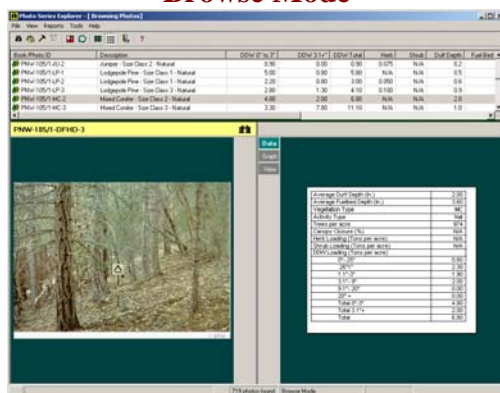


Fuels Management Analyst Suite FMAPlus®

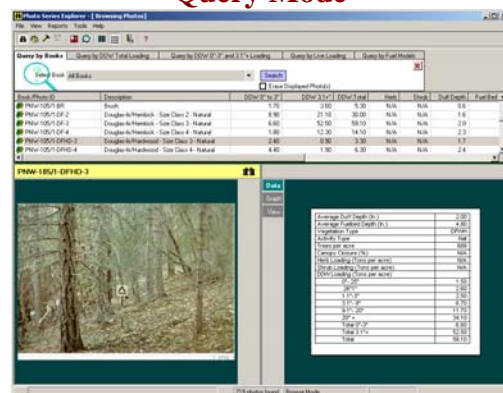
Users' Guide to Using the Photo Series Explorer® and Photo Manager Programs



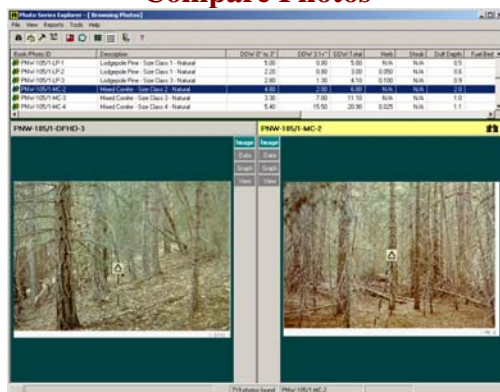
Browse Mode



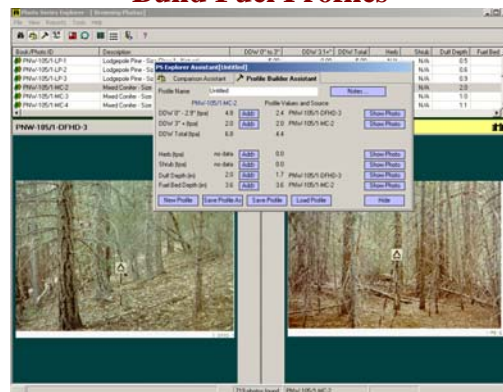
Query Mode



Compare Photos













Build Fuel Profiles



03/07/2016

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	Toggle Fuel Profile Builder Mode
	Toggle PSExplorer Assistant
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	Reset All Query Parameters To The Defaults
	Toggle Icon View
	Toggle List View
	Exit
	Help

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Welcome to PSExplorer®!

The PSExplorer program within Fuels Management Analyst facilitates:

- The viewing of published and locally generated Photo Series
- The searching of published and locally generated Photo Series for photos that meet defined criteria



Searching for photos based on defined criteria is done via database queries. Four types of queries are available:

- Query by Photo Series Book
- Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type and Dead Down Woody Total Fuel Loading
- Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type, 0-3" and 3.1"+Dead Down Fuel Loading
- Query for Live Fuel Loading Using Vegetation Type, Activity Type, Herbaceous and Shrub Fuel Loading
- Query by Fire Behavior (FBPS) or Danger Rating (NFDRS) Fuel Model

Photo Series

Managers frequently need to define fuel profile objectives to support land management planning project objectives. The definition of these fuel profiles is often done using photos from published and/or locally generated photo series. The DDWoodyPC® and PSExplorer programs within the FMAPlus® have access to all photos and data plates from the following photo series:

GTR-INT-46	Photo Series for Appraising Thinning Slash in Northern Idaho; Western Hemlock, Grand Fir and Western Redcedar Timber Types
GTR-INT-96	Photo Guide for Appraising Downed Woody Fuels in Montana Forests: Grand Fir/Larch/Douglas-fir, Western Hemlock, Western Hemlock/Western Redcedar and Western Redcedar Cover Types
GTR-INT-97	Photo Guide for Appraising Downed Woody Fuels in Montana Forests: Interior Ponderosa Pine, Ponderosa Pine/Larch/Douglas-fir, Larch/Douglas-fir and Interior Douglas-fir Cover Types
GTR-INT-98	Photo Guide for Appraising Downed Woody Fuels in Montana Forests: Lodgepole Pine and Englemann Spruce-Subalpine Fir Cover Types
GTR-NA-FR-22	Photo Series for Quantifying Forest Residues in the: Northern Hardwood and Oak-Hickory Types

GTR-NA-FR-25	Photo Series for Quantifying Forest Residues in: Loblolly Pine, Eastern White Pine, Pitch Pine and Virginia Pine
GTR-PNW-51	Photo Series for Quantifying Forest Residues in the: Coastal Douglas-fir-Hemlock and Coastal Douglas-fir Hardwood Types
GTR-PNW-52	Photo Series for Quantifying Forest Residues in the: Ponderosa Pine, Ponderosa Pine and Associated Species and Lodgepole Pine Types
GTR-PNW-95	Photo Series For Quantifying Forest Residues in Sierra Mixed Conifer and Sierra True Fir Types
GTR-PNW-105	Photo Series for Quantifying Natural Forest Residues in Common Vegetation Types of the Pacific Northwest
GTR-PSW-56	Photo Series for Quantifying Natural Forest Residues: Southern Cascades and Northern Sierra Nevada
PMS 830	Stereo Photo Series for Quantifying Natural Fuels. Volume I: Mixed-conifer with Mortality, Western Juniper, Sagebrush and Grassland Types in the Interior Northwest.
PMS 831	Stereo Photo Series for Quantifying Natural Fuels. Volume II: Black Spruce and White Spruce Types in Alaska.
PMS 836	Stereo Photo Series for Quantifying Natural Fuels. Volume IIa: Hardwoods with Spruce in Alaska.
PMS 832	Stereo Photo Series for Quantifying Natural Fuels. Volume III: Lodgepole Pine, Quaking Aspen and Gambel Oak Types in the Rocky Mountains.
PMS 833	Stereo Photo Series for Quantifying Natural Fuels. Volume IV: Pinyon-Juniper, Chaparral and Sagebrush Types in the Southwestern United States.
PMS 834	Stereo Photo Series for Quantifying Natural Fuels. Volume V: Midwest Red and White Pine, Northern Tallgrass Prairie and Mixed Oak Types in the Central and Lake States.
PMS 837	Stereo Photo Series for Quantifying Natural Fuels. Volume Va: Jack Pine in the Lake States.
PMS 835	Stereo Photo Series for Quantifying Natural Fuels. Volume VI: Longleaf Pine, Pocosin and Marshgrass Types in the Southeastern United States.

PMS 838

Stereo Photo Series for Quantifying Natural Fuels. Volume VIa: Sand Hill, Sand Pine Scrub and Hardwoods with White Pine Types in the Southeastern United States with Supplement Sites for Volume VI (2003).

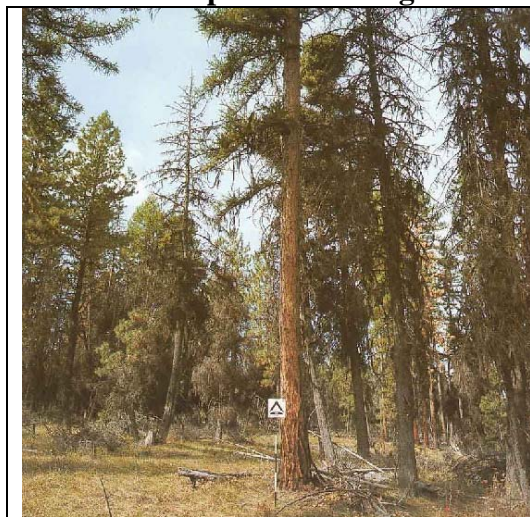
Black Hills

Photo Series for Quantifying Forest Residues in the Southwestern Region: Black Hills Photo Series A-89-6-82

Photo Series Images

For each photo series photo, there are two graphic images available for use. One image is of the photo and the other is of the data plate. The data plate contains the attributes of the photo such as fuel loadings and stand measurements.

Example Photo Image



Example Data Plate Image

SITE INFORMATION

Site location: N 45° 15' 01.31" W 118° 32' 12.63"

Slope: < 10% Aspect: North

Plant association: *Paradotsuga menziesii*/*Calamagrostis rubescens*

Soil type: Loamy-skeletal, mixed, frigid UHic Argixerolls

Woody material depth: 0.1 ft Woody material loading: 9.7 tons/ac

Litter depth: 0.5 in Litter loading: 1.5 tons/ac

Duff depth: 0.8 in Duff loading: 9.7 tons/ac

STAND INFORMATION

SAF cover type: Interior Ponderosa Pine

Species: *Pinus ponderosa* 57%, *Pseudotsuga menziesii* 29%, *Abies grandis* 14%

Standing dead trees: 43%

Crown closure: 50%

Seedling density: 1552/ac

Most common species: *Pinus ponderosa*

Sapling density: 0/ac

Most common species: no saplings

OVERSTORY

	Size Class (Diameter at Breast Height)			
	4 - 9"	9 - 16"	16 - 23"	≥ 24"
Most common species	<i>Pinus ponderosa</i>	<i>Pinus ponderosa</i>	--	<i>Pinus ponderosa</i>
Second most common species	--	<i>Pseudotsuga menziesii</i>	--	<i>Pseudotsuga menziesii</i>
Tree density (stems/ac)	34	54	0	0
Live	34	34	0	0
Dead	0	30	0	0
Avg DBH (in)	6.2	12.0	--	--
Live	6.2	11.4	--	--
Dead	--	11.1	--	--
Avg height (ft)	29.0	52.0	--	--
Live	29.0	55.0	--	--
Dead	--	30.0	--	--
Avg ladder fuel height (ft)	4.0	6.6	--	--
Live	4.0	6.0	--	--
Dead	--	7.0	--	--
Avg height to live crown (ft)	13.5	14.5	--	--
Live crown mass (tons/ac)	1.05	3.82	--	--

UNDERSTORY

	Shrub	Forb	Grass
Most common species	<i>Lanoxa involuta</i>	<i>Fragaria virginiana</i>	<i>Carex geyeri</i>
Other common species	<i>Aralia repens</i>	--	--
Loading (lb/ac)	399	71	640

WOODY MATERIAL

	Loading (tons/ac)		Density (pieces/ac)	
Diameter (in)	Sound	Rotten	Sound	Rotten
0-2.5	0.3	0.0	0.3	--
2.6-1.0	0.6	0.0	0.6	--
1.1-3.0	1.5	0.0	1.5	--
3.1-5.0	2.6	1.6	4.2	97
5.1-20.0	1.7	1.5	3.1	15
> 20.0	0.0	0.0	0.0	0
Total	6.7	3.1	9.7	112

MC 81 INTERIOR PNW MIXED-CONIFER 15

To facilitate queries, each photo has been assigned to an Activity Type, a Vegetation Type and a Fuel Model.

