

#### **United States Department of Agriculture**

Natural Resources Conservation Service

Louisville Field Office

4233 Bardstown Road Suite 100-A Louisville, KY 40291 Voice 502.499.1900 Fax 502.499.1748 March 19, 2015

Kelli Jones Sabak, Wilson & Lingo, Inc. 608 S. Third Street Louisville, KY 40202

RE: St. Joseph Orphanage Farm Development

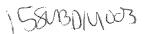
Dear Ms. Jones:

APR 08 2015
PLANNING &
DESIGN SERVICES

Enclosed you will find a copy of the requested soils report on the planned St. Joseph Orphanage Farm development project. The 122 acre project site is planned as a R4 and R-5 development to accommodate single family and townhome residences. The area for the proposed conversion is presently agricultural land (row crop and open meadow) with wooded incised drainageways along Klemenz Creek and its contributing tributaries. The proposal calls for approximately 37.17 acres of conservation area to remain from the tract after development. Most of the retained areas are stream corridors and wooded buffers that should not be disturbed, other than work to enhance the buffer. Within this zone retained as conservation area, a management strategy and commitment to address the invasive species such as Bush Honeysuckle, Privet, Multiflora Rose and Oriental Bittersweet should be employed. A major reason for this recommendation is because the stream will be stressed as a result of urbanization of the watershed and there will need to be a healthy infrastructure to support the longevity and proper functioning of the stream buffer. The secondary reason is a naturally functioning buffer has an aesthetic value that is not choked out by invasives that destroy the functionally of a true streamside water quality buffer.

The soils on the tract are primarily of the Crider-Nicholson association of well drained to moderately well-drained soils underlain by limestone geology. Under the present ground cover of trees and brushy species along the drainageways, water runoff from the site is somewhat mitigated 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 aged woodland area. This infiltration of water and the fractured limestone units under the soil mantel provides recharge to the stream network within the site.

The significant removal of the tree canopy along the corridor edges, destruction of the soil's duff layer, removal of the topsoil and compaction of the subsoil layer on the ridge caps (cropland areas) during land transformation will make the area subject to high erosion rates and more rapid runoff. Measures should be employed to help compensate for the loss of naturally occurring erosion control and water infiltration systems. Since the exposed soils are expected to be of higher clay content, any planned erosion control system should address the containment of suspended clays as well as the capture of larger soil particles. Any designed erosion control system can expect to be stressed due to low water infiltration on the site and high runoff rates. Intercepting and reducing the velocity of falling raindrops with some type of ground cover or covering will reduce some of the expected adverse impacts. A complete erosion and sediment control plan for the developing

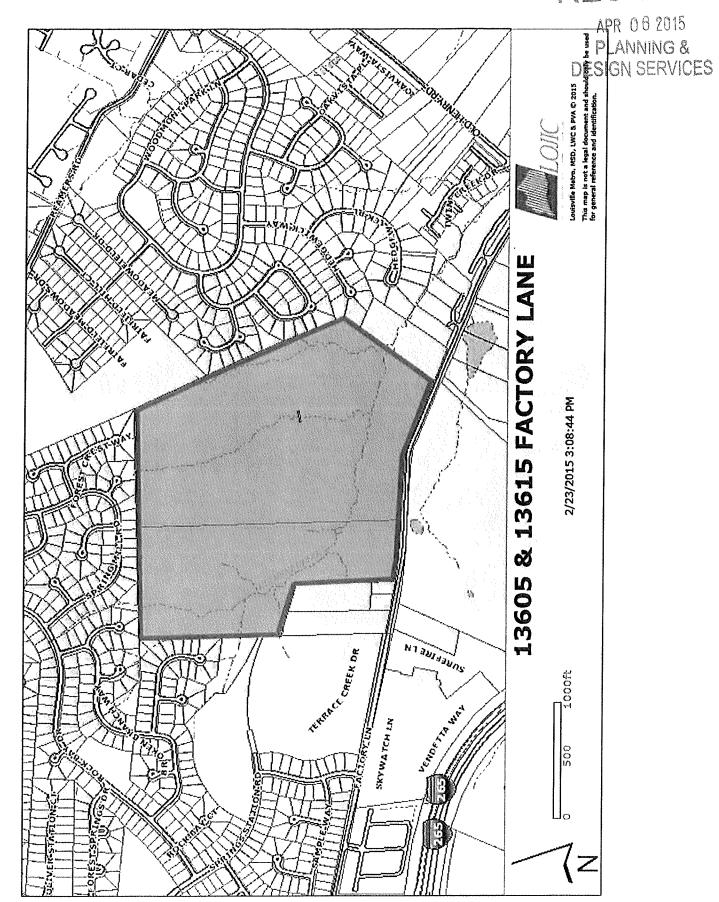


area should be put in place to help address these concerns while work is in progress. As the plan is implemented, the components of the system should be monitored and checked for repair, replacement or redesign after every storm event. As the individual contributing watersheds for erosion and sediment control systems change, so may the need to revise the system for proper functioning.

As plans are developed to address the natural resource concerns of the site during and after its landuse transition, please feel free to call on us if we can provide any assistance.

Sincerely

Kurt D. Mason, CPESC District Conservationist



THE ALTONOON THE TAX THE TAX THE PROPERTY OF T

APR 06 2015 PLAMNING & SIGN SERVICES 38° 17'36" N 2/24/2015 Page 1 of 3 0068EZÞ 820 SA TT. M 82. St. 11. M Tacior Lan Soil Map—Jefferson County, Kentucky (St. Joseph Orphanage Site) Web Soil Survey National Cooperative Soil Survey 631,700 S S S MIN 7 300 600 1200 1800 Map projection: Wes94 Edge tics: UTM Zone 16N WIGS94 Map Scale: 1:6,730 if printed on A landscape (11" x 8.5") sheet.

50 100 200 300 Natural Resources Conservation Service 엺 NSDA USDA 826 30, 11, M 820 30, II. M 0078ESp 38° 175'N 38° 17 36' N

158/BD111033

MAP LEGEND

| Spoil Area             | Stony Spot             | Very Stony Spot        | Wet Spot             | Other                | Special Line Features  | tures          |
|------------------------|------------------------|------------------------|----------------------|----------------------|------------------------|----------------|
| 681                    | <b>(3)</b>             | 6                      | ę,                   | <)                   | ;                      | Water Features |
| Area of Interest (AOI) | Area of Interest (AOI) | Soil Map Unit Polygons | Soil Map Unit I ines | Soil Map Unit Points | Special Point Features | Blowout        |
| Area of In             |                        | Soils                  | ] }                  | E                    | Special                | į,             |

## Blowout

| Clay Spot | Closed Depression |
|-----------|-------------------|
| ప్ర       | ວັ                |
|           | Clay Spot         |







Marsh or swamp

ava Flow

Landfill

E)

Mine or Quarry

~ 4 ( O

Miscellaneous Water

Perennial Water

0

Rock Outcrop

S

Saline Spot Sandy Spot

### Streams and Canals Interstate Highways Rails **Fransportation** ‡

Major Roads US Routes

Gravelly Spot

6 %

Gravel Pit

◇ ½

Aerial Photography

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.

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

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

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

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

Jefferson County, Kentucky Soil Survey Area:

Version 13, Sep 17, 2014 Survey Area Data:

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

or larger.

