

CITY OF LAKELAND
NATURAL RESOURCES ASSESSMENT

APPENDIX A

FOREST STAND GROUP/TYPE CLASSIFICATIONS

Forest Stand Classification

Loblolly, Shortleaf Pine Group (LSP)

Stands with the LSP designation must have > 50% stocking of pine.

LSP1- Loblolly Pine- (Associates), Sweetgum, Blackgum, Yellow-Poplar, Southern Red, Blackjack, and Post oaks. Sites include uplands with great moisture & good drainage as well as poorly drained depressions.

LSP2- Shortleaf Pine- (Associates), White, Southern Red, Scarlet, Black, Post, and Blackjack oaks as well as, Hickory, Blackgum, Red Maple, and Virginia Pine. Sites are low well, drained ridges to rocky, dry, south aspect slopes & better-drained spur ridges on north slopes & old fields.

LSP3- Virginia Pine- (Associates), White, Black, Southern Red, and Chestnut Oaks as well as Shortleaf Pine, Sweetgum, Blackgum, and Red Maple. Sites include abandoned fields and dry sites.

Oak, Pine Group (OP)

Stands with OP designation must have the pine component stocking of 25-50%.

OP1- Eastern Red Cedar, Hardwood- (Associates), Oak, Hickory, Walnut, Ash, Locust, Dogwood, Blackgum, Hackberry, Winged Elm, and Shortleaf as well as Virginia Pines. Sites are usually dry uplands and abandoned fields.

OP2- Shortleaf Pine, Oak- (Associates), White, Scarlet, Blackjack, Black, Post, and Southern Red Oaks as well as Hickory, Blackgum, Sweetgum, and Virginia Pine. Sites are generally found in dry, low ridges, flats, and south aspect slopes.

OP3- Virginia Pine, Southern Red Oak- (Associates), White, Black, Scarlet, Post, Blackjack, and Chestnut Oaks as well as Shortleaf Pine, Blackgum, and Hickory. Sites are dry slopes and ridges.

OP4- Loblolly Pine, Hardwoods- (Associates), Blackgum, Sweetgum, Yellow-Poplar, Red Maple, White and Green Ash, and American Elm all on more moist sites as well as Southern and Northern Red Oaks, White, Post, and Scarlet Oaks, and Persimmon and Hickory on drier sites. Sites are very moist (although not all year) to drier sites.

Oak, Hickory Group (OH)

Specified stand type must represent the majority (>50%) of species on site.

OH1- Post Oak, Blackjack Oak- (Associates), Black, Southern Red, White, Scarlet, Chinkapin, Shumard, and Shingle Oaks as well as Hickory, Blackgum, Sourwood, Red Maple, Winged Elm, Hackberry, Shortleaf Pine, Virginia Pine, Dogwood, and Eastern Red Cedar. Sites include dry uplands and ridges.

OH2- Chestnut Oak- (Associates), Scarlet, White, Black, Post, Southern Red, and Northern Red Oaks as well as Blackgum, Sweetgum, Red Maple, Shortleaf Pine, and Virginia Pine. Rocky outcrops and ridge tops with thin soils.

OH3- White Oak, Red Oak, Hickory- (Associates), White Ash, Red Maple, Locust, Walnut, Beech, Sweetgum, Blackgum, Yellow-poplar, and Dogwood. Sites are a variety of well-drained uplands.

OH4- Northern Red Oak- (Associates), Black, Scarlet, and Chestnut Oaks as well as Yellow-poplar. Sites include a spotty distribution on ridge crests and north slopes in mountains, but also on rolling land, slopes, and benches on loamy soil.

OH5- Sassafras, Persimmon- (Associates), Elm, Eastern Red Cedar, Hickory, Ash, Yellow-poplar, and oaks. Sites occupy old fields and abandoned farmland.

OH6- Sweetgum, Yellow-Poplar- (Associates), Red Maple, White and Green Ash, and other moist site hardwoods. Sites generally occupy moist lower slopes.

OH7- Yellow-Poplar- (Associates), Black Locust, Red Maple, and other moist site hardwoods as well as Northern and Southern Red Oaks. NO SWEETGUMS FOR THIS CLASSIFICATION. Sites are lower slopes, north slopes, moist coves, flats and old fields.

OH8- Black Walnut- (Associates), Yellow-poplar, White Ash, Black Cherry, Beech, Oaks, and Hickory. Sites include coves and well-drained bottoms.

OH9- Red Maple, Oak- (Associates), Dominated by Red Maple, variety of central hardwoods, upland oak, Hickory, Yellow-poplar, Sassafras, Shortleaf and Virginia Pines. Sites occupy uplands.

