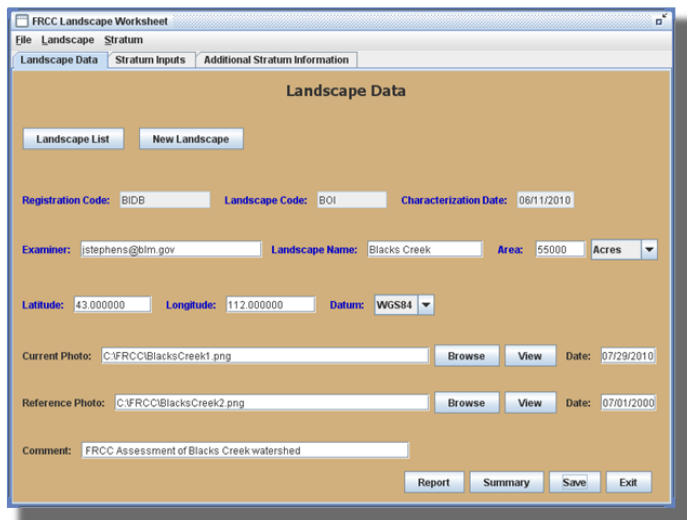# Fire Regime Condition Class
Software Application
User's Guide

Version 3.0.3.0

September 2010

National Interagency
Fuels, Fire, & Vegetation
Technology Transfer
(NIFTT)

Introduction

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Overview

Assessments of fire regimes and land health are key elements in federal land management programs. Such information serves as a foundation for evaluating current conditions, assessing landscape trends, and designing projects to restore fire-adapted ecosystems. Agency leadership, as well as field practitioners, have identified a need for a resource that summarizes fire regimes and ecological departure from historical reference conditions. Since 2002, an interagency working group has been developing fire regime and ecological departure assessment methods to address these needs.

Now in its third version, the Fire Regime Condition Class (FRCC) Software Application (FRCCSA) is a simple, non-spatial tool for quickly summarizing FRCC at multiple scales using the Standard Landscape Worksheet Method.

The software offers a more efficient way to enter, edit, and store calculations compared to the paper Standard Landscape Worksheet. The FRCCSA automatically computes FRCC at the landscape, stratum, and stand scales, thereby saving the user a great deal of manual calculations. In addition, the FRCCSA also generates reports with graphics and tables to make data more comprehensible.

> ***Note***: Prospective users of the FRCC Software Application must be familiar with the FRCC principles, concepts, and methods that are described in the FRCC Guidebook chapters 2 and 3. In addition, Chapter 3 of the Guidebook provides a foundational understanding of the various data fields to be populated in the paper Standard Landscape Worksheet (or Field Form), which correspond to those in the Software Application. The FRCC Guidebook is available at www.frcc.gov.

For an expanded explanation of the Standard Landscape Worksheet Method and the FRCCSA's role, see chapters 3 and 4 of the FRCC Guidebook, available at www.frcc.gov. For questions not answered by this user guide or the FRCC Guidebook, please contact the FRCC Helpdesk at helpdesk@frcc.gov.

What's New in Version 3.0.3.0?

Version 3.0.3.0 has kept the basic functionality of version 1.3.2.4 but is more user-friendly and has refined and added FRCC analysis capabilities. Since version 1.3.2.4., some naming conventions have also changed. What was previously described as a "project" is now referred to as a "Landscape" or "assessment area." This change is intended to reflect the fact that not all FRCC analyses are tied to planned or implemented projects.   The software, previously called the "FRCC Standard Landscape Application" is now called the "FRCC Software Application," and the main window used for viewing and editing Landscapes is called the FRCC Landscape Worksheet.

The biggest formatting change in version 3.0.3.0 is that the FRCC Landscape Worksheet is now divided into three tabs for entering Landscape Data, Stratum FRCC Inputs, and Additional Stratum Information. The tables and graphs included in the report have been updated to better convey relevant information, and an FRCC Summary Report Table has been included (see section 2.7.6). Finally, the software is now able to generate reports and FRCC summaries for areas that include multiple Landscapes.

Changes in the FRCCSA version 3.0.3.0 include the following:

- Biophysical settings (BpS) are now downloaded along with the software rather than stored in an online database. The LANDFIRE National, LANDFIRE Rapid Assessment, and Guidebook model sets are available in version 3.0.3.0.

- The Species List function has been simplified for more convenient use through the "My Species" button rather than through the FRCCSA menus.

- Multi-Landscape Summaries can now provide FRCC analysis for a group of Landscapes, for example Landscapes making up a fire management unit.

- Global Summaries can provide FRCC analysis for groups of Multi-Landscape Summaries, such as multiple Landscapes making up an entire National Forest.

- The Landscape List button provides a menu of Landscapes to choose from for viewing, editing, and generating reports, rather than scrolling back and forth through a list of Landscapes.

- BpSs are now easier to find in the BpS menu with the addition of BpS Source and Zone menus to narrow the list of BpSs to choose from.

Credits

FRCCSA was developed for the National Interagency Fuels, Fire, & Vegetation Technology Transfer (NIFTT) by Dale Hamilton and Daniel Hamilton of Systems for Environmental Management (SEM), Missoula, Montana. Direction was provided by Jeff Jones from the USDA Forest Service, Doug Havlina from the Bureau of Land Management, and Consultant Steve Barrett from NIFTT.

Support for the development of FRCCSA was provided by the USDA Forest Service and the U.S. Department of Interior.

This FRCC Software Application User's Guide was written by Heather Hamilton Otieno and edited by Christine Frame, both of SEM.

Your Input

We value your input. Please forward any questions, comments, reports of bugs, or ideas to the National Interagency Fuels, Fire, & Vegetation Technology Transfer (NIFTT) at helpdesk@niftt.gov.

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1.2 Installing the Software
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1.1 Prerequisites

Install Microsoft Access 2000 or a later version before installing the FRCC Software Application. The FRCC Software Application uses Microsoft Access 2000 for storing database information.

If you have data saved in FRCCSA version 1.3.2.4, you can import those data into version 3.0.3.0. First, save your database before uninstalling version 1.3.2.4 of the software. (The database will be located at C:\FRCC\StdLndscpWksht if it was installed according to default settings. Look for a Microsoft Access file called "frcc" or "frcc.mdb.") See Section 4 for instructions on importing data into version 3.0.3.0.

If you had previously installed an older version of the FRCC Software Application, you must uninstall it. Be sure to also remove any shortcuts on the desktop to the old version.

1.2 Installing the Software

Follow these steps to install the FRCC Software Application (FRCCSA):

1. Download the FRCC Software Application installation file from the FRCC website at www.frcc.gov. The FRCC Software Application installation file can be downloaded by clicking on the **Tools and User Documents** menu item in the FRCC Resources section. Select the **FRCCSA** link in the **Version 3.0.3.0** box on the right side of the page.

2. When asked whether to "Save File or Cancel," choose "Save" and save the download folder into the file directory of your choice.

3. Once the initial download is complete, you will need to extract all data from the downloaded compressed folder (right-click on the downloaded folder and select "Extract All.")

4. You must have the Java Runtime Environment (JRE) installed on your computer before you can run FRCCSA. If JRE is not installed (or you are not sure whether it is installed), use Windows Explorer to navigate to the folder where you saved the FRCCSA installation file. In the installation file, double-click on jre-6u16-windows-i586-s.exe. You will be prompted

to "Run or Cancel;" choose "Run." If JRE is already installed, you will receive a message asking if you would like to reinstall it. Choose "No." Otherwise, follow the promptings to complete the JRE setup.

5.   After installing JRE, return to the saved FRCCSA installation folder and double-click the "Setup.exe" file. You may receive a warning that the file is an executable file. Click "OK" to continue the installation. Next, you may receive the following warning: "The publisher could not be verified. Are you sure you want to run this software?" Continue by pressing "Run." The set up will now continue; simply follow the promptings.

6. If you are an administrator installing the software on a computer where it will be used by people logged in as standard users, you need to customize the security settings after installing. See Appendix A for instructions.

1.3 Starting the Program

Start the FRCC Software Application by clicking on the Windows **Start** button, then click on **Programs**, then **Fire Regime Condition Class**, then **FRCC Software Application**, as shown below in Figure 1-1. Or, double-click the desktop shortcut created during installation.

> **Note**: *If you receive an error message while running the software, consult Appendix B for instructions on how to proceed.*
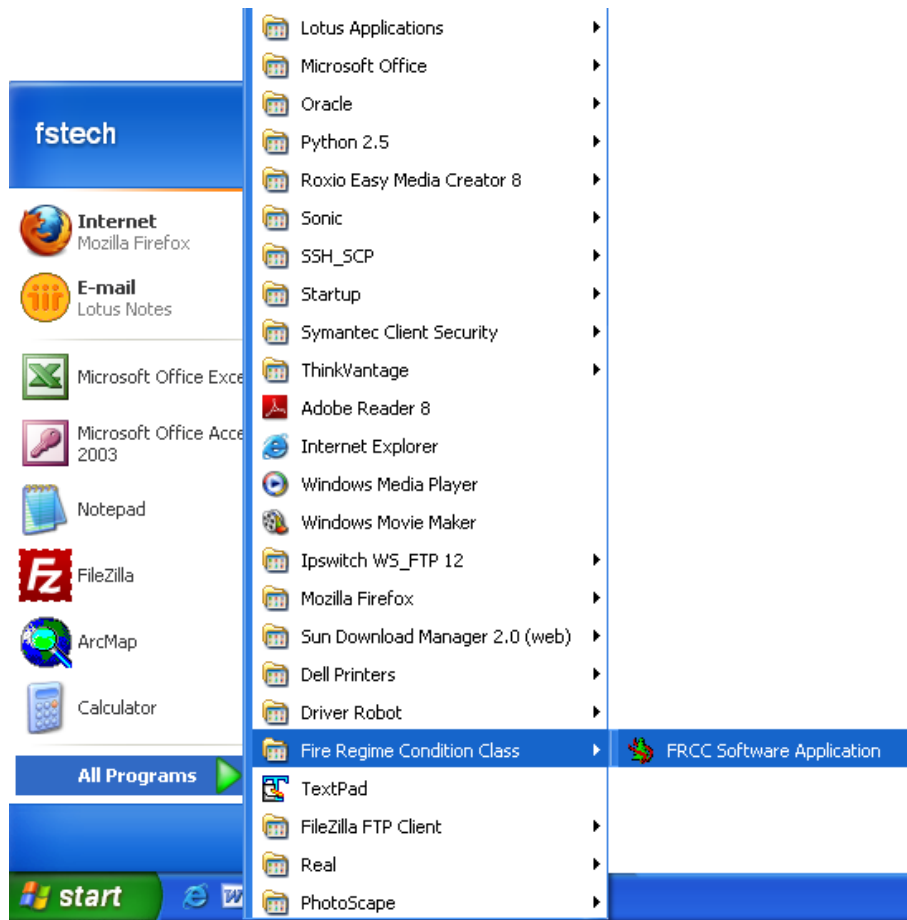
Figure 1-1. Starting the FRCC Software Application.

FRCCSA will open with the Landscape Worksheet showing a Landscape from the database.

Section 2: Landscape Worksheet

2.1 Viewing Landscapes
2.2 Entering Data
2.3 Landscape Data Tab
2.4 Stratum FRCC Inputs Tab Page
2.5 Additional Stratum Information Tab Page
2.6 Saving the Landscape
2.7 Viewing Reports

The FRCC Landscape Worksheet will open automatically when the FRCC Software Application starts. To open the FRCC Landscape Worksheet if you have closed it, click the Forms menu from the FRCC desktop and then click Landscape Form (fig. 2-1).

Figure 2-1. Opening the FRCC Landscape Worksheet from the FRCC Software Application.

The FRCC Landscape Worksheet (shown below in fig. 2-2) will open, displaying a Landscape from the database.

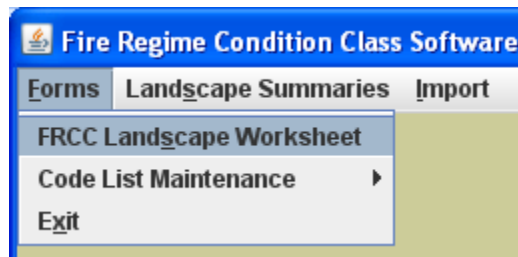**Figure 2-2**. The Landscape Worksheet displaying sample Landscape.

If this is a first-time installation, a sample Landscape will be loaded into the Landscape Worksheet.

2.1 Viewing Landscapes

In this user's guide, "Landscape" will be used to refer to what previous versions of the software called a "project." Since the application evaluates areas that may not contain "projects" (such as prescribed burns, thinning, etc.), "Landscape" is a more descriptive and less limiting term to match the software's function.

To open a Landscape, click the **Landscape List** button. The Landscape Navigation form (shown below in fig. 2-3) will open to a list of all saved Landscapes. Select a Landscape from the list and click **View Landscape** to open a new FRCC Landscape Worksheet window displaying the Landscape for editing.

> *Tip:* As you navigate between Landscapes, consult *Appendix B* for help on how to proceed if you receive an error message.

You can also select a Landscape from the list and click the **View Report** button to see the landscape's FRCC Landscape Report (see section 2.7 for an explanation of the report results).

> *Tip: Close the Landscape Navigation form and extra FRCC Landscape Worksheet windows after opening the Landscape(s) you wish to view. The Landscape Navigation form will stay open until you exit, and a new Landscape Navigation form will open every time you click the* **Landscape List** *button. This repeated process can clutter your screen and eventually slow down the software.*

Figure 2-3. Landscape Navigation form with Blacks Creek Landscape selected.

Starting a new Landscape. You will need to create a blank Landscape to enter your own data. You can click the **New Landscape** button on the Landscape Data tab of the FRCC Landscape Worksheet. You can also click the **Landscape** menu in the FRCC Landscape Worksheet window and then select the **New Landscape** menu item (see fig. 2-4 below).

> *Tip: You can navigate through the Software Application using a mouse. Alternatively, you can move between fields with the "tab" key on your keyboard, and when you come to a drop-down menu, use the up and down arrow keys to choose the menu item you want and then hit the tab key to move to the next field. You can also use many common keyboard shortcuts for entering data, such as Ctrl-C for copying, Ctrl-V for pasting, Home for moving to the beginning of a field, and End for moving to the end of a field.*
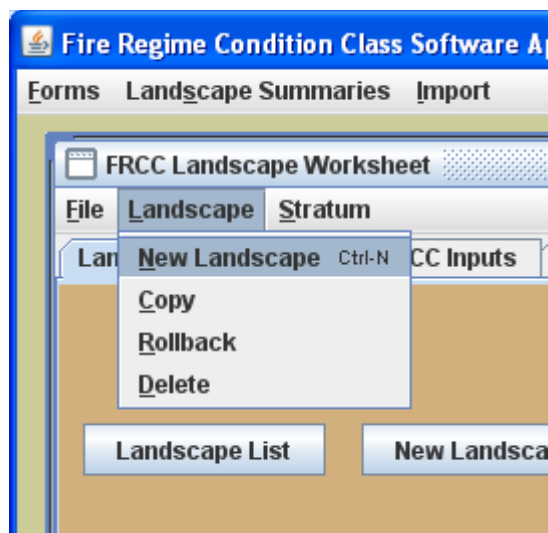
Figure 2-4. Creating a new Landscape.

Tip: After you have learned how to create a new Landscape, you will need to close the new Landscape you have created and again open the Landscape Worksheet (which contains a sample Landscape) to continue progressing through this user's guide (refer to the beginning of Section 2 above).

2.2 Entering Data

Data are entered on three tabs: Landscape Data, Stratum FRCC Inputs, and Additional Stratum Information; each is explained in detail below. The names of required fields appear in blue font (and names of optional fields appear in black). An error message will appear when a Landscape is saved if required fields are incomplete (see Appendix B).

Refer to the Interagency FRCC Guidebook for technical information about individual fields in the software form and for background on interpreting the FRCC calculations. The Guidebook is available at www.frcc.gov. Specifically, Chapter 3 of the FRCC Guidebook provides detailed explanations of the various fields to be populated in the paper Standard Landscape Worksheet or Field Form, which correspond to those on the FRCC Software Application Landscape Worksheet.

