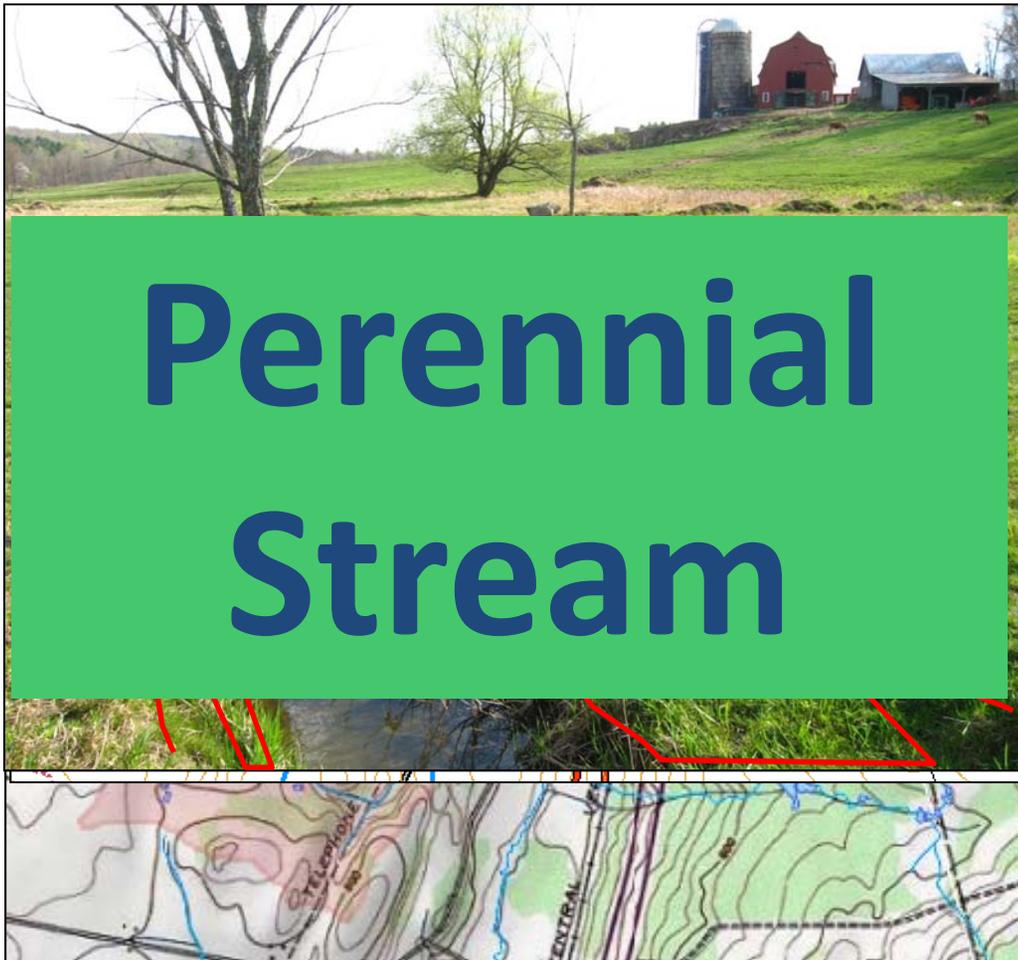


Is it a Stream or a Ditch?

Using Remote Sensing Data and Field Observations to Determine Jurisdiction and Reporting Requirements for Proposed Ditching

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

D.A. = 1.9 sq.mi.



1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

D.A.: Not shown on maps.



1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

D.A. = 0.3 sq.mi.



Channelized Perennial Stream

1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

**D.A.: Not on stream stats
layer and unmeasurable on
ANR Atlas**



Channelized Ephemeral Stream?

1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

D.A. = 0.5 sq.mi.



Channelized Perennial Stream



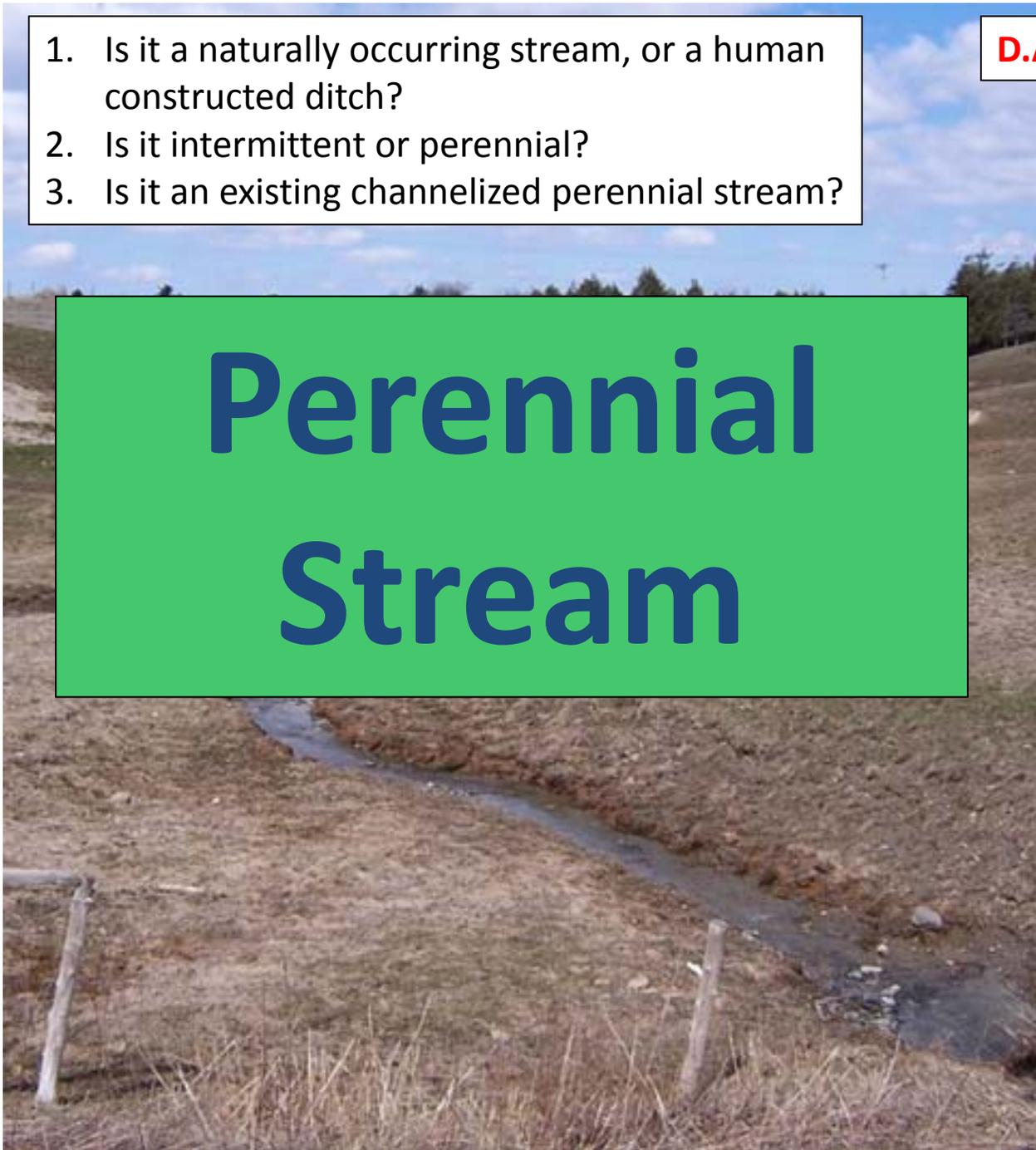
1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

D.A. = 0.4 sq.mi.

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

Perennial Stream

1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms



1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

D.A. = 0.7 sq.mi.



Channelized Perennial Stream



1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

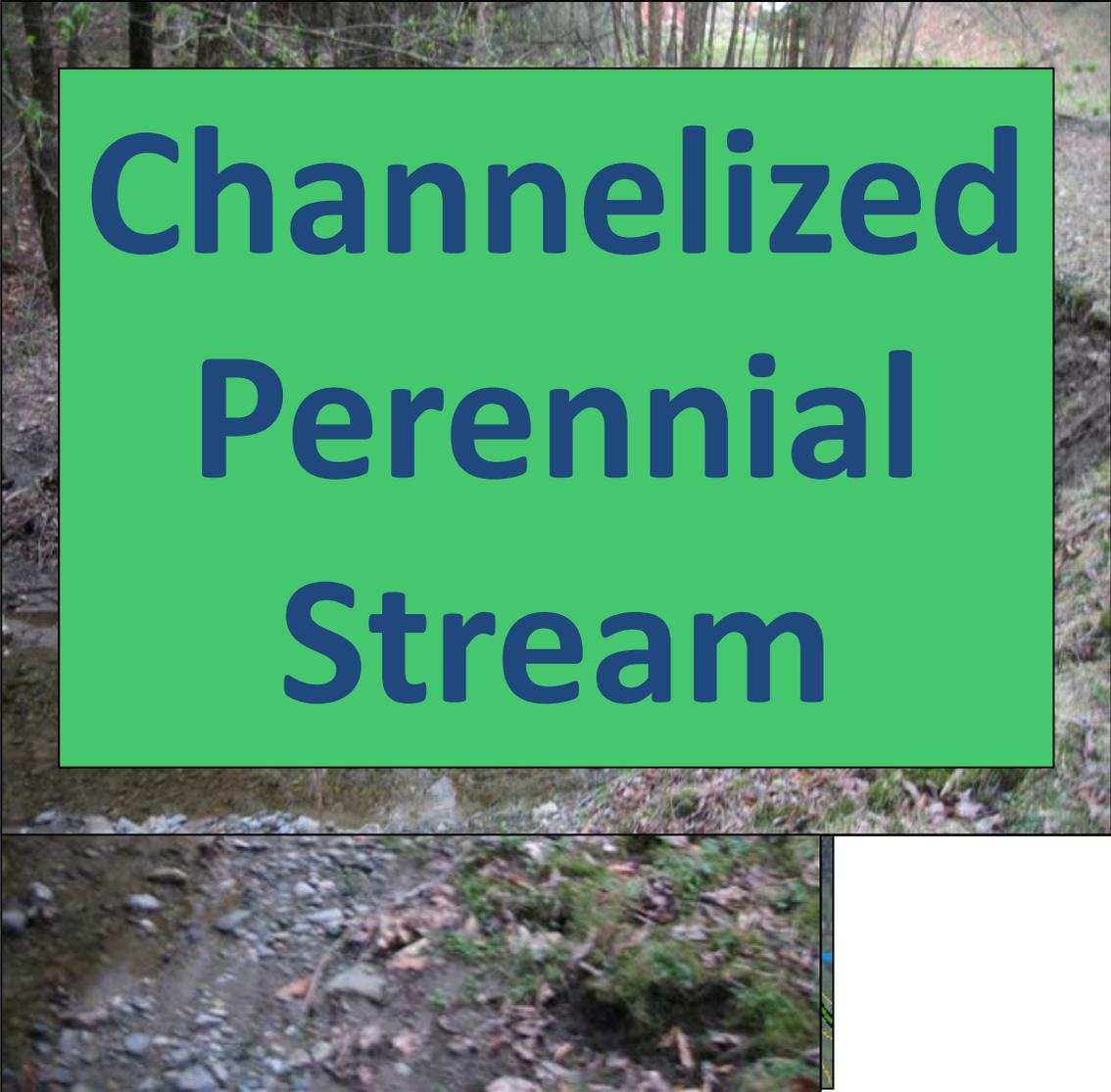


D.A. = < 0.5 sq.mi.

1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

D.A. = < 0.5 sq.mi.



Channelized Perennial Stream

1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

D.A. = 0.38 sq.mi.



1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

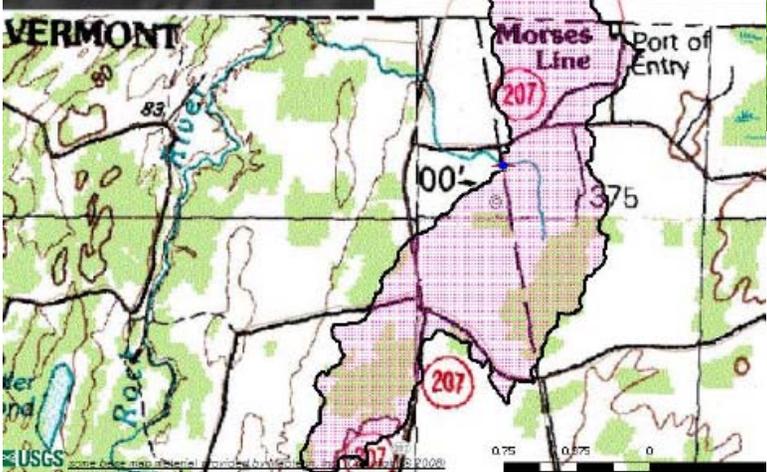
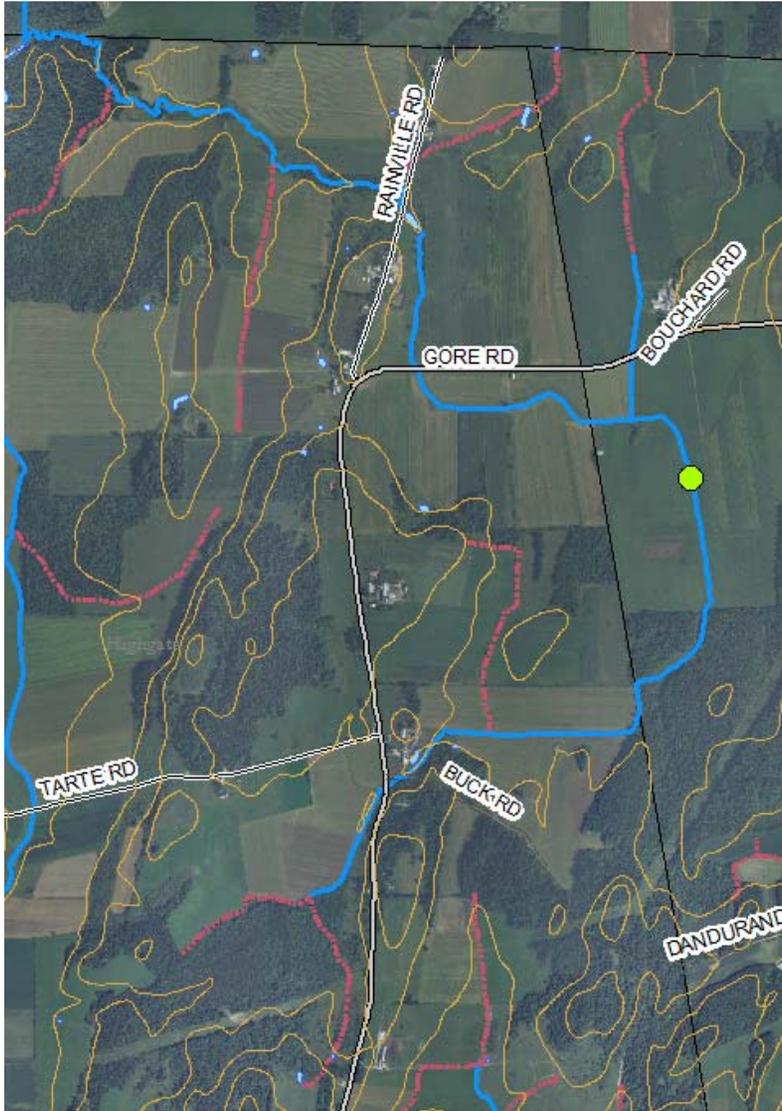
1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?

D.A. = 1.2 sq.mi.



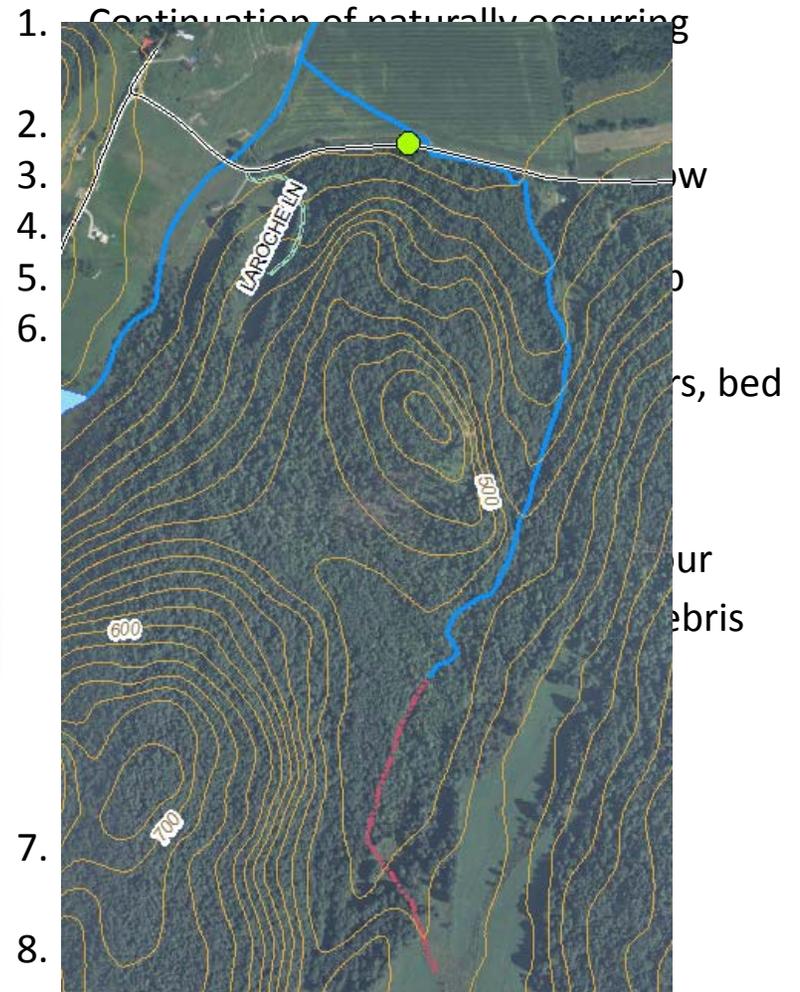
1. Continuation of naturally occurring channel upstream
2. Drainage basin topography
3. Direct observation of perennial flow
4. Drainage Area
5. USGS Intermittent Probability Map
6. Geomorphic Characteristics
 - a) riffles, pools, runs, gravel bars, bed armor layer
 - b) Depositional benches
 - c) Bank erosion and/or bed scour
 - d) Indications of waterborne debris and sediment transport
 - e) Defined bed and banks
 - f) Thalweg sinuosity
7. Seeps, springs or other base flow contribution
8. Aquatic Organisms

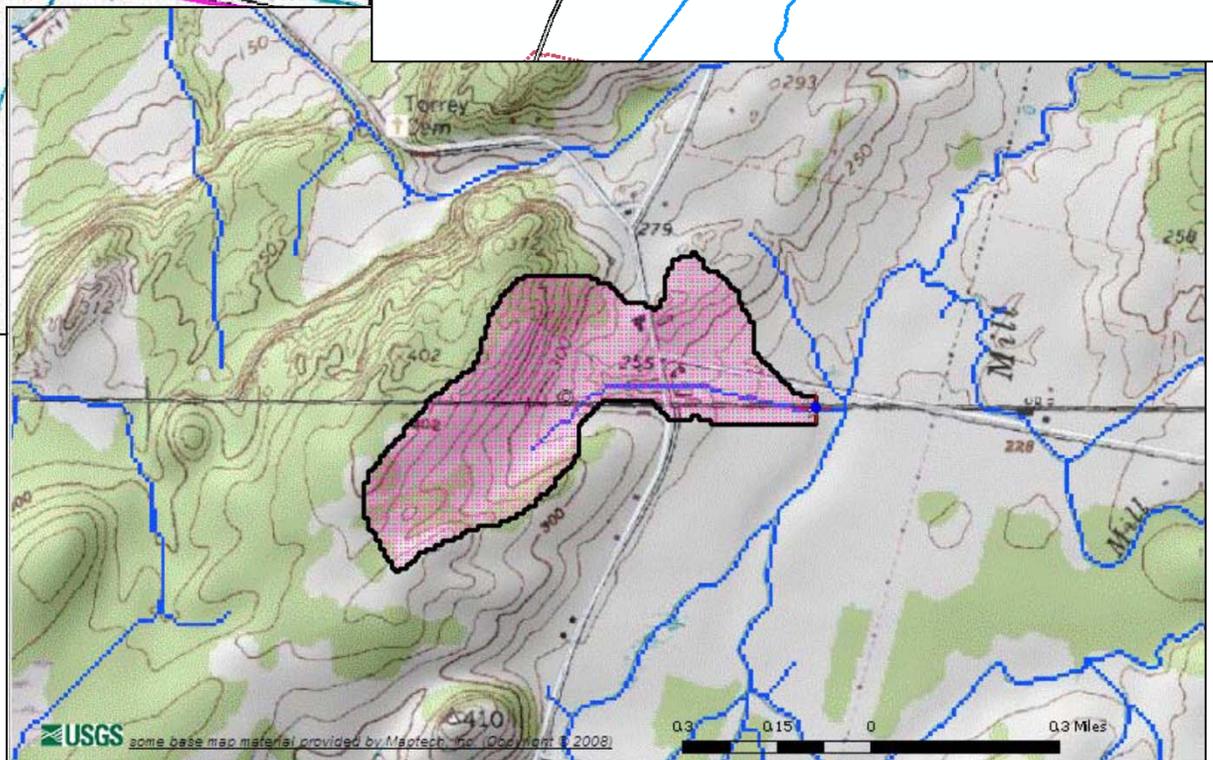
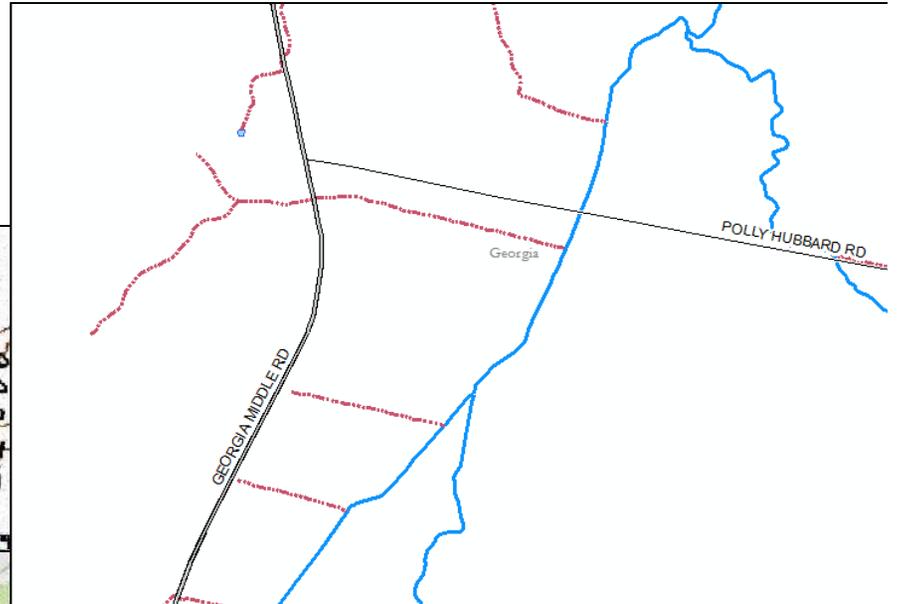
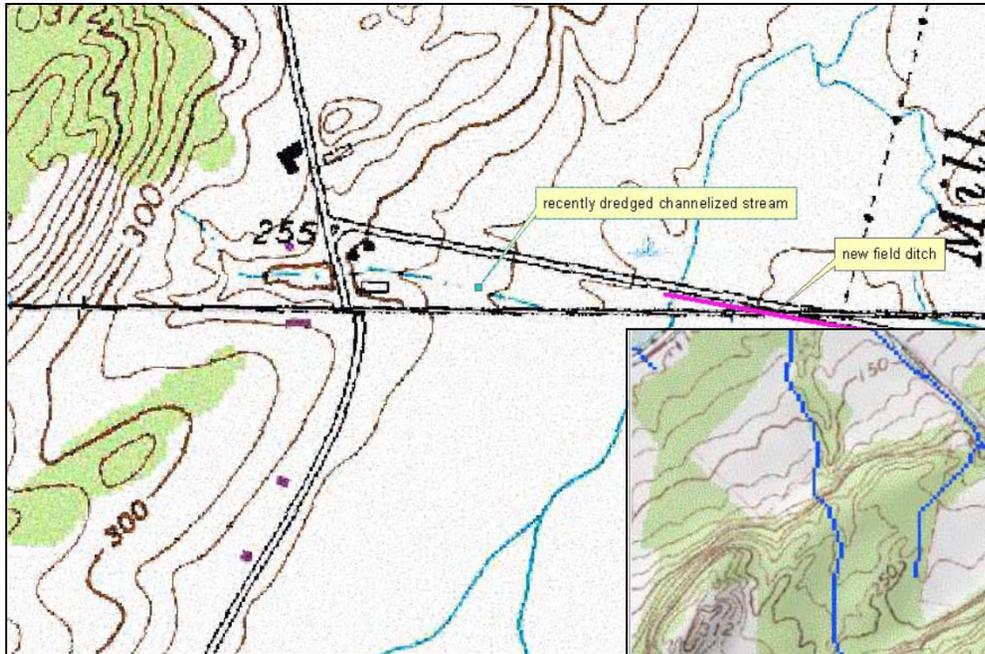
D.A. = 1.84 sq.mi.

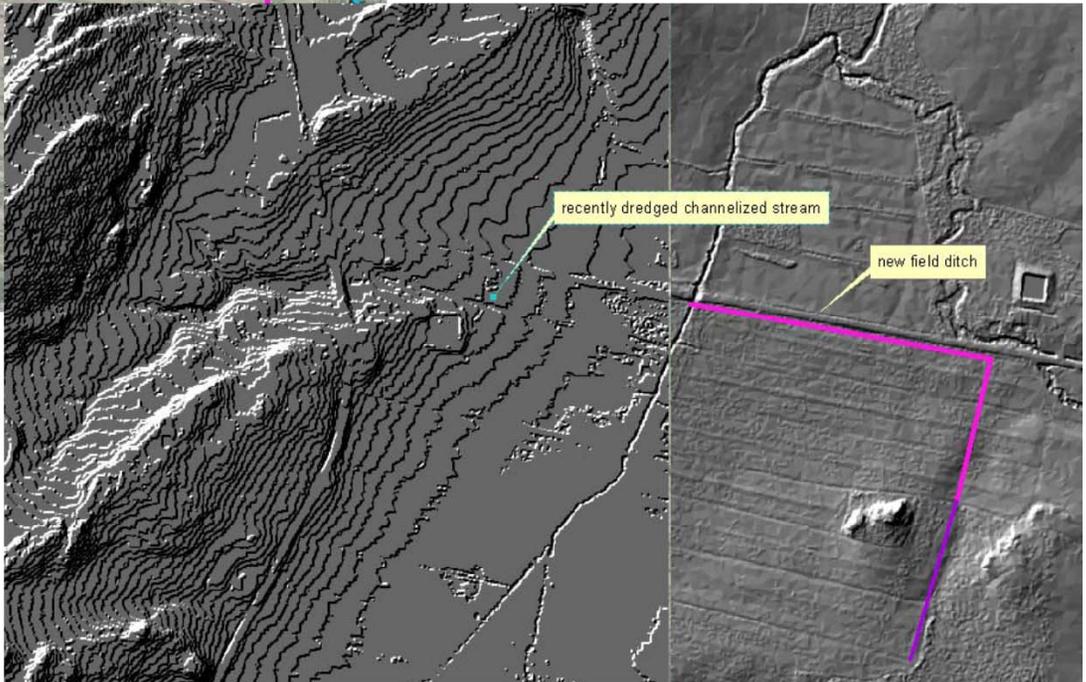
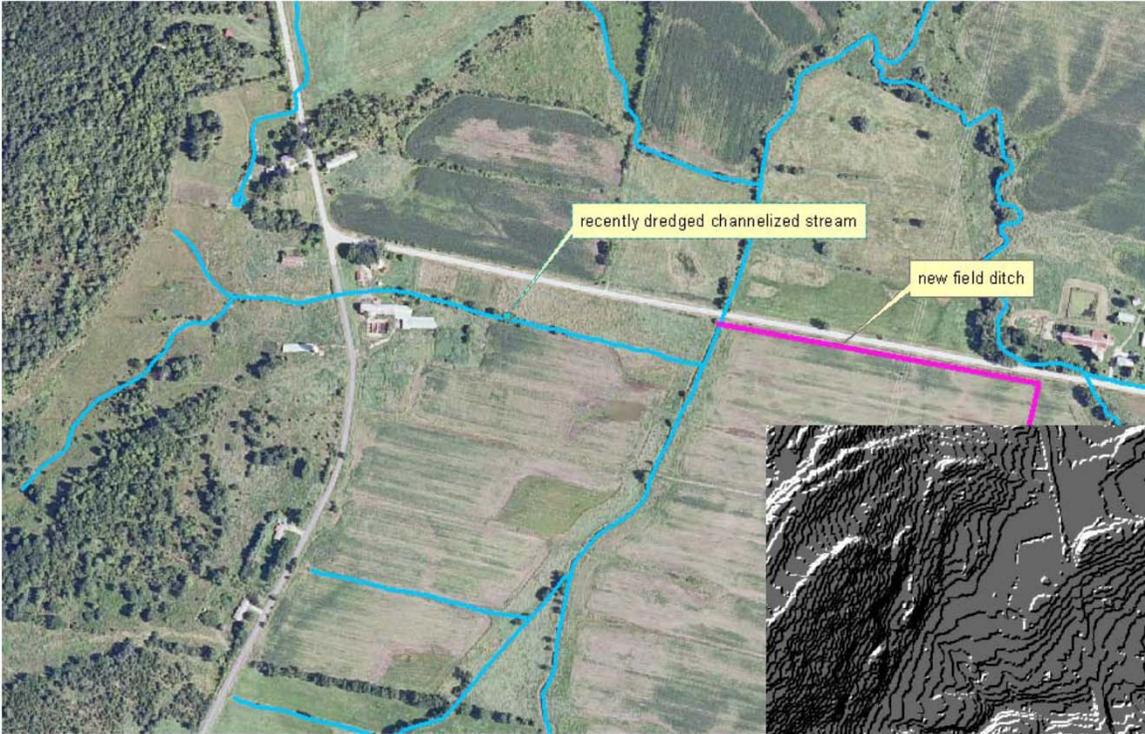


End

1. Is it a naturally occurring stream, or a human constructed ditch?
2. Is it intermittent or perennial?
3. Is it an existing channelized perennial stream?







channelization



End