May 24, 2014—Jul 5, Date(s) aerial images were photographed:

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

Severely Eroded Spot

Û

Slide or Slip Sodic Spot

O 19. 10

Sinkhole

## Map Unit Legend

|                             | Jefferson County, Kentucky (KY111)   | Kemucky (KY111) |                |
|-----------------------------|--|-----------------|----------------|
| Map Unit Symbol             | Map Unit Name  | Acres in AOI    | Percent of AOI |
| ВеС                         | Beasley sift loam, 6 to 12 percent slopes  | 0.7             | 9.6%           |
| Во                          | Boonewood silt loam,<br>occasionally flooded   | 10.6            | 8.8%           |
| CaC2                        | Caneyville silt toam, 6 to 12<br>percent slopes, eroded, very<br>rocky                                       | 4,4             | 3.6%           |
| CaD2                        | Caneyville silt loam, 12 to 25 percent slopes, eroded, very rocky  | 49.7            | 41.3%          |
| CrB                         | Crider silt loam, 2 to 6 percent slopes  | 8.6             | 7.1%           |
| crc                         | Crider silt loam, 6 to 12 percent slopes   | 0.0             | %0'0           |
| NnB                         | Bedford silt loam, 2 to 6 percent slopes   | 42.5            | 35.3%          |
| SaB                         | Sandview silt toam, 2 to 6<br>percent slopes   | 2.0             | 1.6%           |
| unc                         | Urban land-Alfic Udarents<br>complex, fragipan<br>substratum-over hard<br>bedrock, 0 to 12 percent<br>slopes | 11              | %6'0           |
| olo                         | Urban land-Affic Udarents<br>complex, clayey substratum-<br>over hard bedrock, 0 to 12<br>percent slopes     | 0,1             | %0'0           |
| aín                         | Urban land-Alfic Udarents<br>complex, clayey substratum-<br>over hard bedrock, 12 to 25<br>percent slopes    | 0.8             | %9.0           |
| Totals for Area of Interest |  | 120.6           | 100.0%         |
|                             |  |                 |                |

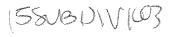
## 

APR 0.6 2005 PLANNING & DESIGN SERVICES

Survey

Web Soil Survey National Cooperative Soil Survey

USDA Natural Resources
Conservation Service



#### 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: BeC-Beasley silt loam, 6 to 12 percent slopes

Component: Beasley (80%)

The Beasley component makes up 80 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 calcareous siltstone. Depth to a root restrictive layer, bedrock, paralithic, is 40 to 60 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 moderate. 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 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent.

APR 08 2015 PLANNING &

Component: Nicholson (8%)

Generated brief soil descriptions are created for major components. The Nicholson 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: Shrouts (5%)

Generated brief soil descriptions are created for major components. The Shrouts

soil is a minor component.

Map Unit: Bo-Boonewood silt loam, occasionally flooded

Component: Boonewood, occasionally flooded (90%)

The Boonewood, occasionally flooded component makes up 90 percent of the map unit. Slopes are 0 to 4 percent. This component is on flood plains on valleys. The parent material consists of mixed fine-silty alluvium over 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 high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 23 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Nolin (4%)

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

Component: Newark (3%)

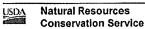
Generated brief soil descriptions are created for major components. The Newark soil is a minor component.

Component: Lindside (3%)

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

Map Unit: CaC2—Caneyville silt loam, 6 to 12 percent slopes, eroded, very rocky

Component: Caneyville (80%)



SSIBDIMOR

The Caneyville component makes up 80 percent of the map unit. Slopes are 6 to 12 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 3e. This soil does not meet hydric criteria.

#### Component: Crider (7%)

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: CaD2—Caneyville silt loam, 12 to 25 percent slopes, eroded, very rocky

#### Component: Caneyville (80%)

The Caneyville component makes up 80 percent of the map unit. Slopes are 12 to 25 percent. This component is on hills 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 6e. This soil does not meet hydric criteria.

#### Component: Beasley (7%)

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

Component: Faywood (6%)

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

APR 08 2015 PLANNING & DESIGN SERVICES

Component: Rock outcrop (4%)

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

Component: Shrouts (3%)

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

Map Unit: CrB-Crider silt loam, 2 to 6 percent slopes

Component: Crider (90%)

The Crider component makes up 90 percent of the map unit. Slopes are 2 to 6 percent. This component is on ridges on karst uplands. The parent material consists of thin fine-silty loess over clayey residuum weathered from limestone and dolomite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. 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: Caneyville (7%)

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

Component: Nicholson (3%)

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

Map Unit: CrC-Crider silt loam, 6 to 12 percent slopes

Component: Crider (90%)



2/24/2015

Page 4 of 8

The Crider component makes up 90 percent of the map unit. Slopes are 6 to 12 percent. This component is on ridges on karst uplands. The parent material consists of thin fine-silty loess over clayey residuum weathered from limestone and dolomite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. 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 3e. This soil does not meet hydric criteria.

#### Component: Caneyville (5%)

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

#### Component: Nicholson (3%)

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

#### Component: Beasley (2%)

Generated brief soil descriptions are created for major components. The Beasley 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. Shrinkswell 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: SaB-Sandview silt loam, 2 to 6 percent slopes

Component: Sandview (90%)

The Sandview component makes up 90 percent of the map unit. Slopes are 2 to 6 percent. This component is on ridges on uplands. The parent material consists of thin fine-silty loess over clayey residuum weathered from limestone and dolomite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. 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 (4%)

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

Component: Nicholson (3%)

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

Component: Faywood (3%)

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

Map Unit: UhC—Urban land-Alfic Udarents complex, fragipan substratum-over hard bedrock, 0 to 12 percent slopes

Component: Urban land (60%)

Generated brief soil descriptions are created for major soil components. The Urban land is a miscellaneous area.

Component: Alfic Udarents (40%)

APR 0.6 2015
PLANNING &
DESIGN SERVICES



2/24/2015

The Alfic Udarents component makes up 40 percent of the map unit. Slopes are 0 to 12 percent. This component is on ridges on uplands. The parent material consists of thin fine-silty loess over clayey residuum weathered from limestone. Depth to a root restrictive layer, fragipan, is 16 to 30 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 low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 0 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria.

Map Unit: UjC—Urban land-Alfic Udarents complex, clayey substratum-over hard bedrock, 0 to 12 percent slopes

Component: Urban land (60%)

Generated brief soil descriptions are created for major soil components. The Urban land is a miscellaneous area.

Component: Alfic Udarents (40%)

The Alfic Udarents component makes up 40 percent of the map unit. Slopes are 0 to 12 percent. This component is on ridges on karst uplands. The parent material consists of thin fine-silty loess over clayey residuum weathered from limestone and dolomite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is high. 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 0 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria.

Map Unit: UjD—Urban land-Alfic Udarents complex, clayey substratum-over hard bedrock, 12 to 25 percent slopes

Component: Urban land (60%)

Generated brief soil descriptions are created for major soil components. The Urban land is a miscellaneous area.

Component: Alfic Udarents (40%)

The Alfic Udarents component makes up 40 percent of the map unit. Slopes are 12 to 25 percent. This component is on ridges on karst uplands. The parent material consists of thin fine-silty loess over clayey residuum weathered from limestone and dolomite. Depth to a root restrictive layer is greater than 60 inches . The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is high. 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 0 percent. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria.

#### **Data Source Information**

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



2/24/2015

Page 8 of 8

#### **Selected Soil Interpretations**

This report allows the customer to produce a report showing the results of the soil interpretation(s) of his or her choice. It is useful when a standard report that displays the results of the selected interpretation(s) is not available.