2.3 Landscape Data Tab Page

Figure 2-5. The Landscape Data tab with fields numbered (in red font) according to the field numbers in the Standard Landscape Worksheet (which is explained in detail in Chapter 3 of the FRCC Guidebook). Refer back to this page to locate the fields described in this section.

The Landscape Data tab contains landscape-scale data for an assessment area. The Landscape may contain many strata, but Landscape data describe the overall area.

Navigating through the Landscape Data tab. The first three fields on the Landscape Data tab differentiate Landscapes from each other. These three fields are shaded grey to remind you that each Landscape must have a unique combination of those fields in order to be identified (for example, a Landscape could share the Registration Code and Landscape codes with another Landscape so long as its Characterization Date is different).

2.3.1 Landscape Data Fields

Registration Code (field 1) – Required. Create a code that you will use to identify your agency and sub-unit. The code can be up to 12 alphanumeric characters. An example might be "FBIT" for the USDA Forest Service, Bitterroot National Forest or "BWID" for the Bureau of Land Management, Winnemucca District. Make this code relevant and

meaningful for your local area so you can distinguish your data from those of neighboring agencies. Since your data will not be aggregated nationally, you do not need to adhere to an outside code system.

Landscape Code (field 2) – Required. The Landscape Code is a unique code that you create to identify this assessment area. The code may be based on some abbreviation of the project name. For efficiency, you may want to use the same codes used in project reporting (such as for the National Fire Plan Operations and Reporting System [NFPORS] or the Forest Service Activity Tracking System [FACTS]).

Characterization Date (field 3) – Required. Enter either the date of examination or the date of entering the Landscape. This date needs to distinguish the assessment area from other assessment areas entered. Enter the date in MM/DD/YYYY format. For example, July 17, 2010, would be entered as: 07/17/2010.

> **Note:** *For reassessments where conditions have changed (such as after management treatments or after a wildfire), use the same Landscape Code but change the Characterization Date. Unchanged data can simply be copied from previous assessments, but any altered strata must be entered anew. (See Section 2.3.4 for information on copying Landscapes and entering strata.)*

Examiner Code (field 4) – Required. Enter your email address or name.

Landscape Name (field 5) – Required. Enter a descriptive name for the Landscape. Examples may include drainages, fire management units, geographic features, or project names already designated for NFPORS or other databases.

Landscape Area (field 6) – Required. Enter the size of the Landscape area in this field and specify the measurement unit in field 7 below.

Acres/Hectares (field 7) – Required. Select Acres or Hectares from the drop-down menu as the measurement unit for the Landscape area entered in field 6 above.

2.3.2 Landscape Location Fields

Fields 8 to 10 are required in order to pinpoint the geographic location of your Landscape for activities such as repeat photography, locating your Landscape within a geographic information system (GIS), and for referencing other project areas and data sets, such as those used by NFPORS.

We recommend using a global positioning system (GPS) receiver to record longitude and latitude (fields 8-9) in decimal degrees, rather than using degrees, minutes, and seconds. If you do not have a GPS receiver, you can estimate longitude and latitude using a USGS 1:24,000 topographic map.

Latitude (field 8) – Required. Enter the latitude of a reference point within the Landscape, preferably a central position with a panoramic view that might be useful for photographs. Enter the latitude in decimal degrees to the sixth decimal place (for example, 45.951234).

Longitude (field 9) – Required. Enter the longitude of your landscape reference point in decimal degrees to the sixth decimal place (for example, 95.951234).

Datum (field 10) – Required. Select the appropriate datum from the drop-down menu. This datum should match your GPS receiver. You may contact your local GIS coordinator to see which datum is preferred.

2.3.3 Landscape Current and Historical Photos

Current photo (field 11) – Not Required.
Reference Condition Photo (field 13) – Not Required.
Current and historical photos of the assessment area can be stored in a Landscape as hyperlinks. To enter a photo, place an electronic copy of the photo on your computer's hard drive. The photo should be in a compressed format such as TIFF or JPEG. Click the **Browse** button next to the Photo field to load a photo. Navigate to the folder containing the photo file, click on the photo file, and click the **Save** button. Once a photo has been added to the Landscape, the photo can be viewed by clicking the **View** button.

Fig 2-6. Photo section of Landscape tab showing **View** button.
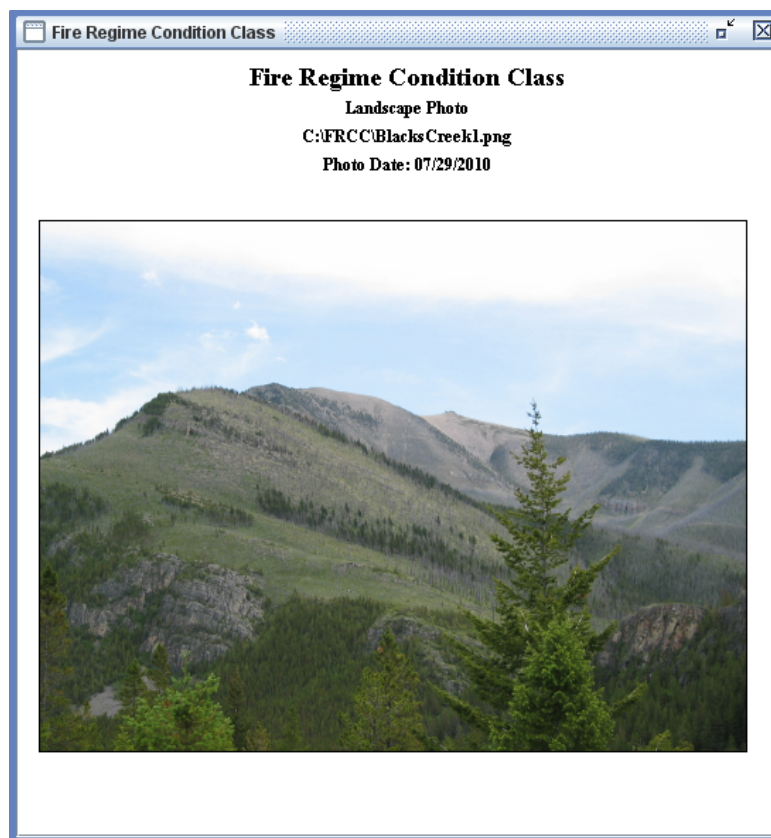
Fig 2-7. Landscape Photo window, opened using **View** button, displaying the saved photo.

Current photo date (field 12) – Not Required.
Reference Condition Photo Date (field 14) – Not Required.
When a photo is added to the Landscape, the Photo Date field will be populated with the date associated with the photo on your hard drive. This default photo date can be overwritten if desired.

Comments (field 15) – Not Required. Enter comments about the Landscape that might be helpful to managers and future assessors; for example, you may enter "FRCC Assessment of Black Ck Watershed," or general information about ecological conditions, dates of wildland fire, prescribed fire use, historical information, or other relevant data. These comments will appear in the FRCC report generated by the application.

2.3.4 Copying, Saving, and Deleting Landscapes

After entering Landscape information, you can work with Landscapes through the Landscape menu at the top of the FRCC Landscape Worksheet window and through the buttons at the bottom.

Saving a Landscape. Click the **Save** button at the bottom of the FRCC Landscape Worksheet; or from the **File** menu, select the **Save** menu item.

> **Note:** *The software will warn you any time you try to save a Landscape with invalid or missing required data. See* [Appendix B](#) *for how to proceed if you receive a warning message from the software.*

Copying a Landscape. Click on the **Landscape** menu and select the **Copy** menu item. Simply change one or more of the primary key values in the pop-up box that appears (Registration Code, Landscape Code, or Characterization Date) to copy the current Landscape to a new Landscape (see fig. 2-8 below). In the process of creating the new copy, the existing Landscape will be retained.
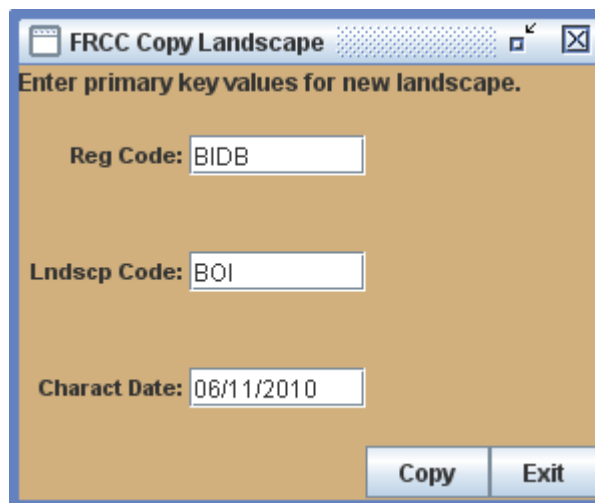
Figure 2-8. Copying a Landscape. From this form, enter at least one new primary key value for the new Landscape to distinguish it from the old copy.

Rolling back a Landscape. To disregard any changes made to an assessment and reload it as it was last saved to the database, click on the **Landscape** menu and then select **Rollback**.

Deleting a Landscape. To delete a Landscape, move to the Landscape to be deleted using the **Landscape List** button. Once the Landscape to be deleted is displayed in the Landscape Worksheet, click on the form's **Landscape** menu and click the **Delete** menu item. A dialog box will appear asking "Do you want to delete this Landscape?" Click **Yes**.

2.4 Stratum FRCC Inputs Tab Page

Figure 2-9. Example Stratum FRCC Inputs tab of the Landscape Worksheet with default assessment entered. Field numbers from the Standard Landscape Worksheet (see FRCC Guidebook Chapter 3) are superimposed in red for reference.

The Stratum FRCC Inputs tab contains data for each of the strata included in a Landscape. (The Landscape Name is listed at the top of the Stratum FRCC Inputs tab.) Landscapes are usually divided into strata based on biophysical settings (BpS). The Landscape may be divided into as many strata as necessary, as long as the strata total 100 percent of the Landscape. BpS, fire regime data, and S-Class percentages are entered on this tab; all other data for the stratum will be entered later on the Additional Stratum Information tab (section 2.5).

2.4.1 Adding, Viewing, Copying, and Deleting Strata

Adding Strata. To add additional strata to the Landscape, click on the **Create New Stratum** button located to the right of the Stratum Number field. Strata may also be created through the **Stratum** menu, **Create New Strata** menu option.

Navigating Between Strata. Once multiple strata have been entered for a Landscape, the **Review Previous Stratum** and the **Review Next Stratum** buttons can be used to scroll between strata. The **Stratum** menu also allows navigation through the **Previous Stratum** and **Next Stratum** menu options. When navigating between strata, note the black text to the right of the Stratum Number field, which indicates where you are in the list of strata (for example, "2 of 5").

> **Note:** *The software will produce a warning message if you try to navigate away from a stratum that is missing required data. See [Appendix B](#) for how to proceed if you receive a warning message from the software.*

Navigating through the Stratum FRCC Inputs tab. The BpS Source, Zone, and Biophysical Setting fields are drop-down menus. Note that several fields are calculated automatically: Stratum Number, Total Composition, and Reference and Current Percent Totals for the Succession Class Data section. Also note that you should not edit the Reference Percentages for the S-Classes as these have been calculated according to expert opinion. See each of these fields within the user guide for more details.

Copying and Deleting Strata. To copy an existing stratum, click on the **Stratum** menu and then click **Copy**. The new stratum will be assigned the next available stratum number. To delete a stratum, click on the **Stratum** menu and then click **Delete**. (See the *Stratum Number* field below to learn how adding and deleting strata affect the Stratum Number assignment.)

2.4.2 Stratum Data Fields

> **Note***: Chapters 3 and 4 of the FRCC Guidebook (available at www.frcc.gov) provide technical explanations of the various data entry fields*.

Stratum Number (field 16) – Required. This number will be automatically associated with the strata, counting up from one.

> **Note:** *If a stratum is deleted, its Stratum Number is deleted along with it. For example, if a Landscape had four strata and Stratum 2 is deleted, the remaining strata would be numbered 1, 3, and 4. The navigational numbers to the right of the Stratum Number field would reflect the current position of the stratum; so, in the example above, Strata 3 would have the navigational tag "2 of 3." Any new strata will be assigned numbers counting up from the highest Stratum Number currently in the Landscape. In the example above, a new stratum would be Strata 5, and its navigational tag would read "4 of 4."*

2.4.3 Stratum BpS Fields

BpS Source -- Required. This drop-down menu offers three different sets of models from which the user can later select a biophysical setting. The sets included are: LANDFIRE

National, Guidebook, and LANDFIRE Rapid Assessment. For information on how these model sets differ and which set best meets your needs, refer to FRCC Guidebook Chapter 2 (www.frcc.gov). Use this field to select the model set from which you will choose the biophysical setting (field 17) for the stratum.

> *Note: LANDFIRE Refresh models will be available late in 2011. The FRCC Guidebook Chapter 2 contains details on this model set. Please check www.frcc.gov for status. Access to these models will require an updated installation of FRCCSA.*

Region – Required. This field includes the regions or zones associated with the model set selected in the BpS Source field. Select the region that applies to the Stratum's geographic location. If you are unsure which region (or zone) your stratum is located in, consult the Biophysical Settings Resources section of www.frcc.gov or contact helpdesk@niftt.gov.

Biophysical Setting (field 17) – Required. BpSs can be selected from a drop-down list of codes populated according to the BpS Source and Region fields. To see the title of each of the biophysical settings in the list, hold the cursor over a code in the drop-down list. A tool tip giving the full BpS name will appear. Once you select a BpS, its full name will appear in black to the right of the BpS field.

When a BpS code from the drop-down menu is selected, the reference values for S-Class and fire regime variables will auto-populate in the stratum data (fields 19, 21, and 48). Once you have selected a BpS, complete and save required fields on the Stratum FRCC Inputs tab before moving to the Additional Stratum Information tab.

> *Note: Many fields in the Additional Stratum Information tab will also auto-populate when the BpS is selected. We will address these fields later in section 2.5.*

Stratum Composition (field 18) – Required. Enter the percentage of the Landscape represented by this stratum. The Total Composition field (on the right side of the form) will automatically calculate the sum of composition percentages for all strata. As you enter stratum percentages, the Total Composition field will display as red text on yellow until the sum of all strata equals 100 percent.

> *Note: If the Total Composition does not equal 100, a warning message will appear when saving or generating a Landscape report. The Landscape will still save normally, but you will be unable to generate a report until the Total Stratum Composition equals 100.*

Stratum Reference Condition Fire Frequency (field 19) – Required. This field will auto-populate with a default value from the BpS model. The default value is a calculation of the average number of years between fires in representative stands (mean fire interval). Do not change this value, as it consists of an average of multiple sites sampled during field research by BpS experts.

Stratum Current Fire Frequency (field 20) – Required. This field is an estimate of the current mean fire interval (MFI). MFI is defined as the average number of years between fires in representative stands. See FRCC Guidebook Chapter 3 (available at www.frcc.gov) for detailed advice about estimating this value. If there is no evidence of post EuroAmerican settlement fires, 100 years is the recommended default value, which generally corresponds to the recent fire exclusion period. If you believe no substantial change has occurred from reference conditions, simply reenter the reference value. For any non-fire strata, enter "9999" as the default value.

Stratum Reference Condition Fire Severity (field 21) – Required. This metric is defaulted from the BpS description.   Do not change this value as it is determined for the BpS by expert opinion and modeling. The metric describes the proportion of upper-layer lifeform replacement for dominant vegetation, as described in the BpS title.

Stratum Current Fire Severity (field 22) – Required. Estimate the current upper-layer lifeform replacement of the dominant vegetation as described in the BpS title.   For example, if the stratum title describes conifers with a grass understory, estimate the percent replacement of the conifer layer. Users should develop this value assuming 90th percentile burning conditions with current fuels and vegetation. This value can be estimated from field-based observations or modeled using fire effects models. Enter the percentage as an integer, not a decimal. See FRCC Guidebook Chapter 3 (www.frcc.gov) for a more detailed explanation of fire severity.

2.4.4 Succession Class Data

The Succession Class Data block lists Reference and Current percentages for S-Classes A-E and U, if applicable to the BpS. Reference values are defaulted according to the Stratum BpS selected. Enter current percentages based on your estimates for the current composition of S-Classes within the stratum.