Oak, Gum, Cypress Group (OGC)

Wet Site Indicator -

OGC1- Swamp Chestnut Oak, Cherrybark Oak- (Associates), Hickory, Blackgum, Sweetgum, American and Winged Elms, Yellow-poplar, Beech, White, Shumard, Southern Red, and Post Oaks. Sites include alluvial flood plains of major rivers on all ridges in the terraces and on the best fine sandy loam soils on the highest first bottom ridges.

OGC2- Sweetgum, Nuttall Oak, and Willow Oak- (Associates), Green Ash, Pecan, American Elm, Cottonwood, Red Maple, Honeylocust, and Persimmon. Very wet sites.

OGC3- Overcup Oak and Water Hickory- (Associates), Willow Oak, American Elm, Green Ash, Hackberry, Red Maple, and Persimmon. Sites include alluvial floodplains in low, poorly drained flats with clay soils; also in sloughs and lowest backwater basins and low ridges with heavy soils that are subject to late spring inundation.

OGC4- Cypress and Water Tupelo: 25-50% stocking of Cypress, (Associates), Blackgum, Sweetgum, Willow, Red Maple, American Elm, Persimmon, and Overcup Oak. Sites include floodplains, stream margins, and very low, poorly drained flats, deep sloughs, and swamps wet most of the year.

OGC5- Cypress: >50% stocking of Cypress, (Associates), Willow, Red Maple, Blackgum, Sweetgum, American Elm, Persimmon, and Overcup Oak. Sites are very low, poorly drained flats, deep sloughs, and swamps wet most of the year.

Elm, Ash, Cottonwood Group (EAC)

-Specified stand type must represent the majority (>50%) of species on site-

EAC1- River Birch and Sycamore- (Associates), Red Maple, Black Willow, and other moist site hardwoods. Sites include edges of streams, creeks, and lakes.

EAC2- Cottonwood- (Associates), Willow, White and Green Ash, as well as Sycamore. Sites occupy stream banks where bare moist soils are available.

EAC3- Sycamore, Pecan, and American Elm- (Associates), Boxelder, Green Ash, Hackberry, Silver Maple, Cottonwood, Willow, Sweetgum, and River Birch. Sites include bottomlands and alluvial floodplains of major rivers.

EAC4- Sugarberry, Hackberry, Elm, and Green Ash- (Associates), Pecan, Blackgum, Sweetgum, Honeylocust, Red Maple, Blackberry, and Boxelder. Sites include low ridges and flats in flood plains.

EAC5- Red Maple Lowlands- (Associates), Red Maple comprises the majority of the stocking. Because this type grows on a wide variety of sites, associates are diverse. Yellow-poplar, Blackgum, Sweetgum, and Loblolly Pine. Sites are generally restricted to moist and very wet conditions with poorly drained soils and on swamp borders.

CITY OF LAKELAND
NATURAL RESOURCES ASSESSMENT

APPENDIX B

SOILS CLASSIFICATIONS

City of Lakeland **Soil Inventory**

Soils have many functions. Soils provide nutrients for uptake by plants which in turn become a food source for many organisms. Basic soil textures include sand, silt, and clay. These textures have a lot to do with the soil's carrying capacity which essentially indicates the soil's ability to sustain life. The fertility of the soil depends on many things such as light, moisture, temperature, and the overall physical condition of the soil. Soil reaction is described as the degree of acidity or alkalinity as measured in pH units. While soil structure is described as primary particles that can be arranged into clusters or compound particles, soil structure dictates drainage, nutrient leeching, runoff, erosion, and compaction also. The above as well as other factors are the basis for the description of each soil listed. Soils GIS shapefiles were in the GIS system prior to the NRI and have been obtained from USDA NRCS. Soil codes and descriptions are taken from the Shelby County Tennessee Soil Survey as prepared by the USDA NRCS (Shelby County Soil Survey). Lakeland's soils can be generally categorized as Loess, a wind deposited loamy formation that is highly unconsolidated and subject to severe erosive potential as well as to compaction.

