daily records will be maintained with the strike team element.

Quantities and Units

The *Quantity* and *Units* fields in the *DAILY* table are also important for calculating a resource's daily costs. A resource's daily cost is calculated by multiplying the resource's unit cost, quantity, and units together to determine the total cost of the resource. The *Units* field can be handled various ways. You can use a standard number of hours like 14, assuming that on average everyone is working a 14 hour day or you can enter the actual hours or you can enter a 1 if the rate you are using is a daily not hourly rate. It is preferable to enter hourly rates because this allows a direct comparison of resource cost (daily costs are not always based on the same number of hours so comparisons where daily costs are used, may be misleading). Some examples of quantities to use are as follows:

Crew Strike Team	=	Quantity of 2
Engine Strike Team	=	Quantity of 5

Backing Up

By default, as you enter data into ICARS it is automatically saved into the database. It is always wise to make a copy of the database and that is what we refer to as "Backing Up". Backing up is usually handled by the CTSP on the incident. If you are running stand alone refer to the Administrator Guide for instructions on backing up.

Cost Share Apportionment

Cost share apportionment capabilities are built into ICARS. Cost sharing is provided for incidents where there is more than one jurisdictional agency involved and costs are to be shared between agencies. The Cost apportionment section functions through the assignment of resources to divisions, with those divisions potentially having unique percentage breakdowns per division, per day. The *DIVISION* table is where you set up divisions and shifts and cost sharing percentages by agency. For example the day shift on division A would be A1 (A=division, 1=day shift). Once a division is set up you may assign resources to that division in the *DAILY* table. Only resources with the division and shift fields filled in, in the *DAILY* table, will be included in the cost share.

About Cost Sharing an Incident

The information developed in the Cost Share reports can be used in two ways depending on the agencies involved and the cost share agreement for the incident:

1. To develop a percentage split between agencies, which will then be applied, at a later date, against the actual expenditures as determined by agency financial statements.
2. To develop each agency's dollar share of the incident cost so billings can be produced immediately by the appropriate agency.

If you are using ICARS to determine the actual dollar responsibility of each agency then you must also deal with how support costs will be allocated. Support costs will usually be allocated based on the direct cost percentages. This can be accomplished by adding a division code of S1 to all support resources in the *DAILY table* (if some support resources will not be shared leave the division field blank on those resources) or creating separate allocation lines with S1 in the division field (see below). Follow this by adding division S1 to the Division table for all days. You can then enter into the division table the direct cost split by agency from report R1 for each day. This will create some extra complexity in the daily process because you don't know the direct cost split for the current day until you have completed steps 1-3 below for that day. Thus to do this you must complete steps 1-3 below first, then update the division table with the S1 percents for the current day and then complete step 3 again and step 4.

An alternative to putting an S1 in for each resource is to determine the support costs each day that will be allocated and enter two allocation lines into the *DAILY table* with the kind ALL. The first line would be a minus number with the division field blank. The second entry would be a positive number with a S1 in the division field. These entries will not affect the total cost but will allow you to show support dollars in the cost share module.

When using ICARS to determine each Agencies actual dollar responsibility you will also want to know how much each agency spent, so you can determine who owes whom. Under menu option Reports is 1) cost summary by agency 2) cost detail by agency report, which will give you the amount spent by each agency.

Daily Steps for Cost Apportionment

The daily steps when doing cost apportionment include the following:

1. Finish normal daily processing and updating of the *Resource, Daily and AirDay Table*, including the assignment of divisions to the resource that are involved in the Cost Apportionment for the particular incident.
2. Edit the Division table to enter the current day percentages by division.
3. Print "Cost Share Summary" report CAT R1.

4. Print detail reports:
Cost Share By Shift and Kind (CAT R2) and
Cost Share Resource Worksheet (CAT R3).

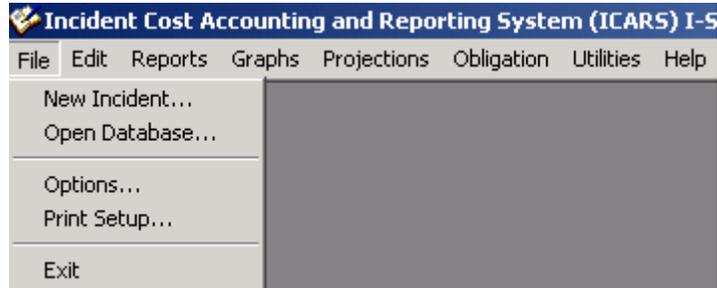
Alternative Cost Sharing Approaches

1. Variations to the basic structure above can be made, by being flexible, with the division assignments. For example if the determined method of cost sharing were to identify specific resources that are the responsibility of each agency without regard to what division they are working on a modified approach would be to designate a division for each agency and proceed accordingly. For example A1 could be designated to represent Federal costs and division B1 to represent State costs. Under this scenario you would assign a status of A1 or B1 to all resources identified, regardless of where they actually worked.
2. Since only those resources with the status field filled out will be included in Cost apportionment reports, another modification is to only include a status entry for specific resources. For example on a Predominantly Federal fire you might have six engines and one hand crew supporting the State portion of the fire. You could chose to identify those resources with an A1 in the status field and leave the status on all other resources blank. You would then fill out the Status table showing 100% State for A1. This would just pull in the resources with state responsibility and the cost share reports would determine the state portion of the fire based on those resources alone.

CHAPTER 4 ICARS File Menu

This chapter deals with all File menu options from within ICARS. The ICARS menu is broken down into different modules of the program (i.e.) Editing, Reporting, Graphing, Projecting, etc. Similar to any Windows application you may use your mouse to click on a menu item or use a common keyboard combination of the “ALT” key and the underlined letter of the menu option (ie) Alt-F to activate the File menu. This manual will now describe each menu option and its function. Below is an image of the ICARS main menu.

IMAGE 4-1 ICARS Main Menu



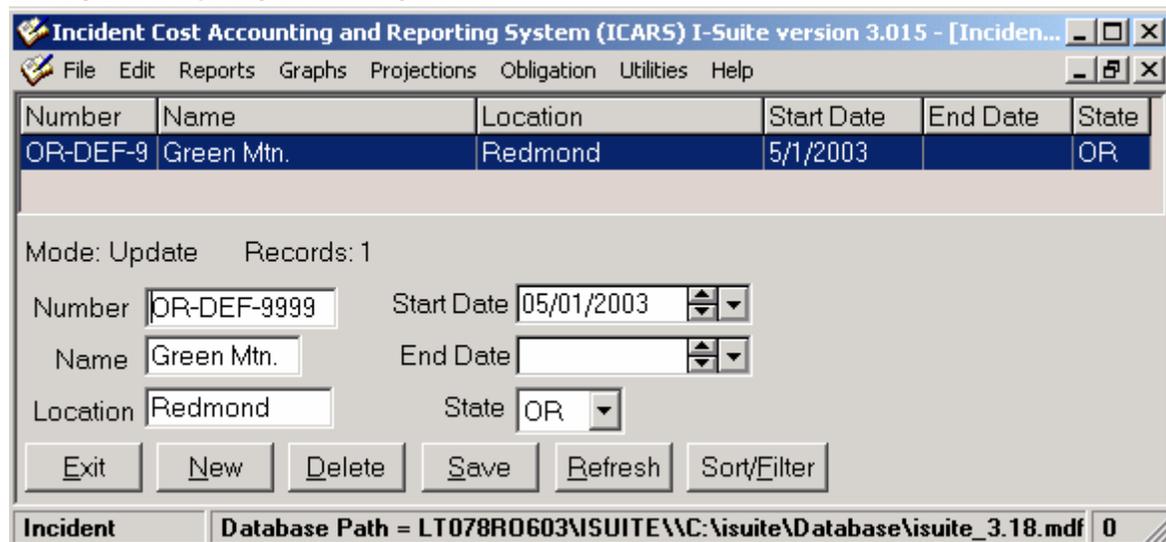
Under the File menu is where all basic Open, Printer Setup, and Exit Functions are located. When you start ICARS for the first time it opens a default database called ISuite.mdf. Using the file menu options you can Open or Reopen an existing database or create a new incident using the

ISuite.mdf. Each menu option is discussed below.

NEW INCIDENT

The NEW INCIDENT menu option is used for adding a new incident to an existing ICARS database. You may have many different databases, each potentially storing a single or multiple incident. By default, the ISuite.mdf file is the default database.

IMAGE 4-2 ICARS Incident Screen



If you open a database without an incident ICARS will take you to this screen immediately. Because the ICARS application uses a relational database, you must first create a new incident before adding any resource. If you wish to remove an incident, you may delete the incident from the Incident table. Because of its relationships with the other tables all resource records and

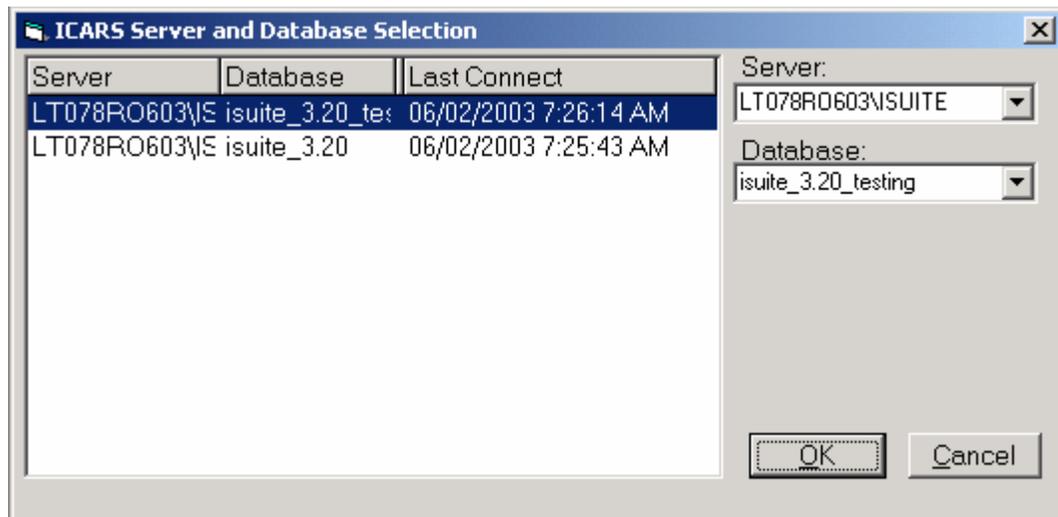
their accompanying daily records will be deleted.

The image above shows the Incident Screen, where you can ADD, DELETE or MODIFY Incidents. To add a new incident, simply press the "NEW" button and fill out the fields below the grid. Once you have filled out all the fields, press "SAVE" to save that incident's information. You may have multiple incidents within any ICARS database. Press "Exit" to close the incident Screen. See Menu option Edit | Incident for greater detail of the fields.

OPEN DATABASE

IMAGE 4-3 Open Database Screen

The OPEN menu option will prompt the user with a dialogue box that will display current databases (*.mdf) that have been attached through the Admin Tool. You must the



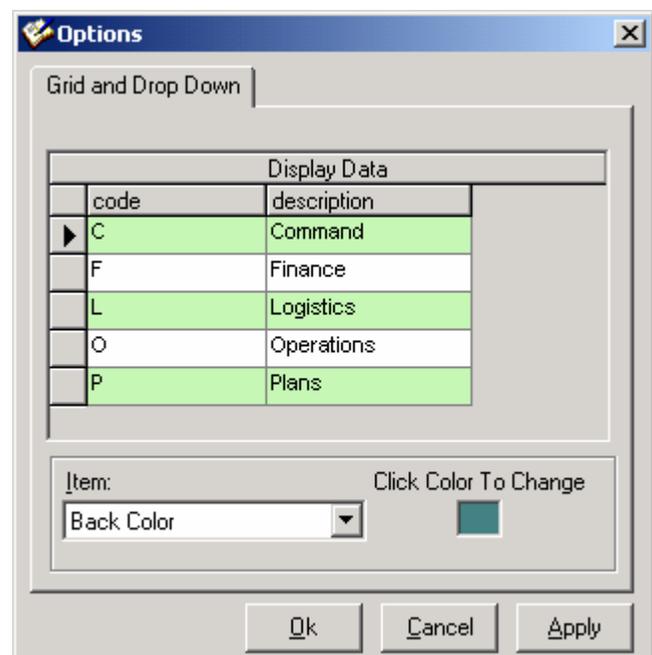
select the appropriate server, which may be your PC or another PC, operating as a server, and database. For further instructions on attaching databases see the I-Suite Administrators Guide.

OPTIONS

IMAGE 4-6 ICARS Options Screen

By choosing Options, you may customize the colors of all the grids in ICARS. ICARS grids are commonly referred to as "Even" and "Odd" rows. You can change colors for the row backgrounds, font foregrounds, and grid columns. These new settings are saved automatically and are used until they are changed again.

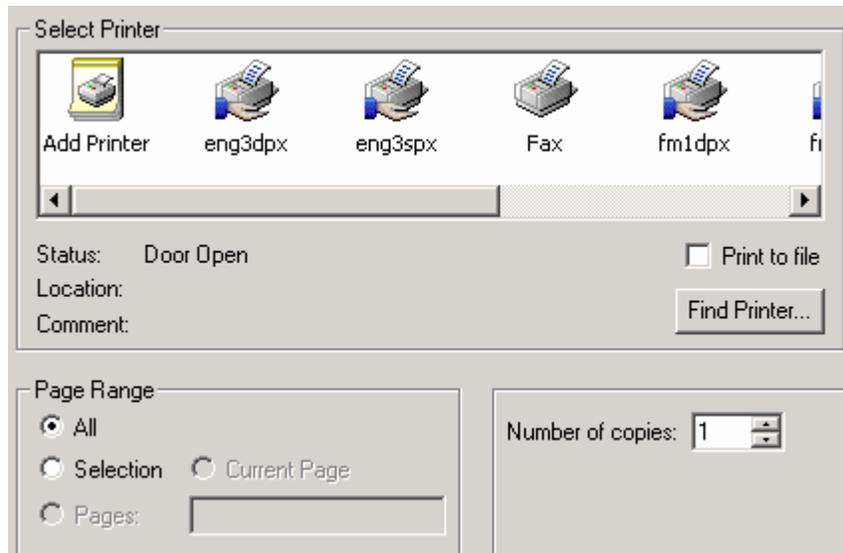
After first installing ICARS, a default set of colors for the grids and column headers will be installed. You may change colors at anytime. These color settings are independent of any Windows color settings



you have set previous to changing ICARS colors.

PRINT SETUP

IMAGE 4-7 ICARS Printer Setup Screen



The Print Setup menu option simply calls up a Window's Printer Setup. This will differ depending on the version of Windows you are using.

EXIT

The EXIT menu option exits the ICARS application. This is always the preferred method of exiting any Windows application.

CHAPTER 5

ICARS Edit Menu

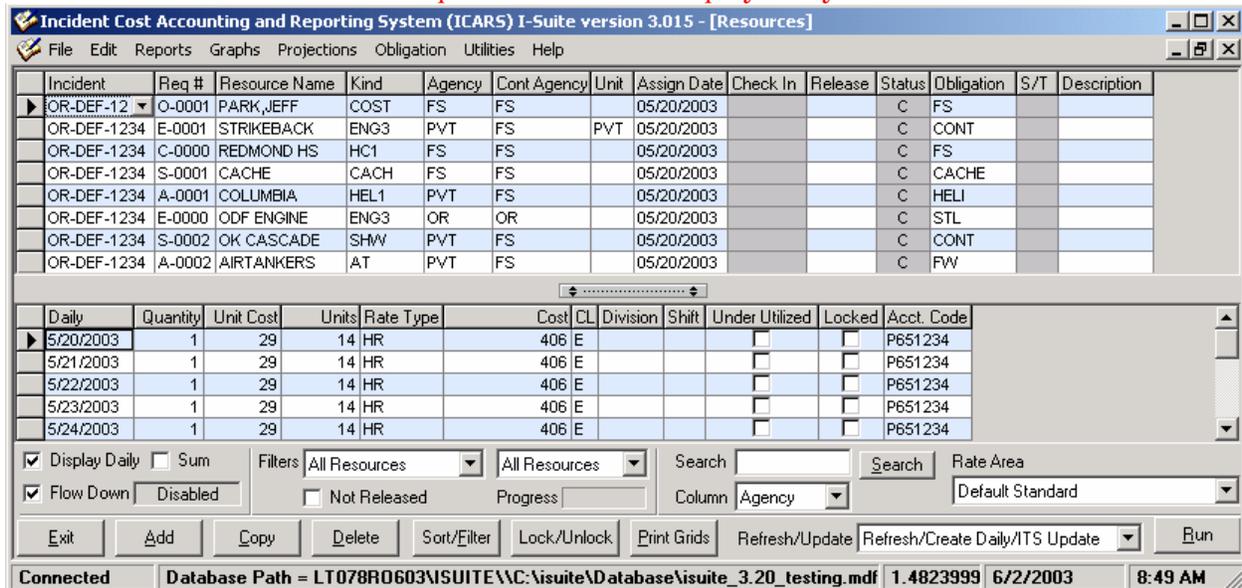


IMAGE 5-1 ICARS Edit Main Menu

This chapter deals with all Edit menu options from within ICARS. From the Edit Menu, you can edit all ICARS tables necessary to run the application. The ICARS application is based on a relational database and one table has relationships to other tables and so on and so on. For instance: The Incident table is the master table; you must have an Incident in the Incident table before entering Resources in the Resource table. Taking this a little further, you must have a resource in the resource table before you can create daily records for that resource. One table works off the other.