When customers select this report, they are presented with a list of interpretations with results for the selected map units. The customer may select up to three interpretations to be presented in table format.

For a description of the particular interpretations and their criteria, use the "Selected Survey Area Interpretation Descriptions" report.

#### Report—Selected Soil Interpretations

|   |             | Selected Soil Interpr              | etations | –Jefferson County, Ke                 | птиску |  |       |  |
|---|-------------|------------------------------------|----------|---------------------------------------|--------|--|-------|--|
| Map symbol and soil name                            | Pct. of map | Eng - dwellings v<br>basements     | Nlo      | Eng - dwellings v<br>basements        | vith   | Eng - local roads and streets                |       |  |
|   | unit        | Rating class and limiting features | Value    | Rating class and<br>limiting features | Value  | Rating class and limiting features           | Value |  |
| BeC—Beasley silt<br>loam, 6 to 12 percent<br>slopes |             |                                    |          |                                       |        | Very limited Low strength Shrink-swell Slope |       |  |
| Beasley   | 80          | Somewhat limited                   |          | Somewhat limited                      |        | Very limited                                 |       |  |
|   |             | Shrink-swell                       | 0.50     | Shrink-swell                          | 0.50   | Low strength                                 | 1.00  |  |
|   |             | Slope                              | 0.04     | Slope                                 | 0.04   | Shrink-swell                                 | 0,50  |  |
|   |             |                                    |          |                                       |        | Slope  | 0.04  |  |
| Bo—Boonewood silt<br>loam, occasionally<br>flooded  |             |                                    |          |                                       |        |  |       |  |
| Boonewood,<br>occasionally<br>flooded               | 90          | Very limited                       |          | Very limited                          |        | Very limited                                 |       |  |
|   |             | Flooding                           | 1.00     | Flooding                              | 1.00   | Flooding                                     | 1.00  |  |
|   |             | Depth to saturated zone            | 0.56     | Depth to saturated zone               | 1.00   | Low strength                                 | 1.00  |  |
|   |             | Depth to hard bedrock              | 0.46     | Depth to hard bedrock                 | 1.00   | Depth to hard bedrock                        | 0.46  |  |
|   |             |                                    |          |                                       |        | Depth to saturated zone                      | 0,28  |  |





PLANNING & DESIGN SERVICES

| Map symbol and soil   | Pct. of | Eng - dwellings v                     | vlo        | Eng - dwellings w                     | /lth  | Eng - local roads and              | street |
|---|---------|---------------------------------------|------------|---------------------------------------|-------|------------------------------------|--------|
| name  | map     | basements                             | <b>7</b> 0 | basements                             |       |                                    | 31100  |
|   | unit    | Rating class and<br>limiting features | Value      | Rating class and<br>limiting features | Value | Rating class and limiting features | Valu   |
| CaC2—Caneyville silt<br>loam, 6 to 12 percent<br>slopes, eroded, very<br>rocky  |         |                                       |            |                                       |       |                                    |        |
| Caneyville  | 80      | Somewhat limited                      |            | Very limited                          |       | Very limited                       |        |
|   |         | Shrink-swell                          | 0.50       | Depth to hard bedrock                 | 1.00  | Low strength                       | 1.0    |
|   |         | Depth to hard bedrock                 | 0.46       | Shrink-swell                          | 0.50  | Shrink-swell                       | 0.9    |
|   |         | Slope                                 | 0.04       | Slope                                 | 0.04  | Depth to hard bedrock              | 0.4    |
| CaD2—Caneyville silt<br>loam, 12 to 25<br>percent slopes,<br>eroded, very rocky |         |                                       |            |                                       |       | Slope                              | 0.0    |
| Caneyville  | 80      | Very limited                          |            | Very limited                          |       | Very limited                       |        |
|   |         | Slope                                 | 1.00       | Depth to hard bedrock                 | 1.00  | Low strength                       | 1.0    |
|   |         | Shrink-swell                          | 0.50       | Slope                                 | 1.00  | Slope                              | 1.0    |
|   |         | Depth to hard bedrock                 | 0.46       | Shrink-swell                          | 0.50  | Shrink-swell                       | 0.5    |
| CrB—Crider silt loam, 2<br>to 6 percent slopes                                  |         |                                       |            |                                       |       | Depth to hard bedrock              | 0.4    |
| Crider  | 90      | Not limited                           |            | Not limited                           |       | Very limited                       |        |
|   |         |                                       |            |                                       |       | Low strength                       | 1.0    |
| CrC—Crider silt loam, 6<br>to 12 percent slopes                                 |         |                                       |            |                                       |       |                                    |        |
| Crider  | 90      | Somewhat limited                      |            | Somewhat limited                      |       | Very limited                       |        |
|   |         | Slope                                 | 0.04       | Slope                                 | 0.04  | Low strength                       | 1.0    |
| NnB—Bedford silt  |         |                                       |            |                                       |       | Slope                              | 0.0    |
| loam, 2 to 6 percent<br>slopes  |         |                                       |            |                                       |       |                                    |        |
| Bedford   | 85      | Somewhat limited                      |            | Very limited                          |       | Very limited                       |        |
|   |         | Depth to saturated zone               | 0.77       | Depth to saturated zone               | 1.00  | Depth to thin cemented pan         | 1.00   |
|   |         | Depth to thin cemented pan            | 0.50       | Depth to thin cemented pan            | 1.00  | Frost action                       | 1.0    |
|   |         | Shrink-swell                          | 0.50       | Shrink-swell                          | 0.23  | Low strength                       | 1.0    |
|   |         | Depth to thick cemented pan           | 0.10       |                                       |       | Shrink-swell                       | 0.5    |
|   |         |                                       |            |                                       |       | Depth to saturated zone            | 0.43   |