Activity Types

There are five activity types as follows:

- Natural (Nat)
- Clearcut (CC)
- Partial Cut (PC)
- Thinning (TH)
- Regeneration Cut (RC)

Vegetation Types

There are 42 vegetation types as follows:

Code	Veg. Type	Code	Veg. Type
BR	Brush	PP	Ponderosa Pine
BS	Black Spruce	PPAS	Ponderosa Pine/Associated Species
DFHD	Douglas-fir - Hardwood	PPLDF	Ponderosa pine, Larch, Douglas-fir
DFI	Douglas-fir - Interior	QA	Quaking Aspen
DFWH	Douglas-fir, Western Hemlock	RF	Red Fir
GF	Grand fir, Larch, Douglas-fir	RWP	Red and White Pine
GO	Gamble Oak	SA	Subalpine fir
GR	Grass	SB	Sagebrush
HD	Hardwood	SFES	Subalpine Fir, Englemann Spruce
JP	Jack Pine	SH	Shrub
JU	Juniper	SHP	Sandhill Pine
LDF	Larch, Douglas-fir	SPHD	Spruce Hardwoods
LL	Loblolly Pine	TF	True fir
LLP	Longleaf Pine	VP	Virginia Pine
LP	Lodgepole Pine	WC	Western Red Cedar, Western Hemlock
MC	Mixed Conifer	WF	White Fir
MF	Mixed Conifer, Fir	WH	Western Hemlock
MH	Mountain Hemlock	WJ	Western Juniper
MP	Mixed Conifer, Ponderosa Pine	WP	White Pine (Eastern)
NHOH	Northern Hardwood, Oak Hickory	WPHD	Hardwoods with White Pine
PiP	Pitch Pine	WS	White Spruce
PO	Pocosin		

The vegetation types were assigned based on how the photos were aggregated in the published photo series. This provides for the possible inclusion of a tree species in more than one vegetation type. For example, photos with the tree species Ponderosa pine might occur in the following vegetation types: MC, MP, PP, PPAS and PPLDF.

The Activity Type and the Vegetation Type are used in the following queries:

- Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type and Dead Down Woody Total Fuel Loading
- Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type, 0-3" and 3.1"+Dead Down Fuel Loading
- Query for Live Fuel Loading Using Vegetation Type, Activity Type, Herbaceous and Shrub Fuel Loading

Fuel Models

A surface fuel model has been assigned to each photo using on the Fire Behavior Prediction System (FBPS) and National Fire Danger Rating System Fuel Models. The 13 1982 FBPS and the 20 NFDRS fuel models are listed below.

Fuel Group	1982 FBPS Fuel Model Number and Description
Grass	1 - Short Grass (1 foot)
	2 - Timber with grass and understory
	3 - Tall Grass (2.5 feet)
Brush	4 - Chaparral
	5 - Brush
	6 - Dormant Brush
	7 - Southern Rough
Timber Litter	8 - Closed Timber Litter
	9 - Hardwood / Pine long needle litter
	10 - Timber
Slash	11 - Light Slash
	12 - Medium Slash
	13 - Heavy Slash

Fuel Group	NFDRS Fuel Model Number and Description
Grass	A – Western Annual Grasses
	C – Open Pine with Grass
	L – Western Perennial Grasses
	N – Sawgrass
	S – Tundra
	T – Sage with Grass
Brush	B – Mature Brush (6 feet)
	D – Southern Rough
	F – Intermediate Brush
	O – High Pocosin
	Q – Alaska Black Spruce
Timber Litter	E – Hardwood Litter (Fall)
	G – Heavy Short Needle Timber Litter
	H – Normal Short Needle Timber Litter
	P – Southern Lone Needle Pine Litter
	R – Hardwood Litter – Spring/Summer
	U – Western Long Needle Litter
Slash	I – Heavy Slash
	J – Medium Slash
	K – Light Slash

A team of Fire Behavior Analysts reviewed each photo and assigned a Fire Behavior and Danger Rating fuel model to each photo. Each Analyst considered “what fuel strata would be the primary carrier of the fire.” This can vary with changes in weather and topographic conditions. Since there are only 13 1982 FBPS and 20 NFDRS fuel models to select from, a difficult decision in fuel model assignment occasionally occurred. Remain aware that differences in fuel model assignment decisions based on the interpretation of conditions depicted in a photo are expected. Using a highly experienced team of Fire Behavior Analysts to make the fuel model assignments, the developers of FMAPlus have attempted to minimize interpretation differences.

Photo Series Books

The phrase “photo series book” is used within FMAPlus 3 to define an aggregation of photos from one of the published photo series. The entire published photo series can be defined as a photo series book or a subset of photos from a published photo series can be aggregated into a photo series book. In the second scenario, a published photo series would be represented in FMAPlus 3 as more than one photo series books. The table on the next page lists the photo series books in release 3.0.X of FMAPlus 3. As additional photo series are published, they may be added to future releases of FMAPlus. The table on the next page summarizes the Photo Series Books in FMAPlus 3.0.X.

Photo Series Book	Published Photo Series	Activity Types	Vegetation Types
AK-Black Spruce	PMS 831	Nat	BS
AK-Hardwoods/Spruce	PMS 836	Nat	SPHD
AK-White Spruce	PMS 831	Nat	WS
Black Hills	SW Region	Nat, PC TH	PP, PPAS
Demo	Assorted	Nat	PP, PPAS
INT-46	GTR-INT-46	TH	GF, WC, WH
INT-96	GTR-INT-96	Nat	GF, WC
INT-97	GTR-INT-97	CC, Nat, PC TH	DFI, LDF, PP, PPLDF
INT-98	GTR-INT-98	Nat	MC, SFES
Jack Pine	PMS 837	Nat	JP
Mixed Oak Types-Spring	PMS-834	Nat	NHOH
Mixed Oak Types-Summer	PMS-834	Nat	NHOH
NAFR-22	NA-FR-22	CC, Nat	NHOH
NAFR-25	NA-FR-25	CC, Nat, PC TH	LL, NHOH, VP
PNW-105	GTR-PNW-105	Nat	BR, DFHD, DFWH, GR, JU,LP, MC, PP, PPAS, SA
PNW-51	GTR-PNW-51	CC, PC, TH	DFHD, DFWH
PNW-52	GTR-PNW-52	CC, PC, TH	LP, PP
PNW-95	GTR-PNW-95	RC	MC, TF
PNW-Interior-Grass	PMS 830	Nat	GR
PNW-Interior-MC with Mortality	PMS 830	Nat	MC
PNW-Interior-Sagebrush	PMS 830	Nat	SB
PNW-Interior-Western-Juniper	PMS 830	Nat	JU
PSW-56	GTR-PSE-56	Nat	LP, MH, MP, PP, RF, WF
Red & White Pine-Spring	PMS-834	Nat	RWP
Red& White Pine-Summer	PMS-834	Nat	RWP
RM-Gamble Oak	PMS 832	Nat	GO
RM-Lodgepole	PMS 832	Nat	LP
RM-Quaking Aspen	PMS 832	Nat	QA
SE-Hardwoods/White Pine	PMS 838	Nat	WPHD
SE-Longleaf Pine	PMS 835	Nat	LLP
SE-Marshgrass	PMS 835	Nat	GR
SE-Pocosin-Shrub	PMS 835	Nat	PO
SE-Pocosin-Woodland	PMS 835	Nat	PO
SE-Sandhill Pine	PMS 838	Nat	SHP
SW-Chaparral	PMS 833	Nat	SH
SW-Pinyon-Juniper	PMS 833	Nat	JU
SW-Sagebrush	PMS 833	Nat	SB
Tallgrass Prairie-Spring	PMS-834	Nat	GR
Tallgrass Prairie-Summer	PMS-834	Nat	GR

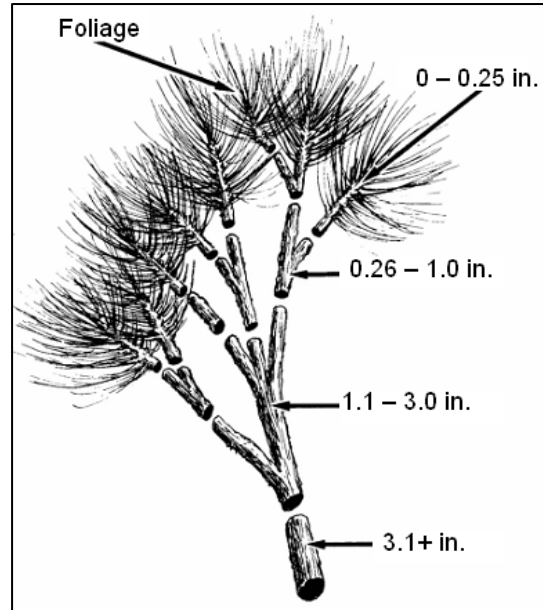
Fuel Types and Fuel Load Size Classes

Fuels are typed as dead or live. Furthermore, live fuels are divided into a herbaceous and shrub categories.

The fuel weight of dead downed woody material is frequently stratified into the following categories:

- Foliage
- 0.0" to 0.25"
- 0.26" to 1.0"
- 1.1" to 3.0"
- 3.1"+

The 3.1"+ dead material is usually subdivided into 3 to 4 subcategories that do vary by photo series.



The PSExplorer Screen Format and Definitions

The screen viewed upon initial startup of PSExplorer follows. The screen is composed of the following sections:

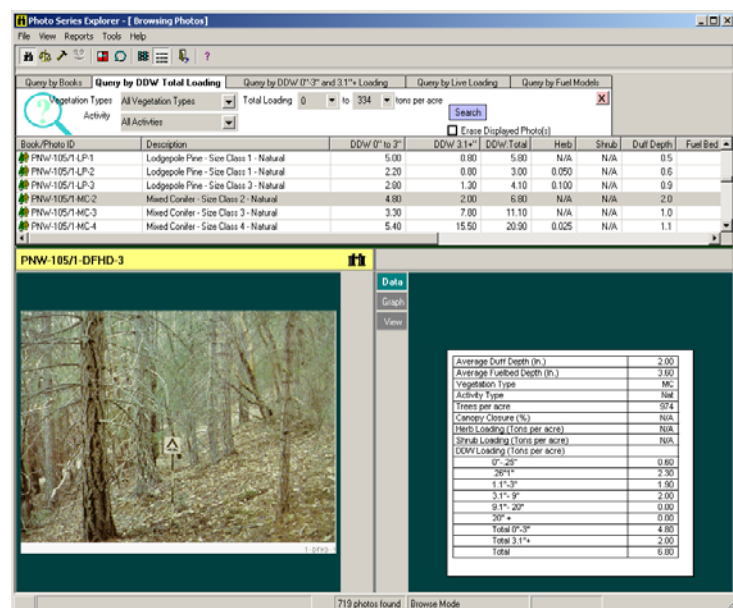
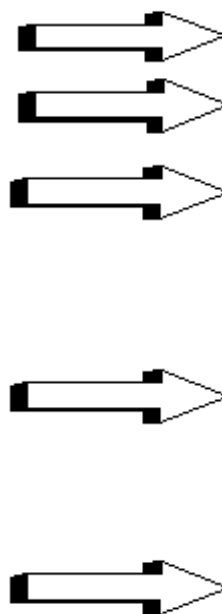
The Main Menu and Toolbar Icons

The Query Tabs

The Selected Photo Series Browse Window

The Photo/Data Display Window

The Program Status Bar



The main menus and icons on the toolbar are used to implement program processes. The query tabs support the display of photos that meet specific query criteria.

The browse window displays the current universe of selected photos in either the List View or in Icon View. In the List view, each attribute of a photo is shown in columnar format.

Book/Photo ID	Description	DDW 0" to 3"	DDW 3.1"+	DDW:Total	Herb	Shrub	Duff Depth	Fuel Bed Depth	Canopy Closure	Trees Per Acre	Veg Type	Activity Type	FB-Fuel Model	DR-Fuel Model
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	2.40	7.30	9.70	0.356	0.200	1.3	0.1	50	118	MC	Nat	2	C
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	4.60	12.50	17.10	0.019	0.000	1.6	0.1	85	571	MC	Nat	11	K
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	4.60	14.00	18.60	0.133	0.089	1.9	0.1	60	419	MC	Nat	11	K
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	2.70	23.10	25.80	0.370	0.440	1.8	0.1	57	151	MC	Nat	10	G
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	6.80	24.10	30.90	0.420	0.160	2.2	0.3	50	252	MC	Nat	10	G
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	6.10	24.90	31.00	0.161	0.014	1.8	0.1	78	303	MC	Nat	10	G
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	8.60	28.30	36.90	0.245	0.239	3.2	0.3	57	488	MC	Nat	10	G
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	7.70	32.20	39.90	0.021	0.335	1.9	0.1	42	319	MC	Nat	12	J
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	4.70	40.40	45.10	0.659	0.178	1.6	0.1	56	336	MC	Nat	10	G
PNW-Interior-MCwithMo...	Int. PNW Mixed Conifer wi...	5.30	41.50	46.80	0.089	0.006	2.2	0.1	62	286	MC	Nat	10	G

The 13 columns are:

- Book/Photo ID
- Photo Description
- 0.0" – 3.0" Dead Down Woody (DDW) Fuel Loading (Tons/Acre)
- 3.1"+ Dead Down Woody (DDW) Fuel Loading (Tons/Acre)
- Total Dead Down Woody (DDW) Fuel Loading (Tons/Acre)
- Herbaceous Fuel Loading (Tons/Acre)
- Shrub Fuel Loading (Tons/Acre)
- Duff Depth (inches)
- Fuel Bed Depth (inches)
- Vegetation Type
- Activity Type
- 1982 FBPS (FB) Fuel Model
- NFDRS (DR) Fuel Model

Note that not all columns may be shown requiring a need to scroll to the right to see hidden columns.



