

SNOA004 facing south across

| Survey Description | n | | | | | | | | |
|----------------------------------------------|-----------------------|---------------------|-----------------|-----------------------------|-----------------|-------------------|------------|-----------|----------------------|
| Project Name: | | Waterbody Na | me: | | v | aterbody ID: | | | Date: |
| Atlantic Coast Pipel | ine | UNT to Wate | son Creek | | S | inoc103 | | | 11/9/2015 |
| State: | County: | | Company: | | Crew I | Member Initials | : | Photos: | |
| Virginia | Nottoway | | NRG | | CR, A | AS | 1-3 | | |
| Tract Number(s): | | | Nearest Mile | epost: | | Associated W | etland | ID(s): | |
| 12-079 | | | 241.5 | | | Wnoc100 | | | |
| Survey Type: (check one) | | e ⊠Re-I | Route | □Access Road | | □Other: | | | |
| Physical Attributes | 5 | | | | | | | | |
| Stream Classification: (check one) | ⊠Ephemera | al 🗆 Inter | rmittent | Perennial | | | | | |
| Waterbody Type: | | | | | | | | | |
| (check one) | River 🛛 Str | ream 🗆 Dito | ch 🗆 C | anal 🗌 Other | : | | | | |
| онwм | OHWM Indica | tor: | | | | | | . | |
| Width: _ <u>5</u> ft. | (cneck an that appi | ¥) | on bank | | g | | | ∃Scourinę | staining |
| Height: | □Bent, r | natted, or missir | ng ⊡Wrack li | ine ⊠Litter ar | nd | □Abrupt plan | t | □Soil cl | naracteristic change |
| tt. N/A□ | vegetatio | n | | debris | | community ch | ange | | |
| Width of Waterbody - T | op of Width | of Waterbody - | Toe of Slope | Width of Waterb | ody - W | ater Edge to | Depth | of Water | : |
| Bank to Top of Bank: | to Toe | of Slope: | | water Edge: | | | (Approx.) |) | |
| <u>_8_</u> ft. | - | <u>2</u> ft. | | N/A 🗆 – | <u>5</u> ft. | | N/A□ | | <u>_0.3_</u> ft. |
| Sinuosity: | Water | velocity: | | Bank height | | | Bank s | slope | |
| (check one) | (Approx.) | | | Right: | | | | Right | : |
| | | <u>_0.2</u> _fps | 6 | Left: | <u>1.5_</u> ft. | | | Left | <u>60</u> degrees |
| Meanderir | ng N/A□ | | | | <u>1.5_</u> ft. | | | | 60 degrees |
| Qualitative Attribu | tes | | | | | | | | |
| Water Appearance: (check one) | No water ⊠0 | Clear 🗆 Turk | oid □Sh or | neen 🗆 Sui n surface sci | rface um | □Algal mats | □Othe | r: | |
| Substrate: | Bedrock 🗆 Bo | oulder 🗆 Cobb | ole 🗆 Grav | el 🛛 Sand 🛛 | ⊠ Silt/ c | clay 🛛 Organic | : 🗆 (| Other: | |
| (check all that apply) % of Substrate: | % | % | _% | <u>% 40 %</u> | <u>30_</u> % | <u> 30 </u> % | _ | _% | |
| Width of Rinarian Zone | Vegetativ | a lavors. | | | | | | | |
| Whath of Riparian Zone | (check all that | apply) | ⊠ Trees | : D | 🛛 Saplir | ngs/Shrubs: | | I Herbs | |
| <u>ft</u> . N/A⊠ | Avg. DBH (approx.) | of Dominants: | <u>_12_</u> in. | - | <u>2</u> in. | | | | |
| Dominant Bank Vegeta | tion (list): | | | | | | | | |
| Sycamore, sweet-gi | um, southern r | ed oak, north | ern Spiceb | ush, Japanese | hone | ysuckle | | | |
| Aquatic Habitats (ex: su | Ibmerged or emerge | d aquatic vegetatio | n, overhanging | banks/roots, leaf pac | ks, large | submerged wood | , riffles, | deep pool | s): |
| None | | | | | | | | | |
| Aquatic Organisms Ob | served (list): | | | | | | | | |
| None | | | | | | | | | |
| T&E Species Observed | (list): | | | | | | | | |
| None | | | | | | | | | |
| Disturbances (ex: livesto | ock access, manure i | n waterbody, wast | e discharge pip | es): | | | | | |
| None | | | | | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Ar | tificial, man-m | nade 🗆 Manip | ulated | | | | |
| Stream Quality ^a : (check one) | □ High | ⊠ Mo | oderate | □ Low | | | | | |

Snoc103

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) SNDC103 PFO SNOCIOU

Form Rev. 07/09/2014



Waterbody SNOC103 facing northwest upstream



Waterbody SNOC103 facing southeast downstream



Waterbody SNOC103 facing southwest across

| Survey Description | n | | | | | | | | |
|------------------------------------------------|-------------------------------------|---------------------|------------------|---------------------------|---------------|------------------|--------------------|------------|----------------------|
| Project Name: | | Waterbody Na | me: | e Wi | | | | | Date: |
| Atlantic Coast Pipel | ine | Watson Cree | ek | | S | inoc101 | | | 11/9/2015 |
| State: | County: | | Company: | | Crew I | Member Initials: | : 1 | Photos: | |
| Virginia | Nottoway | | NRG | | CR, S | SA | | 1-3 | |
| Tract Number(s): | | | Nearest Mile | epost: | • | Associated We | etland | ID(s): | |
| 12-078 | | | | | | Wnoc100 | | | |
| Survey Type: (check one) | | e ⊠Re-F | Route | □Access Road | 1 | □Other: | | | |
| Physical Attributes | s | | | | | | | | |
| Stream Classification: (check one) | □ Ephemera | al 🗆 Inter | mittent | Perennial | | | | | |
| Waterbody Type: | | | | | | | | | |
| (check one) | River Str | ream 🗆 Dito | ch 🗆 Ca | anal 🗌 Other | : | | | | |
| OHWM Width: | OHWM Indica (check all that appl | tor: | 🛛 Clear lir | ne OShelvin | a | Wrested | | Scouring | □Water |
| <u>10 ft.</u> | ,,,, | · / | on bank | | 9 | vegetation | | ocouni | staining |
| Height: | ⊠Bent, r | matted, or missin | ig ⊡Wrack li | ne ⊠Litter ar | nd | □Abrupt plant | t | □Soil cł | naracteristic change |
| <u>0.8</u> π. N/A□ | vegetatio | n | | debris | | community cha | ange | | |
| Width of Waterbody - T Bank to Top of Bank: | op of Width | of Waterbody - | Toe of Slope | Width of Waterb | ody - W | ater Edge to | Depth (Approx.) | of Water | : |
| | 10 100 | of Slope. | | Water Luge. | | , | | | 0.4 ft |
| <u>_15_</u> ft. | - | <u>3</u> ft. | | N/A□ | <u>8_</u> ft. | 1 | N/A□ | - | <u>_0.4_</u> 1t. |
| Sinuosity: | Water | velocity: | | Bank height | | 1 | Bank s | lope | |
| Straight | (Approx.) | 4 (| | Right: | ⊿ ft | | | Right | 50 degrees |
| | | <u>_1_</u> ips | | Left: | <u>-</u> | | | Left | |
| | ng N/A□ | | | | <u>4_</u> ft. | | | | <u>70</u> degrees |
| Qualitative Attribu | tes | | | | | | | | |
| (check one) | No water ⊠0 | Clear □Turb | oid □Sh on | neen ⊡Su n surface sci | rface um | □Algal [mats | □Other | : | |
| Substrate: | Bedrock 🛛 Bo | oulder 🗆 Cobb | ole 🛛 Grav | el 🛛 Sand 🛛 | ⊠ Silt/ c | clay 🗆 Organic | | Other: | |
| (check all that apply) % of Substrate: | % | % | <u>% 25</u> % | <u> 50 %</u> | <u>25_</u> % | % | | % | |
| Width of Riparian Zone | - Vegetative | e Lavers: | | | | | | | |
| | (check all that | apply) | ⊠ Trees | : 5 | ⊠ Saplir | ngs/Shrubs: | \boxtimes | Herbs | |
| <u>100 ft</u> - N/A□ | Avg. DBH (approx.) | of Dominants: | <u>_12_</u> in. | - | <u>2</u> in. | | | | |
| Dominant Bank Vegeta | tion (list): | | | | | | | | |
| Sycamore, northern | n Spicebush, A | merican horn | beam, Elur | nus hystrix, sw | veet-gu | um | | | |
| Aquatic Habitats (ex: su | ubmerged or emerge | d aquatic vegetatio | n, overhanging | banks/roots, leaf pac | ks, large | submerged wood, | riffles, o | deep pools | s): |
| Leaf Packs | | | | | | | | | |
| Aquatic Organisms Ob | served (list): | | | | | | | | |
| None | | | | | | | | | |
| T&E Species Observed | (list): | | | | | | | | |
| None | | | | | | | | | |
| Disturbances (ex: livesto | ock access, manure i | n waterbody, waste | e discharge pipe | es): | | | | | |
| None | | | | | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Ar | tificial, man-m | ade 🗆 Manip | ulated | | | | |
| Stream Quality ^a : (check one) | □ High | ⊠ Mo | oderate | □ Low | | | | | |

Snoc101

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:





Waterbody SNOC101 facing southwest upstream



Waterbody SNOC101 facing northeast downstream



Waterbody SNOC101 facing northwest across

| Survey Descriptio | n | | | | | | | |
|------------------------------------------------------------|--------------------------|---------------------|------------------------|----------------------------|-------------|------------------------|----------------|-----------------------------|
| Project Name: | | Waterbody Na | me: | | W | aterbody ID: | | Date: |
| Atlantic Coast Pipel | line | UNT to Cell | ar Creek | | S | NOC004 | | 12/5/2014 |
| State: | County: | | Company: | | Crew I | Member Initials: | Photos: | |
| Virginia | Nottoway | | NRG | | CR, A | AS | SNOC | 004_001-003 |
| Tract Number(s): | | | Nearest Mile | epost: | | Associated Wetl | and ID(s): | |
| 12-091 | | | 239.7 | | | None | | |
| Survey Type: (check one) | | e ⊠Re-I | Route | □ Access Road | | □Other: | | |
| Physical Attribute | S | | | | | | | |
| Stream Classification: (check one) | Ephemera | al 🗆 Inte | rmittent | ⊠Perennial | | | | |
| Waterbody Type: | | | | | | | | |
| (check one) | River Str | eam 🗆 Dite | ch 🗆 C | anal 🗌 Other: | | | | |
| онwм | OHWM Indica | tor: | | | | | | |
| Width:4ft. | (cneck all that apply | /) | ☐ Clear lir on bank | ne ∐Shelvin | g | ☐Wrested vegetation | Scourin | g ∐Water staining |
| Height: | ⊠Bent, n | natted, or missir | ng ⊠Wrack li | ne 🗆 Litter ar | nd | □Abrupt plant | □Soil c | haracteristic change |
| 6.8_ft. N/A□ | vegetatio | n | - | debris | | community change | ge | - |
| Width of Waterbody - 1 Bank to Ton of Bank | op of Width o | of Waterbody - | Toe of Slope | Width of Waterbo | ody - W | ater Edge to De | pth of Wate | r: |
| Bank to Top of Bank: | to loe | of Slope: | | water Edge: | | (40) | 010X.) | |
| <u> </u> | 0.5 | ft. | | <u></u> | 3.5 _ | _ft. N// | A□ | <u>0.4</u> tt. |
| Sinuosity: | Water | velocity: | | Bank height | | Ba | nk slope | |
| (check one) | (Approx.) | | | Right: | _ | | Right | t: |
| | | 1 | fps | Left: | 3 | _ft. | Lef | <u>50</u> degrees t: |
| Meanderi | ng N/A□ | | | | 4 | <u>f</u> t. | | 70degrees |
| Qualitative Attribu | ites | | | | | | | |
| Water Appearance: (check one) | [□] No water ⊠C | Clear 🗆 Turk | oid ⊡Sh or | neen ⊡Sui n surface scu | rface um | □Algal □C mats | Other: | |
| Substrate: | Bedrock 🗆 Bo | ulder 🗆 Cobl | ole 🛛 Grav | el 🛛 Sand 🛛 | ⊠ Silt/ c | lay 🗆 Organic | Other: | |
| (check all that apply) % of Substrate: | % | % | % 20 % | 50 % | 30 | % % | % | |
| Width of Dinarian Zana | Vegetetive | | | | | | | |
| width of Riparian Zone | (check all that | apply) | ⊠ Trees | : 🛛 | ☑ Saplir | ngs/Shrubs: | ⊠ Herbs | |
| $\frac{8 \text{ ft}}{100000000000000000000000000000000000$ | Avg. DBH | of Dominants: | 8 | in | 2 | in. | | |
| Dominant Bank Vegeta | ation (list): | | | | | | | |
| American Holly, Be | ech, Elm, Pin C | Dak, Christma | as Fern, Sn | nilax, Japanese | Hone | eysuckle | | |
| Aquatic Habitats (ex: se | ubmerged or emerged | d aquatic vegetatic | on, overhanging | banks/roots, leaf pac | ks, large | submerged wood, rif | fles, deep poo | ls): |
| Riffles, deep pools, | leaf packs, ove | erhanging roo | ots | | | | | |
| Aquatic Organisms Ob | served (list): | | | | | | | |
| Minnows | | | | | | | | |
| T&E Species Observed | l (list): | | | | | | | |
| none | | | | | | | | |
| Disturbances (ex: liveste | ock access, manure i | n waterbody, wast | e discharge pip | es): | | | | |
| none | | | | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Ar | tificial, man-m | nade 🗆 Manipu | ulated | | | |
| Stream Quality ^a : (check one) | □ High | ⊠ Mo | oderate | | | | | |

Snoc004

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream is downcutting.





