

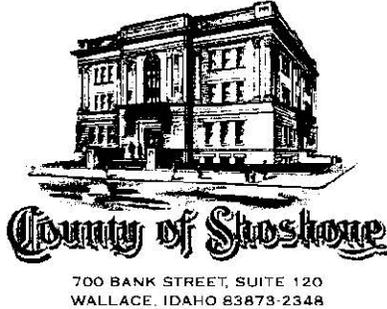
Attachments - Mullan Forest Health Collaborative Project

COMMISSIONERS:

VINCE RINALDI, District 1
LARRY YERGLER, District 2
JON CANTAMESSA, District 3

email: bocc@co.shoshone.id.us

Office Phone: 752-3331
Fax: 752-4304



PEGGY WHITE, CLERK DISTRICT COURT
AUDITOR and RECORDER

email: pwhite@co.shoshone.id.us

Office Phone: 752-1264
Fax: 752-1896

November 3, 2011

Larry Kaiser
Supervisory Forester
Coeur d'Alene District Office
3815 Schreiber Way
Coeur d'Alene, ID 83815

Dear Larry:

I am writing on behalf of the Shoshone County Forest Health Collaborative regarding the project north and south of the city of Mullan that we have all been working on for several months. First, let me thank you for all of your efforts in cooperating with us to outline a viable project for our collaborative to develop.

Our request with this letter is that you proceed with the scoping and subsequent process as soon as possible with the goal of having the project ready to implement during the next field season. I will outline our suggestions on how to design the project.

Our first and main objective is to protect the citizens in and around Mullan from fire in the surrounding forests. The selected prescription should maximize fire protection for the citizens. We would suggest that efforts be made to promote forest health with all decisions. Trees removed should leave a fire resistant forest with as many trees remaining as possible. The city of Mullan is also concerned about scenic qualities around the community. Our discussion suggests that priority should be given to encouraging re-growth of the specific species of white pine, ponderosa pine, western larch, and cedar. These species are resilient to the conditions that exist in our county and represent native species historically.

We are concerned about promoting forest health with emphasis on habitat, water quality, and restoration where it can reasonably be incorporated with the fire protection prescription. We would support a balanced prescription that is developed by enhancing current conditions. This is, let the present forest conditions lead you to the best practices prescription. We would ask that you not restrict

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Larry Kaiser
Page 2

your judgment on the ground by including hard targets such as strict spacing requirements or specific tree diameter criteria. We do not believe predetermined rigid prescriptive limits are desirable.

Another priority for the collaborative is protection of infrastructure. The Avista power line to the community and to the Lucky Friday mine, water tanks on the north side, and bridges are examples. Any road construction or rehabilitation should be planned to provide optimum future access to fight a wildfire and keep firefighters safe.

The project should be designed to generate adequate revenue to make the project self-funding as well as to provide for stewardship work to protect infrastructure, construct bridges substantial for fire vehicle traffic, provide stream restoration opportunities, as well as other restoration that may be possible.

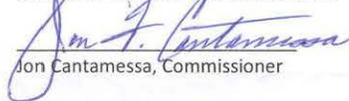
Efforts should be made to leave as many large trees as possible, consistent with the applicable forest types, in developing the prescription. Our expectation would be to create a fire resistant forest with maximum opportunity to promote excellent future forest health.

We discussed the preference to utilize local contractors as much as is possible when contracting projects to benefit the local economy. We would also suggest the project utilize any opportunity to use biomass beneficially to either the community or the environment.

We look forward to the opportunity to comment further as you develop this worthwhile project.

Sincerely,

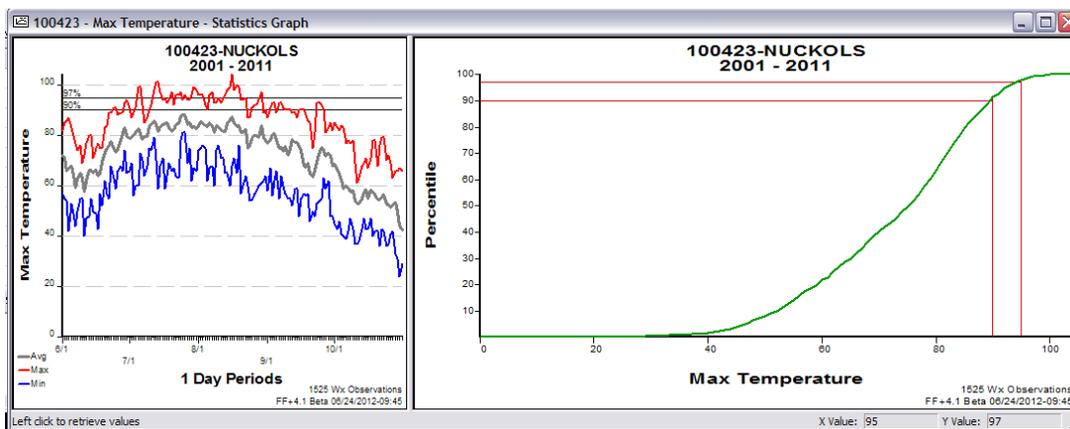
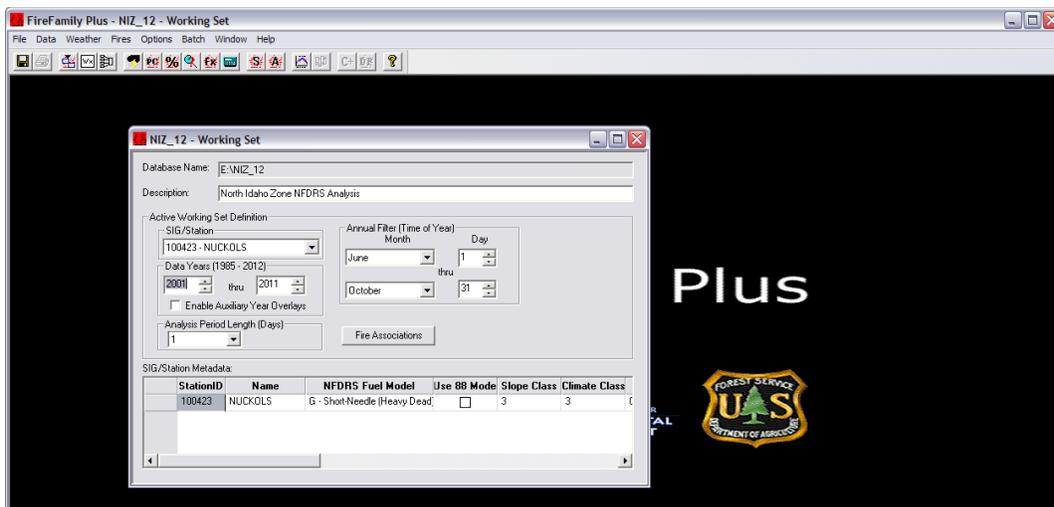
BOARD OF COUNTY COMMISSIONERS


Jon Cantamessa, Commissioner

Fire/ Fuels Weather and Fire Behavior Analysis Mullan Forest Health Collaborative

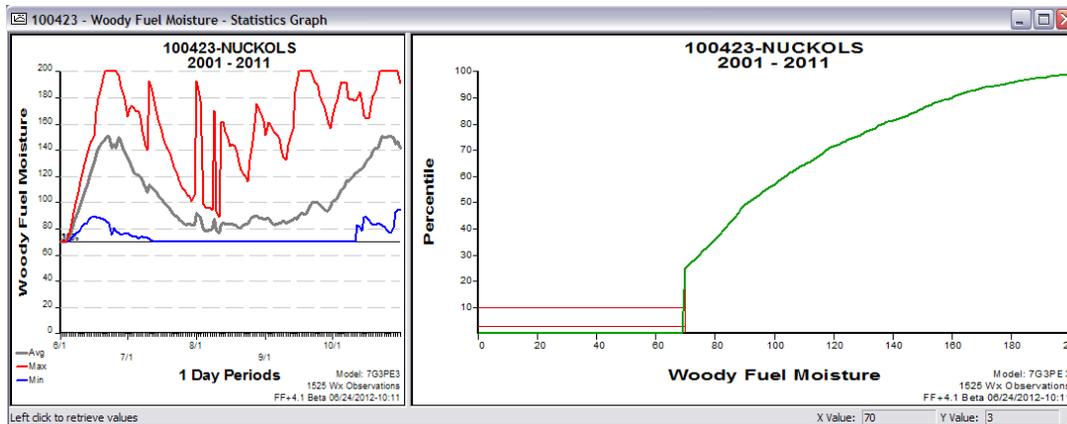
*Lonnie Newton
Fire Ecologist
BLM, Coeur d'Alene Field Office*

Fire Family Plus software used to analyze weather inputs from the closest weather station to obtain inputs for fire behavior modeling. The dataset used encompasses the last ten years of weather data for the north Idaho fire season (6-1 through 10-31). Nuckols weather station was used, located north of Silverton, Idaho, approximately 7 miles from the project area.

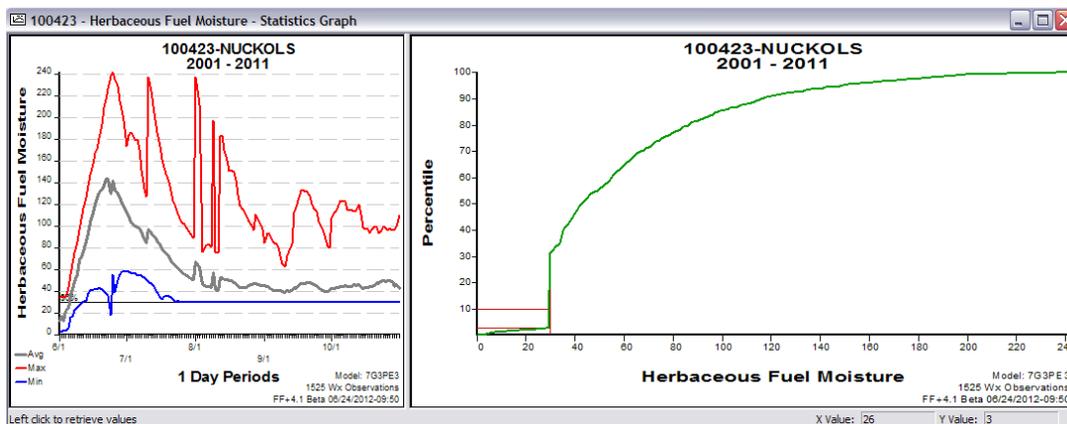


97th percentile Max temperature = 95 degrees.