Hot Tip


If the user clicks on the column label, the photos are sorted either numerically or alphabetically based on the information in the columns. The sort will be either in increasing order or decreasing order. By clicking a second time on the column label, the sort will change order.

If the user wishes have a better view of the photos identifiers in the universe of selected photos, then the user should select the Icon View.

PNW-Interior-MCwithMortality/MC01	PNW-Interior-MCwithMortality/MC02	PNW-Interior-MCwithMortality/MC03	PNW-Interior-MCwithMortality/MC04	PNW-Interior-MCwithMortality/MC05
PNW-Interior-MCwithMortality/MC07	PNW-Interior-MCwithMortality/MC08	PNW-Interior-MCwithMortality/MC09	PNW-Interior-MCwithMortality/MC10	PNW-Interior-MCwithMortality/MC11
PNW-Interior-MCwithMortality/MC13	PNW-Interior-MCwithMortality/MC14	PNW-Interior-MCwithMortality/MC15	PNW-Interior-MCwithMortality/MC16	PNW-Interior-MCwithMortality/MC17

The photo/data display window supports the display of a specific photo and the specific data that is contained in the 13 attributes recorded in the photos database in FMAPlus.

SE-LongleafPine/LLP01



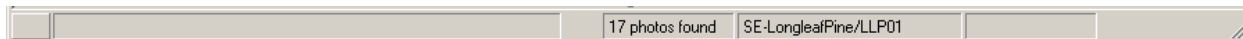
Data

Graph

View

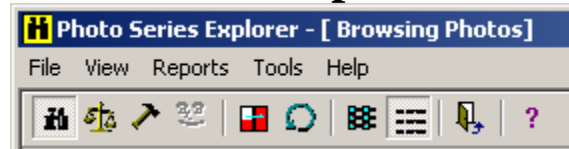
Average Duff Depth (In.)	N/A
Average Fuelbed Depth (In.)	N/A
Vegetation Type	LLP
Activity Type	Nat
Trees per acre	108
Canopy Closure (%)	28
Herb Loading (Tons per acre)	0.64
Shrub Loading (Tons per acre)	2.6
DDW Loading (Tons per acre)	
0"- .25"	0.22
.26"-1"	0.40
1.1"-3"	0.51
3.1"+	0.00
Total 0"-3"	1.10
Total 3"+	0.00
Total	1.10

The program status bar shows the number of photos currently active for viewing as well an identifier of the currently displayed photo.



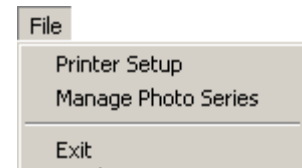
PSExplorer Main Menu and Toolbar Icon Descriptions

The PSE main menu and toolbar are shown in the figure at the right. Below is a description of each main menu item and the tool bar icons.



The File Menu

This main menu item allows the user to perform a Printer Setup, Manage Photo Series and Exit the program.

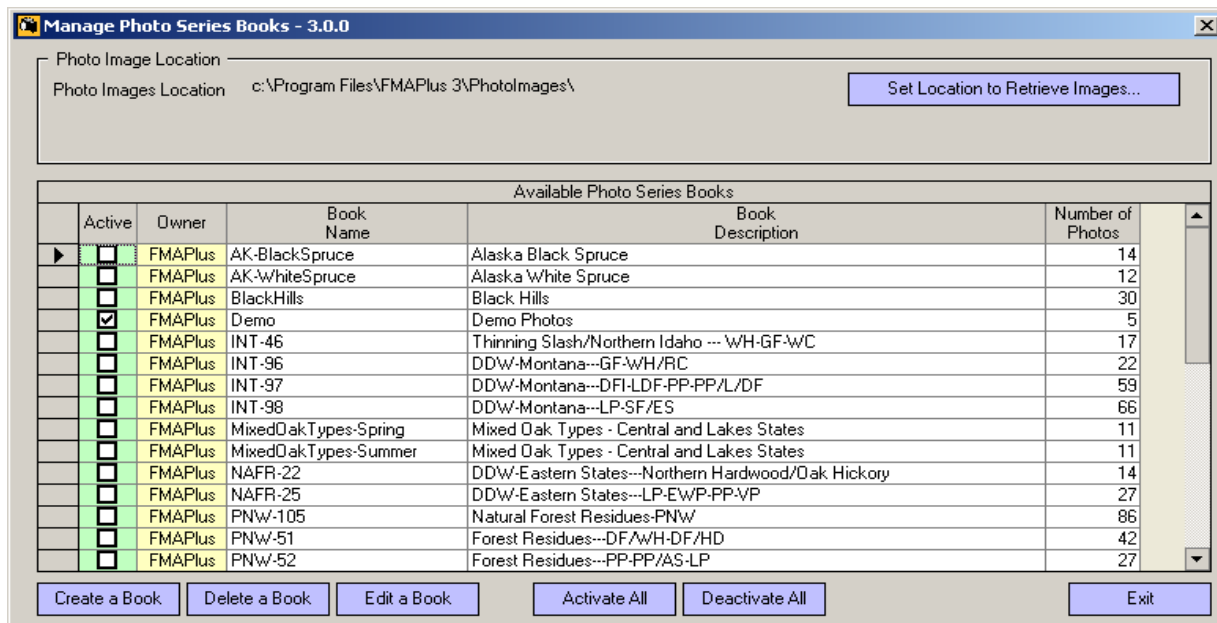


Printer Setup

Selecting the Printer Setup option will display the Print Setup dialog box relative to the default printer defined for your computer.

Manage Photo Series

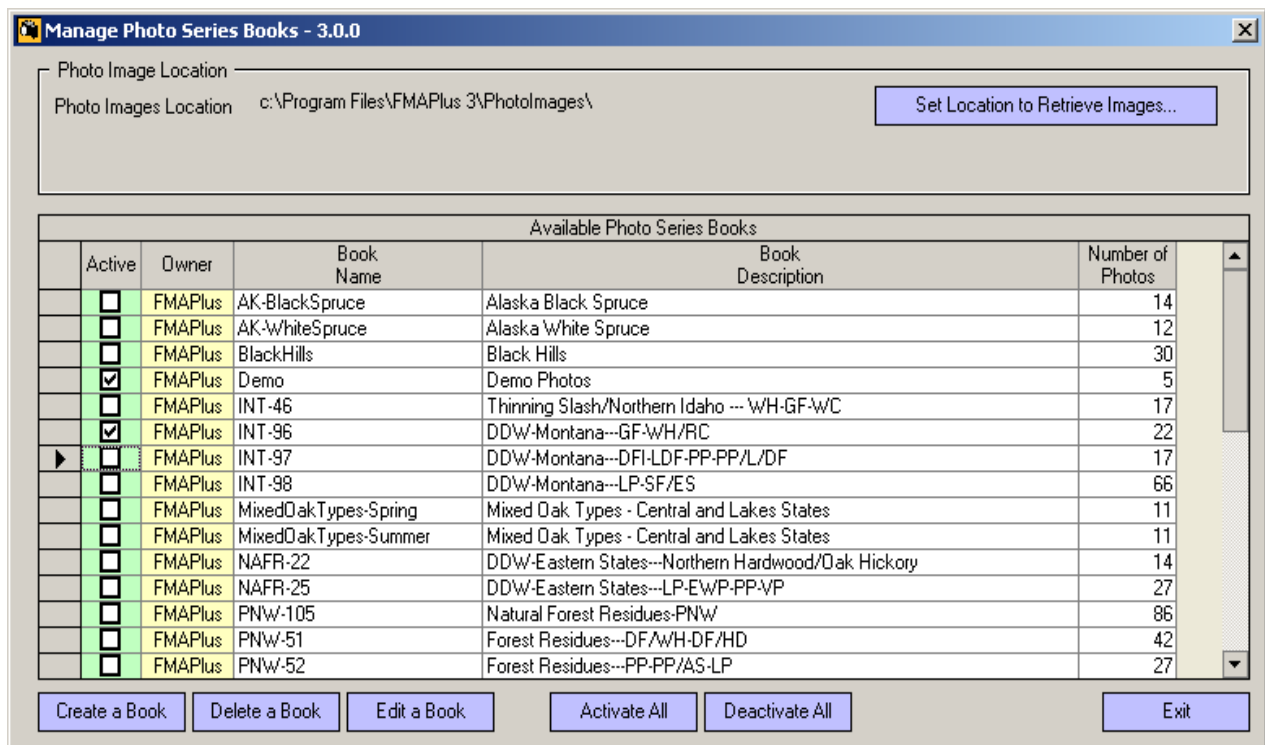
For currently supported photo series, this menu item is used to Activate a Photo Series Book or to Deactivate a Photo Series Book. These actions are supported using the Photo Manager program. The Photo Manager program can also be used to make non-supported and local photo series available for use in the DDWoodyPC and PSExplorer programs (see Using Local Photo Series). The Photo Manager program can be started externally from the PSExplorer program by selecting the **Start=>Programs=>FMAPlus 3** menu. If the **File=>Manage Photo Series** menu is selected within the PSExplorer program, the screen below will appear.



Activating a Photo Series Book

Before photos can be viewed or data used in PSExplorer, the user needs to designate which photo series will be identified for use. This process is called Activating Photo Series Books. Designating a photo series book as active makes that photo series book available to the user using the PSExplorer program. Initially on program installation, only the Demo photo series book is designated as active.

To activate a photo series, click in the box in the Active column to the left of the photo series. When the box is first clicked, a check will appear and a pencil symbol will appear to the left of the box. Press the down arrow key on the keyboard. Notice the pencil symbol will disappear and there will be a right arrow just below where the pencil symbol was. This action records the activation of the photo series INT-96 to the photo3.mdb. The screen below shows photo series INT-96 and Demo active.



The user can activate all of the photo series at one time by clicking on the **Activate All** button.

Deactivate a Photo Series Book

If the user wishes to deactivate a photo series, click in the box in the Active column to the left of the photo series. When the box is first clicked, the check will disappear and a pencil symbol will appear to the left of the box. Press the down arrow key on the keyboard. Notice the pencil symbol will disappear and there will be a right arrow just below where the pencil symbol was. This action records the deactivation of the selected photo series in the photo3.mdb.

The user can deactivate all of the photo series at one time by clicking on the **Deactivate All** button.

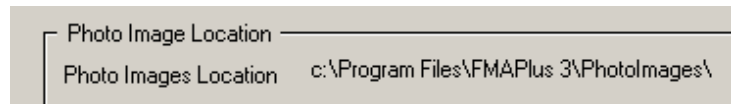
Setting the Photo Images Directory

All of the photo images distributed with FMAPlus are installed to the PhotoImages folder in the folder where FMAPlus 3 was installed. The path to the PhotoImages folder is set during the program installation.