**Natural Resources** 

|   |             | Selected Soil Interpre   | etations                                 | -Jefferson County, Ker   | itucky |                                       |         |
|---|-------------|--|--|--|--------|---------------------------------------|---------|
| Map symbol and soll name  | Pct. of map | Eng - dwellings w<br>basements   | vio                                      | Eng - dwellings w<br>basements   | ith    | Eng - local roads and                 | streets |
|   | unit        | Rating class and limiting features   | Value                                    | Rating class and<br>limiting features  | Value  | Rating class and<br>limiting features | Value   |
| SaB—Sandview silt<br>loam, 2 to 6 percent<br>slopes   |             |  |  |  |        |                                       |         |
| Sandview  | 90          | Not limited  |  | Not limited  |        | Very limited                          |         |
|   |             |  |  |  |        | Low strength                          | 1.00    |
| UhC—Urban land-Alfic<br>Udarents complex,<br>fragipan substratum-<br>over hard bedrock, 0<br>to 12 percent slopes   |             |  |  |  |        |                                       |         |
| Urban land  | 60          | Not rated  |  | Not rated  |        | Not rated                             |         |
| Alfic udarents  | 40          | Somewhat limited   |  | Very limited   |        | Very limited                          |         |
|   |             | Depth to thin cemented pan   | 0.50                                     | Depth to saturated zone  | 1.00   | Depth to thin cemented pan            | 1,00    |
|   | The Pro-    | Depth to saturated zone  | 0.39                                     | Depth to thin cemented pan   | 1.00   | Low strength                          | 1.00    |
|   |             | Depth to thick cemented pan  | 0.29                                     |  |        | Depth to thick cemented pan           | 0.29    |
|   |             |  |  |  |        | Depth to saturated zone               | 0,19    |
| UjC—Urban land-Alfic<br>Udarents complex,<br>clayey substratum-<br>over hard bedrock, 0<br>to 12 percent slopes     |             |  |  |  |        |                                       |         |
| Urban land  | 60          | Not rated  |  | Not rated  |        | Not rated                             |         |
| Alfic udarents  | 40          | Somewhat limited   |  | Somewhat limited   |        | Very limited                          |         |
|   |             | Shrink-swell   | 0.01                                     | Shrink-swell   | 0.09   | Low strength                          | 1.00    |
| www.hood.co.co.co.co.co.co.co.co.co.co.co.co.co.  |             | August (Color) and Color (Colo |  |  |        | Shrink-swell                          | 0.01    |
| UjD—Urban land-Alfic<br>Udarents complex,<br>clayey substratum-<br>over hard bedrock,<br>12 to 25 percent<br>slopes |             |  |  |  |        |                                       |         |
| Urban land  | 60          | Not rated  |  | Not rated  |        | Not rated                             |         |
| Alfic udarents  | 40          | Very limited   |  | Very limited   |        | Very limited                          |         |
|   |             | Slope  | 1.00                                     | Slope  | 1.00   | Slope                                 | 1.00    |
|   |             | Shrink-swell   | 0.01                                     | Shrink-swell   | 0.09   | Low strength                          | 1,00    |
| референциального от предоставления по предоставления предоставления по предоставления по предоставления по пре      |             | - Company  | C. C | ne ne nemen von vir die bligt jaar keping van gegebie de de von ver de verein de verei |        | Shrink-swell                          | 0.01    |

#### **Data Source Information**

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

RECEIVED

APR 05 205
PLANNING &
DESIGN SERVICES

#### **Selected Soil Interpretations**

This report allows the customer to produce a report showing the results of the soil interpretation(s) of his or her choice. It is useful when a standard report that displays the results of the selected interpretation(s) is not available.

When customers select this report, they are presented with a list of interpretations with results for the selected map units. The customer may select up to three interpretations to be presented in table format.

For a description of the particular interpretations and their criteria, use the "Selected Survey Area Interpretation Descriptions" report.

#### Report—Selected Soil Interpretations

|  |                | Selected Soil Interpr                 | etations | -Jefferson County, Kei                | ntucky |                                       |       |  |
|--|----------------|---------------------------------------|----------|---------------------------------------|--------|---------------------------------------|-------|--|
| Map symbol and soil name   | Pct. of<br>map | Eng - dwellings v<br>basements        | vlo      | Eng - dwellings w<br>basements        | ith    | Eng - local roads and streets         |       |  |
|  | unit           | Rating class and<br>limiting features | Value    | Rating class and<br>limiting features | Value  | Rating class and<br>limiting features | Value |  |
| BeC—Beasley silt<br>loam, 6 to 12 percent<br>slopes  |                |                                       |          |                                       |        | Very limited Low strength             |       |  |
| Beasley  | 80             | Somewhat limited                      |          | Somewhat limited                      |        | Very limited                          |       |  |
|  |                | Shrink-swell                          | 0.50     | Shrink-swell                          | 0.50   | Low strength                          | 1.00  |  |
|  |                | Slope                                 | 0.04     | Slope                                 | 0.04   | Shrink-swell                          | 0.50  |  |
|  |                |                                       |          |                                       |        | Slope                                 | 0.04  |  |
| Bo—Boonewood silt<br>loam, occasionally<br>flooded   |                |                                       |          |                                       |        |                                       |       |  |
| Boonewood,<br>occasionally<br>flooded  | 90             | Very limited                          |          | Very limited                          |        | Very limited                          |       |  |
|  |                | Flooding                              | 1.00     | Flooding                              | 1.00   | Flooding                              | 1.00  |  |
| A CONTRACTOR OF THE CONTRACTOR |                | Depth to saturated zone               | 0.56     | Depth to saturated zone               | 1.00   | Low strength                          | 1.00  |  |
|  |                | Depth to hard bedrock                 | 0.46     | Depth to hard bedrock                 | 1.00   | Depth to hard bedrock                 | 0.46  |  |
|  |                |                                       |          |                                       |        | Depth to saturated zone               | 0.28  |  |



SPESSED PHANNING & DESIGN SERVICES

|   |         | Selected Soil Interp               | retations | s–Jefferson County, Ke             | ntucky  | <u> </u>                           |   |
|---|---------|------------------------------------|-----------|------------------------------------|---|------------------------------------|---|
| Map symbol and soil name  | Pct. of | Eng - dwellings basements          | wło       | Eng - dwellings v<br>basements     | vith  | Eng - local roads and              | street                                  |
|   | unit    | Rating class and limiting features | Value     | Rating class and limiting features | Value   | Rating class and limiting features | Value                                   |
| CaC2—Caneyville silt<br>loam, 6 to 12 percent<br>slopes, eroded, very<br>rocky                                  |         |                                    |           |                                    |   |                                    |   |
| Caneyville  | 80      | Somewhat limited                   |           | Very limited                       |   | Very limited                       |   |
|   |         | Shrink-swell                       | 0.50      | Depth to hard bedrock              | 1.00  | Low strength                       | 1.00                                    |
|   |         | Depth to hard bedrock              | 0.46      | Shrink-swell                       | 0.50  | Shrink-swell                       | 0.50                                    |
|   |         | Slope                              | 0.04      | Slope                              | 0.04  | Depth to hard bedrock              | 0.46                                    |
|   |         |                                    |           |                                    |   | Slope                              | 0.04                                    |
| CaD2—Caneyville silt<br>loam, 12 to 25<br>percent slopes,<br>eroded, very rocky                                 |         |                                    |           |                                    |   |                                    |   |
| Caneyville  | 80      | Very limited                       |           | Very limited                       |   | Very limited                       |   |
|   |         | Slope                              | 1.00      | Depth to hard bedrock              | 1.00  | Low strength                       | 1.00                                    |
| ter Schreibert i Michael Michael Michael An Saidhean an Mòrd an deann a tha dhùthail an Naobh a Taobh Ann Saidh |         | Shrink-swell                       | 0.50      | Slope                              | 1.00  | Slope                              | 1.00                                    |
|   |         | Depth to hard bedrock              | 0.46      | Shrink-swell                       | 0.50  | Shrink-swell                       | 0.50                                    |
| ,   |         |                                    |           |                                    |   | Depth to hard bedrock              | 0.46                                    |
| CrB—Crider silt loam, 2<br>to 6 percent slopes  |         |                                    |           |                                    |   |                                    |   |
| Crider  | 90      | Not limited                        |           | Not limited                        |   | Very limited                       |   |
|   |         |                                    |           |                                    |   | Low strength                       | 1.00                                    |
| CrC—Crider silt loam, 6 to 12 percent slopes  |         |                                    |           |                                    |   |                                    |   |
| Crider  | 90      | Somewhat limited                   |           | Somewhat limited                   |   | Very limited                       |   |
|   |         | Slope                              | 0.04      | Slope                              | 0.04  | Low strength                       | 1.00                                    |
|   |         |                                    |           |                                    |   | Slope                              | 0.04                                    |
| NnB—Bedford silt<br>loam, 2 to 6 percent<br>slopes  |         |                                    |           |                                    | , met 4 de generale en kontengen eller en |                                    |   |
| Bedford   | 85      | Somewhat limited                   |           | Very limited                       |   | Very limited                       | *************************************** |
|   |         | Depth to saturated zone            | 0.77      | Depth to saturated zone            | 1.00  | Depth to thin cemented pan         | 1.00                                    |
|   |         | Depth to thin cemented pan         | 0.50      | Depth to thin cemented pan         | 1.00  | Frost action                       | 1.00                                    |
|   |         | Shrink-swell                       | 0.50      | Shrink-swell                       | 0.23  | Low strength                       | 1.00                                    |
|   |         | Depth to thick cemented pan        | 0.10      |                                    |   | Shrink-swell                       | 0.50                                    |
|   |         |                                    |           |                                    |   | Depth to saturated zone            | 0.43                                    |
|   |         |                                    |           |                                    |   |                                    |   |