Ca- Calloway Silt Loam, somewhat poorly drained, uppermost 20" is readily penetrated by roots, water and air, fragipan starts at 15-25", strong to medium acidity, low natural fertility, when wet in winter and spring use of heavy machinery may injure tree roots and cause soil compaction, plant competition is moderate, suitable for bottomland hardwoods

Co- Collins Silt Loam, deep moderately drained soil on first bottoms, high water capacity, roots can penetrate 3 feet plus, water table is at 24", some flooding in winter and spring, excellent for bottomland hardwoods, plant competition is high due to high availability of water and nutrients, woodlands will need to be weeded

Fm- Falaya Silt Loam, somewhat poorly drained, very silty first bottoms, water table during winter and spring is within a foot of the surface and during summer and fall table is several feet below, high available water capacity, medium to strong acidity, excess water is main limitation, excellent for bottomland oaks and other hardwoods, weeding is needed due to water

Fs- Filled Land (Silty), consists of soil material that has been moved for the purpose of leveling and building, some areas are suitable for development as recreational sites such as tennis courts, golf courses, and parks

GaA- Grenada Silt Loam (0-2% slope), moderately well drained soils on broad ridge tops, brittle fragipan starts at 2' and extends 1-3' down leading to another layer of friable silt loam several feet deep, runoff is slow and dries slowly in spring, roots water and air readily penetrate down to 24" where fragipan then limits,

strong acidity with medium water capacity, slight hazard of erosion, great for upland hardwoods and pine

GaB- Grenada Silt Loam (2-5% slopes), moderately well drained soil on uplands, roots water and air readily penetrate to 24" where the fragipan starts and limits, the fragipan causes wetness in upper layers leading to rapid runoff and causing droughty conditions in the summer, strongly acidic and low natural fertility, slight hazard of erosion, good for upland hardwoods loblolly and shortleaf pines

GaB2- Grenada Silt Loam (2-5% slopes, eroded), moderately well drained uplands, fragipan begins at 15-24" (mostly 20"), rapid runoff in rainy season and droughty during summer, strongly acidic and medium water capacity, runoff and erosion are main problems (terracing, grassed waterways, strip cropping and contour farming is suggested), upland hardwoods loblolly and shortleaf pines, moderately low natural fertility

GaC- Grenada Silt Loam (5-8% slopes), moderately well drained on side slopes, fragipan starts near 24" and is 1-3' thick, roots water and air readily penetrate top layer to 8" rapid runoff, droughty during summer and fall, medium water capacity, low natural fertility, and strongly acidic, upland hardwoods loblolly and shortleaf pines

GaC3- Grenada Silt Loam (5-8% slopes) eroded, moderately well drained soil, fragipan starts at 14-20" is 1-3' thick, in some places is so eroded fragipan is on surface, with slow movement of water the surface can become logged, surface water is rapid during wet months, droughty in summer, strongly acidic with low natural fertility, medium water capacity, severe erosion has reduced thickness of surface layer for root growth and water storage, control of erosion is difficult, upland hardwoods loblolly and shortleaf pines, protection is needed if roads and trails are built

GaD- Grenada Silt Loam (8-12% slopes), moderately well drained sites on hill sides, surface layer is 7-9" thick, fragipan starts at 22-30" and is 1-3' deep, rapid runoff, strongly acidic with medium water capacity, upland hardwoods and pines, erosion hazard is medium so protection is needed, restricted root zone and rapid runoff are biggest problems

GaD2- Grenada Silt Loam (8-12% slopes) eroded, plow layer is 6" deep with subsoil down to 12-18" where fragipan starts and extends 1-3' (can be just below plow layer in some areas), can be waterlogged with rapid runoff in wet months, droughty during summer, strongly acidic with medium water capacity, severe erosion hazard, upland hardwoods and pines

GgD3- Grenada Complex (5-12% slopes) severely eroded, soil on hillsides where erosion has removed all of the original surface layer, shallow gullies have cut into fragipan, plow layer is compact and shows sign of mottling, fragipan can be just below plow layer, partially exposed and/or washed away, rapid runoff, strongly acidic with low natural fertility, medium to low water capacity, fair site for pines, severe hazard of erosion

Gr- Graded Land Silty materials, graded for subdivisions a few inches up to 5 feet, 1-5% slope after grading, small areas of filled land, ok for plants and trees if seedbed is prepped with fertilizer and enough water

Gs- Gullied Land (Silty), hillsides with 8-20% slopes, gullies make up 25% or more of the land, gullies range from 3-15' deep and 5-80' wide, between sheet erosion have removed much of the surface layer and subsoil, in some gullies sandy and gravelly Coastal Plain material is exposed, strongly acidic, all acreage has been cleared, some planting of pine and hardwoods, seedling mortality and competition range from slight to severe

He- Henry Silt Loam, poorly drained, fragipan starts at near 20" and is 18-30" thick, some alkali or slick spots, surface runoff is slow or ponded, uppermost 20" is readily penetrated by roots water and air, subsoil is dense and poorly aerated, restricts root growth and slows drainage, excessive wetness in winter and spring, droughty in summer, medium water capacity, strongly acidic with low natural fertility, seasonal wetness is a major limitation, diversions are needed to intercept runoff of higher soils, ¼ of area in the county is wooded, good for bottomland oaks and other hardwoods, some ponding can kill trees, if soil is wet during winter use of heavy machinery can damage roots and cause soil compaction

