

## Chapter 12 – Implementing Treatments

This chapter explains how to use the tools in the IFMAP Activity Tracking module to implement all treatments that are approved through the compartment review process. It focuses on how to track the treatments in the system from initial steps of implementation.

### Concepts to be covered in this Chapter

- TSALE and stand data
- Treatment Tracking 101
- Field Treatment Boundary (Edits to the boundary and attributes)

### Definition of terms

**Activity Tracking** – the system used to document treatments as they move along the approval process and treatment sequence, and also to document those AOIs and treatments that are terminated at a stage prior to successful completion.

**Treatment** – A commercial or non-commercial activity on an AOI resulting from the routine decision making process (compartment review) or resulting from a Disturbance.

**Treatment Status** – The status of activity on a treatment area, from the development of a proposal, to the completion of activities, is identified by its Treatment Status. Key points in the business process require the Treatment Status to be updated accordingly.

**Treatment Sequence** – In many cases a series of treatments is required to achieve a cover type objective and associated silvicultural objective. For example, to convert an old red pine sawlog AOI to a young jack pine pulp AOI, the Treatment Sequence may be 'Harvest / Site Preparation / Planting / Stocking Survey'. Each of these steps is an individual treatment; together they comprise a treatment sequence.

**Step (Next Step)** – each treatment in a treatment sequence is considered a 'step'. Activity Tracking facilitates creation of next step treatments as well as mechanisms to track whether a 'next step' is required to complete a sequence.

**Treatment Sponsor** – Just as with AOIs, all Treatments have sponsors. These are the individuals that are directly responsible for developing the treatment proposal. Co-Managers should agree who will be the Treatment Sponsor. At a minimum, this includes the writing of the treatment prescription, but could also include initiating the Forest Treatment Proposal (FTP), tracking the Treatment status in the GDSE, closing the Treatment, and updating the Inventory database. Local agreements clearly identify who will handle the various steps of the Treatment Tracking process for the different Treatment Types.

## Data Layers

A couple of new data layers are introduced, and several are used in new ways as we implement Treatment Tracking:

**Treatments Layer (or Database)** – This layer/database is the central backbone of activity tracking. It consists of the database records (attributes) and the polygon(s) associated with each record. The layer displays the displays the polygon associated with the treatment, while the database contains the details about that Treatment. While the layer shows up on the map, the database shows up in the reports.

**Treatment History Layer (Database)** – The Treatment History Layer is a database that records the shape and attributes of a Treatment at key points in the decision making process. This allows the Treatment layer to be edited and remain current, while preserving a record of the past and the decisions that were approved. Snapshots are taken of the Treatment boundary at the Compartment Review Proposal, Compartment Review Decision, Field Treatment Boundary, the Premature Termination or Successful Completion (whichever applies) status changes.

## **TSALE and stand data**

The TSALE program was designed to take inputs from the OI Inventory system. While much of the data in IFMAP will satisfy what TSALE requires, there are three situations where it isn't obvious how to proceed.

### **Stand Number**

Because in IFMAP we have "Treatment Name", instead of Stand Numbers for our Treatment areas, this one can be difficult. In most cases only a single Harvest Treatment occurs in a given stand. In those cases, just use the parent Forested (or Nonforested) stand number when adding Stand data to TSALE.

In the occasion that there are more than one Harvest Treatment scheduled for a given treatment area, and both stands will be part of the same Timber Sale Proposal, a "dummy" stand number will need to be input for the second (or subsequent) IFMAP Treatments. For example, if Treatments "125-thin" and "125-clearcut" (both from stand 125) are in the same Timber Sale, then the first stand entered into TSALE should be numbered #125. The second number should be a "dummy" number. It's recommended to insert the number "9" in the 100's place of the stand number. In this example, the dummy stand number would be "925".

Note: If there are 3 or more, treatments for a stand, develop another scheme for your dummy number.

### **Site Index**

The TSALE program asks for Site Index for every stand that is entered. Since this data is only gathered in IFMAP when it is needed to determine treatment prescriptions, it should be assumed by everyone that this data generally does not exist, and that all IFMAP stands in TSALE will have null values for Site Index.

