USDA

United States Department of Agriculture

Natural Resources
Conservation Service

Louisville Field Office

4233 Bardstown Road
Suite 100-A
Louisville, KY 40291
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April 6, 2015

RECEIVED
FEB 06 2017
PLANNING & DESIGN SERVICES

Kathy Linares
Mindel Scott & Associates, Inc.
5151 Jefferson Blvd.,
Louisville, KY 40219

RE: Primrose Meadows Section 3

Dear Ms. Linares:

Enclosed you will find a copy of the requested soils report on the planned Primrose Meadows, section 3 development project. The project site is planned as a R4 subdivision to accommodate 20 individual single family lots on 6.1 acres. The area for the proposed conversion is primarily wooded.

The soils on the tract are primarily moderately shallow soils (20" – 40") of the Caneyville and Shrouts Associations. These soils are underlain by limestone geology within karst terrains. Under the present ground cover of trees and brushy species, water runoff from the site is somewhat contained in the top layer of soil and the duff or organic layers under the tree canopies. Extended root systems provide other avenues for water infiltration along with the decaying root mass under the scrubby woodland area. This infiltration of water through porous soils reduces runoff by providing avenues for capturing and retaining stormwater. During construction activities, this natural system to deter runoff will be lost due to soil compaction and most likely the destruction of the soil's organic layer and removal of the tree canopies. These changes should be calculated in the before and after scenarios of stormwater runoff from the site to adequate estimate the changes in runoff after the site is developed.

PDS Notes 2/13/17

Accompanied with the development plans for the project should be measures designed to address the potential soil erosion and movement of sediments downstream. The loss of the existing woodland canopies which currently hold the soil in place needs to be replaced by a system that captures and filters runoff during construction. As plans are developed to address the soil erosion and water runoff concerns of the site during and after the property transition, please feel free to call on us if we can provide any assistance.