LoB- Loring Silt Loam (2-5% slopes), deep moderately well drained soil on broad ridgetops, plow layer is 7" thick, weak fragipan begins near 28" and extends another 12-25" down with a brown silt loam continuing after for several feet, strongly acidic, roots water and air penetrate to 28", the weak fragipan only slightly restricts these, high water capacity, slope is main limitation, white and red oaks with yellow polar and black walnut indicating good site characteristics for upland hardwoods and pines

LoB2- Loring Silt Loam (2-5% slopes) eroded, moderately well drained soils on ridgetops, top layer is 5-7" thick with subsoil extending 2' where fragipan extends down 12-24" down strongly acidic with moderate natural fertility, high available water capacity, good forested sites with valuable species present in LoB

LoC2- Loring Silt Loam (5-8% slopes) eroded, deep moderately well drained soil on hillsides, weak fragipan at 16-24" and extends 12-20" down, below pan is several feet of brown silt loam, medium to strongly acidic, moderate natural fertility, high available water capacity, slope and erosion hazard are main problems, moderate erosion hazard, same Lo species with pines, moderate plant competition, site prep may be needed

LoD- Loring Silt Loam (8-12% slopes), moderately well drained soil on hillsides, 6-10" thick surface layer, subsoil extends 30" down where weak fragipan starts and extends 12-18" down where brown silty loam extends for several feet, strongly acidic with moderate natural fertility, high available water capacity, erodes easily, same hardwood species with pine, plant competition and erosion hazard are moderate problems, protection from erosion is needed

LoD2- Loring Silt Loam (8-12% slopes) eroded, moderately well drained soil on hillsides, plow layer is mixed in with former subsoil, subsoil extends 12-22" where fragipan extends 12-24" down to brown silt loam that extends down for several feet, some areas have rills and gullies, strongly acidic with moderately low natural fertility, high available water capacity, same species with pines, moderate plant competition and erosion hazard, protection from erosion is needed

LoD3- Loring Silt Loam (5-12% slopes) severely eroded, moderately drained soil on hillsides, erosion has removed all of the original surface layer and much of the subsoil, subsoil extends 12-18" where a weak fragipan begins and extends 10-24" where a brown silt loam extends for several feet, some shallow gullies cut into fragipan, strongly acidic with moderately low natural fertility, medium water capacity, erodes easily if not protected, site has same species but has little amount of wooded acreage in the county, severe erosion hazard

MeB- Memphis Silt Loam, deep well drained soil on tops of broad low lying hills, plow layer is 7" thick, subsoil is silt loam several feet thick, layer below surface layer can be more clayey, in wooded areas surface layer is 12" thick, strong to medium acidity with high natural fertility, root zone is very deep with high water capacity, one of the most productive upland sites in the whole state, runoff and erosion control are the main problems, washing occurs after disturbance, grass should be established in natural waterways, heavy applications of fertilizer can be used, vegetative cover needed to control runoff and conserve moisture, White and Red oaks with Yellow poplar and upland hardwoods and loblolly pine, because of lack of suitable seed trees natural regeneration will not produce high value desirable phenotypes, moderate plant competition, plant seedlings and remove undesirables

MeB2- Memphis Silt Loam (2-5% slopes) eroded, deep well drained soil formed by loess is 15-80' deep, erosion has removed much of the surface layer, strongly to slightly acidic, high natural fertility, high water capacity, runoff control is main problem, soil is silty and erodes easily if disturbed, terracing is needed, grass should be established in natural water courses, same woodland species, abandoned fields need site prep cultivation and weeding

MeC2- Memphis Silt Loam (5-8% slopes) eroded, deep well drained soils located tops of long narrow winding low-lying hills or rather short hillsides, wooded tracts have surface layer 8-10" thick, soil is 15-80' deep, erosion has removed much of original surface layer, strongly to slightly acidic with moderately high natural fertility, high available water capacity, control of runoff is biggest problem since soil erodes easily if disturbed, same species as Me with same requirements for site prep if needed

MeD2- Memphis Silt Loam (8-12% slopes) eroded, basically the same except for high slope % and possibility for erosion

MeD3- Memphis Silt Loam (5-12% slope) severely eroded, silty, extending 20' or more, strong to medium acidity with moderately high natural fertility, high available water capacity, moderate water capacity, moderate plant competition, upland hardwoods and pine, high erodibility

