

# Defining Resources

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The following White Papers and Technical Papers provide additional detail about defining resources for an owning team.

- [Understanding Dozers, Tractor Plows, and Airboats in Fire Program Analysis Initial Response Simulation Module](#)
- [Understanding Engine Use in Fire Program Analysis \(FPA\) Initial Response Simulation \(IRS\) Module](#)
- [Understanding Airtanker Use in Fire Program Analysis \(FPA\) Initial Response Simulation \(IRS\) Module](#)
- [Understanding Helicopter Use in Fire Program Analysis \(FPA\) Initial Response Simulation \(IRS\) Module](#)
- [Understanding Smokejumper Deployment in Fire Program Analysis \(FPA\) Initial Response Simulation \(IRS\) Module](#)

## Data Requirements for Defining Resources

Enter the following information into FPA before managing resources:

- FPU/FMU/FWAs as entered in **Set Up FPU > FPU Attributes, Set Up FPU > FPU Agencies, Set Up FPU > Define Team.**
- Team IDs, Names, Planning Year, and Owner as entered in the **Set Up FPU > Define Team.**

## In This Chapter

This chapter discusses:

- [Defining Resources](#)
- [Managing Resources](#)
  - [Editing a Resource for the Owning Team](#)
  - [Adding a Resource to the Owning Team](#)
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  - [Creating a New Resource Version for an Owning Team](#)
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# FPA Users Guide

## Defining Resources

### Defining Resources

The FPA system uses the concept of “libraries” for resources. One library is nationwide in scope and contains all the resources entered by the FPUs in the previous version of FPA. The nationwide library also contains national resources (airtankers, Type 1 and 2 helicopters, smokejumper aircraft and hotshot crews). FPA identifies all national resources with a unit identifier (Unit-ID) that begins with “DC\_” and international resources with a Unit-ID that begins with “IN\_.” The nationwide library is available to all FPUs, allowing an FPU to borrow a resource from another FPU.

The second type of resource library is specific to the FPU’s analyses. It will automatically be populated with the FPU’s resources imported from the previous FPA system, and contain all revisions and additions the FPU team makes to each analysis. Resources owned by the FPU, defined by the Unit-ID being included as a member of the FPU, may be edited, copied, added, deleted, and individually defined as multiple versions. The **Current** designation on a resource version indicates to the system that it is the resource to be included in the nationwide library. Another FPU can only borrow the **Current** version of a resource.

Select **Input Data > Define Resources**. This action displays the default view of the Available Resources, Resource Producer Type, and Available Resources Owned by Other Teams tables. It takes the system server time to retrieve and display the set of resources defined by the FPU for the selected analysis.

Displays the Available Resources table: This table contains the FPU-owned resources defined for inclusion in this analysis. The default view enables the Add Resource button only.

Available Resources (for inclusion in options)												
Owning Team	Resource Id	Version	Current	Producer Type	Unit ID	Dispatch Location	Daily Staffing	Total Positions	Total FTEs	% available	Annual Cost	
AK_AK_001	AKD FBK SCP #1	a	y	SCP	AKAKD	AFS at Ft Wainwright:T... A/T	0	0.00	0.00	0	0	
AK_AK_001	AKD FBK SCP #2	a	y	SCP	AKAKD	AFS at Ft Wainwright:T... A/T	0	0.00	0.00	0	0	
AK_AK_001	AKS FBK A/T T1	a	y	ATT	AKAKD	AFS at Ft Wainwright:T... A/T	0	0.00	0.00	0	0	
AK_AK_001	AKS PAQ A/T T1	a	y	ATT	AKAKD	MSS Palmer Air Base T1&2 A/T	0	0.00	0.00	0	0	
AK_AK_001	AMMX E T3-3	a	y	EN34		VFD @	3	3.00	0.00	100	0	

### Column Title Definitions

- **Owning Team:** The name of the FPU that owns and/or funds the resource.
- **Resource Identifier:** The unique name supplied by the FPU (or from the nationwide library) for that resource.
- **Version:** The version for that resource. When only one instance of a resource exists, it will always be version “a.” As you create new versions, FPA adds version letters sequentially.