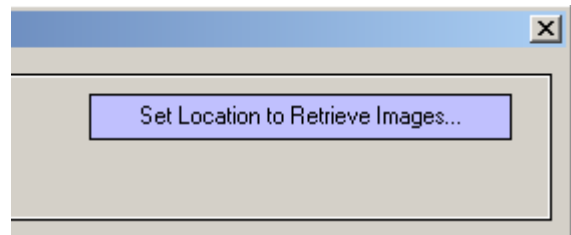
In this step, the user will verify that the path to the PhotoImages folder is correctly set. If it is not, the process to correctly set the path will be described. To check the path currently set to the PhotoImages folder, start the Photo Manager program by clicking on:

Start =>Programs=>FMAPlus 3=>Photo Manager

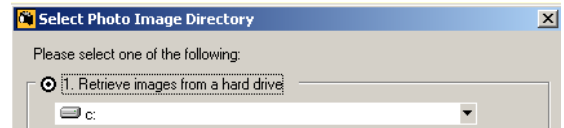
In the upper left part of the Photo Manager program screen, the Photo Images Location is displayed (see right). The default path is c:\Program Files\FMAPlus 3\PhotoImages\.



If the path is not correctly set to the folder where FMAPlus 3 is installed, click on the **Set Location to Retrieve Images** button located in the upper right corner of the screen.



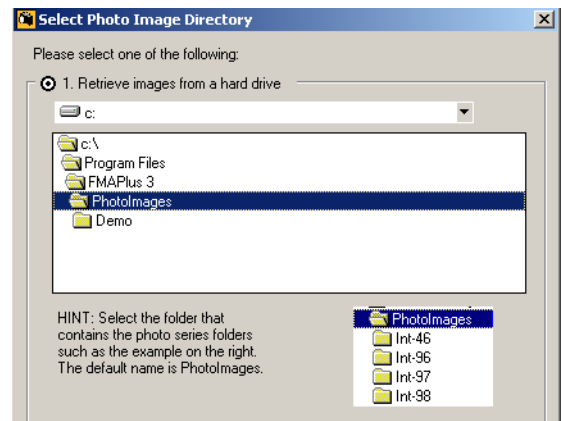
A dialog will appear with the top part appearing as in the figure to the right.. Click on the radio button at the top titled **1. Retrieve images from a hard drive**. Select the hard drive letter from the pulldown just below this title.




Navigate to the file location where the PhotoImages folder resides. The default installation location is:

C:\Program Files\FMAPlus

In this folder, a PhotoImages subfolder has been created upon program installation. Select this folder by double clicking on it or the PhotoImages folder that you have created at a different location. If the default folder location is selected, the dialog will appear as shown in the figure at the right. Click on the **OK** button and the dialog will close. Check the top of the dialog to verify the path to the PhotoImages is defined correctly. Exit the Photo Manager program by clicking on the **Exit** button.

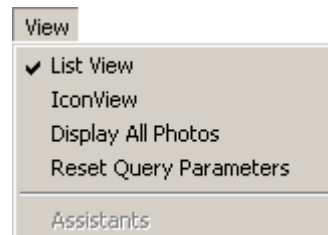


Exit

The menu item will support the quitting of the program. The toolbar icon  performs the same action the **File=> Exit** menu.





The View Menu


This main menu item allows the user to change the view in the The Selected Photo Series Browse Window between a List View and an Icon View.



List View

The List View appears as follows:


Book/Photo ID	Description	DDw' 0" to 3"	DDw' 3.1+"	DDw:Total	Herb	Shrub	Duff Depth
 INT-96/Stand 16	Grand fir,Larch,Douglas-fir - Natural	4.70	11.60	16.30	N/A	N/A	2.6
 INT-96/Stand 16A	Western redcedar, Western hemlock, Natural	5.30	33.60	38.90	N/A	N/A	5.3
 INT-96/Stand 17A	Western redcedar, Western hemlock, Natural	3.60	7.90	11.50	N/A	N/A	3.1
 INT-96/Stand 18A	Western redcedar, Western hemlock, Natural	4.50	13.20	17.70	N/A	N/A	1.5

The user can also select the List View by clicking on the  icon from the Toolbar.

Icon View

The Icon View appears as follows:



The user can also select the Icon View by clicking on the  icon from the Toolbar.

Display All Photos

Selecting this menu item will reset the query database to contain all of the photo series that are active.


The user can also implement the Display All Photos menu function by clicking on the  icon from the Toolbar.

At the bottom of the screen is the Windows Status Bar. It displays the number of photos currently within the universe of active photos.



Reset Query Parameters

Selecting this menu item will reset the query parameters to the default settings.

The user can also implement the Reset Query Parameters menu function by clicking on the  icon from the Toolbar.

The Tools Menu


PSE Explorer has two Screen Modes, Browse and Query as well as two Tools that can be used to Compare photos or Build a Fuels Profile. The user can select the Screen and Tool Modes from the Tools menu item on the Main Menu or by clicking on the icon on the Toolbar as noted.


Tools

- ✓ Query
- Compare Photo Series
- Fuel Profile Builder

Query Mode

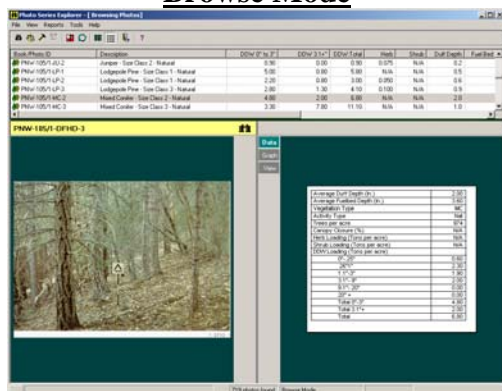
Selecting this menu item will cause the Query Tab to appear.

Query by Books	Query by DDW Total Loading	Query by DDW 0'-3" and 3.1'+ Loading	Query by Live Loading	Query by Fuel Models
 Select Book	All Books		Search	X
<input type="checkbox"/> Erase Displayed Photo(s)				

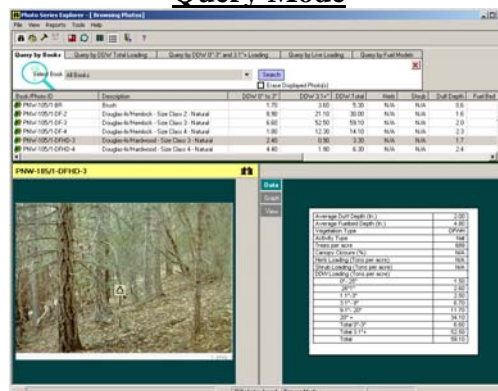
The user can also implement the **Tools=>Query** menu function by clicking on the  icon from the Toolbar.

By implementing this menu function, the user can switch between the Browse Photo screen mode and the Query Photos screen mode.

Browse Mode



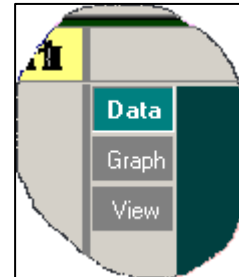
Query Mode



Hot Tip

If the user places the cursor over the line between the Selected Photo Series Browse Window and the Photo/Data Display Window, the cursor will change to two lines with two arrows above and below the lines. If the user holds the left mouse button down, the user can size the Photo/Data Display Window to better fit the photos and data being displayed.

Three buttons control the display of the photos and data. These are the Data, Graph and View buttons.



The Data Button

If the **Data** button is clicked, the data summary for that photo is displayed in the right pane of the Photo/Data Display Window. The following screen shows the Data button selected for both sides of the Photo/Data Display Window.

PNW-105/1-LP-3
🏠

1-LP-3

Data

Graph

View

Average Duff Depth (in.)	0.90
Average Fuelbed Depth (in.)	1.20
Vegetation Type	LP
Activity Type	Net
Trees per acre	50
Canopy Closure (%)	N/A
Herb Loading (Tons per acre)	0.1
Shrub Loading (Tons per acre)	N/A
DDW Loading (Tons per acre)	
0" - .25"	0.20
.26" - 1"	0.90
1.1" - 3"	1.70
3.1" - 9"	1.30
9.1" - 20"	0.00
20" +	0.00
Total 0" - 3"	2.80
Total 3.1" +	1.30
Total	4.10

The Graph Button

If the **Graph** Button is clicked, a pie chart showing the fuel loading data for the selected photo is shown in the right pane of the Photo/Data Display Window. The following screen shows the Graph button selected for both sides of the Photo/Data Display Window.

PNW-105/1-LP-3
🏠

1-LP-3

Data

Graph

View

DDW Total Tons per Acre(TPA) by Size Class

0" - .25" 0.20 TPA

.26" - 1" 0.90 TPA

1.1" - 3" 1.70 TPA

3.1" - 9" 1.30 TPA

9.1" - 20" 0.00 TPA

20" + 0.00 TPA

Users' Guide to PSExplorer, Version 3

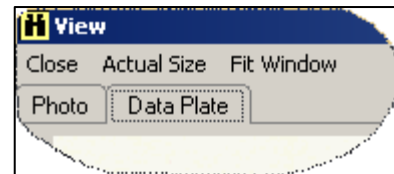
PSE - Page 15

The View Button

If the **View** button is clicked, a full screen view of the photo will be shown.



Viewing of the data plate associated with the Photo Series photo is also possible. To view that data plate, click on the **Data Plate** Tab.



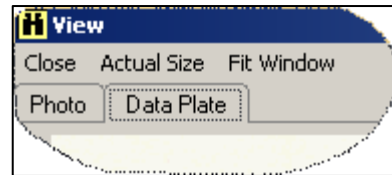
View
Close Actual Size Fit Window
Photo Data Plate

DATA SHEET Residue descriptive code 1-LP-3

LOADING			OTHER MEASUREMENTS	
Size class (inches)	Weight (tons/acre)	Volume (ft ³ /acre)		
0.0 - 0.25	0.2	12	Average residue depth	(feet) 0.1
0.26 - 1.0	.9	63	Ground area covered by residue	(percent) 44
1.1 - 3.0	1.7	135	Average duff and litter depth	(inches) .9
3.1 - 9.0	1.3	104	Ground area covered by duff and litter	(percent) 99
9.1 - 20.0	0	0	Sound residue 3.1-inch diameter and larger	(percent) 100
20.1+	0	0	Rotten residue 3.1-inch diameter and larger	(percent) 0
Total	4.1	314		


STAND INFORMATION		BRUSH INFORMATION		ASSESSMENT OF FIRE BEHAVIOR AND SUPPRESSION DIFFICULTY	
<u>Trees over 20-inch d.b.h.</u>	<u>Trees and dead stems under 8-inch d.b.h.</u>	<u>Dominant species</u> grouse	<u>Spread rate</u> (chains/hour) 1		
<u>Dominant species</u>	<u>Dominant species</u> lodgepole pine	<u>huckleberry</u>	<u>Flame length</u> (feet) 2		
<u>Trees per acre</u>	<u>Trees per acre</u> 50	<u>Average height (inches)</u> 7	<u>Resistance to suppression</u> (chains/man-hour) 2.4		
<u>Average d.b.h. (inches)</u>	<u>Average d.b.h. (inches)</u> 6	<u>Average crown height (inches)</u> 3	<u>Ecoclass coding</u> CLG2-11		
<u>Average tree height (feet)</u>	<u>Average tree height (feet)</u> 60	<u>Ground space occupied (percent)</u> 8			
<u>Average crown height (feet)</u>	<u>Average crown height (feet)</u> 35				
<u>Estimated crown space occupied (percent)</u>	<u>Estimated crown space occupied (percent)</u> 20				
		<u>GRASS AND FORB INFORMATION</u>		<u>REMARKS</u>	
<u>Trees 8- to 20-inch d.b.h.</u>	<u>Snags 8-inch d.b.h. and over</u>	<u>Dominant species</u>	Numerous trees were killed by mountain pine beetle		
<u>Dominant species</u>	<u>Number per acre</u> 197	<u>pinegrass</u>			
<u>Trees per acre</u>	<u>Average d.b.h.</u> 13	<u>Average height (inches)</u> 4			
<u>Average d.b.h. (inches)</u>	<u>Average height</u> 72	<u>Ground space (percent)</u> 25			
<u>Average tree height (feet)</u>		<u>Estimated weight (pounds per acre)</u> 200			
<u>Average crown height (feet)</u>					
<u>Estimated crown space</u>					

When viewing a photo or a data plate, the user can view the image at its actual size based on the resolution it was scanned to. The user can also view an image in a size that fits the display window.