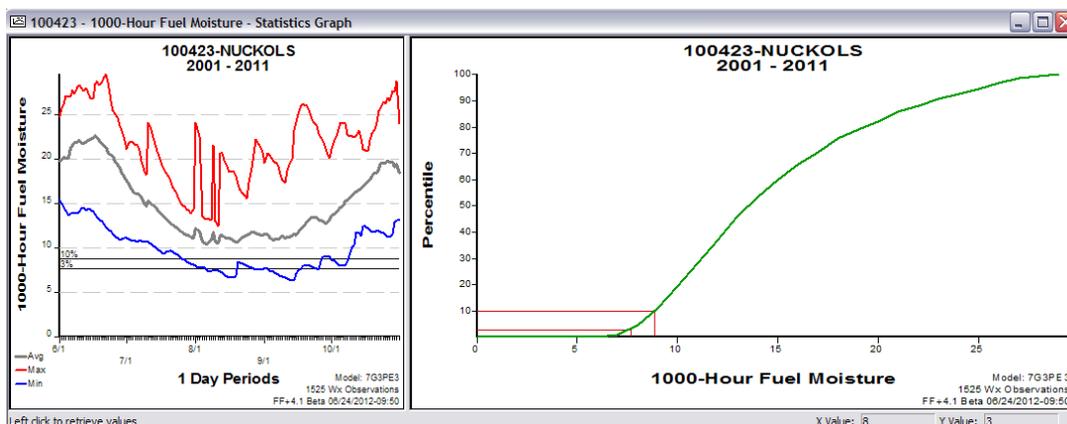
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97th percentile Woody Fuel Moisture = 70%

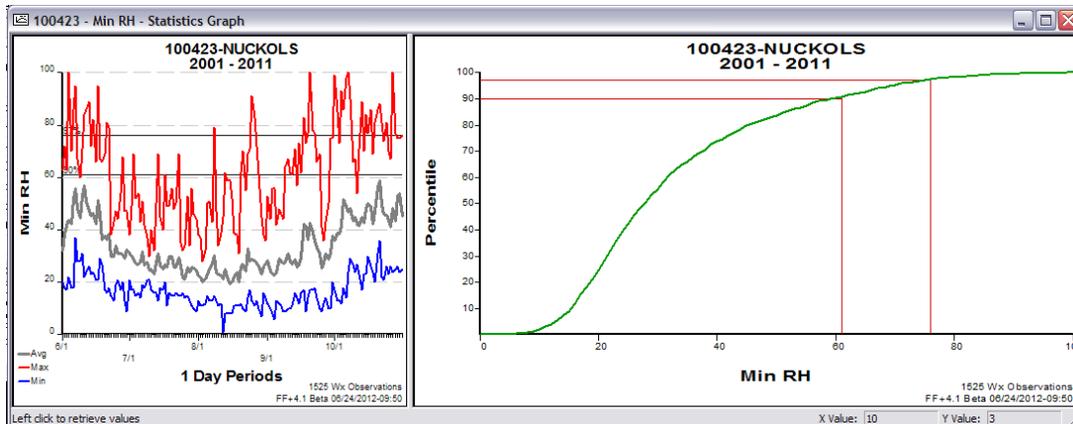


97th percentile Herbaceous Fuel Moisture = 26%

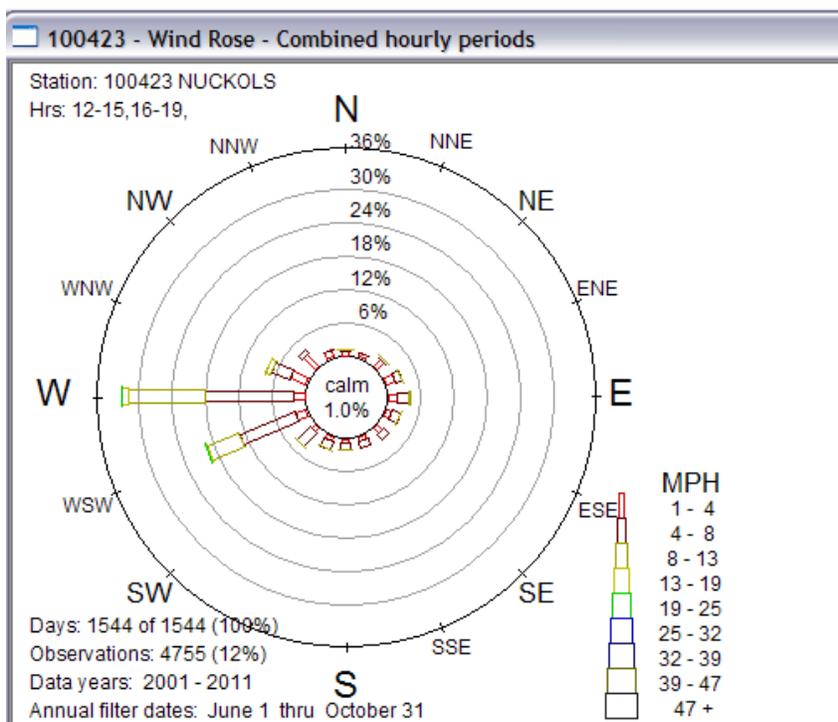


97th percentile 1000-hour Fuel Moisture (calculated) = 8%

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97th percentile Minimum RH value= 10%



Wind analysis for the data shows predominate wind direction is west/ south west with 10 minute average wind speeds during the burning period going as high as 25 mph. Typically gusts achieve 50-75 mph with such events. Fire Family Plus and RAWS do not have the ability to accurately capture data associated with wind gusts.

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BehavePlus Analysis:

No Action, inputs for lodgepole pine stand in Mullan project area:

Inputs: SURFACE, CROWN

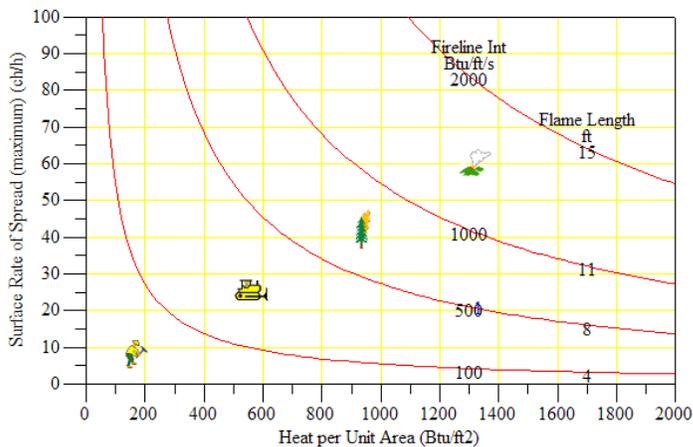
Description	Lodgepole pine stand, Mullan Project Area	
Fuel/Vegetation, Surface/Understory		
Fuel Model		10
Fuel/Vegetation, Overstory		
Canopy Base Height	ft	4
Canopy Bulk Density	lb/ft ³	0.019
Fuel Moisture		
1-h Moisture	%	6
10-h Moisture	%	7
100-h Moisture	%	8
Live Herbaceous Moisture	%	
Live Woody Moisture	%	70
Foliar Moisture	%	30
Weather		
20-ft Wind Speed (upslope)	mi/h	25
Wind Adjustment Factor		.3
Terrain		
Slope Steepness	%	45

Outputs:

Lodgepole pine stand, Mullan Project Area

Surface Rate of Spread (maximum)	21.8 ch/h
Flame Length	8.1 ft
Critical Surface Flame Length	1.6 ft
Transition to Crown Fire ?	Yes
Fire Type	Crowning

Lodgepole pine stand, Mullan Project Area
Fire Characteristics Chart



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Proposed Action, Alternative 1, Inputs for lodgepole pine stand in Mullan project area:

Inputs: SURFACE, CROWN

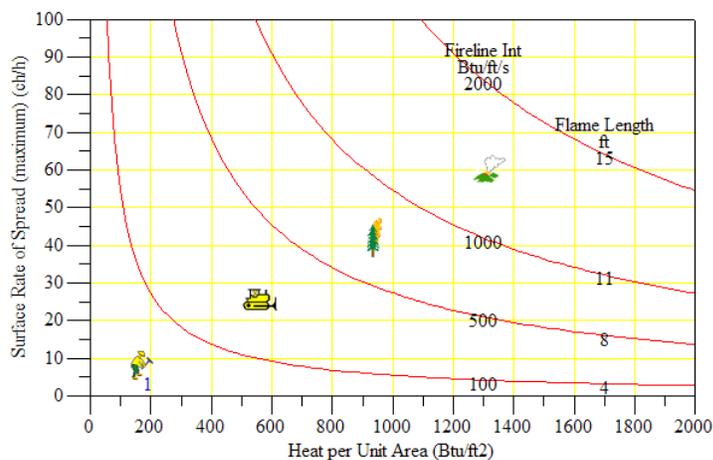
Description	Lodgepole pine stand, Mullan Project Area	
Fuel/Vegetation, Surface/Understory		
Fuel Model		8
Fuel/Vegetation, Overstory		
Canopy Base Height	ft	8
Canopy Bulk Density	lb/ft3	0.006
Fuel Moisture		
1-h Moisture	%	6
10-h Moisture	%	7
100-h Moisture	%	8
Live Herbaceous Moisture	%	
Live Woody Moisture	%	70
Foliar Moisture	%	30
Weather		
20-ft Wind Speed (upslope)	mi/h	25
Wind Adjustment Factor		.3
Terrain		
Slope Steepness	%	45

Outputs:

Lodgepole pine stand, Mullan Project Area

Surface Rate of Spread (maximum)	4.2 ch/h
Flame Length	1.5 ft
Critical Surface Flame Length	2.7 ft
Transition to Crown Fire ?	No
Fire Type	Surface

Lodgepole pine stand, Mullan Project Area
Fire Characteristics Chart



Attachments - Mullan Forest Health Collaborative Project

Proposed Action, Alternative 1, Inputs for lodgepole pine stand with 50 mph winds in Mullan project area:

BehavePlus 5.0.1 Sun, Jun 24, 2012 at 10:47:08 Page 1

Inputs: SURFACE, CROWN

Description: lodgepole pine stand w treatment and 50 mph winds.

Fuel/Vegetation, Surface/Understory

Fuel Model: 8

Fuel/Vegetation, Overstory

Canopy Base Height: 8 ft

Canopy Bulk Density: 0.006 lb/ft3

Fuel Moisture

1-h Moisture: 6%

10-h Moisture: 7%

100-h Moisture: 8%

Live Herbaceous Moisture: 100%

Live Woody Moisture: 70%

Foliar Moisture: 30%

Weather

20-ft Wind Speed (upslope): 50 mi/h

Wind Adjustment Factor: .3

Terrain

Slope Steepness: 45%

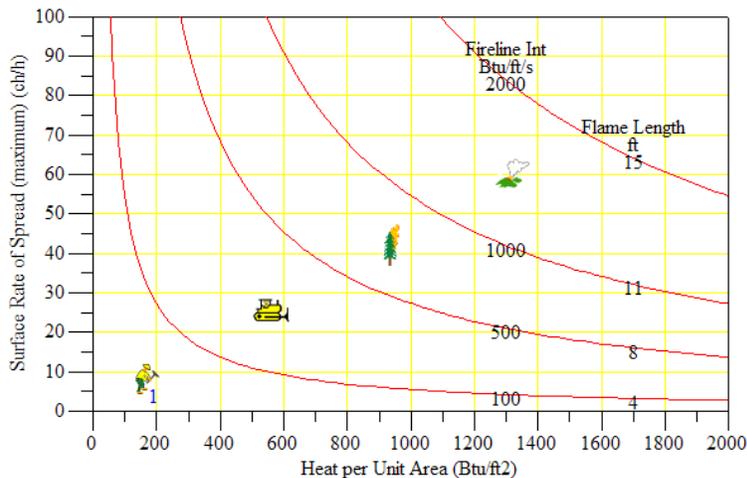
Outputs:

lodgepole pine stand w treatment and 50 mph winds.

Surface Rate of Spread (maximum)	4.9 ch/h
Flame Length	1.6 ft
Critical Surface Flame Length	2.7 ft
Transition to Crown Fire ?	No
Fire Type	CondCrown

lodgepole pine stand w treatment and 50 mph winds.