RESOURCES

IMAGE 5-2 ICARS Resource Input Screen With Display Daily Turned On



The Resource/Daily screen is the primary ICARS screen. The Resource screen contains all the Resource header information for each resource (i.e.) Crews, Engine, Dozers, Aircrafts, Toilets, Caterers, etc. The Daily records, can be displayed by toggling on and off the “Display Daily” check box at the bottom of the Resource Screen. This is where daily entries for that particular resource are kept. The relationship between a single Resource and its charges to the incident is a one-to-many relationship (i.e.) for a single resource there may be one or many Daily records, more commonly, one for each day the resource is charging to the incident.

Required fields for a Resource record are: Incident Number, Req #, Kind, and Assign Date. Daily records are auto created and can be edited. Daily’s Cost field is calculated and can only be changed by adjusting the Quantity, Unit Cost, and Units.

A user may rearrange the order or column width of any and all fields in the Resource and Daily

tables and those settings will be saved.

Buttons, and their function, found at the bottom of the screen are:

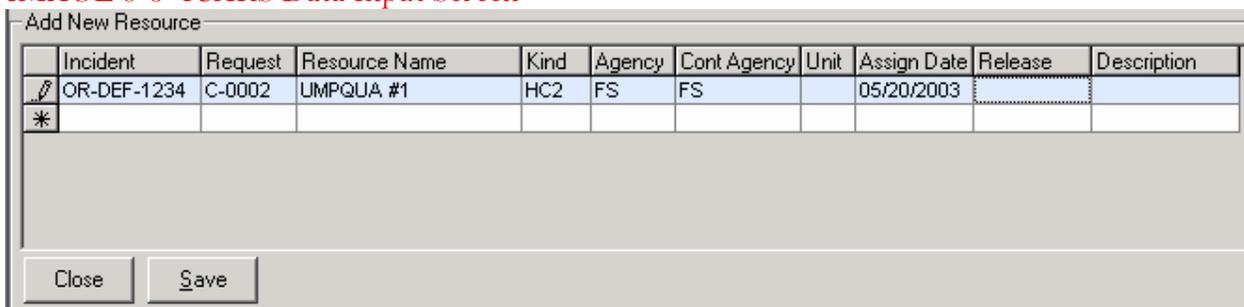


Enable Flow down – When checked the flow down features of the daily table will function.

When unchecked all flow down in the daily table will stop.

Add – Add a resource record. Will bring up the add resource screen which can be filled out and saved as a new resource. Resources in the resources table can be dragged and dropped into the input screen, and then edited for quick creation of like resources.

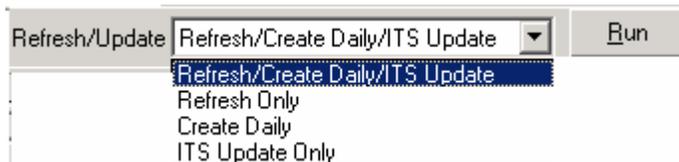
IMAGE 5-3 ICARS Data Input Screen



Copy – Copy a resource record. Will bring up the add resource screen, pre-filled with the information of the resource record currently highlighted. Changes can be made to the record and the record can be saved as a new resource.

Delete – Delete a daily or resource record.

Refresh/Update – Use to update the database. Select the type of update you want in the dropdown box and then click on the Run button. The choices of update types are:



Refresh Only – Refresh the database to reflect any changes made by I-Suite partners.

Create Daily Only – Daily records are created from the check in through release dates.

Apply ITS Only – Updates daily records with postings from the Incident Time System.

Refresh/Create Daily/Update ITS – Will do all of the above.

Sort/Filter – To sort and filter based on multiple criteria. See detail in **Chapter 11**.

Lock\Unlock – Lock or unlock all daily records for a resource.

Print Grids – Print the Resource or Daily screen as seen.

Incident Filter – Filters on all incidents or only the incident you select.

Resource Filter – Filters based on the first letter of the Request # field (E=Equipment, A=Aircraft, C=Crews, O=Overhead, S=Supplies, or just filters out Overhead)

Not Released Filter – Filters based on only currently assigned (not demobed) resources.

Search – The search routine will search for an entry in the column selected.

Rate Area – If you have set up a custom rate area, you can choose to activate it here.

Daily Sum – When checked the total cost will display for the resource selected.

Flow Down – Can be unchecked to turn off the flow down feature in the Daily table.

Below is a brief description of each field found in the Resource table.

Incident: This value is a lookup value to the Incident table. Only values that pre-exist in the Incident table are valid here. *Note:* You will not be able to add resource records unless you have already added an incident record to the Incident table. This field is a pull-down box that allows you to either pick from the list of valid Incident numbers or simply type in it in. The Incident field is a required field.

REQ Num: This value is the Request Number. This number is found on the Resource Order Forms and is used on various other incident related documents to identify the specific resource. This field required and so if you are not sure, at the time of entering the resource, what the number is, just enter the identifier A=Aircraft, C=Crew, E=Equipment, O=Overhead and S=Supplies with a zero for the number. The actual number can be entered later.

Name: This value is the name that you wish to use to identify that particular resource. (ie) Engine 2395 or Redmond Hotshots, or Duncan Toilets. Consistency is important when you are naming the resources. This will facilitate using the SORT function. For example, Engine 555 vs Eng 8. Be consistent. **Note:** Since the kind of the resource you are entering is typically in the kind field, you do not need to include the kind in the name.

Kind: This value is a required field and plays a very critical role in ICARS. Each resource must be assigned a Resource Kind (ie) ENG3 = Engine Type-3, TLT = Toilets, HC1 = Hand Crew Type-1. The Kind selected will affect where the resource groups on the reports and what default rate is picked up from the Rates table.

Agency: This value is the Agency this resource belongs to (ie) USFS, BIA, NPS, or PVT. All contract equipment should use the PVT agency value. This value could potentially be very important in a cost apportionment scenario. Though this field is not required the Agency value helps to determine the default Unit Cost for a particular Resource. Every ICARS user is strongly encouraged to assign an Agency to each Resource.

Contracting Agency: This field is optional. When used, it will track the agency that is actually responsible for payment of the resource. Always use in cost apportionment situations. This field uses the Agency lookup table. It will be filled with FED, STATE, COUNTY, RURAL, BLM, BIA, NPS, FWS, DOD, FS.

Unit: This field is optional and can be left blank. Similar to Agency, is a more specific value for which a resource belongs to. (i.e.) If the Agency was USFS, the Unit might be a particular Forest: DES for Deschutes NF. The main use of the Unit field in ICARS is to track local resources. There is a field in the Unit lookup table where you can identify which units are local. Reports can then be run identifying local resources.

Obligations: Obligations can now be tracked and reported through ICARS. This field will be auto filled with values from the Obligation table. These values are based on the Request #, Agency, Kind, Incident State, Contracting Agency and AD identifier. A new obligation module is present on the menu, to extract certain obligation categories into obligation reports that can

be reported to the incident unit.

Assign Date: This field is optional if a check in date is entered. Otherwise this is a required field and plays a critical role in ICARS. The assign date for a particular resource is the date the resource first started charging to the incident and determines how many days of cost information is created in the Daily table. This date overrides the check in date and allows for the creation of cost information before a resource checks in.

Check In Date: The Check In date is a field used by IRSS and can't be changed in ICARS. If a check in date is not entered, you must enter an assign date.

REL Date: This value is a release date for a particular Resource. This also plays a critical role in ICARS. The release date is used similar to the assign date, and there can never be charges in the daily table prior to the assign or check in date or after the release date. If a release date is prior to the current date, ICARS will not insert daily records for that resource for that day. When resources are released, it is critical that a release date is entered.

Status: Display for information only. This record is entered and used by IRSS to track the status of a resource. C = Checked In A = Assigned, D = Demobed, P = Pending Demob.

S/T: Strike Team identifier. A strike team parent record will show as P-xxx. All component records will show as C-xxx. Daily costs will be created for the components but not the parent record, since the parent is not a real record but just a placeholder in the database for IRSS and IAP to use for assignments of the strike team.

Description: This value is used to better describe a particular resource or add relevant information.

DAILY

The Daily table is where the detail records for each resource are kept. A detail or Daily record stores information about a single day's activity and its cost relation to the incident.

When initially placing Resources in the Resource table, ICARS will create daily records from the check-in or assign date to the current date. This automatic Daily record is generated only as an estimate and is based on a lookup from the Rates table based on the Agency and Kind that you have entered. If you know the actual rate for a resource you may replace the estimate, generated by ICARS with the actual rate for this particular Resource. If ITS is inputting actual time, clicking the Apply ITS button will enter Actual time and/or costs. There is a cost unit field which will show a E for the original estimate, a U for user updated or an A for actual costs from ITS.

Built into ICARS is an automatic flow down function, which allows a user to change the Daily table's Quantity, Unit Cost, Units, Rate Type or Division and that information will change (flow down) to all the daily records below it, that are not locked. The flow down can be turned off using the checkbox on the resource table screen.

Below is a brief description of each field found in the Daily table.

Daily Date: This value is a required field. This value is the date for this particular resource's charges for that day.

Quantity: This value is a required field. This field indicates the number of items assigned to the resource. For example, a strike team is a quantity of five.

Unit Cost: This value is a required field. This value is the dollar amount that is associated with *Quantity* and *Units* and represents the unit cost of the resource.

Units: This value is a required field. This value is commonly associated to the *Rate Type*. For example, the units will equal "1" if a Daily Rate Type is used or possibly 14 if an hourly rate type is used.

Rate Type: This value is a required field. An example of values might be Hourly, Daily, Guaranteed, Gallon, etc.

Cost: This value is a calculated field. The calculation is derived from three fields: Quantity multiplied by Unit Cost multiplied by Units. When Quantity, Units, or Unit Cost fields are changed, the Cost field is automatically re-calculated, after leaving the record.

Cost Level (CL): Will show an E for the original estimate, a U for user updated or an A for actual costs from ITS.

Division: This value is the division the resource is assigned to for that day. The Division field can be either blank or can be filled in with a valid Division, which is stored in the Division Table. The lookup table for this field will only display Divisions, for that particular day of the daily record you are editing (i.e.) If you are editing a Daily record for 7/11/98, the division pull-down will only show the division assignments for 7/11/98.

Shift: This value represents the shift that a particular resource is being worked. "D" for Day or "N" for night. This will allow you the option of sorting for cost based on day versus night.

Underutilized: This field is a check box that's toggles on or off. On is represented with a check mark in the box. This field is used for reporting potential resources that might not be currently used.

Locked: This field is a check box that's toggles on or off. On is represented with a check mark in the box. When the locked field is checked, the entries in the record can't be changed by the user or the ITS update process. This is often used when you have entered the actual amount for a resource and don't want it to be changed. If this field is not locked the Flow Down method can and will change all daily records below the changed value for Quantity, Unit Cost, Units, and Rate Type.

Accounting Code: This value is used to reflect the accounting code that the incident is being charged to. The accounting code may be changed on a daily basis and is limited to entries in the Accounting Code lookup table.

AIRDAILY

See Aircraft Analysis in Chapter 12

DIVISIONS

IMAGE 5-4 ICARS Division Input Screen

The Division table is where division information is stored for an incident. This is a critical piece when on a cost apportionment incident. The division table is where you enter the percentage break down of a particular division by Federal, State, and Other responsible parties. The combined three columns (Fed %, State %, and Other %)

Division	Incident	Shift	Date	Fed %	State %	Other %	Description
A	OR-DEF-123	D	05/20/2003	50	50	0	
A	OR-DEF-123	D	05/21/2003	50	50	0	
A	OR-DEF-123	D	05/22/2003	50	50	0	
A	OR-DEF-123	D	05/23/2003	50	50	0	
A	OR-DEF-123	D	05/24/2003	50	50	0	

Mode: Update Records: 14

Division: Fed %:

Incident: State %:

Shift: Other %:

Date: Description:

Buttons: Exit, New, Delete, Copy, Save, Refresh, Sort/Filter

must add up to 100%. The *Fed %*, *State %* and *Other %* fields represent percentage of their cost obligations to that division for that specific date. For example, if Division A for June 1 has a 60-40 split, this is shown as 60 % Fed and 40% State.

Using Division assignments on an incident is totally optional, unless required for cost apportionment. The values in this table are used as lookup values to the Daily Table. The values that a user will see from the Daily table are only the divisions for the particular day that the resource is charging to the incident. Similar to Daily records, divisions will automatically be duplicated each day if there are divisions for the prior day. The records themselves will be copied and use the current computers date as their date. If the percentages are different for that next day, the ICARS user will be required to change the percentages for that particular day. If there are no division records for the prior day the replication of the division records will not occur and will require the user to insert them. There is a copy at the bottom of the division screen, where you can copy one division record and then go back in and change the date and potentially the percentages.

Below is a brief description of each field found in the Division Table.

Incident: This value is a required field. It is a lookup to the Incident table.

Division: This value is a required field. Normally this value would be a “A”, “B” or a “1”, “2” type value. This value would be the letters or numbers that the Incident is calling these divisions

Shift: This value will be a “D” for day or a “N” for night. If costs are not being apportioned by shift a “D” may still be used.

Date: This value is a required field. This value is the date associated with the cost apportionment percentages.

Fed %: This field is a required field. This field represents the Federal percentage of their cost obligations to that division for that specific date.

State %: This field is a required field. This field represents the State percentage of their cost obligations to that division for that specific date.

Other %: This field is a required field. This field represents the Other percentage of their cost obligations to that division for that specific date. Other represents any other agency or group that is not either Federal or State (ie) County, City, etc. ICARS has the capability to divide the cost obligations into a maximum of three entities.

Description: This field is an area where you could place additional information about that division.

ACRES BURNED

IMAGE 5-5 ICARS Acres Burned Screen

The screenshot shows the 'Acres Burned' screen in ICARS. At the top, there is a table with the following data:

Incident	Date	FIL	Acres	Fuel Type	Potential	Haines Index	Res Value
CO-COS-000	06/10/2004	2	1500	Timber	Other	4	
CO-COS-000	06/10/2004	1	1000	Timber	Urban	4	Powerline

Below the table is a data entry form with the following fields:

- Mode: New Records: 2
- Incident:
- Fuel Type:
- FIL:
- Potential:
- Acres:
- Haines Index:
- Date:
- Res Value:

At the bottom of the form are several buttons: Exit, New, Delete, Save, Refresh, and Sort/Filter.

The acres burned is tied to the Net Value Change “NVC” module where you can calculate the dollar loss for various types of predefined resources.

Similar to the division table, you would insert new acres burned records for each day on the incident (just the new acres...not the total). Then in the NVC FIL(Fire Intensity Level) table

you can assign the cost per acre for each type of resource for each FIL.

As a future enhancement the acres burned now also includes fields to track fire characteristics. These will eventually be used to calculate the cost per a weighted acres, with the weighting being based on the potential and risk of the fire.

INCIDENTS

The Incident table contains all the basic information for the incident including the incident number, name, location, and Start & end date.

Below are brief descriptions of each field found in the Incident table.

Number: This should be the actual # assigned to the fire.

Number	Name	Location	Start Date	End Date	State
OR-DEF-1	TESTING	BEND	5/20/2003		OR

Mode: Update Records: 1

Number: Start Date:

Name: End Date:

Location: State:

IMAGE 5-6 ICARS Incident Input Screen

Name: This will be the Common name of the incident (ie) “Canyon Fire”

Location: Usually represents a city but can be a more specific location.

State: Must be the two letter state code. This is critical to the obligations reporting.

Start Date: All Dates entered in I-Suite will verify against this date. This will stop keypunch, etc. errors where check in and ITS posting dates are prior to the start date.

End Date: The End Date is used for stopping ICARS from creating daily records, if opened after the end of an incident. No daily records can be created after the Incident End Date.