- **Current:** A check box to indicate which version of a resource is in the current organization. We recommend that you mark the version of the resource that was funded in 2007 (“had wheels in the parking lot”) as the current version.
- **Producer Type:** A system provided drop-down list of the NWCG type for the resource. You may modify the producer type field only when using the Add Resource button.
- **Unit ID:** The unique identifier for the agency unit that owns the resource.
- **Dispatch Location:** The dispatch location where this version of the resource is assigned. FPU's can edit the dispatch location by selecting the resource and clicking the Edit Resource button.
- **Daily Staffing:** User entered number of people who staff the resource each day; this value is used for fireline production rate determination.
- **Total Positions:** User entered total number of permanent, WAE and temporary positions required to staff the resource. For instance, an engine may have two WAEs and five temporary employees assigned to ensure seven-day availability; a handcrew may have one permanent, four WAEs, and fifteen seasonal employees for five-day availability.
- **Total FTEs:** User entered total Full Time Equivalents (FTEs) positions needed to staff the resource. To calculate FTEs determine the total number of funded position/crew days for each resource. Example: (one fully funded crew supervisor = 260 days) + (one WAE 13/13 = 130 days) + (eight seasonal firefighters for 86 days = 688 days.) Next, divide the total number of funded position days for the resource by 260. Example continued:  $1078 / 260 = 4.15$  FTEs.
- **% Available:** The percentage of time the resource is available to the FPU. The system default for all the FPU team resources is 100%. Federal partner agency, participant resources (such as those from state agencies), or Cooperator resources (such as those from fire protection districts) may not be available to respond to wildland ignitions 100% of the time. Consider the typical response to the ignition workload from participant and cooperator agency resources from particular dispatch locations and set the percent availability accordingly. This setting may have an effect on the initial response-success performance measure.
  - **Annual Cost:** The annual cost for the resource.

The boxes for editing, adding, copying, creating a new version, and deleting selected resources contain these fields.

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The screenshot shows the 'Edit Resource' dialog box with the following fields and values:

- Resource Identifier: LPR-MM
- Version: a
- Current:
- Unit ID: WILPR
- Dispatch Location: Leopold Dispatch
- Producer Type: EN70
- Category: Engine
- Description: Type 7
- Gallons Per Load: 100
- Daily Staffing: 0
- Total Positions: 0

Buttons: Save, Cancel

### Field Definitions

- **Resource Identifier:** The unique name supplied by the FPU (or from the nationwide library) for that resource.
- **Version:** The version for that resource. When only one instance of a resource exists, it will always be version “a.” FPA sequentially letters additional versions as they are created.
- **Current:** A marked check box indicates the version of this resource is in the current organization. We recommend that you mark the version of the resource that was funded in 2007 (“had wheels in the parking lot”) as the current version. Checking the **Current** box also includes the resource in the Nationwide Library of resources and allows other FPU Teams to borrow the resource.
- **Unit ID:** The unique identifier for the agency unit that owns the resource. Checking the **Current** box also includes the resource in the nationwide library of resources and allows other FPU teams to borrow the resource.
- **Dispatch Location:** A drop down-list populated from entries in the **Input Data > Define Dispatch Locations** screen. A dispatch location is the location where the resource typically resides. When the required Dispatch Location does not display, users must add the Dispatch Location on the **Input Data > Define Dispatch Locations** screen.

- **Producer Type:** A system provided drop-down list of the NWCG type for the resource. FPA enables the **Producer Type** textbox only when using the **Add Resource** button.
- **Category:** A system provided drop-down list of the NWCG category for the producer type. FPA automatically populates this field when the Producer Type is set.
- **Description:** A system provided definition for the resource based on either the NWCG classification, or the combining of NWCG types specific to FPA. FPA automatically populates this field when the Producer Type is set.
- **Gallons Per Load:** User entered gallon capacity of this engine. This field is for engines only. Gallons for aircraft are system provided. Water tenders are assumed to have unlimited capacity.
- **Daily Staffing:** User-entered number of people who staff the resource each day. This value is used to determine the fireline production rate.
- **Total Positions:** User entered total number of permanent, WAE and temporary positions required to staff the resource. For instance, an engine may have two WAEs and five temporary employees assigned to ensure seven-day availability; a handcrew may have one permanent, four WAEs, and fifteen seasonal employees for five-day availability.
- **Total FTEs:** User entered total Full Time Equivalents (FTEs) positions needed to staff the resource. To calculate FTEs, determine the total number of funded position/crew days for each resource. Example: (one fully funded crew supervisor = 260 days) + (one WAE 13/13 = 130 days) + (eight seasonal firefighters for 86 days = 688 days). Next, divide the total number of funded position days for the resource by 260. For example,  $1078 / 260 = 4.15$  FTEs.
  - **% Available:** The percentage of time the resource is available to the FPU. Percent (%) Availability is applied to the time period identified by Season, Days of Week, and Hours Begin and End. The system default for all FPU team resources is 100%. Federal partner agency, participant resources, (such as those from state agencies), or Cooperator resources, (such as those from fire protection districts), may not be available to respond to wildland ignitions 100% of the time. Consider the typical response to the ignition workload from participant and cooperator agency resources from particular dispatch locations and set the percent availability accordingly. This setting may affect the initial response success performance measure.
- **Hours Begin:** Use the drop down menu to set the hour of day the resource staffing begins each day.
- **Hours End:** Use the drop down menu to set the hour of day the resource staffing ends each day.

Do not set the helicopter duty-day above 14 hours
- **Day of Week Start:** Use the drop-down list to set the first day of the week the resource is staffed.