|  |  | Selected Soil Interpre  | etations   | –Jefferson County, Ker  | писку |                                       |                              |
|--|--|---|------------|---|-------|---------------------------------------|------------------------------|
| Map symbol and soil name   | Pct. of                                  | Eng - dwellings w<br>basements  | //0        | Eng - dwellings w<br>basements  | rith  | Eng - local roads and                 | streets                      |
|  | unit                                     | Rating class and<br>limiting features   | Value      | Rating class and<br>limiting features   | Value | Rating class and<br>limiting features | Value                        |
| SaB—Sandview silt<br>loam, 2 to 6 percent<br>slopes  |  |   |            |   |       |                                       |                              |
| Sandview   | 90                                       | Not limited   |            | Not limited   |       | Very limited                          |                              |
|  |  |   |            |   |       | Low strength                          | 1.00                         |
| UhC—Urban land-Alfic<br>Udarents complex,<br>fragipan substratum-<br>over hard bedrock, 0<br>to 12 percent slopes  |  |   |            |   |       |                                       |                              |
| Urban land   | 60                                       | Not rated   |            | Not rated   |       | Not rated                             | ways on a conference         |
| Alfic udarents   | 40                                       | Somewhat limited  | 1 - 1 - 1  | Very limited  |       | Very limited                          |                              |
|  |  | Depth to thin cemented pan  | 0.50       | Depth to saturated zone   | 1,00  | Depth to thin cemented pan            | 1.00                         |
|  |  | Depth to saturated zone   | 0.39       | Depth to thin cemented pan  | 1.00  | Low strength                          | 1.00                         |
|  |  | Depth to thick cemented pan   | 0.29       |   |       | Depth to thick<br>cemented pan        | 0,29                         |
|  | 1 3 2 2                                  |   |            |   |       | Depth to saturated zone               | 0.19                         |
| UjC—Urban land-Alfic<br>Udarents complex,<br>clayey substratum-<br>over hard bedrock, 0<br>to 12 percent slopes  |  |   |            |   |       |                                       |                              |
| Urban land   | 60                                       | Not rated   |            | Not rated   |       | Not rated                             | and the second second second |
| Alfic udarents   | 40                                       | Somewhat limited  |            | Somewhat limited  |       | Very limited                          |                              |
|  |  | Shrink-swell  | 0.01       | Shrink-swell  | 0.09  | Low strength                          | 1,00                         |
|  |  |   | a wices as |   |       | Shrink-swell                          | 0.01                         |
| UjD—Urban land-Alfic<br>Udarents complex,<br>clayey substratum-<br>over hard bedrock,<br>12 to 25 percent<br>slopes  |  |   |            |   |       |                                       |                              |
| Urban land   | 60                                       | Not rated   |            | Not rated   |       | Not rated                             |                              |
| Alfic udarents   | 40                                       | Very limited  |            | Very limited  |       | Very limited                          |                              |
|  |  | Slope   | 1.00       | Slope   | 1.00  | Slope                                 | 1.00                         |
| 1999-1991 - 1999-1999 - 1999-1999 - 1999-1999 - 1999-1999-1999-1999-1999-1999-1999-1999-1999-1999-1999-1999-19   |  | Shrink-swell  | 0.01       | Shrink-swell  | 0.09  | Low strength                          | 1.00                         |
| NATION CONTRACTOR CONT | On Design Design Control Control Control | - The Control of the |            | Conference in the property of the contract of |       | Shrink-swell                          | 0.01                         |

#### **Data Source Information**

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

APR 08 29%
PLANNING &
DESIGN SERVICES

#### 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.



st. Joseph Orphanage Site

PLANNING &

DESIGN SERVICES

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 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.

1550BVM003

#### Report—Water Features

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

|   |            |           | Water I   | Features—Jeffer | rson County, k | (entucky         |            |           | Mar Val Nahi |          |
|---|------------|-----------|-----------|-----------------|----------------|------------------|------------|-----------|--------------|----------|
| Map unit symbol and soil                      | Hydrologic | Surface   | Month     | Wate            | Water table    |                  | Ponding    |           |              | oding    |
| name  | group      | runoff    |           | Upper limit     | Lower limit    | Surface<br>depth | Duration   | Frequency | Ouration     | Frequenc |
|   |            |           |           | Fi              | FI             | Ft               |            |           |              |          |
| BeC—Beasley silt loam, 6 to 12 percent slopes |            |           |           |                 |                |                  |            |           |              |          |
| Beasley                                       | С          | Very high | January   | _               | _              |                  | -          | None      | -            | None     |
|   |            | <b>_</b>  | February  | -               | _              | _                |            | None      |              | None     |
|   |            |           | March     | _               |                |                  | -          | None      | _            | None     |
|   |            | <u> </u>  | April     | _               | -              |                  | <b> </b> - | None      |              | None     |
|   |            |           | May       |                 | <b> </b>       | _                | _          | None      | -            | None     |
|   |            | 1         | June      | _               | _              | -                | <u> </u>   | None      | -            | None     |
|   |            |           | July      | _               | -              |                  | -          | None      | _            | None     |
|   |            |           | August    | _               |                |                  | _          | None      |              | None     |
|   |            |           | September | _               | <b>-</b>       | _                | _          | None      | _            | None     |
|   |            |           | October   | _               | _              |                  |            | None      |              | None     |
|   |            |           | November  |                 | _              |                  |            | None      |              | None     |
|   |            |           | December  |                 |                |                  | _          | None      | _            | None     |

## RECENTED

PLANNING &
DESIGN SERVICES

Water Features-Jefferson County, Kentucky

St. Joseph Orphanage Site

|  |            |         | Water                | Features-Jeffe | rson County, 1 | Kentucky         |          |           |                        |            |  |
|--|------------|---------|----------------------|----------------|----------------|------------------|----------|-----------|------------------------|------------|--|
| Map unit symbol and soil                     | Hydrologic | Surface | Surface Month runoff | Wate           | Water table    |                  | Ponding  |           |                        | Flooding   |  |
| name   | group      | runoff  |                      | Upper limit    | Lower limit    | Surface<br>depth | Duration | Frequency | Duration               | Frequency  |  |
|  |            |         |                      | Ft             | Fl             | FI               |          |           |                        |            |  |
| Bo-Boonewood silt loam, occasionally flooded |            |         |                      |                |                |                  |          |           |                        | i i        |  |
| Boonewood, occasionally flooded              | C/D        | Low     | January              | 1.2-2.0        | 1.7-8.0        |                  | -        | None      | Brief (2 to 7<br>days) | Occasional |  |
|  |            |         | February             | 1,2-2.0        | 1.7-8.0        | _                | -        | None      | Brief (2 to 7<br>days) | Occasional |  |
|  |            |         | March                | 1.2-2.0        | 1.7-8.0        | _                | -        | None      | Brief (2 to 7<br>days) | Occasional |  |
|  |            |         | April                | 1.2-2.0        | 1.7-8.0        | _                |          | None      | Brief (2 to 7<br>days) | Occasional |  |
|  |            |         | May                  | 1.2-2.0        | 1.7-8.0        | _                | _        | None      | Brief (2 to 7<br>days) | Occasional |  |
|  |            |         | November             | 1.2-2.0        | 1.7-8.0        | _                | -        | None      | Brief (2 to 7<br>days) | Occasional |  |
|  |            |         | December             | 1.2-2.0        | 1.7-8.0        | _                | -        | None      | Brief (2 to 7<br>days) | Occasional |  |

