

North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

|  |                     |                                     |
|--|---------------------|-------------------------------------|
| Date: 7/2/07   | Project: Cooper S/D | Latitude: 35.7584688°N              |
| Evaluator: Jennifer Burdette   | Site: #1            | Longitude: 79.0732545°W             |
| <b>Total Points:</b><br>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30 | County: Chatham     | Other<br>e.g. Quad Name: Farrington |

A. Geomorphology (Subtotal = 6)

|   | Absent | Weak | Moderate | Strong |
|---|--------|------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank  | 0      | 1    | 2        | 3      |
| 2. Sinuosity  | 0      | 1    | 2        | 3      |
| 3. In-channel structure: riffle-pool sequence   | 0      | 1    | 2        | 3      |
| 4. Soil texture or stream substrate sorting   | 0      | 1    | 2        | 3      |
| 5. Active/relic floodplain  | 0      | 1    | 2        | 3      |
| 6. Depositional bars or benches   | 0      | 1    | 2        | 3      |
| 7. Braided channel  | 0      | 1    | 2        | 3      |
| 8. Recent alluvial deposits   | 0      | 1    | 2        | 3      |
| 9 <sup>a</sup> Natural levees   | 0      | 1    | 2        | 3      |
| 10. Headcuts  | 0      | 1    | 2        | 3      |
| 11. Grade controls  | 0      | 0.5  | 1        | 1.5    |
| 12. Natural valley or drainageway   | 0      | 0.5  | 1        | 1.5    |
| 13. Second or greater order channel on <u>existing</u> USGS or NRCS map or other documented evidence. | No = 0 |      | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 3.5)

|   |        |     |           |     |
|---|--------|-----|-----------|-----|
| 14. Groundwater flow/discharge  | 0      | 1   | 2         | 3   |
| 15. Water in channel and > 48 hrs since rain, <u>or</u> Water in channel -- dry or growing season | 0      | 1   | 2         | 3   |
| 16. Leaf litter   | 1.5    | 1   | 0.5       | 0   |
| 17. Sediment on plants or debris  | 0      | 0.5 | 1         | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)   | 0      | 0.5 | 1         | 1.5 |
| 19. Hydric soils (redoximorphic features) present?  | No = 0 |     | Yes = 1.5 |     |

C. Biology (Subtotal = 4.5)

|   |  |     |   |     |
|---|--|-----|---|-----|
| 20 <sup>b</sup> . Fibrous roots in channel            | 3  | 2   | 1 | 0   |
| 21 <sup>b</sup> . Rooted plants in channel            | 3  | 2   | 1 | 0   |
| 22. Crayfish  | 0  | 0.5 | 1 | 1.5 |
| 23. Bivalves  | 0  | 1   | 2 | 3   |
| 24. Fish  | 0  | 0.5 | 1 | 1.5 |
| 25. Amphibians  | 0  | 0.5 | 1 | 1.5 |
| 26. Macroinvertebrates (note diversity and abundance) | 0  | 0.5 | 1 | 1.5 |
| 27. Filamentous algae; periphyton                     | 0  | 1   | 2 | 3   |
| 28. Iron oxidizing bacteria/fungus.                   | 0  | 0.5 | 1 | 1.5 |
| 29 <sup>b</sup> . Wetland plants in streambed         | FAC = 0.5, FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0 |     |   |     |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

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North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

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|--|---------------------|-------------------------------------|
| Date: 7/2/07   | Project: Cooper S/D | Latitude: 35.7585721°N              |
| Evaluator: Jennifer Burdette   | Site: #2            | Longitude: 79.0723704°W             |
| <b>Total Points:</b><br>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30 | County: Chatham     | Other<br>e.g. Quad Name: Farrington |

A. Geomorphology (Subtotal = 9)

|   | Absent | Weak | Moderate | Strong |
|---|--------|------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank  | 0      | 1    | ②        | 3      |
| 2. Sinuosity  | 0      | ①    | 2        | 3      |
| 3. In-channel structure: riffle-pool sequence   | 0      | ①    | 2        | 3      |
| 4. Soil texture or stream substrate sorting   | 0      | 1    | ←②       | 3      |
| 5. Active/relic floodplain  | ①      | 1    | 2        | 3      |
| 6. Depositional bars or benches   | ①      | 1    | 2        | 3      |
| 7. Braided channel  | 0      | ①    | 2        | 3      |
| 8. Recent alluvial deposits   | ①      | 1    | 2        | 3      |
| 9 <sup>a</sup> Natural levees   | ①      | 1    | 2        | 3      |
| 10. Headcuts  | 0      | ①    | 2        | 3      |
| 11. Grade controls  | 0      | ①    | 1        | 1.5    |
| 12. Natural valley or drainageway   | 0      | ①    | 1        | 1.5    |
| 13. Second or greater order channel on <u>existing</u> USGS or NRCS map or other documented evidence. | No = ① |      | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 3)

|  |        |     |           |     |
|--|--------|-----|-----------|-----|
| 14. Groundwater flow/discharge   | ①      | 1   | 2         | 3   |
| 15. Water in channel and > 48 hrs since rain, <u>or</u><br>Water in channel -- dry or growing season | ①      | 1   | 2         | 3   |
| 16. Leaf litter  | 1.5    | ①   | 0.5       | 0   |
| 17. Sediment on plants or debris   | ①      | 0.5 | 1         | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)  | 0      | ①   | 1         | 1.5 |
| 19. Hydric soils (redoximorphic features) present?   | No = 0 |     | Yes = ①.5 |     |

C. Biology (Subtotal = 6)

|   |  |     |   |     |
|---|--|-----|---|-----|
| 20 <sup>b</sup> . Fibrous roots in channel            | ③  | 2   | 1 | 0   |
| 21 <sup>b</sup> . Rooted plants in channel            | ③  | 2   | 1 | 0   |
| 22. Crayfish  | ①  | 0.5 | 1 | 1.5 |
| 23. Bivalves  | ①  | 1   | 2 | 3   |
| 24. Fish  | ①  | 0.5 | 1 | 1.5 |
| 25. Amphibians  | ①  | 0.5 | 1 | 1.5 |
| 26. Macroinvertebrates (note diversity and abundance) | ①  | 0.5 | 1 | 1.5 |
| 27. Filamentous algae; periphyton                     | ①  | 1   | 2 | 3   |
| 28. Iron oxidizing bacteria/fungus.                   | ①  | 0.5 | 1 | 1.5 |
| 29 <sup>b</sup> . Wetland plants in streambed         | FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = ① |     |   |     |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

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North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

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|--|---------------------|-------------------------------------|
| Date: 7/2/07   | Project: Cooper S/D | Latitude: 35.7547824°N              |
| Evaluator: Jennifer Burdette   | Site: #3            | Longitude: 79.0743072°W             |
| <b>Total Points:</b><br>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30 | 25.5                | County: Chatham                     |
|  |                     | Other<br>e.g. Quad Name: Farrington |

A. Geomorphology (Subtotal = 13.5)

|  | Absent | Weak | Moderate | Strong |
|--|--------|------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank   | 0      | 1    | 2        | 3      |
| 2. Sinuosity   | 0      | 1    | 2        | 3      |
| 3. In-channel structure: riffle-pool sequence  | 0      | 1    | 2        | 3      |
| 4. Soil texture or stream substrate sorting  | 0      | 1    | 2        | 3      |
| 5. Active/relic floodplain   | 0      | 1    | 2        | 3      |
| 6. Depositional bars or benches  | 0      | 1    | 2        | 3      |
| 7. Braided channel   | 0      | 1    | 2        | 3      |
| 8. Recent alluvial deposits  | 0      | 1    | 2        | 3      |
| 9 <sup>a</sup> Natural levees  | 0      | 1    | 2        | 3      |
| 10. Headcuts   | 0      | 1    | 2        | 3      |
| 11. Grade controls   | 0      | 0.5  | 1        | 1.5    |
| 12. Natural valley or drainageway  | 0      | 0.5  | 1        | 1.5    |
| 13. Second or greater order channel on existing USGS or NRCS map or other documented evidence. | No = 0 |      | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 6.5)

|  |        |     |           |     |
|--|--------|-----|-----------|-----|
| 14. Groundwater flow/discharge   | 0      | 1   | 2         | 3   |
| 15. Water in channel and > 48 hrs since rain, <u>or</u><br>Water in channel -- dry or growing season | 0      | 1   | 2         | 3   |
| 16. Leaf litter  | 1.5    | 1   | 0.5       | 0   |
| 17. Sediment on plants or debris   | 0      | 0.5 | 1         | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)  | 0      | 0.5 | 1         | 1.5 |
| 19. Hydric soils (redoximorphic features) present?   | No = 0 |     | Yes = 1.5 |     |

C. Biology (Subtotal = 5.5)

|   |  |     |   |     |
|---|--|-----|---|-----|
| 20 <sup>b</sup> . Fibrous roots in channel            | 3  | 2   | 1 | 0   |
| 21 <sup>b</sup> . Rooted plants in channel            | 3  | 2   | 1 | 0   |
| 22. Crayfish  | 0  | 0.5 | 1 | 1.5 |
| 23. Bivalves  | 0  | 1   | 2 | 3   |
| 24. Fish  | 0  | 0.5 | 1 | 1.5 |
| 25. Amphibians  | 0  | 0.5 | 1 | 1.5 |
| 26. Macroinvertebrates (note diversity and abundance) | 0  | 0.5 | 1 | 1.5 |
| 27. Filamentous algae; periphyton                     | 0  | 1   | 2 | 3   |
| 28. Iron oxidizing bacteria/fungus.                   | 0  | 0.5 | 1 | 1.5 |
| 29 <sup>b</sup> . Wetland plants in streambed         | FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0 |     |   |     |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

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North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

Date: 7/2/07 Project: Cooper S/D Latitude: 35.7541967°N  
 Evaluator: Jennifer Burdette Site: #4 Longitude: 79.0741177°W  
 Total Points: 25.5 County: Chatham Other: e.g. Quad Name: Farrington  
 Stream is at least intermittent if ≥ 19 or perennial if ≥ 30

A. Geomorphology (Subtotal = 12)

|  | Absent | Weak | Moderate | Strong |
|--|--------|------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank   | 0      | 1    | 2        | 3      |
| 2. Sinuosity   | 0      | 1    | 2        | 3      |
| 3. In-channel structure: riffle-pool sequence  | 0      | 1    | 2        | 3      |
| 4. Soil texture or stream substrate sorting  | 0      | 1    | 2        | 3      |
| 5. Active/relic floodplain   | 0      | 1    | 2        | 3      |
| 6. Depositional bars or benches  | 0      | 1    | 2        | 3      |
| 7. Braided channel   | 0      | 1    | 2        | 3      |
| 8. Recent alluvial deposits  | 0      | 1    | 2        | 3      |
| 9 <sup>a</sup> Natural levees  | 0      | 1    | 2        | 3      |
| 10. Headcuts   | 0      | 1    | 2        | 3      |
| 11. Grade controls   | 0      | 0.5  | 1        | 1.5    |
| 12. Natural valley or drainageway  | 0      | 0.5  | 1        | 1.5    |
| 13. Second or greater order channel on existing USGS or NRCS map or other documented evidence. | No = 0 |      | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 7)

|  |        |     |           |     |
|--|--------|-----|-----------|-----|
| 14. Groundwater flow/discharge   | 0      | 1   | 2         | 3   |
| 15. Water in channel and > 48 hrs since rain, or Water in channel -- dry or growing season | 0      | 1   | 2         | 3   |
| 16. Leaf litter  | 1.5    | 1   | 0.5       | 0   |
| 17. Sediment on plants or debris   | 0      | 0.5 | 1         | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)  | 0      | 0.5 | 1         | 1.5 |
| 19. Hydric soils (redoximorphic features) present?   | No = 0 |     | Yes = 1.5 |     |

C. Biology (Subtotal = 6.5)

|   |  |     |   |     |
|---|--|-----|---|-----|
| 20 <sup>b</sup> . Fibrous roots in channel            | 3  | 2   | 1 | 0   |
| 21 <sup>b</sup> . Rooted plants in channel            | 3  | 2   | 1 | 0   |
| 22. Crayfish  | 0  | 0.5 | 1 | 1.5 |
| 23. Bivalves  | 0  | 1   | 2 | 3   |
| 24. Fish  | 0  | 0.5 | 1 | 1.5 |
| 25. Amphibians  | 0  | 0.5 | 1 | 1.5 |
| 26. Macroinvertebrates (note diversity and abundance) | 0  | 0.5 | 1 | 1.5 |
| 27. Filamentous algae; periphyton                     | 0  | 1   | 2 | 3   |
| 28. Iron oxidizing bacteria/fungus.                   | 0  | 0.5 | 1 | 1.5 |
| 29 <sup>b</sup> . Wetland plants in streambed         | FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0 |     |   |     |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

26. Crayfish, blk beetles

North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

|  |                     |                                     |
|--|---------------------|-------------------------------------|
| Date: 10/11/07   | Project: Cooper S/D | Latitude: 35.7510099°N              |
| Evaluator: Jennifer Burdette   | Site: # 5           | Longitude: 79.0729812°W             |
| <b>Total Points:</b><br>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30 | County: Chatham     | Other<br>e.g. Quad Name: Farrington |

A. Geomorphology (Subtotal = 9)

|   | Absent | Weak | Moderate | Strong |
|---|--------|------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank  | 0      | 1    | 2        | 3      |
| 2. Sinuosity  | 0      | 1    | 2        | 3      |
| 3. In-channel structure: riffle-pool sequence   | 0      | 1    | 2        | 3      |
| 4. Soil texture or stream substrate sorting   | 0      | 1    | 2        | 3      |
| 5. Active/relic floodplain  | 0      | 1    | 2        | 3      |
| 6. Depositional bars or benches   | 0      | 1    | 2        | 3      |
| 7. Braided channel  | 0      | 1    | 2        | 3      |
| 8. Recent alluvial deposits   | 0      | 1    | 2        | 3      |
| 9 <sup>a</sup> Natural levees   | 0      | 1    | 2        | 3      |
| 10. Headcuts  | 0      | 1    | 2        | 3      |
| 11. Grade controls  | 0      | 0.5  | 1        | 1.5    |
| 12. Natural valley or drainageway   | 0      | 0.5  | 1        | 1.5    |
| 13. Second or greater order channel on <u>existing</u> USGS or NRCS map or other documented evidence. | No = 0 |      | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 2.5)

|   |        |     |           |     |
|---|--------|-----|-----------|-----|
| 14. Groundwater flow/discharge  | 0      | 1   | 2         | 3   |
| 15. Water in channel and > 48 hrs since rain, <u>or</u> Water in channel -- dry or growing season | 0      | 1   | 2         | 3   |
| 16. Leaf litter   | 1.5    | 1   | 0.5       | 0   |
| 17. Sediment on plants or debris  | 0      | 0.5 | 1         | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)   | 0      | 0.5 | 1         | 1.5 |
| 19. Hydric soils (redoximorphic features) present?  | No = 0 |     | Yes = 1.5 |     |

C. Biology (Subtotal = 2.5)

|   |  |     |   |     |
|---|--|-----|---|-----|
| 20 <sup>b</sup> . Fibrous roots in channel            | 3  | 2   | 1 | 0   |
| 21 <sup>b</sup> . Rooted plants in channel            | 3  | 2   | 1 | 0   |
| 22. Crayfish  | 0  | 0.5 | 1 | 1.5 |
| 23. Bivalves  | 0  | 1   | 2 | 3   |
| 24. Fish  | 0  | 0.5 | 1 | 1.5 |
| 25. Amphibians  | 0  | 0.5 | 1 | 1.5 |
| 26. Macroinvertebrates (note diversity and abundance) | 0  | 0.5 | 1 | 1.5 |
| 27. Filamentous algae; periphyton                     | 0  | 1   | 2 | 3   |
| 28. Iron oxidizing bacteria/fungus.                   | 0  | 0.5 | 1 | 1.5 |
| 29 <sup>b</sup> . Wetland plants in streambed         | FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0 |     |   |     |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

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North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

|  |                            |   |
|--|----------------------------|---|
| Date: <u>10/11/07</u>  | Project: <u>Cooper S/D</u> | Latitude: <u>35.7525086°N</u>                                     |
| Evaluator: <u>Jennifer Burdette</u>  | Site: <u>#6</u>            | Longitude: <u>79.0748966°W</u>                                    |
| <b>Total Points:</b><br>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30 <u>11.5</u> |                            | County: <u>Chatham</u><br>Other e.g. Quad Name: <u>Farrington</u> |

**A. Geomorphology (Subtotal = 6)**

|   | Absent        | Weak       | Moderate | Strong |
|---|---------------|------------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank  | 0             | <u>1</u>   | 2        | 3      |
| 2. Sinuosity  | 0             | 1          | <u>2</u> | 3      |
| 3. In-channel structure: riffle-pool sequence   | <u>0</u>      | 1          | 2        | 3      |
| 4. Soil texture or stream substrate sorting   | 0             | <u>1</u>   | 2        | 3      |
| 5. Active/relic floodplain  | <u>0</u>      | 1          | 2        | 3      |
| 6. Depositional bars or benches   | <u>0</u>      | 1          | 2        | 3      |
| 7. Braided channel  | <u>0</u>      | 1          | 2        | 3      |
| 8. Recent alluvial deposits   | <u>0</u>      | 1          | 2        | 3      |
| 9 <sup>a</sup> . Natural levees   | <u>0</u>      | 1          | 2        | 3      |
| 10. Headcuts  | <u>0</u>      | <u>1</u>   | 2        | 3      |
| 11. Grade controls  | 0             | <u>0.5</u> | 1        | 1.5    |
| 12. Natural valley or drainageway   | 0             | <u>0.5</u> | 1        | 1.5    |
| 13. Second or greater order channel on <u>existing</u> USGS or NRCS map or other documented evidence. | No = <u>0</u> |            | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

**B. Hydrology (Subtotal = 3)**

|   |          |     |                  |     |
|---|----------|-----|------------------|-----|
| 14. Groundwater flow/discharge  | <u>0</u> | 1   | 2                | 3   |
| 15. Water in channel and > 48 hrs since rain, <u>or</u> Water in channel -- dry or growing season | <u>0</u> | 1   | 2                | 3   |
| 16. Leaf litter   | 1.5      | 1   | <u>0.5</u>       | 0   |
| 17. Sediment on plants or debris  | <u>0</u> | 0.5 | 1                | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)   | 0        | 0.5 | <u>1</u>         | 1.5 |
| 19. Hydric soils (redoximorphic features) present?  | No = 0   |     | Yes = <u>1.5</u> |     |

**C. Biology (Subtotal = 2.5)**

|   |  |          |   |          |
|---|--|----------|---|----------|
| 20 <sup>b</sup> . Fibrous roots in channel            | 3  | 2        | 1 | <u>0</u> |
| 21 <sup>b</sup> . Rooted plants in channel            | 3  | <u>2</u> | 1 | 0        |
| 22. Crayfish  | <u>0</u>   | 0.5      | 1 | 1.5      |
| 23. Bivalves  | <u>0</u>   | 1        | 2 | 3        |
| 24. Fish  | <u>0</u>   | 0.5      | 1 | 1.5      |
| 25. Amphibians  | <u>0</u>   | 0.5      | 1 | 1.5      |
| 26. Macroinvertebrates (note diversity and abundance) | <u>0</u>   | 0.5      | 1 | 1.5      |
| 27. Filamentous algae; periphyton                     | <u>0</u>   | 1        | 2 | 3        |
| 28. Iron oxidizing bacteria/fungus.                   | <u>0</u>   | 0.5      | 1 | 1.5      |
| 29 <sup>b</sup> . Wetland plants in streambed         | FAC = <u>0.5</u> , FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0 |          |   |          |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

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North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

|  |                     |                                     |
|--|---------------------|-------------------------------------|
| Date: 10/11/07   | Project: Cooper S/D | Latitude: 35.7522847°N              |
| Evaluator: Jennifer Burdette   | Site: #7            | Longitude: 79.0754228°W             |
| <b>Total Points:</b><br>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30 | 16.5                | County: Chatham                     |
|  |                     | Other<br>e.g. Quad Name: Farrington |

A. Geomorphology (Subtotal = 10.5)

|  | Absent | Weak | Moderate | Strong |
|--|--------|------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank   | 0      | 1    | 2        | 3      |
| 2. Sinuosity   | 0      | 1    | 2        | 3      |
| 3. In-channel structure: riffle-pool sequence  | 0      | 1    | 2        | 3      |
| 4. Soil texture or stream substrate sorting  | 0      | 1    | 2        | 3      |
| 5. Active/relic floodplain   | 0      | 1    | 2        | 3      |
| 6. Depositional bars or benches  | 0      | 1    | 2        | 3      |
| 7. Braided channel   | 0      | 1    | 2        | 3      |
| 8. Recent alluvial deposits  | 0      | 1    | 2        | 3      |
| 9 <sup>a</sup> Natural levees  | 0      | 1    | 2        | 3      |
| 10. Headcuts   | 0      | 1    | 2        | 3      |
| 11. Grade controls   | 0      | 0.5  | 1        | 1.5    |
| 12. Natural valley or drainageway  | 0      | 0.5  | 1        | 1.5    |
| 13. Second or greater order channel on existing USGS or NRCS map or other documented evidence. | No = 0 |      | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 3)

|  |        |     |           |     |
|--|--------|-----|-----------|-----|
| 14. Groundwater flow/discharge   | 0      | 1   | 2         | 3   |
| 15. Water in channel and > 48 hrs since rain, or Water in channel -- dry or growing season | 0      | 1   | 2         | 3   |
| 16. Leaf litter  | 1.5    | 1   | 0.5       | 0   |
| 17. Sediment on plants or debris   | 0      | 0.5 | 1         | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)  | 0      | 0.5 | 1         | 1.5 |
| 19. Hydric soils (redoximorphic features) present?   | No = 0 |     | Yes = 1.5 |     |

C. Biology (Subtotal = 3)

|   |  |     |   |     |
|---|--|-----|---|-----|
| 20 <sup>b</sup> . Fibrous roots in channel            | 3  | 2   | 1 | 0   |
| 21 <sup>b</sup> . Rooted plants in channel            | 3  | 2   | 1 | 0   |
| 22. Crayfish  | 0  | 0.5 | 1 | 1.5 |
| 23. Bivalves  | 0  | 1   | 2 | 3   |
| 24. Fish  | 0  | 0.5 | 1 | 1.5 |
| 25. Amphibians  | 0  | 0.5 | 1 | 1.5 |
| 26. Macroinvertebrates (note diversity and abundance) | 0  | 0.5 | 1 | 1.5 |
| 27. Filamentous algae; periphyton                     | 0  | 1   | 2 | 3   |
| 28. Iron oxidizing bacteria/fungus.                   | 0  | 0.5 | 1 | 1.5 |
| 29 <sup>b</sup> . Wetland plants in streambed         | FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0 |     |   |     |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

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North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

|   |                     |   |
|---|---------------------|---|
| Date: 10/11/07  | Project: Cooper S/D | Latitude: 35.7524397°N                              |
| Evaluator: Jennifer Burdette  | Site: # 8           | Longitude: 79.0757386°W                             |
| <b>Total Points:</b><br>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30     12.5 |                     | County: Chatham<br>Other e.g. Quad Name: Farrington |

A. Geomorphology (Subtotal = 7)

|   | Absent | Weak | Moderate | Strong |
|---|--------|------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank  | 0      | ①    | 2        | 3      |
| 2. Sinuosity  | 0      | ①    | 2        | 3      |
| 3. In-channel structure: riffle-pool sequence   | 0      | ①    | 2        | 3      |
| 4. Soil texture or stream substrate sorting   | 0      | ← ①  | 2        | 3      |
| 5. Active/relic floodplain  | ①      | 1    | 2        | 3      |
| 6. Depositional bars or benches   | ①      | 1    | 2        | 3      |
| 7. Braided channel  | ①      | 1    | 2        | 3      |
| 8. Recent alluvial deposits   | ①      | 1    | 2        | 3      |
| 9 <sup>a</sup> . Natural levees   | ①      | 1    | 2        | 3      |
| 10. Headcuts  | 0      | ①    | 2        | 3      |
| 11. Grade controls  | 0      | 0.5  | ①        | 1.5    |
| 12. Natural valley or drainageway   | 0      | 0.5  | ①        | 1.5    |
| 13. Second or greater order channel on <u>existing</u> USGS or NRCS map or other documented evidence. | No = ① |      | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 3)

|   |        |     |         |     |
|---|--------|-----|---------|-----|
| 14. Groundwater flow/discharge  | ①      | 1   | 2       | 3   |
| 15. Water in channel and > 48 hrs since rain, <u>or</u> Water in channel -- dry or growing season | ①      | 1   | 2       | 3   |
| 16. Leaf litter   | 1.5    | ①   | 0.5     | 0   |
| 17. Sediment on plants or debris  | ①      | 0.5 | 1       | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)   | 0      | ①   | 1       | 1.5 |
| 19. Hydric soils (redoximorphic features) present?  | No = 0 |     | Yes = ① |     |

C. Biology (Subtotal = 2.5)

|   |  |     |   |     |
|---|--|-----|---|-----|
| 20 <sup>b</sup> . Fibrous roots in channel            | 3  | 2   | 1 | ①   |
| 21 <sup>b</sup> . Rooted plants in channel            | 3  | ②   | 1 | 0   |
| 22. Crayfish  | ①  | 0.5 | 1 | 1.5 |
| 23. Bivalves  | ①  | 1   | 2 | 3   |
| 24. Fish  | ①  | 0.5 | 1 | 1.5 |
| 25. Amphibians  | ①  | 0.5 | 1 | 1.5 |
| 26. Macroinvertebrates (note diversity and abundance) | ①  | 0.5 | 1 | 1.5 |
| 27. Filamentous algae; periphyton                     | ①  | 1   | 2 | 3   |
| 28. Iron oxidizing bacteria/fungus.                   | ①  | 0.5 | 1 | 1.5 |
| 29 <sup>b</sup> . Wetland plants in streambed         | FAC = ①; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0 |     |   |     |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

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North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

|  |                     |                                     |
|--|---------------------|-------------------------------------|
| Date: 10/11/07   | Project: Cooper S/D | Latitude: 35.7533 010°N             |
| Evaluator: Jennifer Burdette   | Site: # 9           | Longitude: 79.0763911°W             |
| <b>Total Points:</b><br>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30 | County: Chatham     | Other<br>e.g. Quad Name: Farrington |

A. Geomorphology (Subtotal = 8 )

|  | Absent | Weak | Moderate | Strong |
|--|--------|------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank   | 0      | 1    | 2        | 3      |
| 2. Sinuosity   | 0      | 1    | 2        | 3      |
| 3. In-channel structure: riffle-pool sequence  | 0      | 1    | 2        | 3      |
| 4. Soil texture or stream substrate sorting  | 0      | 1    | 2        | 3      |
| 5. Active/relic floodplain   | 0      | 1    | 2        | 3      |
| 6. Depositional bars or benches  | 0      | 1    | 2        | 3      |
| 7. Braided channel   | 0      | 1    | 2        | 3      |
| 8. Recent alluvial deposits  | 0      | 1    | 2        | 3      |
| 9 <sup>a</sup> Natural levees  | 0      | 1    | 2        | 3      |
| 10. Headcuts   | 0      | 1    | 2        | 3      |
| 11. Grade controls   | 0      | 0.5  | 1        | 1.5    |
| 12. Natural valley or drainageway  | 0      | 0.5  | 1        | 1.5    |
| 13. Second or greater order channel on existing USGS or NRCS map or other documented evidence. | No = 0 |      | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 4.5 )

|  |        |     |           |     |
|--|--------|-----|-----------|-----|
| 14. Groundwater flow/discharge   | 0      | 1   | 2         | 3   |
| 15. Water in channel and > 48 hrs since rain, <b>or</b><br>Water in channel -- dry or growing season | 0      | 1   | 2         | 3   |
| 16. Leaf litter  | 1.5    | 1   | 0.5       | 0   |
| 17. Sediment on plants or debris   | 0      | 0.5 | 1         | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)  | 0      | 0.5 | 1         | 1.5 |
| 19. Hydric soils (redoximorphic features) present?   | No = 0 |     | Yes = 1.5 |     |

C. Biology (Subtotal = 2.5 )

|   |  |     |   |     |
|---|--|-----|---|-----|
| 20 <sup>b</sup> . Fibrous roots in channel            | 3  | 2   | 1 | 0   |
| 21 <sup>b</sup> . Rooted plants in channel            | 3  | 2   | 1 | 0   |
| 22. Crayfish  | 0  | 0.5 | 1 | 1.5 |
| 23. Bivalves  | 0  | 1   | 2 | 3   |
| 24. Fish  | 0  | 0.5 | 1 | 1.5 |
| 25. Amphibians  | 0  | 0.5 | 1 | 1.5 |
| 26. Macroinvertebrates (note diversity and abundance) | 0  | 0.5 | 1 | 1.5 |
| 27. Filamentous algae; periphyton                     | 0  | 1   | 2 | 3   |
| 28. Iron oxidizing bacteria/fungus.                   | 0  | 0.5 | 1 | 1.5 |
| 29 <sup>b</sup> . Wetland plants in streambed         | FAC = 0.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0 |     |   |     |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

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North Carolina Division of Water Quality – Stream Identification Form; Version 3.1

|  |                            |  |
|--|----------------------------|--|
| Date: <u>10/11/07</u>  | Project: <u>Cooper S/D</u> | Latitude: <u>35.7545413°N</u>              |
| Evaluator: <u>Jennifer Burdette</u>  | Site: <u>#10</u>           | Longitude: <u>79.0765805°W</u>             |
| <b>Total Points:</b><br>Stream is at least intermittent if ≥ 19 or perennial if ≥ 30 <u>14.5</u> | County: <u>Chatham</u>     | Other<br>e.g. Quad Name: <u>Farrington</u> |

**A. Geomorphology (Subtotal = 6.5)**

|  | Absent | Weak | Moderate | Strong |
|--|--------|------|----------|--------|
| 1 <sup>a</sup> . Continuous bed and bank   | 0      | ①    | 2        | 3      |
| 2. Sinuosity   | 0      | ①    | 2        | 3      |
| 3. In-channel structure: riffle-pool sequence  | 0      | ①    | 2        | 3      |
| 4. Soil texture or stream substrate sorting  | 0      | ← ①  | 2        | 3      |
| 5. Active/relic floodplain   | ①      | 1    | 2        | 3      |
| 6. Depositional bars or benches  | ①      | 1    | 2        | 3      |
| 7. Braided channel   | ①      | 1    | 2        | 3      |
| 8. Recent alluvial deposits  | ①      | 1    | 2        | 3      |
| 9 <sup>a</sup> Natural levees  | ①      | 1    | 2        | 3      |
| 10. Headcuts   | 0      | ①    | 2        | 3      |
| 11. Grade controls   | 0      | 0.5  | ①        | 1.5    |
| 12. Natural valley or drainageway  | 0      | ①.5  | 1        | 1.5    |
| 13. Second or greater order channel on existing USGS or NRCS map or other documented evidence. | No = ① |      | Yes = 3  |        |

<sup>a</sup> Man-made ditches are not rated; see discussions in manual

**B. Hydrology (Subtotal = 3.5)**

|  |        |       |           |     |
|--|--------|-------|-----------|-----|
| 14. Groundwater flow/discharge   | ①      | 1     | 2         | 3   |
| 15. Water in channel and > 48 hrs since rain, <u>or</u><br>Water in channel -- dry or growing season | ①      | 1     | 2         | 3   |
| 16. Leaf litter  | 1.5    | 1     | ①.5       | 0   |
| 17. Sediment on plants or debris   | 0      | ← ①.5 | 1         | 1.5 |
| 18. Organic debris lines or piles (Wrack lines)  | 0      | 0.5   | ①         | 1.5 |
| 19. Hydric soils (redoximorphic features) present?   | No = 0 |       | Yes = ①.5 |     |

**C. Biology (Subtotal = 4.5)**

|   |  |     |   |     |
|---|--|-----|---|-----|
| 20 <sup>b</sup> . Fibrous roots in channel      | 3  | ②   | 1 | 0   |
| 21 <sup>b</sup> . Rooted plants in channel      | 3  | ②   | 1 | 0   |
| 22. Crayfish                                    | ①  | 0.5 | 1 | 1.5 |
| 23. Bivalves                                    | ①  | 1   | 2 | 3   |
| 24. Fish  | ①  | 0.5 | 1 | 1.5 |
| 25. Amphibians                                  | ①  | 0.5 | 1 | 1.5 |
| 26. Macrobenthos (note diversity and abundance) | ①  | 0.5 | 1 | 1.5 |
| 27. Filamentous algae; periphyton               | ①  | 1   | 2 | 3   |
| 28. Iron oxidizing bacteria/fungus.             | ①  | 0.5 | 1 | 1.5 |
| 29 <sup>b</sup> . Wetland plants in streambed   | FAC = ①.5; FACW = 0.75; OBL = 1.5 SAV = 2.0; Other = 0 |     |   |     |

<sup>b</sup> Items 20 and 21 focus on the presence of upland plants, Item 29 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

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