S-Class Reference Percent Composition (field 48) – Required. This reference percentage is defaulted for each S-Class according to the BpS selected. Note that this one field number covers up to five reference percentage values, one for each S-Class in your BpS model. Reference percentages should not be altered. If you cannot find a BpS model whose reference S-Class percentages match your local conditions, contact helpdesk@frcc.gov.

> **Note:** *If the sum of your S-Class Reference percentages does not equal 100, this indicates the reference percentages have accidentally been altered. You can reenter your BpS in the Biophysical Settings field and the default reference values will return. However, all current values you may have entered will be cleared (i.e., Composition Percent, Current Frequency, Current Severity, and S-Class Current Percent fields).*

S-Class Current Percent Composition (field 49) – Required. Enter your estimate of the current composition for each S-Class, including any uncharacteristic classes. The sum of these percentages must be 100.

> **Note:** *Remember, any S-Class present today which was not part of the reference setting should be assigned as "Uncharacteristic." These are typically seral stages associated with degraded ecological conditions and will be crosswalked to Stand Condition Class 3.*
>
> *In order to enforce this rule, if an S-Class has "0" as a reference value, you will be unable to enter a current percentage greater than zero. The current S-Class percent box for the S-Class will be shaded grey as a reminder. This restriction also maintains the integrity of modeling strategies that deliberately use fewer than five boxes. (See FRCC Guidebook Chapter 3 [www.frcc.gov] for a more detailed explanation of modeling strategies.)*

Entering an Uncharacteristic S-Class. The "U" code row in the Succession Class Data table represents any succession classes not present in the historical reference condition ecosystems; therefore, the reference percentage for an uncharacteristic succession class is always "0".

The Reference and Current Percent Total boxes at the left side of the S-Class data box will calculate the total of the reference and current S-Class percentages entered in the table. If either total does not equal 100, it will be displayed in red on a yellow background. A warning message will notify you of an incomplete Percent Total when you try to save, report, or move away from the stratum. You will be able to save or move away from the stratum after clicking **OK** in the warning message. However, you will not be able to generate a report or a summary table until you have changed the values so that they total 100.

2.5 Additional Stratum Information Tab Page

Figure 2-10. Additional Stratum Information tab page of the Landscape Worksheet with default assessment entered. Field numbers from the Standard Landscape Worksheet (see FRCC Guidebook Chapter 3) are superimposed in red for reference. (Fields in parentheses are entered on the Stratum FRCC Inputs tab page but appear on this tab page for reference.)

The Additional Stratum Information tab page contains ancillary data not crucial to the area assessment; however, entering more data will give an expanded description of the stratum. When you select a BpS, many of these fields will be populated with default values. You can either change the default data or leave them as they are.

The Landscape Name, BpS Name, and Stratum Number are provided for reference at the top of the page.

Navigating through the Additional Stratum Information tab. The following fields are all populated using drop-down menus: BpS Lifeform, Indicator Species, Landform, Average Slope, Insolation Class, Elevation Type, Datum, Reference Composition Source, and Current Composition Source. Click the grey buttons associated with the fields, and then click on the item you want from the drop-down menu.

> *Tip: When selecting a code from a drop-down menu, briefly hold the cursor over the item (code) in the menu. A tool tip will appear with a description corresponding to the code.*

2.5.1 Additional Stratum Information Fields

Stratum BpS Lifeform (field 23) – Not Required. This field represents the dominant lifeform associated with the BpS. Select a code from the drop-down menu.

Stratum BpS Indicator Species (fields 24-26) – Not Required. Use these three fields to document dominant vegetation from the reference/historical period.

> *Entering species codes.* When entering the Indicator Species, use the NRCS (Natural Resources Conservation Service) species code. There are two ways to enter NRCS codes into the Indicator Species fields:

> ### 1. Entering NRCS codes using the indicator species drop-down menus

> The first way to enter NRCS codes into the Indicator Species fields is by using the indicator species drop-down menus to select species (see fig. 2-11 below).
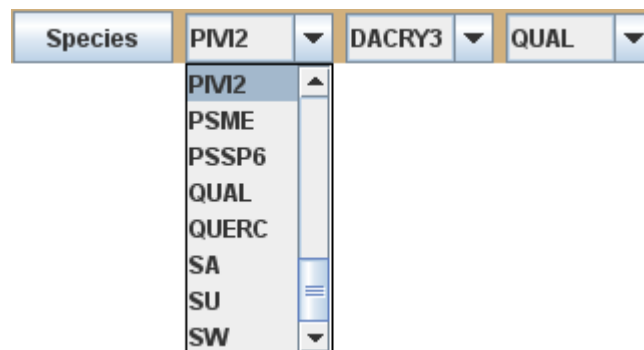
Figure 2-11. Indicator Species fields with Indicator Species 1 drop-down menu expanded.

> The species listed in the drop-down menu include all species used elsewhere in the assessment area and any species in My Species List, which can be viewed and modified using the **My Species List** button (see section 2.4.3).

> > **Reminder:** *You can hold the cursor over a code in the drop-down menu to display a tooltip with the species' common and scientific names.*
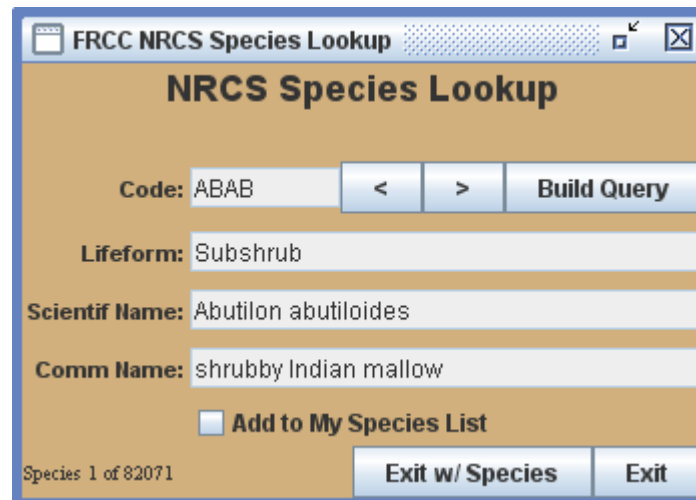
> ### 2. Entering NRCS codes using the Species button

> If the species you wish to enter does not appear in the species drop-down menu, you can use the **Species** button to look up a species using the NRCS Species Lookup.

> *Opening the NRCS Species Lookup Form with the* **Species** *button.* Select the Indicator Species field in which you wish to enter and then click the button

labeled **Species**, located to the left of the indicator species fields. The NRCS Species Lookup Form will appear (see fig. 2-12 below).

Searching for species in the NRCS Species Lookup Form. Scroll through the species using the ◁ (previous species) and the ▷ (next species) buttons. There are over 82,000 species to choose from in the species list, so it will be necessary to query the species list for the species you are looking for. To search for species, click on the **Build Query** button (see fig. 2-12 below).

Figure 2-12. NRCS Species Lookup Form.

After clicking the **Build Query** button, the NRCS Species Lookup will switch to query mode (see fig. 2-13 below). Enter either the scientific name in the "Scientif Name" field or the common name in the "Comm Name" field, and then press the **Exe Query** (execute query) button.

Figure 2-13. NRCS Species Lookup Form in Query Mode, ready to query the database for all species with a common name of "ponderosa pine."

The form will query the list of species stored in the database, looking for one with the scientific or common name entered. If more than one species is found for the name you specified in the query, use the **<** (previous species) and the **>** (next species) buttons to scroll through the species returned from the query.

> **Tip:** *You can use a wildcard entry of "%" when specifying search terms for either the common or scientific name of a species. The query will return all results that match your search terms with <u>any combination of characters</u> where you entered "%."*

Exiting the NRCS Species Lookup Form with a species code for an Indicator Species field. A species code can be propagated to the Species field on the form by pressing the **Exit w/ Species** button.

> **Note:** *Once a species has been added to a field using the **Species** button, it will be available in all Indicator Species fields' drop-down menus in the stratum. After saving the Landscape, the species will also appear in all species drop-down menus in other strata within the Landscape. To keep species in the drop-down menus for use in other Landscapes, check "Add to My Species List" in the NRCS Species Lookup. The species will be added to the list available in the Indicator Species drop-down menu for all of your Landscapes. See section 2.4.3 for information on viewing and modifying your list of species.*

Stratum Landform (field 27) – Not Required. Select a landform code from the drop-down menu. The code should reflect coarse-scale dominance of hills, rivers, valleys, etc. in the stratum.

Stratum Average Slope Class (field 28) – Not Required. Select a slope class from the drop-down menu. Slope codes are associated with a descriptor and degree ranges.

Stratum Insolation Class (field 29) – Not Required. Insolation class refers to the relative amount of solar exposure. Select an insolation class from the drop-down menu. The tooltips list aspect, slope, and airflow associated with the insolation class.

Stratum Low Elevation (field 30) – Not Required. Enter the low elevation for the stratum, in feet or meters (specified in field 32).

Stratum High Elevation (field 31) – Not Required. Enter the high elevation for the stratum, in feet or meters (specified in field 32).

Stratum Elevation Units (field 32) – Not Required. Select either feet or meters from the drop-down menu to match the measurements in fields 30 and 31.

Stratum Latitude (field 33) – Not Required. Enter the latitude of a central position in the stratum in decimal degrees to the sixth decimal place (for example, 45.951234).

Stratum Longitude (field 34) – Not Required. Enter the longitude of a central position in the stratum in decimal degrees to the sixth decimal place (for example, 95.951234).

Datum (field 35) – Not Required. Enter the datum (for example, WGS84) associated with your latitude and longitude measurements, which should be listed on your GPS. If you do not know which datum to use, contact your local GIS coordinator to see which GIS datum is preferred.

Current Stratum Photo (field 36) – Not Required. Click the **Browse** button next to the Photo field to load a photo from your computer's hard drive. The photo should be in a compressed format, such as TIFF or JPEG. Navigate to the folder containing the photo file, click on the photo file, and click the **Save** button. Once a photo has been added to the Landscape, the photo can be viewed by clicking the **View** button.

Current Stratum Photo Date (field 37) – Not Required. When a photo is added to the Stratum, the Photo Date field will be populated with the date associated with the photo on your hard drive. This default photo date can be overwritten if desired.

Stratum Reference Condition S-Class Percent Composition Source (field 38) – Not Required. Enter a code from the drop-down menu to match the source for your reference S-Class Percent Composition (such as non-local expert estimate, local expert estimate with literature review and modeling, etc).

Stratum Current S-Class Percent Composition Source (field 39) – Not Required. Enter a code from the drop-down menu to represent the source for your current succession class data (such as the data were obtained through visual estimate, mapped summary, etc).

Stratum Uncharacteristic S-Classes (fields 40-45) – Not Required. These fields provide further information if you entered a current percent for the "U" row in the Succession Class Data block on the Stratum FRCC Inputs tab. The field codes allow you to specify what type of uncharacteristic class is present in your stratum (for example, grazing, insects/disease, or timber harvest). You can document up to three component U-classes to account for your U-Class area. First, select a code from the S-Class drop-down menu (hold the cursor over a code to see the full S-Class name). Next, enter further descriptive comments in the Comment field, which activates once the S-Class code is entered. In the Comment field, include an estimate for the component percentages if you are identifying several U-Classes

> ***Note:*** *Once one uncharacteristic S-Class is entered, the next uncharacteristic S-Class code field appears beneath. Once the second uncharacteristic S-Class code is entered, a third and final uncharacteristic S-Class code field appears. Be sure to enter (and delete) these fields in order. If, for example, there are data in the third field when the second field is reset to blank, the third field will disappear from the form, but the data will still show on the report.*

Stratum Comments (field 46) – Not Required. Enter any other comments about the stratum in this field. These comments will appear in the FRCC report. For example, you might want to enter "FRCC Assessment of Pinyon-Juniper stratum" or perhaps document any management issues.

2.5.2 Succession Class Data Fields

These data fields are all optional but help to give a fuller description of the stratum. *S-Class Code (field 47), S-Class Reference Percent Composition (field 48),* and *S-Class Current Percent Composition (field 49)* are shown at the left side of the Succession Class Data block for reference, but must be entered from the Stratum FRCC Inputs tab (see section 2.4.4).

S-Class Upper Layer Lifeform (field 50). Select a lifeform from the drop-down menu that matches the upper layer in the S-Class.

S-Class Upper Layer Size Class (field 51). Select a size class from the drop-down menu that matches the size class of the upper layer.

S-Class Dominant Species (fields 52-55). Enter species that identify the S-Class. See directions above for using the **Species** button or the local drop-down list (see section 2.5.1, *Entering species codes*).

S-Class Photo (field 56). To reach the photo fields, scroll right using the scroll bar at the bottom of the Succession Class table. To enter a photo, place an electronic copy of the photo on your computer's hard drive. The photo should be in a compressed format such as TIFF or JPEG. Click the **Browse** button next to the Photo field to load a photo. Navigate to the folder containing the photo file, click on the photo file, and click the
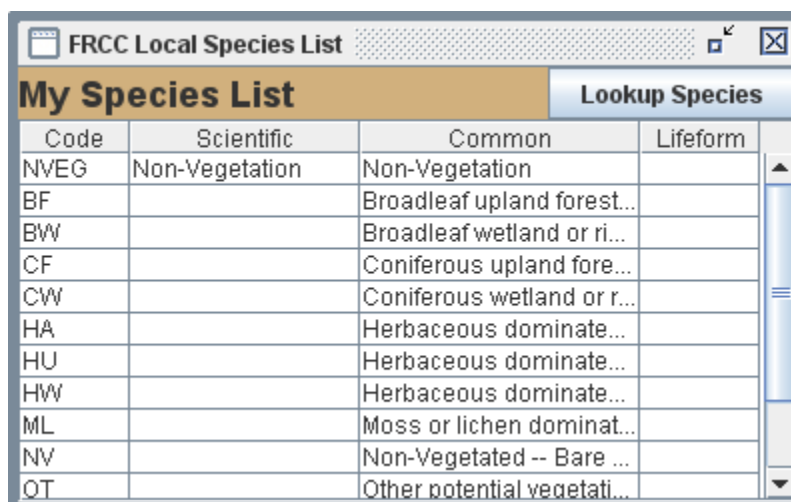
Save button. Once a photo has been added to the Landscape, the photo can be viewed by clicking the **View** button.

S-Class Photo Date (field 57). When a photo is added, the Photo Date field will be populated with the date associated with the photo on your hard drive. This default photo date can be overwritten if desired.

2.5.3 My Species List

My Species List is a place to store BpS codes that you use frequently. The codes in My Species List appear in the Indicator Species drop-down menus, along with BpS codes used elsewhere in the Landscape. When you first install the software, My Species List contains a default list of lifeforms rather than species codes. See the headings below for instructions on clearing the list and modifying it to reflect the species you commonly use.

To access My Species List, press the **My Species** button in the bottom left corner of the Additional Stratum Information tab page.

Figure 2-14. My Species List opened with the **My Species** button
set to the default list of lifeforms.

The species in My Species List will appear in a table, including the species code, scientific name, common name, and associated lifeform. Keep My Species List open to add species in the next step.

Adding Species to My Species List. To add species to My Species List, click the **Lookup Species** button in the top right corner of the My Species List window. The **Lookup Species** button will display the NRCS Species Lookup used to add species to the Indicator Species field, with the exception that this NRCS Species Lookup form has no "Exit with Code" button since it is used for adding species to My Species List instead of for populating fields.

Fig 2-15. The NRCS Species Lookup form accessed
through the My Species List **Lookup Species** button.

Use this form to look up species you want to add to the species drop-down menu. (See section 2.5.1 for instructions on how to find species using the NRCS Species Lookup.) Select species by checking the **Add to My Species List** box in the NRCS Lookup Form. When finished looking up species to add to the list, click **Exit** to return to My Species List. You will need to close My Species List and reopen it to see your changes. You will also need to close any open Landscapes and reopen them in order to see your species list additions in the species drop-down menus.

Removing Species from My Species List. Click the **My Species List** button. Your list of species will display in the My Species table. To remove a species, click the **Lookup Species** button and build a query that will take you to the species you wish to remove. (See section 2.5.1 for directions on building queries in the NRCS Species Lookup.) The species will have the "My Species" box checked; to remove it from the list, uncheck the My Species box. You may de-select as many species as you wish, then exit the NRCS Species Lookup. You will need to close the My Species window and reopen it in order to see your changes. You will also need to close any open Landscapes and reopen them in order to see the selected species removed from the Indicator Species drop-down menus.