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- **Day of Week End:** Use the drop-down list to set the last day of the week the resource is staffed.
- **Season Begin:** Enter the typical season start month and day the resource-staffing season begins.
- **Season End:** Enter the typical season end month and day the resource-staffing season ends.
- **Annual Cost:** Enter the annual cost for the resource for staffing and vehicle(s).
- **Vehicle Capital Cost:** Only complete this field when the vehicle resource is a new purchase. This cost tracks with an option, but *is not* included in the option cost and does not count against the preparedness budget.
- **Comments:** Use this optional field to enter comments about the settings applied to this resource for this analysis (250 characters maximum).

Displays the Resource Producer Type table. The Resource Producer Type Table displays the system look-up data for each producer type. Edits are not allowed.

Prod Type	Category	Description	Avg Speed	Unit Type	Gal / Load	Workshift Length
ATT	Air Tanker	Type 1&2	314	Air	2600	Daylight
CRW	Crew	Handcrew	35	Ground		18 hours
DZR1	Dozer	Type 1	30	Ground		18 hours
DZR2	Dozer	Type 2	30	Ground		18 hours
DZR3	Dozer	Type 3	30	Ground		18 hours
EN12	Engine	Type 1 & 2	40	Ground		18 hours
EN34	Engine	Type 3 & 4	35	Ground		18 hours

### Column Title Definitions

- **Prod Type:** A system provided list of the NWCG producer types.
- **Category:** A system provided NWCG category for the producer type.
- **Description:** A system provided definition for the producer type based on either the NWCG classification, or the combining of NWCG types specific to FPA.
- **Avg. Speed:** A system provided average speed for the producer type based on NWCG producer types.
- **Unit Type:** Describes whether the unit flies or works on the ground.
- **Gal/Load:** The gallon or load capacity of this resource. Gallons for aircraft are system provided and cannot be user-edited. Water tenders are assumed to have unlimited capacity.
- **Workshift Length:** The hours that a resource is available to work. Daylight means the resource is available from Civil Daylight to Civil Twilight.

A field bordered by a red line or a red exclamation mark (!) next to a field means it is a required data entry field.

Tips

- Single Engine Airtankers (SEATS), Scoopers (SCPs) and Large Airtankers (ATTs), when a fire event occurs outside the Hours, Days, and Months defined here, these fire resources will not be available for dispatch even with a Callback Delay.
- When setting the availability time on resources in the FPA model, consider aircraft availability. Set the End of day for agency tactical aircraft based on maximum duty day (14 hrs) rather than the normal office work shift (8 hr day). This avoids a callback delay on the aircraft itself. It also better models fire situations where tactical aircraft extend through civil twilight whenever there is reasonable risk of fire response need. This avoids the legal issue of "callback" on a pilot once they are released.

Managing Resources

1. On the Available Resources table, click any row to begin modifying the resource.

Available Resources (for inclusion in options)										
Owning Team	Resource Id	Version	Current	Producer Type	Unit ID	Dispatch Location	Daily Staffing	Total Positions	Total FTEs	% ava
AK_AK_001	AKD FBK SCP #1	a	y	SCP	AKAKD	AFS at Ft Wainwright:T... A/T	0	0.00	0.00	0
AK_AK_001	AKD FBK SCP #2	a	y	SCP	AKAKD	AFS at Ft Wainwright:T... A/T	0	0.00	0.00	0
AK_AK_001	AKS FBK A/T T1	a	y	ATT	AKAKD	AFS at Ft Wainwright:T... A/T	0	0.00	0.00	0
AK_AK_001	AKS PAQ A/T T1	a	y	ATT	AKAKD	MSS Palmer Air Base T1&2 A/T	0	0.00	0.00	0
AK_AK_001	AMMX E T3-3	a	y	EN34		VFD @	3	3.00	0.00	100

2. Select the appropriate button to complete the intended modification. Each button prompts a specific system action accomplished within a dialog box:
  - opens a dialog box containing information about the resource selected. The user may make edits to any field that is not grayed out.
  - opens a dialog box allowing the user to add a new resource to the FPU or nationwide resource libraries. The system will indicate all required field entries.
  - allows you to copy any resource (including versions) owned by the FPU team, and edit available fields and uniquely name the copied resource before you save it.
  - allows the user to make another instance of an existing resource. This can be used to populate options at budget ranges above or below the current funding level by adjusting:
    - The cost and/or the staffing count,
    - Days of the week staffed, and/or

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- Length of staffing season.

Then edit the cost to account for these changes. You can use versions to evaluate how changes to staffing and period of staffing affect performance measure outputs. You may only create versions of resources owned by your team.

**Only one version of a resource can be included in each Preparedness Option.**

- **Delete Selected Resource** allows you to permanently remove the resource from its library and any analysis it was used in. **Use great care when determining whether to delete a resource.** If a resource is accidentally deleted, it must be recreated.