USDA N

Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey 2/24/2015 Page 4 of 16

155MB)11/1003

|   |            |          | Water i   | Features-Jeffe | rson County, k | Centucky         |          |           |          |           |
|---|------------|----------|-----------|----------------|----------------|------------------|----------|-----------|----------|-----------|
| Map unit symbol and soil  | Hydrologic | Surface  | Month     | Wate           | r table        |                  | Ponding  |           | Flo      | ading     |
| name  | group      | runoff   |           | Upper limit    | Lowerlimit     | Surface<br>depth | Duration | Frequency | Duration | Frequency |
| 10-20 <del>0-0-40-0-40-0-40-0-40-0-40-0-40-0-4</del>                        |            |          |           | Ft             | FI             | Ft               |          |           |          |           |
| CaC2—Caneyville silt loam,<br>6 to 12 percent slopes,<br>eroded, very rocky |            |          |           |                |                |                  |          |           |          |           |
| Caneyville  | D          | Medium   | January   | _              | _              | -                | _        | None      | _        | None      |
|   |            |          | February  | <u> </u>       |                |                  | <b>—</b> | None      | _        | None      |
| .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                                     |            |          | March     |                | _              |                  |          | None      |          | None      |
|   |            |          | April     |                | _              | _                |          | None      | -        | None      |
|   | <u> </u>   |          | May       |                | -              | _                | _        | None      | _        | None      |
|   |            | <u> </u> | June      | _              | -              |                  | _        | None      |          | None      |
|   |            |          | July      |                | _              |                  |          | None      | _        | None      |
|   |            | <b></b>  | August    |                |                | _                | _        | None      | _        | None      |
|   |            |          | September | -              |                |                  | -        | None      | _        | None      |
|   |            |          | October   | _              | -              |                  |          | None      | _        | None      |
|   |            |          | November  | _              | _              |                  | <b>-</b> | None      | _        | None      |
| - 147-6   |            |          | December  |                |                |                  |          | None      |          | None      |

#### APR 05 266 PLANNING & DESIGN SERVICES

Water Features---Jefferson County, Kentucky

St. Joseph Orphanage Site

|  |            |         | Water)    | Features—Jeffe | rson County, t | (entucky         |           |           |          | 200       |
|--|------------|---------|-----------|----------------|----------------|------------------|-----------|-----------|----------|-----------|
| Map unit symbol and soil   | Hydrologic | Surface | Month     | Wate           | r table        |                  | Ponding   |           | Flo      | oding     |
| name   | group      | runoff  |           | Upper limit    | Lower limit    | Surface<br>depth | Duration  | Frequency | Duration | Frequency |
|  |            |         |           | Ft             | FI             | Ft               |           |           |          |           |
| CaD2—Caneyville silt loam,<br>12 to 25 percent slopes,<br>eroded, very rocky |            |         |           |                |                |                  |           |           |          |           |
| Caneyville   | D          | Medium  | January   | -              | _              | _                |           | None      | <u> </u> | None      |
|  |            |         | February  |                | <b>-</b> .     | <b>–</b>         | <b> -</b> | None      |          | None      |
|  |            |         | March     |                |                | _                |           | None      | _        | None      |
| ······································                                       |            |         | April     |                |                | <b> </b>         | <b> -</b> | None      |          | None      |
|  |            |         | May       | _              | -              |                  | <b> -</b> | None      |          | None      |
|  |            |         | June      | _              | _              | _                | _         | None      |          | None      |
|  |            |         | July      | _              | _              |                  |           | None      | _        | None      |
|  |            |         | August    | _              | _              |                  | -         | None      | _        | None      |
|  |            |         | September | -              | _              | _                |           | None      | _        | None      |
|  |            |         | October   | <b>-</b>       | _              | _                | _         | None      |          | None      |
|  |            |         | November  | _              | -              | _                | -         | None      |          | None      |
|  |            |         | December  | _              |                |                  | _         | None      |          | None      |

USDA Natu

Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey 2/24/2015 Page 6 of 16

|   |            |          | Water     | Features-Jeffe | rson County, F | септиску         |          |           |          |           |
|---|------------|----------|-----------|----------------|----------------|------------------|----------|-----------|----------|-----------|
| Map unit symbol and soil                    | Hydrologic | Surface  | Month     | Wate           | r table        |                  | Pending  |           | Flo      | oding     |
| name  | group      | runoff   |           | Upper limit    | Lower limit    | Surface<br>depth | Duration | Frequency | Duration | Frequency |
| <u></u>                                     |            | <u> </u> |           | Ft             | Ft             | Ft               |          |           |          |           |
| CrB—Crider silt loam, 2 to 6 percent slopes |            |          |           |                |                |                  |          |           |          |           |
| Crider                                      | В          | 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      |

## APR 08 73% PLANNING & DESIGN SERVICES

Water Features---Jefferson County, Kentucky

St. Joseph Orphanage Site

|  |            |         | Water     | Features-Jeffei | rson County, F | (entucky         |          |           |          |           |
|--|------------|---------|-----------|-----------------|----------------|------------------|----------|-----------|----------|-----------|
| Map unit symbol and soil                     | Hydrologic | Surface | Month     | Wate            | r table        |                  | Ponding  |           | Flo      | oding     |
| name   | group      | runoff  |           | Upper limit     | Lower limit    | Surface<br>depth | Duration | Frequency | Duration | Frequency |
|  |            |         |           | Fl              | FI             | Ft               |          |           |          |           |
| CrC-Crider silt loam, 6 to 12 percent slopes |            |         |           |                 |                |                  |          |           |          |           |
| Crider                                       | В          | Medium  | Januery   | -               | _              | _                |          | None      |          | None      |
|  |            |         | February  | _               |                | -                | <b>—</b> | None      |          | None      |
|  |            |         | March     | -               | _              | <u> </u>         | -        | 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  | <del></del>     | _              |                  |          | None      |          | None      |



Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey 2/24/2015 Page 8 of 16



|  |            |         | Water     | Features-Jeffer | rson County, k | (entucky         |          |           |          |           |
|--|------------|---------|-----------|-----------------|----------------|------------------|----------|-----------|----------|-----------|
| Map unit symbol and soil                     | Hydrologic | Surface | Month     | Wate            | r table        |                  | Ponding  |           | Flo      | oding     |
| name   | group      | runoff  |           | Upper timit     | Lower limit    | Surface<br>depth | Ouration | 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      |
|  | <b></b>    |         | 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      |
| , <u></u>                                    |            |         | July      | _               | _              | -                |          | None      |          | None      |
|  |            |         | August    |                 | _              | _                | -        | None      |          | None      |
|  |            |         | September |                 | <del></del>    | _                |          | None      | _        | None      |
|  |            |         | October   | -               |                |                  | -        | None      | _        | None      |
|  |            |         | November  | _               | _              |                  | _        | None      | _        | None      |
|  | <b> </b>   |         | December  | 1.5-2.7         | 1.7-3.0        |                  |          | None      |          | None      |