Fire Characteristics Chart



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No Action, inputs for ponderosa/ Douglas fir stand in Mullan project area:

Inputs: SURFACE, CROWN

Description: Ponderosa/ Douglas fir stand, Mullan Project Area

Fuel/Vegetation, Surface/Understory

Fuel Model: 9

Fuel/Vegetation, Overstory

Canopy Base Height: 4 ft

Canopy Bulk Density: 0.019 lb/ft³

Fuel Moisture

1-h Moisture: 6%

10-h Moisture: 7%

100-h Moisture: 8%

Live Herbaceous Moisture: [highlighted]

Live Woody Moisture: 70%

Foliar Moisture: 30%

Weather

20-ft Wind Speed (upslope): 25 mi/h

Wind Adjustment Factor: 1.3

Terrain

Slope Steepness: 45%

Outputs:

Ponderosa/ Douglas fir stand, Mullan Project Area

Surface Rate of Spread (maximum) 19.4 ch/h

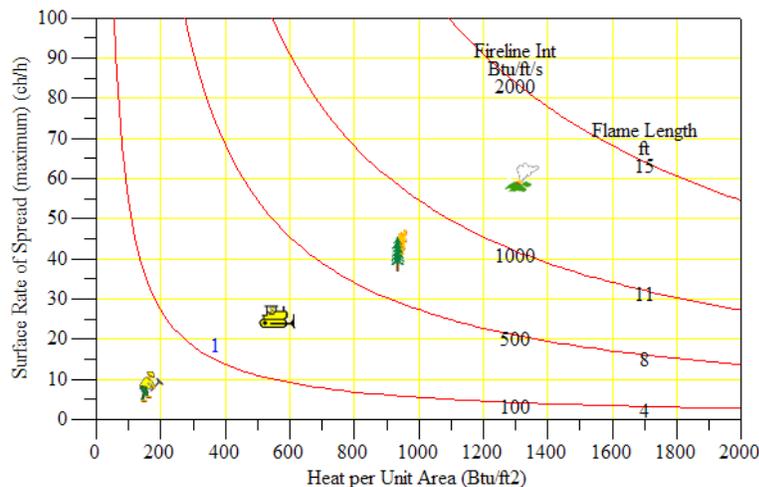
Flame Length 4.3 ft

Critical Surface Flame Length 1.6 ft

Transition to Crown Fire ? Yes

Fire Type Crowning

Ponderosa/ Douglas fir stand, Mullan Project Area
Fire Characteristics Chart



Attachments - Mullan Forest Health Collaborative Project

Proposed Action, Alternative 1, inputs for ponderosa/ Douglas fir stand in Mullan project area:

Inputs: SURFACE, CROWN

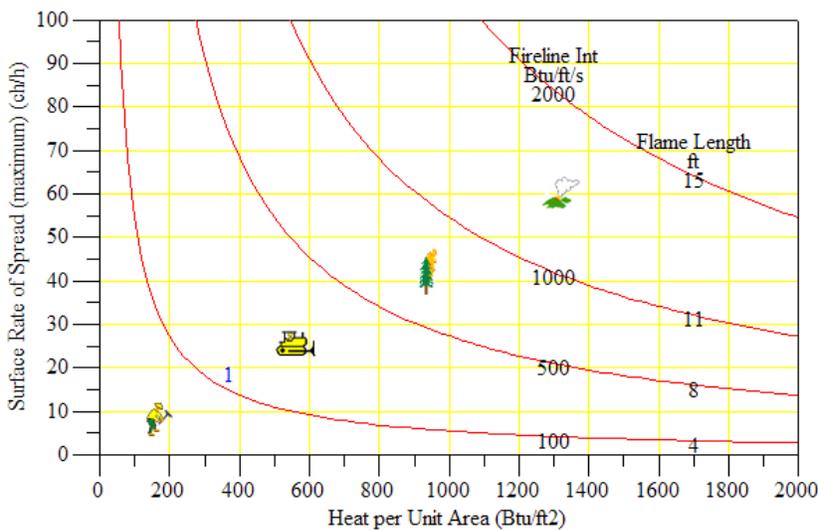
Description	Ponderosa/ Douglas fir stand, Mullan Project Area	
Fuel/Vegetation, Surface/Understory		
Fuel Model		9
Fuel/Vegetation, Overstory		
Canopy Base Height	ft	16
Canopy Bulk Density	lb/ft3	0.006
Fuel Moisture		
1-h Moisture	%	6
10-h Moisture	%	7
100-h Moisture	%	8
Live Herbaceous Moisture	%	100
Live Woody Moisture	%	70
Foliar Moisture	%	30
Weather		
20-ft Wind Speed (upslope)	mi/h	25
Wind Adjustment Factor		.3
Terrain		
Slope Steepness	%	45

Outputs:

Ponderosa/ Douglas fir stand, Mullan Project Area

Surface Rate of Spread (maximum)	19.4 ch/h
Flame Length	4.3 ft
Critical Surface Flame Length	4.3 ft
Transition to Crown Fire ?	No
Fire Type	Surface

Ponderosa/ Douglas fir stand, Mullan Project Area
Fire Characteristics Chart



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Silviculture Prescription Table

Unit #	Unit Acres	Stand #	FORVIS #	Stand Acres	Existing Vol/ac (MBF)	Leave Vol/ac (MBF)	Cut Tot/Vol (MBF)	Harvest/Vol (MBF)	Silvicultural Prescription	Tree Spacing	Special Requirements
1	10	1	CDMULL2330	9	9.8	3.9	5.9	53	cut all trees < 15" dbh	55 x 55	
1 a		1	CDMULL2330	1	9.8	2.8	7.0	7	cut all trees < 16" dbh	60 x 60	Feather Edge
2	45	2	CDMULL2330	15	9.8	3.9	5.9	89	cut all trees < 15" dbh except PP	55 x 55	
		3	CDMULL0770	5	10.9	6.2	4.7	24	cut all trees < 21" dbh except PP	65 x 65	
		4	CDMULL2370	25	15.9	8.8	7.1	178	cut all trees < 17" dbh	45 x 45	
3	26	6	CDMULL2370	22	15.9	8.8	7.1	156	cut all trees < 17" dbh	45 x 45	
3 a		6	CDMULL2370	4	15.9	5.2	10.7	43	cut all trees < 19" dbh	60 x 60	Feather Edge
4	32	8	CDMULL2360	11	5	2	3	33	cut all trees < 19" dbh	60 x 60	
		9	CDMULL0860	21	25.2	8.4	16.8	353	cut all trees < 17" dbh	40 x 40	
5	5	5	CDMULL2370	5	15.9	8.8	7.1	36	cut all trees < 17" dbh	45 x 45	
6	12	7	CDMULL0780	12	20.5	11.6	8.9	107	cut all trees < 17" dbh	35 x 35	
7	5	9	CDMULL2370	4	15.9	8.9	7	28	cut all trees < 16" dbh	50 x 50	
7 a		1	CDMULL2370	1	15.9	0	15.9	16	cut all trees	70'	Powerline R/W
8	7	11	CDMULL1600	7	36.6	21.1	15.5	109	cut all trees < 16" dbh	35 x 35	
9	49	12	CDMULL2560	41	26.9	9	17.9	734	cut all trees < 14" dbh	35 x 35	
9 a		12	CDMULL2560	5	26.9	5	21.9	110	cut all trees < 17" dbh	60 x 60	Feather Edge
9 USFS		13	CDMULL1760	3	24.3	9	15.3	46	cut all trees < 19" dbh	55 x 55	
10	22	14	CDMULL2550	18	21.7	6.2	15.5	279	cut all trees < 15" dbh	50 x 50	
10 a		14	CDMULL2550	3	21.7	2.2	19.5	59	cut all trees < 18" dbh	65 x 65	Feather Edge
10 USFS		14	CDMULL2550	1	21.7	6.2	15.5	16	cut all trees < 15" dbh	50 x 50	
11	43	15	CDMULL2550	28	21.7	6.2	15.5	434	cut all trees < 15" dbh	50 x 50	
		16	CDMULL1810	11	13.6	6.7	6.9	76	cut all trees < 16" dbh	50 x 50	
11 a		15	CDMULL2550	3	21.7	2.2	19.5	59	cut all trees < 18" dbh	65 x 65	Feather Edge
11 USFS		15	CDMULL2550	1	21.7	6.2	15.5	12	cut all trees < 14" dbh	30 x 30	
12	75	19	CDMULL1850	9	27.2	13.6	13.6	122	cut all trees < 16" dbh	35 x 35	
		18	CDMULL2540	37	22.5	10	12.5	463	cut all trees < 16" dbh	40 x 40	
12 a		17	CDMULL1850	4	27.2	13.6	18.9	76	cut all trees < 16" dbh	50 x 50	Feather Edge
		18	CDMULL2540	8	22.5	4.1	18.4	147	cut all trees < 18" dbh	65 x 65	
12 b		20	CDMULL2540	4	22.5	1.1	21.4	86	cut all trees < 23" dbh	80 x 80	Scallop Edge
12 USFS		20	CDMULL2540	13	22.5	10	12.5	163	cut all trees < 15" dbh	40 x 40	
TOTALS	331			331				4,108	MBF Gross Volume		

Attachments - Mullan Forest Health Collaborative Project

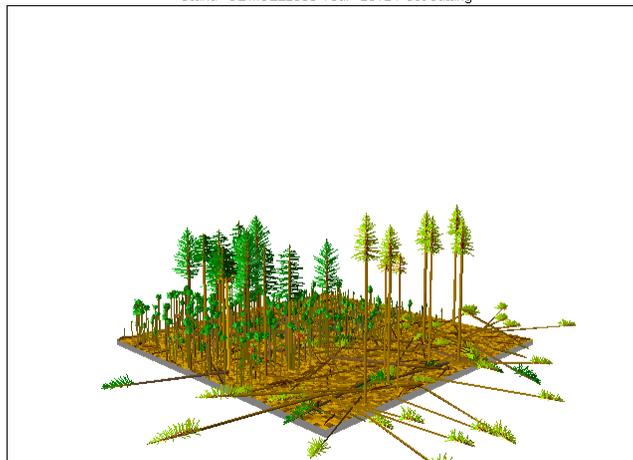
Unit 1 – Existing Condition

Stand=CDMULL2330 Year=2012 Beginning of cycle



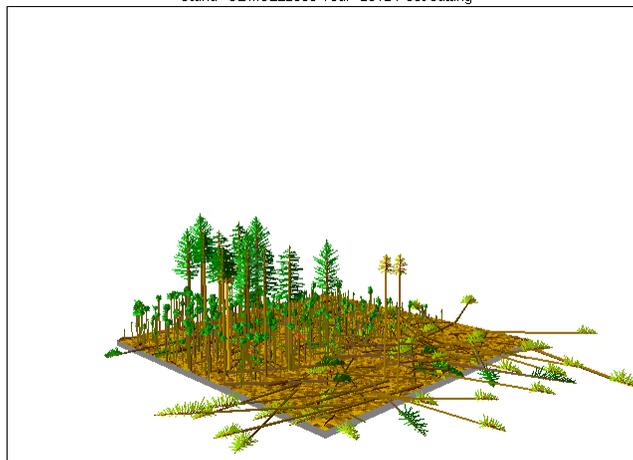
Unit 1 – After Selective Thinning – Cut All Trees <15”dbh