## Editing a Resource

1. Select **Input Data > Define Resources.**

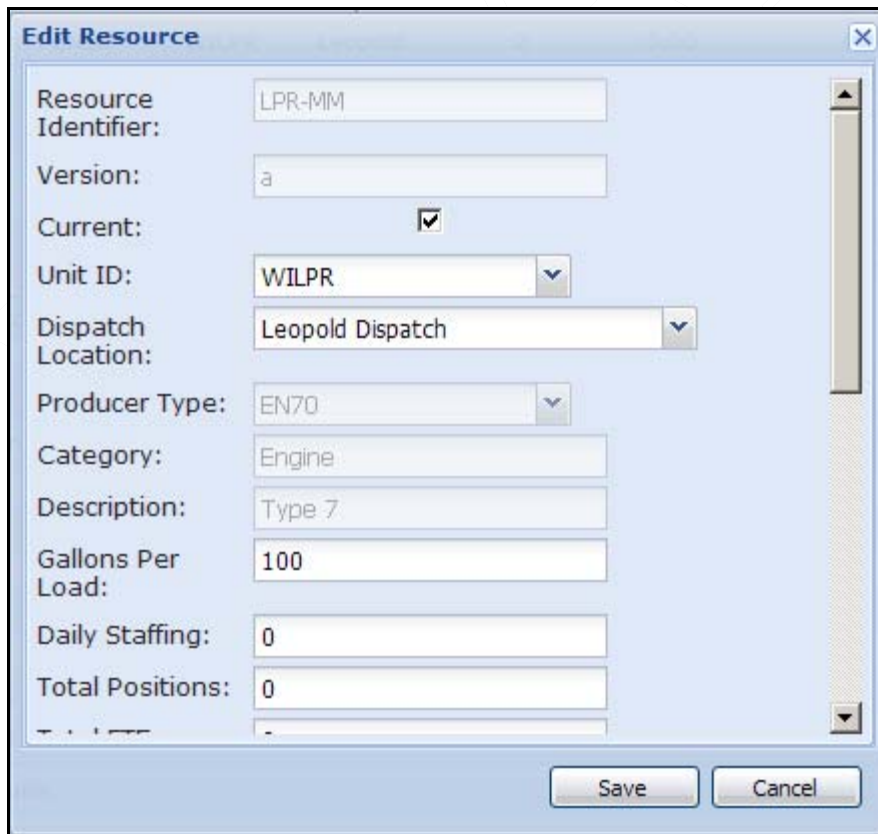
Displays the Available Resources table.

2. Click to select the row of the resource you want to edit. The row highlights with a blue background. This click enables all table action buttons.

3. Click **Edit Resource...**

FPA grays out all other tables or navigational tools until editing is complete.

Displays the Edit Resource box.



The screenshot shows the 'Edit Resource' dialog box with the following fields and options:

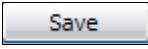
- Resource Identifier: LPR-MM
- Version: a
- Current:
- Unit ID: WILPR (dropdown menu)
- Dispatch Location: Leopold Dispatch (dropdown menu)
- Producer Type: EN70 (dropdown menu)
- Category: Engine
- Description: Type 7
- Gallons Per Load: 100
- Daily Staffing: 0
- Total Positions: 0

Buttons at the bottom: Save, Cancel



Scroll to enter values for additional fields in the dialog box using the scroll bar at the right side of the box, or resize the box.

4. Accept the displayed values, or enter a modified value as required into fields that are not grayed out.

5. Click  to save the modified resource information and update the database.

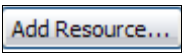
Users return to the Available Resources table.

Click  to return to the Available Resources table. No database updates occur.