RATES

Standard rates are included for single resources such as crews, engines, overhead, fallers, pickups, and fuel tenders. The RATES tables main function is to determine a default rate for a resource entered into the Resource table. There are numerous types of rates for a number of different groups. When you choose Rates from the Edit menu you will see that there are three different tables to edit. Those are Rates, Rate Type, and Rate Group. All three tables are tied together. Below is a brief description of each of the Rates tables

Description	Status	Standard
▶ Default Standard	Default	Yes
Region 10	Inactive	No
Region 6	Active	No

Description:

Status:

Rate Area

IMAGE 5-8a ICARS Rate Area Input Screen

The Rate Area table contains a default rate identifier and specific rate areas set up by the user. After setting up a rate area in this table you then make that rate are active and utilize that rate area in the rates table to set up specific rates for that area. In the Resources screen you can then specify to use your new rate area as the first rate to pick up. If you do not set up rates for a certain Kind, the default rates will then be used.

Rate Type

IMAGE 5-7 ICARS Rate Types Input Screen

Rate Type	Monetary	Description
DAY	<input checked="" type="checkbox"/>	Daily Single Shift
DAYN	<input checked="" type="checkbox"/>	Daily Non Hazard Rate
GAL	<input checked="" type="checkbox"/>	Gallons
GUAR	<input checked="" type="checkbox"/>	Guarantee Rate
HR	<input checked="" type="checkbox"/>	Hourly Rate (Ave-Haz)
HRNH	<input checked="" type="checkbox"/>	HourlyRate (Ave-Non-Haz)
MILE	<input checked="" type="checkbox"/>	Mileage
MISC	<input checked="" type="checkbox"/>	Misc Support
OT	<input checked="" type="checkbox"/>	Overtime
RT	<input checked="" type="checkbox"/>	Regular Time
TRAN	<input checked="" type="checkbox"/>	Mob/Demobilization
PERS	<input checked="" type="checkbox"/>	Person
UNIT	<input checked="" type="checkbox"/>	Units
DAY2	<input checked="" type="checkbox"/>	Daily Double Shift
EA	<input checked="" type="checkbox"/>	Each
WEEK	<input checked="" type="checkbox"/>	Weekly
MNTH	<input checked="" type="checkbox"/>	Monthly

Mode: Update Records: 17

Rate Type

Monetary

Description

The Rate Type table stores information about the different types of rates that are available in the Rate Type pull down combo box in the Daily table. Rate types for Weekly and Monthly rates have been added. These rate types only allow the creation of daily records every week or month. So if you know resource is only paid weekly or monthly use these rate types. Otherwise ICARS will try to create a cost for every day, which would be incorrect.

Rate Group

IMAGE 5-7a ICARS Rate Group Input Screen

The Rate Group field is used in the Rates Table to allow different rates for the same kind of resource, but for different agencies (Fed, State, Contract, etc).

Group	Description
CITY	City
CNTY	County
CONT	Contract
FED	Federal
OTH	Other
ST	State

Mode: Update Records: 6

Group:

Description:

Exit New Save Refresh Sort/Filter

Rates

The Rates Table stores rate information about each Kind of resource within ICARS. These rates may be negotiated prior to Fire Season or simply rough estimates so that ICARS has something to use as a default rate for any kind of resource that is used on an incident. All Daily rates for any resource may be over-written by changing the rate inside the Daily table for a particular resource. If you want to set up a specific Rate Area, first enter the new Rate Area in the Rate Area table, and then select that rate area from the box in the upper left corner of the Rates screen. Rates can be entered in the grid and then saved by clicking on Apply.

IMAGE 5-9 Rates Table Input Screen

Rate Areas
 Default Standard Standard Rate

Rate Kinds

Kind	Description
GIST	GIS TECHNICAL SPCL
GMEC	GENERAL MECHANIC
GRD	GRADER
GSUL	GROUND SUPPORT UL
HC1	HAND CREW TY 1
HC2	HAND CREW TY 2
HC3	HAND CREW-AD
HCIN	HAND CREW INMATE
HCM1	CREW-MILITARY
HCS1	HAND CREW S/T TY 1
HCS2	HAND CREW S/T TY 2
HCSC	HANDCREW S/T COMPONENT
HCSU	HAND CREW S/T TY UNK
HCU	HAND CREW TY UNK
HEB1	HELIBASE MGR TY 1
HEB2	HELIBASE MGR TY 2
HECM	HELICOPTER CREW MMBR
HECP	HELITACK CREW MEMBER

Rates

	CITY	CNTY	CONT	FED	OTH	ST
DAY		5300	7500	5300		7500
DAY2						
DAYN						
EA						
GAL						
GUAR						
HR		375	530	375		530
HRNH						
MILE						
MISC						
OT						
PERS						
RT						
TRAN						
UNIT						

Exit Apply Cancel

KINDS OF RESOURCES

The Kind table is a lookup table containing a two to four letter abbreviation for all acceptable kinds. Every resource added to the resource table requires a Kind to be assigned. The Kind table should contain all the Kinds you will need. However, there may be times when you will need to add a new Kind to the Kind table. The best way to add a resource, is to find an existing resource that is similar to the one you want to add. Click on this resources which will populate the edit fields at the bottom of the screen. Then change the KIND and any other information that is difference. Then click SAVE AS, which will save the KIND with the new name that you gave it. You can also just choose NEW from the KIND screen and enter all the fields from scratch. If you do add new KINDS be aware of all the fields in the Kind table as they play a critical role in the Reporting and Graphing of ICARS data. Minor changes in the Kind table can significantly change the way ICARS data is reported and graphed. The KIND table also includes fields used by IRSS, which you do not see in ICARS, so if you are adding kinds coordinate with your IRSS partners, so they can assure that their fields are also filled in.

IMAGE 5-10 Kind Table Input Screen

Kind	Quantity	Units	Rate Type	People	Direct	Aircraft	Form	Description	Like	Group	Graph	Cat1A	Cat1B
DOZ2	1	12	HR	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 - All Others	DOZER TY 2 MEDIUM	D - DOZERS	E - EQUIPMENT	E - EQUIPM	E - CREWS & E	Q - OTHER EQUI
DOZ3	1	12	HR	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 - All Others	DOZER TY 3 LIGHT	D - DOZERS	E - EQUIPMENT	E - EQUIPM	E - CREWS & E	Q - OTHER EQUI
DOZB	1	14	HR	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 - All Others	DOZER BOSS (SINGLE RES)	OD - DIRECT	L - LINE PERSON	O - PERSON	O - SUPPORT	S - SUPPORT-OV
DOZI	1	14	HR	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 - All Others	DOZER OPERATOR (IA)	OD - DIRECT	L - LINE PERSON	O - PERSON	O - SUPPORT	S - SUPPORT-OV

Mode: Update Records: 405

Kind Code: Kind Like:

Daily Form: Kind Group:

Quantity: Graph Group:

People: Cat 1A:

Units: Cat 1B:

Rate Type:

Description:

Direct: Aircraft:

Below are brief descriptions of each field found in the Kind table.

Kind Code: This value is the Kind Code that is used in the Resource Table. Before adding a Kind to the Kind table you should be sure and see that no other Kind in the Kind table will suit the need.

Description: This value is a more descriptive word to the Kind Code.

Quantity: Is the value that is used as the default Quantity for a particular Kind that is inserted into the resource table. Quantity is the number of that Kind.

Units: Is the value that is used as the default Units for a particular Kind that is inserted into the resource table. Units correlate closely to Rate Type. A “Daily” Rate Type would most likely have a Unit value of 1 (one day), where a “Hourly” Rate Type might have a Unit value of 12 or 14.

RateType: Is the value that is used as the default Rate Type for a particular Kind that is inserted into the resource table. Rate Type correlates closely to Units. A “Daily” Rate Type would most likely have a Unit value of 1 (one day), where a “Hourly” Rate Type might have a Unit value of 12 or 14.

Direct: The Direct Check box is a toggle for a Direct Cost or an In-Direct Cost. Examples of a Direct cost would be an engine directly on the fire line. An example of an In-direct cost might be Showers that support the Incident in a In-direct means.

Aircraft: This Aircraft check box is a toggle to determine if the Kind is an aircraft or not. It is used for reporting purposes throughout ICARS. Examples of aircrafts would be air tankers, helicopters, lead planes, etc.

Daily Form: This value is used to determine what kind of Daily form to use. If you notice, the

Daily form is much different for an air tanker than it is a dozer. On the same note, you'll notice a helicopter is different from a lead plane. The majority of the Kind of resource on an incident will fall under the "O" category of "All Other". Helicopters and Aircraft have their own daily form and that is primarily when you will see different Daily Form codes used.

Like Kind: This value is used to group very similar kinds together for reporting on the daily and weekly cost summaries. For instance ENG, ENG1, ENG2, and ENG3 are all engines, just different types. There are times when we wish to know just how many engines, irrelevant to the type of engine they are. Following are the current Like Kind groupings that are set up.

Group Code	Kind Like Description
C	CREWS
D	DOZERS
E	ENGINES
H	HELICOPTERS
T	TRACTOR/PLOWS
W	WATER TENDERS
OD	LINE PERSONNEL
OS	CAMP PERSONNEL
VE	MISC. VEHICLES
F	MISC. FACILITIES
EQ	MISC. EQUIPMENT
H1	HEAVY HELI
H2	MEDIUM HELI
H3	LIGHT HELI
H4	OTHER HELI
CC	CAMP CREW
SUP	SUPPLIES
MC	MILITARY CREW
LO	LOWBOY-TRANSP.
MI	MISC. SUPPORT
FW	FIXED WING AIR
AT	AIRTANKER
RET	RETARDENT
BUS	BUSSES
CAT	CATERER
SHW	SHOWER
TLT	TOILETS
RES	RESCUE MEDICAL
TRA	MOB/DEMOB
TRC	TRASH COLLECTOR

Kind Group: This value further breaks down the cost group from within the Direct or Support Cost Sections. Under the Direct section there are four groups, those are: "A" (Air), "C" (Crews),

“E” (Equipment), “L” (Overhead-Line). For the Support section there are three groups, those are: “M” (Camp Support), “O” (Overhead-Support), “S” (Supplies).

Graph Group: This value determines where the cost of this particular kind falls into place, in the graphs. All the graphs for ICARS are broken up into six groups, those are: “A” (Air), “C” (Crews), “E” (Equipment), “M” (Camp Support), “O” (Overhead), and “S” (Supplies).

Function Group: This value is used in a few ICARS reports for breaking down costs into the I.C.S. functions, those are: “F” (Finance), “L” (Logistics), “O” (Operations), “P” (Plans), “M” (Other-Support Costs)

Cost Group A: This value is used in the cost apportionment reports to break down costs into “A” (Aircraft), “E” (Equipment) and “O” (Support-Overhead).

Cost Group B: This value is used in the cost specific apportionment reports to break down costs in greater detail than the COST APP group. Categories are “A” (Fixed Wing and Retardant), “C” (Crews), “E” (Engines), “H” (Helicopters), “Q” (Other Equipment), and “S” (Support - Overhead).

Report Z1: In ICARS, there has been an additional fields left blank for each kind. This will allow you to group ICARS kinds into any grouping you wish for reporting purposes.

AGENCIES

Agency

The Agency table stores the information about every agency used by ICARS. For each Agency listed there is an abbreviation and description. If you wish to group all Federal Agencies, you may choose FED. At any time, you may add an agency to the *AGENCY* table.

Below are brief descriptions of each field found in the Agency table.

Agency: This value is the Agency the resource

belongs to (ie) FS, BIA, NPS, or PVT. All contract equipment should use the “PVT” Agency value. The values in the Agency field are the values seen when looking up an Agency from the

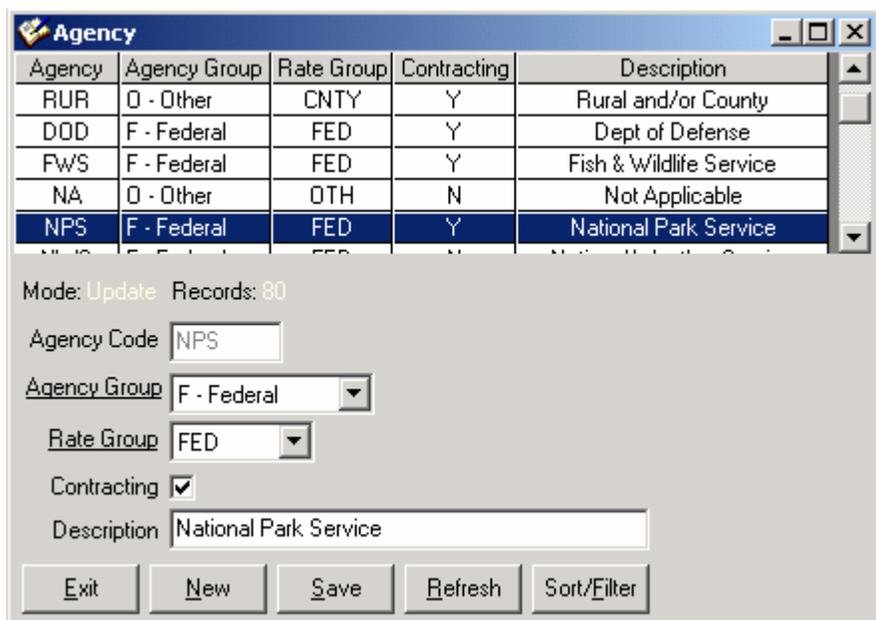


IMAGE 5-11 ICARS Agency Table Screen

Resource Table.

Agency Group: This value is Federal, State, or Other.

Rate Group: This value of the Rate grouping that particular Agency falls under. (IE) Federal, State, County, Contract, etc. Used for determining the default rate in the Rates Table.

Contracting: A “Y” in this field allows you to use that agency in the Resource table to identify the agency that has contracted and will pay for the resource.

Description: This value is a description of the Agency

Agency Groups

Agency group table is strictly a look-up table and only has 6 values in it. (Federal, State, County, City, Private and Other)

HOME UNIT

IMAGE 5-12 Home Unit Table

The values found in this table are "sub" agency codes. With the example of the Forest Service these values would be Forests. The Local box can be checked to identify a local resource, which when used in the Resource table will allow the tracking and reporting of local resources.

Unit Code	Agency	Local	Description
IDSTF	FS	N	Sawtooth Nf
MNSUF	FS	N	Superior Nf
ORSUF	FS	N	Siuslaw Nf
CASZA	FS	N	South Zone Air Unit
CASZF	FS	N	South Zone

Mode: New Records: 2322

Unit Code:

Agency:

Local:

Description:

Exit New Save Refresh Sort/Filter

Home Unit c:\suite\database\suite.mdb 3/2/2001 3:16

NVC

This section of ICARS will estimate Net Value Change (NVC) which is derived from the number of acres burned, the Fire Intensity Level (FIL) of the acres burned and the NVC categories affected. This area involves three tables, NVC categories, NVC values by FIL and acres burned. Acres burned has been defined, so below are NVC categories and NVC by FIL.

NVC Categories

The values in this table are predefined upon installing ICARS. These are the categories that are often affected by Fire related incidents. Examples are Timber, Wildlife, Water Usage, etc.

IMAGE 5-13 NVC Categories Input Screen

NVC	Description
1	Mature Timber
2	Immature Timber
3	Forage
4	Water Use
5	Water Storage
6	Fish
7	Wildlife
8	Recreation

Mode: Update Records: 8

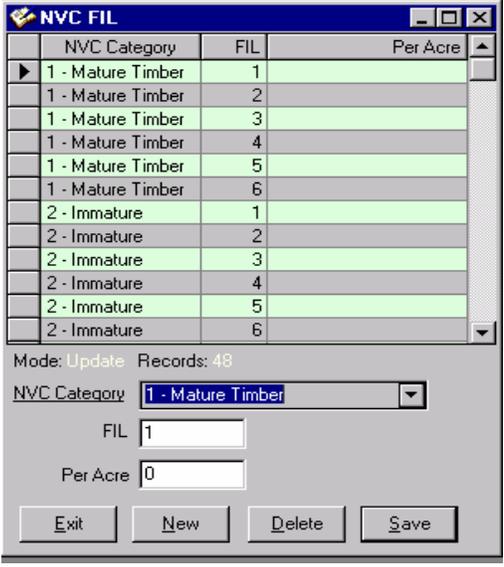
NVC Category:

Description:

Exit New Delete Save

NVC Values by FIL

The values in this table represent the Cost per Acre for each NVC Category for each Fire Intensity Level (FIL). Normally as the FIL increases, the cost per acre increases. By default, the Cost Per Acres field has been left blank, as this value differs greatly from one area to the next. You will have to obtain these values from the area the incident is on. The reports for this section of ICARS will only report categories that have a Cost per Acre value in that field.