MeE- Memphis Silt Loam (12-20% slopes), deep well drained soil on short slopes, a few shallow gullies, high water capacity with strong to slight acidity, high natural fertility, rapid runoff and severe erodability, runoff is main problem, same species as Me site prep and planting is needed if there is an absence of a good seed source

MeF3- Memphis Silt Loam (12-30% slopes) severely eroded, deep soil on hillsides, erosion has removed most of surface layer and most of subsoil, 4" thick plow layer, top 6" is silty clayey loam, many rills and gullies, strong to slight acidity with moderately high natural fertility, high water capacity, rapid runoff and severe erodibility, runoff control is main problem, fairly good for loblolly pine and then can be used as a nurse crop for reinstatement of upland hardwoods, site prep and weeding needed, slope limits operability

MeG- Memphis Silt Loam (30-65% slopes), well drained soils on hillsides that form deep narrow meandering V-shaped valleys leading down from narrow ridgetops, soil is formed from loess 20-80' thick, depth to alkaline loess is 4-6', gullies in most areas, soil is underlain by sand at 30-40", medium acidity with moderate natural fertility, deep root zone with high water capacity, same species as Me, moderate plant competition, slope is moderate to severe limitation on operability

Wy- Waverly Silt Loam, poorly drained first bottoms along small rivers and creeks, dark grayish brown silt loam is 3-8" thick, then material is gray or mottled gray and brown silt loam, flooded nearly every year, in winter and spring water table is seldom below 1 foot from surface, does not drain away until late spring, high water capacity, medium to strong acidity with moderate natural fertility, wetness in winter and spring is a major limitation, good for bottomland oaks red maple cottonwood sweetgum green ash and sycamore, moderate seedling mortality, severe plant competition, both because of excessive wetness

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APPENDIX C

WETLANDS CLASSIFICATIONS

Natural Resources Inventory City of Lakeland

Wetlands Inventory

Coded sites have been indicated as possible locations of wetlands or sites where conditions are favorable for classification as a wetland. Actual designation of a wetland depends on a classification by the US Army Corps of Engineers. Codes included are areas listed by the National Wetlands Inventory, completed by the US Fish and Wildlife Service, which occurred within the city limits of Lakeland, TN. Maps of wetlands were made by obtaining National Wetland Inventory information and GIS shapefiles, maps from the NRCS (Natural Resources Conservation Service) of field delineated wetland locations and known locations where US Army corps of Engineers made delineations.

NWI Wetland Codes Existing in the City of Lakeland

L1OWHh- Lacustrine (L), Limnetic (1), Open Water (OW), Permanently Flooded (H), Diked or impounded (h).

PEM1A- Palustrine (P), Emergent (EM), Persistent (1), Temporarily Flooded (A).

PEM1C- Palustrine (P), Emergent (EM), Persistent (1), Seasonally Flooded (C).

PEM1F- Palustrine (P), Emergent (EM), Persistent (1), Semi permanently Flooded (F).

PEM1Fh- Palustrine (P), Emergent (EM), Persistent (1), Semi permanently Flooded (F), Diked or Impounded (h).

PFO1A- Palustrine (P), Forested (FO), Broad-Leaved Deciduous (1), Temporarily Flooded (A).

PFO1Ah- Palustrine (P), Forested (FO), Broad-Leaved Deciduous (1), Temporarily Flooded (A), Diked or Impounded (h)

PFO1C- Palustrine (P), Forested (FO), Broad-Leaved Deciduous (1), Seasonally Flooded (C).

PFO1Ch- Palustrine (P), Forested (FO), Broad-Leaved Deciduous (1), Seasonally Flooded (C), Diked or Impounded (h).

PFO1F- Palustrine (P), Forested (FO), Broad-Leaved Deciduous (1), Semi permanently Flooded (F).

- PFO1Fh-** Palustrine (P), Forested (FO), Broad-Leaved Deciduous (1), Semi permanently Flooded (F), Diked or Impounded (h).
- POWF-** Palustrine (P), Open Water (OW), Semi permanently Flooded (F).
- POWFh-** Palustrine (P), Open Water (OW), Semi permanently Flooded (F), Diked or Impounded (h).
- POWG-** Palustrine (P), Open Water (OW), Intermittently Exposed (G).
- POWHh-** Palustrine (P), Open Water (OW), Permanently Flooded (H), Diked or impounded (h).
- POWHx-** Palustrine (P), Open Water (OW), Permanently Flooded (H), Excavated (x).
- PSS1A-** Palustrine (P), Scrub-Shrub (SS), Broad-Leaved Deciduous (1), Temporarily Flooded (A).
- PSS1C-** Palustrine (P), Scrub-Shrub (SS), Broad-Leaved Deciduous (1), Seasonally Flooded (C).
- PSS1Fh-** Palustrine (P), Scrub-Shrub (SS), Broad-Leaved Deciduous (1), Semi permanently Flooded (F), Diked or Impounded (h).
- R2USC-** Riverine (R), Lower Perennial (2), Unconsolidated Shore (US), Seasonally Flooded (C).
- U-** Unknown (U).