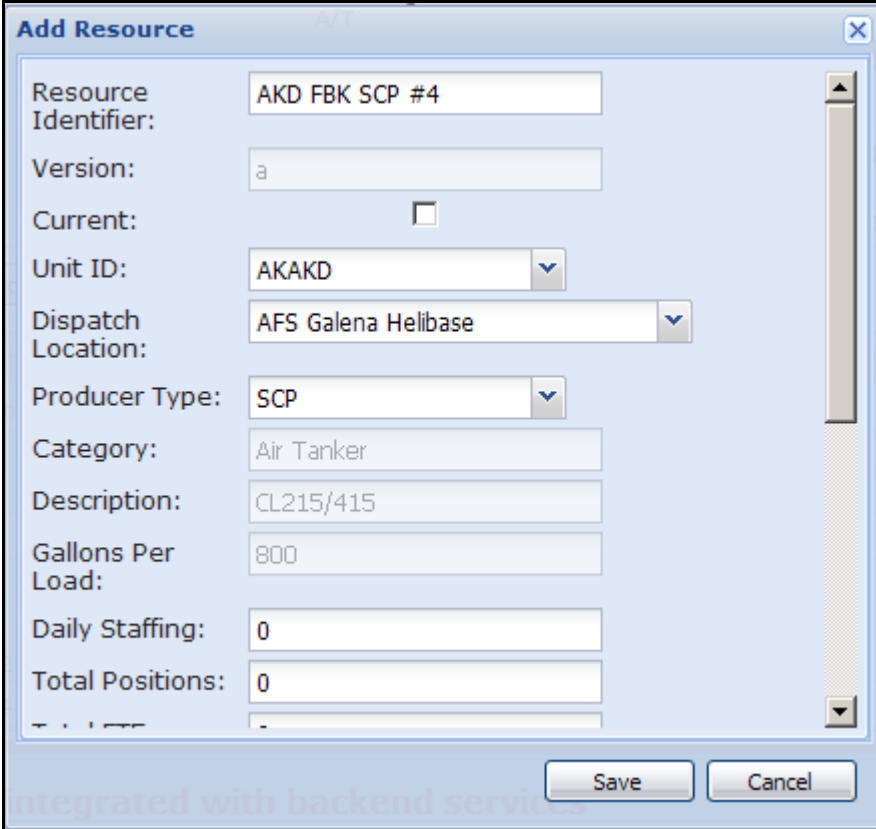
### Adding a Resource to an Owning Team

1. Select **Input Data > Define Resources**.

Displays the Available Resources table.

2. Click .

Displays the Add Resource box.



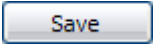
Any field bordered in red requires user input.

3. Begin editing by changing an existing value, or selecting a value from a drop-down list into fields that are not grayed out.


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## Defining Resources

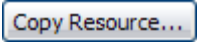
The Resource Identifier may not exceed 15 characters. FPA recommends using the alphanumeric numbering painted on the vehicle, or the resources' common name as the Resource Identifier. This helps find particular resources when searching, and when sorting tables.

4. Click  to save the modified resource information and update the database.

Users return to the Available Resources table.

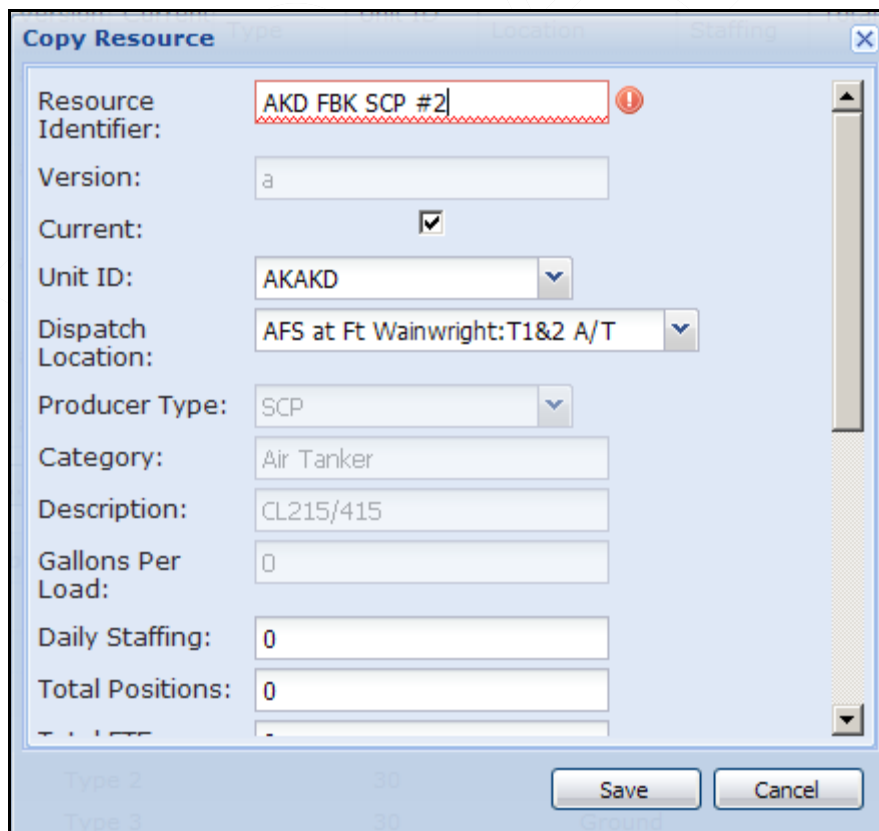
Click  to return to the Available Resources table. No database updates occur.

## Copying a Resource

1. Select **Input Data > Define Resources**.  
Displays the Available Resources table.
2. Click to highlight the row displaying the appropriate Owning Team.
3. Click  to copy information for the selected resource. The user must enter a unique name within the Owning Team in the **Resource ID** field.

Displays the Copy Resources dialog box.

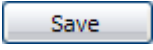
Scroll to enter values for additional fields using the scroll bar at the right side of the dialog box.



The screenshot shows a 'Copy Resource' dialog box with the following fields and values:

Resource Identifier:	AKD FBK SCP #2
Version:	a
Current:	<input checked="" type="checkbox"/>
Unit ID:	AKAKD
Dispatch Location:	AFS at Ft Wainwright:T1&2 A/T
Producer Type:	SCP
Category:	Air Tanker
Description:	CL215/415
Gallons Per Load:	0
Daily Staffing:	0
Total Positions:	0

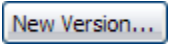
Any field bordered in red requires user input.