Compare Photo Series Mode

By selecting the Compare Photo Series Mode, two photos can be displayed simultaneously in the Photo/Data Display Window.

To enable the Compare Photo Series Mode, click on the  icon on the Toolbar or select **Tools=>Compare Photo Series** from the main menu.



Hot Tip

To select a photo to be displayed on one side of the Photo/Data Display Window, select that side as the “active” side by either clicking on the arrow above the buttons in the center of the Photo/Data Display Window or click anywhere within the area occupied by the photo.

The screen that follows shows two photos displayed simultaneously.

Photo Series Explorer - [Browsing Photos]

File View Reports Tools Help

Query by Books Query by DDW Total Loading Query by DDW 0'-3" and 3.1'+ Loading Query by Live Loading Query by Fuel Models

Select Book: PNW-105, Natural Forest Residues-PNW Search

☐ Erase Displayed Photo(s)

Book/Photo ID	Description	DDW 0" to 3"	DDW 3.1"+	DDW Total	Herb	Shrub	Duff Depth	Fuel Bed Depth	Canj
PNW-105/1-JU-2	Juniper - Size Class 2 - Natural	0.90	0.00	0.90	0.075	N/A	0.2	1.2	
PNW-105/1-LP-1	Lodgepole Pine - Size Class 1 - Natural	5.00	0.80	5.80	N/A	N/A	0.5	2.4	
PNW-105/1-LP-2	Lodgepole Pine - Size Class 1 - Natural	2.20	0.80	3.00	0.050	N/A	0.6	4.8	
PNW-105/1-LP-3	Lodgepole Pine - Size Class 3 - Natural	2.80	1.30	4.10	0.100	N/A	0.9	1.2	
PNW-105/1-MC-2	Mixed Conifer - Size Class 2 - Natural	4.80	2.00	6.80	N/A	N/A	2.0	3.6	

PNW-105/1-LP-1 PNW-105/1-LP-3

Image Image

Data Data

Graph Graph

View View

86 photos found PNW-105/1-LP-3

Four buttons control the display of the photos and data. These are the **Image**, **Data**, **Graph** and **View** buttons.

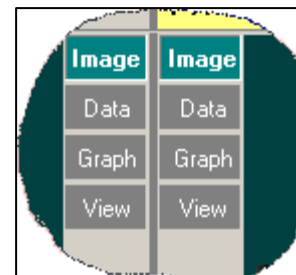


Image Button

The photo that has a yellow bar at the top of the photo display window is the active photo. To designate a photo to be the active photo, do a left mouse click in the center of the photo.

The Data Button

If the **Data** button is selected, the data summary for that photo is displayed on the same side of the Photo/Data Display Window as the button selected.

The Graph Button


If the **Graph** Button is clicked, a pie chart listing the fuel loading data for the selected photo is shown in the Photo/Data Display Window.

The View Button

If the **View** button is selected, a full screen view of the active photo will be shown.

PSExplorer Assistant, Comparison Assistant Tab

The PSExplorer Assistant appears automatically upon selection of the Photo Series Compare Mode.

The Assistant will also appear on the screen by clicking on the  icon.

The **Comparison Assistant** Tab displays fuel loading, duff depth and fuel bed depth information for each photo. The cell with the red text has the highest value for the information displayed for the two photos. The Difference column displays the difference in the data between the two photos.

PSE Explorer Assistant[Untitled]				
Comparison Assistant		Profile Builder Assistant		
	PNW-105/2-LP-1	PNW-105/2-LP-3		
Vegetation Type	LP	LP		
Activity	Nat	Nat	Difference	
DDW 0" - 2.9" (Tons Per Acre)	9.0	5.3		3.7
DDW 3" + (Tons Per Acre)	2.1	11.5		9.4
DDW Total (Tons Per Acre)	11.1	16.8		5.7
Herb (Tons Per Acre)	0.1	0.1		0.0
Shrub (Tons Per Acre)	no data	no data		0.0
Duff Depth (in)	0.4	0.8		0.4
Fuel Bed Depth (in)	4.8	4.8		0.0
				Hide



Hot Tip


Clicking the **Hide** button will cause the Assistant to close.

The Assistant can be display again by clicking on the Assistant icon or by selecting the **View => Assistants** menu.

Fuel Profile Builder Mode

By selecting the Fuel Profile Builder Mode, the user can build a fuels profile defined by assigning a Photo Series photo to each of the following profile characteristics:

- 0"-3.0" Fuel Loading
- 3.1"+ Fuel Loading
- Herb Loading
- Shrub Loading
- Duff Depth
- Fuel Bed Depth

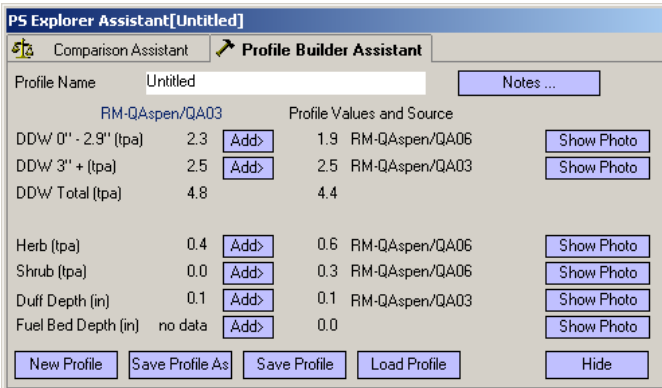
To enable the Profile Builder Mode, click on the  icon on the Toolbar or select **Tools => Fuel Profile Builder** from the main menu.

PSExplorer Assistant, Profile Builder Assistant Tab

The PSExplorer Assistant appears automatically upon selection of the Profile Builder Mode.

The Assistant will also appear on the screen by clicking on the  icon.

When the user selects the Profile Builder Mode, the PSExplorer Assistant appears with the Profile Builder Assistant tab active. By clicking on the **Add** button, the loading or depth is assigned from the active photo. Clicking on the **Display Photo** button will cause the assigned photo to be displayed in the Photo/Data Display Window. Note that if the selected data attribute for the active photo is N/A (Not Available), then a 0.0 is entered for that attribute in the fuel profile.



The screenshot shows the 'PSE Explorer Assistant[Untitled]' window with the 'Profile Builder Assistant' tab selected. The window contains a table for defining fuel profile characteristics, a 'Notes...' button, and several action buttons at the bottom.

Profile Name		Profile Values and Source	
Untitled			
RM-QAspen/QA03			
DDW 0" - 2.9" (tpa)	2.3	Add>	1.9 RM-QAspen/QA06
DDW 3" + (tpa)	2.5	Add>	2.5 RM-QAspen/QA03
DDW Total (tpa)	4.8		4.4
Herb (tpa)	0.4	Add>	0.6 RM-QAspen/QA06
Shrub (tpa)	0.0	Add>	0.3 RM-QAspen/QA06
Duff Depth (in)	0.1	Add>	0.1 RM-QAspen/QA03
Fuel Bed Depth (in)	no data	Add>	0.0

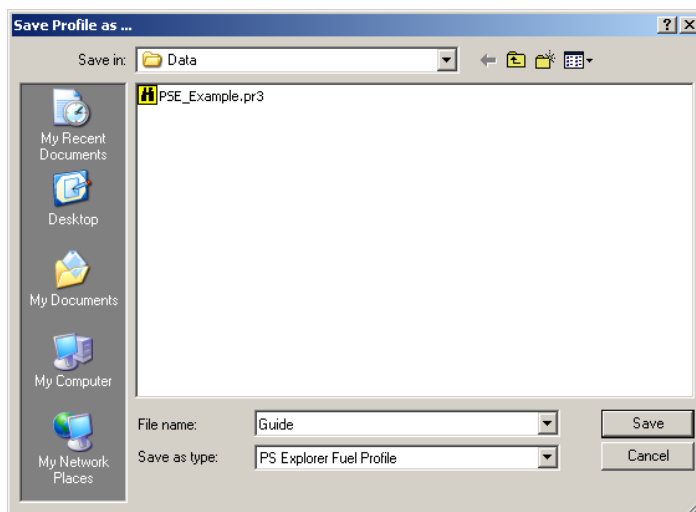
Buttons: New Profile, Save Profile As, Save Profile, Load Profile, Hide

The Notes Button

The user can click on the **Notes** button to activate a dialog box that allows the user to enter information about the fuel profile defined. The information in the Notes box is printed on the Fuel Profile Report.

The Save Profile As Button

Profiles can be saved. To save a profile, click on the **Save Profile As** button and assign a profile name like Guide. Do not assign an extension as PSExplorer will automatically assign a .pr3 extension. In the screen at the right, the new fuels profile is being assigned a file name of Guide.pro and note that there is currently a PSE_Example.pr3 fuel profile saved.



The Save Profile Button

Selecting this button saves the profile using the current profile file name.

The Load Profile Button

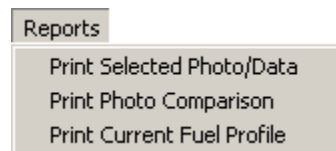
Selecting this button allows the user to select a previously saved fuel profile.

The New Profile Button

Selecting this button clears the Fuel Profile Builder Assistant screen of assignments.

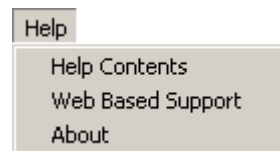
The Reports Main Menu

This main menu item allows the user to print reports based on the mode selected within PSExplorer.



The Help Menu

This main menu item allows the user to access the Help system, Internet Web Based Support and the About screen.



Help Contents

The PSExplorer program has a fully developed Help system. Use this menu item to activate the on-line Help system. Questions that cannot be resolved via the on-line support system should be addressed by contacting technical support.

Web Based Support

If the user has an active connection to the Internet, selecting this menu item will open the default Internet browser on the computer and direct the user to the FMAPlus Support Page. From this page, you can obtain information on program features and program updates as well as make contact to FMAPlus Support System.

About

This menu item will produce a screen showing the Version number of PSExplorer you are running as well as a copyright protection notice. The System icon can be activated to show the status of the user's system resources.

The Query Tabs

If the Screen mode is set to Query, then the Query Tabs appear. These tabs allow the user to select the type of query desired.



Hot Tip

Only photos that are in the universe of active photos prior to a search will be included in the photos selected from a search.


To reset the universe of active photos to include all photo from all active photo series, click on the **Display all Photos** icon or select the **View => Display All Photos** menu.

There are five query modes:

- Query by Photo Series Book
- Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type and Dead Down Woody Total Fuel Loading
- Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type, 0-3" and 3.1"+ Dead Down Fuel Loading
- Query for Live Fuel Loading Using Vegetation Type, Activity Type, Herbaceous and Shrub Fuel Loading
- Query by 1982 Fire Behavior (FBPS) or Danger Rating (NFDRS) Fuel Model


Query by Book Tab

This query mode allows the user to search by Photo Series Book. Only one Book can be selected at a time.

Query by Books	Query by DDW Total Loading	Query by DDW 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
<div> Select Book <input type="text" value="All Books"/> <input type="button" value="Search"/></div> <div><input type="checkbox"/> Erase Displayed Photo(s) <input type="button" value="X"/></div>				


Query by DDW Total Loading Tab

This query mode allows the user to search the universe of active photos by Vegetation Type, Activity Type and Total Dead Down Woody Fuel Loading.

Query by Books	Query by DDW Total Loading	Query by DDW 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
<div> Vegetation Types <input type="text" value="All Vegetation Types"/> <input type="button" value="Search"/></div> <div>Activity <input type="text" value="All Activities"/></div> <div>Total Loading <input type="text" value="0"/> to <input type="text" value="334"/> tons per acre</div> <div><input type="checkbox"/> Erase Displayed Photo(s) <input type="button" value="X"/></div>				


Query by DDW 0-3" and 3.1"+ Loading Tab

This query mode allows the user to search the universe of active photos by Vegetation Type, Activity Type, 0"-3" Fuel Loading and 3"+ Fuel Loading.