#### APR 05 2015 PLANNING & DESIGN SERVICES

Water Features---Jefferson County, Kentucky

St. Joseph Orphanage Site

|   |                                       |         | Water     | Features-Jeffe | rson County, F | (entucky         |          |           |          |           |
|---|---------------------------------------|---------|-----------|----------------|----------------|------------------|----------|-----------|----------|-----------|
| Map unit symbol and soil                      | Hydrologic                            | Surface | Month     | Wate           | r table        |                  | Ponding  |           | Flo      | oding     |
| name  | group                                 | runoff  |           | Upper limit    | Lower limit    | Surface<br>depth | Duration | Frequency | Duration | Frequency |
|   |                                       |         |           | Fl             | Fi             | Fl               |          |           |          |           |
| SaB—Sandview sitt loam, 2 to 6 percent slopes |                                       |         |           |                |                |                  |          |           |          |           |
| Sandview                                      | В                                     | Low     | January   | <b>—</b>       | _              | -                |          | None      | _        | None      |
|   |                                       |         | February  |                | -              |                  |          | None      |          | None      |
|   |                                       |         | March     | <del>-</del>   | -              | _                | -        | None      | _        | None      |
|   |                                       |         | April     | _              | _              | _                |          | None      | _        | None      |
|   |                                       |         | May       | <b> -</b>      | _              | _                | -        | None      | _        | None      |
|   |                                       |         | June      | _              | _              | _                | _        | None      | -        | None      |
|   |                                       |         | July      | -              |                |                  | _        | None      | _        | None      |
|   |                                       |         | August    | _              | -              |                  |          | None      | -        | None      |
|   | · · · · · · · · · · · · · · · · · · · |         | September | -              |                |                  |          | None      |          | None      |
|   |                                       |         | October   | _              |                |                  |          | None      |          | None      |
|   |                                       |         | November  | -              | _              | _                |          | None      | _        | None      |
|   |                                       |         | December  |                | _              | _                | _        | None      | _        | None      |



Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey 2/24/2015 Page 10 of 16

(554BW/003

|   | in in the second of the |   | vvater   | Features-Jeffe | ravir Goully, r | toritusky        |              |           |          | Name (WA) |
|---|-------------------------|---|--|----------------|-----------------|------------------|--------------|-----------|----------|-----------|
| Map unit symbol and soil  | Hydrologic              | Surface                                 | Month  | Wate           | r table         |                  | Ponding      |           | Flo      | oding     |
| nam <del>a</del>  | group                   | runoff                                  |  | Upper limit    | Lower limit     | Surface<br>depth | Duration     | Frequency | Duration | Frequency |
|   |                         |   | No to the contract of the cont | Ft             | Ft              | Ft               |              |           |          |           |
| UhCUrban land-Alfic Udarents complex, fragipan substratum-over hard bedrock, 0 to 12 percent slopes |                         |   |  |                |                 |                  |              |           |          |           |
| Urban land  | _                       | Very high                               | January  | <del>-</del>   | _               | -                | <b> </b> -   | None      | _        | None      |
|   |                         |   | February   |                | _               |                  | 1-           | None      | _        | None      |
|   |                         |   | March  | _              | _               | _                | <del>-</del> | None      |          | None      |
|   |                         |   | April  | -              |                 |                  | -            | None      | <b></b>  | None      |
|   |                         |   | May  | -              | -               |                  |              | None      | _        | None      |
|   |                         |   | June   |                |                 | _                | _            | None      |          | None      |
|   |                         |   | July   | _              | _               | _                |              | None      |          | None      |
|   |                         |   | August   | _              | _               |                  | -            | None      |          | None      |
|   |                         |   | September  |                |                 |                  | _            | None      | _        | None      |
|   |                         |   | October  |                |                 |                  | _            | None      |          | None      |
|   |                         | *************************************** | November   |                | _               |                  |              | None      |          | None      |



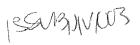
Water Features---Jefferson County, Kentucky

St. Joseph Orphanage Site

|  |  |  | Water     | Features-Jeffe | rson County, i | Kentucky   |  |           |              |           |
|--|--|--|-----------|----------------|----------------|--|--|-----------|--------------|-----------|
| Map unit symbol and soil   | Hydrologic   | Surface  | Month     | Wate           | r table        |  | Ponding  |           | Flo          | oding     |
| name   | group  | runoff   |           | Upper limit    | Lower limit    | Surface<br>depth   | Duration   | Frequency | Duration     | Frequency |
| A CONTRACTOR OF THE PROPERTY O | (47,000,000,000,000,000,000,000,000,000,0  | **************************************   |           | Ft             | FI             | Fl   |  |           |              |           |
|  |  |  | December  | <b>-</b>       |                |  | _  | None      |              | None      |
| Alfic udarents   | D  | Very high  | Jenuary   | 1.5-2.5        | 2.0-3.0        | -  | <b> -</b>  | None      | -            | None      |
|  | The second secon | The state of the s | February  | 1.5-2.5        | 2.0-3.0        | anen   | -  | None      | -            | None      |
| Company of the Compan |  |  | March     | 1,5-2.5        | 2.0-3.0        | -  |  | None      | -            | None      |
|  |  |  | April     | 1.5-2.5        | 2.0-3.0        | -  |  | None      | -            | None      |
|  | Description of the Control of the Co |  | May       | 1.5-2.5        | 2.0-3.0        | - Company of the Comp | - Section of the sect | None      | Banesi       | None      |
|  |  |  | June      | -              | -              |  | <b>[</b>   | None      | -            | None      |
| en e   | - Constitution of the colors   | e de la constitución de la const | July      | _              | and a          | _  | -  | None      |              | None      |
| NOTES EL CONTROL   |  |  | August    | -              |                | _  | -  | None      | <u> -</u>    | None      |
| o y manifesta de la companya de la c  |  | A CARLON CONTRACTOR CO | September | Action 1       |                | _  | _  | None      | -            | None      |
| out a men ut glanda de seu proposition de participat de participat de la companya de la companya de la companya  |  |  | October   | _              |                |  | _  | None      | -            | None      |
|  |  |  | November  | 1.5-2.5        | 2,0-3,0        | min.   | -  | None      | <del>L</del> | None      |
| and a larger and a second of the second of t | - меренульный меренений ме |  | December  | 1,5-2.5        | 2.0-3.0        | <b>-</b>   | _  | None      | _            | None      |



Web Soil Survey National Cooperative Soil Survey 2/24/2015 Page 12 of 16



|  |            |           | Water     | Features-Jeffe | rson County, f | Centucky         |          |           |          |           |
|--|------------|-----------|-----------|----------------|----------------|------------------|----------|-----------|----------|-----------|
| Map unit symbol and soil   | Hydrologic | Surface   | Month     | Wate           | r table        |                  | Panding  |           | Flo      | oding     |
| name   | group      | runoff    |           | Upper limit    | Lower limit    | Surface<br>depth | Duration | Frequency | Duration | Frequency |
|  |            |           |           | Ft             | Ft             | Ff               |          |           |          |           |
| UjC—Urban land-Alfic<br>Udarents complex, clayey<br>substratum-over hard<br>bedrock, 0 to 12 percent<br>slopes |            |           |           |                |                |                  |          |           |          |           |
| Urban land   |            | Very high | January   | I              |                |                  | -        | None      | -        | None      |
|  |            |           | February  | <b> </b> -     | _              | _                | _        | 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      |

