

United States Department of Agriculture

Natural Resources Conservation Service 4233 Bardstown Rd., Suite 100-A Louisville, KY 40291

June 23, 2015

Kathy M. Linares Mindel, Scott & Associates, Inc. 5151 Jefferson Blvd., Suite 101 Louisville, KY 40219

RE: Mt Washington Road Property (11100 Sentimental Lane)

Dear Ms. Linares:

Attached is the requested soil and site evaluation report on the above referenced development. This report includes soils information for approximately 9.8 acres proposed addition to an existing subdivision plan. Internal to the site is an existing pond which will remain as part of the development. It will be of great interest and benefit of the developer to protect the water resources of this water containment. Any construction or developmental activities can affect the quality of the pond's water and the well-being of the aquatic habitat that supports the pond's life. Runoff from upstream areas containing sediment, fertilizers and other pollutants can force an algae bloom and excessive aquatic vegetation growth to the pond, especially where there is not a substantial buffer that intercepts the runoff.

As plans are developed for the site, addressing the natural resource concerns for water quality and aquatic habitat should be considered.

Sincerely,

Kurt D. Mason CPESC District Conservationist

The Mase

Attachment - Soils Report

RECEIVED

SEP 04 2015

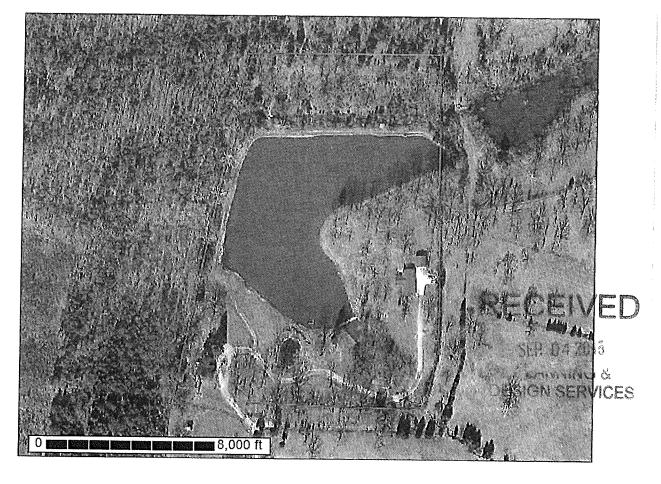


United States Department of Agriculture

NRCS

Natural Resources Conservation Service A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Jefferson County, Kentucky



June 16, 2015



155UBDINOID

Soil Map—Jefferson County, Kentucky (11100 Sentimental Lane)

MAP LEGEND MAP INFORMATION Area of Interest (AOI) Spoil Area The soil surveys that comprise your AOI were mapped at 1:12,000. Area of Interest (AOI) Stony Spot 14 Warning: Soil Map may not be valid at this scale. Soils $\langle \hat{\gamma} \rangle$ Very Stony Spot Enlargement of maps beyond the scale of mapping can cause Soil Map Unit Polygons misunderstanding of the detail of mapping and accuracy of soil line Ÿ. Wet Spot Soil Map Unit Lines placement. The maps do not show the small areas of contrasting Other soils that could have been shown at a more detailed scale. Soil Map Unit Points Special Line Features Special Point Features Please rely on the bar scale on each map sheet for map Water Features Blowout (2) Streams and Canals \boxtimes Borrow Pit Source of Map: Natural Resources Conservation Service Transportation Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov Coordinate System: Web Mercator (EPSG:3857) Clay Spot \mathcal{H} Rails +++ Closed Depression \Diamond Interstate Highways Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the 36 Gravel Pit US Routes Gravelly Spot 2 Major Roads Albers equal-area conic projection, should be used if more accurate Landfill calculations of distance or area are required, 42 This product is generated from the USDA-NRCS certified data as of Background the version date(s) listed below. Aerial Photography 4 Marsh or swamp Soil Survey Area: Jefferson County, Kentucky Survey Area Data: Version 13, Sep 17, 2014 Mine or Quarry Miscellaneous Water (B) Soil map units are labeled (as space allows) for map scales 1:50,000 Perennial Water \bigcirc Rock Outcrop Date(s) aerial images were photographed: Feb 12, 2012—Feb Saline Spot The orthophoto or other base map on which the soil lines were Sandy Spot compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting Severely Eroded Spot of map unit boundaries may be evident. Sinkhole Slide or Slip Sodic Spot