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APPENDIX D

BLANK CITIZEN SURVEY FORM

1. Introduction

The questions that follow are somewhat technical. It may be necessary to review the Natural Resources Inventory Draft for Public Comment (available as pdf) before or while completing this survey. Technical terms will be more fully described within that document. Thanks for your time and comments.

1. Are you a resident of Lakeland TN?

- Yes
 No

2. What is your e-mail address (to prevent duplication of results - Lakeland will not sell or distribute your e-mail address)?

2. Resource Assessment

3. Please rank the following natural resources in terms of priority for conservation.

	Very Low Priority	Low Priority	Neutral	High Priority	Very High Priority
Streams	<input type="radio"/>				
Viewsheds	<input type="radio"/>				
Grasslands	<input type="radio"/>				
Historic/Cultural	<input type="radio"/>				
Forests	<input type="radio"/>				
Agricultural Land	<input type="radio"/>				
Steep Slopes	<input type="radio"/>				
Lakes	<input type="radio"/>				
Wildlife Habitat	<input type="radio"/>				
Threatened, Endangered, & Sensitive Species	<input type="radio"/>				
Wetlands	<input type="radio"/>				

4. What attributes of natural resources do you value highest?

	very low value	low value	neutral	high value	very high value
Ability to provide products (wood, game, crops, etc.)	<input type="radio"/>				
Environmental benefits (air & water quality, etc.)	<input type="radio"/>				
Ability to support biodiversity	<input type="radio"/>				
Contribution to community character	<input type="radio"/>				

Scenic value	<input type="radio"/>				
Ability to support recreation	<input type="radio"/>				

5. Please rank the following land cover types in terms of contribution to community character.

	very low contribution	low contribution	neutral	high contribution	very high contribution
Water	<input type="radio"/>				
Agricultural Land	<input type="radio"/>				
Forested Land	<input type="radio"/>				
Grassland	<input type="radio"/>				

6. Please rank the following land cover types in terms of scenic value.

	very low value	low value	neutral	high value	very high value
Grassland	<input type="radio"/>				
Forested Land	<input type="radio"/>				
Agricultural Land	<input type="radio"/>				
Water	<input type="radio"/>				

7. Rank the following categories/attributes of slopes in terms of conservation priority.

	Very Low Priority	Low Priority	Neutral	High Priority	Very High Priority
Moderate Slopes (< 10%)	<input type="radio"/>				
High Slopes (10% - 20%)	<input type="radio"/>				
Very High Slopes (> 20%)	<input type="radio"/>				
Short slope length (<100')	<input type="radio"/>				
Moderate slope length (100-300')	<input type="radio"/>				
Long slope length (>300')	<input type="radio"/>				

8. Rank the following forest stand groups in terms of conservation priority.

	Very Low Priority	Low Priority	Neutral	High Priority	Very High Priority
Elm-Ash Cottonwood	<input type="radio"/>				
Oak-Pine	<input type="radio"/>				
Oak-Gum-Cypress	<input type="radio"/>				
Oak-Hickory	<input type="radio"/>				
Loblolly-Shortleaf-Pine	<input type="radio"/>				

9. How would you rank the following as criteria to be used in prioritizing conservation of forested stands?

	Not Important	Low Importance	Neutral	Important	High Importance
restoration potential	<input type="radio"/>				
percentage of native species	<input type="radio"/>				
stand age	<input type="radio"/>				
size of contiguous stand	<input type="radio"/>				
stand health	<input type="radio"/>				
stand origin (natural or human induced)	<input type="radio"/>				
connectivity to other habitats	<input type="radio"/>				

10. Please rank the following types of forest stands in terms of conservation priority.

	very low priority	low priority	neutral	high priority	very high priority
naturally occurring stands	<input type="radio"/>				
mature hardwood stands	<input type="radio"/>				
silviculturally produced stands	<input type="radio"/>				
bottomland hardwood stands	<input type="radio"/>				
pine plantations	<input type="radio"/>				
young hardwood stands	<input type="radio"/>				
upland hardwood stands	<input type="radio"/>				

3. End

11. Please provide us with any comments, concerns, or questions you have regarding natural resources conservation or this survey.

Thank you for completing this survey!

