RGNF - Biomass Assessment: Conejos Peak Ranger District

106.6667° W 106°40'0"W | 106.5833° W 106°35'0"W | 106.5° W 106°30'0"W | 106.4167° W 106°25'0"W | 106.3333° W 106°20'0"W | 106.25° W 106°15'0"W

37.5833° N 37°35'0"N | 37.5° N 37°30'0"N | 37.4167° N 37°25'0"N | 37.3333° N 37°20'0"N | 37.25° N 37°15'0"N | 37.1667° N 37°10'0"N | 37.0833° N 37°5'0"N | 37° N 37°0'0"N | 36.9167° N 36°55'0"N

RGNF

Biomass Supply Assessment

Methodology

Biomass quantity estimates for the RGNF are based on their GIS data layers and Forest Management Plan Management (FMP) units. To get a realistic impression of material that may be available we conducted the following assessment:

We started by showing all FMP units that allowed silvicultural activities within their management prescriptions. These units include: 4.21, 4.3, 5.11, 5.13, and 5.41.

Assuming that significant new road construction was unlikely we clipped all areas that were more than 0.25 miles from an existing road.

We then removed a 100 foot buffer from each side of riparian areas.

Then we excluded all terrain >30% slope.

The final screen consisted of removing all areas that had previous silvicultural activities that created young, small diameter seedling, sapling stands. These regeneration cut activities included clearcuts, patch clear cuts and overstory removal cuts.

We then sorted the remaining forested areas by dominant tree species and wildlife habitat structure stage (HSS). Since the vast majority of habitat structure stages and tree size classes are closely correlated we did not further refine the sorts with size class categories. See the table below to interpret tree species, habitat structure stage and tree size classes.

Tree species codes: ABCO = Abies concolor (White fir), ABLA = Abies lasiocarpa (Subalpine fir), PIAR = Pinus aristada (Bristlecone pine), PICO = Pinus contorta, (Lodgepole pine), PIED = Pinus edulis (Piñon pine), PIEN = Picea engelmannii (Engelemann spruce), PIFL = Pinus flexilis (Limber pine), PIPO = Pinus ponderosa (Ponderosa pine), POAN = Populous angustifolia (Narrowleaf cottonwood), POTR = Populace tremuloides, PSME = Pseudotsuga menziesii (Douglas fir).

Tree size classes run from; **E** (established seedlings 0.0-0.9"dbh/drc), **S** (small 1-4.9" dbh) **M** (medium 5-8.9" dbh), **L** (large 9-15.9" dbh) and **V** (very large 16+" dbh). For the purposes of this assessment we equated tree size classes to habitat structure stage as displayed in the table below.

Wildlife Structural Stage and Tree Size Class

Habitat Structural Stage	% Canopy Cover	Tree Size Class
2T	na	E
3A	<40	M
3B	40-70	M
3C	>70	M
4A	<40	L
4B	40-70	L
4C	>70	L

Tree species and habitat structural stage was sorted and displayed by individual ranger district to provide the initial spatial distribution of biomass originating on the RGNF.

For the purposes of this section of the assessment biomass is defined as cellulosic materials, dead or alive, that will be removed from the forest or agricultural byproducts that are used in some process that converts them into boards, house logs, firewood, biofuels, bio char, electrical energy, pellets, animal bedding, erosion waddles, compost and yet to be developed end products.

Biomass yields were determined based on stand exam information and likely silvicultural prescriptions focused on improving stand and watershed health. This provides a close approximation of anticipated biomass removal by tree species and habitat structural stages.

District Boundary

Habitat Structural Stages

2T; 3A; 3B; 3C

4A; 4B; 4C

11/17/2014

Integrated Land Services
4820 South Highway 17
Alamosa, CO 81101
(719) 587-0266

0 2.5 5 10 15 Miles

RGNF - Biomass Assessment: Divide Ranger District

107.5° W 107°30'0"W | 107.375° W 107°22'30"W | 107.25° W 107°15'0"W | 107.125° W 107°7'30"W | 107° W 107°0'0"W | 106.875° W 106°52'30"W | 106.75° W 106°45'0"W | 106.625° W 106°37'30"W | 106.5° W 106°30'0"W | 106.375° W 106°22'30"W

38°0'0"N 38° N | 37.875° N 37°52'30"N | 37.75° N 37°45'0"N | 37.625° N 37°37'30"N | 37.5° N 37°30'0"N | 37.375° N 37°22'30"N

149 | 112 | 160

SNOW MESA | Table Mountain | McKenzie Mountain | WASON PARK | SILVER PARK | SHEEP MOUNTAIN | Farmer Mesa | Eagle Mountain | SAGUACHE ROCKY MOUNTAIN | UTE RIDGE | SANTIAGO | Rio Grande National Forest | Snowshoe Mountain | McClelland Mountain | SEVEN PARKS | WHITECLOUD PARK | CHIEF MOUNTAIN | FISHER MOUNTAIN | BEAUTIFUL MOUNTAIN | Cattle Mountain | FOX MOUNTAIN | SHEEP MOUNTAIN | Treasure Mountain | Saddle Mountain | MINERAL ARCHULETA | RIO GRANDE CONEJOS | South Fork | Monte

RGNF

Biomass Supply Assessment

Methodology

Biomass quantity estimates for the RGNF are based on their GIS data layers and Forest Management Plan Management (FMP) units. To get a realistic impression of material that may be available we conducted the following assessment:

We started by showing all FMP units that allowed silvicultural activities within their management prescriptions. These units include: 4.21, 4.3, 5.11, 5.13, and 5.41.

Assuming that significant new road construction was unlikely we clipped all areas that were more than 0.25 miles from an existing road.

We then removed a 100 foot buffer from each side of riparian areas.

Then we excluded all terrain >30% slope.

The final screen consisted of removing all areas that had previous silvicultural activities that created young, small diameter seedling, sapling stands. These regeneration cut activities included clearcuts, patch clear cuts and overstory removal cuts.

We then sorted the remaining forested areas by dominant tree species and wildlife habitat structure stage (HSS). Since the vast majority of habitat structure stages and tree size classes are closely correlated we did not further refine the sorts with size class categories. See the table below to interpret tree species, habitat structure stage and tree size classes.

Tree species codes: ABCO = Abies concolor (White fir), ABLA = Abies lasiocarpa (Subalpine fir), PIAR = Pinus aristada (Bristlecone pine), PICO = Pinus contorta, (Lodgepole pine), PIED = Pinus edulis (Piñon pine), PIEN = Picea engelmannii (Engelemann spruce), PIFL = Pinus flexilis (Limber pine), PIPO = Pinus ponderosa (Ponderosa pine), POAN = Populous angustifolia (Narrowleaf cottonwood), POTR = Populace tremuloides, PSME = Pseudotsuga menziesii (Douglas fir).

Tree size classes run from; **E** (established seedlings 0.0-0.9" dbh/drc), **S** (small 1-4.9" dbh) **M** (medium 5-8.9" dbh), **L** (large 9-15.9" dbh) and **V** (very large 16+" dbh). For the purposes of this assessment we equated tree size classes to habitat structure stage as displayed in the table below.

Wildlife Structural Stage and Tree Size Class

Habitat Structural Stage	% Canopy Cover	Tree Size Class
2T	na	E
3A	<40	M
3B	40-70	M
3C	>70	M
4A	<40	L
4B	40-70	L
4C	>70	L

Tree species and habitat structural stage was sorted and displayed by individual ranger district to provide the initial spatial distribution of biomass originating on the RGNF.

For the purposes of this section of the assessment biomass is defined as cellulosic materials, dead or alive, that will be removed from the forest or agricultural byproducts that are used in some process that converts them into boards, house logs, firewood, biofuels, bio char, electrical energy, pellets, animal bedding, erosion waddles, compost and yet to be developed end products.

Biomass yields were determined based on stand exam information and likely silvicultural prescriptions focused on improving stand and watershed health. This provides a close approximation of anticipated biomass removal by tree species and habitat structural stages.

District Boundary

Habitat Structural Stages

2T; 3A; 3B; 3C

4A; 4B; 4C

West Fork Fire Complex

11/17/2014

0 5 10 20 30 40 50 Miles

RGNF - Biomass Assessment: Saguache Ranger District

RGNF

Biomass Supply Assessment

Methodology

Biomass quantity estimates for the RGNF are based on their GIS data layers and Forest Management Plan Management (FMP) units. To get a realistic impression of material that may be available we conducted the following assessment:

We started by showing all FMP units that allowed silvicultural activities within their management prescriptions. These units include: 4.21, 4.3, 5.11, 5.13, and 5.41.

Assuming that significant new road construction was unlikely we clipped all areas that were more than 0.25 miles from an existing road.

We then removed a 100 foot buffer from each side of riparian areas.

Then we excluded all terrain >30% slope.

The final screen consisted of removing all areas that had previous silvicultural activities that created young, small diameter seedling, sapling stands. These regeneration cut activities included clearcuts, patch clear cuts and overstory removal cuts.

We then sorted the remaining forested areas by dominant tree species and wildlife habitat structure stage (HSS). Since the vast majority of habitat structure stages and tree size classes are closely correlated we did not further refine the sorts with size class categories. See the table below to interpret tree species, habitat structure stage and tree size classes.

Tree species codes: ABCO = Abies concolor (White fir), ABLA = Abies lasiocarpa (Subalpine fir), PIAR = Pinus aristada (Bristlecone pine), PICO = Pinus contorta, (Lodgepole pine), PIED = Pinus edulis (Piñon pine), PIEN = Picea engelmannii (Engelemann spruce), PIFL = Pinus flexilis (Limber pine), PIPO = Pinus ponderosa (Ponderosa pine), POAN = Populous angustifolia (Narrowleaf cottonwood), POTR = Populace tremuloides, PSME = Pseudotsuga menziesii (Douglas fir).

Tree size classes run from; **E** (established seedlings 0.0-0.9"dbh/drc), **S** (small 1-4.9" dbh) **M** (medium 5-8.9" dbh), **L** (large 9-15.9" dbh) and **V** (very large 16+" dbh). For the purposes of this assessment we equated tree size classes to habitat structure stage as displayed in the table below.

Wildlife Structural Stage and Tree Size Class

Habitat Structural Stage	% Canopy Cover	Tree Size Class
2T	na	E
3A	<40	M
3B	40-70	M
3C	>70	M
4A	<40	L
4B	40-70	L
4C	>70	L

Tree species and habitat structural stage was sorted and displayed by individual ranger district to provide the initial spatial distribution of biomass originating on the RGNF.

For the purposes of this section of the assessment biomass is defined as cellulosic materials, dead or alive, that will be removed from the forest or agricultural byproducts that are used in some process that converts them into boards, house logs, firewood, biofuels, bio char, electrical energy, pellets, animal bedding, erosion waddles, compost and yet to be developed end products.

Biomass yields were determined based on stand exam information and likely silvicultural prescriptions focused on improving stand and watershed health. This provides a close approximation of anticipated biomass removal by tree species and habitat structural stages.

District Boundary

Habitat Structural Stages

2T; 3A; 3B; 3C

4A; 4B; 4C

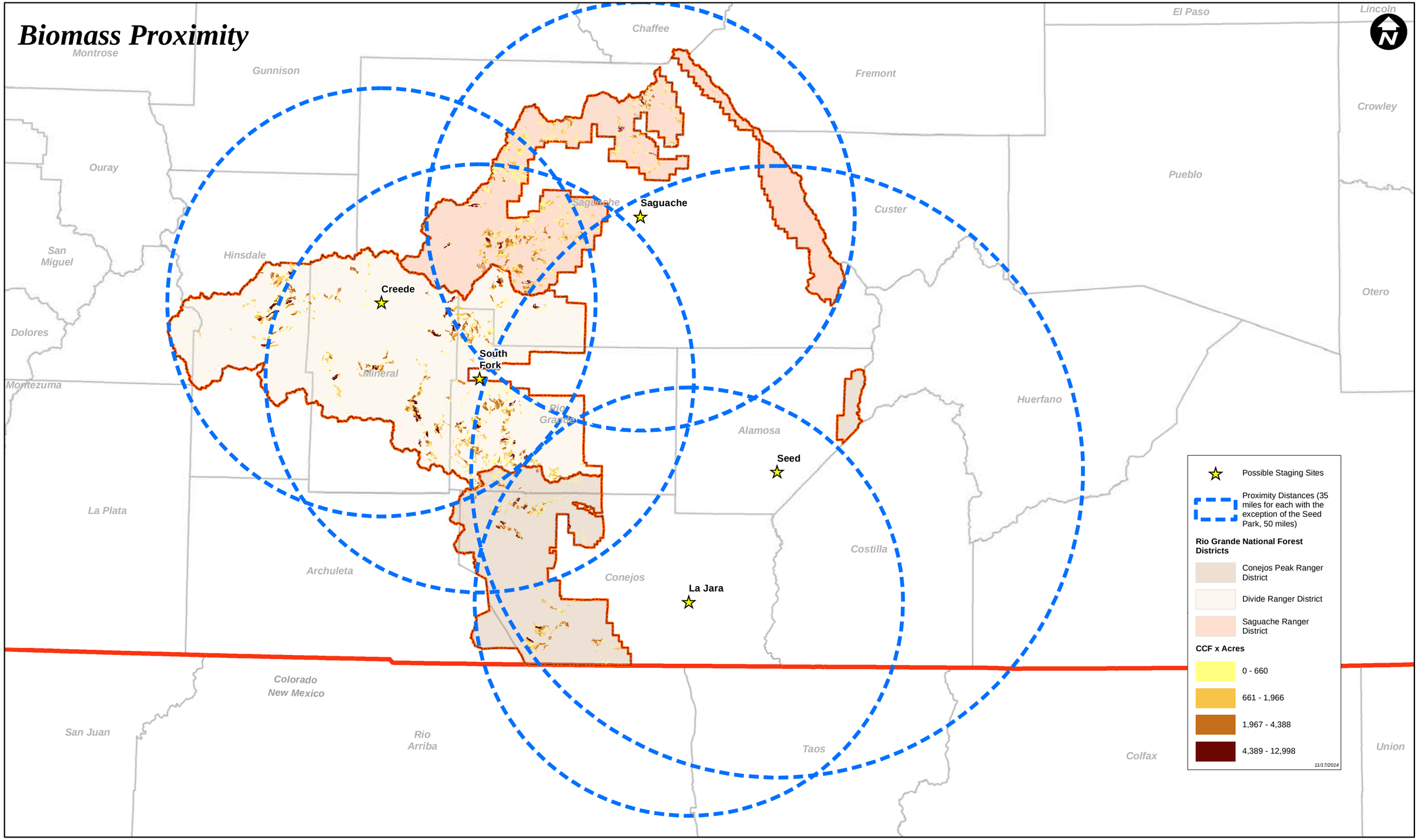
11/17/2014

106.875° W 106°52'30"W
106.75° W 106°45'0"W
106.625° W 106°37'30"W
106.5° W 106°30'0"W
106.375° W 106°22'30"W
106.25° W 106°15'0"W
106.125° W 106°7'30"W
106° W 106°0'0"W
105.875° W 105°52'30"W
105.75° W 105°45'0"W
105.625° W 105°37'30"W

38.375° N 38°22'30"N
38.25° N 38°15'0"N
38.125° N 38°7'30"N
38° N 38°0'0"N
37.875° N 37°52'30"N

0 5 10 20 30 40 50 Miles

Biomass Proximity



Integrated Land Services
6820 South Highway 17
Alamosa, CO 81101
(719) 587-0286

0 5 10 20 30 40 50 Miles