

# NISIMS

## Collecting Field Data: Treatments

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Kathie Jewell

And now, Mark Coca will end up going over how do we take and put a treatment in.

Mark Coca

Thank you, Kathie. Yes, we'll go into treatments and how this data entry in the field is done.

**Treatment Events:** As I mentioned before, treatments can be collected as either points, lines, or polygons. And Kathie just mentioned a little bit ago that treatments must be conducted on an infestation that exists within the system. I'll talk to you a little bit more about that here in just a second. The five types of treatments that we'll be doing in the field are chemical, biological, fire, re-vegetation, and physical treatments.

**Adding a Treatment Event:** So to add a treatment into your handheld device here, first off you select the Add Treatment, and you can choose either a point, line, or a polygon, and these are identified by the 'T' series of icons on your toolbar - they're on the BLM toolbar. You can either digitize it on the screen or use the GPS. So in this case, we're going to do it as a digitized, and we're picking the point feature. So you digitize on the screen where your treatment point exists, and then, as Kathie mentioned earlier, there is a green arrow at the bottom of the screen, which takes you to the screens for your Attribute information and that is circled, in this case we don't see the green arrow, but it is circled at the lower part of your screen there in red. That is where the green arrow is to take you to the Attribute windows.

Now here is the **Attribute** screens for a treatment point, and, again, please remember to fill out each of the tabs completely before moving on to the next tab. As I mentioned earlier, there is an [TreatCp\_id] 'ID box' that is automatically filled in at the top of the

screen there on your right - that the system generates automatically so you do not need to worry about that.

The next block is the 'Start Date', and, again, this is automatically a default to the day that you are actually opening up the device. If that is today's date, then go ahead and click that box right there that is checked. And then also the next field is the 'Completion Date'. Similar, if you're completing your treatment on today's date, it'll be automatically filled in. Just click in the box there, and the system will accept that.

The next field is the 'Last Name' and earlier mention on collecting the infestation data, where the user can use the drop-down menu to find his or her last name. It is the same here and also on you 'First Name'. Use the drop-down menu to find who you are and also for the 'Office', which is your office code of where you are working.

The next field is the 'Role Name' field, and this is another drop-down menu that just kind of describes the type of work that you are doing or type of activity, whether you are an employee, whether you are a contractor, or something like that. Those are some of the choices for role name.

And the next field is the 'Project Name', and, again, this is a drop-down menu where we will have all of the offices submit their project names, and we can have this uploaded in the system. But it makes it easier to just have drop-down menus pulled down to your particular project.

The next two fields are the ones that are titled 'Buffer Radius' and 'Buffer Units'. Now I want you to realize that this is a search radius in a search so don't think of it as buffering a polygon or anything like that or buffering to a polygon. This allows the system to search for the infestations that are within the given buffer value that you have identified. So what you do is, you'll enter in a buffer radius of, let's say, 100, and then, in the Units, pick meters, yards--something, and the system will search for all the infestations that exist within that value, that 100 yards, on your screen.

**Infestation Tab:** Then the next tab is the Infestation tab where it lists all of the infestations that the system found within that buffer distance that you had identified. In this case, there is a single infestation of Leafy Spurge within a certain buffer radius, and, if this is the infestation that you are treating, you will check that little box to the left of the infestation ID number, which is 12402. There's a little box there so you check that, and it'll take you to the next screen.

Now something to note is when we have early detection and rapid response, we may not have a treatment in the system already so what the user should do is go in and enter an infestation real quickly, and then the system will accept that there is an infestation there and allow you to treat that particular infestation. Also remember that there may be multiple infestations of a single species in the area where you are working so make sure you choose the correct one.

**Treatment Tab:** Now the Treatment tab. This is the screen where it allows you to choose the type of treatment that you're conducting. In this case, you have five choices, either chemical, biological, fire, re-vegetation, or physical, and I'll go through those here in just a second. And also there is a menu there or a drop-down for the phenology, and this is the phenology of pretty much most of the species that you are treating. Obviously there's going to be a lot of ranges on an infestation, but pick the one that best fits.