Stand=CDMULL2330 Year=2012 Post cutting



Unit 1a – After Selective Feathering - Cut All Trees <16”dbh

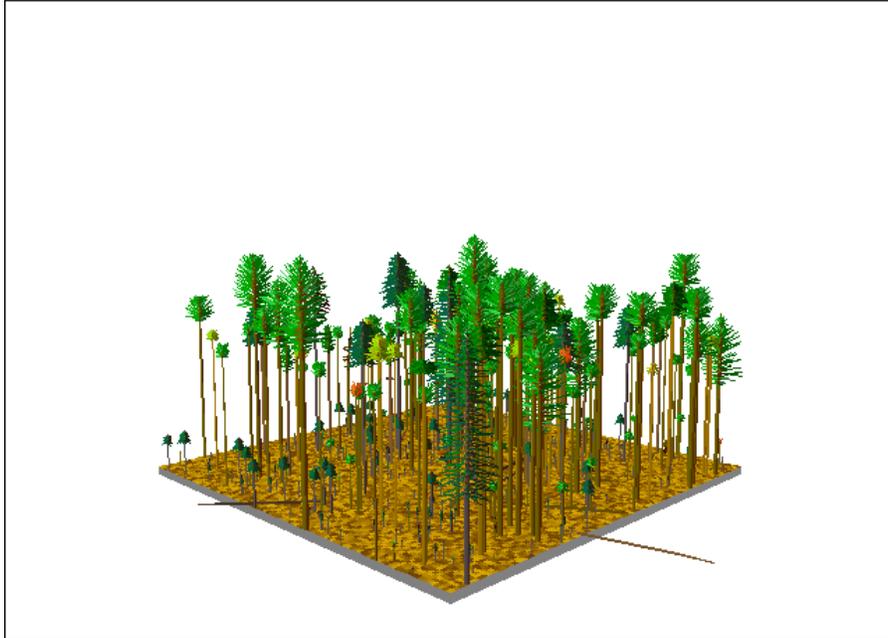
Stand=CDMULL2330 Year=2012 Post cutting



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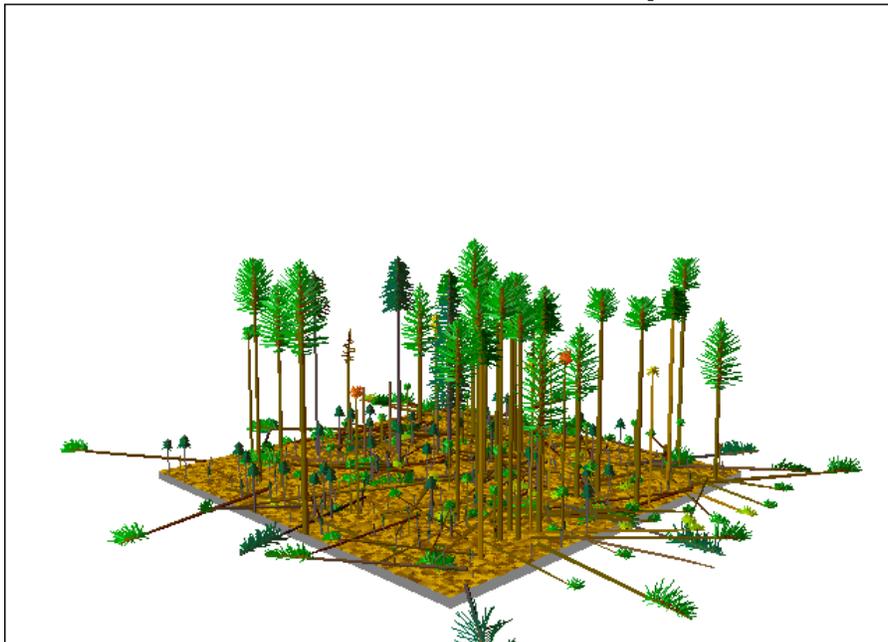
Unit 2 - Existing Condition

Stand=CDMULL2370 Year=2012 Beginning of cycle



Unit 2 - After Selective Thinning All Trees < 17" dbh

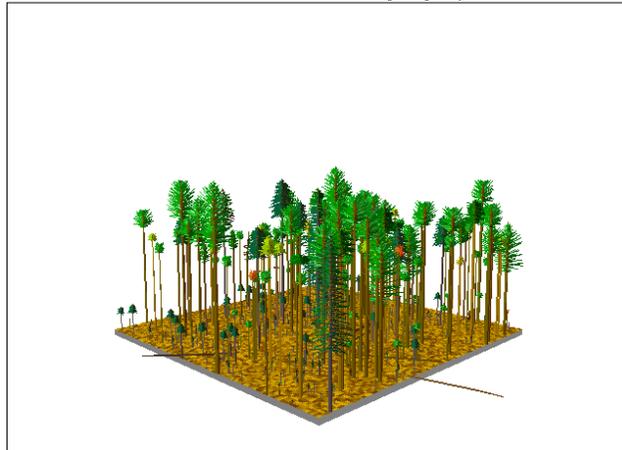
Stand=CDMULL2370 Year=2012 Post cutting



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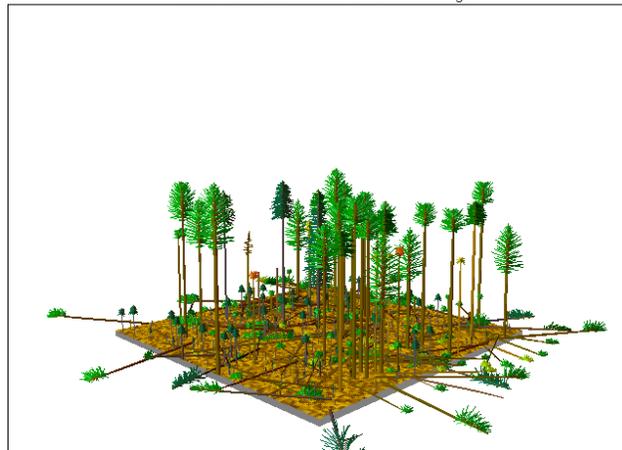
Unit 3 – Existing Condition

Stand=CDMULL2370 Year=2012 Beginning of cycle



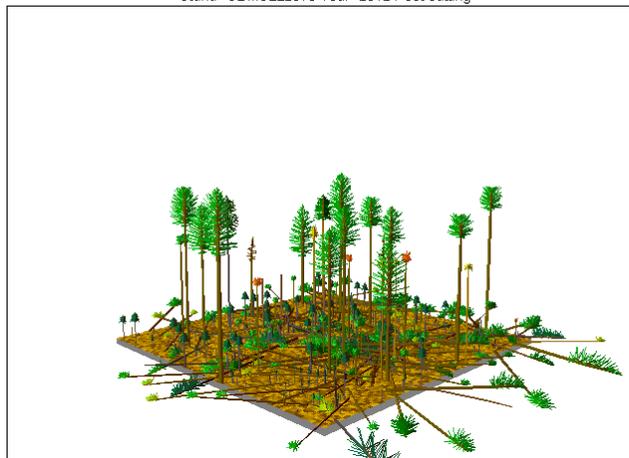
Unit 3 – After Selective Thinning – Cut All Trees <17” dbh

Stand=CDMULL2370 Year=2012 Post cutting



Unit 3a – After Feathering – Cut All Trees <19” dbh

Stand=CDMULL2370 Year=2012 Post cutting



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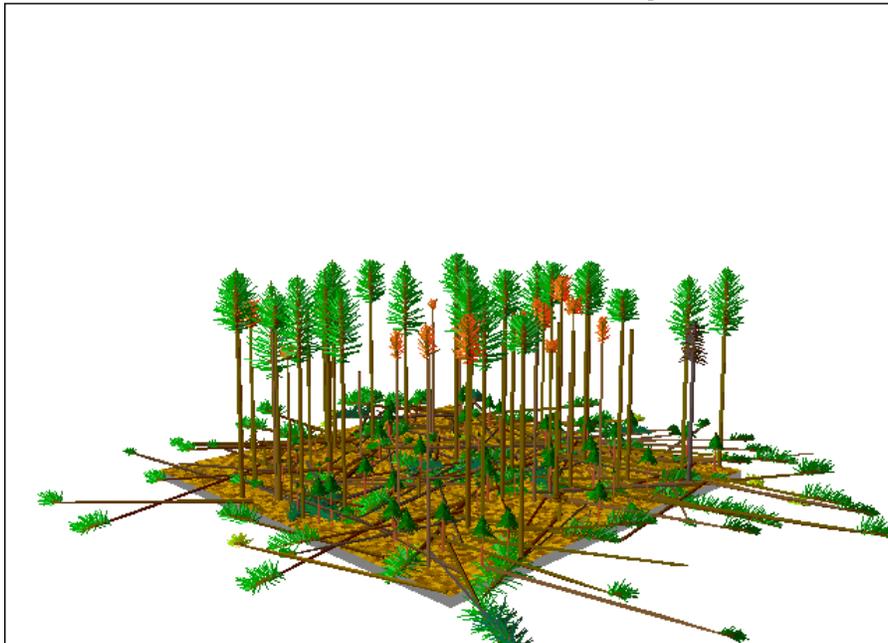
Unit 4 – Existing Conditions

Stand=CDMULL0860 Year=2004 Inventory conditions



Unit 4 – After Selective Thinning All Trees <17" dbh

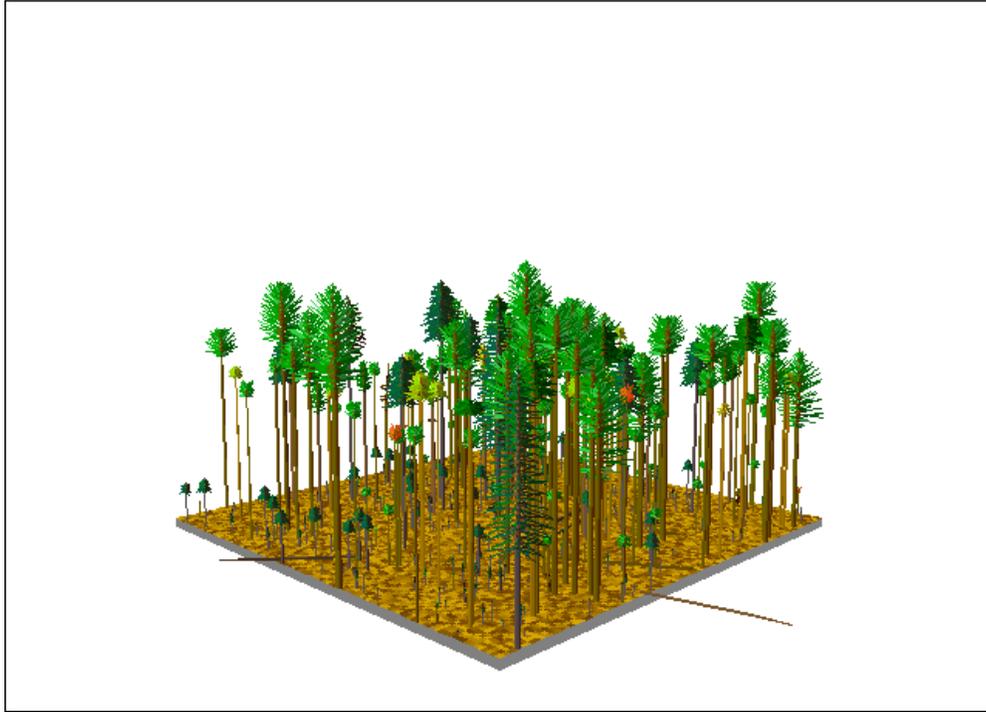
Stand=CDMULL0860 Year=2012 Post cutting



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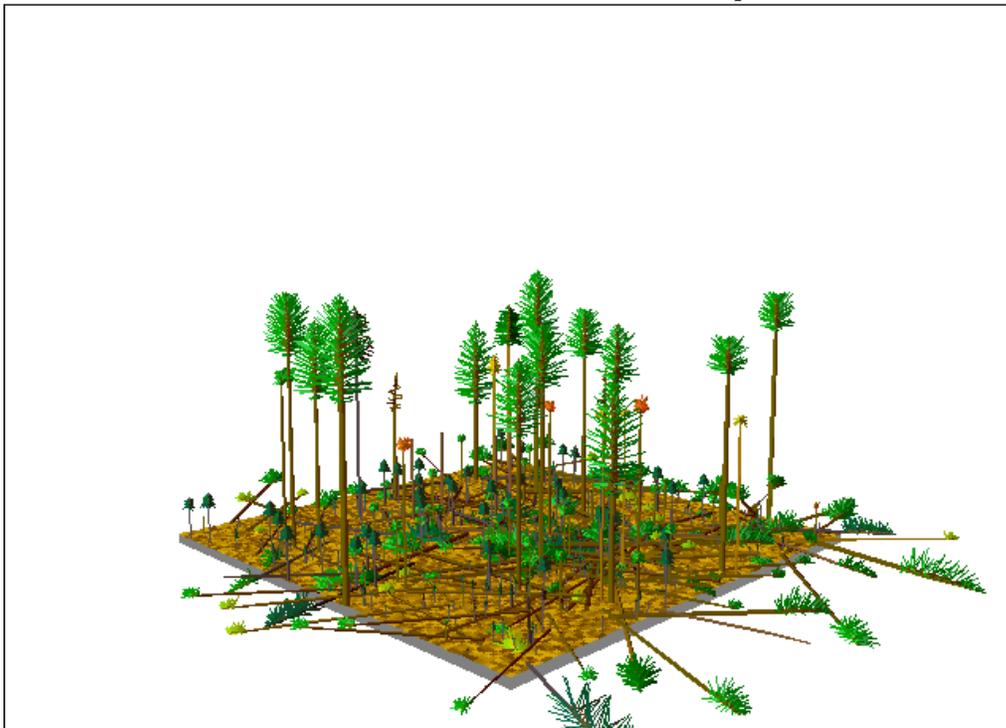
Unit 5 – Existing Condition