Waterbody SNOC004 facing upstream



Waterbody SNOC004 facing downstream



Waterbody SNOC004 facing across

| Survey Description | า | | | | | | | | |
|----------------------------------------------|--------------------------|------------------------|------------------------|---------------------------|---------------------------|--------------------------------|--------------------|----------------------|--|
| Project Name: | Waterbody Name: | | | W | aterbody ID: | Date: | | | |
| Atlantic Coast Pipeli | ne | Cellar Creek | ζ. | | S | noc003 | | 12/5/2014 | |
| State: | County: | | Company: | | Crew M | Member Initials: | Photos: | | |
| Virginia | Prince Edward | 1 | NRG | | CR, A | AS | Snoc0 | 03_001-003 | |
| Tract Number(s): | | | Nearest Mile | epost: | Associated Wetland ID(s): | | | | |
| 12-091, 12-092 | | | 240.0 | | | Wnoc001 | | | |
| (check one) | | □Re-I | Route | □ Access Road | l <u> </u> | Other: | | | |
| Physical Attributes | 6 | | | | | | | | |
| Stream Classification: (check one) | Ephemera | I 🗆 Inter | rmittent | Perennial | | | | | |
| Waterbody Type: | | | | | | | | | |
| (check one) | River 🛛 Str | eam 🗌 Dito | ch 🗆 Ca | anal 🛛 Other | : | | | | |
| ОНШМ | OHWM Indicat | or: | | | | | | | |
| Width:15ft | (check all that apply | () | ⊠ Clear lir on bank | ne ⊡Shelvin | g | □Wrested vegetation | Scouring | g □Water staining | |
| Height: | □Bent, n t. vegetatio | natted, or missin n | ng | ne ⊠Litter ar debris | nd | □Abrupt plant community cha | ⊠Soil c nge | haracteristic change | |
| Width of Waterbody – T | op of Width o | of Waterbody - | Toe of Slope | Width of Waterb | ody – W | Vater Edge to D | epth of Wate | r: | |
| Bank to Top of Bank: | to Toe | of Slope: | | Water Edge: | | (A | pprox.) | | |
| <u>25</u> ft. | _ | <u>3</u> ft. | | | 4 _ | ft. | | <u>0.8 _</u> ft. | |
| Sinussitur | Mator 1 | vala a itur | | N/A 🗆 | | N | /AL | | |
| (check one) | (Approx.) | velocity: | | Bank neight | | B | ank siope Right | | |
| ⊠Straight | | 1.5f | ips | · · · · · · | 6 | _ft. | | <u>80</u> degrees | |
| □Meanderin | 9 N/A□ | | | Left: | 8 | ft. | Let | t: 75 degrees | |
| Qualitative Attribut | tes | | | | | | | | |
| Water Appearance: | | | | | | | | | |
| (check one) | No water ⊠C | Clear □Turb | oid □Sh on | neen ⊡Su nisurface sci | rface um | Algal D mats | Other: | | |
| Substrate: | Bedrock 🗆 Bo | ulder 🛛 Cobb | ole 🛛 Grave | el 🛛 Sand 🛛 | ⊠ Silt/ c | lay 🛛 Organic | □ Other: | | |
| % of Substrate: | % | _% | <u>% 20</u> | % <u>40</u> % | <u>40_</u> % | % | % | | |
| Width of Rinarian Zone | Vegetative | | | | | | | | |
| | (check all that | apply) | ⊠ Trees | : 0 | ⊠ Saplir | ngs/Shrubs: | ⊠ Herbs | | |
| 20 ft | | of Dominants: | 6 | _in | <u>2</u> in. | | | | |
| Dominant Bank Vegeta | tion (list): | | | | | | | | |
| Japanese honeysuc | kle, Persicaria | sp., Red Ma | ple | | | | | | |
| Aquatic Habitats (ex: su | bmerged or emerged | aquatic vegetatio | on, overhanging | banks/roots, leaf pac | ks, large | submerged wood, r | iffles, deep pool | s): | |
| Iron deposits, pools | , riffles, leaf pa | cks, overhan | iging roots, | large submerged | wood | | | | |
| Aquatic Organisms Ob | served (list): | | | | | | | | |
| Snails, bivalve, minr | nows, raccoon | prints | | | | | | | |
| T&E Species Observed | (list): | | | | | | | | |
| none | | | | | | | | | |
| Disturbances (ex: livesto | ck access, manure i | n waterbody, waste | e discharge pipe | es): | | | | | |
| none | | | | | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Ar | tificial, man-m | ade 🗆 Manip | ulated | | | | |
| Stream Quality ^a : (check one) | □ High | ⊠ Mo | oderate | □ Low | | | | | |

Snoc03

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SNOC003 facing upstream



Waterbody SNOC003 facing downstream



Waterbody SNOC003 facing across

| Survey Description | on | | | | | | | | |
|---------------------------------------------------------|--------------------------------------------|----------------------------------------|------------------------|----------------------------------------|-----------------|--------------------------------|---------------------------|------------------------|----------------------|
| Project Name: | | Waterbody Na | me: | | Waterbody ID: | | | | Date: |
| Atlantic Coast Pipe | eline | UNT to Cella | ar Creek | | S | Snoc002 | | , | 12/5/2014 |
| State: | County: | 1 | Company: | | Crew I | Member Initials | : | Photos: | |
| Virginia | Nottoway | | NRG | | CR, A | AS | | Snoc0 | 02_ |
| Tract Number(s): | | | Nearest Mile | epost: | | Associated W | etland | ID(s): | |
| 12-092 | | | 240.02 | | | Wnoc001 | | | |
| Survey Type: (check one) | | e ⊠Re-F | Route | □Access Road | | □Other: | | | |
| Physical Attribute | es | | | | | | | | |
| Stream Classification: (check one) | ⊡Ephemer | al 🛛 Inter | rmittent | Perennial | | | | | |
| Waterbody Type: (check one) | □River ⊠ St | ream 🗆 Dito | ch 🗆 C | anal 🛛 Other | : | | | | |
| OHWM Width: 3_ft | OHWM Indica (check all that appl | itor: y) | □ Clear lir on bank | ne ⊡Shelvin | g | ⊠Wrested vegetation | × | Scouring | g ⊟Water staining |
| Height: ft N/A□ | □Bent, i vegetatio | matted, or missin on | ng ⊠Wrack li | ine □Litter ar debris | nd | □ Abrupt plant community ch | t ange | □Soil cł | naracteristic change |
| Width of Waterbody - | Top of Width | of Waterbody - | Toe of Slope | Width of Waterb | ody - W | Vater Edge to | Depth | of Water | : |
| 5ft | | of Slope: _1ft. | | | 2 | _ft. | (<i>Approx.)</i> N/A□ | | <u>0.5 _</u> ft. |
| Sinuosity: (check one) □Straight ⊠Meander | Water (Approx.) | velocity: 0.5 | _fps | Bank height Right: | 3 3.5 ft. | _ft. | Bank s | slope Right Left | 80 degrees |
| Qualitative Attrib | utes | | | <u> </u> | | | | | |
| Water Appearance: (check one) | □No water □ | Clear ⊠Turb | oid □St or | neen ⊡Sui n surface sci | rface um | □Algal [mats | Othe | r: | |
| Substrate: (check all that apply) % of Substrate: | Bedrock DBo | oulder | ole □ Grav _% | el ⊠ Sand [%] <u>10 </u> % | ⊠ Silt/ o 90 | clay □ Organic % | | Other: % | % |
| Width of Riparian Zon | e: Vegetativ (check all tha Avg. DBH | e Layers: t apply) of Dominants: | ⊠ Trees _ 5 | :: [in | ∃ Sapliı | ngs/Shrubs: in. | × | I Herbs | |
| N/A⊠ Dominant Bank Veget | (approx.) | | | | | | | | |
| Black willow, Junci | us, Agrostis | | | | | | | | |
| Aquatic Habitats (ex: s Riffles, | submerged or emerge | d aquatic vegetatio | n, overhanging | banks/roots, leaf pac | ks, large | e submerged wood, | , riffles, | deep pool | 5): |
| Aquatic Organisms O None | bserved (list): | | | | | | | | |
| T&E Species Observe none | d (list): | | | | | | | | |
| Disturbances (ex: lives None | tock access, manure | in waterbody, waste | e discharge pip | es): | | | | | |
| Tributary is: (check one) | ⊠ Natural | | tificial, man-m | nade 🗆 Manipi | ulated | | | | |
| Stream Quality ^a : (check one) | □ High | ⊠ Mo | oderate | □ Low | | | | | |

Snoc002

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Flows into Cellar Creek within corridor. A dead turtle and beaver signs were observed along the banks. Iron deposits were observed within the stream. Recent rains have resulted in increased flow and turbidity.





Waterbody SNOC002 facing upstream



Waterbody SNOC002 facing downstream



Waterbody SNOC002 facing across

| Survey Description | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------|----------------------|---------------------------------|--------------------|--------------------------------|----------------------------|----------------------|
| Project Name: | | Waterbody Nar | ne: | | w | aterbody ID: | | Date: |
| ACP | | 4NT to | Celle | arCreek | 2 | shos O | 33 | 6-21-16 |
| State: 0 | County/Parish: | electronic and | Company: | SF 19 2 2 A F 19 0 | Crew N | lember Initials: | Photos: | Maria Managara |
| VA | Nottowo | y | EST | | 6 | JV,SB | 12, | N, W |
| Tract Number(s): | | 1 | Nearest Mil | epost: | Street, BA | Associated We | tland ID(s): | No. Saladada (19 |
| 12-092 | e recente i contro | a har in se preside | 243 | ha din segur s | | non | c | |
| Survey Type: (check one) | Centerline | BRe-F | loute | □Access Road | 4 | Other: | NA TON OF | a managana a |
| Physical Attributes | | | | | | | | |
| Stream Classification: (check one) | Ephemera | I 🗹 Inter | mittent | □Perennial | | | | |
| Waterbody Type: (check one) | liver 🖬 Stro | eam 🗆 Ditc | h ⊡C | anal 🗆 Other | r: | | | 3 |
| OHWM Width: <u> </u> | OHWM Indicat (check all that apply | or:) | Clear lin on bank | ne ⊡Shelvin | ng | □Wrested vegetation | □Scouring | g ⊟Water staining |
| Height: <u><0,</u> 5 _{ft.} N/A□ | □Bent, n vegetatio | natted, or missing n | g ⊡Wrack li | ine □Litter a debris | nd | □Abrupt plant community cha | ⊡Soil cl nge | haracteristic change |
| Width of Waterbody - To Bank to Top of Bank: ft. | p of Width of to Toe | of Waterbody - 1 of Slope: ft. | oe of Slope | Width of Waterb Water Edge: | oody - Wa | ater Edge to D | Pepth of Water | :: <0.5_ft. |
| Sinuosity: (^{check one)} ⊡Straight ⊡Meandering | Water v (Approx.) N/A | relocity: | S | Bank height Right: Left: | <u>3</u> ft 3ft | E. | ank slope Right Left | degrees |
| Qualitative Attribute | IS | | | | | | | |
| Water Appearance: | | | | | | | | |
| (check one) | o water ⊔C | lear La Turbi | d ⊡Sh on | leen ⊡Su surface sci | rface um | □Algal □ mats | Other: | |
| Substrate: Check all that apply) % of Substrate: | Bedrock □ Bo | ulder 🗆 Cobbl | e 🗆 Grave | el I Sand (_% <u>///0 %</u> | □ Silt/ cla | ay 🗆 Organic %% | □ Other: % | |
| Width of Riparian Zone: <u>15</u> ft. N/A□ Dominant Bank Vegetatio | Vegetative (check all that a Avg. DBH (approx.) | Layers: apply) of Dominants: | Trees 13 | :: 0 _in | Sapling 4 | gs/Shrubs: _in. | ⊡∕Aerbs <u>M</u> _A_in. | |
| Lipided | a taliof | er.c. | | | | | | |
| Aquatic Habitats (ex: subr | nerged or emerged | aquatic vegetation | , overhanging | banks/roots, leaf pac | :ks, large s | submerged wood, r | iffles, deep pools | s): |
| intermit | tent wa | ter | | | | | | |
| Aquatic Organisms Obse | rved (list): | | | | | | | |
| V LC | ne | | | | | <u>Dalas sa</u> t | | |
| Coverse and the second of the second of the second | ist): | | | | | | | |
| Disturbances (ex: livestock | access, manure in | waterbody, waste | discharge pipe | es): | A Conne | | | |
| non | C | | 0- P P | | | | Sec. Alle | |
| Tributary is: (check one) | Natural | | icial man-m | ade 🗆 Manin | ulated | | | |
| Stream Quality *: | - Indurur | / iti | | | | | | - Anna - Starrages |
| (check one) | □ High | 🗆 Moo | lerate | Low | | | | |

Waterbody ID: Snos003 High Quality: Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man. Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man. Low Quality: Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man. Notes: Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point locations, survey boundary, and IDs of associated features) NI Sh 0500200 shos 003 dp STOS OD/DP phos 001 seep 54 <1 N



Waterbody data point snos003 facing south upstream.