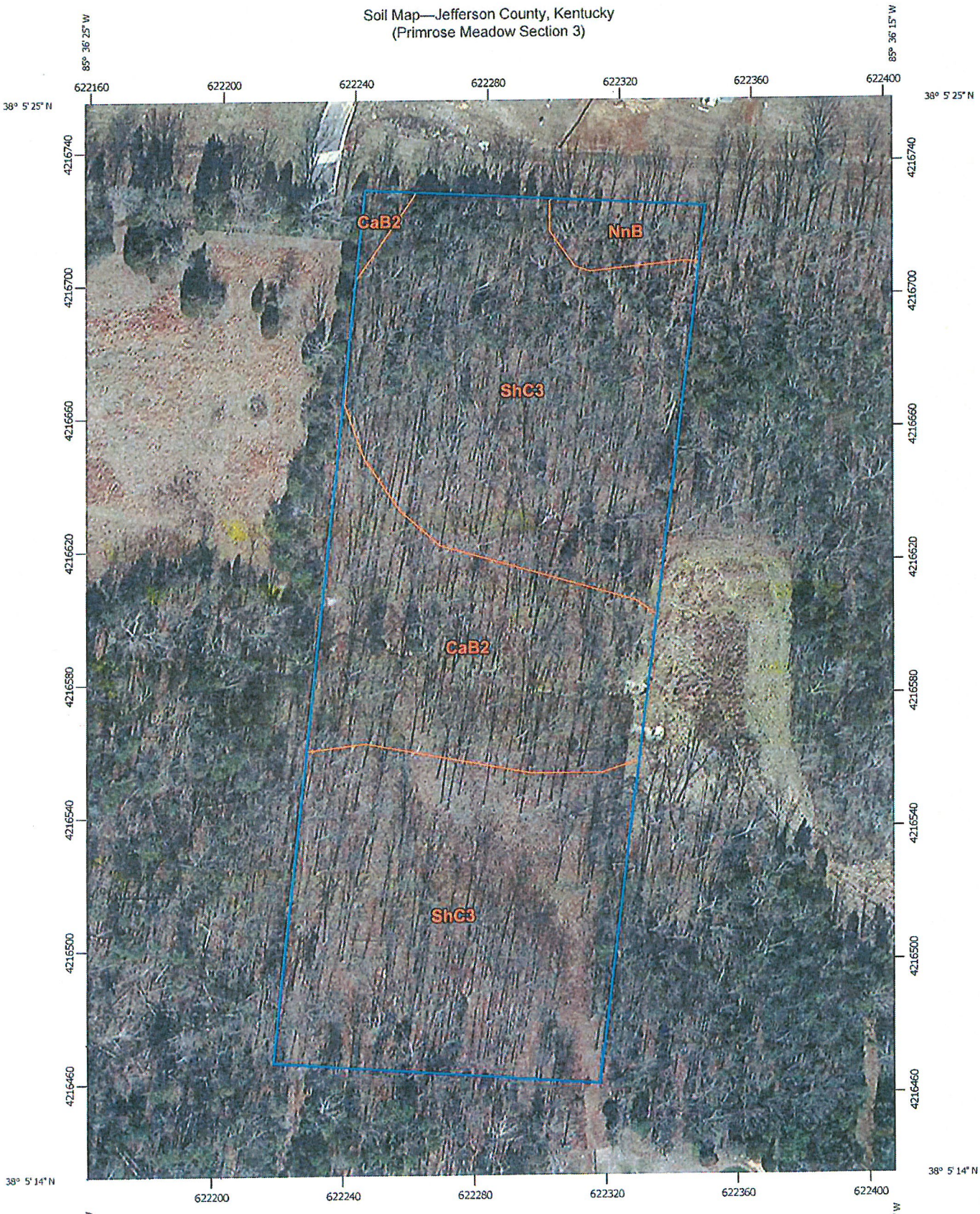
Sincerely

Kurt D. Mason, CPESC
District Conservationist

Attachment – Soils Report

16 2ONE 1075

Soil Map—Jefferson County, Kentucky
(Primrose Meadow Section 3)



Map Scale: 1:1,580 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

1L2ONE1075

Soil Map—Jefferson County, Kentucky
(Primrose Meadow Section 3)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Kentucky
Survey Area Data: Version 13, Sep 17, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 12, 2012—Feb 20, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

16ZONE1075

Map Unit Legend

Jefferson County, Kentucky (KY111)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CaB2	Caneyville silt loam, 2 to 6 percent slopes, eroded, very rocky	1.7	25.2%
NnB	Bedford silt loam, 2 to 6 percent slopes	0.2	3.2%
ShC3	Shrouts silt loam, 6 to 12 percent slopes, severely eroded	4.8	71.6%
Totals for Area of Interest		**6.6**	**100.0%**

1620NE1075

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief, Generated)

Jefferson County, Kentucky

Map Unit: CaB2—Caneyville silt loam, 2 to 6 percent slopes, eroded, very rocky

Component: Caneyville (80%)

The Caneyville component makes up 80 percent of the map unit. Slopes are 2 to 6 percent. This component is on ridges on karst uplands. The parent material consists of clayey residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Crider (7%)

16ZONE1075

Generated brief soil descriptions are created for major components. The Crider soil is a minor component.

Component: Faywood (6%)

Generated brief soil descriptions are created for major components. The Faywood soil is a minor component.

Component: Beasley (4%)

Generated brief soil descriptions are created for major components. The Beasley soil is a minor component.

Component: Rock outcrop (3%)

Generated brief soil descriptions are created for major components. The Rock outcrop soil is a minor component.

Map Unit: NnB—Bedford silt loam, 2 to 6 percent slopes

Component: Bedford (85%)

The Bedford component makes up 85 percent of the map unit. Slopes are 2 to 6 percent. This component is on hills, karst. The parent material consists of noncalcareous loess over loamy noncalcareous loess over clayey residuum. Depth to a root restrictive layer, fragipan, is 21 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 21 inches during January, February, March, April, May, December. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Crider (10%)

Generated brief soil descriptions are created for major components. The Crider soil is a minor component.