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APPENDIX E

Survey Results

Natural Resources Assessment

1. Are you a resident of Lakeland TN?

	Response Percent	Response Count
Yes 	95.5%	42
No 	4.6%	2
<i>answered question</i>		44
<i>skipped question</i>		6

2. What is your e-mail address (to prevent duplication of results - Lakeland will not sell or distribute your e-mail address)?

	Response Count
	44
<i>answered question</i>	44
<i>skipped question</i>	6

3. Please rank the following natural resources in terms of priority for conservation.

	Very Low Priority	Low Priority	Neutral	High Priority	Very High Priority	Rating Average	Response Count
Forests	0.0% (0)	2.6% (1)	5.3% (2)	36.8% (14)	55.3% (21)	4.45	38
Lakes	0.0% (0)	2.6% (1)	7.9% (3)	42.1% (16)	47.4% (18)	4.34	38
Streams	0.0% (0)	5.3% (2)	2.6% (1)	44.7% (17)	47.4% (18)	4.34	38
Steep Slopes	2.6% (1)	18.4% (7)	28.9% (11)	34.2% (13)	15.8% (6)	3.42	38
Wetlands	2.6% (1)	7.9% (3)	26.3% (10)	39.5% (15)	23.7% (9)	3.74	38
Wildlife Habitat	0.0% (0)	7.7% (3)	2.6% (1)	41.0% (16)	48.7% (19)	4.31	39
Historic/Cultural	0.0% (0)	5.3% (2)	23.7% (9)	44.7% (17)	26.3% (10)	3.92	38
Viewsheds	5.3% (2)	2.6% (1)	42.1% (16)	28.9% (11)	21.1% (8)	3.58	38
Grasslands	0.0% (0)	2.6% (1)	34.2% (13)	42.1% (16)	21.1% (8)	3.82	38
Agricultural Land	2.6% (1)	7.9% (3)	55.3% (21)	21.1% (8)	13.2% (5)	3.34	38
Threatened, Endangered, & Sensitive Species	2.6% (1)	2.6% (1)	17.9% (7)	33.3% (13)	43.6% (17)	4.13	39
<i>answered question</i>							39
<i>skipped question</i>							11

4. What attributes of natural resources do you value highest?

	very low value	low value	neutral	high value	very high value	Rating Average	Response Count
Ability to support biodiversity	2.6% (1)	7.9% (3)	28.9% (11)	26.3% (10)	34.2% (13)	3.82	38
Scenic value	2.6% (1)	0.0% (0)	7.9% (3)	47.4% (18)	42.1% (16)	4.26	38
Environmental benefits (air & water quality, etc.)	0.0% (0)	2.6% (1)	5.3% (2)	31.6% (12)	60.5% (23)	4.50	38
Ability to support recreation	0.0% (0)	2.6% (1)	31.6% (12)	42.1% (16)	23.7% (9)	3.87	38
Ability to provide products (wood, game, crops, etc.)	5.3% (2)	15.8% (6)	36.8% (14)	31.6% (12)	10.5% (4)	3.26	38
Contribution to community character	0.0% (0)	2.6% (1)	13.2% (5)	47.4% (18)	36.8% (14)	4.18	38
					<i>answered question</i>		38
					<i>skipped question</i>		12

5. Please rank the following land cover types in terms of contribution to community character.

	very low contribution	low contribution	neutral	high contribution	very high contribution	Rating Average	Response Count
Agricultural Land	5.3% (2)	15.8% (6)	36.8% (14)	39.5% (15)	2.6% (1)	3.18	38
Forested Land	2.6% (1)	0.0% (0)	2.6% (1)	36.8% (14)	57.9% (22)	4.47	38
Grassland	2.6% (1)	2.6% (1)	26.3% (10)	57.9% (22)	10.5% (4)	3.71	38
Water	2.6% (1)	0.0% (0)	7.9% (3)	39.5% (15)	50.0% (19)	4.34	38
					<i>answered question</i>		38
					<i>skipped question</i>		12

6. Please rank the following land cover types in terms of scenic value.

	very low value	low value	neutral	high value	very high value	Rating Average	Response Count
Agricultural Land	7.9% (3)	21.1% (8)	36.8% (14)	28.9% (11)	5.3% (2)	3.03	38
Grassland	2.6% (1)	0.0% (0)	31.6% (12)	55.3% (21)	10.5% (4)	3.71	38
Forested Land	2.6% (1)	0.0% (0)	0.0% (0)	39.5% (15)	57.9% (22)	4.50	38
Water	2.6% (1)	0.0% (0)	5.3% (2)	47.4% (18)	44.7% (17)	4.32	38
					<i>answered question</i>		38
					<i>skipped question</i>		12