The screenshot shows a software window titled "NVC FIL". It contains a table with three columns: "NVC Category", "FIL", and "Per Acre". The table lists 12 rows of data. Below the table, there are input fields for "NVC Category" (a dropdown menu), "FIL" (a text box), and "Per Acre" (a text box). There are also buttons for "Exit", "New", "Delete", and "Save".

NVC Category	FIL	Per Acre
1 - Mature Timber	1	
1 - Mature Timber	2	
1 - Mature Timber	3	
1 - Mature Timber	4	
1 - Mature Timber	5	
1 - Mature Timber	6	
2 - Immature	1	
2 - Immature	2	
2 - Immature	3	
2 - Immature	4	
2 - Immature	5	
2 - Immature	6	

Mode: Update Records: 48
NVC Category: 1 - Mature Timber
FIL: 1
Per Acre: 0
Buttons: Exit, New, Delete, Save

IMAGE 5-14 NVC FIL Input Screen

Narrative

The Narrative file is a text document where you can create and print text documents for Unit Logs or other documentation purposes.

CHAPTER 6

Reports

This chapter discusses the different menu items or reports located under the Reports main menu. The Reports in ICARS are built with Crystal Reports. There is one main menu for the reports. This chapter will first review the report categories and report filters and formats.

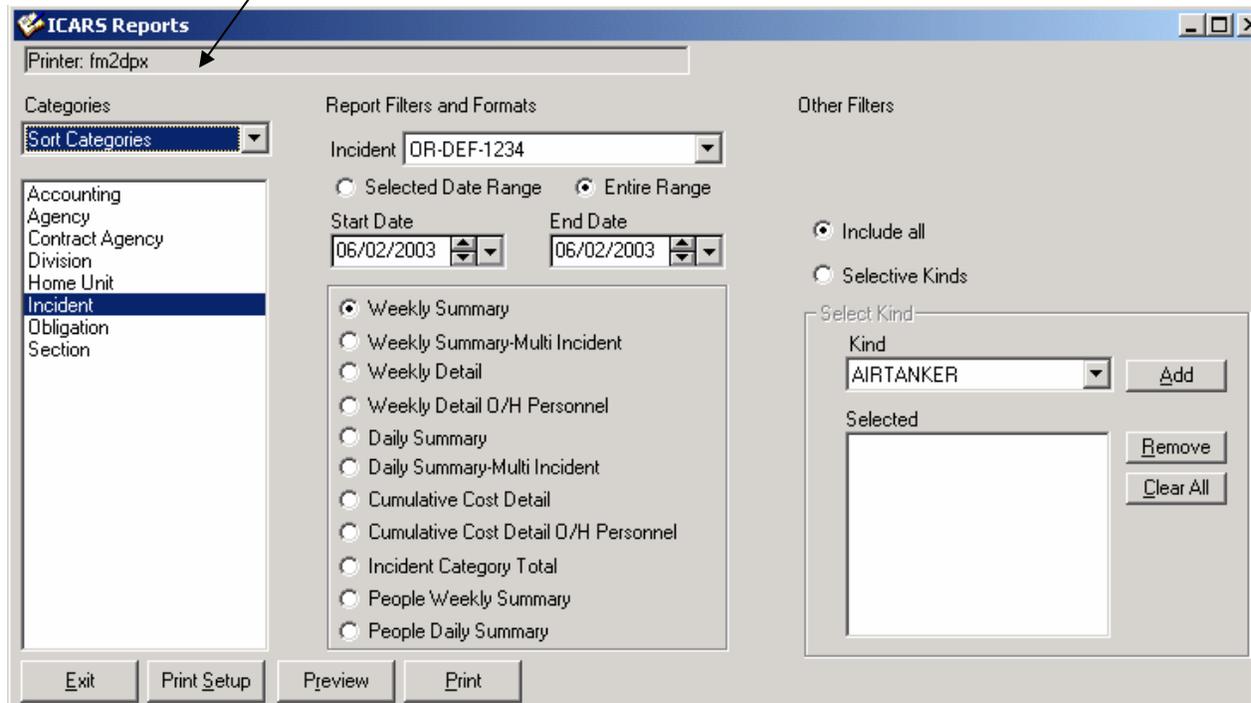
Available Reports

There are a variety of Available reports in the reports menu as displayed in the left column of the screen print above. When you select a report category the report options for that report will display to the right.

Sort Categories

The first set of reports is displayed by selecting the Category **Sort Categories**. These reports are all split out by specific categories. After you select the sort category, you can then select the Incident, Date Range, Specific Report and whether you want to see all occurrences, or just selected ones.

IMAGE 6-1 Report Main Menu



Accounting

Reports split out by Accounting Code.

Agency

Reports split out by specific Agencies.

Contracting Agency

Like the Agency report but, allows for the tracking of who pays the resource, regardless of who it belongs to.

Division

Using the division reports allows the user to expand the use of the division field. It can now, not only be used to track costs by an actual division, but also be used as a cost center-tracking tool, where each division represents a cost center. For example if you had a quick response base, where resources would go from incident to incident and you want to track the costs to each accounting code. In this scenario each division would represent an accounting code.

Home Unit

Includes an additional feature to select a check box for local resources. This will then display in your reports only the Home Units that you have selected as local in the Home Unit table (you did this by going to EDIT—HOME UNIT and editing the local field).

Incident

Includes an additional feature to select kind of resources you want to display in the report. For example you can select Engines and then run the Weekly detail report. This will give you a listing of all the engines. The most typically run reports are the Daily and Weekly Summaries under Incident reports.

Obligation

The obligation module should be used for basic obligation reports. This section may be used for more detail report to be used for analysis and documentation.

Section

Splits the reports out by the Incident Team sections of Operations, Logistics and Finance.

Other Categories

In the Other category are all other reports that are not based on a sorting category as described below.

Acres/NVC

Three levels of reports, from a summary level to a detail by resource level, to display the Net Value Change information as described in Chapter 5.

Aircraft

This report is used for reporting cumulative air costs for a particular incident. It will display all the data entered into the AirDaily table.

Cost Share



The Cost Apportionment reports are a series of reports that are used to show the break down of the incident's costs by agency involved. There are currently four reports, commonly referred to as CAT-1, CAT-2, CAT-3, and CAT-4 reports. CAT-1 starts our very broad and CAT-4 is down to the single resource per day detail. These reports are building blocks to each other. CAT-3 supports CAT-2, which supports CAT-1.

Lookup Tables

Ability to print all lookup tables as described in Chapter 5. When becoming familiar with the data in ICARS, it is sometimes useful to print out these lookup tables as a resource.

Resource Kind

This report shows all Kinds currently on the Incident sorted by Cost. It is very useful during demob to identify the release of costlier resource first. It will also display local resources as identified in the Home Unit table. See the Home Unit table for a description of how to designate local resources.

UnderUtilized

For tracking of resources that are underutilized. Based on the check box in the Daily table.

Standard Reports Options

Weekly Summary & Weekly Summary-Multi Incident

This report is one of the more common reports used in ICARS and provides supporting data for the Cost by Date graph. The multi incident option will show a section for each Incident.

IMAGE 6-3 ICARS Weekly Summary Report

		Salem Tower						
		Weekly Incident Report						
		Cost Summary						
		6/28/98						
		4/8/98	4/9/98	4/10/98	4/11/98	4/12/98	4/13/98	4/14/98
AIR TANKER		0	0	38,000	53,000	58,500	0	0
	Sub total	0	0	38,000	53,000	58,500	0	0
MEDIUM TYPE 2 HELI		0	75,000	56,000	92,000	87,500	94,000	94,000
	Sub total	0	75,000	56,000	92,000	87,500	94,000	94,000
HAND CREW-TY 1		4,396	4,396	4,396	4,396	4,396	4,396	4,396
HAND CREW-TY2		5,040	5,040	5,040	5,040	5,040	5,040	5,040
	Sub total	9,436	9,436	9,436	9,436	9,436	9,436	9,436
DOZER		0	400	400	400	400	400	400
ENGINE		3,612	3,612	4,038	4,038	4,178	4,178	4,178
FALLER		0	2,128	1,064	1,064	1,064	1,064	1,064
LOWBOY		0	1,250	450	0	0	0	0
WATER TENDER		0	1,050	1,050	1,050	1,050	1,050	1,050
	Sub total	3,612	8,440	7,002	6,552	6,692	6,692	6,692
PERSONNEL DIRECT		1,960	3,920	5,880	7,056	7,840	10,192	10,192
	Sub total	1,960	3,920	5,880	7,056	7,840	10,192	10,192
36	Direct/Indirect Sub total	15,008	96,796	116,318	168,044	169,968	120,320	120,320

Daily Summary and Daily Summary-Multi Incident

This is ICARS most popular or used report. This report is used on a daily basis to get an estimated cost of resource on the incident for the current day and cumulatively.

IMAGE 6-4 ICARS Daily Summary Report

Salem Tower
Daily Incident Report
Cost Summary
 4/14/98

Resource Kind	Qty	People	Daily Cost	Cumulative To Date
AIR TANKER	1	1	0	149,500
DOZER	1	1	400	4,000
ENGINE	4	12	4,178	48,724
FALLER	1	1	1,064	12,768
HAND CREW-TY 1	1	20	4,396	52,752
HAND CREW-TY2	1	20	5,040	55,440
LOWBOY	0	0	0	1,700
MEDIUM TYPE 2 HELI	2	2	94,000	968,500
PERSONNEL DIRECT	26	26	10,192	98,000
WATER TENDER	1	1	1,050	10,500
Direct Cost		84	120,320	1,401,884
BUS	5	5	3,000	28,200
CATERER	1	10	9,000	82,680
PERSONNEL SUPPORT	50	50	16,800	145,152
POTABLE WATER TRUCK	1	1	1,150	11,500
TOILET	30	0	900	8,700
TRUCK	14	14	9,800	81,200
Support Cost		80	40,650	357,432
Grand Totals:		164	160,970	1,759,316

Weekly Detail and Weekly Detail-O/H Personnel

The same format as the Weekly Summary, except shows detail to the level of each resource. There are two reports in this format. The Weekly Detail does not include line and support overhead personnel. There is a separate report just for these personnel.

Cumulative Cost Detail & Cumulative Cost Detail-O/H Personnel

Lists each resource with all detail. This will print all Resource and daily detail. This report is normally going to be one of ICARS longer reports. This is sometimes printed at the end of an incident to have hardcopy of all the resource and their costs for every.

IMAGE 6-5 ICARS Cumulative Cost Detail Report

Salem Tower Incident Cumulative Detail 6/15/98

Resource Kind Name	Req No.	Agency	Unit	Assign Date	Prj. Release	Release Date	Resource Description
AIR TANKER							
Tanker 202							
	A2	CONT		4/10/98			
Date	Shift	Div	Qty	Unit Cost	Units	Rate Type	Daily Cost
4/10/98	D	A	1	38,000	1		38,000
4/11/98	D	A	1	53,000	1		53,000
4/12/98	D	A	1	58,500	1		58,500
4/13/98	D	B	1	0	1		0
4/14/98	D	B	1	0	1		0
4/15/98	D	B	1	0	1		0
4/16/98	D	B	1	0	1		0
4/17/98	D	B	1	0	1		0
4/18/98	D	B	1	0	1		0
4/19/98	D	B	1	0	1		0
Subtotal:							149,500
Kind Subtotal:							149,500

Category Total

Across the top are the categories depending on the category of report you are running (ie: agencies, divisions, etc). On the side are the cost categories.

BACHELOR BUTTE

Agency Category Total
With Agency Assignments

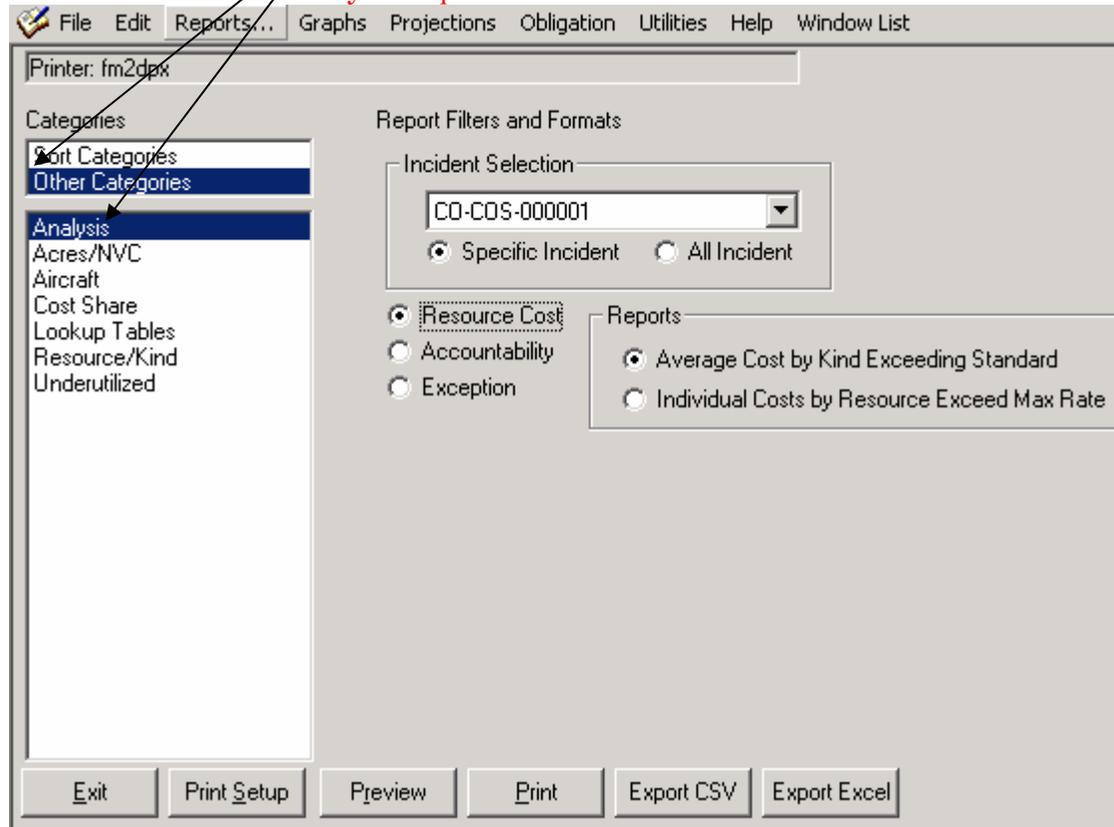
S1601						
	DOD	FS	NPS	PVT	ST	Total
RETARDENT	0	36,000	0	0	0	36,000
MEDIUM HELI	0	0	0	138,000	0	138,000
LIGHT HELI	0	0	0	22,600	0	22,600
HEAVY HELI	0	0	0	216,000	0	216,000
FIXED WING AIR	0	0	0	18,000	0	18,000
AIRTANKER	0	0	0	820,000	0	820,000
Kind Group Subtotal	0	36,000	0	1,214,600	0	1,250,600
ENGINES	0	31,812	0	83,466	51,988	167,266
Kind Group Subtotal	0	31,812	0	83,466	51,988	167,266
MILITARY CREW	66,000	0	0	0	0	66,000
CREWS	0	292,270	0	0	0	292,270
Kind Group Subtotal	66,000	292,270	0	0	0	358,270
WATER TENDERS	0	0	0	65,360	0	65,360
LOW BOY-TRANSP.	0	0	0	360	0	360
DOZERS	0	12,694	0	20,220	0	32,914
Kind Group Subtotal	0	12,694	0	85,940	0	98,634
DIRECT PERSONNEL	0	27,342	0	0	0	27,342
Kind Group Subtotal	0	27,342	0	0	0	27,342
Direct/Indirect Subtotal	66,000	400,118	0	1,384,006	51,988	1,902,112
RESCUE MEDICAL	0	0	0	36,000	0	36,000
OTHER VEHICLES	0	1,800	0	900	0	2,700
OTHER EQUIPMENT	0	0	0	0	0	0
MOB/DEMOB	0	133,890	0	0	0	133,890
INDIRECT PERSONNEL	0	337,064	8,428	2,490	0	347,982
FACILITIES	0	77,700	0	0	0	77,700
CATERER	0	0	0	1,295	0	1,295
BUSSES	0	0	0	149,000	0	149,000
Kind Group Subtotal	0	550,414	8,428	189,655	0	747,497
SUPPLIES	0	789,780	0	0	0	789,780
Kind Group Subtotal	0	789,780	0	0	0	789,780
Direct/Indirect Subtotal	0	1,339,174	8,428	189,655	0	1,536,257
Grand Total	66,000	1,739,292	8,428	1,572,661	51,988	3,438,368

Specialized Report Options

Analysis Reports

There are several reports which will present analytical cost information. These can be accessed through the reports screen by selecting “Other Categories” and then “Analysis” as shown in the image below. Follows are descriptions of the reports and their usage.