Component: Lawrence (5%)

Generated brief soil descriptions are created for major components. The Lawrence soil is a minor component.

Map Unit: ShC3—Shrouts silt loam, 6 to 12 percent slopes, severely eroded

Component: Shrouts, severely eroded (75%)

LD ZONE 1075

The Shrouts, severely eroded component makes up 75 percent of the map unit. Slopes are 6 to 12 percent. This component is on ridges on uplands. The parent material consists of clayey residuum weathered from calcareous shale and/or siltstone. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria.

Component: Beasley (8%)

Generated brief soil descriptions are created for major components. The Beasley soil is a minor component.

Component: Faywood (7%)

Generated brief soil descriptions are created for major components. The Faywood soil is a minor component.

Component: Crider (5%)

Generated brief soil descriptions are created for major components. The Crider soil is a minor component.

Component: Caneyville (5%)

Generated brief soil descriptions are created for major components. The Caneyville soil is a minor component.

Data Source Information

Soil Survey Area: Jefferson County, Kentucky
Survey Area Data: Version 13, Sep 17, 2014

1620NE1075

Dwellings With Basements—Jefferson County, Kentucky
(Primrose Meadows Section 3)

Map Scale: 1:1,480 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

N

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

16 ZONE 1075

Dwellings With Basements—Jefferson County, Kentucky
(Primrose Meadows Section 3)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Background
- Aerial Photography

Soils

Soil Rating Polygons
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Jefferson County, Kentucky
Survey Area Data: Version 13, Sep 17, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 12, 2012—Feb 20, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Dwellings With Basements

Dwellings With Basements— Summary by Map Unit — Jefferson County, Kentucky (KY111)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
CaB2	Caneyville silt loam, 2 to 6 percent slopes, eroded, very rocky	Very limited	Caneyville (80%)	Depth to hard bedrock (1.00)	1.8	28.3%
				Shrink-swell (0.50)		
NnB	Bedford silt loam, 2 to 6 percent slopes	Very limited	Bedford (85%)	Depth to saturated zone (1.00)	0.0	0.7%
				Depth to thin cemented pan (1.00)		
				Shrink-swell (0.23)		
			Lawrence (5%)	Depth to saturated zone (1.00)		
				Depth to thick cemented pan (1.00)		
				Depth to thin cemented pan (0.29)		
ShC3	Shrouts silt loam, 6 to 12 percent slopes, severely eroded	Somewhat limited	Shrouts, severely eroded (75%)	Shrink-swell (0.50)	4.5	71.0%
				Depth to soft bedrock (0.10)		
				Slope (0.04)		
Totals for Area of Interest					**6.3**	**100.0%**

Dwellings With Basements— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Somewhat limited	4.5	71.0%
Very limited	1.8	29.0%
Totals for Area of Interest	**6.3**	**100.0%**

Description

Dwellings are single-family houses of three stories or less. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Higher

16ZONE1075

Dwellings Without Basements—Jefferson County, Kentucky
(Primrose Meadows Section 3)

Map Scale: 1:1,480 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

16ZONE1075

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Background
- Aerial Photography

Soils

Soil Rating Polygons
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

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16ZONE1075

Dwellings Without Basements

Dwellings Without Basements— Summary by Map Unit — Jefferson County, Kentucky (KY111)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
CaB2	Caneyville silt loam, 2 to 6 percent slopes, eroded, very rocky	Somewhat limited	Caneyville (80%)	Shrink-swell (0.50)	1.8	28.3%
				Depth to hard bedrock (0.46)		
NnB	Bedford silt loam, 2 to 6 percent slopes	Somewhat limited	Bedford (85%)	Depth to saturated zone (0.77)	0.0	0.7%
				Depth to thin cemented pan (0.50)		
				Shrink-swell (0.50)		
				Depth to thick cemented pan (0.10)		
			Crider (10%)	Shrink-swell (0.06)		
ShC3	Shrouts silt loam, 6 to 12 percent slopes, severely eroded	Somewhat limited	Shrouts, severely eroded (75%)	Shrink-swell (0.50)	4.5	71.0%
				Slope (0.04)		
Totals for Area of Interest					**6.3**	**100.0%**