Stand=CDMULL2370 Year=2012 Beginning of cycle



Unit 5 – After Selective Thinning All Trees < 17" dbh

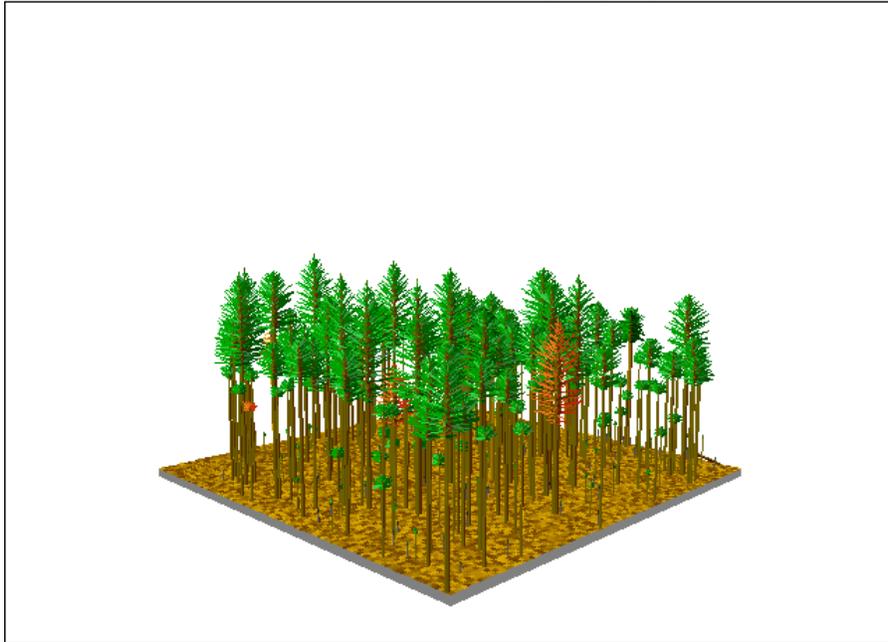
Stand=CDMULL2370 Year=2012 Post cutting



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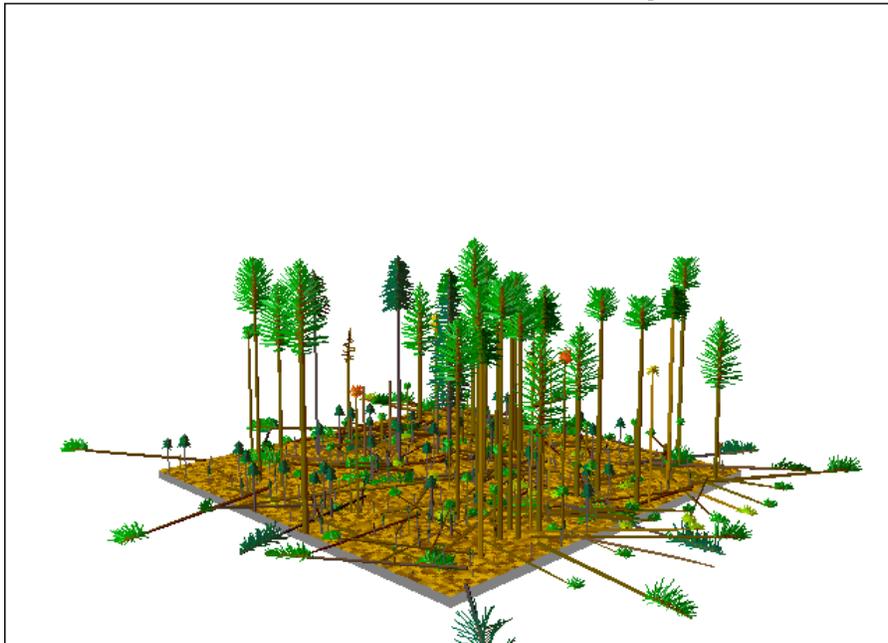
Unit 6 – Existing Condition

Stand=CDMULL0780 Year=2012 Beginning of cycle



Unit 6 – After Selective Thinning All Trees <17" dbh

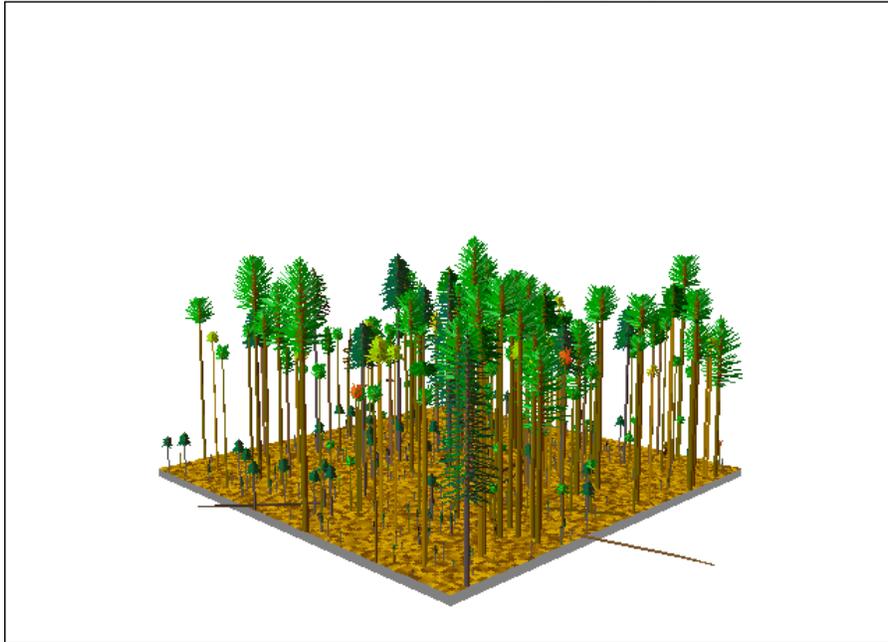
Stand=CDMULL2370 Year=2012 Post cutting



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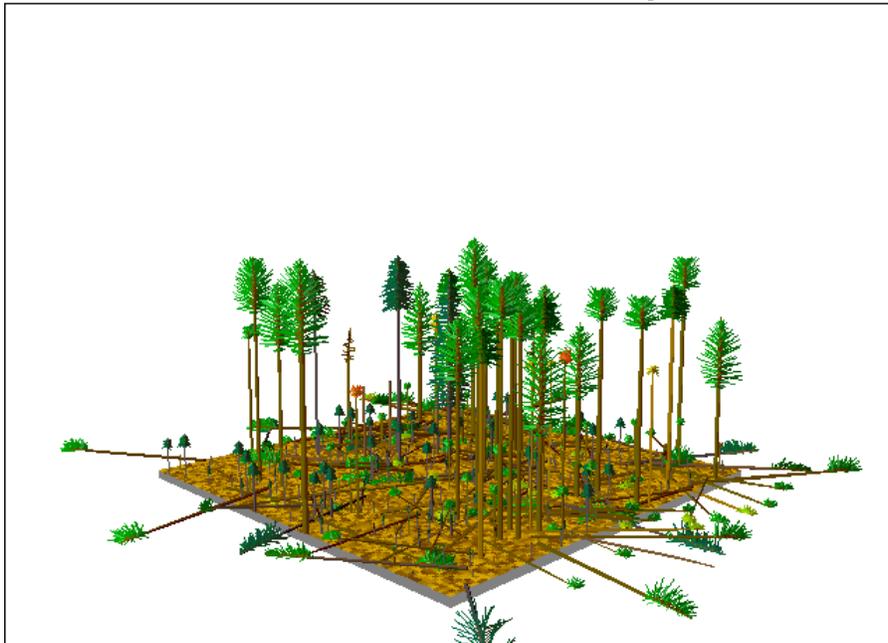
Unit 7 – Existing Condition

Stand=CDMULL2370 Year=2012 Beginning of cycle



Unit 7 - After Selective Thinning All Trees < 16" dbh

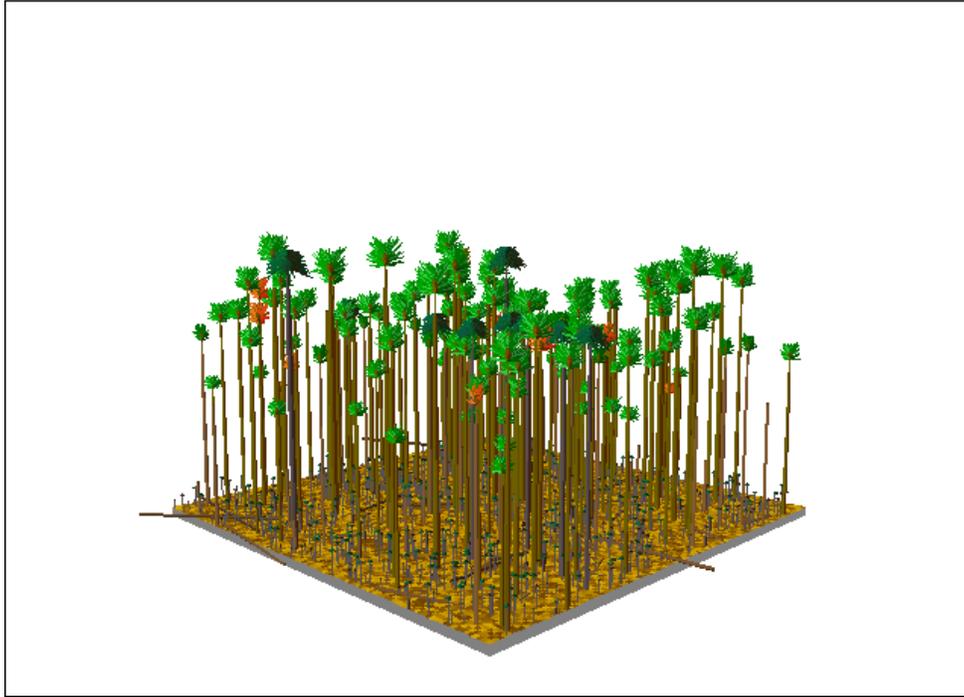
Stand=CDMULL2370 Year=2012 Post cutting



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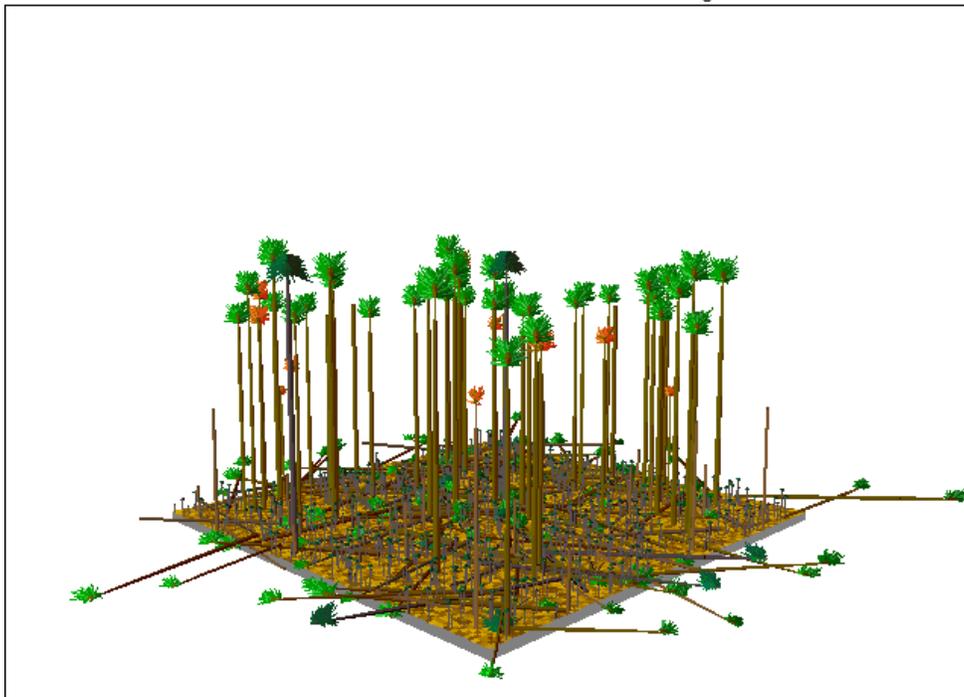
Unit 8 – Existing Condition