Waterbody data point snos003 facing north downstream.



Waterbody data point snos003 facing west across.

| Linear Waterbody | Data Sheet | | | | | |
|----------------------------------------------------|----------------------------------------------|------------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------|
| Survey Description | | | | | | |
| Project Name: | | Waterbody Name |): | | Waterbody ID: | Date: |
| ACP | | Unt to | Celle | ar Creek | Snose | 201 6-21-16 |
| State: | County/Parish: | C | ompany: | | Crew Member Initial | s: Photos: |
| AV | Notoway | for a line of | ZSE | | WV,SB | E, ω, N |
| Tract Number(s): 12-097 | alan araa in taa | N | earest Mile 기니ス | epost: | Associated V None | Vetland ID(s): |
| Survey Type: (check one) | | FRe-Boi | ite | | □ Other: | |
| Physical Attributos | Contonino | | | Lindeeda Noud | El ottier. | |
| Stream Classification: | | | | | | |
| (check one) | Ephemera | I ⊡łntermi | ttent | □Perennial | | |
| Waterbody Type: (check one) | River 🗆 Stre | am 🗆 Ditch | | anal 🛛 Other: | | • |
| OHWM Width:ft. | OHWM Indicat (check all that apply, | or: | Clear lir on bank | ne 🗆 Shelving | g ⊟Wrested vegetation | □Scouring □Water staining |
| Height: <u>≤ </u> [ft. | □Bent, m vegetation | atted, or missing | □Wrack li | ne □Litter an debris | d □Abrupt pla community c | nt Soil characteristic change hange |
| Width of Waterbody - To Bank to Top of Bank: | p of Width o | f Waterbody - To | e of Slope | Width of Waterbo | ody - Water Edge to | Depth of Water: |
| 2 ft. | to roe t | | | water Euge. | l ft | ft. |
| | | | | N/A | | N/A 🗆 |
| Sinuosity: | Water v | elocity: | | Bank height | | Bank slope |
| □Straight | (pp. ca.) | < fre | | Right: | 2 _{ft.} | Right: 30 degrees |
| ⊡Meandering | | ipa | | Left: | 3 ft | Left: 75 degrees |
| O 111 11 Att 11 1 | | | | | | <u></u> usg.coo |
| Qualitative Attribute |)S | | | | | |
| (check one) | lo water ⊡Ć | lear 🗆 Turbid | ⊡Sh on | een ⊡Suri surface scu | face ⊡Algal m mats | □Other: |
| Substrate: (check all that apply) % of Substrate: | Bedrock 🗆 Bou | Ilder Cobble | Grave 35 | el ⊡rSand ⊡ <u>% _30_%</u> | Silt/ clay □ Organi 2.5_ _% | c □ Other: %% |
| Width of Riparian Zone: | Vegetative | l avers: | | | ANTIN AND AND | |
| <u>50 ft</u> . | (check all that a Avg. DBH ((approx.) | pply) of Dominants: | PTrees 14 | : 🖸 | rSaplings/Shrubs: in. | PHerbs <u>NA</u> in. |
| Dominant Bank Vegetati | on (list): | | | <u>.</u> | | |
| Liriodendron + | Wipferg, | -ienidembe | r st. | raciflua, Z | tsimina tril | oba |
| Aquatic Habitats (ex: subr | merged or emerged | aquatic vegetation, o | verhanging | banks/roots, leaf pack | s, large submerged wood | d, riffles, deep pools): |
| overh | anging M | oots inte | rmite | int water | | |
| Aquatic Organisms Obse | erved (list): | | | | | |
| none | | | | | | |
| T&E Species Observed (| list): | | | | | |
| none | Sale and a | a dia man | | | | |
| Disturbances (ex: livestoch | k access, manure in | waterbody, waste dis | scharge pipe | s): | | |
| Tributary is: (check one) | Natural | □ Artific | ial, man-ma | ade 🗆 Manipu | lated | |
| Stream Quality ^a : (check one) | □ High | □ Mode | rate | Low | ويترك ويترك فيترج وواد المحمدات | |
| CALLSTRATE OF CHILDREN STRATE STRATES | PERMIT | NAMES OF TAXABLE PARTY OF TAXABLE PARTY. | States Sections | Contract of the state of the local state of the state of | The Long Control of the State of the State of the State | |

High Quality: Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Waterbody ID: SN 05 001

Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

CL

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point locations, survey boundary, and IDs of associated features)

origi

ShosOUZOp

Shospolop

105600

Prisool (seep

1



Waterbody data point snos001 facing east upstream.



Waterbody data point snos001 facing west downstream.



Waterbody data point snos001 facing north across bank.

| Linear waterbody Data She | 91 | | | |
|-------------------------------------------------------------------|-----------------------------|---------------------------------|-------------------------------------|------------------------------|
| Survey Description | | | | 12 |
| Project Name: | Waterbody Name: | • • • • • | Waterbody ID: | Date: |
| ACP | 4NT+0 (| Lellar Creek | SnosOO | 12 6-21-16 |
| State: County/Parish: | Con | npany: | Crew Member Initials: | Photos: |
| VA Notor | Day E | =SZ | WV, SB | S,N,E |
| Tract Number(s): | Nea | rest Milepost: | Associated Wetland | ID(s): |
| 12-092 | | 243 | none | |
| Survey Type: (check one) Centerlin | e BRe-Route | a ⊡Access Road | □Other: | the ended of the resident |
| Physical Attributes | | | | |
| (check one) | ral Differmitte | ent ⊡Perennial | | |
| Waterbody Type: (check one) □River ⊡rS | ream 🗆 Ditch | Canal Other: | | • |
| OHWM OHWM Indic Width:ft. | ator: /y) 🖸 on | Clear line □Shelving bank | g ⊟Wrested □ vegetation | IScouring ⊟Water staining |
| Height: <u><0.5</u> ft. □Bent, vegetat | matted, or missing D on | Wrack line □Litter an debris | d | □Soil characteristic change |
| Width of Waterbody - Top of Width Bank to Top of Bank: | of Waterbody - Toe of | of Slope Width of Waterbo | ody - Water Edge to Depth | of Water: |
| | 4 A | Water Euge. | 2 4 | < 0.5 # |
| | n. | N/A | <u></u> n | n. |
| Sinuosity: Water | velocity: | Bank height | Bank s | lope |
| □Straight | < fns | Right: | 3 _{ft.} | Right: 75 degrees |
| Meandering N/A | iha | Left: | 3 _{ft.} | Left: 75 degrees |
| Qualitative Attributes | | | | |
| Water Appearance: | | | | |
| (check one) | Clear DTurbid | □Sheen □Surf on surface scur | face ⊡Algal ⊡Other m mats | : |
| Substrate: Geneck all that apply) Substrate: % | oulder 🗆 Cobble | Gravel C Sand C 30_% 40_% | YSilt/clay □ Organic □ C 30%% | Other:% |
| Width of Riparian Zone: Vegetativ | e Layers: | | / | |
| <u>50 ft</u> . (check all the N/A□ (check all the (approx.) | t apply) I of Dominants: | ☑ Trees: ☑ _12in | Saplings/Shrubs: 🛛 | Herbs <u>NA</u> in. |
| Dominant Bank Vegetation (list): | | | | |
| Liridendran tuliaife | a Asimina - | trilaba | | |
| Aquatic Habitats (ex: submerged or emerged | d aquatic vegetation, ove | rhanging banks/roots, leaf pack | s, large submerged wood, riffles, o | deep pools): |
| intermittent water | | | | |
| Aquatic Organisms Observed (list): | | | | |
| none | - 7 | | | |
| T&E Species Observed (list): | | | | |
| Disturbances (ex: livestock access manure | in waterbody, waste disch | arge pines): | | |
| A on c | ni waterbouy, waste disch | iaige hibes). | | |
| Tributary is: | | | | |
| Stream Quality ^a : | | , man-made 🗆 Manipul | ated | |
| (check one) | □ Moderat | te 🛛 🖾 Tow | And and a state | 910 |

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Waterbody ID: Snos002 High Quality: Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man. Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man. Low Quality: Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man. Notes: Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point locations, survey boundary, and IDs of associated features) ShosODI BP 5nus 003 phosool Cseep CL



Waterbody data point snos002 facing south upstream.



Waterbody data point snos002 facing north downstream.



Waterbody data point snos002 facing east across.

| Survey Description | | | | | | | | | |
|--------------------------------------------------|---------------------------------------|--------------------------------|------------------------|---------------------------|-------------------------------------------|---------------------------------|----------------|------------------------------------|--|
| Project Name: | Waterbody Nam | /aterbody Name: V | | | | Waterbody ID: Date | | | |
| ACP | and a second second and a second | Lees Creek | | | 4 | snosO | 05 | 6-22-16 | |
| State: C | ounty/Parish: | C | Company: | ter migdala | Crew M | Member Initials: | Photos | | |
| VA | Notto | way | ESI | | W | 1, SB | S | NE | |
| Tract Number(s): | | N | learest Milepos | t | in an | Associated Wet | land ID(s): | Net alle telabed at | |
| 12- | 096 | Seat Series | 24 | 4.1 | | Whos | 002 | 1 th (Thursday) | |
| Survey Type: (check one) | | ERe-Ro | ute 🗆 | Access Road | | □Other: | le destau | | |
| Physical Attributes | | | | | | | | | |
| Stream Classification: (check one) | □Ephemera | I ⊡Interm | ittent 🖂 | Perennial | | | | | |
| Waterbody Type: (check one) | iver Stre | eam 🗆 Ditch | Canal | □ Other: | | | | • | |
| OHWM Width: 0ft. | OHWM Indicat (check all that apply | or:) | Clear line on bank | □Shelving |) | □Wrested vegetation | □Scourin | g ⊟Water staining | |
| Height: <u>2</u> ft. N/A□ | □Bent, m vegetation | natted, or missing n | □Wrack line | □Litter an debris | d | □Abrupt plant community char | ⊡Soil d nge | haracteristic change | |
| Width of Waterbody - Top Bank to Top of Bank: | o of Width o to Toe o | of Waterbody - To of Slope: | e of Slope Wid Wat | th of Waterbo er Edge: | ody - W | ater Edge to De | epth of Wate | r: | |
| <u>12</u> ft. | - | <u> </u> | N/A | (| ft | t. N/ | 'A□ - | ft. | |
| Sinuosity: | Water v | elocity: | Ban | k height | | Ba | ank slope | | |
| (check one) | (Approx.) | 1 | | Right: | 3 | | Righ | t: 70 | |
| | | fps | | L off: | f | ft. | Lof | degrees | |
| ⊡Meandering | N/A□ | | h kara la | | <u>3</u> f | t. | Lei | . <u>80</u> degrees | |
| Qualitative Attribute | S | | | | | | | | |
| (check one) | o water ⊡∕C | lear ⊡Turbid | ⊡Sheen on surfa | ⊡Surl ace scu | face m | □Algal □0 mats | Other: | | |
| Substrate: B | edrock 🗆 Bor | ulder 🗆 Cobble | Gravel | Sand 🗉 | Silt/ cl | lay 🗆 Organic | Other: | | |
| % of Substrate: | _% | _%% | % | 40 % (| <u>60</u> % | %% | % | | |
| Width of Riparian Zone: | Vegetative | Layers: | / | | / | | | | |
| 100 ft. | (check all that a | apply) | Trees: | Ø | Saplin | igs/Shrubs: | Herbs | | |
| | (approx.) | or Dominants. | <u> 16 </u> in. | - 1 | 4 | _in. | <u></u> In | • | |
| Dominant Bank vegetatio | n (<i>list)</i> : | | | T + | • | | | | |
| Acer Thorn | m Mic | rostegium | Viminiem | 1 MPAT | iens | Capensis | Mas daas saa | | |
| Aqualic Habitats (ex. subm | erged or emerged | aquatic vegetation, | e | roots, lear pack | s, large | submerged wood, m | mes, deep poo | s): | |
| Aquatic Organisms Obser | rved (list): | nging 1000 | | | | | | | |
| Froas | | | | | | | | | |
| T&E Species Observed (lis | st): | | | | | | | | |
| Disturbances (ex: livestock | access, manure in | waterbody, waste d | scharge pipes): | <u> </u> | | | | | |
| Mone | | | | | | | | | |
| (check one) | Natural | □ Artifi | cial, man-made | 🗆 Manipu | lated | | | | |
| Stream Quality *: | | 1 | a second second second | | | | | States of the second second second | |
| (check one) | 🗆 High | I Mode | erate | Low | | | | | |

High Quality: Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Waterbody ID:

Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor, severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point locations, survey boundary, and IDs of associated features)

Lees Creek wall Y voland 20000 50% V rpland 11 SNOSDOY Form Rev. 04/30/2013



Waterbody data point snos005 facing south upstream.