IMAGE 6-6 ICARS Analysis Reports Menu



Resource Cost report.--There are two report options as follows:

Average Cost by Kind Exceeding Standard—This report displays the average cost of all major kinds of resources, like Engine, Type 3 and Dozer, Type 1, compared to a standard rate table.

Individual Costs by Resource Exceed Max Rate—This report displays individual resources that exceed the maximum rate contained in a standard rate table.

Accountability Report—This report displays a number of ratios and comparable costs. An example of the report follows the description and uses of the contents below:

Percentages breakdown of resources—The Upper section of the report shows how the fire breaks out cost wise with percentages for each type of resource (Aircraft, Crews and Direct Equipment) and for total Support and Direct costs.

Support cost per person—The middle section of the report displays the support costs per person. These costs are broken down into the support cost categories.

Ratio of support costs to direct costs—This is an indicator of the level of support costs. The standard is set at 47% meaning that support costs and direct costs are typically about equal. As support costs rise above this level it is an indicator that support costs are too high and should be evaluated for cost savings.

Ratio of support personnel to direct personnel—The standard is set at 35% meaning that approximately 1 out of every 3 persons on a fire are considered support personnel. As the percentage increases it may indicate that the fire is overstaffed with support personnel.

Total Support Cost Per Direct Person—This cost can be used when sharing costs with other cooperators like the State Fire Marshal protecting structures, that are being supported out of the fire camp. This support cost includes all support services and equipment as well as all support personnel (Incident Team Members, etc)

Cost Per Acre—This report will only display cost per acre if the acres burned are entered into the acres burned table, which is found under the Edit tab on the main menu. A weighted average cost per acre burned is being discussed, but until that is developed, keep in mind that the cost per acre is not always a relevant comparable, due to factors such as urban interface and timber type and values at risk.

IMAGE 6-7 ICARS Aircraft Cumulative Summary Report

Incident Cost Accounting and Reporting System (ICARS) Page 1 of 1
6/9/2004 2:44:00PM

Analysis - Accountability

	Current Value	Standard Value	Difference	Std. Deviation.
Aircraft %	0	20	-20	10
Crew %	75	26	49	10
Direct Equipment %	7	15	-8	10
Support %	11	32	-21	10
Direct %	89	68	21	10
Non-Personnel Support Cost Per Person				10
BUSSES	1			0
CAMP CREW	6			0
FACILITIES	1			0
OTHER EQUIPMENT	5			0
OTHER SUPPORT	6			0
OTHER VEHICLES	5			0
RESCUE MEDICAL	2			0
SHOWERS	6			0
	32	133	-101	10
Support Cost/Direct Cost	13	47	-34	10
Ratio of Support Personnel to Direct Personnel	29	35	-6	10
Total Support Cost Per Direct Person	110	249	-139	20
Cost Per Acre	11,863,727	0	11,863,727	0

Exception Report—The exception report aids the Cost Unit Leader in determining if there

are costs in the database that are not accurate. The user can determine which options to include in the report by clicking on the options button on shown on the reporting screen below. If the user clicks all the options, then the resulting report will include all options. The options can be used as follows:

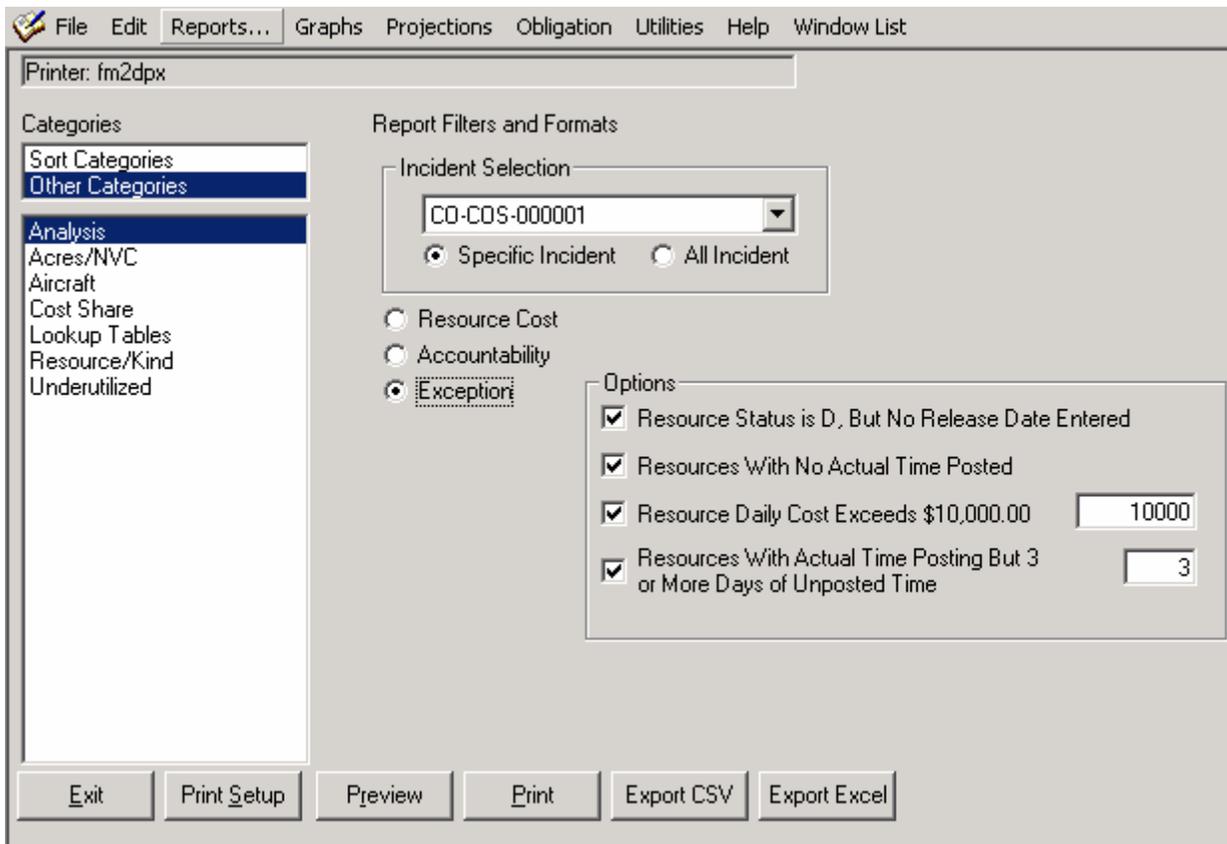
Resource Status is D, But no Release Date Entered—Costs will continue to accrue on a resource until it has a release date. But if a resource status is D, it indicates that the resource was release, but a release date was never entered. Check these resources out with plans and/or time to determine if they have been release and have plans either change the status or remove enter a release date.

Resources With No Actual Time Posted—Most resources will have time posted to them in ITS. This will include all personnel and contracts. This report will display all resources with no actual time posted and tell you how many days of unposted time there are. This can be an indicator of duplicate resources or resources that never checked in. In both these cases the resources are accruing costs and should be deleted from the database. Some resources will never have actual time posted, like supplies, caterer, etc.

Resource Daily Cost Exceeds \$x,xxx—This report will show resources with costs over a user defined limit. The default is \$10,000 but that limit can be changed. The purpose of this report is to analyze high value cost items. This could identify errors in your data, where maybe you have a daily cost with an hourly rate, but it can also identify items that may be worth more analysis, due to the expense of the item.

Resource with Actual time posting but x or more days of unposted time— Sometimes resources will leave the incident, but either they never check out or the release date never gets entered. This report will display those resources that we know have checked in, because there is actual time posted, but have multiple days with no posting along with the number of unposted days. The user can define how many days of non-posting it takes to get on the report. This report may also be of use to the time unit for identifying resources that are not turning in their time.

There is an additional feature on the main ICARS menu under Utilities and Tools to remove all estimates from time postings. This feature will change all estimates to zero. Of course when you re-run the create daily routine estimates will again flow down to all days following the last actual posting. However this is a good tool to remove estimates in the middle of a person or contracts time as those estimates will not be re-generated with create daily. So for instance a resource might have actual posted time from 6/1 to 6/5. But then leaves the incident and has no time posted from 6/6 to 6/10. The resource comes back and has time from 6/11 on. Currently ICARS will include estimates for 6/6 to 6/10 based on whatever time was posted on 6/5. You can manually change the hours for those days to 0, or you could run this routine which would do it for you.



Aircraft Cumulative Detail

IMAGE 6-9 ICARS Aircraft Cumulative Summary Report

Salem Tower Cumulative Air Costs 6/15/98

Date	Div	Name	Kind	Total Aircraft	Tot Hrs	# Trips	# PAX	lbs Cargo	gal Retard	gal Water	Retard \$
4/10/98	A	Tanker 202	AT	38,000	7.50	12	12	45,000	88,000	64,000	20,000
4/11/98	A	Tanker 202	AT	53,000	9.50	18	15	68,050	96,000	70,000	24,000
4/12/98	A	Tanker 202	AT	58,500	9.50	18	423	1,450,000	100,000	76,000	25,500
4/13/98	B	Tanker 202	AT	0							

Resource Kind By Cost

IMAGE 6-10 ICARS Resource Kind By Cost Report

Resource Kind By Cost
4/14/98

Kind	Name	Agency	Unit Cost	Rate Type	Rate Units	Assign Date
AIR TANKER						
	Tanker 202	CONT	0		1	4/10/98
BUS						
	Marion Co. School	CONT	600	DAY	1	4/8/98
CATERER						
	Delta Catering	CONT	9,000	MISC	1	4/10/98
DOZER						
	Johnson Dozer	USFS	400	DAY	1	4/9/98

Cost Share Summary (CAT-1)

This report is broken down by the Cost Apportionment Type (Aircraft, Crews & Equipment, and Support & Overhead) and then by Day and Shift

IMAGE 6-11 ICARS Cost Share Summary Report (CAT-1)

Operational Period Consolidation Worksheet
Cost Share Apportionment
6/15/98

Date	Shift	Daily Cost	FED Cost	FED %	ST Cost	ST %	OTH Cost	OTH %
AIRCRAFT								
4/9/98	Day Shift	75,000	30,000	40	45,000	60	0	0
4/10/98	Day Shift	94,000	94,000	100	0	0	0	0
4/11/98	Day Shift	145,000	53,000	37	92,000	63	0	0
4/12/98	Day Shift	146,000	102,200	70	21,900	15	21,900	15
4/13/98	Day Shift	94,000	94,000	100	0	0	0	0

Cost Share By Shift and Kind (CAT-2)

This report supports the numbers found in the CAT-1 report. This report is once again grouped by Cost Apportionment Type, Day and Shift, and then by Kind Type.

IMAGE 6-12 ICARS Cost Share By Shift and Kind (CAT-2)

Detail By Shift and Resource Kind
Cost Share Apportionment
6/15/98

Date	Shift	Resource Kind	Qty	Daily Cost	FED Cost	FED %	ST Cost	ST %	OTH Cost	OTH %
AIRCRAFT										
4/9/98	D	MEDIUM TYPE 2 HELI	2	75,000	30,000	40	45,000	60	0	0
4/9/98 Day Shift Subtotal:				75,000	30,000	40	45,000	60	0	0
4/10/98	D	AIR TANKER	1	38,000	38,000	100	0	0	0	0
4/10/98	D	MEDIUM TYPE 2 HELI	2	56,000	56,000	100	0	0	0	0
4/10/98 Day Shift Subtotal:				94,000	94,000	100	0	0	0	0
4/11/98	D	AIR TANKER	1	53,000	53,000	100	0	0	0	0
4/11/98	D	MEDIUM TYPE 2 HELI	2	92,000	0	0	92,000	100	0	0
4/11/98 Day Shift Subtotal:				145,000	53,000	37	92,000	63	0	0

Cost Resource Worksheet (CAT-3)

This report supports the numbers found in the Cost Share or CAT-2 report. This report is once again grouped by Cost Apportionment Type, Day and Shift, Kind Type, and then by individual resources.

IMAGE 6-13 ICARS Cost Share Resource Worksheet Report (CAT-3)

Detail Report Cost Share Apportionment 6/15/98

Date	Shift	Div	Name	Agency	Kind	Qty	Daily Cost	Fed Cost	Fed %	ST Cost	St %	OTH Cost	OTH %	
AIRCRAFT														
4/10/98	D	A	Tanker 202		CONT	AT	1	38,000	38,000	100	0	0	0	0
							4/10/98 Day Shift Subtotal:	38,000	38,000	100	0	0	0	0
4/11/98	D	A	Tanker 202		CONT	AT	1	53,000	53,000	100	0	0	0	0
							4/11/98 Day Shift Subtotal:	53,000	53,000	100	0	0	0	0
4/12/98	D	A	Tanker 202		CONT	AT	1	58,500	40,950	70	8,775	15	8,775	15
							4/12/98 Day Shift Subtotal:	58,500	40,950	70	8,775	15	8,775	15

Cost Share Detail Report (CAT-4)

This report is the last of the Cost Apportionment reports within ICARS. This report reports the Cost share amounts at their lowest level. This report is slightly different from the first three CAT reports, in that it is not grouped by any of the fields. This report is simply sorted by Kind Code and then by Day. This one doesn't support the CAT-3 report like the other CAT reports have, though it is the same data, just presented differently.

IMAGE 6-14 ICARS Cost Share Resource Worksheet Report (CAT-4)

Resource Worksheet Cost Share Apportionment 6/15/98

Name	Agency	Kind	Div	Date	Qty	Daily Cost	FED Cost	FED %	ST Cost	ST %	OTH Cost	OTH %	
Tanker 202		CONT	AT	A	4/10/98	1	38,000	38,000	100	0	0	0	0
Tanker 202		CONT	AT	A	4/11/98	1	53,000	53,000	100	0	0	0	0
Tanker 202		CONT	AT	A	4/12/98	1	58,500	40,950	70	8,775	15	8,775	15
Tanker 202		CONT	AT	B	4/13/98	1	0	0	35	0	65	0	0
Tanker 202		CONT	AT	B	4/14/98	1	0	0	50	0	50	0	0
Tanker 202		CONT	AT	B	4/15/98	1	0	0	0	100	0	0	0
Tanker 202		CONT	AT	B	4/16/98	1	0	0	0	100	0	0	0
Tanker 202		CONT	AT	B	4/17/98	1	0	0	0	100	0	0	0
Tanker 202		CONT	AT	B	4/18/98	1	0	0	0	100	0	0	0
Tanker 202		CONT	AT	B	4/19/98	1	0	0	0	100	0	0	0
Marion Co. School		CONT	BUS	A	4/8/98	1	600	480	80	120	20	0	0
Marion Co. School		CONT	BUS	B	4/9/98	2	1,200	0	0	1,200	100	0	0
Marion Co. School		CONT	BUS	B	4/10/98	3	1,800	0	0	1,800	100	0	0

Other Reports (Currently disabled)

Another feature within the Reports section is the ability to run additional reports that might have been added since the release of the ICARS application. This feature is executed from the "Other Reports" option in conjunction with "Utilities | Edit Graph/Report Query. You must first add the new report through the Utilities menu before you can run the report from the Other Report Menu option. Because ICARS allows you to rename, save as, and run multiple ICARS databases, running ad-hoc ICARS reports requires you tell ICARS the query name and the SQL statement that you wish to have run. The query you are entering is the query the new Crystal Report needs in order to run. Press "New" enter the query name and the SQL statement for that query and press "Save"

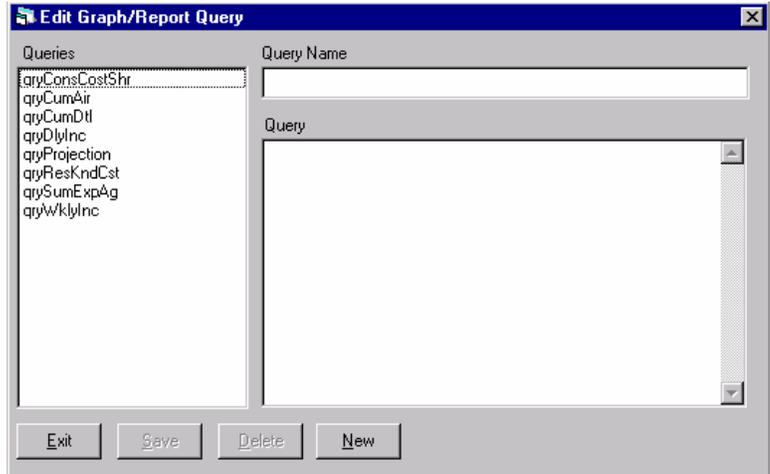


IMAGE 6-15 ICARS Edit Graph / Report Query Screen

CHAPTER 7

Graphs

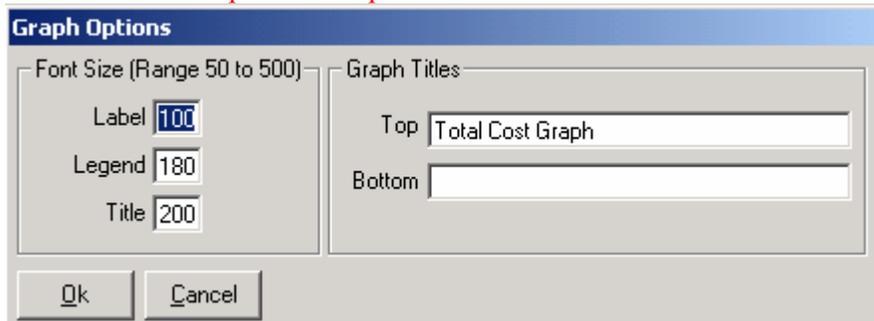
There are a variety of graphical presentations that are pre-designed including Pie, Area and Stacked Bar graphs. The two most common graphs are the Total Cost and the Cost to date. These graphs are typically run on a daily basis. There are also graphs when tracking costs by division to display the splits between divisions. Aircraft graphs are discussed under the Aircraft Analysis, Chapter 11.