7. Rank the following categories/attributes of slopes in terms of conservation priority.

	Very Low Priority	Low Priority	Neutral	High Priority	Very High Priority	Rating Average	Response Count
Moderate Slopes (< 10%)	7.9% (3)	0.0% (0)	55.3% (21)	28.9% (11)	7.9% (3)	3.29	38
High Slopes (10% - 20%)	2.6% (1)	0.0% (0)	47.4% (18)	34.2% (13)	15.8% (6)	3.61	38
Very High Slopes (> 20%)	2.6% (1)	2.6% (1)	47.4% (18)	31.6% (12)	15.8% (6)	3.55	38
Short slope length (<100')	2.6% (1)	5.3% (2)	57.9% (22)	23.7% (9)	10.5% (4)	3.34	38
Moderate slope length (100-300')	2.6% (1)	0.0% (0)	52.6% (20)	28.9% (11)	15.8% (6)	3.55	38
Long slope length (>300')	2.6% (1)	0.0% (0)	47.4% (18)	31.6% (12)	18.4% (7)	3.63	38
						<i>answered question</i>	38
						<i>skipped question</i>	12

8. Rank the following forest stand groups in terms of conservation priority.

	Very Low Priority	Low Priority	Neutral	High Priority	Very High Priority	Rating Average	Response Count
Oak-Hickory	2.6% (1)	0.0% (0)	5.3% (2)	36.8% (14)	55.3% (21)	4.42	38
Elm-Ash Cottonwood	2.6% (1)	13.2% (5)	26.3% (10)	34.2% (13)	23.7% (9)	3.63	38
Loblolly-Shortleaf-Pine	7.9% (3)	10.5% (4)	44.7% (17)	23.7% (9)	13.2% (5)	3.24	38
Oak-Pine	5.3% (2)	2.6% (1)	13.2% (5)	63.2% (24)	15.8% (6)	3.82	38
Oak-Gum-Cypress	5.3% (2)	0.0% (0)	13.2% (5)	50.0% (19)	31.6% (12)	4.03	38
						<i>answered question</i>	38
						<i>skipped question</i>	12

9. How would you rank the following as criteria to be used in prioritizing conservation of forested stands?

	Not Important	Low Importance	Neutral	Important	High Importance	Rating Average	Response Count
stand health	2.6% (1)	2.6% (1)	7.9% (3)	50.0% (19)	36.8% (14)	4.16	38
percentage of native species	2.6% (1)	0.0% (0)	10.5% (4)	52.6% (20)	34.2% (13)	4.16	38
connectivity to other habitats	2.6% (1)	0.0% (0)	21.1% (8)	36.8% (14)	39.5% (15)	4.11	38
stand age	5.3% (2)	0.0% (0)	15.8% (6)	39.5% (15)	39.5% (15)	4.08	38
restoration potential	2.6% (1)	0.0% (0)	28.9% (11)	44.7% (17)	23.7% (9)	3.87	38
size of contiguous stand	2.6% (1)	2.6% (1)	26.3% (10)	39.5% (15)	28.9% (11)	3.89	38
stand origin (natural or human induced)	5.3% (2)	13.2% (5)	42.1% (16)	26.3% (10)	13.2% (5)	3.29	38
						<i>answered question</i>	38
						<i>skipped question</i>	12

10. Please rank the following types of forest stands in terms of conservation priority.

	very low priority	low priority	neutral	high priority	very high priority	Rating Average	Response Count
mature hardwood stands	2.6% (1)	0.0% (0)	10.5% (4)	18.4% (7)	68.4% (26)	4.50	38
young hardwood stands	2.6% (1)	2.6% (1)	23.7% (9)	34.2% (13)	36.8% (14)	4.00	38
pine plantations	2.6% (1)	23.7% (9)	52.6% (20)	15.8% (6)	5.3% (2)	2.97	38
naturally occurring stands	0.0% (0)	5.3% (2)	13.2% (5)	36.8% (14)	44.7% (17)	4.21	38
silviculturally produced stands	2.6% (1)	2.6% (1)	65.8% (25)	21.1% (8)	7.9% (3)	3.29	38
bottomland hardwood stands	2.6% (1)	0.0% (0)	26.3% (10)	39.5% (15)	31.6% (12)	3.97	38
upland hardwood stands	2.6% (1)	0.0% (0)	15.8% (6)	42.1% (16)	39.5% (15)	4.16	38
						<i>answered question</i>	38
						<i>skipped question</i>	12

11. Please provide us with any comments, concerns, or questions you have regarding natural resources conservation or this survey.

	Response Count
	20
<i>answered question</i>	20
<i>skipped question</i>	30

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