4. For fields that are not grayed out, review the values and add or modify as required following the explanations provided in Edit Resource above.
5. Click  to save the new resource and update the database.

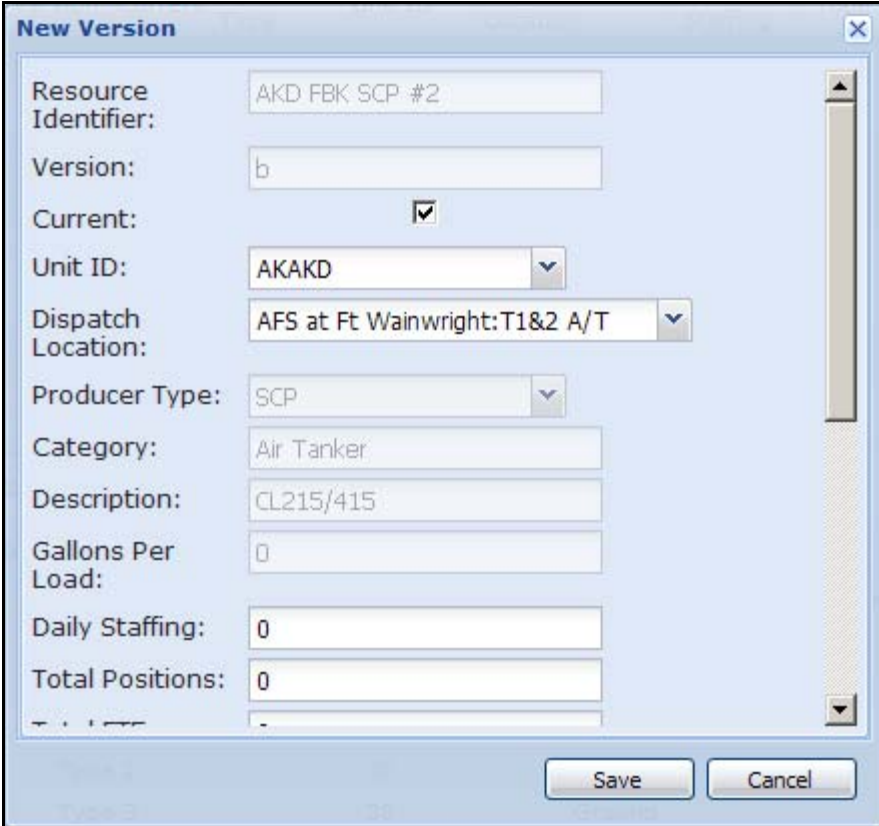
Users return to the Available Resources table.

Click  to return to the Available Resources table. No database updates occur.

### Creating a New Resource Version

1. Select **Input Data > Define Resources**.  
Displays the Available Resources table.
2. Click to highlight the row displaying the desired resource.
3. Click .

Displays the New Version Resource box for the resource selected.



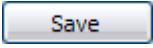
Displays the New Version box.

Scroll to enter values for additional fields using the scroll bar at the right side of the dialog box.


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4. Review the values and add or modify as required into fields that are not grayed out. The system automatically adds the version letter identifier, which is not user editable. The system will automatically mark the new version as Current. If the resource is not the Current version, remember to uncheck this box before saving.

5. Click  to save the modified resource information and update the database.

Users return to the Available Resources table.

Click  to return to the Available Resources table. No database updates occur.

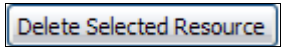
The system automatically checks the Current box for the new version. This deselects the Current box on the original version when you press save. Only one version of a resource can be Current.

### Deleting Selected Resources from an Owning Team

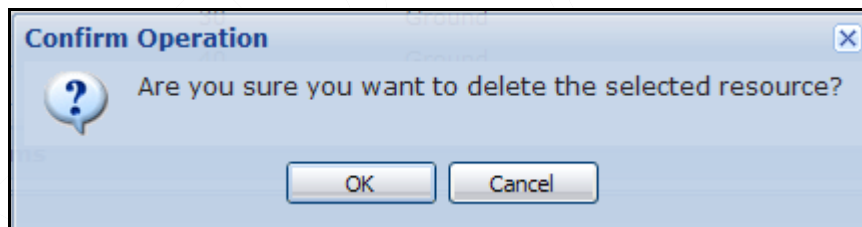
1. Select **Input Data > Define Resources**.

Displays the Available Resources table.


2. Click to highlight the row displaying the appropriate Owning Team.

Click .

Displays the Delete Selected Resource box warning. Deleting a resource permanently removes it from the nationwide and/or FPU resource library. You cannot undo the deletion.



3. Click  to complete the deletion and return to the Available Resources table.

Click  and return to the Available Resources table.

FPA recommends that FPUs do not delete resources; other FPUs may be borrowing from this resource as part of their analysis. Set the **% Availability** field to 0% when not using this resource

### Adding Available Resources Owned by Other Teams

This feature allows an FPU to borrow the Current version of a resource a nationwide resource library. This resource can be available from another team or from the system provided national

resource set. When you borrow one of these resources, you may only edit the percent availability.