Graph Setup and Printing

This chapter deals with the different menu choices located under the Graph menu of ICARS. The graph section of ICARS uses a third-party graph control, so the limitations to ICARS graphs are the limitations of this third-party control.

After selecting a graph you can customize the graph prior to printing. There are several ways to do this. The easiest is to select the options button at the bottom of the screen to adjust the fonts and labels.

IMAGE 7-2 Graph Print Options



Then select the print button at the bottom of the screen, where you can set the rest of the print layout.

IMAGE 7-3 Graph Print

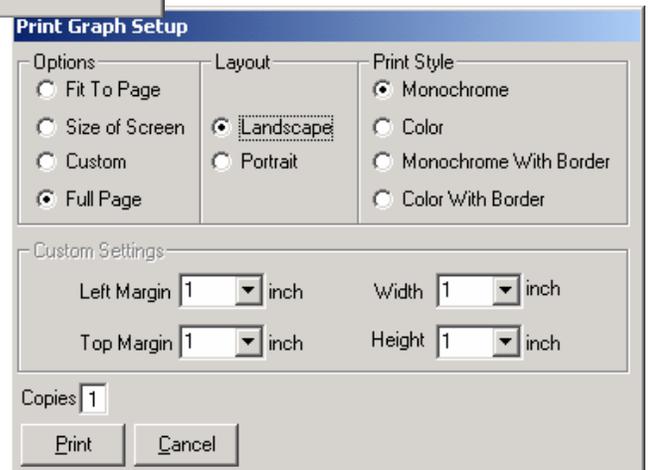


IMAGE 7-1 Graph Main Menu

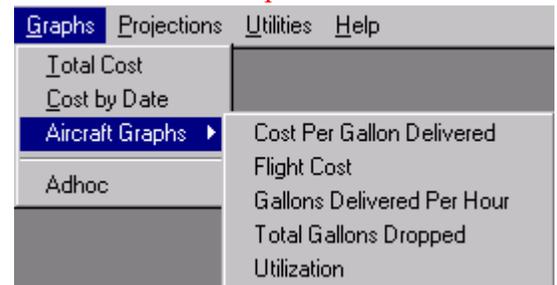


IMAGE 7-4 Graph Control Button Bar



If you wish to do more complex editing of the graph, anytime a graph is presented to the screen, you will see the graph control button bar across the top. From there you can modify many aspects of your graph. The question mark button will activate the graph control helps file, where you can get detailed information about each tab and option on the graph control.

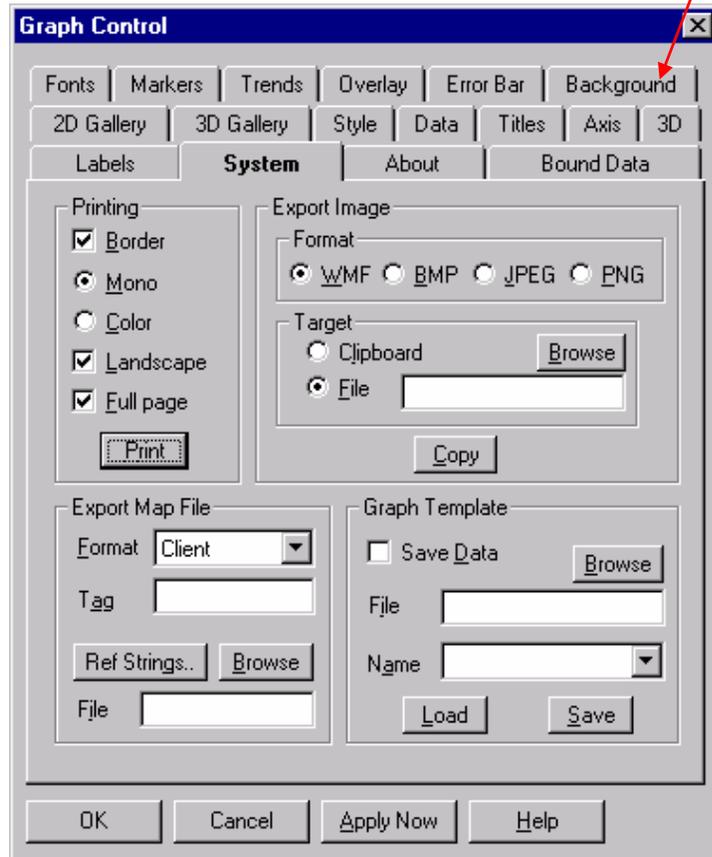


IMAGE 7-5 Graph Control Properties

The options now available in ICARS graphs are quite extensive. You can get to the graph control by selecting any of the buttons on the button bar.

The graph control (seen to the left) has many tabs with options to many to name here. Some of the main tabs are: "System", "Titles", "Fonts", "Style", "Background", "Markers" and "Data".

One nice feature is the graph template. You may make customized settings for a particular graph and then use those each time that graph is used. Again, using these new features may take some time in learning all of its functionality.

Please use the Graphics Control Help file for further information about the graphics control and it's features.

CHAPTER 8

Projections

IMAGE 8-1 Projection Main Menu

Selecting the Projection menu option will bring up the three-grid projection module screen seen below in Image 8-2. This section is for projecting costs for future dates of the incident. There are actually two methods of accomplishing this. One is by using this projection module and the other is to set your computers system date ahead and let the daily records be created and then edit those daily records to reflect what is predicted for those future days.



IMAGE 8-2 Projection Screen

Projection (Enter projection information. First Day Usually = Tomorrow)				
Incident	First Day of	Days	Projection Name	
CO-COS-000001	6/9/2004	6	Direct Attack	
*				

Summary of Projection Kinds (Click line to see resource detail)				
Kind	Quantity	Average Cost	Total Cost	People
CS	2	\$1,148.75	\$2,297.50	2
DOZ2	1	\$1,300.00	\$1,300.00	1
ENG4	1	\$8,750.00	\$8,750.00	3
ENG5	1	\$1,470.00	\$1,470.00	2
ENG6	10	\$1,738.60	\$17,386.00	20
EXCA	1	\$1,400.00	\$1,400.00	1
HC1	9	\$4,901.11	\$44,109.99	180
HC2	13	\$30,740.77	\$399,630.00	260

Projection Detail For Selected Kind (Change quantities to change projected dollars)			
Date	Quantity	People	
6/9/2004	3	3	
6/10/2004	3	3	
6/11/2004	3	3	
6/12/2004	3	3	
6/13/2004	3	3	
6/14/2004	3	3	

Graphs

Cost By Date
 Total Proj. Cost

Reports

Projection
 Weekly (Proj)
 Total Costs

Setting Up the Projection

To create a projection, go to the first of the three grids and select an Incident value from the Incident Field Combo-box. Only current Incidents will be available to choose from. The program will then enter a Start Date for the projection to begin of the next day. This is because today's costs are already accounted for in the Resource and Daily tables, so usually you want your projection to begin the next day. The third field is the number of days you wish to project out. In the last field of the top grid, you can name the projection. You may create an unlimited number of projections. After you have successfully entered in information into the upper grid you should see the second and third grids fill up with information.

The second grid works from the first grid and will have the sum of all "Direct" Kind types that are currently on the Incident today, their quantity, average cost, the total cost, and the total number of people on the incident for those direct resources. The values found in the second grid are values that are generated when the projection in the header record is first created. The average cost field can be edited, if you feel that the average cost created by the program is not accurate for future days.

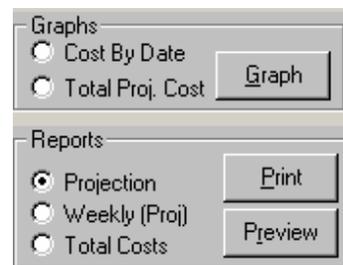
Similar to the second grid, the third grid works off the record that is highlighted in the second grid. The third grid is where users change the quantity of resources for that resource kind for future days. The fields found in the third grid are: Date, Quantity, and People. Of those three fields only the quantity field can be edited. As the quantity number increases or decreases, so should the number for people. These two fields have a direct correlation.

A flow down feature has been added to the quantity field so as you change the quantity for a given day, all future days will change to that same quantity. This should save significant time when editing projections for many days.

Reports & Graphs

A variety of Graphs and Reports that mimic the other basic reports in ICARS are available for projections.

IMAGE 8-2 Projection Screen



Support Cost Calculation

Support costs are generated in a pre-determined method and users have very little control over projected support costs. If you need greater control over projected support costs, it is recommended that you do projections the second method which is to set your computer's system date to a date in the future and then adjust the Daily table to reflect what future resources will be charging to the incident.

The algorithm that is used to generate support costs for a particular projection is to:

1. Sum up all "In-direct" costs for the current day. That number is used as a maximum number or 100% of the support cost pie.
2. All the people are then added up for all the "Direct" resources.
3. A per person support cost is then generated by the amount in number 1 divided by the amount from number 2. This will be a support cost dollar amount per direct person on the incident.
4. The total support cost for any particular day is derived by the number of people still left on the incident multiplied by the amount in number 3 (per person cost).

As the number of direct resources decreases, so will the number of people. When the number of

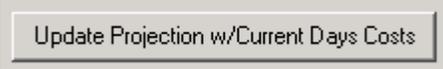
people decreases the amount of support costs will also decrease in direct proportion to the number of direct resource people still left on the incident.

You will not see any support costs in the 3 tiered projection grid. The only place you will see the support costs for a projection will be in the projection reports.

Updating Projections

Once a projection is completed you can now come back to that projected days or weeks later and update the projections with new information. There is a button at the bottom of the

projection screen.

A rectangular button with a light gray background and a thin black border. The text "Update Projection w/Current Days Costs" is centered within the button in a dark gray font.

When this button is clicked the following actions will automatically take place. You will be asked to update the projection days, meaning how many days you want to project? Then the program will automatically change the start date of the projection to tomorrow, cut off all days prior to tomorrow and project out for as many days as you tell it. For days that you previously projected, the quantities that you entered in the projection will remain. So lets say you did a projection for 6/1 to 6/10 and indicated that you had 5 dozers from 6/1 to 6/5 and 2 dozers from 6/6 to 6/10. If on 6/3 you updated the projection, and said you wanted it to go 10 days, the projection would now show 5 dozers from 6/4 to 6/5, 2 dozers from 6/6 to 6/13.

You can come back and update a projection as many times as you want, or if your assumptions totally change, you can just start over with a totally new projection at any time.

Obligation Basics

The obligations module in ICARS, which is accessed from the main menu, is set up to track obligations and creates reports that can be sent to the home unit for daily obligation reporting. The basis of the module is the auto filling of the obligation field in the Resources table. This takes no direct input from the user as the values automatically populate this field based on the Request #, Agency, Kind, Incident State, Contracting Agency and AD identifier (FedCode in ITS). The values entered by the application can be overwritten by the user, however when any of the above information is changed in I-Suite. The application is designed to re-evaluate the obligation field to determine if it needs to be changed, and then change it accordingly.

As data is changed that affects the obligation category or the accounting code, the obligation module is designed to track those changes. Daily there is a change amount tracked, which is the daily change. If a resource category or the accounting code used for the resource, changes, the change amount will adjust up or down to reflect this.

Since the obligation field auto populates, it is critical that the fields mentioned above are accurate. If they are not, the obligation field may be populated incorrectly. Thus verify for each resource being tracked that the following information is correct:

1. The **Agency** field is accurately entered based on who will pay the resource
 - a. Paid by a Forest Service EERA Agency=PVT.
 - b. Paid by a state government Agency=two letter state identifier.
 - c. Paid by a govt agency-exc. EERA's Agency= The Govt agency
 - d. Aircraft paid by OAS Agency=OAS
 - e. National Weather Service Personnel Agency=NWS
2. **AD** Crews paid by other federal or state agencies must show an agency of the federal agency or state. Only show the agency as FS if the Forest Service will process the AD payment at the EFF Payment Center.
3. **Time is being posted to ITS** on a current basis (**within 72 hours** of the completion of a shift).
4. **Accurate Check In and Release dates** are being entered and Release dates are entered **within 24 hours** of the resource demobilization.
5. **The incident state** is accurately entered in the Incident table as the two letter state identifier (i.e. OR, WA, CA)
6. **Local Aircraft and National contracts** have the correct Obligation category identified.
7. For **state** resources, that will be paid by the state, confirm that accurate rates are being used.
8. The **Kind** field is accurately entered.
9. There is an **accounting code** for each daily record.

Obligation Categories

Extract data is captured into 8 categories, by accounting code. The eight categories are:

1. CONT—EERA's and National Contracts-(Excluding Aircraft)
2. HELI—Helicopters (Local and National)—exclude OAS
3. AD—Casual Hires
4. STL—State Costs from the Incident State
5. STO—State Costs from Other States
6. OAS—Office of Aircraft Services (OAS) aircraft.
7. NWS—National Weather Service Personnel

Additional obligation categories that are not included in the extract are as follows:

1. FW—Fixed Wing Aircraft (Local and National)—exclude OAS
2. FS—All Forest service not identified elsewhere
3. FED—All other federal agencies
4. CACHS—All Cache supplies

The application determines obligation categories using the following sequence of if statements. The obligation resulting categories are highlighted. **This is provided for enquiring minds only.**

```
If Agency =OAS      OAS
If Agency-NWS      NWS
Else IF Agency=CITY, RUR or CNTY
    Then If Home unit first two characters = Incident→Incident State  STL
    Then If Home unit first two characters not equal Incident→Incident State  STO
Else If Agency→RateGroup=FED
    Then If Agency=FS
        Then If Kind=CACHE  CACHE
        Then If Persons→FedCode=AD
            Then If ContratorPost→Amt =0  AD
            Else  ADMIX
        Else  FED
Else If Agency→RateGroup=ST
    Then IF Agency=Incident→IncidentState  STL
    Else  STO
Else If Agency=PVT
    Then If ContractingAgency=Incident→IncidentState  STL
    Then If RequestCat=A
        Then if Kind=HEL1, HEL2, HEL3, HEL4, HELU  HELI
        Else  FW (**retardant excluded from this number)
    Then If Persons→FedCode=AD  ADMIX (split in the extract routine)
    Else  CONT
Else Leave blank
```

Daily Extract

IMAGE 9-1 Obligation Extract Screen



Capture Date	Finalized	Total Amount	Change Amount
6/9/2004 11:03:09 AM		\$8,825,670.13	\$2,226,159.25
6/3/2004 9:29:20 AM	0002	\$6,599,510.88	\$5,763,884.05
5/21/2004 4:14:43 PM	0001	\$835,626.83	\$835,626.83

Exit Run Extract Finalize Report Report Detail Report Detail All

Daily there is an extract that can be run to capture and summarize obligation data. The extract can be run multiple times in a day. However each day, before transmitting the information you must run the finalize process. This is accomplished by clicking the Finalize button. The result of this is to post a sequential number in the Finalized field and close obligation postings for that day. Any future changes to the obligations will be reflected in the next days extract. Once you have run the finalize process for a day, the Finalize button will be immobilized until the next day, thus preventing you from running the finalize process more than once a day.

It is possible, for the current day only, to Re-Extract the data and finalize again. This should only be done if there are significant errors, and the obligation extract has not yet been submitted to the Incident Unit (Forest) for input into the accounting system. It is critical that the data for each sequential obligation number in the database matches what is sent to the incident Unit (Forest). To do this, if you highlight the current day extract, you will notice that the Run Extract button changes to Reextract. Clicking it will remove the finalized sequential number and allow you to finalize again.