Waterbody data point snos005 facing north downstream.


Waterbody data point snos005 facing east across.

Harth

| Survey Description | - | N.A. A. A. N. | | to Lowenter | Īw | aterbody ID: | Conserved a | Date: |
|---------------------------------------------------|-------------------------------------|--------------------|-----------------------|-----------------------------|--------------------|-----------------------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Name: | | vaterbody Nan | 10: | C . 1- | | Cio an Ar | V | 6-77-16 |
| ACH | | UNITO | Lees | creek | | 510500 | Dhates | 6-2-10 |
| State: Cour | nty/Parish: | | Company: | | Crew N | Nember Initials: | C | 115 |
| VA N | ottowa | 4 | EST | | w | SB | 0 | NE |
| Tract Number(s): | | 1 | Nearest Milepo | ost: | 19-37 | Associated We | tiand ID(s): | 2 |
| D-T | 96 | | 5 | 244,1 | | whos | 200. | 6 |
| Survey Type: | | | | E 14 | | Clother | | |
| (check one) | Centerline | ⊠/Re-R | oute | LIAccess Road | RASE-MAR | Liother. | N. CONTRACTOR | |
| Physical Attributes Stream Classification: | | | TATEL ST TA | | Chi chi chi | New York Court | A CONTRACTOR OF A | |
| (check one) | Ephemeral | ⊡Interr | nittent | | | has been also | | |
| Waterbody Type: (check one) | □-Stre | am 🗆 Ditcl | h 🗆 Cana | al 🗆 Other | : | | | |
| OHWM Width: 2 ft. | HWM Indicato eck all that apply) | or: | Clear line on bank | □Shelvin | g | EWrested vegetation | □Scouri | ing ⊟Water staining |
| Height: <]ft. | Bent, ma vegetation | atted, or missing | Wrack line | D/Litter an debris | nd | CAbrupt plant community cha | ⊡Soil inge | characteristic change |
| Width of Waterbody - Top of | Width of | Waterbody - T | oe of Slope W | lidth of Waterb | ody - W | ater Edge to | epth of Wat | ter: |
| Bank to Top of Bank: | to Toe o | f Slope: | W | /ater Edge: | 2 | 1 | the sect | < . |
| <u> </u> | | ft. | | | <u>6</u> ft | t. N | | <u> </u> |
| Cinucalha | Waterv | alocity: | N | ank height | | E | ank slope | |
| (check one) | (Approx.) | 1 | | Right | 1 | | Rig | ht: 45 dames |
| □Straight | | fp | S | Loft | f | ft. | Le | eft: degrees |
| EMeandering | N/AD | | | Leit. | 1, | ft. | | degrees |
| Qualitative Attributes | E STATES | | | | | | 哈哈特 | |
| Water Appearance: | in the | | | | rface | | Other: | |
| (check one) | ater LIACI | ear Liurbi | | urface sci | um | mats | | |
| Substrate: Greek all that apply) % of Substrate: | rock 🗆 Bou | lder 🗆 Cobb | le 🗆 Gravel %% | 20 % | BO | lay □ Organic% | Other: | 1 |
| Width of Riparian Zone: | Vegetative | Layers: | | | 1 | | Munt- | |
| 100 . | (check all that a | cply) | Trees: | [| Saplir | ngs/Shrubs: | NA | in. |
| NAD II. | (approx.) | or Dominants: | ir | ı. · | | <u>_in</u> . | A CALLER AND A CALL | |
| Dominant Bank Vegetation | (list): | | | | | | | |
| Implient copen | sis Par | irum h | mitoma | - Toxic | coder | from radie | ans | |
| Aquatic Habitats (ex submer | jed or emerged | aquatic vegetation | n, overhanging ba | inks/roots, leaf pac | cks, large | submerged wood, | riffles, deep po | ools): |
| Over hange | is toot | 8 | | | | | | |
| Aquatic Organisms Observe | ed (list): | | al dense and | a constraint a secondaria a | | | | |
| None | | | | | | and the second | 1. and the second | and the second |
| T&E Species Observed (list) | | | | | Contraction of the | | EARLINE !! | and the second se |
| Non | | | | | | | | Sand La Charles |
| Disturbances (ex. livesbock ac | cess, manure in | waterbody, waste | discharge pipes) |): | | | | |
| none | | | | | and a second | and the second second | ana | |
| Tributary Is: | Natural | | ificial, man-mar | de 🗆 Manir | oulated | | | |
| Stream Quality *: | - Naturai | | | | 12,001,000 | | | |
| (check one) | High | | derate | DLow | | A Stanford Street | e meterer to | and the second second |

Shos006 High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by liveslock or man. Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man. Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man. Notes: Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) Y mosol 3 Y Form Rev. 05/16/2014

Waterbody ID:



Waterbody data point snos006 facing south upstream.



Waterbody data point snos006 facing north downstream.



Waterbody data point snos006 facing east across.

| Survey Description | d | Watashadu Na | no. | in a series of the | M | Vaterbody ID: | | Date: |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------|-----------------|---------------------------------------|--------------|------------------------------|-------------------------------|-------------------------|
| Project Name: | | waterbody Nat | 1 | C 14 | | Snop M. | 5 | 6/16/16 |
| HCP | | UNIT | o Lees | Reck | IC row I | Member Initials | Photos: | Enina |
| State: Cou | nty/Parish: | | Company: | | LI G | TR | NE | SWISE |
| VH N | ottowa | y | 627 | | 5 | FIJP Theresisted W | atland ID/s): | 10-100 |
| Tract Number(s): | | | Nearest Mile | i i i i i i i i i i i i i i i i i i i | | ASSociated | A | |
| 12-096 | | | 6 | 9917 | | 1 | 14 | |
| Survey Type: (check one) | Centerline | Re-F | Route | □Access Road | | Other: | 1. 9.74 C. 199 C. 19 C. 19 C. | THE PLANE & DEPARTMENTS |
| Physical Attributes | | | | and the second second | 的不可能 | | a de se a se a | |
| Stream Classification: (check one) | □Ephemeral | ⊡Inter | mittent | Perennial | | | | |
| Waterbody Type: (check one) | r 🖉 Stre | am 🗆 Dito | :h □C | anal 🗆 Other | | | | |
| OHWM O Width: U ft. | HWM Indicate heck all that apply) | or: | Clear lin | ne 🗆 Shelvin | g | □Wrested vegetation | □Scourin | g 🗆 Water staining |
| Height:ft. | DBent, m vegetation | atted, or missin 1 | g ⊟Wrack li | ne DLitter ar debris | nd | CAbrupt plan community ch | ange | haracteristic change |
| Width of Waterbody - Top o | f Width o | f Waterbody - " | Toe of Slope | Width of Waterb Water Edge: | ody - M | Vater Edge to | Depth of Wate (Approx.) | r. |
| G ft. | | 3 ft. | | _ | 3 | ft. | - | 0,5 ft. |
| | | | | N/A | | Second Contractor | Bank slope | |
| Sinuosity: (check one) | (Approx.) | elocity: | | Right: | Ц | | Righ | * 86 . |
| □Straight | | <u> </u> | os | Loft | 1 | ft. | Le | ft: 0- degrees |
| Meandering | N/AD | | | | 4 | ft. | Le contration | 80 degrees |
| Qualitative Attributes | an realized | | and the | Tele Print Party | | | | 现行转移建筑组 |
| Water Appearance: (check one) | vater 🕵 | lear 🗆 Turb | id ⊡St | neen DSu nisurface sci | rface um | □Algal [mats | ∃Other: | |
| Cubatanta El Bad | | Ider Cobt | le 🕅 Grav | el 🖬 Sand I | | clay 🗆 Organic | Other: | |
| (check all that apply) % of Substrate: | _% | % 20 | % 20 | % 60% | | %% | % | |
| Width of Riparian Zone: | Vegetative | Layers: | К | | | Chaiba | Ki Harbs | |
| 75 tt. | (check all that a | of Dominants: | G Tree: | s: J | 2 Sapli | ings/Shrubs. | NAI | n. |
| N/ACI | (approx.) | | Constant | | | P. | lustichor | n |
| Dominant Bank Vegetation | | 1 th uno | 40 | Cornus | flo | rida, a | wastich | oides |
| Quercus and | med or emerned | aquatic vegetatio | n, overhanging | banks/roots, leaf pag | cks, large | e submerged wood | , riffles, deep po | ols): |
| Liffles/ 20015 | , overl | nanging | roots | /banks | | | | |
| Aquatic Organisms Observ | ed (list): | U J | | 1.5 | | | | |
| caddisflies,. | frogs, | mayfl | ies, a | rquatic | . w | orms | S. S. S. S. | |
| T&E Species Observed (list) |): | | | | | | | |
| none | | | | | Lange of the | | the second second | |
| Disturbances (ex. livestock ad | ccess, manure ir | n waterbody, wast | e discharge pip | es): | | | | |
| Tributary Is: | the sector lines. | Constant Louis I | | | | a state of the second | | |
| (check one) | Natural | | tificial, man-n | nade 🗆 Manip | oulated | | | the second second |
| Stream Quality *: (check one) | 🗆 High | D/M | oderate | Low | | | | |
| And the second se | | | | | | | | |

Waterbody ID: Sh00005 High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man. Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man. Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mals, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man. Notes: Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) snoobos data DOIN



Waterbody data point snoo005 facing northeast upstream.



Waterbody data point snoo005 facing southwest downstream.