Dwellings Without Basements— Summary by Rating Value		
Rating	**Acres in AOI**	**Percent of AOI**
Somewhat limited	6.3	100.0%
Totals for Area of Interest	**6.3**	**100.0%**

16 2DNE1075

Description

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

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Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

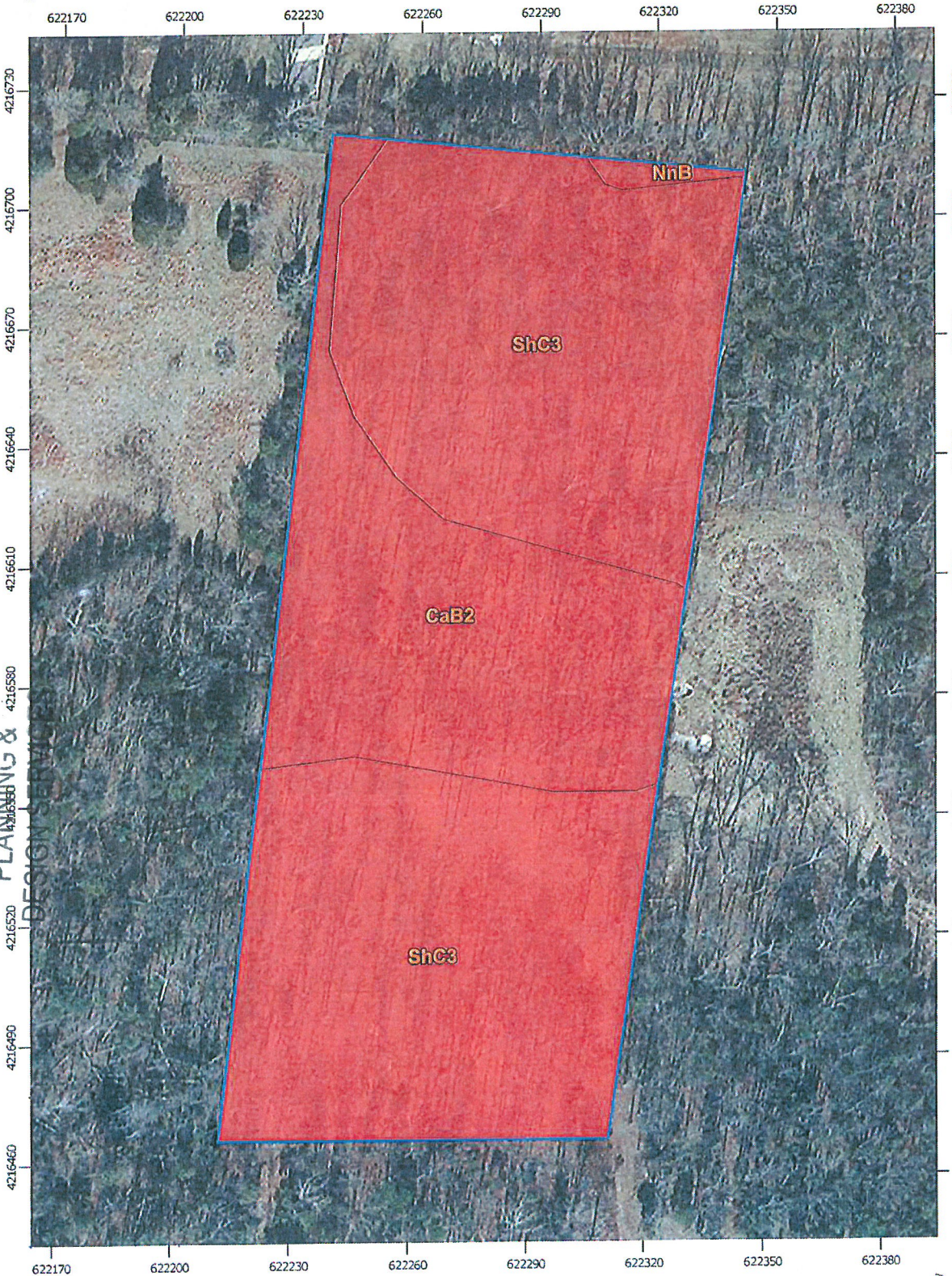
Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Higher

