

Building Base Layers for Constructing **Alternative C** VDDT strata and timber suitability in the Blues Forest Plan Revision, 2-2011, B.Countryman

This paper summarizes the draft process for constructing a GIS layer to use in building initial vegetation conditions to import into the VDDT model. The initial conditions will also be used in the wildlife BBN and watershed ARCS modeling process. The VDDT model will be used to model the future landscape conditions that would be created by the alternative scenarios in the forest plan revision EIS.

The following layers were used to build the existing condition for alternative C:

- Existing vegetation polygon (contains structure, density, species composition, potential vegetation, size class), see special instructions for Malheur veg layer
- Proposed action management area
- LTA soils
- Updated inventory of roadless areas
- 2001 roadless inventory (RACER)
- Administrative forest boundaries
- Stream buffer (Arcs)
- CWPP WUI
- HUC 6 and/or HUC5 layers
- Ownership?

Timber Suitability: The first step in building the IC layer was to classify the above combined layers into a map dividing the land into timber suitability groups (which will help develop the VDDT strata). Some of those suitability classes can change between alternatives and others will stay the same. The first step in the 1982 timber suitability process, and the one that doesn't change, is called "step A". Using the part/step A data and constructing a new layer of just this information will allow us to use this layer as building block for each of the EIS alternatives. The timber suitability data is located within the following Access databases:

- Mal 2010 timbersuit part A and VDDT classes
- UMA 2010 timbersuit part A and VDDT classes
- WAW 2010 timbersuit part A and VDDT classes

The following codes are contained in the 82 rule suit field that was based on the NFMA basic requirements for timber suitability; this is called timber suitability "part A" (see basic timber suitability process paper for classification logic for "part A):

82 rule suit (part A)
part A unsuited non-conifer
part A unsuited regen problem

82 rule suit (part A)
part A unsuited soil regen
part A unsuited wilderness

Steps for developing a base VDDT/timber suitability layer for each alternative:

1. Start with each forest's existing vegetation polygon layer (include vddt class, PVG, slope, aspect, stand tag). For the Malheur we need to retain the unique identifier for each of the polygons in the final veg layer.
2. Overlay new timber suitability "part A" layer
3. Overlay the **alternative C** management area map
4. Overlay the riparian management area map (widths for this alt were widened to 600 ft in some cases.. (see Dee's process for GIS)
5. Overlay forest/ownership
6. Overlay Watershed/subwatersheds
7. Overlay the RACER /inventory map

Classification order for final timber suitability calls:

Step1. Update **wilderness** polygons to timber suitability code 1 (unsuited for timber production or harvest)

Step2. Update any polygon not already code for timber suitability, but coded in the suitability "part A" field as **non-forested**; code to timber suitability 1.

Step3. Any timber suitability null polygon with a non-null timber **suitability part A** call; code as timber suitability 2 (unsuited for timber production but suitable for timber harvest).

Step4. Update any null timber suit polygons, with a non-null value in the riparian management area column to timber suitability 2.

Step5. Update any null timber suit polygons, with a VDDT structural stage code equal to **old forest**, to suitability code "2".

Step6. Use the management area lookup table for each forest to classify any polygon with a null timber suitability code, and a **management area classification** as unsuited for timber production, to suitability code 2. See tables at end of this document.

Step7. Any remaining null polygons are coded to "3", suitable for timber production.

Step8. Check for any RACER areas in active management areas and update to roadless strata.

Classification of polygons into VDDT modeling strata

- **Wilderness.** Management area 1a, 1b and 1c (see cross-walk).
- **Roadless/riparian/old forest.** See following management area cross-walk. Also include 2b research natural areas. Because of assumptions of low levels of treatment for old forest and riparian, include them in this strata
- **Reserved.** Defined as Management area 2, 5, and wildlife corridor areas (ma3C). Timber suitability class 2 (suited for timber harvest but not production).
- **Active** Defined as timber suitability class 3 (suitable for timber production and harvest)

VDDT Strata Classification Order:

Step1: Wilderness management area (or PARWA) = VDDT Wilderness strata

Step2: Anything in MA crosswalk table in strata field coded as roadless = VDDT strata roadless

Step3: Active strata from MA table but coded as riparian management area from timber suitability database = recode as roadless strata.

Step4: Active strata from MA crosswalk table but coded as old forest from VDDT structure field = recode as roadless strata.

Step 5: Management area 3C (corridor) code as VDDT strata reserved.

Step6: Use MA crosswalk table and update any remaining null values to lookup final strata call

Management area crosswalk tables (crosswalk to initial suitability as per Alternative C)

VDDT management area strata crosswalk		
management area	final strata	ma desc
1a	wilderness	wilderness
1b	wilderness	proposed recommended wilderness
1c	wilderness	wilderness study
2a	reserved	wild and scenic river
2b	roadless	RNA
2c	reserved	botanical area
2d	reserved	geologic area
2e	reserved	historic area
2f	reserved	scenic byway
2g	reserved	National trail
2h	reserved	Designated scenic area
2i	reserved	Experimental forest
2j	reserved	Municipal watershed

VDDT management area strata crosswalk		
management area	final strata	ma desc
3a	roadless	non-motorized
3b	roadless	limited motorized
3c	reserved	wildlife corridor
4a	active	general forest
4b	roadless	riparian mgmt area
4c	roadless	old forest
4d	reserved	big game winter range
4e	reserved	wildlife/fish emphasis
4f	reserved	scenic
hcnra	hcnra	hcnra
5	reserved	administrative