Query by Books	Query by DDW Total Loading	Query by DDW 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
	Vegetation Types	All Vegetation Types	0" - 3"	0 to 36 tons per acre
	Activity	All Activities	3.1" Plus	0 to 326 tons per acre
<input type="button" value="Search"/>				<input type="checkbox"/> Erase Displayed Photo(s)


Query by Live Loading Tab

Query the universe of active photos for Live Fuel Loading Using Vegetation Type, Activity Type, Herbaceous and Shrub Fuel Loading

Query by Books	Query by DDW Total Loading	Query by DDW 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
	Vegetation Types	All Vegetation Types	Herb	0 to 10 tons per acre
	Activity	All Activities	Shrub	0 to 182 tons per acre
<input type="button" value="Search"/>				<input type="checkbox"/> Erase Displayed Photo(s)

Query by Fuel Models Tab

This query mode allows the user to search the universe of photos by Danger Rating (NFDRS) or 1982 Fire Behavior (FBPS) Fuel Models. When doing a Query by Fuel Model, select fuel models solely from the Danger Rating Fuel Models or the 1982 Fire Behavior Fuel Models.

Query by Books	Query by DDW Total Loading	Query by DDW 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
	Danger Rating	All Danger Rating Models		
	Fire Behavior	All Fire Behavior Models		
<input type="button" value="Search"/>				<input type="checkbox"/> Erase Displayed Photo(s)

On each query tab, query selection criteria are defined using pulldowns for one more many query criteria. Each tab has a **Search** button and an **Erase Displayed Photo(s)** check box.

The Search Button

Based on search criteria, this button is used to activate the search for photos.

The Erase Displayed Photo(s) Check Box

If this box is checked, then the photo displayed in the Photo/Display Window will be replaced with the first photo listed in the Selected Photo Series Browse Window. If this box is not checked, the photo in the Photo/Display Window will change only by the selection of a photo from the Selected Photo Series Browse Window.


Searching for Photos

Date base queries allow photo series searches based on defined criteria. Four types of queries are available:

- Query by Photo Series Book
- Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type and Dead Down Woody Total Fuel Loading
- Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type, 0-3" and 3.1"+ Dead Down Fuel Loading
- Query for Live Fuel Loading Using Vegetation Type, Activity Type, Herbaceous and Shrub Fuel Loading
- Query by 1982 Fire Behavior (FBPS) or Danger Rating (NFDRS) Fuel Model

Query by Photo Series Book

This query mode allows the user to search by Photo Series Book. Only one Book can be selected at a time.


Query by Books	Query by DD'W Total Loading	Query by DD'W 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
<div> Select Book: <input type="text" value="All Books"/> <input type="button" value="Search"/></div> <div><input type="checkbox"/> Erase Displayed Photo(s)</div>				

To Query by Photo Series Book, click on the pull-down arrow to the right side of the window that shows “All Books.” Select a specific Photo Series. Perform the search by clicking on the Search button. Selecting “All Books” and clicking on the **Search** button will yield the same search result as clicking on the **All Photos** button.




Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type and Dead Down Woody Total Fuel Loading

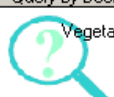
This query mode allows the user to search the universe of photos by Vegetation Type, Activity Type and Total Loading.

Query by Books	Query by DDW Total Loading	Query by DDW 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
 Vegetation Types Activity	All Vegetation Types All Activities	Total Loading 0 to 334 tons per acre	<input type="button" value="Search"/>	<input type="checkbox"/> Erase Displayed Photo(s)

To Query by Total Loading including the option to select Vegetation Types and Activity Types, select the desired item(s) by clicking on the pull-down arrow on the right side of the window. Select the desired selection criteria. For Vegetation Types and Activity Types, more than one Vegetation Types and/or Activity Types can be selected. The screen below shows three Vegetation Types selected. To close the Vegetation Type selection pulldown, press the **ESC** button on the keyboard or click on the white area to the right of the pulldown area.

Query by Books	Query by DDW Total Loading	Query by DDW 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
 Vegetation Types Activity	3 Veg Types Selected Total Loading 0 to 334 tons per acre	<input type="button" value="Search"/>	<input type="checkbox"/> Erase Displayed Photo(s)	
<div> <div> <input type="checkbox"/> NHOH-Northern Hardwood,Oak Hickory <input type="checkbox"/> PIP-Pitch Pine <input type="checkbox"/> PO-Pocosin <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC02 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC03 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC04 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC06 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC07 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC10 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC11 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC12 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC14 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC15 <input checked="" type="checkbox"/> PNW-Interior-MCwithMortality/MC16 <input checked="" type="checkbox"/> SE-LongleafPine/LLP <input type="checkbox"/> BW/P-Red and White Pine </div> <div> <input type="checkbox"/> PPAS-Ponderosa Pine/Associated Spec <input checked="" type="checkbox"/> PPLDF-Ponderosa pine,larch,Douglas-fir <input type="checkbox"/> QA-Quaking Aspen <input type="checkbox"/> RF-Red Fir <input type="checkbox"/> BW/P-Red and White Pine </div> </div>				


The following screen shows the three Vegetation Types that contain Ponderosa pine selected, one Activity Type selected (Natural) and a Total Loading of 10 to 24 tons per acre selected for a Search. By clicking on the **Search** button, the program will query the data base for the universe of photos available to display the photos that meet the query criteria.

Query by Books	Query by DDW Total Loading	Query by DDW 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
 Vegetation Types Activity	3 Veg Types Selected 1 Act Types Selected	Total Loading 10 to 24 tons per acre	<input type="button" value="Search"/>	<input type="checkbox"/> Erase Displayed Photo(s)




Query for Total Dead Down Woody Fuel Loading Using Vegetation Type, Activity Type, 0-3" and 3.1"+ Dead Down Fuel Loading

This query mode allows the user to search the universe of active photos by Vegetation Type, Activity Type, 0"-3" Dead Down Fuel Loading and 3.1"+ Dead Down Fuel Loading.

Query by Books	Query by DD'W Total Loading	Query by DD'W 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
	Vegetation Types	All Vegetation Types	0" - 3"	0 to 36 tons per acre
	Activity	All Activity Types	3.1" Plus	0 to 326 tons per acre
				<input type="button" value="Search"/>
				<input type="checkbox"/> Erase Displayed Photo(s)

To Query by 0"-3" Fuel Loading and 3.1"+ Fuel Loading including the option to select Vegetation Types and Activity Types, select the desired item(s) by clicking on the pull-down arrow on the right side of the window. Note that for a photo to be selected, it must meet all four conditions.


The following screen shows the three Vegetation Types that contain Ponderosa pine selected, the Natural Activity Type selected, 0.0"-3.0" loading of 4 to 10 tons per acre and a 3.1"+ loading of 10 to 24 tons per acre selected.

Query by Books	Query by DD'W Total Loading	Query by DD'W 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
	Vegetation Types	3 Veg Types Selected	0" - 3"	4 to 10 tons per acre
	Activity	1 Activities Selected	3.1" Plus	10 to 24 tons per acre
				<input type="button" value="Search"/>
				<input type="checkbox"/> Erase Displayed Photo(s)

By clicking on the **Search** button, the program will query the universe of active photos and display the photos that meet the criteria.

Query for Live Fuel Loading Using Vegetation Type, Activity Type, Herbaceous and Shrub Fuel Loading

This query mode allows the user to search the universe of active photos by Vegetation Type, Activity Type, Herbaceous Loading and Shrub Loading.


Query by Books	Query by DD'W Total Loading	Query by DD'W 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
	Vegetation Types	All Vegetation Types	Herb	0 to 10 tons per acre
	Activity	All Activities	Shrub	0 to 10 tons per acre
				<input type="button" value="Search"/>
				<input type="checkbox"/> Erase Displayed Photo(s)

To Query by Herbaceous Loading and Shrub Loading including the option to select Vegetation Types and Activity Types, select the desired item(s) by clicking on the pull-down arrow on the right side of the window. Note that for a photo to be selected, it must meet all four conditions.

By clicking on the **Search** button, the program will query the universe of active photos and display the photos that meet the criteria.

Query by Fire Behavior (FBPS) or Danger Rating (NFDRS) Fuel Model

This query mode allows the user to search the universe of active photos by Danger Rating (NFDRS) or Fire Behavior (FBPS) Fuel Models.

Query by Books	Query by DD'W Total Loading	Query by DD'W 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
	Danger Rating Fire Behavior	All Danger Rating Models All Fire Behavior Models	<input type="button" value="Search"/>	<input type="checkbox"/> Erase Displayed Photo(s)


There are correlations between fuel models within these two systems. For example, NFDRS Fuel Model G is similar to FBPS Fuel Model 10. A query with NFDRS Fuel Model G selected in the Danger Rating window and FBPS Fuel Model 10 selected in the Fire Behavior window would yield the same set of resultant photos from a search with just one of the two fuel models selected. Conversely, selecting a NFDRS fuel model and a FBPS fuel model in each window, which are not equivalent, will result in no photos being selected in the search query.



Hot Tip

When doing a query by fuel model, select fuel models solely from the Danger Rating Fuel Models or the Fire Behavior Fuel Models.

Below is a screen with 1 Danger Rating Fuel Model selected. By clicking on the Search button, the program will query the universe of active photos and display the photos that meet the query criteria.

Query by Books	Query by DD'W Total Loading	Query by DD'W 0"-3" and 3.1"+ Loading	Query by Live Loading	Query by Fuel Models
	Danger Rating Fire Behavior	1 Models Selected All Fire Behavior Models	<input type="button" value="Search"/>	<input type="checkbox"/> Erase Displayed Photo(s)



Using Local Photo Series

Via use of the Photo Manager program, the user can enter photo series attribute data in the photos database (photo3.mdb) in FMAPlus 3. If the user also creates electronic graphic files of each photo and photo data place, the user can then use the local photo series in the same manner as the published photo series that come with FMAPlus.

Photo Series Attributes

For each photo in a local photo series, the following attributes need to be defined. If an attribute cannot be defined, a special entry will be made to signify that to the programs in FMAPlus.

- Book/Photo ID
- Photo Description
- 0.0" – 3.0" Dead Down Woody (DDW) Fuel Loading (Tons/Acre)
- 3.1"+ Dead Down Woody (DDW) Fuel Loading (Tons/Acre)
- Total Dead Down Woody (DDW) Fuel Loading (Tons/Acre)
- Herbaceous Fuel Loading (Tons/Acre)
- Shrub Fuel Loading (Tons/Acre)
- Duff Depth (inches)
- Fuel Bed Depth (inches)
- Vegetation Type
- Activity Type
- FBPS (FB) Fuel Model
- NFDRS (DR) Fuel Model
- Photo Graphic File Name
- Data Plate Graphic File Name

The user will enter the photo series attributes using the Photo Manager Program. An example of a completed set of attributes is shown below. Details on the process will follow in subsequent sections.