Resetting My Species List. To clear all species from My Species list, click the **Forms** menu in the FRCC Software Application window. Select **Code List Maintenance**, then **Reset Code Lists**, then **Clear Species List**.
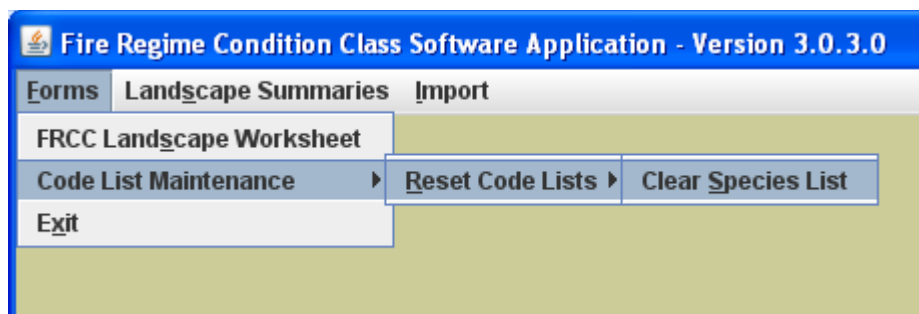
Figure 2-16. FRCC Software Application Forms menu ready to clear My Species List.

A message will ask, "Are you sure you want to remove all species from My Species List?" If you click **Yes**, the message will close and your species list will be reset. The list will be blank the next time you open it, and the previous list's species will be removed from the Indicator Species drop-down menus. (You will need to close any open Landscapes and reopen them in order to see the changes in the Indicator Species menus.)

> *Warning: Once you reset My Species List, you cannot recover the old list.*

2.6 Saving the Landscape

Once the data for the Landscape, strata, and succession classes have been entered, save the assessment to the database by pressing the **Save** button at the bottom of the Landscape Worksheet. Landscapes can also be saved by clicking the **File** menu and then the **Save** menu option. The software will check the data for any errors before saving to the database. A warning message will appear if an error is found in the data. If no message appears, then you know your Landscape was successfully saved.

> *Note: The software will warn you any time you try to save a Landscape with invalid or missing required data. See Appendix B for how to proceed if you receive a warning message from the software.*

2.7 Viewing Reports

View a Landscape Report (containing the data entered and the results of the FRCC calculations) by clicking the **Report** button in the bottom right corner of the Landscape Worksheet. A window will appear that displays the Landscape Report for this assessment area. Your Landscape will automatically save whenever you generate a report.

> *Note: The software will warn you any time you try to generate a report with invalid or missing required data. See Appendix B for how to proceed if you receive a warning message from the software.*

Tip: Use the **Page Up** and **Page Down** buttons to scroll through the report.

2.7.1 Landscape Page

The Landscape page is the first page of the report (see fig. 2-17 below). It shows an overview of the strata departures and condition classes. This page is also useful for quickly scanning your work for data entry errors.

Figure 2-17. Example of the Landscape Report's Landscape page.

2.7.2 Stratum Data Pages

The next several pages of the report provide detailed summaries for each stratum. The number of pages depends on how many strata your assessment area contains. An example Stratum Data page is shown below in Figure 2-18. You can use this page to scan for data errors. The page also shows FRCC calculations for each S-Class in the Succession Class table. Notice the Similarity, Difference, Relative Amount, Stand FRCC, Stand Departure, and S-Class Acres Departed from Reference columns. Below the

table, Vegetation and Fire Departure, Regime, and Condition Class values are listed for the stratum.
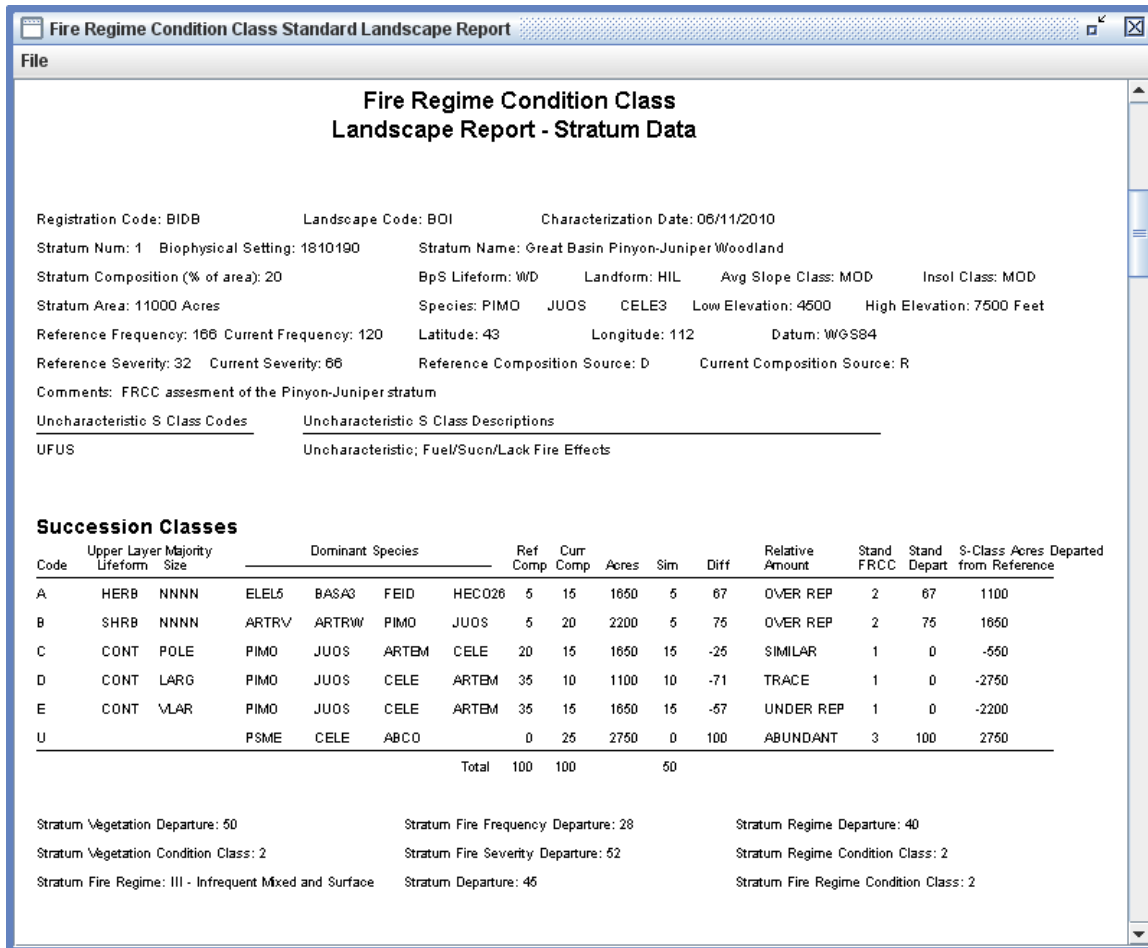
Figure 2-18. Example of the Landscape Report's Stratum Data page.

2.7.3 Reference Fire Regime Summary Page

The Reference Fire Regime Summary page provides a table and graph illustrating the reference fire regime (see fig. 2-19 below). The table lists Reference Frequency, Reference Severity, and Fire Regime group for each stratum. The graph plots these data visually. A bold black number corresponding to each stratum is plotted using the graph's frequency and severity axes. The graph is then divided into boxes showing each fire regime.
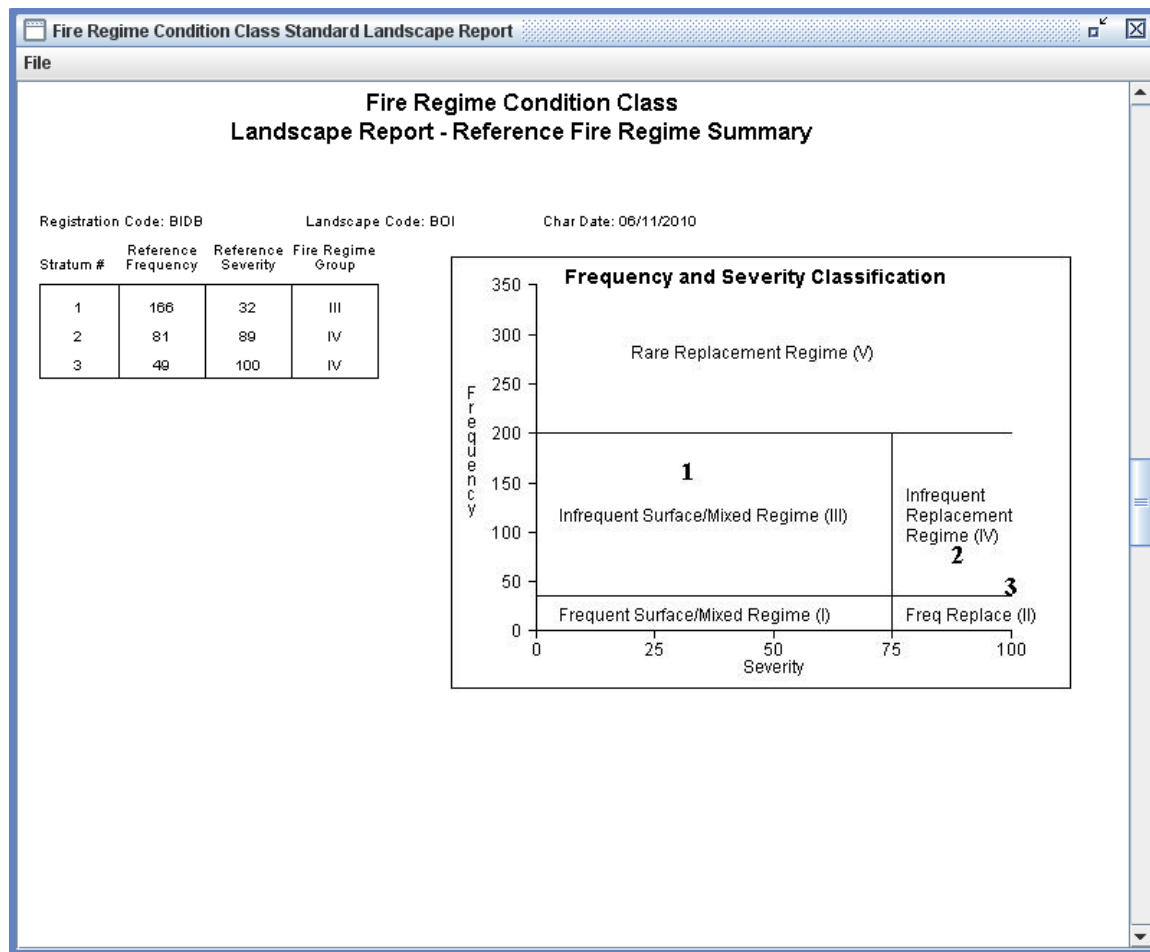
Figure 2-19. Example of the Landscape Report's Reference Fire Regime Summary page.

2.7.4 Fire Regime Condition Class Summary Page

The next page of the Landscape Report, the FRCC Summary page, contains the calculation and graphing of the weighted departures and fire regime condition class for the Landscape (see fig. 2-20 below). The table at the top displays Departure, Composition, and Weighted Departure percentages for each stratum. The last row of the table shows the sum of the strata weighted departures, which forms the Landscape FRCC Departure. Landscape FRCC Departure and Landscape FRCC are listed below the table, along with the range of FRCC Departure values that fall into the class (such as for Condition Class 2: 34-66%).

The Strata and Landscape Departures graph visually represents vegetation departure, regime departure, and stratum departure for each stratum. The graph also plots the Landscape Departure. The scale on the right side of the graph shows where each departure fits into the FRCC classes.
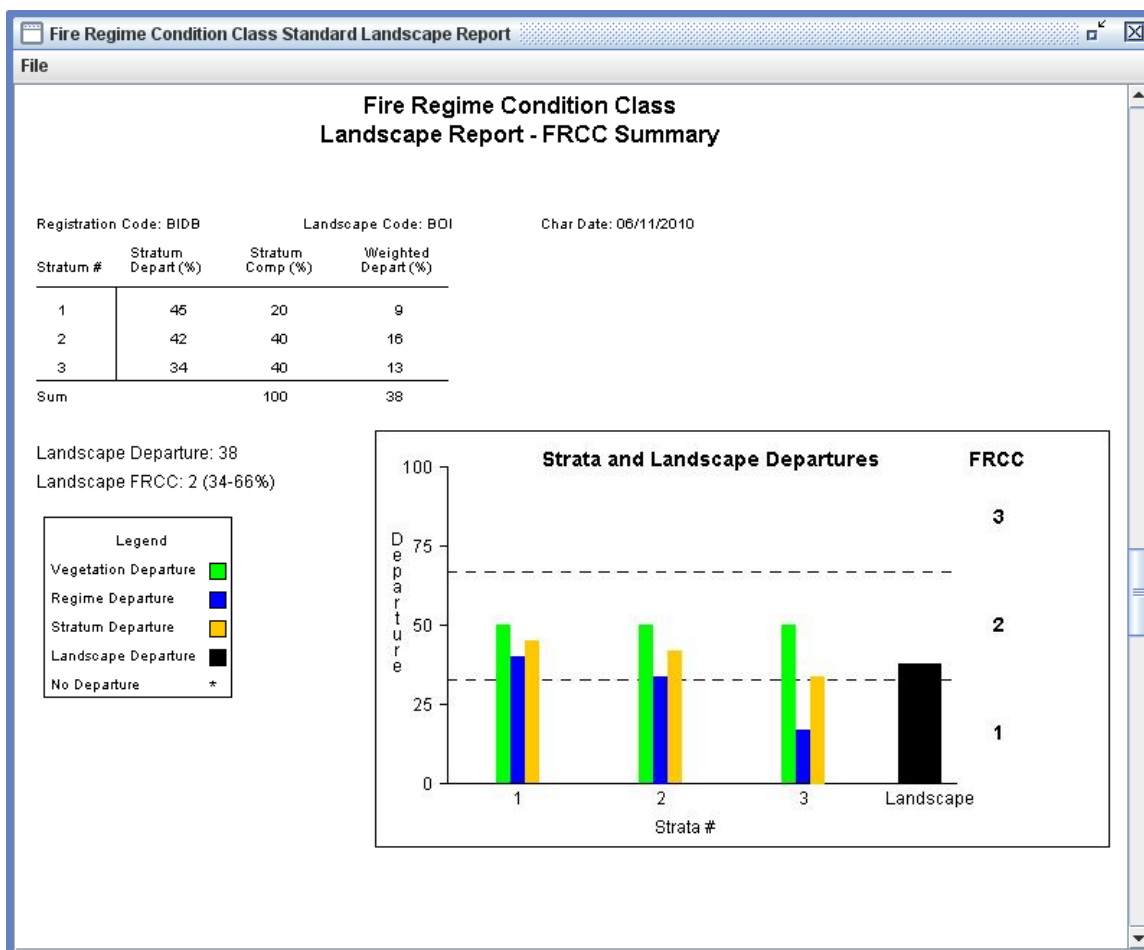
Figure 2-20. Example of the Landscape Report's Fire Regime Condition Class Summary page.

2.7.5 Landscape Report Table

This table is derived by extracting all Stand FRCC acreages and summarizing them into a single table. This table is especially useful in planning documents and meets the required summary format of certain federal agencies (see Chapter 3 of the FRCC Guidebook [www.frcc.gov]). The Landscape Report table lists all BpSs used in the Landscape, followed by their associated fire regime group, the acreage in each condition class, and the total area for each stratum and for the Landscape.

> **Note**: *Many BpS names are so long that they cannot fit into the printable margins of the FRCC Software Application report tables. However, the BpS code is always included in the report tables. We recommend that you keep a list of BpS codes and corresponding names handy for looking up the full names of the BpSs included in your FRCC Software Application reports. Remember that the differences between three available model sets are described in Chapter 2 of the FRCC Guidebook, and that all model sets and associated documentation – from which you can create custom lists of names and codes – can be downloaded through www.frcc.gov in the Biophysical Settings Resources section.*

Tip: The table shown below in Figure 2-21 may be especially applicable in summarizing FRCC for watersheds or single landscapes. This table can be inserted into planning documents, such as Environmental Assessments, Landscape Assessments, or other NEPA documents.