Stand=CDMULL1600 Year=2012 Beginning of cycle



Unit 8 – After Selective Thinning All Trees <16" dbh

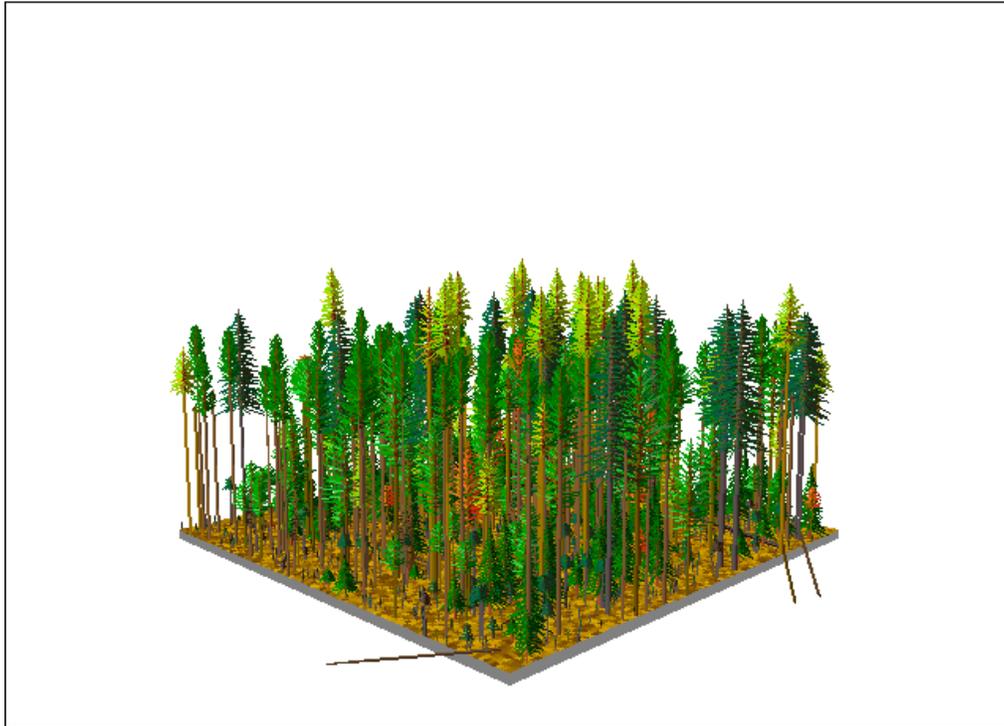
Stand=CDMULL1600 Year=2012 Post cutting



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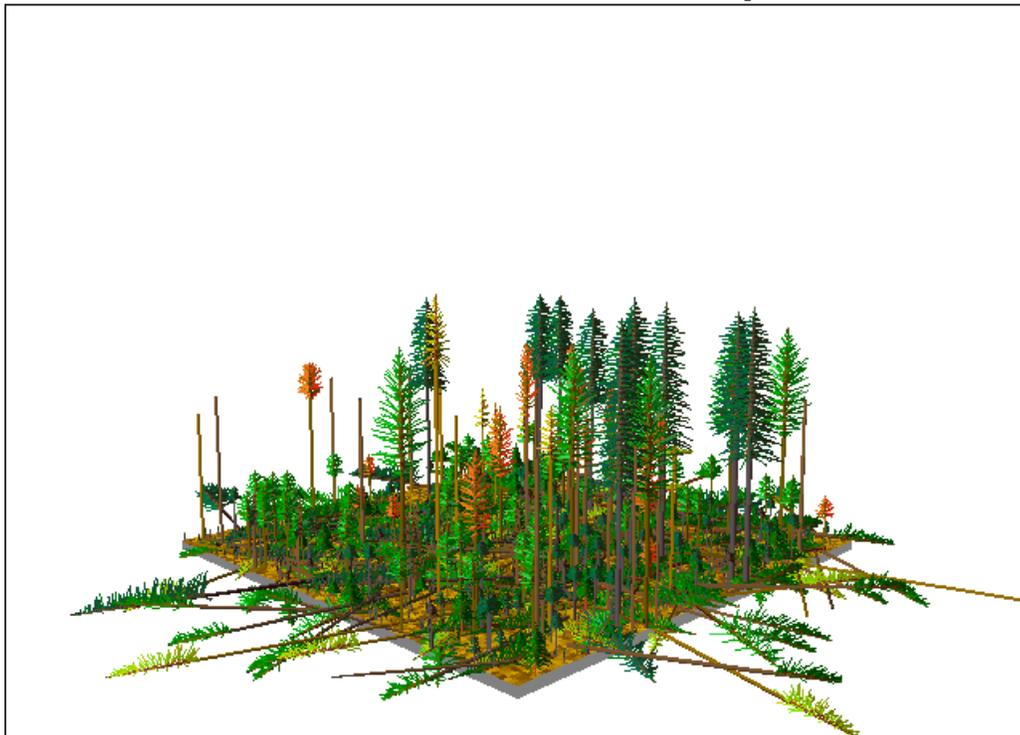
Unit 9 – Existing Conditions

Stand=CDMULL2560 Year=2012 Beginning of cycle



Unit 9 - After Selective Thinning All Trees <16' dbh

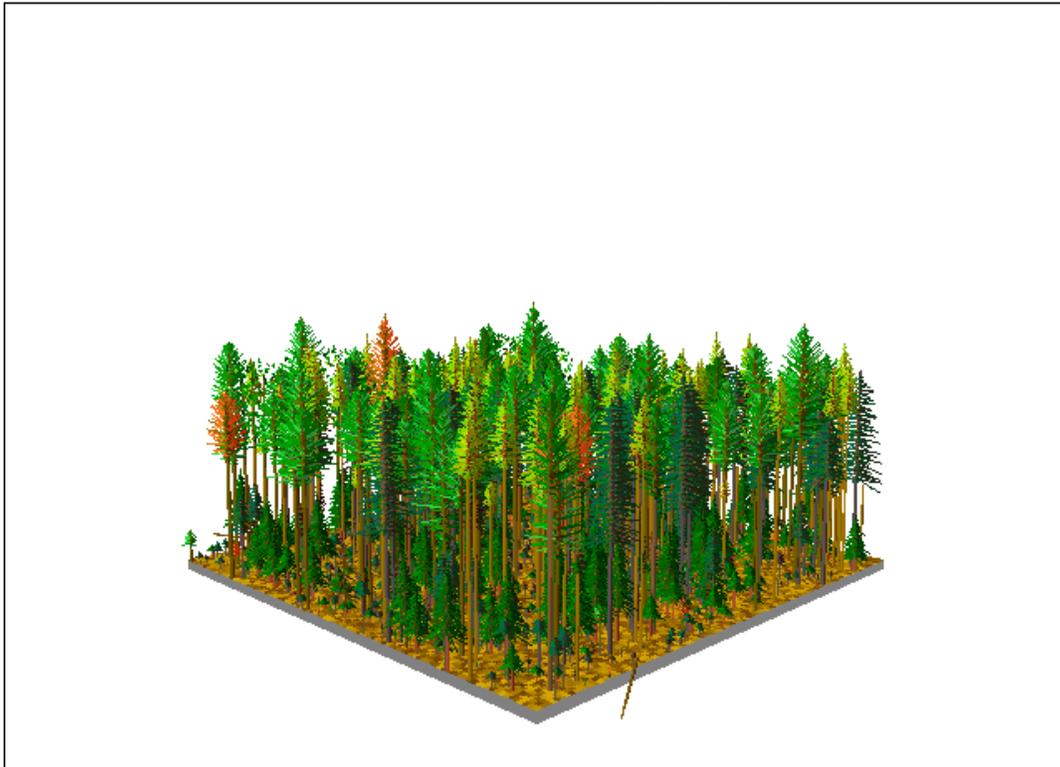
Stand=CDMULL2560 Year=2012 Post cutting



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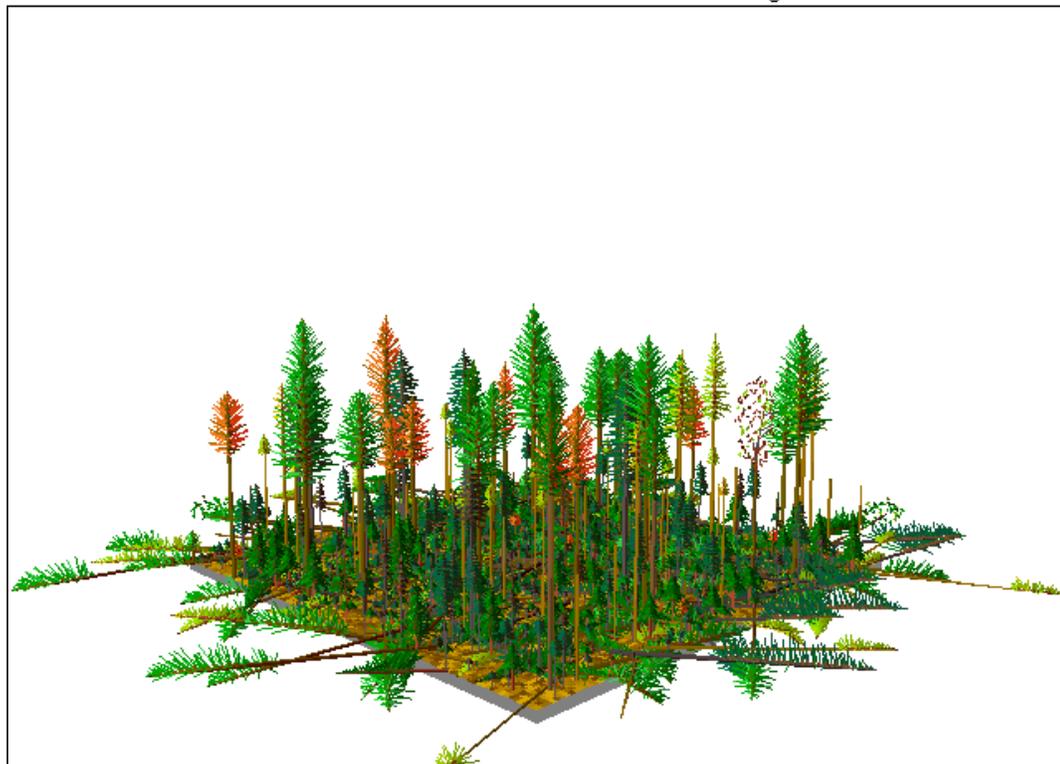
Unit 10 – Existing Condition