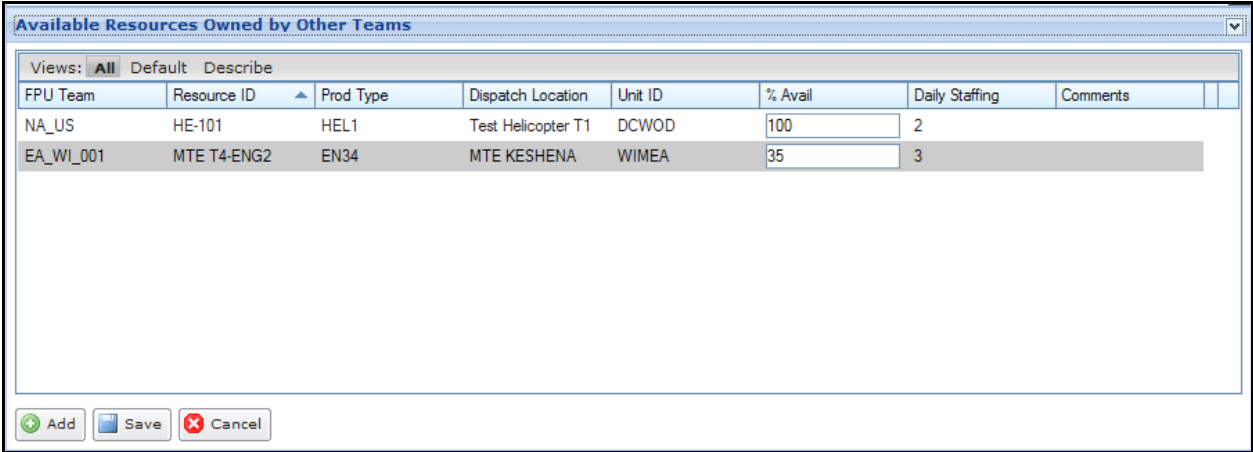
After FPU's borrow and save another team's resources, the FPU must navigate to the **Input Data > FWAs > Dispatch Associations** screen and associate the borrowed resource's dispatch location with the appropriate FPU/FWAs.

- 1. Select **Input Data > Define Resources**.

Displays the Available Resources Owned by Other Teams table.

- 2. Click  from the selected view.

Displays the Available Resources Owned by Other Teams edit table. For example:

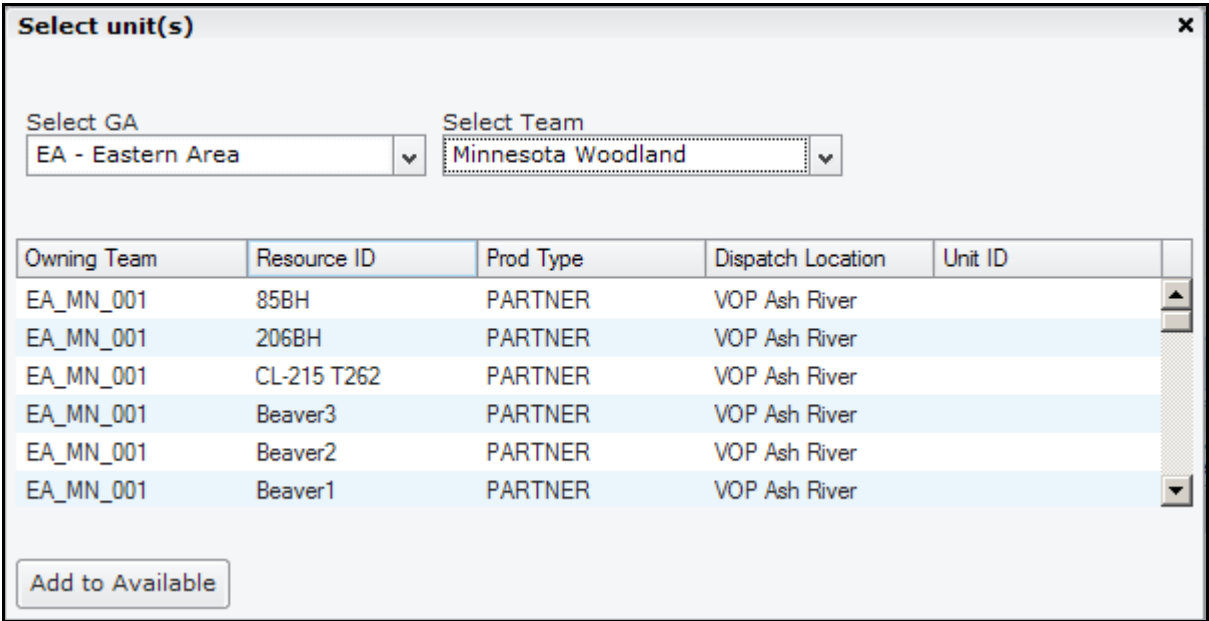


FPU Team	Resource ID	Prod Type	Dispatch Location	Unit ID	% Avail	Daily Staffing	Comments
NA_US	HE-101	HEL1	Test Helicopter T1	DCWOD	100	2	
EA_WI_001	MTE T4-ENG2	EN34	MTE KESHENA	WIMEA	35	3	

FPA grays out all other tables or navigational tools until editing is complete.