LSDA

Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey 6/16/2015 Page 2 of 3



SEP 04 2015

DESIGN SERVICES

15 SUBDINO11

Map Unit Legend

| | Jefferson County, Ke | ntucky (KY111) | |
|-----------------------------|---|----------------|----------------|
| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
| CaB2 | Caneyville silt loam, 2 to 6 percent slopes, eroded, very rocky | 0.2 | 2.2% |
| CaC2 | Caneyville silt loam, 6 to 12 percent slopes, eroded, very rocky | 2.4 | 24.7% |
| NnB | Bedford silt loam, 2 to 6 percent slopes | 0.1 | 1.0% |
| ShD3 | Shrouts silt loam, 12 to 25 percent slopes, severely eroded, very rocky | 4.4 | 44.5% |
| W | Water | 2.7 | 27.5% |
| Totals for Area of Interest | | 9.8 | 100.0% |



SEP 04 2015

PLANNING &
DESIGN SERVICES

Map Unit Description (Brief, Generated)

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

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

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

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

Report—Map Unit Description (Brief, Generated)

Jefferson County, Kentucky

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

Component: Caneyville (80%)

The Caneyville component makes up 80 percent of the map unit. Slopes are 2 PECLIVED 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. SFP 04 2015 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 DESIGN SERVICES a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Crider (7%)



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

Component: Caneyville (80%)

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.

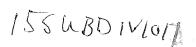
Component: Rock outcrop (3%)

Natural Resources
Conservation Service

Web Soil Survey National Cooperative Soil Survey

6/16/2015 Page 2 of 4

SEP 042015.



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

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

Component: Bedford (85%)

The Bedford component makes up 85 percent of the map unit. Slopes are 2 to 6 percent. This component is on hills, karst. The parent material consists of noncalcareous loess over loamy noncalcareous loess over clayey residuum, Depth to a root restrictive layer, fragipan, is 21 to 35 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. 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: ShD3—Shrouts silt loam, 12 to 25 percent slopes, severely eroded, very

Component: Shrouts, severely eroded (75%)

The Shrouts, severely eroded component makes up 75 percent of the map unit. Slopes are 12 to 25 percent. This component is on hills on uplands. The parent DESIGN SERVICES material consists of clayey residuum weathered from calcareous shale and/or siltstone. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 40 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

Component: Beasley (8%)

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

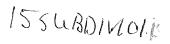


Web Soil Survey National Cooperative Soil Survey

6/16/2015 Page 3 of 4

SEP 04 2015

D CHIMINITY 3



Component: Faywood (7%)

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

Component: Caneyville (5%)

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

Component: Rock outcrop (5%)

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

Map Unit: W-Water

Component: Water (100%)

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

Data Source Information

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



SEP 04 2015

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

| Map symbol and soil name | Pct. of | Eng - dwellings v | v/o | Eng - dwellings w | vith | Eng - local roads and | streets |
|--|---------|--|-------|------------------------------------|-------|------------------------------------|---------|
| unit Ratin limit | | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| CaB2—Caneyville silt loam, 2 to 6 percent slopes, eroded, very 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 |
| | | | | | | Depth to hard bedrock | 0.46 |
| CaC2—Caneyville silt loam, 6 to 12 percent slopes, eroded, very rocky | | - And Anticological Control of the C | | | | | |
| 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 |



SEP 04 2015



| | | Selected Soil Interpr | etations | s–Jefferson County, Ker | ntucky | | |
|--|------------------------|---------------------------------------|----------|--|--------|------------------------------------|--------|
| Map symbol and soil name | Pct. of map unit | Eng - dwellings v basements | v/o | Eng - dwellings w basements | rith | Eng - local roads and | street |
| | um | Rating class and limiting features | Value | Rating class and limiting features | Value | Rating class and limiting features | Value |
| NnB—Bedford silt loam, 2 to 6 percent slopes | | | | | | | |
| Bedford | 85 | Somewhat limited | | Very limited | | Very limited | İ |
| | | 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 | The second secon | - | Shrink-swell | 0.50 |
| | | | | | | Depth to saturated zone | 0.43 |
| ShD3—Shrouts silt loam, 12 to 25 percent slopes, severely eroded, very rocky | | | | | | | |
| Shrouts, severely eroded | 75 | Very limited | | Very limited | | Very limited | |
| | | Slope | 1.00 | Slope | 1.00 | Low strength | 1.00 |
| | | Shrink-swell | 0.50 | Shrink-swell | 0.50 | Slope | 1.00 |
| | | | | Depth to soft bedrock | 0.10 | Shrink-swell | 0.50 |
| VWater | | | | | | | |
| Water | 100 | Not rated | | Not rated | | Not rated | |

Data Source Information

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



SEP 04 2016



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

| | Selecte | d Soil Interpretations-Jefferso | n County, | Kentucky | | |
|---|--|--|-----------|------------------------------------|--------------|----------------|
| Map symbol and soil name | Pct. of | Eng - lawn, landscape, golf | fairway | Eng - shallow excava | tions | |
| | map unit | Rating class and limiting features | Value | Rating class and limiting features | Value | |
| CaB2—Caneyville silt loam, 2 to 6 percent slopes, eroded, very rocky | | | | | | |
| Caneyville | 80 | Somewhat limited | | Very limited | | |
| | | Depth to bedrock | 0.46 | Depth to hard bedrock | 1.00 | |
| | TO THE REPORT OF THE PERSON OF | Dusty | 0.08 | Too clayey | (D.50g | 1 / |
| | | | | Dusty | 0.08 0.08 | VEL |
| | | 199 - 19 to 19 december 1991 - | | Unstable excavation walls | 0.01 | en |
| CaC2—Caneyville silt loam, 6 to 12 percent slopes, eroded, very rocky | | The state of the s | | , e | : I | 2015 uri 8. |
| Caneyville | 80 | Somewhat limited | | DES | IGN SE | vG & RVICES |
| Odricyvine | ٥٥ | | | | | |
| | | Depth to bedrock | | Depth to hard bedrock | 1.00 | |
| 7 P. F M. 1 | | Dusty | 0.08 | Too clayey | 0.50 | |
| | ******************************* | Slope | 0.04 | | 0.08 | |
| | | | | Slope | 0.04 | |
| | | | | Unstable excavation walls | 0.01 | |
| NnB—Bedford silt loam, 2 to 6 percent slopes | | | | | | |
| Bedford | 85 | Somewhat limited | i | Very limited | | |
| | | Low exchange capacity | 0.75 | Depth to thin cemented pan | 1.00 | |
| | | Depth to saturated zone | 0.43 | Depth to saturated zone | 1.00 | |
| | | Dusty | 0.07 | Too clayey | 1.00 | |
| | | The state of the s | 15. A | Dusty | 0.07 | |
| | | - THE REPORT OF A LABORATOR STATE OF THE PARTY OF THE PAR | | Unstable excavation walls | 0.01 | |



| Map symbol and soil name | Pct. of | Eng - lawn, landscape, golf | fairway | Eng - shallow excavatio | ns |
|--|----------|------------------------------------|---------|--|-------|
| | map unit | Rating class and limiting features | Value | Rating class and limiting features | Value |
| ShD3—Shrouts silt loam, 12 to 25 percent slopes, severely eroded, very rocky | | | | | |
| Shrouts, severely eroded | 75 | Very limited | | Very limited | |
| | | Slope | 1.00 | Slope | 1.00 |
| | | Depth to bedrock | 0.10 | Depth to soft bedrock | 0.10 |
| | | Dusty | 0.08 | Too clayey | 0.08 |
| | | | | Dusty | 0.08 |
| | | | | Unstable excavation walls | 0.01 |
| WWater | | | | The second section of the second seco | **** |
| Water | 100 | Not rated | | Not rated | ** |

Data Source Information

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



SEP 04 2015





Chrysier Bidg. Ste. 100-A 4233 Bardstown Road Laufsville, KY 40218-3250

Telephone. Fax: 592,439,1339

SUBJECT:

SOI - Soil and Site Evaluation for Urban Dev't:

Mt. Washington Road Property

DATE: June 4, 2004

FILE CODE: 430-12-13

To:

Ward Wilson, Chair Jefferson County SWCD

233 Bardstown Road, Suite 100-A

Louisville, KY 40218-3280

Enclosed you will find the soil and site evaluation report on the above referenced development proposal. The 65 acre tract is currently under agricultural use and is proposed for conversion to 208 single family residential lots. The present use of the tract is mostly grassland areas that are supporting beef cattle operations.

A comprehensive sediment and erosion control plan should be developed for the tract. The plan should specifically identify the Best Management Practices which will be used to reduce soil erosion and prevent sediment from leaving the construction site. An existing pond, located between lots 116 and 131, is serving somewhat as a sediment control device and a water retention basin. Consideration should be made to reconfigure the embankment and discharge areas of this pond so that it will more effectively serve as a sediment control device. Other measures should be employed in the drainage basin to limit the exposure of bare soil areas and the length of time the bare areas are left exposed.

Any plan for the tract should realize the potential effects of harmful runoff to the commercial pay lake immediately downstream of this proposed project. The quality and quantity of water being discharged to the lake will have an impact on the sustainability of the fishing operation. It should be the developer's responsibility to address the runoff concerns associated with the development and insure runoff containment provisions are properly designed, installed and maintained to address the water quality concerns at all times.

If our office can be of any assistance as you review plans which address the natural resource concerns on this project, please feel free to call on us.

RECEIVED

SEP 04 2015

DESIGN SERVICES

KURT D. MASON, CPESC District Conservationist

Copy furnished: (w/enclosure)

Erik Merten / Justin Tucker, Mindel, Scott & Associates, Inc., Engineers

154BD1VISIP

SOILS INVENTORY FOR: N Vashington Road Property DATE: June 3, 2004

PROPOSED USE: Residential LOCATION: Mt. Washington Road

| AND | | SOILS INVENTORY | | |
|---|--------|---|---------|--------|
| Without the control | SYMBOL | SOIL NAME | % SLOPE | %TRACT |
| | CdB2 | Corydon silt loam, eroded | 2 - 6 | 32.8 |
| | CrC3 | Corydon very rocky silty clay loam, severely eroded | 6 - 12 | 20.7 |
| (and the second | CsB2 | Crider silt loam, eroded | 2 - 6 | 9.5 |
| | RuB | Russellville silt loam | 2-6 | 1.4.9 |
| | CsC3 | Crider silt loam, severely eroded | 6 - 12 | 6.9 |
| | RuB2 | Russellville silt loam, eroded | 2 - 6 | 12.4 |
| | CsB | Crider silt Ioam | 2 - 6 | 0,4 |
| | DeB | Dickson silt loam | 2 - 6 | 1.2 |
| | Wa | Water | 47,340% | 1,2 |

RECEIVED

SEP 042015

DESIGN SERVICES

Removal of soil surface layers can result in drastic changes to runoff characteristics. This may be <u>critical</u> in developing surve numbers and runoff rates for post development requirements. Compaction from heavy machinery will also change the runoff characteristics

BEST MANAGEMENT PRACTICES (BMP's) FOR EROSION, SEDIMENT AND DRAINAGE CONTROL

Mt. Washington Road Property

The <u>alternatives</u> listed should serve as a guide in developing components for a specific sediment and erosion control plan for this project. The method of development will determine to what extent these measures are needed. This listing is not all inclusive. It addresses potential uses of components based on particular land features of this site.

- Minimize the occurrences of erosion by disturbing only the minimal areas needed to construct roads and install utilities.
- ♦ Any disturbed area should be revegetated by preparing a good seedbed which promotes vigorous plant growth. This includes the use of high quality seed with a high germination test rate and a low percentage of noxious weed seed. Use an inoculant on any legume seed.
- ◆ Seed the disturbed areas to a permanent grass cover of KY 31 fescue at a rate of 40 pounds per acre (minimum) plus 15 pounds of annual ryegrass per acre. At a minimum, apply 120 pounds of nitrogen, 120 pounds of P205 and 120 pounds of K20 per acre seeded. An application of 2 to 3 tons of agricultural limestone should also be used on the seeding area.
- ◆ Utilize optimum seeding dates from March 1 to May 15 and August 1 to October 15. Sow seed using a seed drill, broadcast seeder and cultipacker or hydro seed the areas to be seeded. When hydro seeding, use four times the recommended rate of seed. Fertilizer and agricultural limestone should be disked or incorporated into the ground's surface to a depth of 4 to 6 inches prior to seeding. Increase the seed application 20% for each of the following limitations: little or no topsoil, rockiness, droughty weather conditions, poor ground preparation, inability to cover seed and seeding near the end of optimum seeding dates (After May 1 and after October 1.)
- ◆ Utilize a temporary seeding to provide an erosion control ground cover on graded or cleared areas which may be subject to erosion. Temporary seedings are applicable on areas disturbed and left untreated until the entire development area is finish graded and suitable for a permanent ground cover. The following annuals may be used as temporary plantings and are adequate for 3 to 12 months:

Annual Ryegrass (40 lbs per acre between 2/15 - 6/15)
Spring Oats (96 lbs per acre between 2/15 - 6/15)
Wheat (96 lbs per acre between 8/16 - 11/15)
Grain Rye (120 lbs per acre between 8/16 - 11/15)

SEP 04 2015

CLAVINING &
DESIGN SERVICES

• Use sod to line channels and banks requiring immediate vegetation. Sod should be pinned or staked to prevent slippage or rolling out of channel areas.

Page 1 (BUBAWOLB 10-16-04

BEST MANAGEMENT PRACTICES (BMP's) FOR EROSION, SEDIMENT AND DRAINAGE CONTROL

- ◆ Construct diversion channels on the tract to intercept water from adjoining sites or undisturbed areas. The purpose of diverting this water is to reduce the amount of area where "cleaner water" is allowed to mix with the sediment laden water. This reduces the runoff to be contained in sediment or water retention basins.
- ◆ Use a riprap barrier in the channels to trap silt and sediment. The center of these barriers should have a filtering material such as gravel or a filter fabric. In some cases, the center can be hay bales with a riprap front and back slope. These slopes should be a minimum of 2:1.
- ◆ Install outlet protection measures or riprap at the outlet ends of culverts where exit velocities are too high for sod or where the placement of the culvert required disturbance of the existing sod cover. Where the flow through the culvert is of low velocities, the exit areas should be sodded.
- ♦ The project would be best developed in phases where earth moving can be minimized. This will allow each area or phase to be seeded or treated to a temporary or permanent vegetative erosion control measures. As a phase is completed, it should be treated for sheet, rill and gully erosion.
- Utilize gabion baskets as temporary sediment and water retention structures in areas where water velocities are high. Gabions should be anchored to the banks of the channel and the individual baskets anchored to each other.
- ◆ Utilize an artificially constructed wetland to intercept water before it runs into a lake, pond or stream. The wetland, when properly designed, can intercept sediment and nutrient/leats associated with new and existing subdivisions. The wetland may be of particular use where fertilizers and lawn care chemical runoff is anticipated in existing water bodies.
- Use a storm drain inlet protector to filter sediment from new stormwater systems. Inlet protectors should be made of a filter fabric with frame or filter fabric and gravel.
- ◆ Use a gravel base construction entrance for ingress and egress. The gravel entrance should have a filter fabric under the gravel support. The construction entrance should be wide enough to accommodate large vehicles. The length of the gravel entry should be adequate to provide roughness and time to deposit mud and sediment from the underside of vehicles prior to their entry onto a public road or street.
- ♦ Surface roughen the slopes prior to seeding and mulching. This measure will create horizontal depressions, using tillage implements or tracks of excavation equipment. This is preferred on all slopes greater than 3:1 where a smooth seedbed is not advantageous. Surface roughening reduces runoff velocity and may increase infiltration, reduces erosion and aids in the establishment of vegetative cover.

Page 3 [TSUB DIVIOI & 10-16-04

| | Soil Feature Limitations Fo | or Building & Deve | Feature Limitations For Building & Development: Mt. Washington Road Property | igton Road Property | > | |
|--------|---|--------------------|--|---------------------|--------|-------------------|
| Symbol | Soil Series | Slope | Water Table | Bedrock | Hydric | Erosion Potential |
| | | | | | | |
| CdB2 | Corydon silt loam, eroded | 2-6% | | 1'-2 1/2' | no | high |
| CrC3 | Corydon very rocky silty clay loam, severely eroded | 6-12% | | 1'-2 1/2' | ou | high |
| CsB | Crider silt loam | 2-6% | 1 | · +,9 | no | high |
| CsB2 | Crider silt loam, eroded | 2-6% | | +,9 | no | high |
| csc3 | Crider silt Ioam, severely eroded | 6-12% | | +,9 | no | very high |
| DcB | Dickson silt loam | 2-6% | 1'-2' | 5'-9' | no | high |
| RuB | Russellville silt loam | 2-6% | 1'-3' | 5'-9' | no | high |
| RuB2 | Russellville silt loam, eroded | 7-6% | 1'-3' | 5'-9' | no | high |
| Wa | Water | 1 | 0 | ***** | • | |

RECEIVED

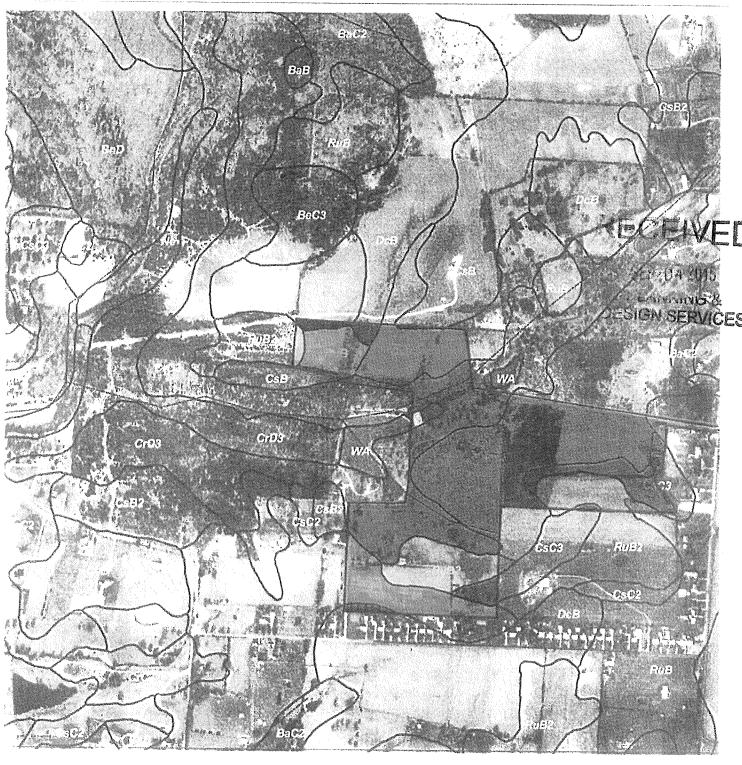
SEH 042015 DESIGN SERVICES

1554BDWOID

Mount Washington Road Property

Jefferson County Conservation District

USDA - NRCS Kurt Mason, District Conservationist



ONIXCS Natural Resources.

Scale 1:7920 (1" = 660')

arm din oberg Lead greene traceparages 2 th or tens Control of the contro

155LBDWO1

10-16-04