Stand=CDMULL2550 Year=2012 Beginning of cycle



Unit 10 – After Selective Thinning All Trees < 15" dbh

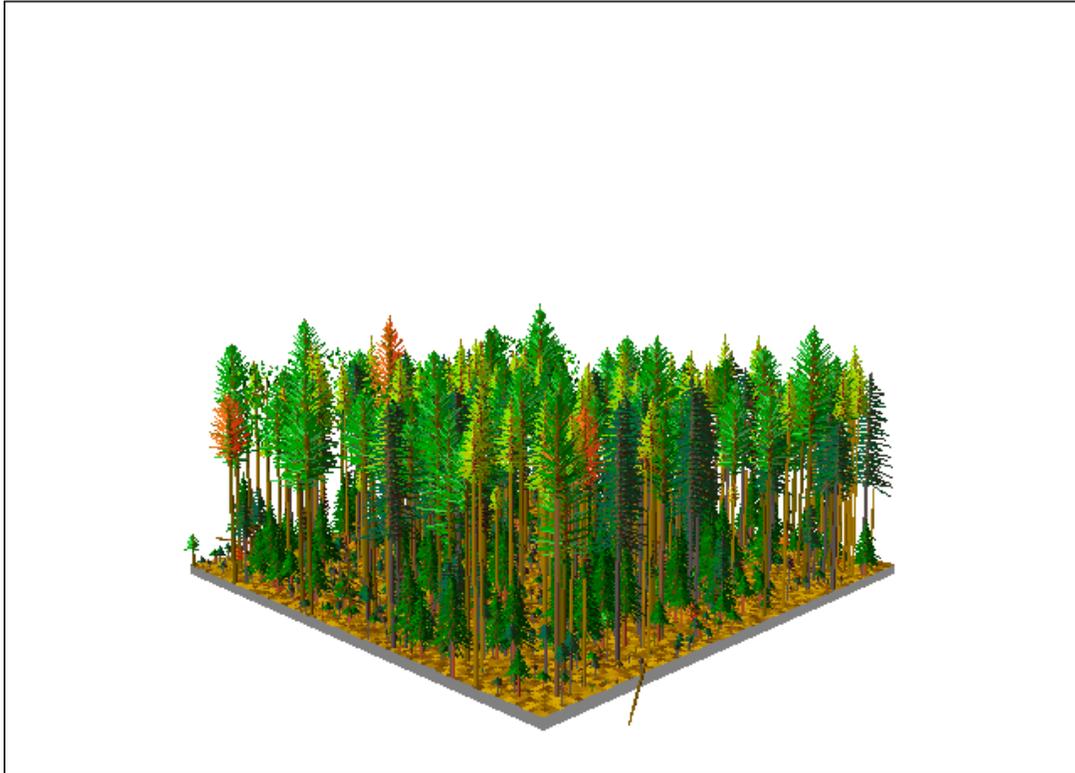
Stand=CDMULL2550 Year=2012 Post cutting



Attachments - Mullan Forest Health Collaborative Project

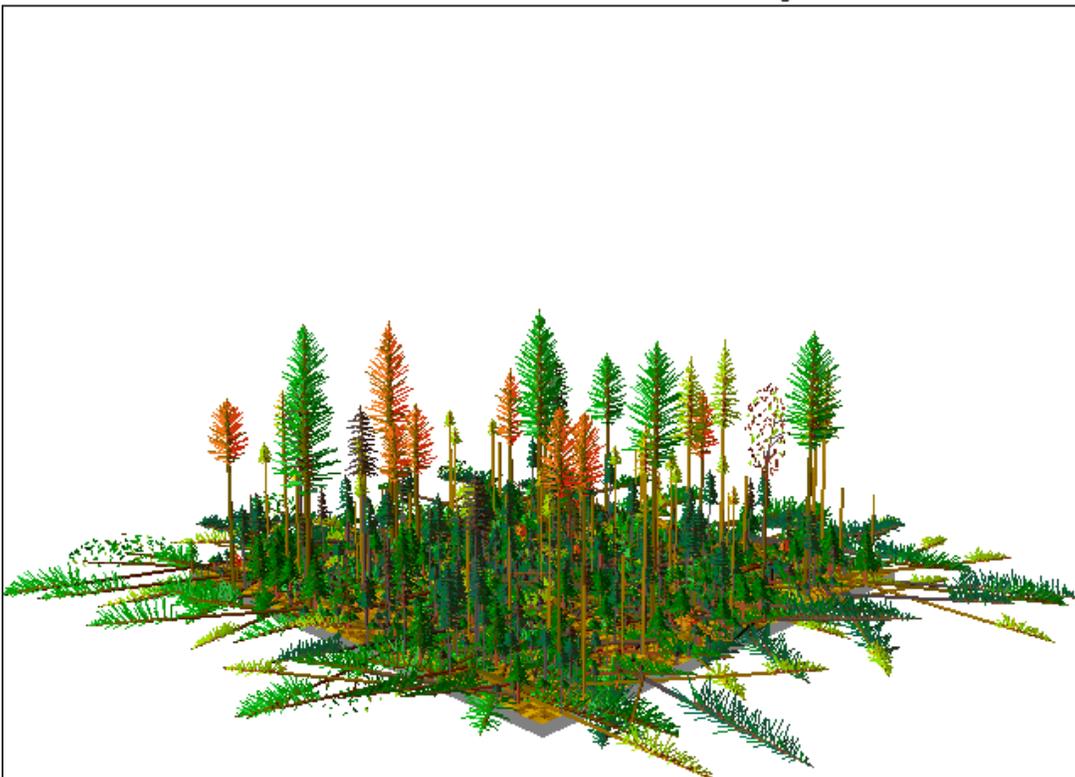
Unit 11 – Existing Condition

Stand=CDMULL2550 Year=2012 Beginning of cycle



Unit 11 – After Selective Cutting All Trees < 16" dbh

Stand=CDMULL2550 Year=2012 Post cutting

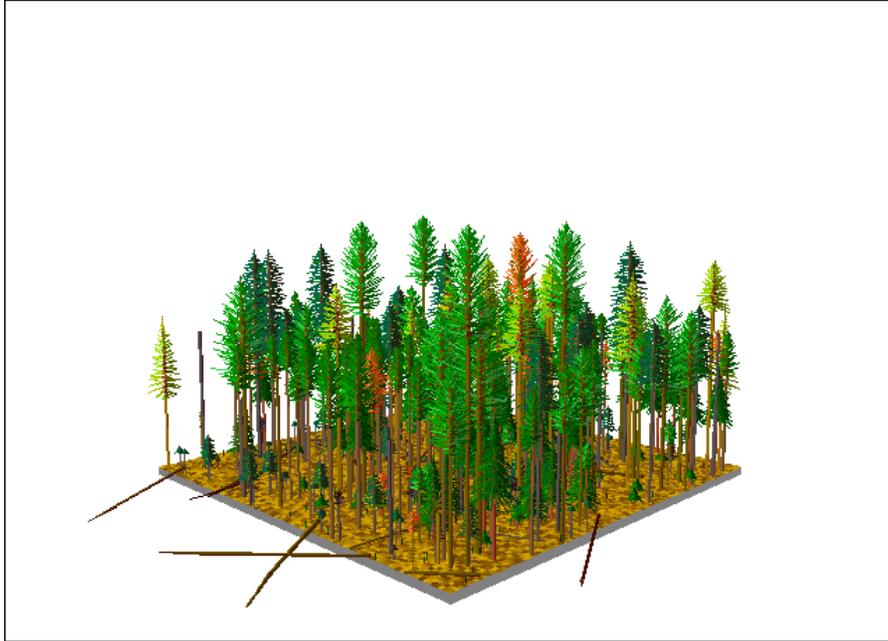


Attachments - Mullan Forest Health Collaborative Project

Unit 12 - Feathering

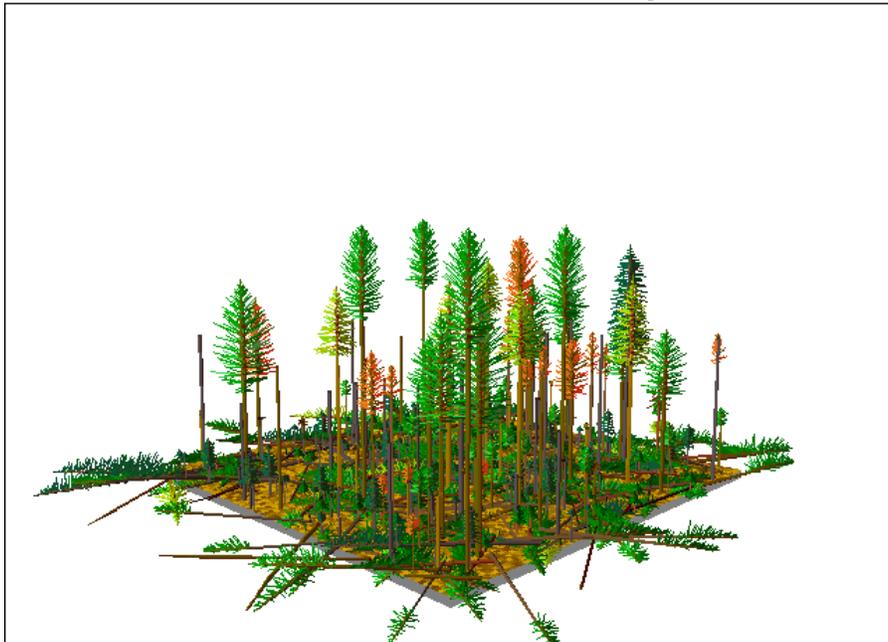
STAND CDMULL2540 – Pre Cutting

Stand=CDMULL2540 Year=2012 Beginning of cycle



STAND MULL2540 Post Cutting – Feathering - Understory Thin all trees <18” dbh

Stand=CDMULL2540 Year=2012 Post cutting

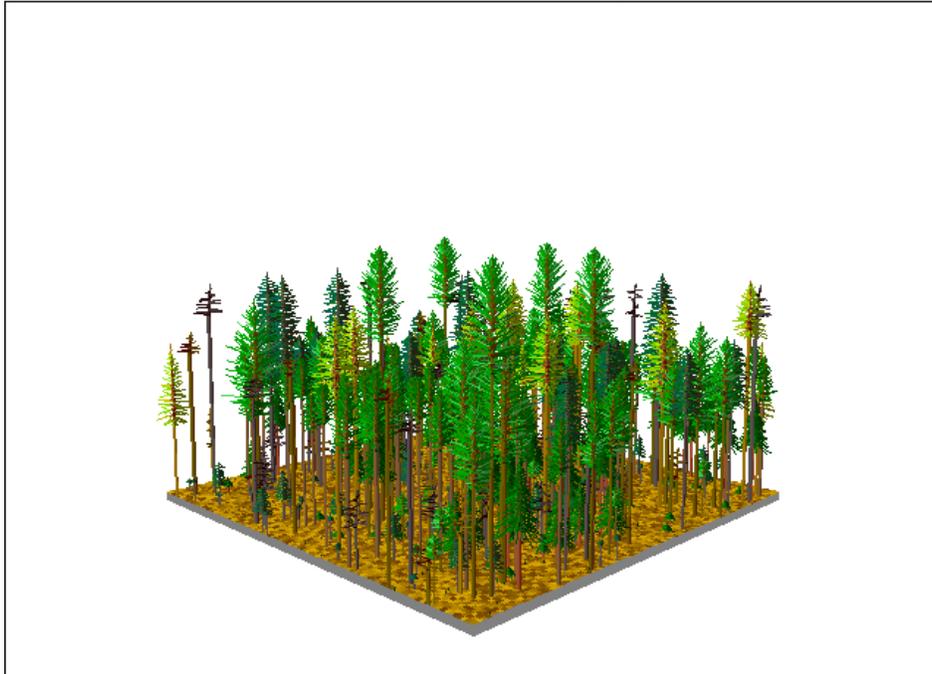


Attachments - Mullan Forest Health Collaborative Project

Unit 12 - Scalping

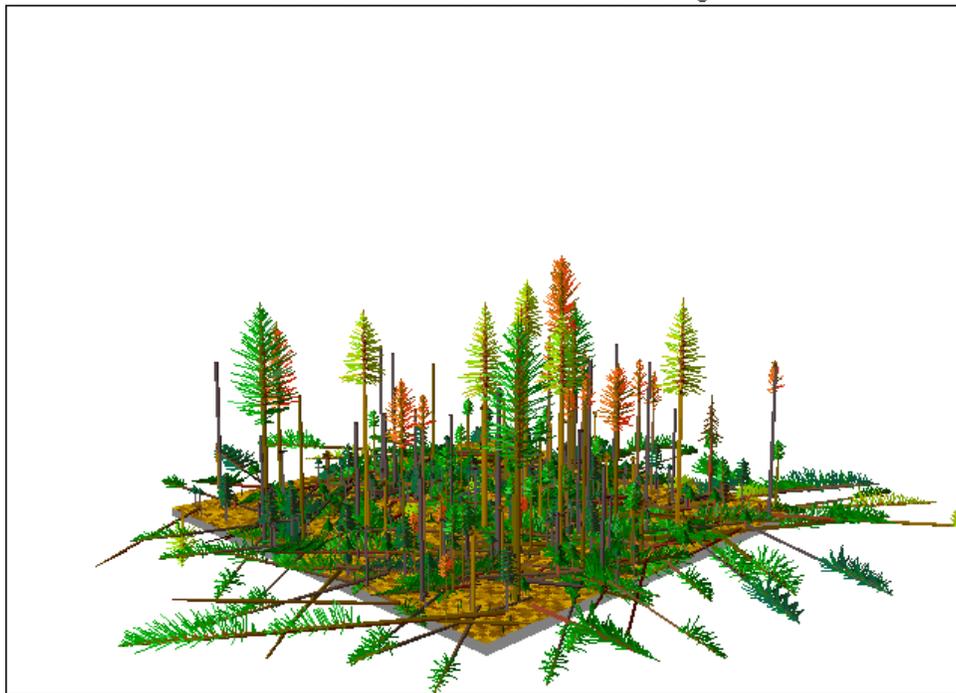