Waterbody data point snoo005 facing southeast across bank.

| Survey Description | | | and the second of | a con marrie data | | Station Real | | Land Maria Marine T |
|-------------------------------------------|-----------------------------------------|-----------------------|-----------------------|--------------------|--------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Project Name: | Iv. | Vaterbody Nam | 10: | | Wat | erbody ID: | C | Date: |
| ALP | | LINTY | OLCO | Carl | 5 | n00004 | | 6/16/16 |
| 1101 | unty/Parish | - 0-1 0 | Company: | year | Crew Me | mber Initials: | Photos: | Facina |
| state: | | | FST | | 12 | JB | NE. | SW. SE |
| VH | Nottowa | 1 | L U L | | | secondated Wetla | nd ID(s): | 50100 |
| Tract Number(s): | . / | | Nearest Milepos | 5 | ĥ | AIA | in infolt | |
| 12-09 | 6 | | 299 | . 7 | | NH | | |
| Survey Type: (check one) | | MRe-R | oute D | Access Road | | Other: | den e di | |
| Dhusiaal Attributos | Cernormie | A | ANTIS CONTRACTOR | | RAMARE | | | |
| Stream Classification: | | | | | | | and a second | |
| (check one) | Ephemeral | □Intern | nittent 🎾 | Perennial | | | | |
| Waterbody Type: | | | | | | | | |
| (check one) | ver K Strea | m Ditch | 1 🗆 Canal | | F. | | | |
| OHWM . | OHWM Indicato | r: | 10 01 F | | | DWrested. | []Scouring | □Water |
| Width: 3 ft | (check all that apply) | | on bank | | ig i | regetation | Looding | staining |
| Height | | Ited or mission | | []] itter a | nd [| Abrupt plant | | aracteristic change |
| ft. | vegetation | nee, or missing | | debris | | community chang | e | A THE MERINE PERSON |
| | of Width of | Waterbody - T | oe of Slope Wi | dth of Waterb | ody - Wat | er Edge to Dep | th of Water | |
| Bank to Top of Bank: | to Toe of | Slope: | Wa | ter Edge: | | (Арр | rox.) (| 15 |
| 4. ft. | (| 2 ft. | | | 15_ft. | | | <u>) 1) ft.</u> |
| | ALL | | N/A | | | N/A | L slong | and the second secon |
| Sinuosity: | (Approx.) | locity: | Ba | Right | 2 | Bai | Right | 90 |
| □Straight | | [] fo | 9 | Kigine | 2 A. | | | 70 degrees |
| Handarian | | | | Left: | 2 # | C. C | Len | 90 degrees |
| Lawleandernig | | STAND SHOW SHOW SHOW | theory alway or skots | TO OBACTOR STO | State State | ALCONT & DOWN | 12.12 (S. Herry | NOTAL PROPERTY |
| Qualitative Attribute | Ŝ | | | | A STATIS | | | and the second second second second |
| Water Appearance: (check one) | water DCle | ear 🗆 Turbi | d 🗆 Sheen | □Su | urface | □Algal □O | ther: | |
| | ~ | | on sur | face sc | um | mats | | |
| Substrate: 🛛 B | edrock 🛛 Boul | der R Cobbl | e 🕅 Gravel | Sand I | Silt/ clay | y 🗆 Organic | Other: | |
| (check all that apply) % of Substrate: | % | % 20. | 6 20% | 60% | % | % | % | |
| | | | A CANADA PARA | | | | AN REAL PROPERTY | |
| Width of Riparian Zone: | (check all that an | ayers: | Derrees: | | Sapling | s/Shrubs: | Herbs | |
| 50 ft. | Avg. DBH o | f Dominants: | in. | | 1 | n. | NHin | |
| N/A | (approx.) | | | | A DA STRAND | | | A greater and the set |
| A care and being | n. Millen | stearing | 1 vimin | Sum B. | vereus | s mont | ana | |
| HLEI PUDIOI | | Sicgion | overbanging her | ks/mote leaf nov | cks large si | ubmerged wood, riff | les, deep pool | s): |
| Aquatic Habitats (ex: subm | herged or emerged a | iquatic vegetation | , overhanging ban | karioota, ieai pat | una, large st | | | |
| Kittles poo | 15, leat | paces | Share Shares | | | | | |
| Aquatic Organisms Obse | rved (list): | | . (1:00 | en le | fores | 1 100 | | |
| stoneflies, | cuddistl | ies, ma | yrnes, | smalls | rugs | | | |
| T&E Species Observed (| ist): | | | | | | | |
| none | | | | | | | | and the second states |
| Disturbances (ex. livestock | access, manure in | waterbody, waste | discharge pipes): | | | | | |
| none. | | | | | | | | |
| Tributary is: | | and the second second | | | | A CONTRACTOR OF THE PARTY | | |
| (check one) | Natural | D Art | ificial, man-made | e 🗆 Manip | pulated | and the second | Section Section | A CONTRACTOR OF THE OWNER |
| Stream Quality *: | - | | | | | | | |
| (check one) | L High | Mo Mo | derate | LI LOW | and a state of the | | | |

- ----

Waterbody ID: sho0004 High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man. Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man. Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man. Notes: Scattered rain within 24hrs Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) 500004



Waterbody data point snoo004 facing northeast upstream.



Waterbody data point snoo004 facing southwest downstream.

Photo Sheet 1 of 2



Waterbody data point snoo004 facing southeast across bank.

| Survey Description | | | | | | | | |
|-------------------------------------------------|------------------------|--------------------|----------------|-------------------|--------------|---------------------------|-----------------------|------------------------|
| Project Name: | | Waterbody Nam | 10: | 0 | M | Vaterbody ID: | 00 | Date: |
| HCP | | 4NT+ | o Lees | s Geelk | | 50000 | 03 | 6/16/16 |
| State: 0 | ounty/Parish: | | Company: | | Crew | Member Initials: | Photos | Facing |
| VH | Nottowa | ey | ESI | | L | R, JB | E | E, W,S |
| Tract Number(s): | | - | Nearest Mile | post: | | Associated We | tland ID(s): | |
| 12-096 |) | | 2 | 44.7 | i e tasi | NI | A | in the and |
| Survey Type: (check one) | Centerline | KRe-R | oute | □ Access Ro | ad | Other: | | a sum and start a |
| Physical Attributes | | | • | and the second | | Contraction of the second | and the second second | |
| Stream Classification: | | | - 144 4 | WE Bernstel | | 2 1 1 1 1 1 1 1 | | |
| (check one) | DEphemeral | Linterr | nittent | RPerennial | e inside | | Sel and | and the second second |
| Waterbody Type: (check one) | liver A Stre | am 🗆 Ditch | n 🗆 Ca | anal 🗆 Oth | ner: | | | |
| онwм | OHWM Indicat | or: | 4 | Y III | | | | |
| Width: 2_ft. | (check all that apply) | | of bank | e 🗆 Sheh | ving | □Wrested vegetation | □Scour | ing DWater staining |
| Height: | □Bent, m | atted, or missing | Wrack lin | ne 🗆 Litter | and | Abrupt plant | □Soil | characteristic change |
| N/AD | vegetation | Chernine 15 | Antis and p | GEDRIS | and the | community cha | ange | and the design of |
| Width of Waterbody - To Bank to Ton of Bank: | o of Width o | f Waterbody - T | oe of Slope | Width of Wate | rbody - W | Vater Edge to | Depth of Wat | ter: |
| | LOTOEL | i slope: | | Water Euge. | 1 | | -ppi only | 05. |
| ft. | - | ft. | | - | | ft. | | <u>U.J.</u> ft. |
| Sinuosity: | Water v | elocity: | | Bank height | | E | Bank slope | |
| (check one) | (Approx.) | 11 | | Right: | | | Rig | ht: Go |
| Louagn | | <u> </u> | S | Left | | .ft. | | 10 degrees |
| Meandering | N/A□ | | | Len | · | .ft. | - | ent. <u>9D</u> degrees |
| Qualitative Attribute | s | | | 1. | | | | |
| Water Appearance: (check one) | lo water do | lear 🗆 Turbi | d ⊡Sh | een 🗆 | Surface | | Other: | |
| | | | on | surface | scum | mats . | | |
| Substrate: | Bedrock 🗆 Bou | ulder 🛒 Cobbl | e 🖾 Grave | el 🖉 Sand | Silt/ | clay 🗆 Organic | Other: | |
| % of Substrate: | _% | % <u>10</u> | % 20 | % 60 % | - | %% | % | 5 |
| Width of Rinarian Zone: | Venetative | 1 avore: | | | | | | |
| 50 | (check all that i | apply) | A Trees | : | 🖾 Sapli | ings/Shrubs: | K Herbs | |
| JU ft. | Avg. DBH | of Dominants: | _7_ | jn. | | _in. | NA | _in. |
| Dominant Bank Vegetati | on (list): | | | | 1. | invstrum | siner | 150. |
| Vaccinium | Sp. , Wa | odward | lia a | reolat | a, D | xydendeu | in al | DECUM |
| Aquatic Habitats (ex: sub | merged or emerged | aquatic vegetation | , overhanging | banks/roots, leaf | packs, large | e submerged wood. | riffles, deep p | ools): |
| Riffle/pools | 5 | | | | | | | |
| Aquatic Organisms Obs | arved (list): | | | | 1 martin | | | |
| mayflies, a | aquatic | . worn | S | | (en la | | | |
| T&E Species Observed (| list): | | | | | | 1 | |
| none | | | | | | | | • |
| Disturbances (ex: livestoo | k access, manure i | waterbody, waste | discharge pip | es): | | W. S. S. S. | | |
| none | | | | | | | | |
| Tributary is: (check one) | Natural | 🗆 Art | ificial, man-m | ade □ Ma | nipulated | | . Alexander | |
| Stream Quality *: | E | ¥., | | | | | | |
| (cneck one) | High | X Mo | derate | I Lov | V | | | |

Waterbody ID: SNOODDR High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots, water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat, no disturbance by livestock or man. Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man. Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man. Notes: Scattered rain within 24hrs. Waterbody Sketch (Include north arrow. centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) *5n00003 data point PhooDOI Form Rev. 05/162014



Waterbody data point snoo003 facing east upstream.



Waterbody data point snoo003 facing west downstream.

Photo Sheet 1 of 2



Waterbody data point snoo003 facing south across bank.

| Survey Description | | | | | har | (| Data |
|--------------------------------------------------------------|-------------------------------------------|--------------------------------------|---------------------------------------|---------------------------------|---------------------|-----------------------------------|-----------------------------------------------------------|
| Atlantia Coast Binalina | | INT TO LES | ne: | | Wa SN | Iterbody ID: | Date: |
| | | | | | | | 9/12/2014 |
| State: Co | ounty: | | Company: | | | ember Initials: | Photos: |
| Virginia IN | ottoway | | | | vv∟ivi, | | 100-1207 10 1209 |
| 12-096 | | | Nearest Mile | post: | Í | NA | and ID(s): |
| Survey Type: | × | | | | 1 | | |
| (check one) | [⊠] Centerline | ⊔Re-F | Route | □ Access Road | | _Other: | |
| Physical Attributes Stream Classification: (check one) | ⊠Ephemera | I ⊡Inter | mittent | Perennial | | | |
| Waterbody Type: (check one) | ver 🛛 Stre | eam 🗆 Ditc | h 🗆 Ca | anal 🛛 Other: | : | | |
| OHWM Width: _2_ft. | OHWM Indicat (check all that apply | or:) | □ Clear lir on bank | ne ⊡Shelving | g | □Wrested vegetation | ⊠Scouring ⊟Water staining |
| Height: ft. N/A□ | ⊠Bent, m vegetatio | natted, or missing | g ⊡Wrack lii | ne ⊠Litter an debris | nd | □ Abrupt plant community chang | ⊠ Soil characteristic change ge |
| Width of Waterbody - Top Bank to Top of Bank: | of Width of to Toe of | of Waterbody - 1 of Slope: | Foe of Slope | Width of Waterbo Water Edge: | ody - Wa | ter Edge to Del | pth of Water: prox.) |
| <u>_4 f</u> t. | - | <u>2_</u> ft. | | N/A⊠ | ft. | N/A | ft. |
| Sinuosity: (check one) □ Straight ⊠Meandering | Water v (Approx.) | /elocity: fp | os | Bank height Right: Left: | <u>1_</u> ft. | Bai | nk slope Right: 45_ degrees Left: 45_ degrees |
| | | | | | <u> </u> | | <u>-+0</u> ucgiees |
| Water Appearance: | 3 | | | | | | |
| (check one) 🛛 🖾 No | o water □C | lear □Turb | id □Sh on | een ⊡Sur surface scu | rface um | □Algal □O mats | ther: |
| Substrate: B | edrock 🛛 Bo | ulder 🛛 Cobb | le 🗆 Grave | el 🛛 Sand 🛛 | ⊠ Silt/ cla | ay 🗆 Organic | □ Other: |
| % of Substrate: <u>NA</u> | _% <u>NA</u> % | % <u>NA</u> % | <u>NA</u> % | <u> 30 </u> % | <u>70_</u> % | <u>NA</u> % | <u>NA %</u> |
| Width of Riparian Zone: | Vegetative (check all that Avg. DBH | • Layers: apply) of Dominants: | [⊠] Trees _ <u>8_</u> in. | : 2 | ⊠ Saplino _2_in. | gs/Shrubs: | ⊠ Herbs |
| N/A⊡ Dominant Bank Vegetatio | n (list): | | | | | | |
| TULIP POPLAR, RED | MAPLE, N. | RED OAK, C | HRISTMA | S FERN, MICR | OSTE | GIUM, ELEPH | ANTOPUS |
| Aquatic Habitats (ex: subm | nerged or emerged | l aquatic vegetation | n, overhanging | banks/roots, leaf pacl | ks, large s | ubmerged wood, riff | les, deep pools): |
| Aquatic Organisms Obse | rved (list): | | | | | | |
| NA | | | | | | | |
| T&E Species Observed (li NA | (st): | | | | | | |
| Disturbances (ex: livestock | access, manure ir | n waterbody, waste | e discharge pipe | es): | | | |
| Tributary is: (check one) | ⊠ Natural | □ Art | ificial, man-m | ade 🗆 Manipu | ulated | | |
| Stream Quality ^a : (check one) | 🗆 High | □ Mo | derate | ⊠ Low | | | |