#### APR 08 2016 PLANNING & DESIGN SERVICES

Water Features---Jefferson County, Kentucky

St. Joseph Orphanage Site

|  |  |  | Water     | Features-Jeffe | rson County, 1   | Centucky   |           |           |                                   |           |
|--|--|--|-----------|----------------|--|--|-----------|-----------|-----------------------------------|-----------|
| Map unit symbol and soll   | Hydrologic   | Surface  | Month     | Wate           | rtable   |  | Ponding   |           | Flo                               | oding     |
| name   | group  | runoff   |           | Upper limit    | Lowerlimit   | Surface<br>depth   | Duration  | Frequency | Duration                          | Frequency |
|  |  |  |           | Ft             | Ft   | Ft   |           |           |                                   |           |
|  |  |  | December  | -              |  |  | <b></b>   | None      |                                   | None      |
| Alfic udarents   | D  | Very high  | January   | work .         |  | _  | <b> -</b> | None      | -                                 | None      |
| - CITI CO. 1 - 7 - 7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -   | and the second second second second second   | - Consideration of the Constitution of   | February  | _              | - The second sec | *****  | -         | None      | -                                 | None      |
| and the state of the  | Control (activated all and activated as a single property of the Control   | The state of the s | March     | _              | - Company of the Comp | The state of the s | _         | None      | <b> -</b>                         | None      |
|  | and the second second second second  | and the second s | April     |                | Access to the contract of the  | -000   | -         | None      | -                                 | None      |
|  | 2011/22 040412-40040412-410  | and the second s | May       | T-             |  |  | -         | None      | _                                 | None      |
|  | and the second second second second  |  | June      | -              |  | 4040k  |           | None      | -                                 | None      |
|  |  | and the second second second second  | July      |                | _  | - Declaration Records Delicated  | -         | None      | -                                 | None      |
| en e   | Control of the Contro | - the state of visible separation and on the   | August    |                | - Committee of the Comm | - Color of the Color of Color  | Broom.    | None      |                                   | None      |
|  |  | - Para de Caración | September | ***            |  |  | -         | None      |                                   | None      |
| THE CONTRACT OF THE CONTRACT O |  | and the second s | October   | _              |  | Character Character Control  |           | None      |                                   | None      |
|  | - Honor or Proposition Co.   |  | November  | ****           |  | ****   | Contra    | None      | _                                 | None      |
| DAGE BEGTT ELEGYA-CO'AT PER E BRAZIEN PER ELEGENE EL PER EN ELEGENE EL PER EL PER EL PER EL PER EL PER EL PER  |  |  | December  | <b>[</b> -     | - Annahar de la confession de service  | _  | -         | None      | -Date Code DebuDiDate Co. Corto D | None      |



Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey 2/24/2015 Page 14 of 16

15a/4)/1/1003

|   |            |           | Water     | Features-Jeffe | rson County, l | Kentucky         |          |           |          |           |
|---|------------|-----------|-----------|----------------|----------------|------------------|----------|-----------|----------|-----------|
| Map unit symbol and soll  | Hydrologic | Surface   | Month     | Wate           | rtable         |                  | Ponding  |           | Flo      | oding     |
| name  | group      | runoff    |           | Upper limit    | Lower limit    | Surface<br>depth | Ouration | Frequency | Duration | Frequency |
|   |            |           |           | Ft             | Ft             | Ft               |          |           |          |           |
| UjD—Urban land-Alfic<br>Udarents complex, clayey<br>substratum-over hard<br>bedrock, 12 to 25 percent<br>slopes |            |           |           |                |                |                  |          |           |          |           |
| Urban land  |            | Very high | January   |                |                |                  |          | None      |          | None      |
|   |            |           | February  | -              |                |                  |          | None      |          | None      |
|   |            |           | March     | _              | _              | _                | _        | None      | _        | None      |
|   |            |           | April     | -              | _              | _                | _        | None      | _        | None      |
|   |            |           | May       |                |                |                  |          | None      |          | None      |
|   |            |           | June      | -              |                | _                | _        | None      |          | None      |
|   |            |           | July      | <u> </u>       | -              |                  | -        | None      |          | None      |
|   |            |           | August    | _              |                | _                | _        | None      | _        | None      |
|   |            |           | September |                |                | _                |          | None      |          | None      |
|   |            |           | October   | -              |                |                  | _        | None      |          | None      |
|   |            |           | November  | _              | _              | _                |          | None      |          | None      |



APR PROPERTY &
PLANNING &
DESIGN SERVICES

Water Features---Jefferson County, Kentucky

St. Joseph Orphanage Site

| Map unit symbol and soil   | Hydrologic   | Surface  | Month     | Wate   | r table  |  | Ponding  |           | Flo                                 | oding     |
|--|--|--|-----------|--|--|--|----------|-----------|-------------------------------------|-----------|
| name   | group  | runoff   |           | Upper limit  | Lower limit  | Surface<br>depth   | Duration | Frequency | Duration                            | Frequency |
|  |  |  |           | Fi   | Ft   | Ft   |          |           |                                     | 1         |
|  |  |  | December  |  |  | _  |          | None      |                                     | None      |
| Alfic udarents   | D  | Very high  | January   | -  | L  | -  | _        | None      | -                                   | None      |
| A TOTAL CONTROL OF THE PROPERTY OF THE PROPERT | 0.000  |  | February  |  |  | -  |          | None      | was:                                | None      |
|  |  |  | March     | _  | -  | -  |          | None      | _                                   | None      |
|  |  | 100.000.000.000.000.000.000.000.000.000  | April     | _  | _  | _  | -        | None      | _                                   | None      |
|  |  |  | May       | -  |  | -  | -        | None      | _                                   | None      |
|  |  |  | June      | -  | _  | _  | -        | None      |                                     | None      |
| Capacida Control (Control (Con | A SANDON DE LA MARCANTA DE LA CARTA DE | Harrist Control of Con | July      |  | The state of the s |  | desire.  | None      | and the second second second second | None      |
| elegis <del>an</del> principal de la principal de la   |  |  | August    | _  |  | ence in the second seco | T-       | None      | _                                   | None      |
| O ENTERON DESCRIPTION OF THE PROPERTY OF THE P | and the second second  |  | September |  |  |  | _        | None      | _                                   | None      |
| Omenters de la principal de la company de la principal de la company de la company de la company de la company   | ALE HONDROMONOHOMON DI ENGRIPHIMAN-EL  | CAN DESIGNATION OF STREET  | October   |  |  |  | -        | None      |                                     | None      |
| and the second s | AND STREET OF STREET   |  | November  | -  | and a  | -  | _        | None      |                                     | None      |
| мен — с имерикандия пономной выстанова под тоба в наменя   |  | - CATHOLOGICA CATHOLOGICA CATHOLOGICA  | December  | - Constitution and Cons | _  |  | T_       | None      |                                     | None      |

#### **Data Source Information**

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



Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey

2/24/2015 Page 16 of 16

|  |  | , |
|--|--|---|
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |