



STONERIDGE REZONING

COVER TYPE INVENTORY REPORT

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4/14/02

STONERIDGE

This site is located approximately 1 mile south of route 50 on the west side of Route 616 near Arcola in Loudoun County, Virginia.

At the present time this site has a mixture of open fields and forestland. It appears that this property was part of one or more working farms that are now abandoned. The current forestland on the site is the result of man caused activities that have occurred in the past. These activities included clearing to create fields and pasture land, removal of trees for lumber and fuelwood, and grazing by livestock. It is almost certain that this entire site was cleared of forestland at one time. There is no "old growth" or "virgin forest" on this property.

Terrain on this site varies from level to steep. The south fork of Broad Run is located in the northwestern corner of the site.

An existing vegetation or forest cover type map was prepared for this property by Zimar & Associates, Inc. in April of 2002. The methods used to prepare this map are as follows:

- Cover type lines were determined in the field using aerial photographs and traditional forestry methods used for type mapping. Existing tree lines were taken from Loudoun County GIS maps and aerial photos.
- Tree lines were verified in the field.
- Species composition was determined by identifying the predominant overstory species.
- Age was determined by extracting a core sample using an increment borer and counting the growth rings. Core samples were also used to determine growth rate. Trees selected for borings were of typical species and size for the particular cover type.

- Size class was determined by measuring with a diameter tape and ocular estimates.
- Stand density was determined by taking random plots with a BAF 10 prism. An average basal area per acre was determined based on data collected from these plots.
- Aspect was determined from topography maps.
- Average number of hardwood sawtimber trees > 14" DBH per acre was determined by taking random .10-acre plots.
- Health, vigor, and quality were determined by growth rate, presence of diseases or insects, and tree form and structure.
- Soil types were determined by using the Loudoun County Soils Map prepared by the Loudoun County, Virginia Office of Mapping and Geographical Information.
- Language used in the Cover Type descriptions are standard forestry terms found in Terminology of Forest Science Technology Practice and Products and Forest Cover Types of the United States and Canada both published by the Society of American Foresters.

Recommendations regarding protection, enhancement, and maintenance of designated Tree Conservation Areas (TCA's) shall include protection using welded wire or super silt fence, installation of highly visible signs on the fencing noting "Tree Conservation Area – Do Not Enter", forbidding the use of machinery and the storing or depositing of construction materials in the TCA, root pruning if necessary based on proposed grading, crown pruning to eliminate potential hazards and improve structure, mulching to protect and enhance soil conditions, possible fertilization based on soil sample results, severing and/or removing strangling vines, cabling weak codominant branch unions, and monitoring and treating insect and disease problems. Trees that have a potential for failure or are in poor condition should be identified and removed, especially along the perimeter of any TCA.

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MP 100-53

Type 1

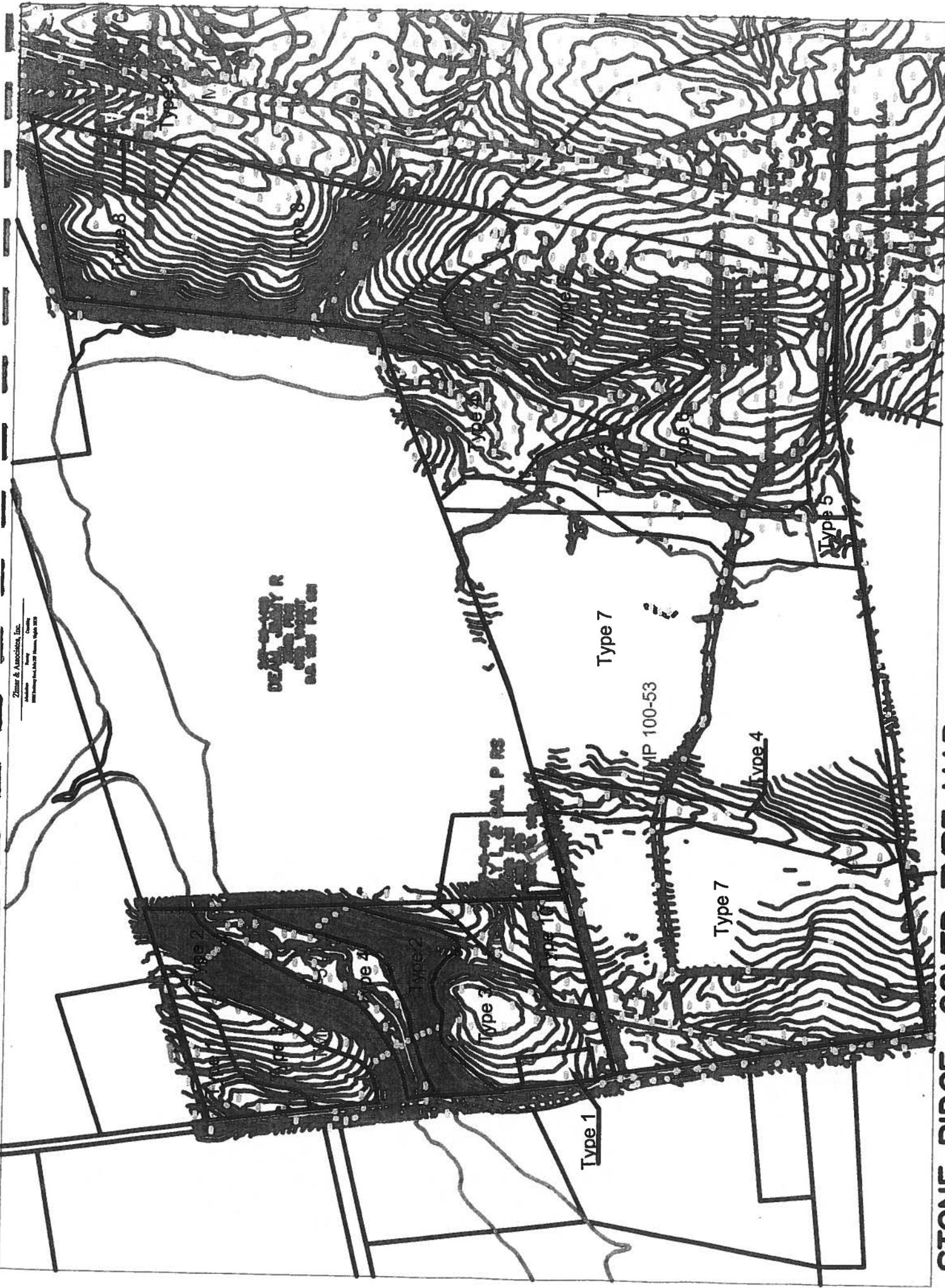
Type 3

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Type 4

Type 7

Type 5



STONE RIDGE: COVER TYPE MAP

Prepared by Zimar and Associates, Inc.

COVER TYPE # 1

SPECIES COMPOSITION: Black oak, southern red oak, red maple, and few pin oaks in overstory.

AGE: 30 to 40 years.

ACREAGE: 2.6

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Young mature to mature sawtimber (8 to 13" DBH with scattered trees up to 20").

DENSITY: Well-stocked (70 to 90 sq. ft. BA).

ASPECT: Westerly.

GROWTH RATE: Fair.

QUALITY: Fair.

HEALTH AND VIGOR: Fair.

INSECTS/DISEASE: None.

REGENERATION: Very sparse.

SOILS: Sudley – Oatlands complex

SAWTIMBER TREES/AC.: 20

SPECIMEN TREES: None.

STAND HISTORY: Possibly clearcut about 40 years ago. Appears to have been grazed for the past twenty years. No recent activity.

COVER TYPE # 2

SPECIES COMPOSITION: Black oak, scarlet oak, white oak, hickory.

AGE: 50 to 75 years.

ACREAGE: 7.6

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Young mature to mature sawtimber (10 to 20" DBH with scattered trees up to 26").

DENSITY: Well-stocked (70 to 90 sq. ft. BA).

ASPECT: Southerly to northerly.

GROWTH RATE: Fair to slow.

QUALITY: Fair.

HEALTH AND VIGOR: Fair.

INSECTS/DISEASE: None.

REGENERATION: Advanced regeneration heavily damaged by beavers.

SOILS: Oatlands gravelly silt loam, Nestoria gravelly silt loam severely eroded.

SAWTIMBER TREES/AC.: 25.

SPECIMEN TREES: None.

STAND HISTORY: No recent activity. Stand is on steep slopes adjacent to perennial stream.

COVER TYPE # 3

SPECIES COMPOSITION: Virginia pine and few shortleaf pines in overstory. Yellow-poplar, red oak, white oak, black cherry, blackhaw viburnum, and greenbrier in understory.

AGE: 50 to 70 years.

ACREAGE: 7.8

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Large pulpwood to sawtimber for pines (10 to 18" DBH).

DENSITY: Overstocked (100 to 120 sq. ft. BA).

ASPECT: Westerly.

GROWTH RATE: Fair to slow.

QUALITY: Poor.

HEALTH AND VIGOR: Poor. Many fallen pines.

INSECTS/DISEASE: None.

REGENERATION: Advanced regeneration of hardwood sawtimber species present throughout. Sizes up to 6" DBH in very good condition.

SOILS: Sudley - Oatlands complex.

SAWTIMBER TREES/AC.: None.

SPECIMEN TREES: None.

STAND HISTORY: Previously open field or pasture seeded in with Virginia pine 50 to 70 years prior. Pines beginning to topple with understory trees being released.

COVER TYPE # 4

SPECIES COMPOSITION: Yellow-poplar, red maple, ash, and American sycamore in overstory. Blue beech and spicebush in understory.

AGE: 50 to 70 years.

ACREAGE: 11.4

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Young mature to mature sawtimber (10 to 20" DBH with scattered trees up to 30").

DENSITY: Well-stocked (70 to 90 sq. ft. BA).

ASPECT: Westerly to southwesterly.

GROWTH RATE: Good.

QUALITY: Fair.

HEALTH AND VIGOR: Good.

INSECTS/DISEASE: Beaver damage in some areas.

REGENERATION: Advanced regeneration of hardwood sawtimber species damaged by beavers.

SOILS: Bowmansville silt loam, Penn silt loam, Nestoria gravelly loam.

SAWTIMBER TREES/AC.: 25.

SPECIMEN TREES: None.

STAND HISTORY: Bottomland cover type along perennial stream. Forested past 100 years. Evidence of past livestock grazing.

COVER TYPE # 5

SPECIES COMPOSITION: Pin oak and swamp white oak in overstory. Spicebush, viburnum, persimmon, and hawthorn in understory.

AGE: 50 years.

ACREAGE: 6.3

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Immature to young mature sawtimber (6 to 15" DBH).

DENSITY: Well-stocked (90 to 100 sq. ft. BA).

ASPECT: Southwesterly.

GROWTH RATE: Fair.

QUALITY: Fair.

HEALTH AND VIGOR: Good.

INSECTS/DISEASE: None.

REGENERATION: Overstory regeneration present.

SOILS: Albano silt loam, Kelly – Sycoline complex.

SAWTIMBER TREES/AC.: None.

SPECIMEN TREES: None.

STAND HISTORY: Stream bottom and swampy areas. Appears to have been recently pastured.

COVER TYPE # 6

SPECIES COMPOSITION: Eastern red cedar, dogwood, sumac, autumn olive, with smaller oaks.

AGE: 5 to 15 years.

ACREAGE: 22.0

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Reproduction to immature (up to 6" DBH).

DENSITY: Poorly stocked.

ASPECT: Southeasterly.

GROWTH RATE: Good.

QUALITY: Fair to good.

HEALTH AND VIGOR: Good.

INSECTS/DISEASE: None.

REGENERATION: Spotty (sparse to good).

SOILS: Sycoline – Catlett complex, Kelly – Sycoline complex, Elbert silty clay loam.

SAWTIMBER TREES/AC.: None.

SPECIMEN TREES: None.

STAND HISTORY: Abandoned field or pastureland seeding in with pioneer tree species.

COVER TYPE # 7

SPECIES COMPOSITION: Virginia pine, eastern red cedar, black locust, persimmon, and scattered oaks.

AGE: 15 to 20 years.

ACREAGE: 55.8

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Immature to young mature (3 to 12" DBH).

DENSITY: Overstocked (110 to 130 sq. ft. BA).

ASPECT: Southerly.

GROWTH RATE: Slow to fair.

QUALITY: Poor.

HEALTH AND VIGOR: Fair but crowded.

INSECTS/DISEASE: None.

REGENERATION: None.

SOILS: Manassas silt loam, Kelly – Sycoline complex, Sycoline – Catlett complex, Albano silt loam, Kelly silt loam.

SAWTIMBER TREES/AC.: None.

SPECIMEN TREES: None.

STAND HISTORY: Abandoned field or pastureland seeding in with pioneer tree species.

COVER TYPE # 8

SPECIES COMPOSITION: White oak, black oak, hickory, shortleaf pine, red maple, Virginia pine, blackgum in overstory. Dogwood, viburnum, red maple, and hickory in understory.

AGE: 75 to 90 years.

ACREAGE: 22.7

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Mature sawtimber (12 to 24" DBH).

DENSITY: Well-stocked (70 to 90 sq. ft. BA).

ASPECT: Westerly.

GROWTH RATE: Fair to good.

QUALITY: Fair to good.

HEALTH AND VIGOR: Good.

INSECTS/DISEASE: None.

REGENERATION: None.

SOILS: Kelly - Sycoline complex, Penn silt loam, Sycoline - Catlett complex.

SAWTIMBER TREES/AC.: 25

SPECIMEN TREES: None.

STAND HISTORY: Forestland possibly grazed and selectively harvested in the past. No activity noted for some time.

COVER TYPE # 9

SPECIES COMPOSITION: White oak, black oak, Virginia and shortleaf pine in overstory. Pole sized red maple, oak, and hickory in understory.

AGE: 15 to 20 years.

ACREAGE: 1.0

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Mostly immature (3 to 8" DBH). Scattered overstory trees are 18 to 30" DBH.

DENSITY: Well-stocked (70 to 90 sq. ft. BA).

ASPECT: Westerly.

GROWTH RATE: Fair to good.

QUALITY: Good.

HEALTH AND VIGOR: Good.

INSECTS/DISEASE: None.

REGENERATION: Dense red maple, oaks, and hickories.

SOILS: Penn silt loam.

SAWTIMBER TREES/AC.: Less than 10.

SPECIMEN TREES: None.

STAND HISTORY: Forestland heavily cut 15 to 20 years ago. Scattered large trees remain with a dense understory of immature hardwoods.

COVER TYPE # 10

SPECIES COMPOSITION: Black locust, black cherry, sassafras, elm, and osage orange. Spicebush and multiflora rose in understory.

AGE: 30 to 50 years.

ACREAGE: 2.7

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Immature sawtimber (6 to 12" DBH).

DENSITY: Poorly stocked (60 sq. ft. BA).

ASPECT: Southerly.

GROWTH RATE: Fair.

QUALITY: Fair.

HEALTH AND VIGOR: Fair.

INSECTS/DISEASE: None.

REGENERATION: Dense red maple, oaks, and hickories.

SOILS: Penn silt loam.

SAWTIMBER TREES/AC.: None.

SPECIMEN TREES: None.

STAND HISTORY: Abandoned homesite with scattered trees. Heavy vines and brush throughout.

COVER TYPE # 10

SPECIES COMPOSITION: Black locust, black cherry, sassafras, elm, and osage orange. Spicebush and multiflora rose in understory.

AGE: 30 to 50 years.

ACREAGE: 2.7

EVEN/UNEVEN AGED: Even.

SIZE CLASS: Immature sawtimber (6 to 12" DBH).

DENSITY: Poorly stocked (60 sq. ft. BA).

ASPECT: Southerly.

GROWTH RATE: Fair.

QUALITY: Fair.

HEALTH AND VIGOR: Fair.

INSECTS/DISEASE: None.

REGENERATION: Dense red maple, oaks, and hickories.

SOILS: Penn silt loam.

SAWTIMBER TREES/AC.: None.

SPECIMEN TREES: None.

STAND HISTORY: Abandoned homesite with scattered trees. Heavy vines and brush throughout.