Waterbody ID: SNOL011

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

HEADWATER EPHEMERAL STREAM; BLACK RAT SNAKE OBSERVED NEARBY

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

50 MIXEN PINE-FORES Form Rev. 07/09/2014



Waterbody point snol011 facing North and upstream



Waterbody point snol011 facing South and downstream



Waterbody point snol011 facing West and across

| Survey Descriptio | n | | | | | | |
|----------------------------------------------|---------------------------------------|------------------------|------------------------|-------------------------|----------------------------|--------------------------------------|--------|
| Project Name: | | | me: | | Waterbody ID: | Date: | |
| Atlantic Coast Pipeline | | | | | SNOLUTZ | 9/12/2014 | |
| State: | County: | | Company: | | Crew Member Initia | lls: Photos: | _ |
| Virginia | Nottoway | | W&C | | RMS, WLM | 100-1215 to 1217 | 7 |
| Tract Number(s): | | | Nearest Mile | epost: | Associated | Wetland ID(s): | |
| 12-096 | | | 241 | | VV NOIUU6 | | |
| Survey Type: (check one) | ⊠Centerline | □Re-F | Route | □ Access Road | □Other: | | |
| Physical Attribute | s | | | | | | |
| Stream Classification: (check one) | Ephemera | l ⊠Inter | mittent | Perennial | | | |
| Waterbody Type: (check one) | □River ⊠ Stre | eam 🗆 Dito | :h □ Ca | anal 🛛 Other: | : | | |
| OHWM Width: | OHWM Indicat (check all that apply | or: | □ Clear lir on bank | ne ⊡Shelving | g ⊠Wrested vegetation | ⊠Scouring ⊟Wa | ater |
| Height: <u>1.0_</u> ft. | ⊠Bent, n vegetatio | natted, or missin n | g □Wrack li | ne ⊠Litter an debris | nd □Abrupt pl community | ant □Soil characteristic o change | change |
| Width of Waterbody - | Top of Width o | of Waterbody - | Toe of Slope | Width of Waterbo | ody - Water Edge to | Depth of Water: | |
| Bank to Top of Bank: | to Toe | of Slope: | | Water Edge: | | (Approx.) | |
| <u>_6_</u> ft. | _ | <u>2.5_</u> ft. | | N/A 🖂 | ft. | ft. | |
| Sinuosity: | Water | /elocity: | | Bank height | | Bank slope | |
| (check one) | (Approx.) | | | Right: | or # | Right: | |
| | | fr | DS | Left: | <u>2.5_</u> π. | Left: | es |
| Meander | Ing N/A⊠ | | | | <u>2.5_</u> ft. | _ <u>75</u> degre | es |
| Qualitative Attribu | utes | | | | | | |
| (check one) | [⊠] No water □C | Clear □Turb | id ⊡Sh on | een ⊡Sur surface scu | face □Algal ım mats | □Other: | |
| Substrate: | Bedrock DBo | ulder 🗆 Cobb | le 🗆 Grave | el 🛛 Sand 🛛 | ⊠ Silt/ clay ⊠ Orga | nic 🗆 Other: | |
| (check all that apply) % of Substrate: | <u>NA % NA </u> % | % <u>NA</u> % | <u>NA</u> % | <u> 5 </u> % | <u>90 % <u>5 </u>%</u> | <u>NA</u> % | |
| Width of Riparian Zon | e: Vegetative | Lavers: | | | | | |
| | (check all that | apply) | [⊠] Trees | : 🛛 🖂 | Saplings/Shrubs: | ⊠ Herbs | |
| <u>>100_ft</u> · N/A□ | Avg. DBH (approx.) | of Dominants: | <u>3</u> in. | - | <u>1</u> in. | | |
| Dominant Bank Vegeta | ation (list): | | | | | | |
| Tulip poplar, ironwo | ood, beech, ferr | ns, moss | | | | | |
| Aquatic Habitats (ex: s | ubmerged or emerged | aquatic vegetation | n, overhanging | banks/roots, leaf pacl | ks, large submerged wo | od, riffles, deep pools): | |
| Overhanging veget | tation, shallow p | ools | | | | | |
| Aquatic Organisms Ob | oserved (list): | | | | | | |
| Toad, frog | | | | | | | |
| T&E Species Observed | d (list): | | | | | | |
| none | | | | | | | |
| Disturbances (ex: livest | tock access, manure in | n waterbody, waste | e discharge pipe | es): | | | |
| none | | | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Art | tificial, man-m | ade 🗌 🗆 Manipu | ulated | | |
| Stream Quality ^a : (check one) | □ High | | oderate | ⊠ Low | | | |

| | Waterbody ID: |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| | Snol012 |
| ^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; di disturbance by livestock or man. | side; banks stable and protected verse and stable aquatic habitat; |
| Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active of function or riparian vegetation only moderately compromised; banks moderately unstable; water color is clour greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by live | channel width on each side; filter dy, submerged objects covered w stock or man. |
| Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vichannel width on each side; lack of regeneration; filtering function severely compromised; banks unstable turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish measure disturbance from livestock or man. | egetation less than 1/3 of the act (eroding); water color is muddy a ovement; little to no aquatic habit |
| Notes: | |
| ow quality intermittent choked with downed trees and mineral substrates fed by PEO seen | are slope |
| | |
| Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bound | ndary, and IDs of associated featu |
| Lipland (L) | |
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Waterbody point snol012 facing North and upstream



Waterbody point snol012 facing South and downstream



Waterbody point snol012 facing West and across

| Survey Descript | ion | | | | | | | | | | |
|----------------------------------------------|-------------------------|-----------------------------|------------------------|------------------------|----------------|---------------------|--------------|-------------------------------|--------------|--------------|--------------------|
| Project Name: | | Waterb | ody Nam | e: | | | W | aterbody ID: | | Date | e: |
| Atlantic Coast Pipeline | 9 | UNIt | o Bland | Creek | | | SI | NOL013 | | 9/13 | 3/2014 |
| State: | County: | | C | company: | | | Crew N | lember Initials | : F | Photos: | |
| Virginia | Nottoway | / | V | V&C | | | RMS, | WLM | | 100 -1223 | 5 TO 1225 |
| Tract Number(s): | | | Ν | learest Mile | post: | | | Associated W | etland | ID(s): | |
| 12-099 | | | 2 | 241 | | | | NA | | | |
| Survey Type: (check one) | ⊠Cer | nterline | □Re-Ro | oute | | ess Road | | □Other: | | | |
| Physical Attribu | tes | | | | | | | | | | |
| Stream Classificatio (check one) | n: □Eph | nemeral | ⊠Interm | ittent | □Pere | nnial | | | | | |
| Waterbody Type: (check one) | □River | Stream | Ditch | □ Ca | anal | Other: | | | | | |
| OHWM Width: 4 ft. | OHWM I (check all ti | Indicator: hat apply) | | ⊠ Clear lin on bank | e D | Shelving | g | □Wrested vegetation | | Scouring | □Water staining |
| Height: | ⊡ I veg | Bent, matted, c getation | or missing | □Wrack lii | ne D d | ⊡Litter an ebris | nd | □ Abrupt plan community ch | t ange | ⊠Soil chara | cteristic change |
| Width of Waterbody | - Top of V | Vidth of Wate | rbody - To | be of Slope | Width of | Waterbo | ody - W | ater Edge to | Depth | of Water: | |
| Bank to Top of Bank | c: to | o Toe of Slop | e: | | Water E | dge: | | | (Approx.) | | |
| <u>_8_</u> ft. | | <u>4_</u> ft. | | | N/A 🗆 | | <u>2</u> ft. | | N/A□ | 0.1 | <u>1</u> ft. |
| Sinuosity: | v | Vater velocity | : | | Bank he | ight | | | Bank s | lope | |
| (cneck one) | ť | Approx.) | 0.01 fra | | | Right: | 2 ft | | | Right: | 0 degrees |
| ⊠Meand | erina | | <u>0.01_</u> ips | | | Left: | <u></u> n. | | | Left: | |
| | | N/AL | | | | | <u>4_</u> π. | | | | <u>5</u> degrees |
| Qualitative Attril | butes | | | | | | | | | | |
| (check one) | \Box No water | ⊠Clear | □Turbid | l ⊡Sh on | een surface | ⊡Sur scu | face Im | □Algal [mats | □Other | : | |
| Substrate: | □ Bedrock | □ Boulder | | e 🛛 Grave | el ⊠S | and [| ∃ Silt/ c | lay 🛛 Organic | |)ther: | |
| % of Substrate: | <u>NA %</u> | <u>NA</u> % | <u>10_</u> % | <u>20</u> % | 60 | <u>%</u> | <u>NA %</u> | <u> 10 </u> % | NA | _% | |
| Width of Riparian Zo | one: Veg | etative Lavers | : | | | | | | | | |
| 100 (| (checi | k all that apply) | | [⊠] Trees: | | \triangleright | Saplin | igs/Shrubs: | \boxtimes | Herbs | |
| <u>>100 π</u> · N/A□ | Avg. (appro | | inants: | <u>12</u> in. | | _ | <u>3</u> in. | | | | |
| Dominant Bank Veg | etation (list): | | | | | | | | | | |
| SOURWOOD, SV | VEEIGUM, | WHITE OA | K, HOLI | LY, SPICE | BUSH | JACK- | IN-IH | E-PULPII, A | ATHAI | RIUM | |
| Aquatic Habitats (ex: SOFT SAND/MU | submerged or e | emerged aquatic | vegetation, (S, CPO | overhanging M | banks/root | s, leaf pacl | ks, large | submerged wood | , riffles, o | deep pools): | |
| Aquatic Organisms | Observed (list) |): | | | | | | | | | |
| EPT, CHIRONON | /IDAE | | | | | | | | | | |
| T&E Species Observ | ved (list): | | | | | | | | | | |
| NA | | | | | | | | | | | |
| Disturbances (ex: live | estock access, m | anure in waterbo | ody, waste o | discharge pipe | es): | | | | | | |
| NA | | | | | | | | | | | |
| Tributary is: (check one) | ⊠ Na | tural | 🗆 Artifi | cial, man-m | ade | 🗆 Manipu | ulated | | | | |
| Stream Quality ^a : (check one) | ⊠ Hig | jh | □ Mod | erate | [| Low | | | | | |

| | waterbody ID: |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| | SNOL013 |
| ^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on ear roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; disturbance by livestock or man. | ach side; banks stable and protected by diverse and stable aquatic habitat; no |
| Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the activ function or riparian vegetation only moderately compromised; banks moderately unstable; water color is c greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by | e channel width on each side; filtering loudy, submerged objects covered with livestock or man. |
| Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natura channel width on each side; lack of regeneration; filtering function severely compromised; banks unstab turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish severe disturbance from livestock or man. | l vegetation less than 1/3 of the active le (eroding); water color is muddy and movement; little to no aquatic habitat; |
| Notes: | |
| HEADWATER INTERMITTENT SPRINGHEAD/STREAM | |
| | |
| Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey b | oundary, and IDs of associated features) |
| -150'- -15 | 6' — N |
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Form Rev. 07/09/2014