Obligation Extract Reports

Once the extract is run there are three reports that can be viewed and printed. The report you will see, will be for the extract line that you have highlighted in the Obligation Extract grid. The first is a summary report, for submission to the home unit. The second is a detail report by specific vendor and the third is the Report Detail All, which will provide all the individual daily detail reports in one report file. The detail reports should either be provided to the home unit daily or at the end of the incident for audit support. If running at the end of the incident use the Report Detail All, instead of running the daily reports individually, as this will produce the same data.

The summary and detail reports are displayed below.

IMAGE 9-2 Obligation Summary Report

Incident Cost Accounting and Reporting System (ICARS)				Page 1 of 1
Obligation				6/5/2003 9:25:32AM
Capture Date: 06/05/2003				
Sequence: 00003				
Export Date:				
Accounting Code				
RC Line #	Obligation	Total Amount	Previous Amount	Change Amount
P651234				
001	All non-air contracts	\$123,658.00	\$62,080.00	\$61,578.00
002	Contract Helicopters	\$0.00	\$0.00	\$0.00
003	Fixed Wing Air	\$0.00	\$0.00	\$0.00
005	Incident State Resources	\$20,230.00	\$19,040.00	\$1,190.00
006	State Resources From Out of State	\$20,230.00	\$19,040.00	\$1,190.00
Grand Total:		\$164,118.00	\$100,160.00	\$63,958.00

IMAGE 9-3 Obligation Detail Report

Incident Cost Accounting and Reporting System (ICARS)				Page 1 of 2	
Obligation Detail				6/5/2003 9:40:00AM	
Capture Date: 06/05/2003					
Sequence: 00003					
Export Date:					
Accounting Code	Obligation		Total Amount	Previous Amount	Change Amount
Resource	Request #	Kind			
P651234					
All non-air contracts					
STRIKEBACK	E-0001	ENG1	\$28,560.00	\$26,880.00	\$1,680.00
OK CASCADE	S-0002	SHW	\$37,400.00	\$35,200.00	\$2,200.00
JONES	E-0010	WAT1	\$28,560.00	\$0.00	\$28,560.00
WILLIES WATER	E-0011	WAT1	\$28,560.00	\$0.00	\$28,560.00
ARBIES	E-0012	TLT	\$578.00	\$0.00	\$578.00
All non-air contracts Total:			\$123,658.00	\$62,080.00	\$61,578.00
Contract Helicopters					
COLUMBIA	A-0001	HEL1	\$0.00	\$0.00	\$0.00
Contract Helicopters Total:			\$0.00	\$0.00	\$0.00
Fixed Wing Air					
AIRTANKERS	A-0002	AT	\$0.00	\$0.00	\$0.00
Fixed Wing Air Total:			\$0.00	\$0.00	\$0.00
Incident State Resources					
ODF ENGINE	E-0000	ENG3	\$20,230.00	\$19,040.00	\$1,190.00
Incident State Resources Total:			\$20,230.00	\$19,040.00	\$1,190.00
State Resources From Out of State					
DNR ENGINE	E-0006	ENG3	\$20,230.00	\$19,040.00	\$1,190.00
State Resources From Out of State Total:			\$20,230.00	\$19,040.00	\$1,190.00
P651234 Total:			\$164,118.00	\$100,160.00	\$63,958.00

Chapter 10

Utilities

IMAGE 10-1 Utilities Main Menu



This chapter deals with the different menu items located under the Utilities main menu. Under this menu, you'll find extra ICARS "utilities", such as setting the computer's system clock and locking daily records.

Set System Date and Time

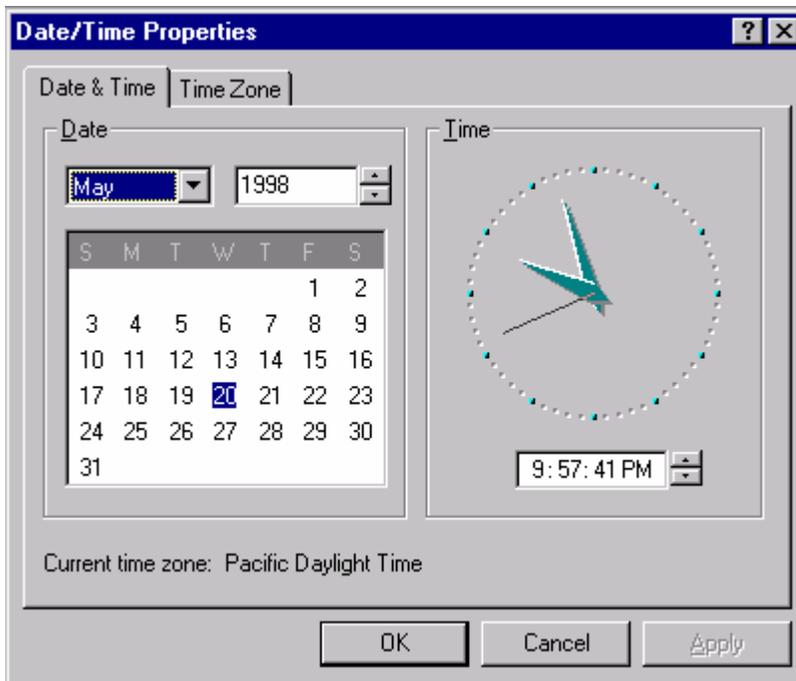


IMAGE 10-2 Date / Time Property Screen

The ICARS application relies heavily on the computers system date. It is important that you know what your computers date is and how to change it. There are other means of getting to this same Date / Time Properties window in Windows 95, but we chose to add a menu option for ICARS users to run it from within ICARS. From this window you can select a new date and time for your computer.

LockDaily Records

There are times when you may wish to "freeze" ICARS Daily records for a particular period of time. This new feature in ICARS allows a user to do this very easily. Locking or unlocking daily records are as easy as picking a start date and an end date.

IMAGE 10-3 Daily Record Locking Screen



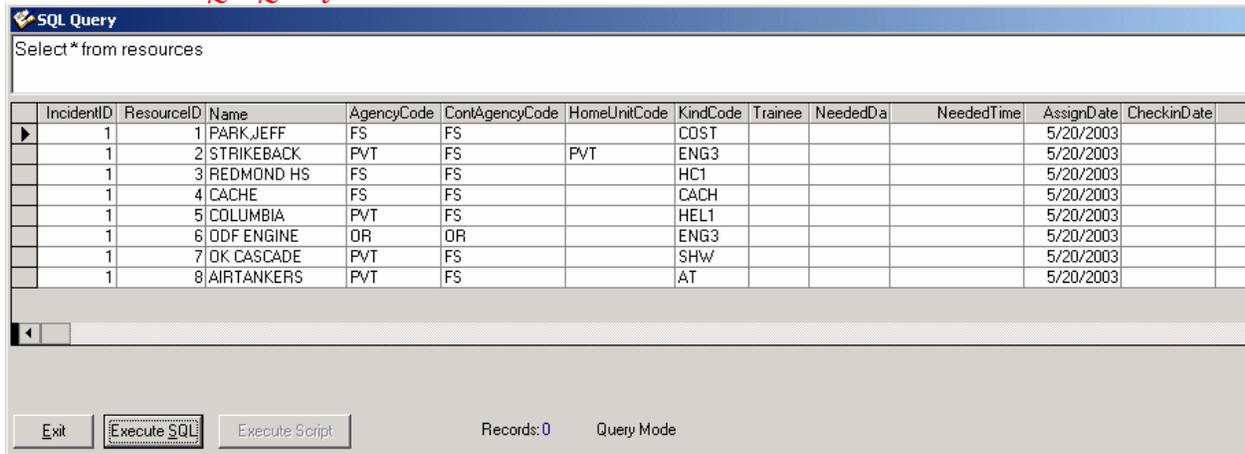
Database Tools

SQL Query

Using the SQL Query language you can use select statements to view the actual data in tables. Editing of tables is disabled from this tool. To view the data in a table enter a select statement into the sql query box like the following:

Select * from resources

IMAGE 10-4 SQL Query Screen

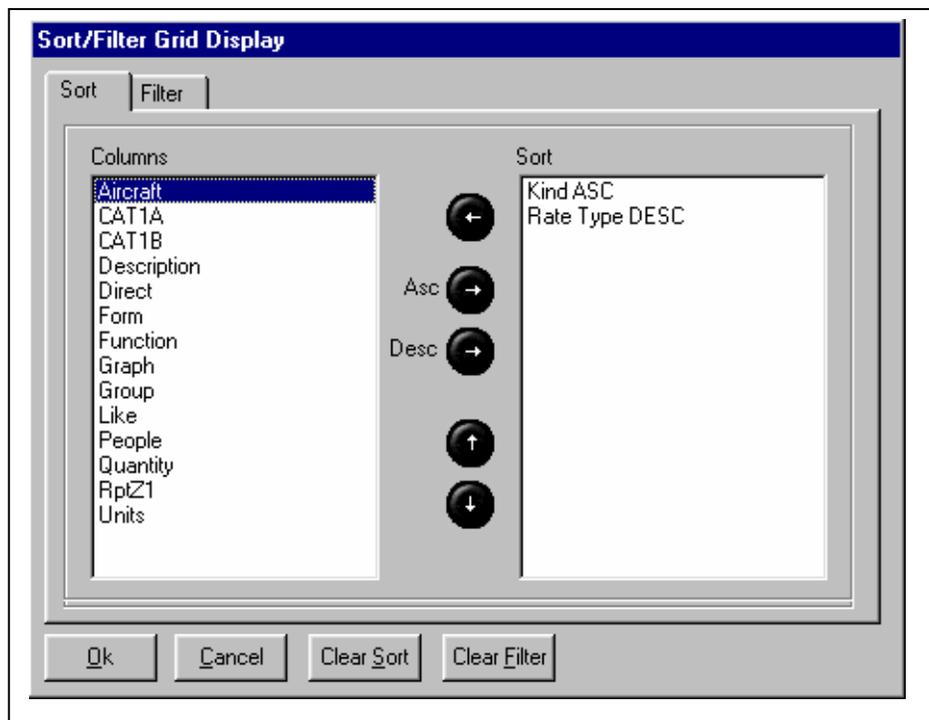


Sorting

Sort Description

The sort function allows the user to display the data in descending or ascending order. The user sets the order of display by selecting column headings in a specific order. The **Sort** tab includes a *Columns* list, a *Sort* list, and several buttons, that will be identified in this section.

IMAGE 11-1 Sort Screen



Sort Tab Basics

Lists in the Sort tab

Within the **Sort** tab are two lists labeled *Columns* & *Sort*. The *Columns* list contains the heading of each column on the grid. The *Sort* list contains the ordered heading titles transferred from the *Columns* list.

Moving the cursor inside a list

To move the cursor inside the *Columns* or *Sort* box, use the \uparrow button to move the cursor up-wards or the \downarrow button to move the cursor down-wards.

Moving a selected heading within a list

To move a heading within a list, select the heading and hold the **Ctrl** key while moving the cursor. The heading will move with the cursor movement. At the desired position let go of the **Ctrl** key and the heading will no longer move with the cursor.

Choosing Ascending or Descending order

Both buttons transfer the selected heading from the *Columns* lists to the *Sort* list but the way the information is listed varies according to the selected button. To choose ascending order, select the *Asc* button. To choose descending order, select the *Desc* button.

Ascended headings will be listed from first to last alphabetically (A-Z). The information within each heading may also be listed from first to last alphabetically or numerically smallest to largest, when there is no conflict with the heading order.

Descended headings will be listed from last to first alphabetically. The information within each heading may also be listed from last to first alphabetically or numerically largest to smallest, when there is no conflict with the heading order.

Moving a heading from the *Sort* list to the *Columns* list

To move a heading from the *Sort* list to the *Columns* list, select a heading from the *Sort* list. Select the ← button. The selected heading will appear in the *Columns* list.

Sorting headings

Select the desired heading in the *Columns* list and choose ascending or descending order. The selected heading will appear in the *Sort* list. Multiple headings can be selected by repeating above steps. Select the **OK** button at the bottom of the dialog box and the data will be displayed sort order chosen.

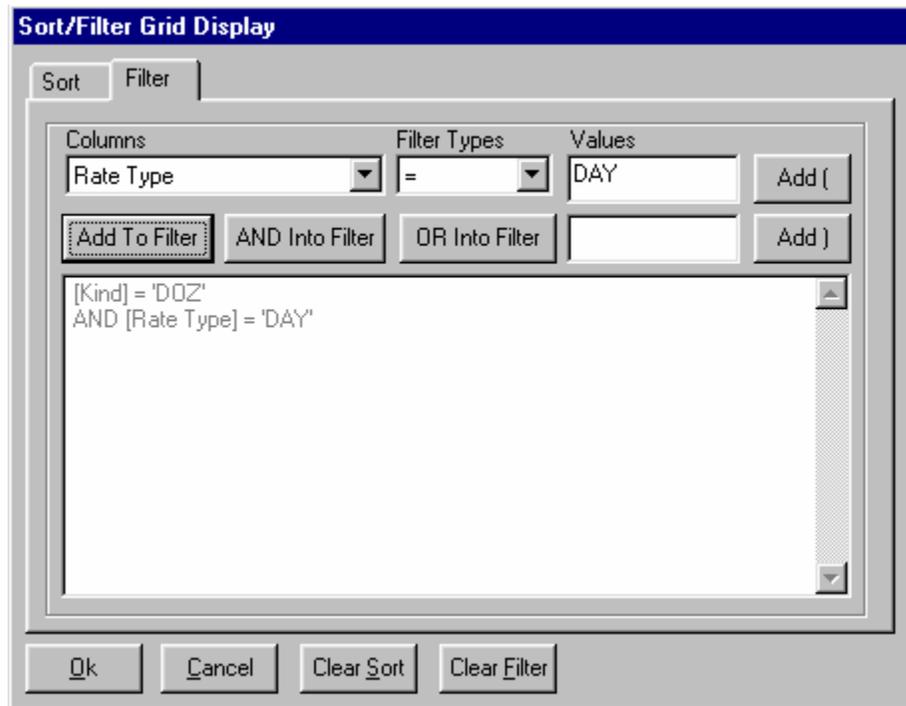
Filter

Filter Description

The filter function allows the user to display data according to specified criteria. The user specifies the criteria by using one or more of the filtering options. The **Filter** tab includes a *Column* dropdown list, a *Filter Type* dropdown list, two *Specifications* boxes, and a *Filter Display* box. The **Filter** tab also includes several buttons that will be identified in this section,

See **Figure 11-2**.

IMAGE 11-2 Filter Tab Screen



Filter Tab Basics

Choosing a column

The first dropdown list at the top right of the **Filter** tab is the *Column* list. When the drop arrow at the right of the box is selected, all the available column titles appear. While still holding the mouse button, move the cursor to the desired column title. Release the mouse button to select the desired column title. This column will now be the primary column in the filter. The column titles may vary with each display grid selected and filter.

Choosing a filter type

The second dropdown list box at the top of the **Filter** tab lists the filter types when the drop arrow at the right of the box is selected. While still holding the mouse button, move the cursor to the desired filter type. Release the mouse button to select the filter type. The filter type options are: =, >, >=, <, <=, <>, LIKE, and BETWEEN. The selected filter type will now be the primary method of filtering. The filter types will remain the same with every display grid but may change with each filter. For specific filter type information, see **Figure 3**.



SPECIFIC FILTER TYPE INFORMATION		
SYMBOL	HOW SYMBOL WORKS	SPECIAL INFORMATION
=	Signifies the filter results will be an exact match to the specification. Case sensitive.	Can be used with words or numbers
>	Signifies the filter results will be greater than the specification	Use only with numbers
>=	Signifies the filter results will be greater than or equal to the specification	Use only with numbers
<	Signifies the filter results will be less than the specification	Use only with numbers
<=	Signifies the filter results will be less than or equal to the specification	Use only with numbers
<>	Signifies the filter results will exclude only the specification	Use only with numbers
LIKE	Signifies the filter results will be similar to the specification	Can be used with words, numbers or % (wildcard)
BETWEEN	Signifies the filter results will be between two specifications	Use only with numbers

Figure 3

Choosing filter specifications

The two parallel boxes towards the left of the **Filter** tab are for the Filter Specifications. The specific filter information is inputted into these boxes. This information may be words, numbers, or a combination of both. To input this information, select the top box and type the specifications in the box. The second box may only be used with the BETWEEN filter type.

Viewing the Filter

The large box in the middle of the **Filter** tab shows the current Filters to be applied to the display grid. All the current filters will be applied to the data.

Filtering Information

Creating a Filter

By selecting the **Add Filter**, the **And into Filter**, and/or the **Or Into Filter** button, the information input into the *Column*, *Filter Type*, and *Filter Specifications* boxes is displayed in the *Filter Display* box. Select the **OK** button to apply the filter to the data.

Using the Add Filter

The **Add Filter** button should be chosen when adding the first filter to the Filter Display box but can be used for any and all additional filters.