Book Information																	
Identifier	Images Folder	Name															
AK-BlackSpruce		Alaska Black Spruce															
Built By	Date Built	Calendar...															
	1998																
Data Entry Aides			Size Classes (inches)														
<input type="checkbox"/> Add New Photo with Previous Photo Name																	
<input type="checkbox"/> No Images for this Book																	
<input checked="" type="checkbox"/> Use Automatic Photo and Data Plate Image Naming																	
File Type: JPEG (.jpg)																	
Photos																	
Photo ID	Photo Name	0"-25" TPA	.26"-1" TPA	1.1"-3" TPA	3.1"+ TPA	Herb TPA	Woody TPA	Fuelbed Depth In.	Duff Depth In.	Veg. Type	Act. Type	FB Fuel Model	DR Fuel Model	Trees per Acre	Crown Cover Percent	Photo File	Data Plate File
BS01	Alaska Black Spruce - Natural	0.20	0.30	1.20	0.50	0.01	0.09	-1	7	BS	Nat	5	Q	8404	62	pbs01.jpg	dbs01.jpg
BS02	Alaska Black Spruce - Natural	0.10	0.10	0.60	0.00	0.02	0.64	-1	9.7	BS	Nat	5	Q	8085	29	pbs02.jpg	dbs02.jpg
BS03	Alaska Black Spruce - Natural	0.10	0.10	0.20	0.00	0.10	0.92	-1	9.8	BS	Nat	5	Q	1443	8	pbs03.jpg	dbs03.jpg
BS04	Alaska Black Spruce - Natural	0.20	0.40	1.40	1.20	0.06	0.79	-1	9.8	BS	Nat	5	Q	5463	33	pbs04.jpg	dbs04.jpg
BS05	Alaska Black Spruce - Natural	0.10	0.20	0.80	0.00	0.04	0.91	-1	4.6	BS	Nat	5	Q	4361	59	pbs05.jpg	dbs05.jpg
BS06	Alaska Black Spruce - Natural	0.10	0.20	0.50	0.20	0.35	0.38	-1	6	BS	Nat	5	Q	4362	52	pbs06.jpg	dbs06.jpg
BS07	Alaska Black Spruce - Natural	0.20	0.40	0.80	0.30	0.02	0.77	-1	6	BS	Nat	5	Q	6006	82	pbs07.jpg	dbs07.jpg
BS08	Alaska Black Spruce - Natural	0.10	0.20	0.50	2.40	0.31	0.06	-1	5.1	BS	Nat	5	Q	2113	58	pbs08.jpg	dbs08.jpg
BS09	Alaska Black Spruce - Natural	0.20	0.40	2.00	5.90	0.52	0.63	-1	3.5	BS	Nat	5	Q	3305	31	pbs09.jpg	dbs09.jpg
BS10	Alaska Black Spruce - Natural	0.10	0.20	0.10	1.20	0.33	0.73	-1	9.1	BS	Nat	5	Q	739	21	pbs10.jpg	dbs10.jpg
BS11	Alaska Black Spruce - Natural	0.10	0.20	0.40	0.70	0.00	0.21	-1	4.9	BS	Nat	5	Q	2868	78	pbs11.jpg	dbs11.jpg
BS12	Alaska Black Spruce - Natural	0.20	0.30	0.10	0.00	0.11	1.64	-1	9.3	BS	Nat	5	Q	1662	63	pbs12.jpg	dbs12.jpg
BS13	Alaska Black Spruce - Natural	0.30	0.50	1.50	9.80	0.03	0.74	-1	4.4	BS	Nat	5	Q	671	6	pbs13.jpg	dbs13.jpg
BS14	Alaska Black Spruce - Natural	0.40	0.60	0.60	4.00	0.05	2.40	-1	6.6	BS	Nat	5	Q	353	22	pbs14.jpg	dbs14.jpg

Electronic Graphics Files for Photos and Data Plates

Photos from locally developed photo series can be scanned and saved in either JPG or GIF file format. Place these graphic files in a folder inside the PhotoImages folder. For example, if a local photo series was created with a title of 1Tieton, the folder for the electronic photo and data plate images would be in the 1Tieton folder inside the PhotoImages folder. See the figure at the right.

Graphic File Resolution

It is recommended that images be scanned and saved to a resolution of about 1 megapixel or 640x480. Scanning images to a high resolution will not improved their viewing resolution.

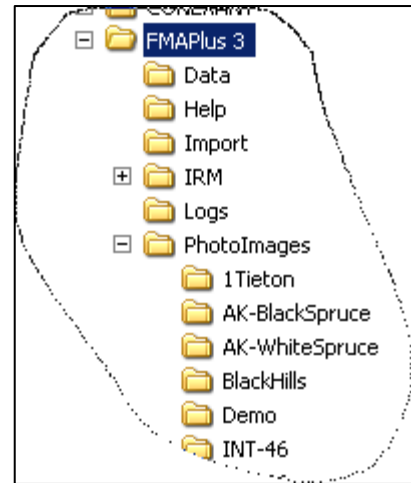
Photo and Data Plate Files

Following are some recommendations on the naming convention to use for the electronic graphics files.

Start the file name for each photo image file with a “p” and start the name for a data plate image file with a “d”.

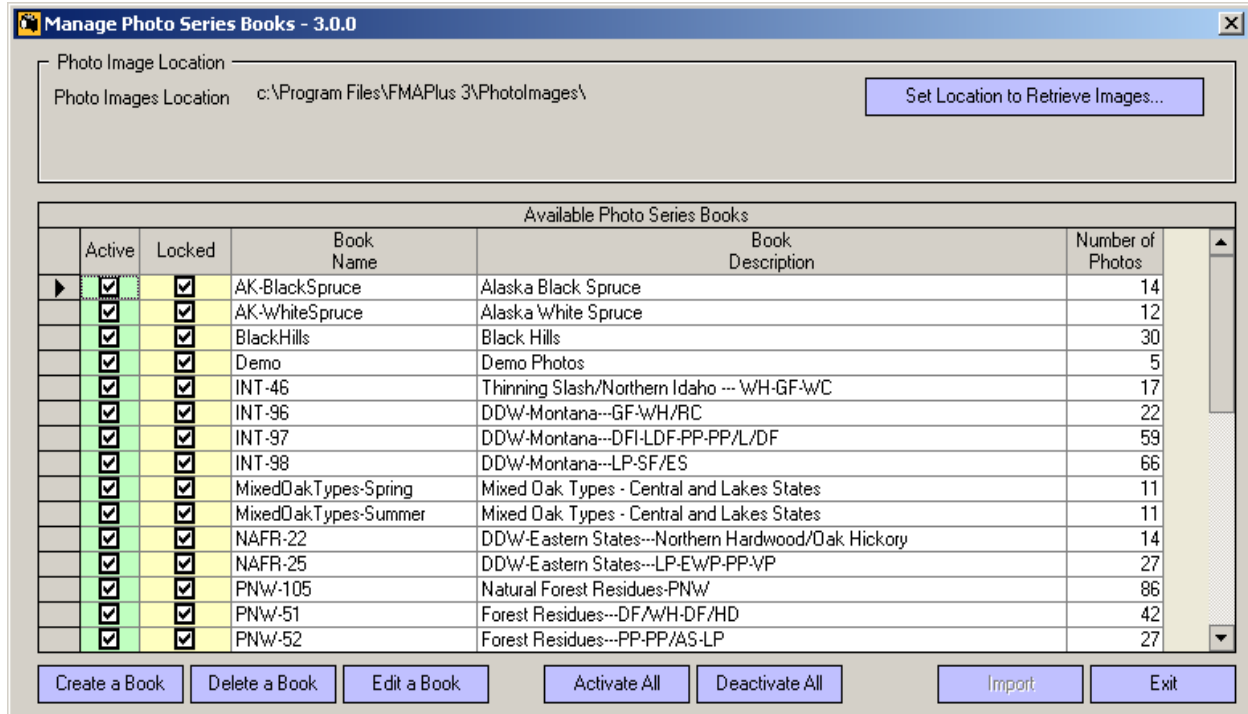
The file name of the photo and data plate files should have a tie to the photo name in the paper version of the photo series. For example, a photo in GTR-PNW-105 has the title of 2-DFHD-2 in the paper version of the photo series. A suggested name for the photo image file is p2dfhd2.xxx and for the data plate image file is d2dfhd2.xxx where xxx is either jpg or gif.

Once the photo image and data plate graphic image have been created by scanning, and have been appropriately named, copy the graphics file into the local photo images folder created earlier in the PhotoImages folder.



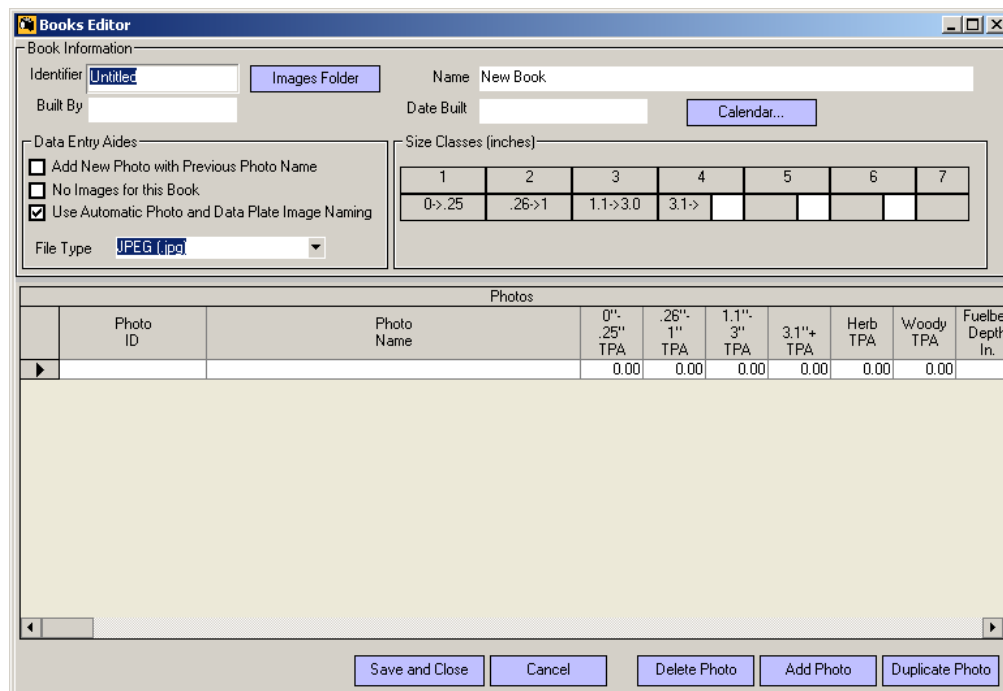
Using Photo Manager to Enter Local Photo Series Attributes into the Photos Database

Start the Photo Manager program using the **Start => Programs => FMAPlus 3 => Photo Manager**. The screen below will appear.



Creating a Photo Series Book

To create a photo series book, click on the **Create a Book** button. The screen below will appear.



The Book Information Area

The first task is to complete the Book Information section of the books creation screen. The Books Information area of the books creation screen will appear as shown below when initially opened.

The screenshot shows the 'Book Information' window. The 'Identifier' field contains 'Untitled', 'Name' contains 'New Book', and 'Date Built' is empty with a 'Calendar...' button. Under 'Data Entry Aides', 'Use Automatic Photo and Data Plate Image Naming' is checked. The 'File Type' is 'JPEG (.jpg)'. The 'Size Classes (inches)' table is as follows:

1	2	3	4	5	6	7
0->.25	.26->1	1.1->3.0	3.1->			

An example for this Users' Guide has been created and is distributed with the FMAPlus 3. The photo series name is Custom-PS. A folder called Custom-PS has been created in the PhotoImages folder. Ten images have been copied into that folder, five are photos and five are data plates. The process that was followed to create this example will be described.

The data for the example that be entered in the Book Information screen is as follows:

- Identifier: Custom-PS
- Name: Custom Photo Series Example
- Built By: FMAPlus User
- Built Date: 02/20/2005
- Data Entry Aids: "Use Automatic Photo and Data Plate Naming"
- File Type: JPEG (jpg)
- Size Classes: 3.1" – 9.0", 9.1 – 20.0" and 21.1"+.

The completed Books Information section for the Custom-PS photo series is shown below.

The screenshot shows the 'Book Information' window with the example data entered. 'Identifier' is 'Custom-PS', 'Name' is 'Custom Photo Series Book Example', and 'Date Built' is '02/20/2005'. Under 'Data Entry Aides', 'Use Automatic Photo and Data Plate Image Naming' is checked. The 'File Type' is 'JPEG (.jpg)'. The 'Size Classes (inches)' table is as follows:

1	2	3	4	5	6	7
0->.25	.26->1	1.1->3.0	3.1->9	9.1->20	20.1->	

Entering and Editing Cell Characters in the Books Information Area

When the Photo Manager – Create/Edit Book screen first appears, the cursor is in the Identifier cell. Pressing the Tab key will move the cursor progressively to additional cells. The user can use the mouse to perform a left mouse click in a cell to move the cursor to that cell. To edit cell characters, place the cursor in the cell and make the desired edits.