CDMULL2540 - Pre Cutting

Stand=CDMULL2540 Year=2003 Inventory conditions



CDMULL2540 Post Cutting – Scalping – Understory Thin all trees < 22” dbh

Stand=CDMULL2540 Year=2012 Post cutting

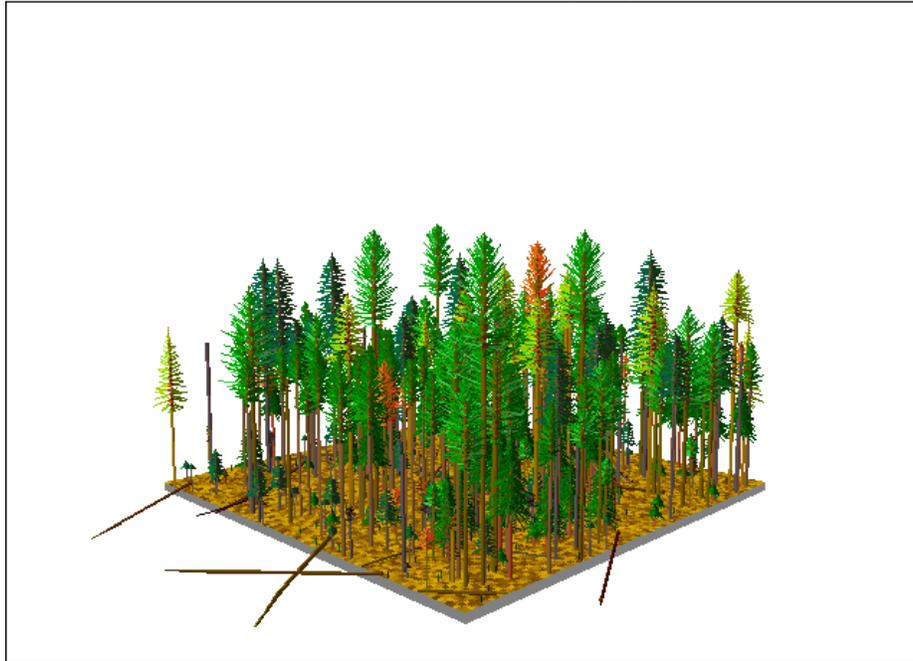


Attachments - Mullan Forest Health Collaborative Project

Unit 12 Selective Thin

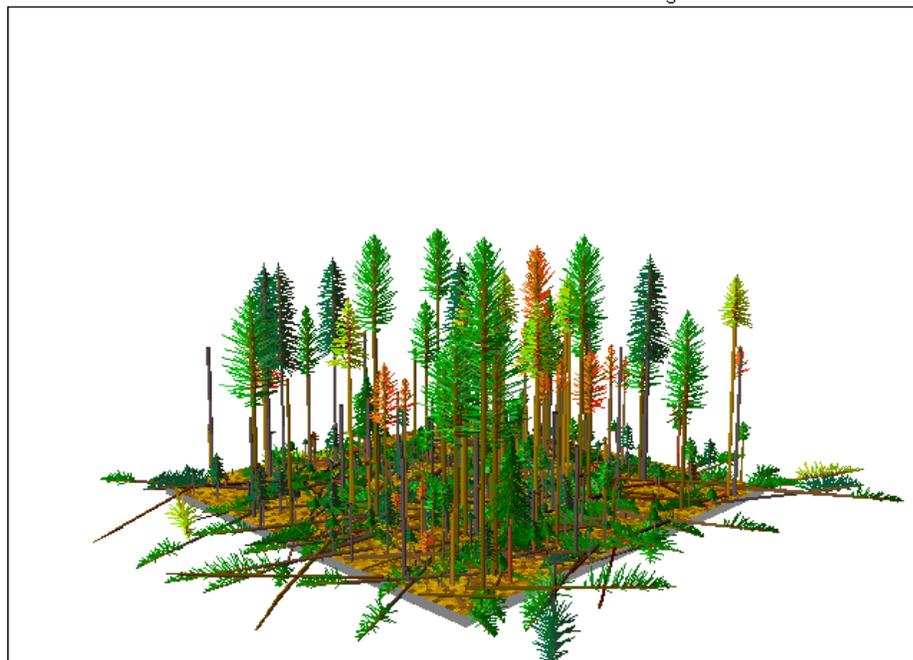
STAND CDMULL2540 – Pre Cutting

Stand=CDMULL2540 Year=2012 Beginning of cycle



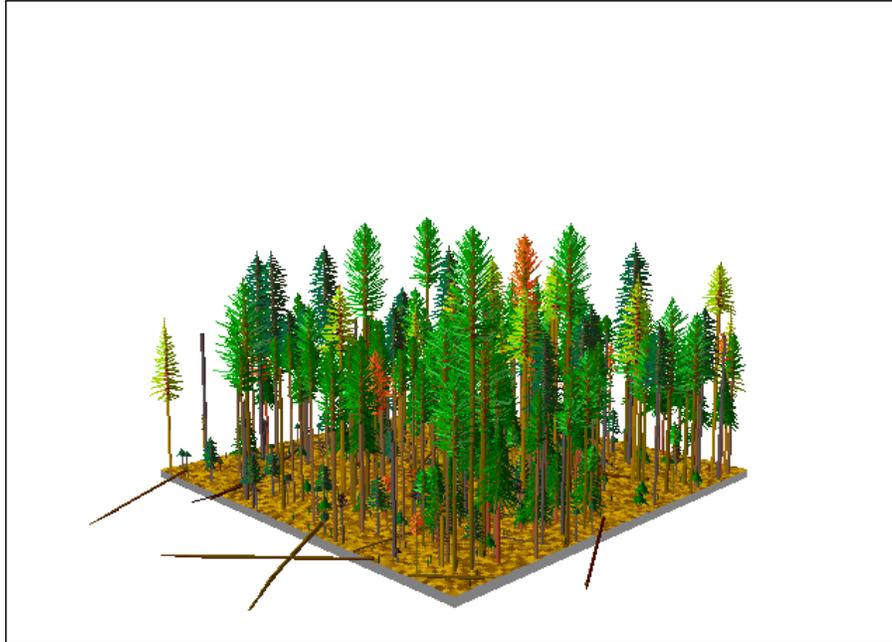
STAND CDMULL2540 – Post Cutting – Selective Thin all Understory Trees <16” dbh

Stand=CDMULL2540 Year=2012 Post cutting



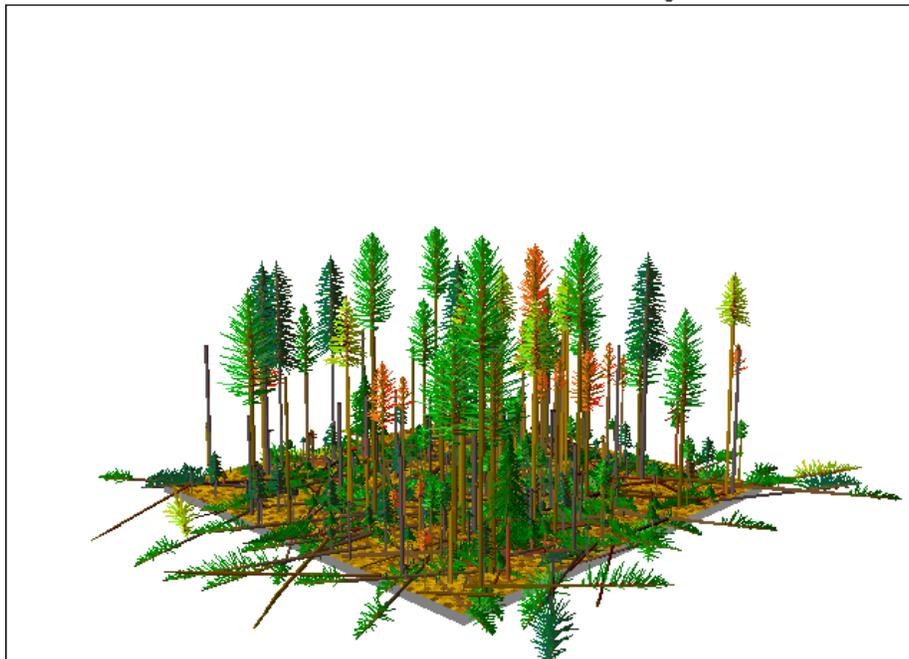
Unit 12 – Existing Condition

Stand=CDMULL2540 Year=2012 Beginning of cycle



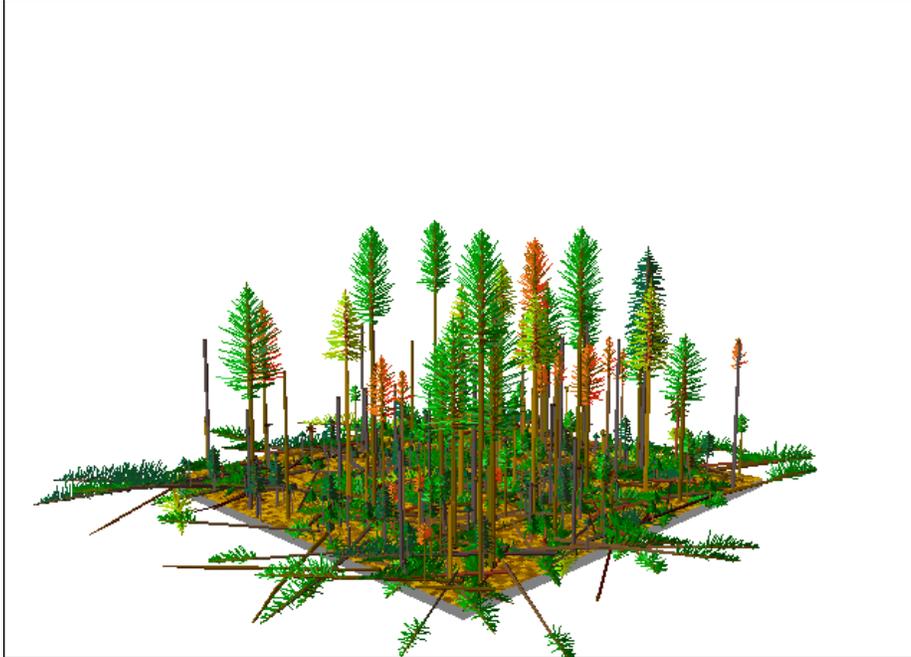
Unit 12 – After Thinning All Trees < 16” dbh

Stand=CDMULL2540 Year=2012 Post cutting



Unit 12 – After Feathering

Stand=CDMULL2540 Year=2012 Post cutting



Unit 12 – After Scalloping

Stand=CDMULL2540 Year=2012 Post cutting