Using the And Into Filter

The **And Into Filter** button can be used for any filter after the first filter is added. The “And” signifies that in addition to the first filter specification, this filter specification must be met as well. This filter will only show data that meets both specifications.

Using the Or Into Filter

The Or Into Filter button can be used for any filter after the first filter is added. The “Or” signifies that this filter specification can be substituted for the first filter specification. The filter will show all the data that fits either filter specifications.

Grouping Multiple Filters

The **Add[** and **Add]** buttons allow brackets to be placed around a group of filter specifications within the *Filter Display* box. Placing brackets around a group will separate that group from any other filter specifications.

Examples

[Kind] = 'DOZ'

AND [Rate Type] = 'DAY'

Select only the data where the Kind Code is equal to DOZ and the Rate Type Code is equal to DAY

[Kind] Like 'DOZ%'

Select only the data where the Kind Code starts with DOZ

Clearing, Deleting and Saving

Clearing information

To clear the sort information, select the Clear Sort button at the bottom of the dialog box. New information can be sorted now. This button will clear the information even if the Filter tab is selected. To clear the filter specifications, select the Clear Filter button at the bottom of the dialog box. New information can be filtered now. This button will clear the information even if the Sort tab is selected.

Cancel

To cancel the sort or filter modifications select the Cancel button at the bottom of the dialog box. The sort/filter screen will disappear and the original screen where the sort/filer button

was selected with no changes to the data displayed.

Saving information

To save and apply the current sort/filter select the Ok button at the bottom of the dialog box. The display grid on the original screen where the sort/filter button was selected will not be refreshed with the selected sort and filters applied.

CHAPTER 12

AIRCRAFT ANALYSIS

The aircraft analysis function in ICARS allows you to compare different types of aircraft. You can look at the aircraft summarized by kind or by individual aircraft. The analysis tool is based on graphical presentation. The following types of graphical presentations can be used:

1. Cost per gallon of retardant/water dropped.
2. Total Gallons dropped and gallons dropped per hour.
3. Total flight hours and flight cost.

Aircraft analysis involves the following functions:

1. You must be receiving the daily aircraft information sheets from air operations. If you are not receiving this information it should be available if requested. When you get the air information review it for reasonableness and completeness. Enter each individual aircraft into the Resource table.
2. Fill out the AirDaily table as described below.
3. Run the graphs which are provided under the GRAPH item on the main menu. The AIRDAILY table is like the DAILY table except it is used for Aircraft records. There are two views of the AIRDAILY table. One is for entering daily information on Airtankers and the other for Helicopters. The information you enter into these tables determines what the aircraft graphs display so there are some specific ways you need to enter the data in these tables.

Some analysis tips to be aware of:

1. For the analysis to be useful and accurate it is sometimes necessary so split helicopter flight hours and costs between water/retardant drops and other assignments. This is only necessary if the helicopter is doing a mix of activities.
2. There are typically mobilization and demobilization costs associated with ferrying (flight time) an aircraft to the fire. These costs can be ignored, included in the first day of costs or allocated based on the expected days that the aircraft will be assigned. How you deal with these costs will affect the outcome of your analysis. If you are doing a post analysis, after the fact, or need additional aircraft and are trying to decide what type of aircraft you are going to order then I would allocate the costs. If you are doing a use analysis to see which type of aircraft is the most cost effective, once it is there, I would exclude the ferry costs because they are really irrelevant to a day to day decision.

Incident Cost Accounting and Reporting System (ICARS) I-Suite version 1.25 - [Resources]

File Edit Reports Graphs Projections Utilities Help

Incident	Req #	Resource Name	Kind	Agency	Cont Agency	Unit	Assign Date	Check In	Release	Status	Description
1	A-0001	HEL14	HEL1	PVT			2/20/2001				
1	E-0002	SIUSLAW #234	ENG3	FS			2/20/2001				
1	E-0002	SMITH	DO73	PVT			2/20/2001				

Air Date	Division	Shift	Ret\$	Water/Ret Flt\$	Other Flt\$	Total\$	Water/Ret Hrs	Other Hrs	Total Hrs	Gal Water	Gal Ret	Trips	Pass.	Lbs Cargo
2/20/2001			0	20500	0	20500	8		8	10000				
2/21/2001			0	15000	0	15000	5		5	8000				
2/22/2001			0	15400	5000	20400	5	3	8	8000			20	2300
2/23/2001			0	0	0	0								

Display Daily Sum Filters 1 All Resources Search Search
 Flow Down Disabled Not Released Progress Column Agency

Exit Add Copy Delete Refresh Sort/Filter Lock/Unlock Create Daily Apply ITS Print Grids

Resources c:\visuite\database\visuite.mdb 3/13/2001 3:38 PM

IMAGE 12-1a ICARS Resource Input Screen for *Airtanker* with Display Daily On

Incident Cost Accounting and Reporting System (ICARS) I-Suite version 1.25 - [Resources]

File Edit Reports Graphs Projections Utilities Help

Incident	Req #	Resource Name	Kind	Agency	Cont Agency	Unit	Assign Date	Check In	Release	Status	Description
1	A-0001	HEL14	HEL1	PVT			2/20/2001				
1	A-0002	AIRTANKER 53	AT	PVT			2/20/2001				

Air Date	Division	Shift	Ret\$	Water/Ret Flt\$	Total\$	Water/Ret Hrs	Gal Water	Gal Ret
2/20/2001			5000	2000	7000	5		7000
2/21/2001			10000	4000	14000	10		14000
2/22/2001			0	0	0			

Display Daily Sum Filters 1 Aircraft Search Search
 Flow Down Disabled Not Released Progress Column Agency

Exit Add Copy Delete Refresh Sort/Filter Lock/Unlock Create Daily Apply ITS Print Grids

Resources c:\visuite\database\visuite.mdb 3/13/2001 3:46 PM

The fields in the helicopter and airtanker view of AIRDAILY are:

Incident, Division and Shift: The use of these fields is consistent with the DAILY table.

Retardant \$: If you are dropping retardant you can show the cost here.

Water/Ret Flt \$ and Water/Ret Hrs: Use these fields to enter Flight dollars and hours associated with dropping water or retardant. For helicopters, if the helicopter is also doing other things like moving equipment or people. Then the flight costs and hours for those activities should be included in the other fields (see next field).

Other Flt \$ and Other Hrs: For use with helicopters only. Use these fields for flight dollars and hours associated with activities other than dropping water or retardant. If an aircraft is dropping water/retardant as well as other activities, it will be necessary to have air

ops split the time between the activities. If air ops can't do this then treat all the flight time and hours as other. This is because the analysis graphs will include all aircraft \$ and hours shown. If you do not have accurate dollars and hours you do not want to include these aircraft in your analysis. In the above example, for helicopters the first day was split between activities, whereas the second day was all water and the third day was all passengers and cargo.

Total \$ and Total Hrs: Calculated fields.

Num Trips, Num Passengers and Num Lbs Cargo: These fields, for helicopters only, are not used in the air graphs but do show on the air report. They are mainly informational.

Gal Water and Gal Ret: Enter the actual gallons dropped. If the aircraft was involved in multiple activities and you were unable to get a split from air ops on how much time was spent dropping water/ret then leave the gallons fields blank. Only lines with gallons on them will be included in the aircraft analysis graphs, so leaving the gallons blank will have the effect of removing that line from the analysis.

ICARS is distributed as a part of the I-Suite of applications. Most Computer Technical Specialists should be able to set up incident networks that will allow ICARS users to be networked into the I-Suite application. I-Suite includes the Incident Resource Status System (IRSS), Incident Action Plan (IAP) and the Incident Time System (ITS). What does this mean to you?

Data Sharing

When ICARS is being used in a network environment with I-Suite you will need to clearly establish working guidelines with the other users of the database. These guidelines will include:

1. How to update the data,
2. Who is authorized to make what changes,
3. When will backups occur.

Data & Data Standards

Data entered into I-Suite will come for the most part from the check in sheets. Most resources will be entered so you will have a line for every overhead person, pickup, bus, etc. While this does simplify your data entry, you will have a database that looks different than you might build yourself. You may have 400 lines of overhead personnel instead of two summarized lines for Support and Direct overhead.

To reflect total costs in ICARS the data that comes in from IRSS will have to be supplemented. All resources will initially either reflect the estimated costs from the Rates table or will show a zero costs. Where the costs are zero, like for all aircraft, you will have to get and enter a cost. Where an estimate is being shown, you will have to assess the reasonableness of that estimate and change it if necessary, to an actual cost or a better estimate. IRSS will bring in all direct firefighting resources and all personnel, but may not include the following resources or cost areas:

1. Mobilization/Demobilization travel costs.
2. Supplies, both from the cache and buying team.
3. Some support equipment and services trash collection, caterer, telephones, cell phones, copier, land use, etc.
4. Some, or all, Aircraft.
5. Off incident costs, like expanded dispatch and buying team personnel.
6. Actual costs for all contract equipment.

Data Manipulation

There are a variety of data standards to be aware of when changing data. Samples of these are listed below.

1. Before **deleting a record**, make sure that it is ok with all users. One application may have additional information attached to that record like manifests, or daily cost records.
2. A new feature, added in 2002, is the handling of **strike teams**. A strike team will be entered in IRSS as a Parent record (the strike team name) with various children records(individual crews or engines). The parent record will show in ICARS, but you will not be able to add costs to it. The costs will show with the individual children records. This process allows strike teams to be built and dismantled. All the daily records will be maintained with the strike team element.
3. **Adding Kinds** to the kind table. Make sure all ICARS fields are completed if someone else adds the Kind and make sure to notify other partners if you are adding the kind.
4. **Check in and Release dates**. If resources are mobilizing prior to the check in date either include additional costs in the cost of mobilization or move the check in date back to the order date. Use the same methodology for demobilization.
5. Make sure that when **release dates** are entered, that the resource actually demobs, because costs will stop accruing based on the release date.
6. If the Agency, Kind and Check in Date fields are not filled out, **no daily costs** will be created for resources.
7. Changing the check in date will delete ICARS daily cost records if changed to a more current date. Thus if a resource checks in, is released, and then comes back...either check it in twice, or leave the original check in date. **DO NOT** just change the check in date on the original record, as you will lose all costs generated between the first and second check in.

APPENDIX A

ICARS Individual Table Structures

Table: AccountingCodes

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
AccountingID	Number (Long)	4
IncidentID	Number (Long)	4
AccountingCode	Text	20
AgencyCode	Text	4

Table: Acres

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
AcresID	Number (Long)	4
IncidentID	Number (Long)	4
AcresDate	Date/Time	8
NVCID	Number (Long)	4
Acres	Number (Double)	8
Fuel Type		
Potential		
Haines Index		
Res Value		

Table: L_Agency

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
AgencyCode	Text	4
AgencyGroupID	Number (Long)	4
RateGroupID	Number (Long)	4
Agency Desc	Text	35
Contracting	Y/N	1

Table: L_AgencyGroup

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
AgencyGroupID	Number (Long)	4
AgencyGroupCode	Text	1
Description	Text	40

Table: AirDay

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
AirDayID	Number (Long)	4
ResourceID	Number (Long)	4
DivisionID	Number (Long)	4
ShiftID	Number (Long)	4

AirDate	Date/Time	8
DolTotal	Number (Long)	4
DolRet	Number (Long)	4
DolWater	Number (Long)	4
DolOther	Number (Long)	4
HrsTotal	Number (Single)	4
HrsWater	Number (Single)	4
HrsOther	Number (Single)	4
NumTrips	Number (Long)	4
NumPasg	Number (Long)	4
NumLbsCargo	Number (Double)	8
GalRet	Number (Long)	4
Loads	Number (Long)	4
GalWater	Number (Long)	4

Table: L_Cost

Columns

Name	Type	Size
CostID	Int	4
Item	nvarchar	50
StandardValue	money	8
MaxValue	money	8
CostType	nvarchar	20
FireType	nvarchar	20
StandardDeviation	money	8

Table: Daily

Columns

Name	Type	Size
DailyID	Number (Long)	4
ResourceID	Number (Long)	4
DailyDate	Date/Time	8
Quantity	Number (Single)	4
UnitCost	Number (Single)	4
Units	Number (Single)	4
CostUpdateLevel	Text	1
DivisionID	Number (Long)	4
ShiftID	Number (Long)	4
RateTypeID	Number (Long)	4
UnderUtilized	Number (Integer)	2
Locked	Number (Single)	4
AccountingID	Number(Long)	4

Table: L_DailyForm

Columns

Name	Type	Size
DailyFormID	Number (Long)	4
DailyFormCode	Text	1
Description	Text	20

Table: Division

Columns

Name	Type	Size
DivisionID	Number (Long)	4

IncidentID	Number (Long)	4
DivisionCode	Text	1
ShiftID	Number (Long)	4
DivisionDate	Date/Time	8
FedPct	Number (Integer)	2
StatePct	Number (Integer)	2
OtherPct	Number (Integer)	2
Description	Text	25

Table: Incidents

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
IncidentID	Number (Long)	4
IncidentNumber	Text	13
IncidentName	Text	20
IncidentLocation	Text	15
Incident State	Text	2
StartDate	Date/Time	8
EndDate	Date/Time	8

Table: L_Kind

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
KindCode	Text	4
Direct	Number (Integer)	2
DailyFormID	Number (Long)	4
Aircraft	Number (Integer)	2
Quantity	Number (Single)	4
Units	Number (Single)	4
RateTypeID	Number (Long)	4
People	Number (Long)	4
KindLike	Number (Long)	4
KindGroup	Number (Long)	4
GraphGroup	Number (Long)	4
CAT1A	Number (Long)	4
CAT1B	Number (Long)	4
RptZ1	Text	5
KindDescription	Text	25

Table: L_KindGroupRpt

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
KindLUID	Number (Long)	4
KindRptGroup	Text	20
GroupCode	Text	3
KDescription	Text	50

Table: NextNumber

Columns

70

Name	Type	Size
TableName	Text	40
FieldName	Text	25
Description	Text	150

Table: NVC

Columns

Name	Type	Size
NVCID	Number (Long)	4
NVCTypeID	Number (Long)	4
FIL	Number (Integer)	2
NVCPerAcre	Number (Single)	4

Table: L_NVCType

Columns

Name	Type	Size
NVCTypeID	Number (Long)	4
NVCTypeCode	Number (Integer)	2
Description	Text	25

Table: L_Oblig

Columns

Name	Type	Size
ObligCode	Text	5
ObligDesc	Text	40
SumReport	Bit	1
RCLineNumber	Text	5
BOC	Text	4

Table: Projection

Columns

Name	Type	Size
ProjectionId	Number (Long)	4
ProjectionGroupID	Number (Long)	4
ProjectionDate	Date/Time	8
KindCode	Number (Long)	4
Quantity	Number (Single)	4
AverageCost	Number (Single)	4
People	Number (Long)	4
ProjectionType	Text	1

Table: ProjectionGroup

Columns

Name	Type	Size
ProjectionGroupID	Number (Long)	4
IncidentId	Number (Long)	4
StartDate	Date/Time	8
Days	Number (Integer)	2
Description	Text	30

Table: L_RateArea

Columns

Name	Type	Size
ContAgencyGroup	Text	4
Description	Text	35
Status	Text	4

Table: L_RateGroup**Columns**

Name	Type	Size
AreaID	Number (Long)	4
Description	Text	30
Status	Text	4

Table: L_Rates**Columns**

Name	Type	Size
RateID	Number (Long)	4
KindID	Number (Long)	4
RateTypeID	Number (Long)	4
AreaID	Number (Long)	1
RateGroupID	Number (Long)	4
UnitCost	Number (Single)	4
Comment	Text	50
UpdatedDate	Date/Time	8

Table: L_RateType**Columns**

Name	Type	Size
RateTypeID	Number (Long)	4
RateTypeCode	Text	4
Description	Text	30
Monetary	Number (Integer)	2

Table: Resource**Columns**

Name	Type	Size
ResourceID	Number (Long)	4
IncidentID	Number (Long)	4
RequestNum	Text	6
Name	Text	20
AgencyCode	Number (Long)	4
ContAgencyCode	Number (Long)	4
HomeUnitCode	Number (Long)	4
KindCode	Number (Long)	4
ObligCode	Text	5
AssignDate	Date/Time	8
CheckinDate	Date/Time	8
ReleaseDate	Date/Time	8
Status	Text	2
Description	Text	255
AccountingID	Number(long)	

Table: L_Shift

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
ShiftID	Number (Long)	4
ShiftCode	Text	1
Description	Text	50

Table: L_HomeUnit

Columns

<u>Name</u>	<u>Type</u>	<u>Size</u>
HomeUnitCode	Text	8
AgencyCode	Number (Long)	4
HomeUnitDesc	Text	35
Local	Y/N	1