Identifier Field

This is the folder name in the PhotoImages folder. It is recommended to keep this name short. Note that the name can contain only acceptable characters based on the Windows file naming standards.

Name

This is a descriptive name for the photo series.

Built By

This field identifies who built the photo series.

Built Date

This field documents the date the photo series book was built in FMAPlus.

Data Entry Aids

There are three check boxes in this area as well as a (Graphics) File Type definition window.

Add New Photo with Previous Photo Name

When the item is checked, the Photo Name from the last photo in the entry will be entered as the photo name for a newly Added Photo. A new data row for entering attributes for a new photo is accomplished using the **Add Photo** button. This feature may allow the user do less data entry.

	Photo ID	Photo Name	0"-.25" TPA	.26"-1" TPA
	Custom1	Ponderosa pine 1	0.00	0.00
		Ponderosa pine 1	0.00	0.00

No Images in this Book

When this item is clicked, the data entry columns for the Photo File name and the Data Plate File name will disappear from the screen.

Use Automatic Photo and Data Plate Naming and File Type

When the item is checked, the file names for the photo and data plate files will be automatically created using a standard naming convention. The standard naming convention in Photo Manager is PXXXXX.YYY for photo image files and DXXXXX.YYY for data plate image files. The formats are the same except that the file name for photo graphic images starts with a P and for data plate graphic images starts with a D. The XXXXX stands for user defined Photo ID and the YYY stand for the user selected File Type (JPEG or GIF). In the example, the Photo ID is Custom1 and when the cursor is moved from the Photo ID cell, the files names shown in the lower right graphic will be created.

	Photo ID	Photo Name	0"-.25" TPA	.26"-1" TPA	1"-3" TPA	3"-6" TPA
	Custom1	Ponderosa pine 1	0.00	0.00	0.00	

	Photo File	Data Plate File
1	PCustom1.jpg	DCustom1.jpg
1		

Size Classes

The 3.1" dead down woody material is frequently subdivided into 3 to 4 classes based on diameter of the material. In the Size Class area, the user can define up to 4 size classes. To define a size class, enter the value in inches for the upper size class break. In the example shown, the first size class is 3.1" to 9.0," size class section 4. Notice that in the size class section 5, the program automatically set the beginning of that size class to be 0.1" greater than the upper limit is size class section 4. Continue entering values until complete.

1	2	3	4	5	6	7
0->.25	.26->1	1.1->3.0	3.1->9	9.1->20	20.1->	

The Photos Area

The photos area is where the attributes for each photo are entered.

Photos															
Photo ID	Photo Name	0" 25" TPA	.26" 1" TPA	1.1" 3" TPA	3.1" 9" TPA	9.1" 20" TPA	20.1" + TPA	Herb TPA	Woody TPA	Fuelbed Depth In.	Duff Depth In.	Veg. Type	Act. Type	FB Fuel Model	DR Fuel Model
▶ Custom1	Ponderosa pine 1	0.03	0.90	2.00	3.50	0.00	0.00	0.01	0.00	1.2	3.2	PP	Nat	9	C

The photo that has the black right facing arrow in the first column is called the "active row."



Hot Tip

The width of attribute fields can be changed to facilitate viewing.

To change the width of a column, do a left mouse click on a column border and while continuing to hold the left mouse button down, drag the border to increase or decrease the column width.

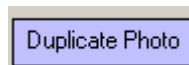
Adding and Deleting Photos

To add a photo, click on the **Add Photo** button. Note that the photo "row" added will be at the bottom of the existing photo "rows." To delete a photo, click on the row to make it the active photo and then click on the **Delete Photo** button.



Adding a Duplicate Photo

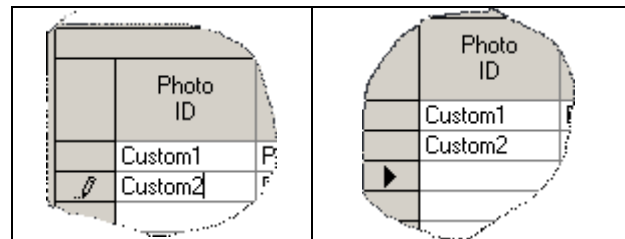
The user may wish to add a photo whose attributes are similar to the last photo in the photo series listing. To save time on data entry, the user can add a photo with its attributes being identical to the last row in the photo series by clicking on the **Duplicate Photo** button. In the figure below, a duplicate row has been added. Notice the user still needs to enter a unique Photo ID.



Photos															
Photo ID	Photo Name	0" 25" TPA	.26" 1" TPA	1.1" 3" TPA	3.1" 9" TPA	9.1" 20" TPA	20.1" + TPA	Herb TPA	Woody TPA	Fuelbed Depth In.	Duff Depth In.	Veg. Type	Act. Type	FB Fuel Model	DR Fuel Model
▶ Custom1	Ponderosa pine 1	0.03	0.90	2.00	3.50	0.00	0.00	0.01	0.00	1.2	3.2	PP	Nat	9	C
	Ponderosa pine 1	0.03	0.90	2.00	3.50	0.00	0.00	0.01	0.00	1.2	3.2	PP	Nat	9	C

Entering Cell Characters in the Photos Area

When the Photo Manager – Create/Edit Book screen first appears, the cursor is in the Identifier cell. The user can use the mouse to perform a left mouse click in a cell to move the cursor to that cell. When the user starts to enter data into a cell, there will be a pencil icon in the left column of the photo row. This indicates that data is being entered in cell rows. However, the data entered is not written to the photo3.mdb until the cursor is moved to another cell that is not on the current photo row being edited. The user can use the mouse to click in a cell on the current photo row being edited or can use the up or down arrow keys on the keyboard to perform this action. When the cursor has been moved to a cell not on the current photo row being edited, the pencil will change to a solid black right facing arrow on the photo row where the cursor was moved. When the user sees the solid black right facing arrow on a photo row, then the user knows the edits have been written to the photo3.mdb file.



Editing Cell Characters in the Photos Area

To edit cell characters, place the cursor in the cell and make the edits as desired. To insure edits have been written to the photo3.mdb file, move the cursor to a cell that is not on the photo row where the edits occurred.

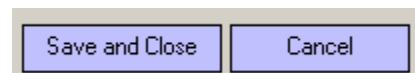
The example photo series will appear as shown below once all information has been entered into the Books Information and Photos areas.

Book Information		Name															
Identifier	Custom-PS	Custom Photo Series Book Example															
Built By	FMAPlus User	Date Built	02/20/2005														
<input type="checkbox"/> Add New Photo with Previous Photo Name <input type="checkbox"/> No Images for this Book <input checked="" type="checkbox"/> Use Automatic Photo and Data Plate Image Naming		Size Classes (inches) <table border="1"> <thead> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th></tr> </thead> <tbody> <tr> <td>0->.25</td><td>.26->1</td><td>1.1->3.0</td><td>3.1->9</td><td>9.1->20</td><td>20.1-></td><td></td></tr> </tbody> </table>		1	2	3	4	5	6	7	0->.25	.26->1	1.1->3.0	3.1->9	9.1->20	20.1->	
1	2	3	4	5	6	7											
0->.25	.26->1	1.1->3.0	3.1->9	9.1->20	20.1->												
File Type		JPEG (iso)															

Photos																				
	Photo ID	Photo Name	0". 25" TPA	.26". 1" TPA	1.1". 3" TPA	3.1". 9" TPA	9.1". 20" TPA	20.1" + TPA	Herb TPA	Woody TPA	Fuelbed Depth In.	Duff Depth In.	Veg. Type	Act. Type	FB Fuel Model	DR Fuel Model	Trees per Acres	Crown Cover Percent	Photo File	Data Plate File
▶	Custom1	Ponderosa pine 1	0.03	0.90	2.00	3.50	0.00	0.00	0.01	0.20	1.2	3.2	PP	Nat	9	U	152	80	PCustom1.jpg	DCustom1.jpg
	Custom2	Ponderosa pine 2	0.10	1.60	4.20	2.10	2.90	4.70	0.01	0.01	2.4	1.6	PP	Nat	11	K	852	90	PCustom2.gif	DCustom2.gif
	Custom3	Ponderosa pine 3	0.10	1.10	2.50	10.30	6.00	0.00	0.13	0.01	2.4	1.1	PP	Nat	12	J	53	60	PCustom3.gif	DCustom3.gif
	Custom4	Ponderosa pine 4	0.10	0.70	0.80	1.30	6.30	13.50	0.01	0.50	3.6	2.2	PP	Nat	2	C	651	50	PCustom4.gif	DCustom4.gif
	Custom5	Ponderosa pine 5	0.04	2.50	6.90	8.10	6.40	3.60	0.10	0.01	3.6	0.6	PP	Nat	11	K	341	40	PCustom5.gif	DCustom5.gif

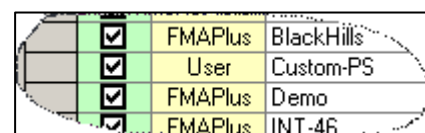
Saving Edits to a Photo Series Book

To save entries on the Create/Edit Book screen, click on the **Save and Close** button. Clicking the **Cancel** button will close the Create/Edit Book screen without saving edits.



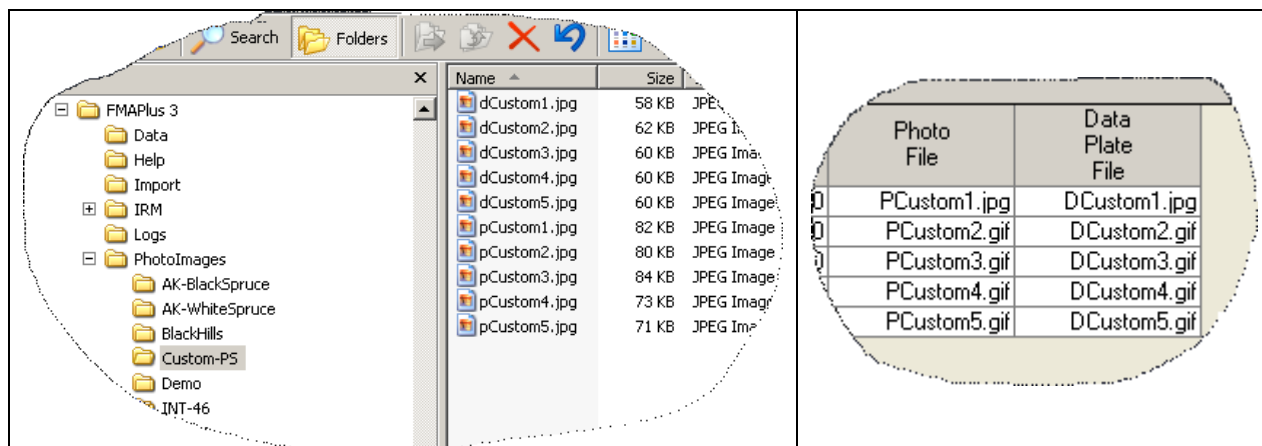
Making a Local Photo Series Active

Once a photo attributes have been entered and saved, the user can make the photo series available by clicking on the check box in the Active column to the left of the photo series identifier.



Copying Photo Images to the Photo Series Folder

The last activity necessary for a custom photo series to be utilized by programs in FMAPlus is to copy the photo and data plate graphic image files to the photo series folder in the PhotoImages folder. Use Windows Explorer to copy these files (see below left). The file names need to be the same as those defined in the photo series books file (see below right).



Editing a Photo Series Book

The user can only edit user entered local photo series books. On the Photo Manager screen, the owner of a photo series is shown in the Owner column. The user cannot edit published photo series books, which are owned by FMAPlus but can edit any photo series not owned by FMAPlus.

To edit a locally created photo series, click on the row with the local photo series name and then click on the **Edit Photo Series** button. Follow the steps described in the Creating a Photo series Book section above for procedures on how to edit and save a local photo series book.

	Active	Owner	Book Name	
	<input checked="" type="checkbox"/>	FMAPlus	AK-BlackSpruce	Alas
	<input checked="" type="checkbox"/>	FMAPlus	AK-WhiteSpruce	Alas
	<input checked="" type="checkbox"/>	FMAPlus	BlackHills	Blac
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