**Chemical Input - Info1 Screen:** After you select your phenology, then you move on to the next tab, and I will show you that here in just a second. In this case, we have chosen Chemical so I'll show you how the screens are for a chemical treatment - an herbicide treatment.

First off, on this Info 1 screen under Chemical Input, are the 'Start' time. You enter in the time that the treatment was started and use the 24-hour format. There is also an 'End' time so the time that the treatment was completed, again, in a 24-hour format.

Next, there is a drop-down menu for the type of 'Equipment' that you used, whether that be a backpack, an ATV, or pickup sprayer or whatever it may be, and then the 'PUP' number - the Pesticide Use Proposal number. This is another drop-down menu that will all be automatically loaded in the system, to make it easier for you to choose.

The next field is the 'Carrier Name' so you choose the type of fluid that is in the tank as your carrier. And then the next two fields are the 'Carrier Volume' and the 'Carrier UOM' - unit of measure for that particular liquid. In this case, we have one gallon of water, that is our carrier.

The next two fields are the 'Calibration Rate' and the 'Calibration Rate Unit of Measurement'. This is the calibration rate of your spray equipment, whether that be a backpack or an ATV or a pickup - whatever it may be. So please enter in the actual calibration rate that you have checked on your equipment.

**Chemical Input - Info2 Screen:** On the Info 2 screen are the 'Delivery' and 'Coverage Pattern'. I'll just describe those real quick. The Delivery is how the herbicide or the pesticide was applied, whether that be a ground or an aerial application. And the Coverage Pattern is a type of whether it was a broadcast or a spot-type treatment. And, again, those are drop-down menus, to make it easier for you to choose.

And the next few fields are for the environmental conditions at the time of your chemical treatment. The first one is the 'Temperature', and enter this - this is the air temperature in degrees Fahrenheit.

The next one is the 'Wind Direction'. And please note that this is the direction that the wind is coming from. So when you enter your value in, it's where the wind is coming from in cardinal directions.

Next is the 'Wind Speed', and that is listed in miles per hour. There's also a 'Relative Humidity', and then a 'Distance to Water' that just tells us how close the treatment occurs within some kind of a water source.

**Chemical Input - Chem1 Screen:** The next one is the Chemical 1 screen, as you can see here. This allows you to enter in the actual pesticide information that you are applying. So first off, we'll start off with 'Trade Name'. In this case, we have chosen 2,4-D Amine, and the 'Manufacturer' is DuPont for this particular product.

And the next choices are the 'Pesticide Amount' and the 'Unit of Measure' for that particular volume. This is just asking, for instance, on a spot treatment how much estimated pesticide you have applied on the ground at that particular spot.

And the next two fields are the 'Application Rate' and the 'Application Rate Unit of Measurement'. This is the application rate as listed on your pesticide label so make sure you look at this correctly. This is the value that is used later on so, again, always pay attention to your pesticide label.

**Chemical Input - Adju1 Screen:** Now we have what's called Adjuvant 1 screen. This allows you to enter in other products that you have added to your spray mix, to aid in your herbicide treatment, whether it may be a dye or a surfactant or a non-foaming agent - something like that - real simple. Again, there are 'Trade Names' and drop-down menus so open up the drop-down menu and select the adjuvant that you are using and then also the 'Application Rate' as listed on that particular label.

**Chemical Input - Chem2 Screen:** We have the Chemical 2 screen. Many people ask, "Well, how do we account for tank mixes?" Well, this is what we have done, we have this Chemical 2, and we also have a Chemical 3, 4, and 5 screens, which allows you to add up to a total of five active ingredients or pesticides in your treatment here. The process is exactly the same as I mentioned before on the Chemical 1. Select a new 'Trade Name' and the 'Manufacturer' and 'Pesticide Amount' and the 'Application Rate'

and so forth. This allows you to enter in a tank mix. And also we have the ability to enter in additional adjuvants as well, for a total of five adjuvants - two, three, four, and five. So you may have a dye and a surfactant and maybe a non-foaming agent, a pH balance, or something like that so this allows you to enter in all of those. And that is primarily the chemical treatment.