Waterbody data point snol013 facing south, downstream



Waterbody data point snol013 facing north, upstream



Waterbody data point snol013 facing, across

| Survey Description | on | | | | | | | |
|---------------------------------------|---------------------|-----------------------------|----------------------|------------------------|---------------|------------------------|-------------------|----------------------------|
| Project Name: | | Waterbody | lame: | | W | aterbody ID: | | Date: |
| Atlantic Coast Pipeline | | UNI to Bla | ind Creek | | S | NOL014 | | 9/13/2014 |
| State: | County: | · | Company: | | Crew N | lember Initials | : Pho | otos: |
| Virginia | Nottoway | | W&C | | RMS, | WLM | 10 | 0 -1226 TO 1228 |
| Tract Number(s): | | | Nearest Mile | epost: | | Associated W | etland ID(| s): |
| 12-099 | | | 241 | | | NA | | |
| Survey Type: (check one) | ⊠Centerli | ne 🗆 Re | e-Route | □ Access Road | | □Other: | | |
| Physical Attribute | es | | | | | | | |
| Stream Classification: (check one) | : ⊠Epheme | eral ∏In | termittent | | | | | |
| Waterbody Type: | Ephonic | | | | | | | |
| (check one) | □River ⊠ S | stream 🗆 D | Ditch 🗆 C | anal 🛛 Other: | | | | |
| онwм | OHWM India | ator: | | | | | | |
| Width: _2_ft. | (check all that ap | ply) | Clear lin on bank | ne 🗆 Shelving | g | ☐Wrested vegetation | ⊠Sco | ouring ⊟Water staining |
| Height: | □Bent | matted, or miss | sing ⊠Wrack li | ine ⊠Litter ar | nd | Abrupt plan | t 🖂 S | Soil characteristic change |
| | vegetat | ion | | debris | | community ch | ange | |
| Width of Waterbody - | Top of Widtl | n of Waterbody | - Toe of Slope | Width of Waterbo | ody - W | ater Edge to | Depth of W | Vater: |
| Bank to Top of Bank: | to To | e of Slope: | | Water Edge: | | | (Approx.) | |
| <u>_6 f</u> t. | | <u>2</u> ft. | | | ft. | | | ft. |
| Sinuosity | Wate | r velocity: | | N/A⊠ Bank beight | | | N/A⊠ Bank slon | Δ |
| (check one) | (Appro. | к.) | | Right: | | I | Barrk Slop F | Right: |
| ⊠Straight | | fp | s | L offi | <u>3_</u> ft. | | | <u>55</u> degrees |
| □Meander | ing N/A⊠ |] | | Len. | <u>2</u> ft. | | | degrees |
| Qualitative Attribu | utes | | | · | | | | |
| Water Appearance: (check one) | ⊠No water Γ |]Clear □Ti | urbid ⊟Sh | neen ⊡Sur | face | | Other: | |
| | | | or | n surface scu | ım | mats | | |
| Substrate: | | Boulder 🗆 Co | bble 🛛 Grav | el 🛛 Sand 🛛 | ⊠ Silt/ c | lay 🗆 Organic | □ Othe | er: |
| % of Substrate: | <u>NA % NA</u> | <u>%</u> <u>NA</u> | % <u>NA</u> % | <u> 50 </u> % | <u>50_</u> % | <u>NA</u> % | <u>NA</u> % | |
| Width of Riparian Zon | e: Vegetati | ve Layers: | | | | | | |
| >100 ft. | (check all th | at apply) H of Dominants | ⊠ Trees | :: 2 | ⊠ Saplin | ngs/Shrubs: | 🛛 He | erbs |
| <u>_>100 n</u> N/A□ | (approx.) | | <u>12</u> in. | - | <u>3</u> ın. | | | |
| Dominant Bank Veget | ation (list): | | | | | | | |
| SOURWOOD, SW | EETGUM, WH | IITE OAK, H | OLLY, SPIC | EBUSH, BLACI | K HAV | V, CHRISTM | AS FER | N, RED MAPLE |
| Aquatic Habitats (ex: s | submerged or emerg | ed aquatic vegeta | tion, overhanging | banks/roots, leaf pack | ks, large | submerged wood, | riffles, deep | pools): |
| NA | | | | | | | | |
| Aquatic Organisms Ol | bserved (list): | | | | | | | |
| NA | | | | | | | | |
| T&E Species Observe | d (list): | | | | | | | |
| NA | | | | | | | | |
| Disturbances (ex: lives | tock access, manure | e in waterbody, wa | ste discharge pip | es): | | | | |
| NA | | | | | | | | |
| Tributary is: (check one) | ⊠ Natural | | Artificial, man-m | nade 🗆 Manipu | ulated | | | |
| Stream Quality ^a : | | | , | 5-7 L | - | | | |
| (CHECK ONE) | ⊔ High | | vioderate | ⊠ Low | | | | |

| | Waterbody ID: |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| | SNOL014 |
| ^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; d disturbance by livestock or man. | n side; banks stable and protected by iverse and stable aquatic habitat; no |
| Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active function or riparian vegetation only moderately compromised; banks moderately unstable; water color is clor greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by liv | channel width on each side; filtering udy, submerged objects covered with estock or man. |
| Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural width on each side; lack of regeneration; filtering function severely compromised; banks unstable turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish m severe disturbance from livestock or man. | vegetation less than 1/3 of the active (eroding); water color is muddy and novement; little to no aquatic habitat; |
| Notes: | |
| HEADWATER EPHEMERAL STREAM | |
| | |
| Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bou | Indary, and IDs of associated features) |
| -150'- -150' | 5' - N |
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| 176 | |

Form Rev. 07/09/2014



Waterbody data point snol014 facing north, upstream



Waterbody data point snol014 facing south, downstream



Waterbody data point snol014 facing across

| Survey Description | on | | | | | | | |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|--------------------------|-----------------------------|-------------------------------|-----------------|----------------------------|
| Project Name: | | Waterbody Na | me: | | Wa | aterbody ID: | | Date: |
| Atlantic Coast Pipeline | | UNI to Blan | d Creek | | Sr | NOL015 | | 9/13/2014 |
| State: | County: | | Company: | | Crew M | lember Initials | : Pho | tos: |
| Virginia | Nottoway | | W&C | | RMS, | WLM | 10 | 0-1242 TO 1244 |
| Tract Number(s): | | | Nearest Mile | epost: | | Associated W | etland ID(s | \$): |
| 12-099 | | | 241 | | | NA | | |
| Survey Type: (check one) | ⊠Centerlin | e □Re-F | Route | □ Access Road | | □Other: | | |
| Physical Attribute | es | | | | | | | |
| Stream Classification (check one) | : □Ephemer | al ⊡Inter | mittent | ⊠Perennial | | | | |
| Waterbody Type: (check one) | □River ⊠ St | ream 🗆 Dito | ch □ Ca | anal 🛛 Other: | : | | | |
| OHWM Width: | OHWM Indica (check all that app | ator: ly) | Clear lir on bank | ne ⊠Shelving | g | ⊠Wrested vegetation | ⊠Sco | ouring ⊟Water staining |
| Height:ft. | ⊠Bent, vegetatio | matted, or missin on | g □Wrack li | ne □Litter ar debris | nd | ☐ Abrupt plan community ch | t ⊠S ange | Soil characteristic change |
| Width of Waterbody - | Top of Width | of Waterbody - | Toe of Slope | Width of Waterbo | ody - Wa | ater Edge to | Depth of V | Vater: |
| Bank to Top of Bank: | to Toe | of Slope: | | Water Edge: | | | (Approx.) | |
| <u>_12_</u> ft. | - | <u>10</u> ft. | | | <u>3</u> ft. | | N/A 🗆 | <u>0.2</u> ft. |
| Sinuosity: | Water | velocity: | | Bank height | | | Bank slop | e |
| (check one) | (Approx. |) | | Right: | 05 4 | | F | light: |
| Maanda | ing | <u>_0.5</u> fps | 5 | Left: | <u>3.5_</u> II. | | | Left: |
| | nng N/A□ | | | - | <u>4.5_</u> ft. | | | <u>85</u> degrees |
| Qualitative Attrib | utes | | | | | | | |
| (check one) | □No water ⊠ | Clear DTurb | oid □Sh on | leen ⊡Sur surface scu | rface um | □Algal [mats | □Other: | |
| Substrate: | Bedrock Bedro | oulder 🛛 Cobb | ole 🛛 Grave | el 🛛 Sand 🛛 | ⊠ Silt/ cl | ay 🛛 Organic | □ Othe | r: |
| % of Substrate: | <u>NA_% _2 %</u> | <u> </u> | <u>45</u> % | <u>31_</u> % | <u>10_</u> % | 2_% | <u>NA</u> % | |
| Width of Riparian Zor | e: Vegetativ | e Layers: | | | | | | |
| _>100_ft· | (check all tha Avg. DBH (approx.) | t apply) I of Dominants: | ⊠ Trees _ <u>8_</u> in. | : 2 | ⊠ Saplin _ <u>1_</u> in. | gs/Shrubs: | ⊠ He | rbs |
| Dominant Bank Veget | tation (list): | | | | | | | |
| Cedar, ironwood, s | sweetgum, map | ole, ferns, mos | S | | | | | |
| Aquatic Habitats (ex: s | submerged or emerge | ed aquatic vegetatio | n, overhanging | banks/roots, leaf pac | ks, large : | submerged wood | , riffles, deep | pools): |
| Riffles, runs, pools | , woody debris | , leaf packs, o | verhanging | g banks | | | | |
| Aquatic Organisms O | bserved (list): | | | | | | | |
| Tadpoles, minnow | s, EPT, water p | enny | | | | | | |
| T&E Species Observe | d (list): | | | | | | | |
| NA | | | | | | | | |
| Disturbances (ex: lives | tock access, manure | in waterbody, waste | e discharge pipe | es): | | | | |
| NA | | | | | | | | |
| Tributary is: (check one) | ⊠ Natural | | tificial, man-m | ade 🗆 Manipu | ulated | | | |
| Stream Quality ^a : (check one) | ⊠ High | | oderate | □ Low | | | | |

| Γ | Waterbody ID: |
|---|---------------|
| | SNOL015 |
| | |

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:



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Waterbody data point snol015 facing north, downstream



Waterbody data point snol015 facing south, upstream


Waterbody data point snol015 facing east, across

| Survey Description | n | 1 | | | | |
|----------------------------------------------|-----------------------|---------------------|------------------|-------------------------|---------------------------------|--------------------------------------|
| Project Name: | | Waterbody Na | me: | | Waterbody ID: | Date: |
| Atlantic Coast Pipeline | | UNI to Blan | d Creek | | snoi016 | 9/13/2014 |
| State: | County: | | Company: | | Crew Member Initials | s: Photos: |
| Virginia | Nottoway | | W&C | | RMS, WLM | 100-1239 to 1241 |
| Tract Number(s): | | | Nearest Mile | epost: | Associated W | Vetland ID(s): |
| 12-099 | | | 241 | | Wnol007 | |
| Survey Type: (check one) | | e ⊡Re-I | Route | □Access Road | □Other: | |
| Physical Attribute | s | | | | | |
| Stream Classification: (check one) | Ephemera | al 🗌 Inter | rmittent | ⊠Perennial | | |
| Waterbody Type: | | | | | | |
| (check one) | River Str | eam 🗆 Dito | ch 🗆 Ca | anal 🛛 Other: | : | |
| онwм | OHWM Indica | tor: | | | | |
| Width: <u>8_</u> ft. | (check all that appl | y) | on bank | | g Divitested vegetation | |
| Height: <u>0.5 f</u> t. | ⊠Bent, r vegetatio | matted, or missin | ig ⊡Wrack li | ne ⊠Litter ar debris | nd DAbrupt plan community cl | nt □Soil characteristic change hange |
| Width of Waterbody - T | op of Width | of Waterbody - | Toe of Slope | Width of Waterbo | ody - Water Edge to | Depth of Water: |
| Bank to Top of Bank: | to Toe | of Slope: | | Water Edge: | | (Approx.) |
| <u>_15_</u> ft. | _ | _4ft. | | | <u>3</u> ft. | <u>0.25</u> ft. |
| Sinuosity: | Water | velocity: | | N/AL | | Bank slope |
| (check one) | (Approx.) | | | Right: | | Right: |
| | | <u>_1_</u> fps | | l eft [.] | <u>5_</u> ft. | _ <u>45</u> degrees |
| ⊠Meanderin | ng N/A□ | | | - | <u>3.5_</u> ft. | <u>60</u> degrees |
| Qualitative Attribu | tes | | | | | |
| Water Appearance: | No water 🛛 🕅 | Clear ⊡Turk | vid ⊡Sh | | | □Other: |
| | | | on | surface scu | um mats | |
| Substrate: | Bedrock 🗆 Bo | oulder 🛛 Cobb | ole 🛛 Grave | el 🛛 Sand 🛛 | 🛛 Silt/ clay 🛛 Organie | c 🗆 Other: |
| % of Substrate: | 5_% <u>NA</u> | % <u>5</u> % | <u> 25 </u> % | <u> 60 </u> % | <u>5_% NA_</u> % | <u>NA %</u> |
| Width of Riparian Zone | e: Vegetative | e Lavers: | | | | |
| | (check all that | apply) | ⊠ Trees | : 🛛 🛛 | I Saplings/Shrubs: | ⊠ Herbs |
| <u>>100 ft</u> · N/A□ | Avg. DBH (approx.) | of Dominants: | <u>13</u> in. | - | <u>3</u> in. | |
| Dominant Bank Vegeta | tion (list): | | | | | |
| Oak, maple, ironwo | od, holly, ferns | ; | | | | |
| Aquatic Habitats (ex: su | ubmerged or emerge | d aquatic vegetatio | n, overhanging | banks/roots, leaf pac | ks, large submerged wood | d, riffles, deep pools): |
| Riifles, runs, pools, | overhanging b | anks, leaf pa | cks | | | |
| Aquatic Organisms Ob | served (list): | | | | | |
| Tadpoles, minnows | , fish, worms | | | | | |
| T&E Species Observed | (list): | | | | | |
| none | | | | | | |
| Disturbances (ex: livesto | ock access, manure i | n waterbody, wast | e discharge pipe | es): | | |
| none | | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Ar | tificial, man-m | ade 🗆 Manipu | ulated | |
| Stream Quality ^a : (check one) | 🛛 High | | oderate | □ Low | | |

| Waterbody ID: |
|---------------|
| Snol016 |
| |

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Medium sized perennial stream with wide forested floodplain and adjacent wetland.