16 20 NE 107 S

Local Roads and Streets—Jefferson County, Kentucky
(Primrose Meadows Section 3)



Map Scale: 1:1,480 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

16ZONE1075

Local Roads and Streets—Jefferson County, Kentucky
(Primrose Meadows Section 3)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Background
- Aerial Photography

Soils

Soil Rating Polygons
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Lines
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Soil Rating Points
- Very limited
- Somewhat limited
- Not limited
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

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1620NE1075

Local Roads and Streets

Local Roads and Streets— Summary by Map Unit — Jefferson County, Kentucky (KY111)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
CaB2	Caneyville silt loam, 2 to 6 percent slopes, eroded, very rocky	Very limited	Caneyville (80%)	Low strength (1.00)	1.8	28.3%
				Shrink-swell (0.50)		
				Depth to hard bedrock (0.46)		
NnB	Bedford silt loam, 2 to 6 percent slopes	Very limited	Bedford (85%)	Depth to thin cemented pan (1.00)	0.0	0.7%
				Frost action (1.00)		
				Low strength (1.00)		
				Shrink-swell (0.50)		
				Depth to saturated zone (0.43)		
			Crider (10%)	Frost action (1.00)		
				Low strength (1.00)		
				Shrink-swell (0.06)		
			Lawrence (5%)	Depth to thick cemented pan (1.00)		
				Depth to thin cemented pan (1.00)		
				Frost action (1.00)		
				Low strength (1.00)		
				Depth to saturated zone (0.17)		
ShC3	Shrouts silt loam, 6 to 12 percent slopes, severely eroded	Very limited	Shrouts, severely eroded (75%)	Low strength (1.00)	4.5	71.0%
				Shrink-swell (0.50)		

Local Roads and Streets— Summary by Map Unit — Jefferson County, Kentucky (KY111)						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Slope (0.04)		
Totals for Area of Interest					**6.3**	**100.0%**

Local Roads and Streets— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Very limited	6.3	100.0%
Totals for Area of Interest	**6.3**	**100.0%**

Description

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: *None Specified*

Tie-break Rule: Higher

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Report—Water Features

Absence of an entry indicates that the data were not estimated. The dash indicates no documented presence.

Water Features–Jefferson County, Kentucky										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
CaB2—Caneyville silt loam, 2 to 6 percent slopes, eroded, very rocky										
Caneyville	D	Low	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	—	—	—	—	None	—	None

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Water Features–Jefferson County, Kentucky										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
NnB—Bedford silt loam, 2 to 6 percent slopes										
Bedford	C/D	Medium	January	1.5-2.7	1.7-3.0	—	—	None	—	None
			February	1.5-2.7	1.7-3.0	—	—	None	—	None
			March	1.5-2.7	1.7-3.0	—	—	None	—	None
			April	1.5-2.7	1.7-3.0	—	—	None	—	None
			May	1.5-2.7	1.7-3.0	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	1.5-2.7	1.7-3.0	—	—	None	—	None

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Water Features–Jefferson County, Kentucky										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
ShC3—Shrouts silt loam, 6 to 12 percent slopes, severely eroded										
Shrouts, severely eroded	D	Very high	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	—	—	—	—	None	—	None

Data Source Information

Soil Survey Area: Jefferson County, Kentucky
Survey Area Data: Version 13, Sep 17, 2014