### **What about UM, MD, MC, and LM types in TSALE?**

For covertime and MO in TSALE - put an "I" in those fields of TSALE for those four OI Crossover code.

## Treatment Tracking '101'

In order to understand how to track Treatments during Implementation, it is probably best to view the entire process of Treatment Tracking. Appendix F (Activity Tracking Flowchart) illustrates the flow of the Treatment Tracking process. The diagram at right is an excerpt. The process focuses on one key attribute of the Treatments layer – the **"Approval Status"** (as seen below in the **Attribute Editor**)



**Harvest**  
**Approval Status:**  
 Fld. Tr. Bdy. - Incomplete

Treatment Name: 45-RP CCut  
 Treatment Method: Clearcut with Reserves  
 Treatment Purpose: Regeneration

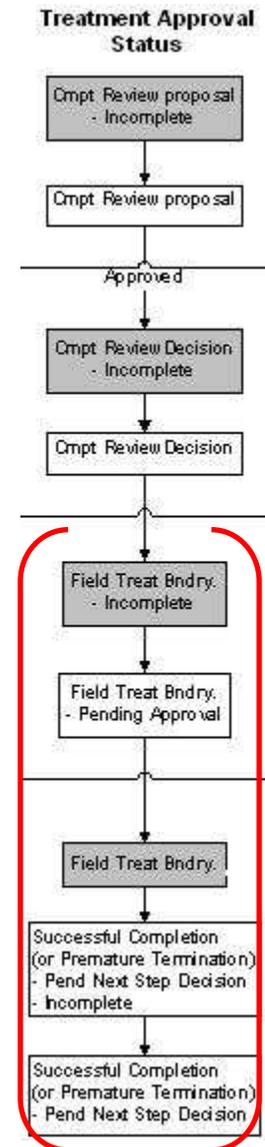
General | Harvest | **Status** | Dates | Sign-Offs | Closure

Compartment Review  
 Sponsor Name: Stevens, Cody  
 Sponsor Affiliation: FMFM

Status | Objectives | Updated Objectives | Comments

**Approval Status:**  
 Fld. Tr. Bdy. - Incomplete  
 Last Changed On: 1/2/2008 2:39:05 PM

Work Status:  
 N/A  
 Work Status Comment:



As a Treatment progresses from being proposed at Pre-Review, through Compartment Review, into being carried out in the field, its corresponding Approval Status should change along with it.

To review, during the Inventory Year a Treatment progresses from the initial status of "Compartment Review Proposal – Incomplete" through "Compartment Review Decision". After the Compartment Review updates have been approved by the District Inventory and Planning Specialist, the data is finalized and the status is changed to "Compartment Review Decision". It is captured as a snapshot for the Treatment History layer and immediately

forwarded to the “Field Treatment Boundary – Incomplete” status, where it awaits implementation during the Year of Entry.

It is at this point that the guidance in this Chapter for Implementing Treatments begins. We will discuss when and how to update Treatment attributes and boundaries, and how and when to update the Treatment Status as a Treatment is carried out. We will discuss finalizing the Field Treatment Boundary,

**A note on roles and responsibilities**

As a general rule, the Treatment Sponsor is responsible for shepherding a treatment through the tracking processes described below. This rule is not hard and fast though, as different processes have evolved in each FMU that work best for the staff in that area. As an FMU begins using the Treatment Tracking tools, Co-Managers in the Unit as well as some District Staff need to have a conversation about who will handle the various roles in the process. Managers should come to agreement on what works best for their staff.