Figure 2-21. An example FRCC Landscape Report table.

Note: *This page of the report can also be accessed from the form by clicking the **Summary** button in the bottom right corner of the Landscape Worksheet.*

2.7.6 Code Summary Page

The final page of the report, the Code Summary page, lists all codes used in the report along with their descriptions (see fig. 2-22 below).

Figure 2-22. Example of the Landscape Report's Code Summary page.

2.7.7 Saving and Printing Reports

From the Report, click the **File** menu and then the **Save Report As** option. A window will open allowing you to browse to a location for saving the report. The *Files of Type* field allows you to select either JPG or PNG files as the format for your saved report. Once you name your file and click **Save**, your report will be stored in the location you specified. Each page of the report is saved as a separate document and numbered. For example, if you saved your Landscape report as "BearCreek," and specified that you wanted your report in JPG format, you would find files BearCreek_p1.jpg, BearCreek_p2.jpg, etc. for all the pages in your report.

To print a report, click the **File** menu in the report window and then the **Print** menu item.

Section 3: Multi-Landscape and Global Summaries

3.1 Multi-Landscape Summary
3.2 Global Summary

The FRCC Software Application determines Fire Regime Condition Class (FRCC) at a variety of scales. These data can be aggregated upwards into three summary units: Landscape (discussed above), Multi-Landscape, and Global. (Chapter 2 of the FRCC Guidebook discusses FRCC assessments at different scales.) Each summary breaks down the total designated area into its component BpSs and lists their Fire Regime Group and area in each Condition Class. The summaries all follow the same basic table format, listing information according to BpS within the summary area. The difference between the three summary units is their scope: the Landscape Summary refers to one Landscape; the Multi-Landscape Summary refers to a collection of Landscapes; and the Global Summary refers to a collection of Multi-Landscape assessment areas. The chart below (fig. 3-1) shows the relationship between the different summary units.
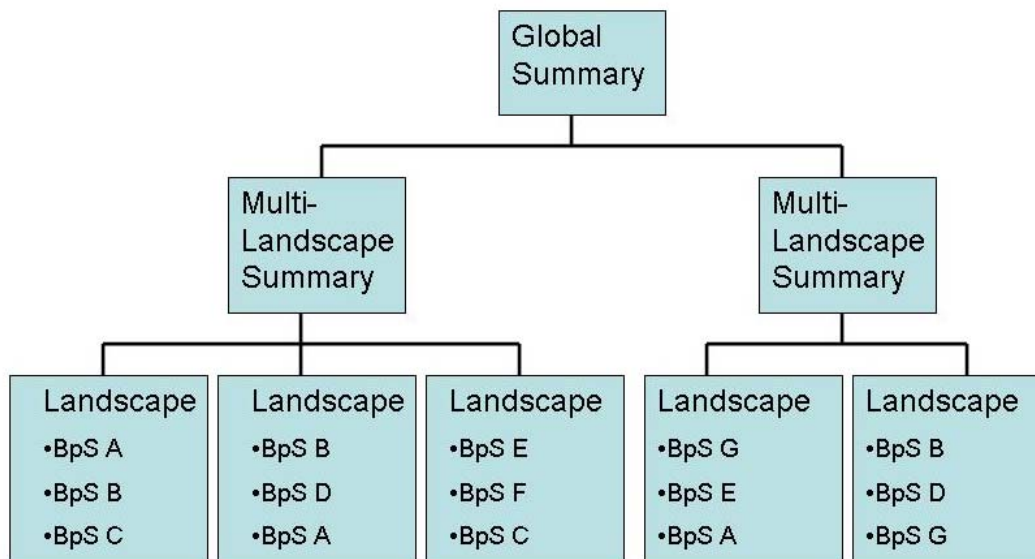
Figure 3-1. This chart shows the relationships between different summary units. Landscape FRCC assessments can be combined to produce a Multi-Landscape Summary. Multi-Landscape Summaries can be combined into a Global Summary for the broadest analysis. At each level of assessment, FRCC is calculated according to BpS acreage. So, the report for the Multi-Landscape Summary on the left side of the diagram would list Condition Class acreage for BpSs A, B, C, D, E, and F, aggregating data across Landscapes.

3.1 Multi-Landscape Summary

The Multi-Landscape Summary analyzes FRCC data across an area that includes several Landscapes. An example of a multi-landscape summary might be a fire management unit (FMU)

where FRCC is required for all Landscapes embedded within the larger FMU. The Multi-Landscape Summary appears in the Software Application only, not in the hand-calculated Standard Landscape Worksheet or Field Form.

To access the Multi-Landscape Summary, click the **Landscape Summaries** menu in the FRCC Software Application window. Choose the **Multi-Landscape Summary** menu item.

Figure 3-2. Opening the Multi-Landscape Summary Form with the Landscape Summaries menu.

The Multi-Landscape Summary Form will then open, as shown below in Figure 3-3.

Figure 3-3. The Multi-Landscape Summary Form, open to a default summary.
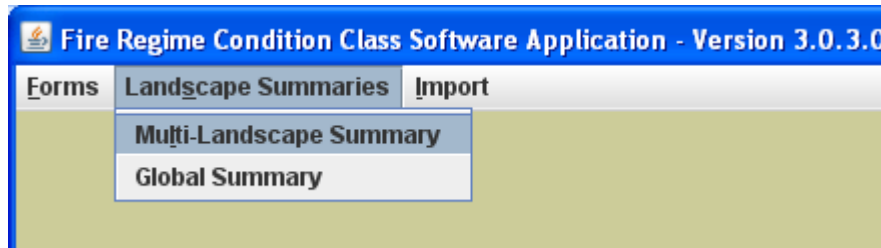
3.1.1 Multi-Landscape Summary Fields

Multi-Landscape ID Code – Required. This code must be unique to your Multi-Landscape Summary in order to differentiate it from other assessment areas. This code is required in order to save the summary so that it can be identified later. Once an ID code is entered and saved, the ID Code field will turn grey and the ID Code cannot be changed.

Title. This field is an expanded name for the summary assessment area. You can use it to identify a longer name associated with the summary code; for example, a geographic location.

Description. This field gives you a chance to specify more about the summary assessment area; for example, a name of a fire management unit or other delineation.

Comments. This field can be used for comments about the type of assessment, the intended planning document, or other pertinent notes; comments will appear in the generated report.

3.1.2 Viewing, Adding, and Removing Landscapes

Landscape Table. The Multi-Landscape Summary Form contains a table showing the Landscapes to be summarized. Each row shows one Landscape's Name, Registration Code, Landscape Code, and Characterization Date. Recall from the Landscape Data tab (section 2.2.1) that Registration Code, Landscape Code, and Characterization Date are the three fields that uniquely identify a Landscape within the FRCC Software Application.

Adding Landscapes. To add a Landscape to the table for summarization, click the **Add Landscape** button. The Landscape Select Form will open, showing a list of Landscapes saved in the FRCC Software Application. Click on the row containing the Landscape you wish to select and then click the **Add Landscape** button.

Figure 3-4. The Landscape Select Form, with Blacks
Creek Landscape selected to be added to the Multi-
Landscape Summary assessment area.

Once you click **Add Landscape**, the Landscape Select Form will close, and the
selected Landscape will appear at the bottom of the table on the Multi-Landscape
Summary Form. If you have many Landscapes in the table, you may need to use the
scroll bar on the right to see all of your Landscapes.

Viewing Landscapes. If you want to see or change the details of a Landscape in your Multi-
Landscape Summary Unit, you can do so using the **View Landscape** button. Select a
Landscape in the table and click **View Landscape**. An FRCC Landscape Worksheet
window will open containing the Landscape. If you make changes to the Landscape, be
sure to save before returning to the Multi-Landscape Summary Form.
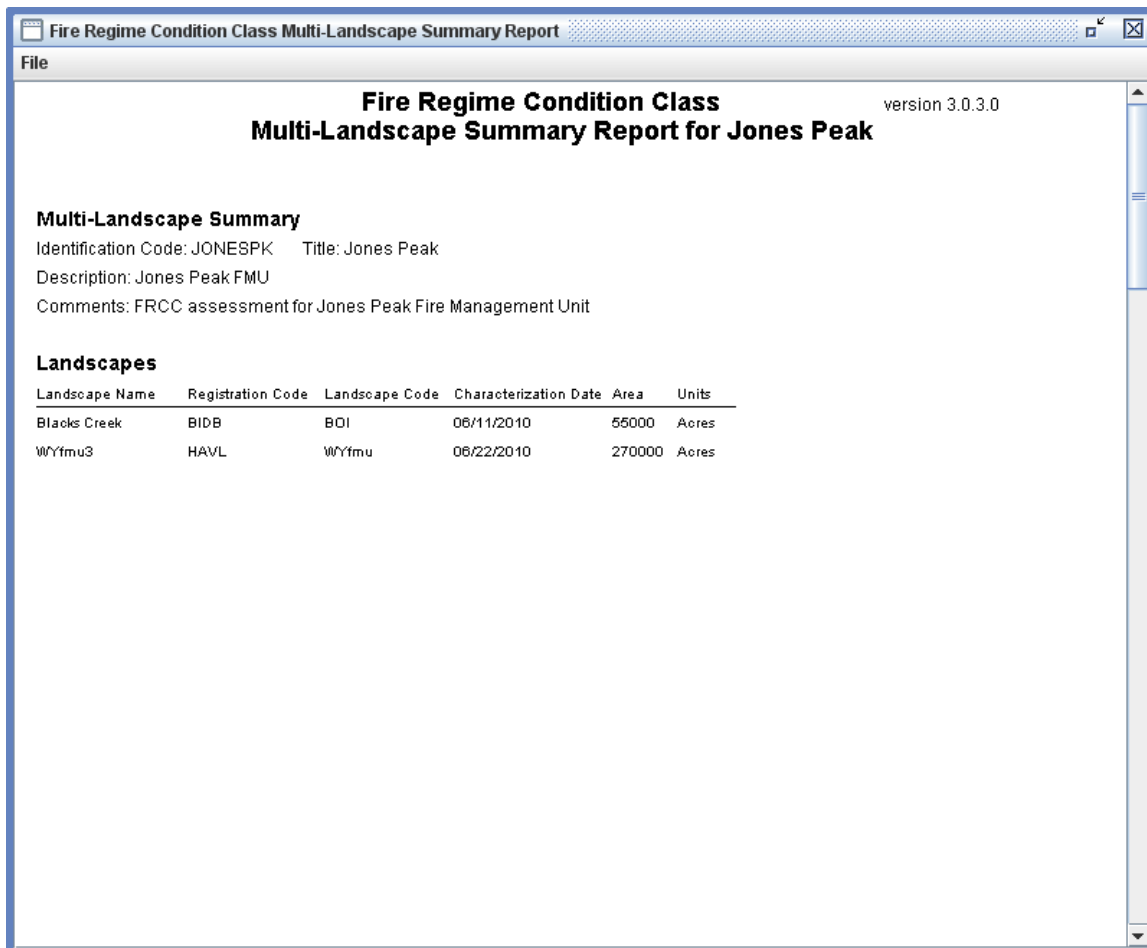
> **Tip:** *Close Landscape windows when you are finished to avoid a cluttered screen and
> possible slower functioning of the software.*

Removing Landscapes. To remove a Landscape from the Multi-Landscape Summary, select
it in the table and click the **Remove Landscape** button.

3.1.3 Reports and Summary Report Tables

Generating a Multi-Landscape Summary Report. After adding all desired Landscapes, click
the **Report** button. A new window will open with the Multi-Landscape Summary
Report for your specified area. Reports are in a format similar to the Landscape
Report. The report begins with a Multi-Landscape Summary page that lists the
identification information for the Multi-Landscape Summary Unit and all of the
Landscapes included.

> ***Note:*** *The software will warn you any time you try to generate a report with invalid or missing required data. See* *Appendix B* *for how to proceed if you receive a warning message from the software.*

Figure 3-5. Multi-Landscape Summary Report, open to the first page of identification data.

Next, the Landscape Data pages in the report give Landscape and BpS data for each Landscape included in the summary, as shown below in Figure 3-6.

Fire Regime Condition Class Multi-Landscape Summary Report

File

Fire Regime Condition Class
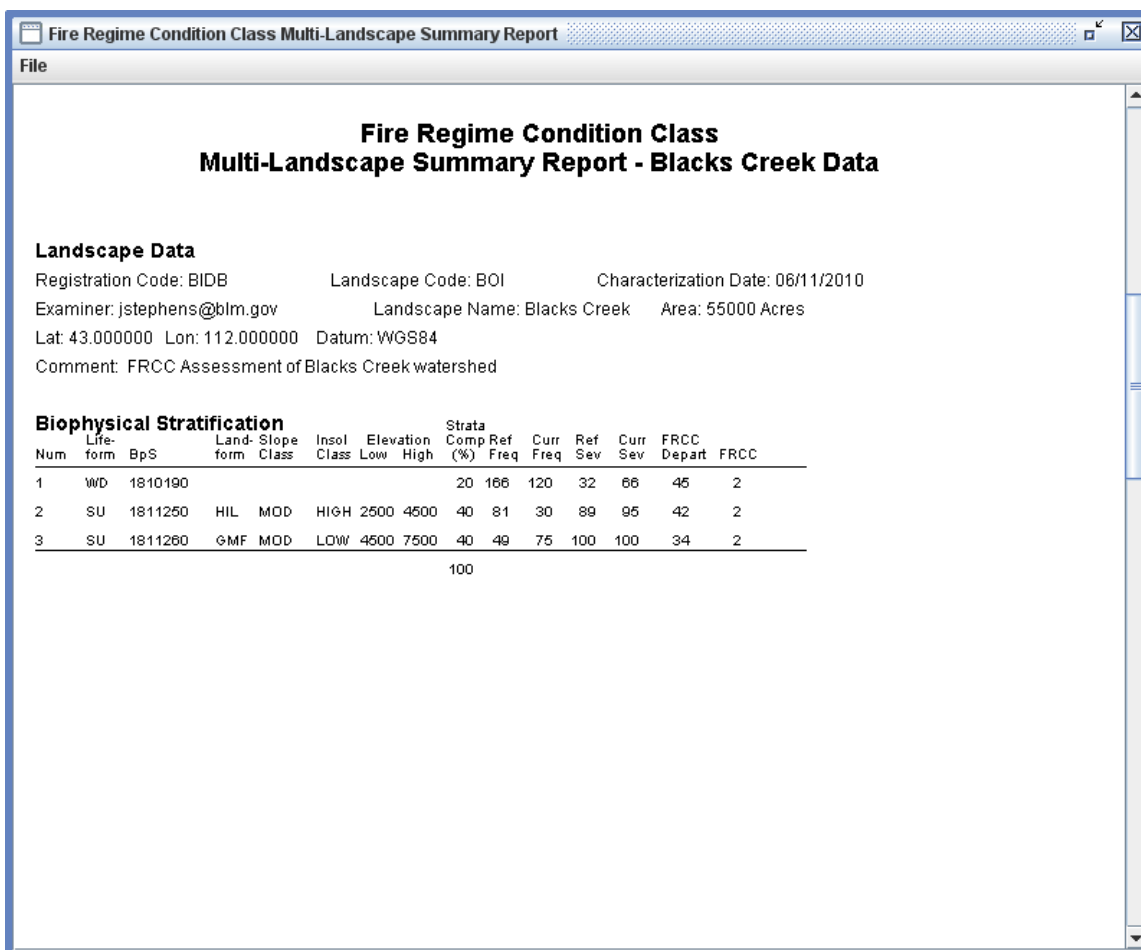**Multi-Landscape Summary Report - Blacks Creek Data**

Landscape Data

Registration Code: BIDB   Landscape Code: BOI   Characterization Date: 06/11/2010

Examiner: jstephens@blm.gov   Landscape Name: Blacks Creek   Area: 55000 Acres

Lat: 43.000000   Lon: 112.000000   Datum: WGS84

Comment: FRCC Assessment of Blacks Creek watershed

Biophysical Stratification

Num	Life-form	BpS	Land-form	Slope Class	Insol Class	Elevation Low	Elevation High	Strata Comp (%)	Ref Freq	Curr Freq	Ref Sev	Curr Sev	FRCC Depart	FRCC
1	WD	1810190						20	166	120	32	66	45	2
2	SU	1811250	HIL	MOD	HIGH	2500	4500	40	81	30	89	95	42	2
3	SU	1811260	GMF	MOD	LOW	4500	7500	40	49	75	100	100	34	2
								100						

Figure 3-6. Landscape Data page of the Multi-Landscape Summary Report.