**Biological Treatment:** Next we have a Biological Treatment. And, at the first screen, when it asks you for the choices, whether it's chemical or biological - if you selected biological and selected your phenology, it would take you to this screen - the Bio 1 screen

**Biological Treatment - Bio1 Screen:** And it's similar to the same thing. The 'Treatment ID' is always chosen for you. You don't have to worry about that.

The next is a drop-down menu, or the 'Biological Proposal Number' - the BCARP number.

The next one is the 'Species Code'. This is the biological agent that you are applying to the site. And, as Kathie mentioned earlier, you can choose between either the code, or, in this case, the 'Scientific Name'. And either one will fill in the other one. So this is how you can do this, it's the same thing here. These are automatically populated this way.

The next field is the 'Number Release'. This is the number of agents that you have released on that particular site. And the next one is the 'Life Stage' of those particular agents that you applied to the site, whether it's a larva, an egg, an adult, and so forth.

And then the next screen there, or the next field, is the 'Protection Method'. Now this is what you are doing, if anything, to protect those biological agents on that particular site, whether you put up a little tent to protect them from predators or just put a sign up that says you have applied biological agents and so forth. And, again, as I said before,

make sure you fill out all the fields before you move on to the next tab.

**Biological Treatment - Bio2 Screen:** The Bio 2 screen allows you to enter in the environmental conditions at the time of treatment, similar to the chemical treatment. Again, we have the 'Wind Direction', and this is the direction that the wind is coming from. The 'Wind Speed', which is, again, captured in miles per hour. The 'Temperature' is the air temperature in degrees Fahrenheit at the time of treatment. And then also the soil conditions or the 'Soil Texture' of that particular site where you're applying them. And there's a drop-down menu for all the choices. And when you are done entering all the biological things, you click on the green OK button at the lower left part of your screen, and that will finish your biological treatment.

**Fire Treatment:** As you can see here on the Treatment Point screen, at the upper part of the thing there, if you chose fire as your treatment and select phenology, it will bring up this next screen, which allows you to enter in the 'Burn Intensity', and there's a drop-down menu there as well, whether it's high, low, medium, and so forth. And then also the 'Fuel Model' of the vegetation that you burned at the time of treatment. Again, it's another drop-down menu, and these are the classes that are listed as part of our normal fire program and fields program. When you are done with that, click the green OK button at the lower left part of the screen, and that completes your fire treatment information or data.

**Re-Vegetation Treatment:** Next is Re-vegetation. This is re-vegetating a site to control against some kind of target species. When you choose the Re-vegetation option, it brings you to this Re-vegetation screen - a one-page screen. Again, there's a 'Treatment ID' that is filled in by the system automatically.

And then the first field is an 'Overall Re-vegetation Rate'. Now this is just the numeric value of what you are re-vegetating with, whether it's a seeding or planting trees or whatever it is. So put in the numeric value. And then the next option is the 'Overall Re-vegetation Unit of Measure', and this is where you put in the units, whether you are

planting number of pounds of seed per acre or number of trees per acre or seedlings or whatever it may be. And then choose the 'Equipment' that you are doing to perform this re-vegetation, if it's some kind of mechanical method.

And then, the next option is the 'Phenology'. This is the phenology of the things that you are planting with or re-vegetating with, whether that be seed or seedlings. And you can see there's another drop-down menu that you can choose from. And when you are done with the re-vegetation treatment, click your OK button, and that will complete your re-vegetation treatment information.

**Physical Treatment:** And then, the last treatment type we have is Physical Treatment. And when you select Physical Treatment on the screen there, it brings up these other two options, whether that be 'Mechanical' or 'Manual'. And, again, there's drop-down menus. The big difference between mechanical and manual is, mechanical is if you are riding on or in or operating some kind of mechanized equipment. And manual is primarily using some kind of a hand tool or your own hands to do the physical removal of the plant species. So pick the most appropriate one there. Again, choose the phenology of your target species. And, when you are done, click the green OK button, and you are now completed with your treatments.

Now as I've mentioned, I've shown you for all of points. The procedure for doing a treatment line and/or a treatment polygon is primarily the exact same way. Just go through the same type of screens. The system will capture it just in a different manner, and that is primarily it. And then you are done with your treatments.

Next, we will talk about treatment evaluations, and I think Kenny Keever is up next.

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