**Field Treatment Boundary**

**Field Treatment Boundary – Incomplete**

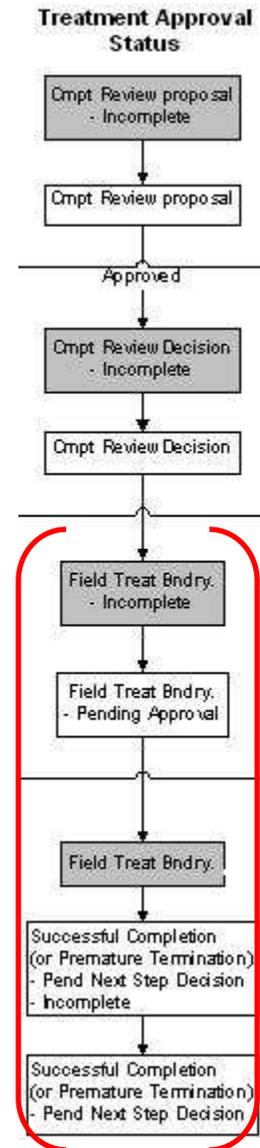
A Treatment that is approved and ready for implementation is at the Approval Status “**Field Treatment Boundary – Incomplete**”. This is the case for either the first Treatment in a sequence or a Treatment that has been initiated as a Next Step.

The suffix “ – **Incomplete**” means that the Treatment is at a point in the process where the boundary should be re-shaped and any attributes updated. This is true at any point in the Treatment Tracking process.

**Treatment Boundary (Spatial) Edits**

Most updates to the Treatments layer will be spatial edits to the boundary. For example, when the boundary line is painted in on a timber sale, it often varies from what was approved at the Compartment Review. It is at this point that the Treatments layer should be edited to match the field boundary. There are several editing tools in ArcMap that make it relatively easy to modify the Treatment layer. **Appendix G** describes in detail how to use these tools.

The goal of this editing is to have the Treatments layer give an accurate representation of what is being carried out on the ground. When the edits are

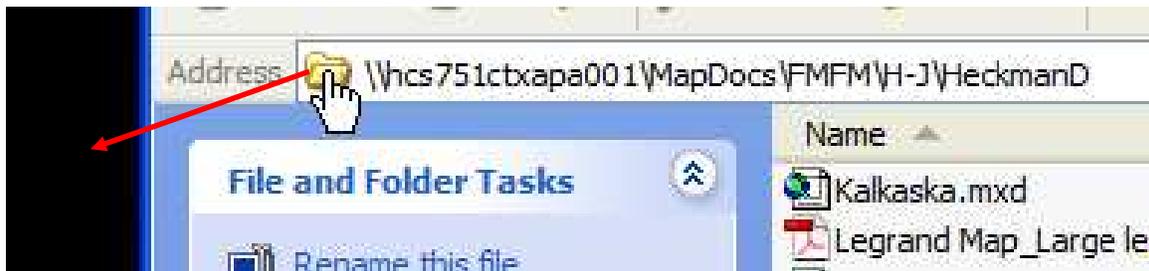


complete, the representation of the Treatment area in the layer should be sufficient to use in FTP or Timber Sale map creation. The acreage in the database is what should be used in both the FTP and Timber Sale proposal.

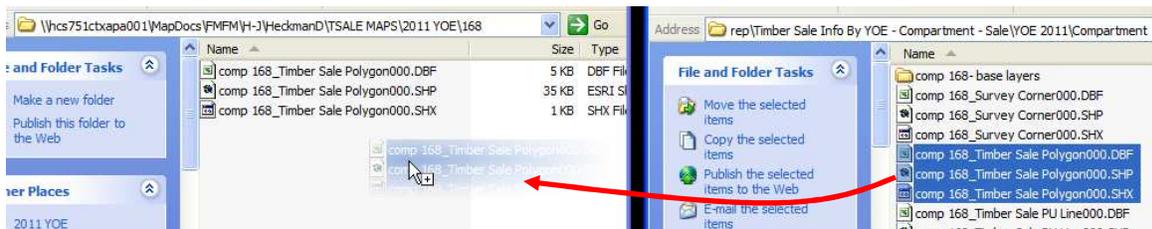
In most cases modifications to the Treatments layer will be made based upon GPS/Shapefile data. This can be accomplished fairly easily after some practice with the editing tools described in Appendix G. The general strategy is to load a shapefile generated using Soloforest on the NOMAD into your M: drive. You can use the Explorer Application to do this or a more efficient method would be to use an M Drive shortcut if you have created one. This will save you up to several minutes off of each time you access your M drive. To do this, click on the following link, or paste it into your browser/shortcut window, navigate to your folder, then drag and drop the folder next to the address to your desktop:

1) Create M Drive Short Cut:

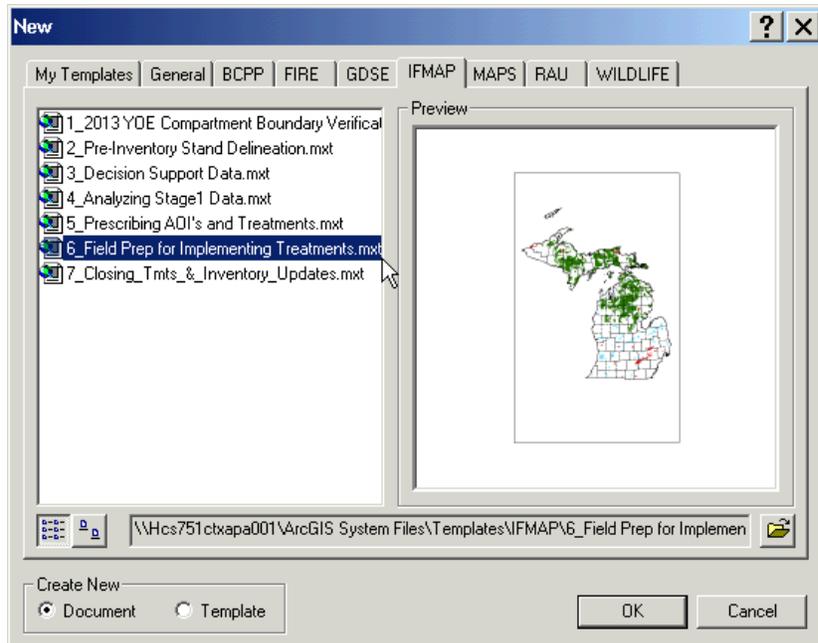
- a. Clicking on this link: <\\hcs751ctxapa001\MapDocs\FMFM\H-J\HeckmanD>
- b. Drag folder icon in Address bar to your desktop:



2) Drag and Drop files from local computer to your M Drive Shortcut:



3) Once you have the shape file (copy \*.shp, \*.dbf, \*.shx) from Soloforest copied into your M Drive, You need to start IFMAP and load template 6\_Implementing Treatments.mxt:



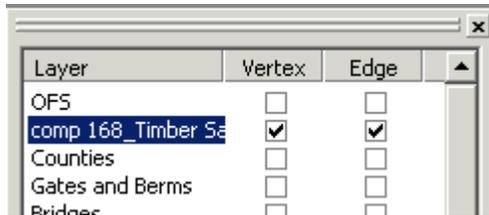
- 4) Now add the shapefile you copied into your M Drive as a layer in your project and adjust its appearance as desired.



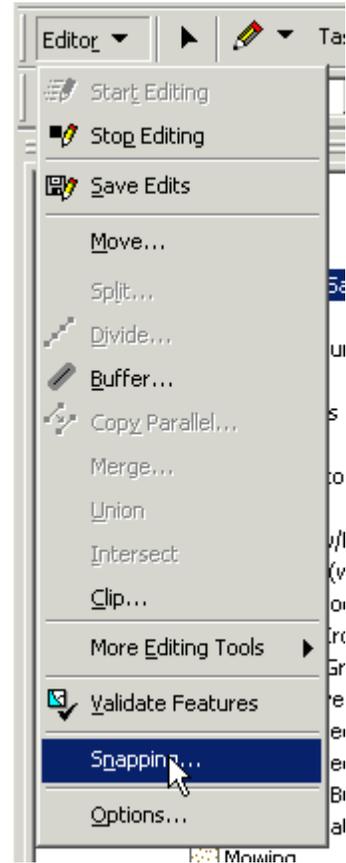
- 5) Start an edit session ensuring you choose the folder with treatments layer listed.
- 6) Make sure the Treatments layer is the only selectable layer using the selection tab.

7) Turn on “Snapping” so that while you are making an edit to the treatments layer, your cursor will automatically snap to the shapefile you are using as a reference.

- a. Click Editor | Snapping
- b. Check the vertex and Edge boxes to the right of your GPS Shapefile



(This will allow your cursor to snap to the line and vertices of the GPS boundary)



- c. On the editor toolbar change Target Layer to **Treatments**
- d. Change the Task to **Reshape Feature**



Before editing the treatment layer, be sure to check the GPS data, comparing it to what you’ve seen in the field. Remember, the 98 DOQ’s / 2009 NAIP imagery is still our “base”, regardless of what the GPS data tells you. Make the Treatment boundary match what is seen as evidence of treatment boundaries on the imagery. Anomalies (or “spikes”) in the GPS data should be corrected / ignored when modifying the treatment boundary.

8) Begin reshaping the treatment layer to match the GPS boundary by clicking on the sketch tool (see above, looks like a pencil) on the editor toolbar.

- 9) Using the sketch tool, click either inside or outside of the treatment layer where the GPS boundary intersects the perimeter of the treatment layer. This will begin a reshape of the perimeter of the treatment layer. Continue following the GPS boundary and click often enough to make a smooth treatment line. It is often best to reshape the treatment layer in small chunks at a time. To end a reshape or "sketch" double click.



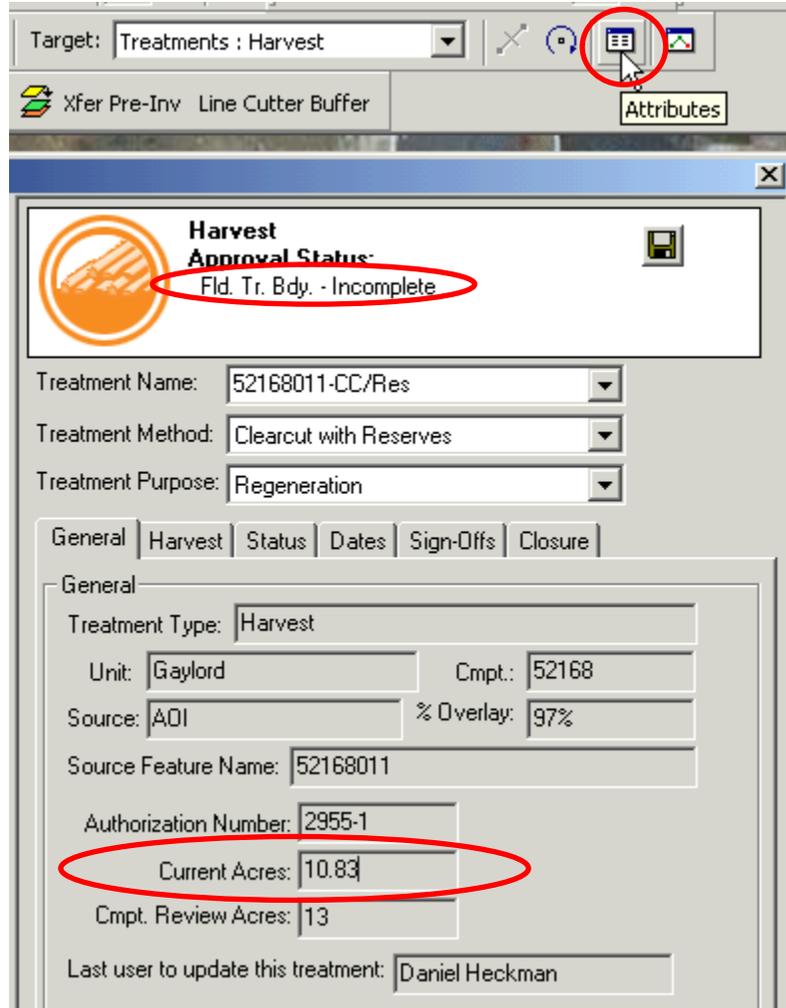
- 10) After a reshape has occurred the treatment layer should closely match the GPS boundary as shown above. Continue the reshaping procedure until the treatment layer is a close representation of what the GPS boundary shows. The rule of thumb is to reshape until the acreage of the treatment layer shape matches the GPS acres, rounded to the nearest acre.



11) Acreage of the treatment can be verified using the "Report feature in

acres tool" , the measure tool (measure a feature) or by using the Attribute editor.

12) When edits to the treatment layer shape are complete, be sure to **save edits**.



### Treatment Attribute Edits

At the point of "Field Treatment Boundary - Incomplete" most edits to the attribution involve adding of additional notes (to "Next Steps" or the "Work Status Comments"). Other more significant (following the "OI - Chapter 7" process) updates could also be needed to coding. The list below describes the attribute edits that may occur:

**Minor Changes** – Add this information as it becomes available.

**Site Conditions** – includes any change or removal from Compartment Review. Make spatial changes in the Site Conditions layer and use the 'Refresh Site Conditions' button in the attribute editor to update the Treatments attributes. (See Chapter 16 and Appendix O for details.)

**Treatment Method (for types other than 'Harvest')** – Insignificant for some Treatment types (Seeding by machine vs. by hand). Any change in a Harvest Method is significant.

**Adding or modification to Treatment Type specific attributes** (on Tab 2 of the Interface)

**Harvest:** Proposal ID from TSALE (use the 9 digit code, no spaces, zeros for place-holders).

**Prescribed Burn:** 'Substrate' and 'Vegetation' burn severity.

**Planting:** row/tree spacing, bare-root/containerized, seed lot #, ('acres unplanted' should be filled in after Successful Completion)

**Seeding:** Pounds per acre and seed lot ('acres unplanted' should be filled in after Successful Completion)

**Pesticide:** Type, Uniformity, and Trade Name ('Act. Dose' should be filled in after Successful Completion)

**Treatment Start Date** – This attribute can be modified as needed for scheduling of work. If the Treatment type has resources allocated based upon an approved Plan-of-Work (e.g.-Timber Sales), it is very important to have this date accurate in the database.

**Treatment Purpose or Objective** – See Chapter 10 for descriptions. Chapter 15 describes how to make changes to the Objective. Purpose is editable within the attribute editor.

**Next Steps** – Additional comments are considered minor as long as they don't make significant changes to what was agreed to at the Compartment Review.

**Work Status Comments** – This field is an open comment field for keeping track of work progress as it is needed. Feel free to add comments as needed.

**Significant Changes** – Requiring a Post Compartment Review Modification process to be followed.

**Treatment Type** – This attribute isn't editable. Using a different Treatment type will require a new Treatment to be created. See Chapter 15 (Post Review Modifications).

**Treatment Method (for Harvests)** – Modifications to the Method could be significant (in the case of harvests for example). This is a significant change.

**Planting or Seeding 'Species'** – found on tab 2 of the Attribute Editor for these Treatment Types.

**Short term Covertypes Objective** - This is the 10 year covertypes objective for the Treatment area. If the objective changes, it is a significant change. Note: if the new objective is listed in the alternative acceptable species in "Next Steps", then it is not a significant change. See Chapter 15 for instructions on how to modify this field.

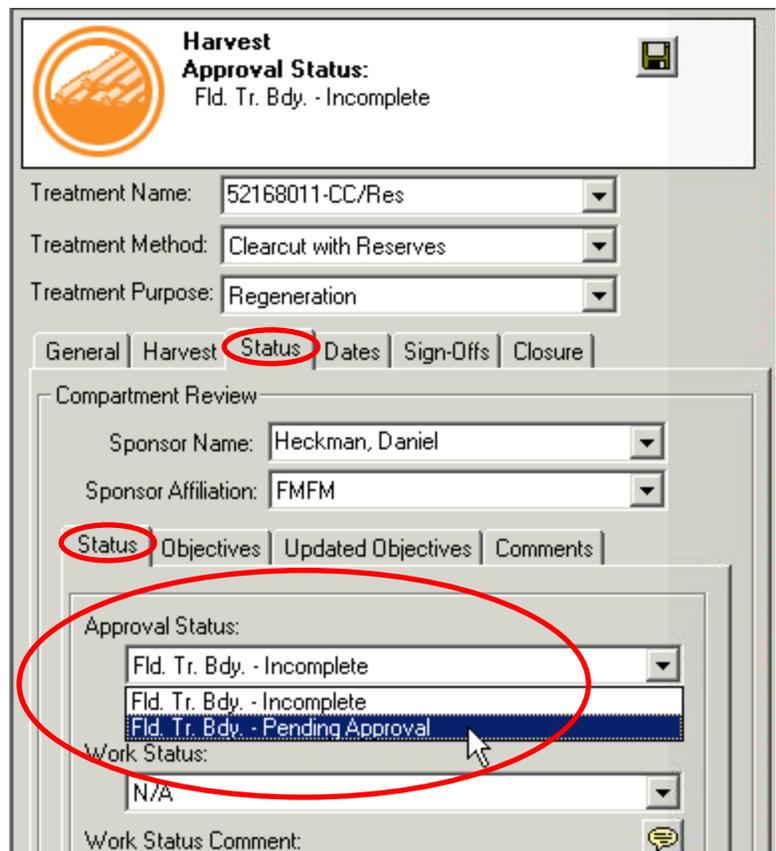
### Field Treatment Boundary – Pending Approval

Once field work is done to prepare the treatment area for work, the boundary should be modified (see above) to reflect any changes and attributes should be updated. In the case of harvests, this would be the point at which the sale boundary is done, and the Timber Sale Proposal has been drafted (see Appendix P - Timber Sale Preparation Check List). For all other Treatments, this is when a Forest Treatment Proposal (FTP) would be prepared.

Once the FTP or Timber Sale Proposal has been given to Co-Managers (Wildlife Biologist, Unit Mgr, etc.) for approval the Approval Status of the treatment needs to be updated. To do this:

- 1) Start IFMAP with Template #6\_Field Prep for Implementing Treatments.mxt
- 2) Start an edit session
- 3) Select the treatment using the selection tool
- 4) Open the Attribute editor  

- 5) Enter the Proposal ID (For timber sales only) under the Harvest Tab
- 6) Click on the Status Tab | Status Tab and forward the Approval Status to **"Field Treatment Boundary – Pending Approval"**.



The screenshot shows the IFMAP Attribute Editor interface for a Harvest treatment. The top section displays the Harvest icon and the Approval Status: Fld. Tr. Bdy. - Incomplete. Below this, there are dropdown menus for Treatment Name (52168011-CC/Res), Treatment Method (Clearcut with Reserves), and Treatment Purpose (Regeneration). The interface has several tabs: General, Harvest, Status, Dates, Sign-Offs, and Closure. The Status tab is selected and circled in red. Under the Status tab, there is a 'Compartment Review' section with dropdowns for Sponsor Name (Heckman, Daniel) and Sponsor Affiliation (FMFM). Below this, there are sub-tabs: Status, Objectives, Updated Objectives, and Comments. The Status sub-tab is selected and circled in red. In the Status sub-tab, there is an 'Approval Status' dropdown menu. The current selection is 'Fld. Tr. Bdy. - Incomplete', and the dropdown list is open, showing three options: 'Fld. Tr. Bdy. - Incomplete', 'Fld. Tr. Bdy. - Incomplete', and 'Fld. Tr. Bdy. - Pending Approval'. The 'Fld. Tr. Bdy. - Pending Approval' option is highlighted with a blue background and a mouse cursor is pointing at it. Below the Approval Status dropdown is a 'Work Status' dropdown menu with 'N/A' selected. At the bottom, there is a 'Work Status Comment' field with a speech bubble icon.

The Treatment Approval Status should remain at this status until the Timber Sale has a bid date, or the FTP has been approved. Once approved, the Attribute Editor should be used again to advance the Approval Status to **Field Treatment Boundary**.

Note: FTPs for Prescribed Burns are tracked somewhat differently in the system. Do not advance the status of a Prescribed Burn past "-Pending Approval" until the Burn has been funded and appears on the annual priority burn list. It is at this point that the Status can be forwarded to "Field Treatment Boundary".

Field Treatment Boundary is one of the Status points at which a snapshot is written into the Treatment History Layer. For the sake of maintaining an accurate record of history, it's important not to advance the status to this point prematurely. If this happens in error, contact the District Inventory and Planning Specialist, or the State Inventory Specialist for assistance.