The final page of the Multi-Landscape Summary Report is a Summary Report Table that lists all BpSs in the summary unit, their Fire Regime Group, their Condition Class acreage, and their total acreage within the summary unit.

> **Note**: *Many BpS names are so long that they cannot fit into the printable margins of the FRCC Software Application report tables (see fig. 3-7 below). However, the BpS code is always included in the report tables. We recommend that you keep a list of BpS codes and corresponding names handy for looking up the full names of the BpSs included in your FRCC Software Application reports. Remember that the differences between three available model sets are described in Chapter 2 of the FRCC Guidebook, and that all model sets and associated documentation – from which you can create custom lists of names and codes – can be downloaded through www.frcc.gov in the Biophysical Settings Resources section.*

> **Note:** *The table shown below in Figure 3-7 may be especially applicable in summarizing FRCC for a single Fire Management Unit or other compilations of landscapes. This table can be inserted into documents such as Fire Management Plans or Land Use Plans.*

Figure 3-7. The Multi-Landscape Summary Report Table at the end of the Multi-Landscape Summary Report.

This Summary Report Table can also be accessed independently, by clicking the **Summary** button in the Multi-Landscape Summary window.

Saving Multi-Landscape Summary Reports. From the report, click the **File** menu and then the **Save Report As** option. A window will open, allowing you to browse to a location for saving the report. The *Files of Type* field allows you to select either JPG or PNG files as the format for your saved report. Once you name your file and click **Save**, your report will be stored in the location you specified. Each page of the report is saved as a separate document and numbered. For example, if you saved your Summary report as "BattleMtnFMU," and specified that you wanted your report in JPG format, you would find files BattleMtnFMU _p1.jpg, BattleMtnFMU _p2.jpg, etc. for all the pages in your report.

Printing Multi-Landscape Summary Reports. From the report's **File** menu, click **Print**.

3.1.4 Summary List Navigation

Click the **Summary List** button to view other Multi-Landscape Summary Reports and assessment areas. The button opens the Multi-Landscape Summary Navigation Form.

Figure 3-8. Multi-Landscape Summary Navigation form, ready to select a Multi-Landscape Summary assessment area for viewing reports or for editing data in the Summary Form.

Viewing Multi-Landscape Summaries. The Multi-Landscape Summary Navigation Form lists all saved Multi-Landscape Summaries. To view a summary assessment area for editing, select it in the table of names and then click the **View Multi-Landscape Summary** button at the bottom of the form. A new Multi-Landscape Summary Form will open to the assessment area you selected.

> **Tip:** *Close the Multi-Landscape Summary Navigation Form and any extra Multi-Landscape Summary windows when you finish using them. The Multi-Landscape Navigation Form will stay open until you exit, and a new Multi-Landscape Navigation Form will open every time you click the* **Summary List** *button. Repeatedly opening Summary Forms and Navigation Forms can clutter your screen and eventually slow down the software.*

Viewing Multi-Landscape Summary Reports. The Multi-Landscape Navigation form also provides a shortcut for accessing reports for the Summaries listed. You can select a Summary assessment area in the Multi-Landscape Summary Navigation form table and click the **View Report** button. The Summary Report will appear in a new window (see section 3.2.3).

3.1.5 Creating a New Multi-Landscape Summary Assessment Area

To start a new Multi-Landscape Summary assessment area, click the **New Summary** button. The Multi-Landscape Summary form will be blank, and you can enter the three identification fields and add Landscapes to the table. You can also create a new summary assessment area by clicking the **Multi-Landscape Summary** menu (in the Multi-Landscape Summary window) and choosing the **New Multi-Landscape Summary** menu item.

3.1.6 Saving, Rolling Back, and Deleting Multi-Landscape Summary Assessment Areas

Saving Multi-Landscape Summary Units. Click the **Save** button at the bottom of the Multi-Landscape Summary form. If you are saving a new assessment area, the Multi-Landscape ID Code field will turn grey and your Multi-Landscape ID will be set, so you cannot edit it after saving.

Rolling Back Multi-Landscape Summary Units. To revert a Multi-Landscape Summary assessment area to its last-saved form, click the **Multi-Landscape Summary** menu and then select the **Rollback** menu item.

Deleting Multi-Landscape Summary Units. To delete a Multi-Landscape Summary assessment area, first view it using the **Summary List** button (section 3.2.4). From the Multi-Landscape Summary's **Multi-Landscape Summary** menu, click **Delete**. A message will appear asking, "Do you want to delete this multi-landscape summary?" Once you click **Yes**, another message will appear saying, "Multi-Landscape summary deleted." Click **OK**, and the Multi-Landscape Summary Form will show the first summary in the Summary List.

3.2 Global Summary

The Global Summary combines two or more Multi-Landscape Summaries. It functions like the Multi-Landscape Summary, except that it combines multi-landscape groupings where the Multi-Landscape summary combines single landscapes.

To open the Global Summary, click the **Landscape Summaries** menu in the FRCC Software Application window. Click the **Global Summary** menu item.
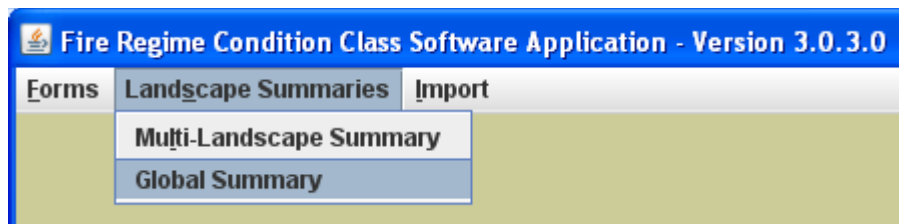
Figure 3-9. Opening the Global Summary Form from the Landscape Summaries menu.

The menu will open the Global Summary Form, as shown below in Figure 3-10.

Figure 3-10. The Global Summary Form, open to a default summary.

3.2.1 Global Summary Fields

Global ID Code – Required. This code must be unique to your Global Summary assessment area in order to differentiate it from other assessment areas. Once an ID code is entered and saved, the ID Code field will turn grey and the ID Code cannot be changed.

Title. This field specifies a name associated with the summary code; for example, a geographic location.

Description. This field gives you a chance to specify more about the assessment area; for example, noting that it's a fire management unit.

Comments. This field gives further space for commenting on the global summary assessment area.

3.2.2 Viewing, Adding, and Removing Multi-Landscape Summaries

Multi-Landscape Table. The Global Summary Form contains a table showing the Multi-Landscape Summary assessment areas included in the global summary. Each Multi-Landscape Summary is identified by its Title and ID Code. Recall from the Multi-Landscape Summary Form (section 3.2.1) that the Multi-Landscape ID Code must be unique in order to identify the summarization unit.

Adding Multi-Landscape Summaries. To add a Multi-Landscape Summary to the assessment area, click the **Add Multi-Landscape Summary** button. The Multi-Landscape Lookup Form will open, showing a list of Multi-Landscape Summaries saved in the FRCC Software Application. Click on the row containing the Multi-Landscape Summary you wish to select and then click the **Add Multi-Landscape** button.

Figure 3-11. The Multi-Landscape Select form, ready to add Jones Peak to the Global Summary assessment area.

Once you click **Add Multi-Landscape**, the Multi-Landscape Lookup Form will close, and the selected Multi-Landscape Summary will appear at the bottom of the table in the Global Summary Form.

> **Note:** *Only three Multi-Landscape Summaries can fit onto the final page of the Global Summary Report for printing. If you want to conduct global summaries with more than three Multi-Landscape Summaries, you can still view reports within the software, but will not be able to fit all the data into a printed report. In this case, you may need to develop your own custom spreadsheet or table to display your data in their entirety. As you select Multi-Landscape Summaries to include, also keep in mind how many different BpSs are included in your overall global summary. (If the same BpS is found in several Landscapes, it will be entered only once in the report table, with the combined data from all Landscapes where it is found.) The first summary report table in the global summary report can print 25 BpSs, and the second summary report table can print 23. If you exceed these limits, you can still view full reports in the software, but the tables will print only the BpSs they can fit onto a standard page. See the end of section 3.2.3 for more details on the summary table pages of the report.*

Viewing Multi-Landscape Summaries. If you want to see or change the details of a Multi-Landscape Summary assessment area, you can do so using the **View Multi-Landscape Summary** button. Select a Multi-Landscape Summary assessment area in the table and click **View Multi-Landscape Summary**. The Multi-Landscape Summary Form will open, containing the selected Multi-Landscape Summary assessment area. If you make changes to the Multi-Landscape Summary assessment area, be sure to save before returning to the Global Summary form.

> **Tip:** *Close Multi-Landscape Summary windows when you are finished to avoid a cluttered screen and possible slower functioning of the software.*

Removing Multi- Landscape Summaries. To remove a Multi-Landscape Summary assessment area from the Global Summary assessment area, select it in the table and click the **Remove Multi-Landscape** button.

3.2.3 Reports and Summary Report Tables

Generating a Global Summary Report. After adding all desired Multi-Landscape Summaries to the table, click the **Report** button. A new window will open with the Global Summary Report for your specified area. This report has the same basic structure as the Multi-Landscape Summary Report. The report begins with a Global Summary page that lists the identification information for the summary area and all of the Multi-Landscape assessment areas included.

> **Note:** *The software will warn you any time you try to generate a report with invalid or missing required data. See [Appendix B](#) for how to proceed if you receive a warning message from the software.*
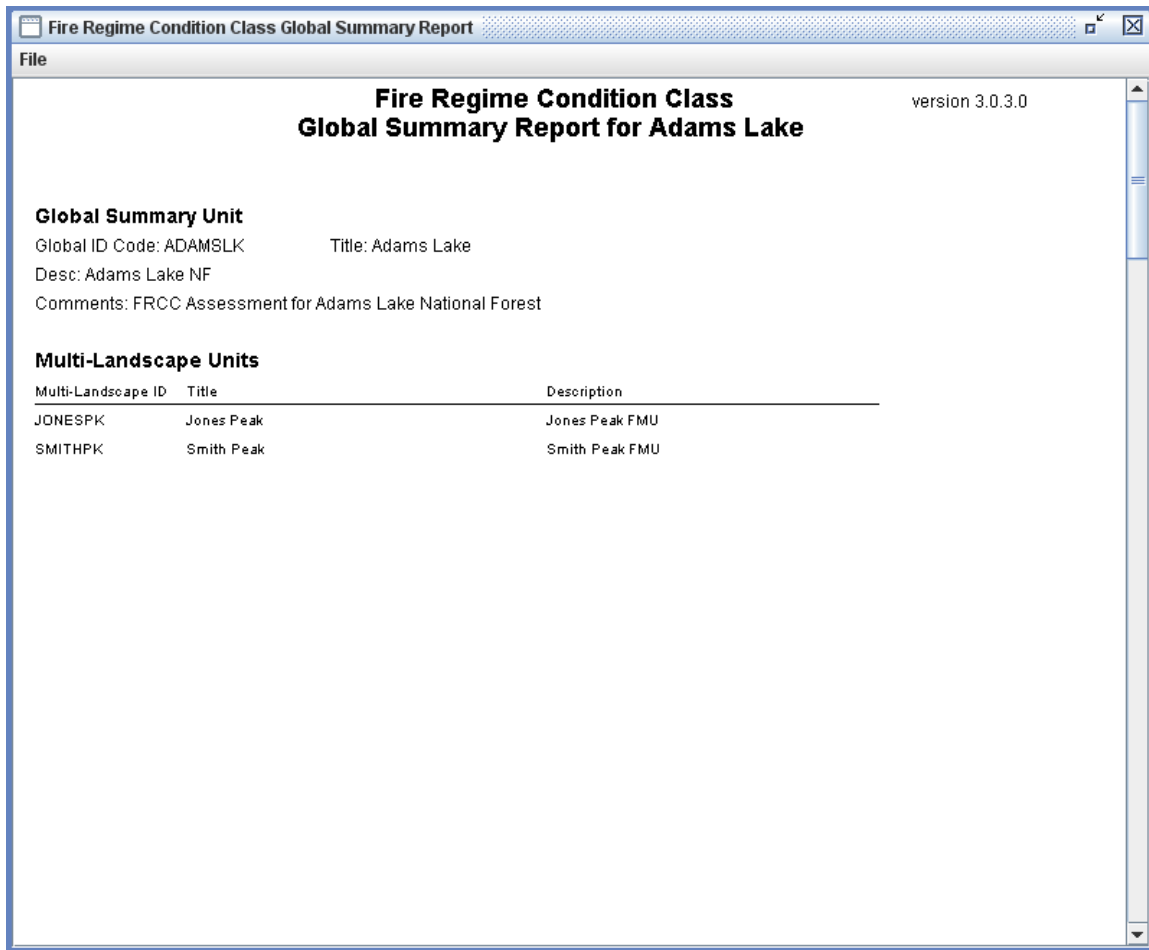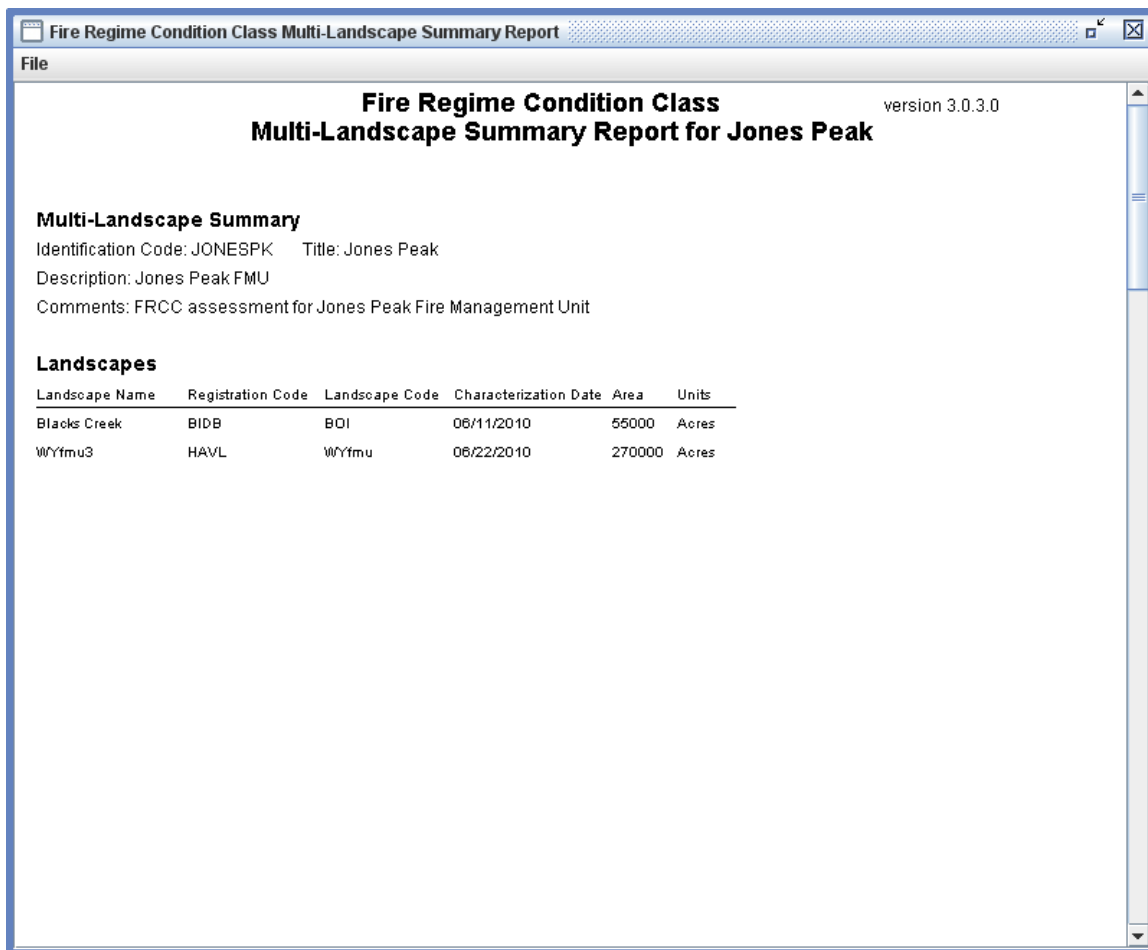
Figure 3-12. The first page of the Global Summary Report.

Next, the Multi-Landscape Data pages in the report list component Landscapes for each of the Multi-Landscape Summary assessment areas included in the Global Summary.

Figure 3-13. The Multi-Landscape Data page of the Global Summary Report.

The last two pages of the Global Summary Report contain two Summary Report tables. The first table lists all BpSs in the summary area, their Fire Regime Group, their Condition Class acreage, and their total acreage within the summary area.

> **Note**: *Many BpS names are so long that they cannot fit into the printable margins of the FRCC Software Application report tables. However, the BpS code is always included in the report tables. We recommend that you keep a list of BpS codes and corresponding names handy for looking up the full names of the BpSs included in your FRCC Software Application reports. Remember that the differences between three available model sets are described in Chapter 2 of the FRCC Guidebook, and that all model sets and associated documentation – from which you can create custom lists of names and codes – can be downloaded through www.frcc.gov in the Biophysical Settings Resources section.*

FRCC Global Summary Report for Adams Lake					
Biophysical Setting (BpS Code)	FRG (I-V)	Condition Class 1 (Acres)	Condition Class 2 (Acres)	Condition Class 3 (Acres)	Total Acres
Calif. Steppe Grassland with Shrub... (CAST2)	II	0	8250	2750	11000
Inter-Mountain Basins Big Sagebrus... (1811250)	IV	6600	7700	7700	22000
Inter-Mountain Basins Montane Sage... (1811260)	IV	4400	13200	4400	22000
Rocky Mountain Aspen Forest and Wo... (2210110)	IV	18900	61425	14175	94500
Rocky Mountain Lodgepole Pine Fore... (2210500)	IV	36450	28350	16200	81000
Rocky Mountain Subalpine Dry-Mesic... (2210550)	V	33075	37800	23625	94500
Northern Rocky Mountain Dry-Mesic ... (1910452)	III	25900	58275	45325	129500
Rocky Mountain Subalpine Dry-Mesic... (1910550)	III	66600	59200	22200	148000
Northern Rocky Mountain Dry-Mesic ... (1910451)	I	27750	32375	32375	92500
Northern Rocky Mountain Subalpine ... (1010460)	III	1350	7650	0	9000
Rocky Mountain Subalpine Mesic-Wet... (1010560)	IV	1800	7200	0	9000
Northern Rocky Mountain Ponderosa ... (1010530)	I	3000	2700	300	6000
Northern Rocky Mountain Dry-Mesic ... (1010451)	I	2700	3300	0	6000
Total Acres		228525	327425	169050	725000

Figure 3-14. The Global Summary Report table page of the Global Summary Report.

Like the first table, the second table lists BpSs and Fire Regime Group, but provides additional information on Condition Class acreage by Multi-Landscape Unit assessment areas.

> **Note:** *The table shown below in Figure 3-15 may be especially applicable in summarizing FRCC over large areas such as Fire Planning Units or other nested analyses. For example, the names of Fire Management Units can be inserted in the second row of this table, thereby providing FRCC summarization for multiple FMUs. This table may have application in Fire Management Plans or other large-scale summaries.*

Biophysical Setting	Code - Fire Regime	Jones Peak			Smith Peak						Total Acres
		CC1	CC2	CC3	CC1	CC2	CC3	CC1	CC2	CC3	
Calif. Steppe Grassland wit...	CAST2 - II	0	8250	2750	0	0	0				11000
Inter-Mountain Basins Big S...	1811250 - IV	6600	7700	7700	0	0	0				22000
Inter-Mountain Basins Monta...	1811260 - IV	4400	13200	4400	0	0	0				22000
Rocky Mountain Aspen Forest..	2210110 - IV	18900	61425	14175	0	0	0				94500
Rocky Mountain Lodgepole Pi...	2210500 - IV	36450	28350	16200	0	0	0				81000
Rocky Mountain Subalpine Dr...	2210550 - V	33075	37800	23625	66600	59200	22200				94500
Northern Rocky Mountain Dry...	1910452 - III	0	0	0	25900	58275	45325				129500
Rocky Mountain Subalpine Dr...	1910550 - III	33075	37800	23625	66600	59200	22200				148000
Northern Rocky Mountain Dry...	1910451 - I	0	0	0	27750	32375	32375				92500
Northern Rocky Mountain Sub...	1010460 - III	0	0	0	1350	7650	0				9000
Rocky Mountain Subalpine Me...	1010560 - IV	0	0	0	1800	7200	0				9000
Northern Rocky Mountain Pon...	1010530 - I	0	0	0	3000	2700	300				6000
Northern Rocky Mountain Dry...	1010451 - I	0	0	0	27750	32375	32375				6000
Total Acres		132500	194525	92475	220750	258975	154775				725000

FRCC Global Summary Report for Adams Lake

Figure 3-15. The final page of the Global Summary Report, showing the Global Summary Report table broken down to condition classes by Multi-Landscape Unit.

Both Global Summary Report tables can also be accessed independently by clicking the **Summary** button in the Global Summary window.

Saving Global Summary Reports. From the report, click the **File** menu and then the **Save Report As** option. A window will open, allowing you to browse to a location for saving the report. The *Files of Type* field allows you to select either JPG or PNG files as the format for your saved report. Once you name your file and click **Save**, your report will be stored in the location you specified. Each page of the report is saved as a separate document and numbered. For example, if you saved your Summary report as "BattleMtnFMU" and specified that you wanted your report in JPG format, you would find files BattleMtnFMU _p1.jpg, BattleMtnFMU _p2.jpg, etc. for all the pages in your report.

Printing Global Summary Reports. From the report's **File** menu, click **Print**.

> **Note:** *The Global Summary report can print up to 25 BpSs in the first summary report table and up to 23 BpSs in the second summary report table (which breaks down data by Multi-Landscape Summary and Condition Class). Remember that the report aggregates BpS data for different strata that share the same BpS model, so the number*

of rows in this table will correspond to the number of distinct BpSs rather than the total number of strata. If your Global Summary exceeds the printable number of BpSs, you can still view all of your data within the software, but will not be able to fit all of your data into a printed report. The final page of the report shows a breakdown of FRCC acreage by Multi-Landscape Summary Unit. This page can fit only three Multi-Landscape Summary Units. If you have more than three Multi-Landscape Summary Units in your Global Summary Unit, you can view all of the data within the software, but only the first three Multi-Landscape Summary Units can be printed in the summary report table. If necessary, you can develop your own custom spreadsheet or table to display your data in their entirety.

3.2.4 Creating a New Global Summary Assessment Area

To create a new Global Summary Assessment Area, click the **New Summary** button. The Global Summary Form will be blank, so you can enter information into the identification fields and add Multi-Landscape Summaries to the table. You can also create a new summary assessment area by clicking the **Global Summary** menu (in the Global Summary window) and choosing the **New Global Summary** menu item.

3.2.5 Saving and Rolling Back Global Summary Assessment Areas

Saving Global Summary Assessment Areas. Click the **Save** button at the bottom of the Global Summary form. If you are saving a new summary assessment area, the Global ID Code field will turn grey.

Rolling Back Global Summary Assessment Areas. To revert a Global Summary assessment area to its last-saved form, click the **Global Summary** menu and then select the **Rollback** menu item.

3.2.6 Navigating Between Global Summaries

To move from one global summary to another, use the **Next Summary** and **Previous Summary** buttons. The summary assessment areas will automatically arrange in alphabetical order according to Global ID Code.

3.2.7 Deleting Global Summary Assessment Areas

To delete a Global Summary assessment area, first navigate to it using the **Next Summary** and **Previous Summary** buttons (see section 3.3.6). From the Global Summary Form's **Global Summary** menu, click **Delete**. A message will appear asking, "Do you want to delete this global summary?" Once you click **Yes**, another message will say, "Global summary deleted." Click **OK** and the Global Summary Form will show the first summary assessment area from the alphabetical list of Global ID codes used for navigating.

Section 4: Importing Databases

The Import menu allows you to import data from version 1.3.2.4 of the FRCC Software Application into version 3.0.3.0.

To import a database, use the **Import** menu in the FRCC Desktop and then select the **Import Database** option.

Figure 4-1. The Import menu ready to open the Import Database window.

A window will open allowing you to choose the database to be imported, as shown below in Figure 4-2.
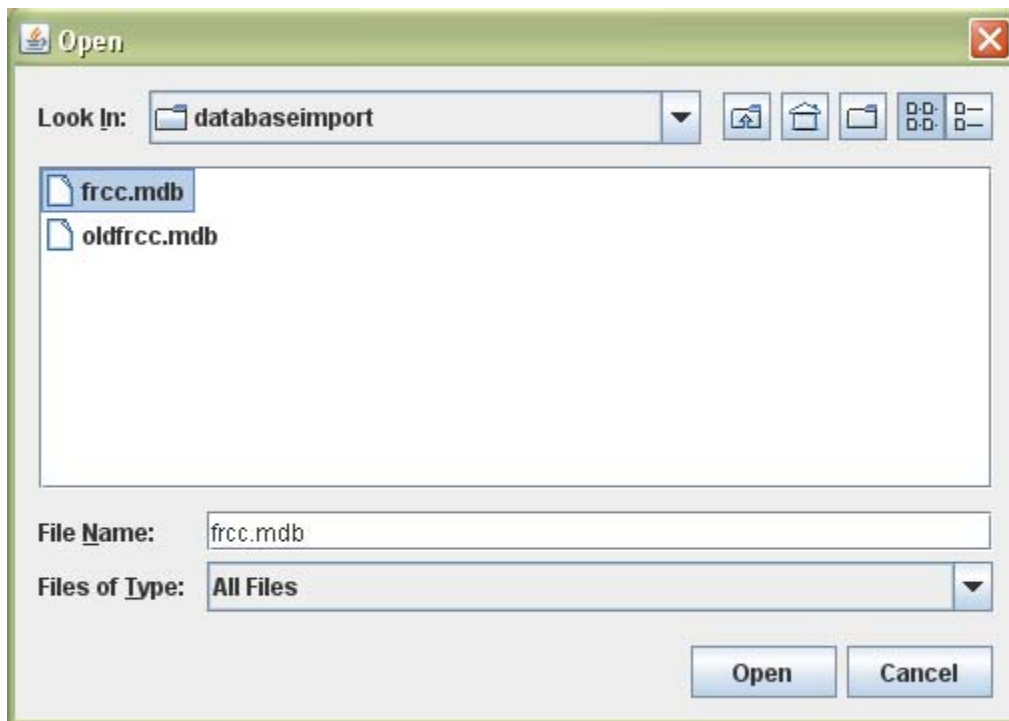

Figure 4-2. Database import window, navigated to the frcc.mdb file saved from version 1.3.2.4 of the software before uninstalling.

Click **Open**. The window closes and a message appears listing how many Landscapes were imported.

Figure 4-3. Message indicating how many Landscapes have been imported.

Click **OK** in the import message, which will then close. Use the Landscape List to view imported Landscapes.

Appendix A: Installation Permission Instructions

If you installed the FRCC Software Application from an administrator account, you need to customize security settings before using the software from a standard user account.

First, log in to Windows as an administrator. In Windows Explorer, navigate to the folder where the FRCC Software Application was installed.

Right-click on "FRCC Software Application v3.0.3.0." A menu will open; click on **Properties**.

A window will open showing properties for the FRCC Software Application. The Properties window will look different depending on your version of Windows. Windows 7 users can follow the instructions below; Windows XP users, please skip to "Instructions for Windows XP Users."

Instructions for Windows 7 Users:

Click the Security tab. You will see a screen like Figure A-1. Click the **Edit** button.
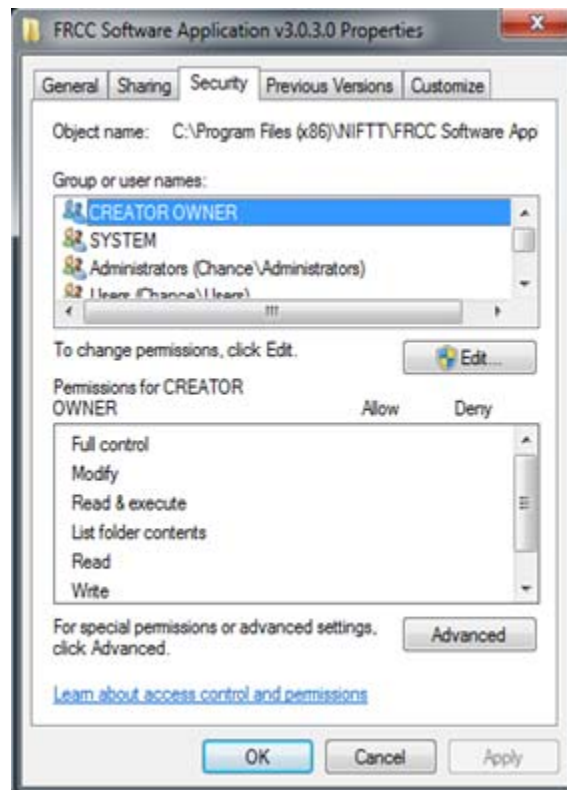

Figure A-1. FRCC Software Application Properties window in Windows 7; notice the **Edit** button to be clicked next.

After clicking the **Edit** button, a security permissions window will open. Your screen will look similar to Figure A-2.
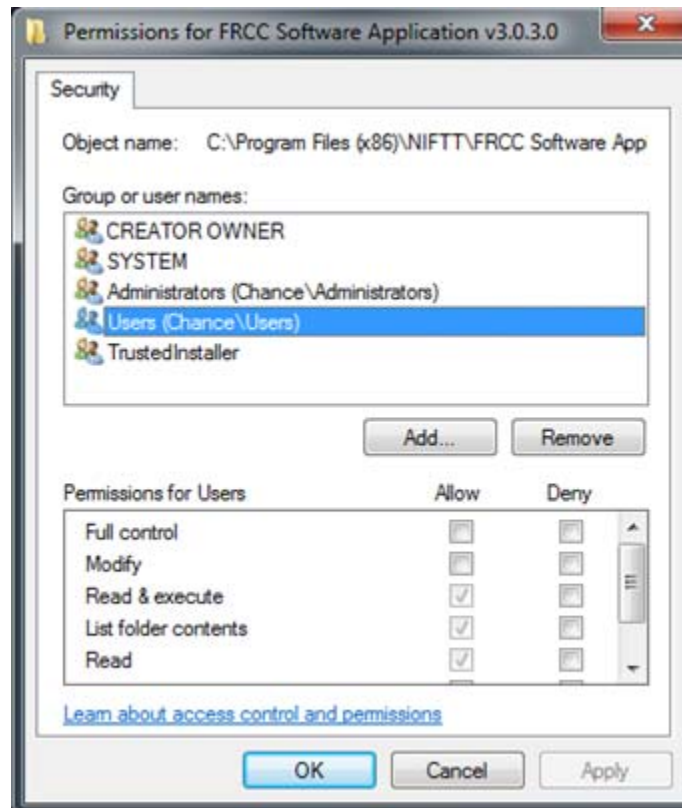

Figure A-2. Permissions window for FRCC Software Application. The title bar and tab may look different depending on your operating system, but the form should have group or user names listed at the top and permissions listed below. Here, the **Users** row is selected for modification.

Select the **Users** group, as in Figure A-2. Under "Permissions for Users," select the "Allow" check box for the "Modify" permission. Click **OK**. The window will close, and your security permissions have been set appropriately for standard users to operate the FRCC Software Application.

Instructions for Windows XP Users:

Once the Properties window opens in Windows XP, it will look like Figure A-3 below.
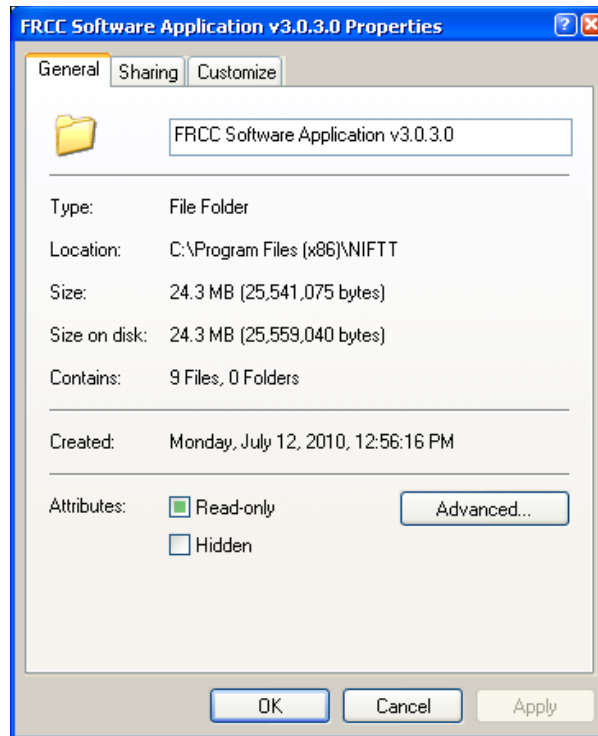
Figure A-3. FRCC Software Application Properties
window open in Windows XP.

De-select the "Read-only" option in the attributes section. Click **Apply**. A dialogue
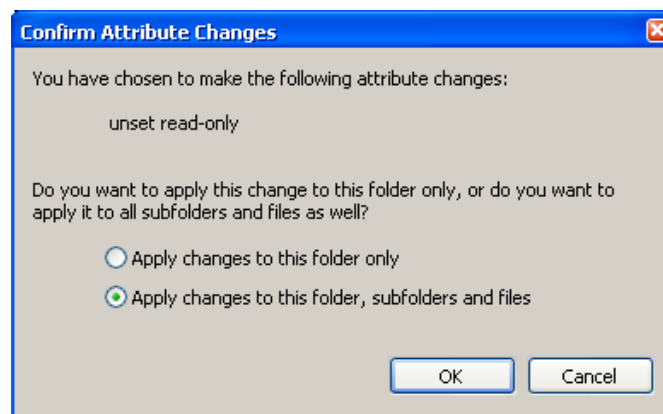box will open, as shown below in Figure A-4.

Figure A-4. Dialogue box confirming changes to FRCCSA
Properties.

Click **OK** in this dialogue box, and it will close; click **OK** in the Properties window, and
it will close also. Your security settings have now been reset to allow standard users to
operate the FRCC Software Application.

Appendix B:
# Troubleshooting Common Warning Messages

The FRCC Software Application will warn you of situations where the data you have entered will not generate a valid report. Listed below are some common messages you may see, along with recommendations for how to proceed.

1. Security permission
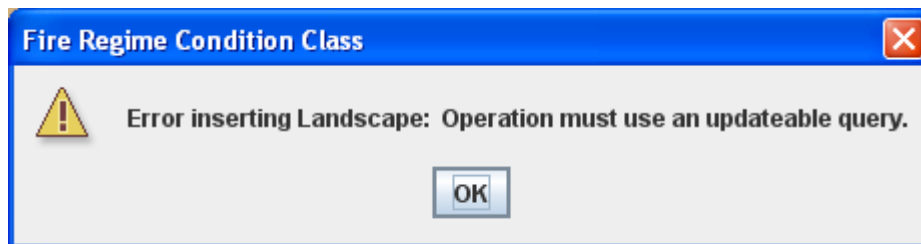
If you see this error, it means that your copy of the Software Application was installed under an administrator account without giving permission for standard users to access the software. See Appendix A for instructions on how to modify your security settings.

2. Trying to run **FRCCSA** without the **Java Runtime Environment**
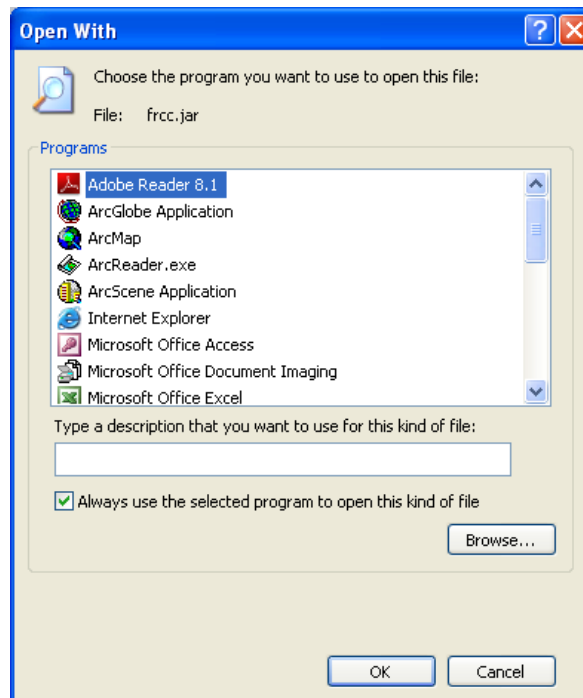
If you see this window when you try to open FRCCSA, then you have not installed the Java
Runtime Environment (JRE), which is required for the software to run. See Step 4 of the
installation instructions (section 1.2) to install the JRE.

3. Trying to save a Landscape without entering strata data
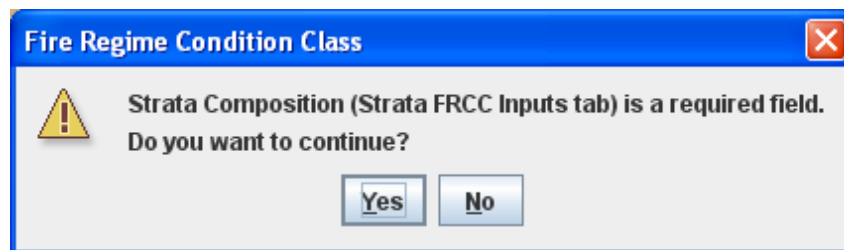
If you receive this message, you tried to save your Landscape before completing the Strata
Composition field on the Stratum FRCC Inputs tab. You must complete all fields on the
Stratum FRCC Inputs tab before the software can generate a report for the Landscape. Click
Yes to save the Landscape data you have entered so far, but remember that you cannot yet
generate a report. Click **No** to keep your data in the form without saving it. If you click **No**,
proceed to the Stratum FRCC Inputs tab to enter all required stratum fields (listed in blue) and
then save the Landscape.

4. Leaving a required field blank

The software will alert you at several different points if required fields are not completed. This
type of message may appear when saving a Landscape, generating a report or summary, or
navigating between strata. The message will alert you to the specific field (in this message,
Landscape Name) as well as its field number and the tab where it is located. Use the
screenshots at the beginning of each tab's section in this user's guide to locate field numbers.

If you received this message because you clicked **Summary** or **Report**, then you should click
No to return to the worksheet and complete the required field before generating your
summary or report. If you click **Yes**, your report will generate, but it will be missing key
identification data.

If you received this message because you clicked **Save**, you can click **Yes** to continue saving
the data you have entered so far. After saving, you can return to complete the missing data for
the required field. If you tried to save without completing a required field and then click **No** in

this message, your data will not be saved, but it will remain open in the Landscape Worksheet. You can enter the required field and then save. All required fields must be entered in order for the software to generate useful reports.

If you received this message by trying to move between strata within a Landscape, click **No** to stay on the current stratum and enter the required data. If you click **Yes**, the software will proceed to the next or previous stratum (depending on which button you clicked to generate the warning message); however, you will need to return to the stratum associated with the error message to enter required data before generating a report.

If fields critical to calculations in the report are left blank, the software will not generate a report until those fields are completed. In such cases, a message like the one below will appear.
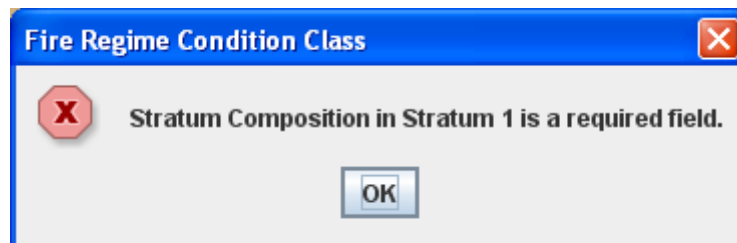

If this message appears, you must click **OK** and enter the required data before a report will generate. Since this warning message is regarding a stratum field, the message indicates in which stratum you need to fix the mistake. If you fail to enter data for Stratum Composition, Stratum Current Fire Frequency, or Stratum Current Fire Severity, a similar message will alert you to the missing data.

5. Incomplete stratum composition percent total
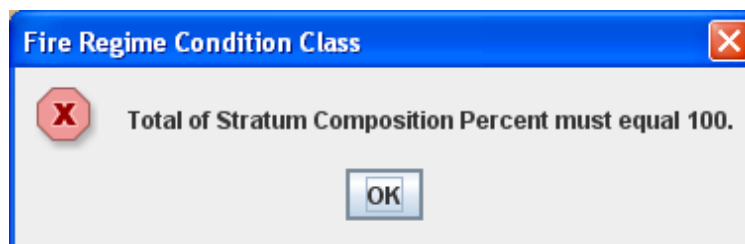
This message appears when the Total Composition field on the Stratum FRCC Inputs tab does not equal 100 and you attempt to generate a **Summary** or **Report**. Stratum Total Composition Percent is calculated as the sum of the Composition % fields for all strata entered in the Landscape. If this message appears, you must click **OK** and return to the Stratum FRCC Inputs tab to adjust your strata values so that their composition percentages total 100. The Total Composition field will appear as red text on yellow, showing the incomplete percentage until you fix it.

If your Stratum Total Composition Percent does not equal 100 and you click **Save**, you will get this message instead:
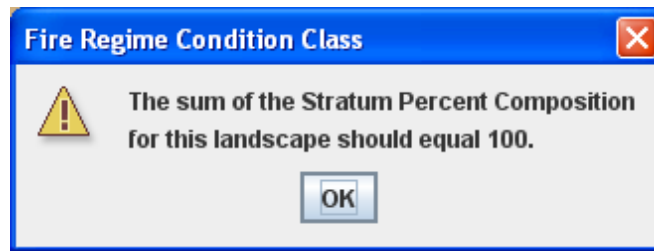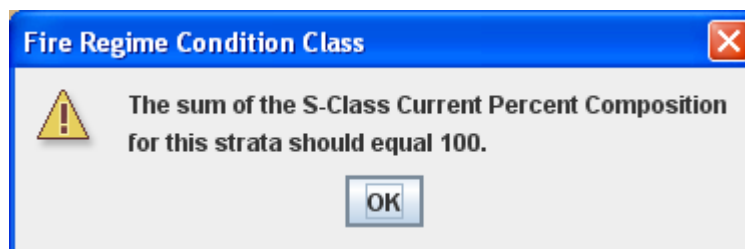
Once you click **OK**, your Landscape will still save, but you must return to the Stratum FRCC Inputs tab to correct your strata composition percentages so that their total is 100 before you can generate reports or summaries.

## 6. Incomplete stratum current percent total
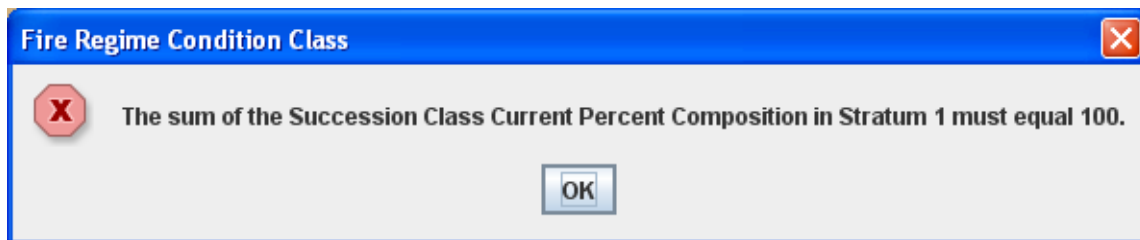
This message alerts you to the fact that the sum of current percentages in the Succession Class Data section of the Stratum FRCC Inputs tab does not equal 100; clicking either **Summary** or **Report** will trigger this message. You must click **OK** and return to the Stratum FRCC Inputs tab to fix the current percentages so they total 100. The Current Total field will appear as red text on yellow until the sum totals 100; the message tells you which stratum needs to be fixed (in this message, Stratum 1).

If your current percentage total does not equal 100 and you click **Save**, you will instead see this message:

The Landscape will still save once you click **OK**, but you must return to the Stratum FRCC Inputs tab to fix the stratum's Current Percent Composition total. The field will appear as red text on yellow until the total equals 100.

7. Failing to select a row in the navigation menus
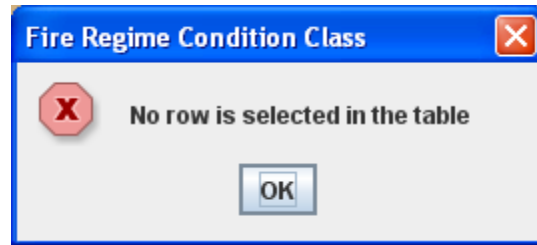
This error is related to the navigation forms associated with the **Landscape List** and **Summary List** buttons. When using these forms to navigate, you must select a row before you can use any of the buttons to view a report, summary, or Landscape.

This message can also appear in the Multi-Landscape Summary form and Global Summary form when attempting to Add, View, or Remove Landscapes (or Multi-Landscapes). A row must be highlighted in a table before you can perform any of these functions.

8. Generating a report for a multi-landscape summary without all required data
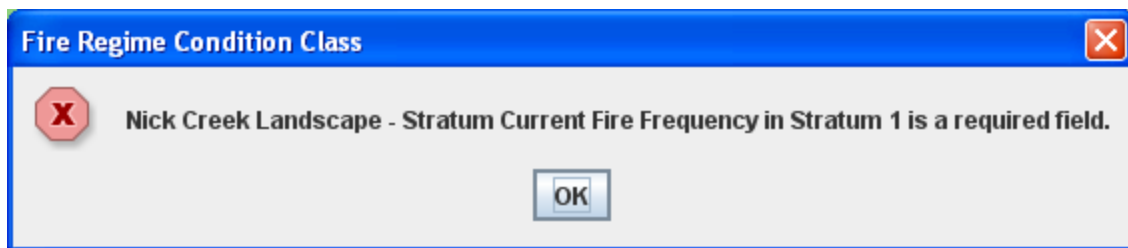
If you click the multi-landscape **Report** button and receive a message like this, it means that one of the Landscapes in the multi-landscape summary is missing data for a required field. The message indicates which field is missing (in this message, Stratum Current Fire Frequency on Stratum 1 in Nick Creek Landscape). Click **OK** in the message and then use the **View Landscape** button to open the Landscape indicated in the message and enter the required field. You can refer to the screen captures in sections 2.3 and 2.4 for help in locating fields.

9. Generating a report for a global summary without all required data
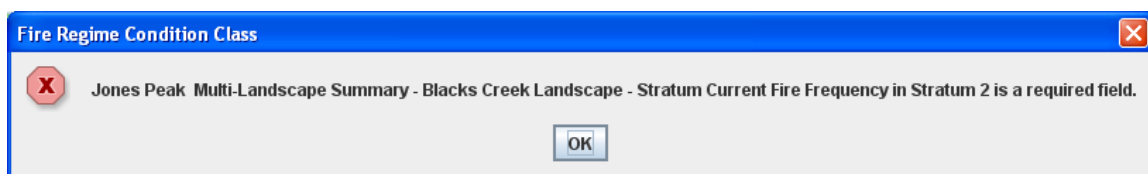
If you click the global summary **Report** button and receive a message like this, it means that one of the multi-landscape summaries included has a Landscape that is missing data for a required field. The message indicates which field is missing data (in this message, Stratum 2

Current Fire Frequency in Blacks Creek Landscape, in Jones Peak Multi-Landscape Summary).
Click **OK** in the message, then use the **View Multi-Landscape Summary** button to open

the multi-landscape summary indicated in the message. From the multi-landscape summary
form, use the **View Landscape** button to view the Landscape indicated in the message and
enter data into the required field. Be sure to save the Landscape before returning to generate
the global report.