- 3. Click .

Displays the Select Unit(s) box.



Select unit(s)

Select GA: EA - Eastern Area

Select Team: Minnesota Woodland

Owning Team	Resource ID	Prod Type	Dispatch Location	Unit ID
EA_MN_001	85BH	PARTNER	VOP Ash River	
EA_MN_001	206BH	PARTNER	VOP Ash River	
EA_MN_001	CL-215 T262	PARTNER	VOP Ash River	
EA_MN_001	Beaver3	PARTNER	VOP Ash River	
EA_MN_001	Beaver2	PARTNER	VOP Ash River	
EA_MN_001	Beaver1	PARTNER	VOP Ash River	


Add to Available

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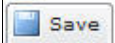
4. Highlight one or more rows containing the appropriate resource(s) owned by another team. The row highlights with a blue background.

Highlight more than one resource by pressing the CTRL key.

5. Click  to close out of this box and return to the Available Resources Owned by Other Teams table.

Users return to the Available Resources Owned by Other Teams table.

Click .

6. Click  to save the modified resource information and update the database.

Click  to return to the Available Resources Owned by other Teams table. No database updates occur.

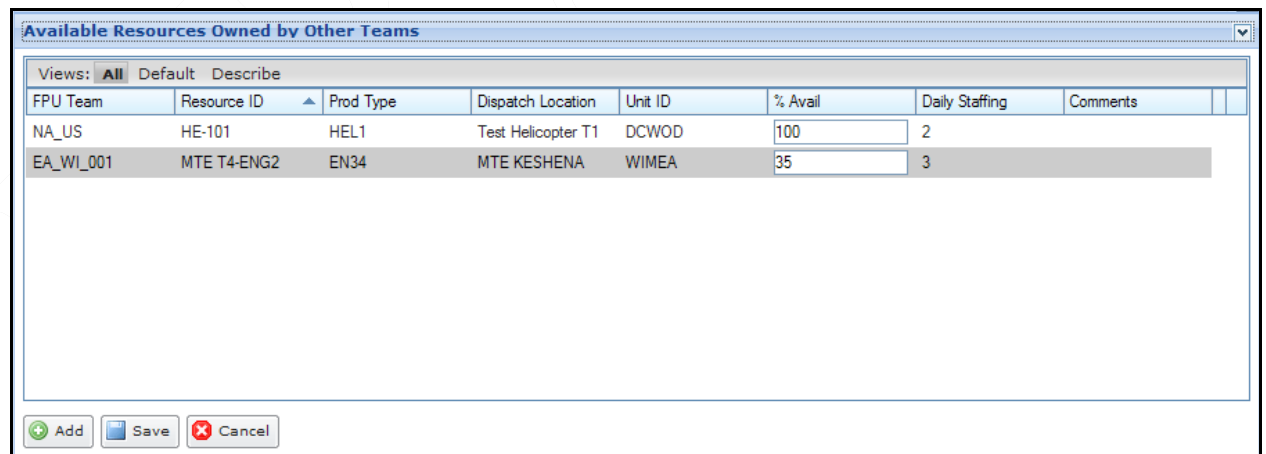
### Column Title Definitions

- **Select GA:** Click the drop-down list and select a geographic area. NA denotes national resources and IN denotes international resources (Canada and Mexico).
- **Select Team:** Click the drop-down list and select the desired FPU team.

## Editing Available Resources Owned by Other Teams

1. Select **Input Data > Define Resources.**

Displays the Available Resources Owned by Other Teams table.



FPU Team	Resource ID	Prod Type	Dispatch Location	Unit ID	% Avail	Daily Staffing	Comments
NA_US	HE-101	HEL1	Test Helicopter T1	DCWOD	<input type="text" value="100"/>	2	
EA_WI_001	MTE T4-ENG2	EN34	MTE KESHENA	WIMEA	<input type="text" value="35"/>	3	

2. Click .

Displays the Available Resources Owned by Other Teams edit dialog box.

The **% Avail** field is the only editable field on this table.

3. Accept the displayed value or enter modified values.

4. Click  to save the modified resource information and update the database.

Users return to the Available Resources Owned by Other Teams table.

Click  to return to the Dispatch Locations Owned by My Team table. No database updates occur.

### Removing Available Resources Owned by Other Teams

Once added, FPUs cannot remove or delete resources owned by other teams from this table. If your FPU no longer wants to use one or more of those “borrowed” resources, then do not include them when building your preparedness options. See [Managing Preparedness Options](#) for more information.