Form Rev. 07/09/2014



Waterbody data point snol016 facing south, upstream



Waterbody data point snol016 facing north, downstream



Waterbody data point snol016 facing west, across

| Survey Descriptio | n | | | | | | Dete |
|------------------------------------------------|--------------------------|--------------------|--------------------|--------------------------|--------------------|-----------------------|----------------------------|
| | | Waterbody Nar | me: d Crook | | | 1y ID: 17 | Date: |
| ATLANTIC COAST | PIPELINE | | u Creek | | SINULU | 17 | 9/13/2014 |
| State: | County: | | Company: | | Crew Member | Initials: | Photos: |
| Virginia | Nottoway | | W&C | | RMS, WLM | | 100-1249 to 1251 |
| Tract Number(s): | | | Nearest Mile | epost: | Associ | iated Wetland | ID(s): |
| 12-099 | | | 241 | | NA | | |
| Survey Type: (check one) | ⊠Centerline | □Re-F | Route | □Access Road | □Othe | r: | |
| Physical Attribute | s | | | | | | |
| Stream Classification: | | l ⊡Intor | mittont | | | | |
| Weterhedy Tymes | | | milleni | | | | |
| (check one) | River Str | eam 🗆 Ditc | :h □ Ca | anal 🛛 Other: | | | |
| онwм | OHWM Indicat | or: | | | | | |
| Width: ft. | (crieck all triat apply |) | on bank | | g ⊔vvre vegeta | ation | staining |
| Height: | ⊠Bent, n | natted, or missin | g □Wrack li | ne □Litter an | id □Abri | upt plant | Soil characteristic change |
| ft. N/A□ | vegetatio | n | | debris | comm | unity change | |
| Width of Waterbody - 1 Bank to Top of Bank: | op of Width of | of Waterbody - T | Toe of Slope | Width of Waterbo | ody - Water Ed | ge to Depth | of Water: |
| | | or Stope: | | water Euge. | | (Applox.) | 4 |
| <u>_5</u> ft. | - | <u>_2_</u> ft. | | | ft. | N/A⊠ | <u>n</u> . |
| Sinuosity: | Water | /elocity: | | Bank height | | Bank s | slope |
| | (Approx.) | fr | | Right: | 3 ft | | Right: 35 degrees |
| Meanderi | | ŀ | 5 | Left: | <u> </u> | | Left: |
| | N/A | | | | <u> </u> | | <u>45</u> degrees |
| Qualitative Attribu | ites | | | | | | |
| (check one) | [☑] No water □C | Clear □Turb | id ⊡Sh on | leen ⊡Sur surface scu | face □Alg ım ma | al ⊡Othei ts | r: |
| Substrate: | Bedrock 🗆 Bo | ulder 🗆 Cobb | le 🛛 Grave | el 🛛 Sand 🛛 | 🛛 Silt/ clay 🛛 | Organic 🗆 | Other: |
| % of Substrate: | <u>NA % NA 9</u> | % <u>NA</u> % | <u> 5 </u> % | 40_% | <u>55_% N/</u> | <u>4</u> % <u>N</u> A | <u>`</u> % |
| Width of Riparian Zone | e: Vegetative | Layers: | | | | | |
| | (check all that | apply) | [⊠] Trees | : 🛛 🛛 | Saplings/Shru | ıbs: 🛛 🖂 |] Herbs |
| <u>>100 π</u> · N/A□ | (approx.) | or Dominants: | <u>12</u> in. | - | _ <u>1_</u> in. | | |
| Dominant Bank Vegeta | ation (list): | | | _ | | | |
| SWEETGUM, MAP | LE, PINE, FER | N, DOGWOC | JD, POPLA | AR | | | |
| Aquatic Habitats (ex: su | ubmerged or emerged | aquatic vegetation | n, overhanging | banks/roots, leaf pack | ks, large submerg | ed wood, riffles, | deep pools): |
| NA | | | | | | | |
| Aquatic Organisms Ob | served (list): | | | | | | |
| NA | | | | | | | |
| T&E Species Observed | (list): | | | | | | |
| NA | | | | | | | |
| Disturbances (ex: livest | ock access, manure i | n waterbody, waste | e discharge pipe | es): | | | |
| | | | | | | | |
| (check one) | ⊠ Natural | □ Art | tificial, man-m | ade 🗆 Manipu | lated | | |
| Stream Quality ^a : (check one) | □ High | | oderate | ⊠ Low | | | |

| ^a High Quality: Natural channel, natural vegetation extend roots; water color is clear to tea-colored; no barriers to disturbance by livestock or man. | s at least one or two active channel widths on each side; banks stable and protected by fish movement; many fish cover types available; diverse and stable aquatic habitat; no |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Moderate Quality: Altered channel evidenced by rip-rap function or riparian vegetation only moderately compromi greenish film; moderate odor; minor barriers to fish movem | b; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering ised; banks moderately unstable; water color is cloudy, submerged objects covered with nent; fair aquatic habitat; minimum disturbance by livestock or man. |
| Low Quality: Channel is actively down cutting or wideni channel width on each side; lack of regeneration; filterin turbid; obvious pollutants (algal mats, surface scum, sur severe disturbance from livestock or man. | ing; rip rap and channelization excessive; natural vegetation less than 1/3 of the active ig function severely compromised; banks unstable (eroding); water color is muddy and face sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; |
| Notes: | |
| HEADWATER EPHEMERAL | |
| | |
| | |
| | |
| Waterbody Sketch (Include north arrow, centerline, dis | stance from centerline, data point location, survey boundary, and IDs of associated features) |
| | |
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| | Wholoo/ |
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| | Snolois |
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| 150 | |
| 15 - | » / , 150 » |
| | |
| | Form Rev. 07/09/2014 |
| - | |

Waterbody ID: SNOL017



Waterbody data point snol017 facing northeast, upstream



Waterbody data point snol017 facing southwest, downstream



Waterbody data point snol017 facing west, across

| Survey Descriptio | n | har , 1 1 1 | | | hu | | |
|-----------------------------------------------|---------------------|---------------------|----------------------|-------------------------|------------------------|-------------------|---------------------------|
| Project Name: | lino | | | K | Waterbody ID: | | Date: 0/15/2014 |
| | | | | N | SNOLUTO | | 9/13/2014 |
| State: | County: | | Company: | | Crew Member Initia | Is: Phot | |
| Virginia | Nottoway | | | | VVLIM, RIMS | 100 | J-1253 TO 1255 |
| 17act Number(s): | | | Nearest Mile | epost: | | wetiand ID(s | ;): |
| Survey Type: | | | 241 | | WINGEOOR | , | |
| (check one) | | e □Re-F | Route | □ Access Road | □Other: | | |
| Physical Attribute | S | | | | | | |
| Stream Classification: (check one) | Ephemer | al ⊡Inter | mittent | ⊠Perennial | | | |
| Waterbody Type: | • | | | | | | |
| (check one) | River St | ream 🗆 Dito | ch 🗆 Ca | anal 🛛 Other: | | | |
| ОНШМ | OHWM Indica | ator: | | — • · · · · | | | |
| Width: 5 ft. | (check all that app | (y) | Clear lin on bank | ie ⊠Shelving | g ⊡Wrested vegetation | ⊠Sco | staining UWater |
| Height: | ⊠Bent, | matted, or missin | g ⊡Wrack li | ne ⊠Litter an | nd 🗆 Abrupt pla | ant ⊠S | oil characteristic change |
| <u>0.5</u> ft. N/A□ | vegetatio | on | 0 | debris | community | change | 0 |
| Width of Waterbody - 1 Bank to Ton of Bank | op of Width | of Waterbody - | Toe of Slope | Width of Waterbo | ody - Water Edge to | Depth of W | /ater: |
| Balik to Top of Balik. | 10 100 | or slope. | | water Euge. | | (Appiox.) | 0.0.4 |
| <u>_20</u> ft. | - | <u>3</u> ft. | | | <u>2.5_</u> ft. | N/A□ | <u> </u> |
| Sinuosity: | Water | velocity: | | Bank height | | Bank slope | 9 |
| | (Approx. |) 0.9 fpc | | Right: | 4 ft. | R | ight: 50 degrees |
| ⊠Meanderi | | <u>_0.6_</u> ips | • | Left: | 25.4 | | Left: |
| | | | | | <u>5.5_</u> it. | | <u> </u> |
| Qualitative Attribu Water Appearance: | ites | | | | | | |
| (check one) | No water ⊠ | Clear 🗆 Turb | oid ⊡Sh on | een ⊡Sur surface scu | face □Algal ım mats | □Other: | |
| Substrate: | Bedrock 🛛 Be | oulder 🛛 Cobb | ole 🛛 Grave | el 🛛 Sand 🛛 | 🛛 Silt/ clay 🛛 Orgar | nic 🗆 Othe | r: |
| % of Substrate: | <u>5_% NA</u> | <u>% NA %</u> | <u> 10 </u> % | <u> 75 </u> % | <u>10_% NA_%</u> | <u>NA</u> % | |
| Width of Riparian Zone | e: Vegetativ | e Layers: | | | | | |
| >100 ft | (check all tha | t apply) | ⊠ Trees | | Saplings/Shrubs: | ⊠ He | rbs |
| <u>>100 II</u> N/A□ | (approx.) | of Dominants. | <u>10</u> in. | - | _ <u>1_</u> ın. | | |
| Dominant Bank Vegeta | ation (list): | | | | | | |
| ALDER, MAPLE, S | WEETGUM, B | OEHMARIA, | HONEYSU | CKLE, STILT C | JRASS | | |
| Aquatic Habitats (ex: si | ubmerged or emerge | d aquatic vegetatio | n, overhanging | banks/roots, leaf pack | ks, large submerged wo | od, riffles, deep | |
| | S, RIFFLE/PC | | X, SOFT S | ANDY SEDIME | ENT, CWD, OVE | RHANGIN | G VEG, ROOTMATS |
| Aquatic Organisms Ob | served (list): | | | | | | |
| FISH, CRAYFISH, MAY | LIES, WATER STR | RIDERS | | | | | |
| T&E Species Observed | l (list): | | | | | | |
| NA | | | | | | | |
| Disturbances (ex: livest | ock access, manure | in waterbody, waste | e discharge pipe | es): | | | |
| | | | | | | | |
| (check one) | ⊠ Natural | 🗆 Ari | tificial, man-m | ade 🛛 Manipu | ulated | | |
| Stream Quality ^a : | ⊠ Lliah | | odorato | | | | |
| (======) | ы пign | | Juerale | | | | |

| | Waterbody ID: |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| | SNOL018 |
| ^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on eac | h side: banks stable and protected by |

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

SMALL PERENNIAL STREAM, WITH INVASIVES IN RIPARIAN ZONE BUT DIVERSE AQUATIC HABITAT.





Waterbody data point snol018 facing northwest, downstream



Waterbody data point snol018 facing south, downstream



Waterbody data point snol018 facing east and across

| Survey Descr | ription | | | | | | | | | | | |
|--------------------------------------------|-----------------------|--------------------|--------------------------|--------------------|-------------------------------------|------------------|------------------------|------------------------------|------------------------|-------------------|-----------|----------------------|
| Project Name: | | | Waterb | ody Name | : | | | N | aterbody ID: | | | Date: |
| Atlantic Coast | Pipeline | 9 | UNT to | UNT to Bland Creek | | | S | noe050 | | | 4/25/2016 | |
| State: | Co | ounty: | | C | ompany: | | | Crew I | Member Initials | 8: | Photos: | |
| Virginia | N | ottoway | | Ν | RG | | | CG, S | SA | | 1-3 | |
| Tract Number(s) | | | | N | earest Mile | epost: | | | Associated W | etland | ID(s): | |
| 12-103 | | | | 24 | 46.8 | | | | none | | | |
| Survey Type: (check one) | | ⊠Centerli | ne | □Re-Rou | ute | □A | ccess Road | k | □Other: | | | |
| Physical Attri | ibutes | | | | | | | | | | | |
| Stream Classific (check one) | ation: | ⊠Epheme | eral | □Intermi | ttent | □P | erennial | | | | | |
| Waterbody Type (check one) | : □Ri [,] | ver 🖂 S | Stream | □ Ditch | | anal | Other | : | | | | |
| | | | | | | | | | | | | |
| Width: | | (check all that ap | pply) | | Clear lir on bank | ne | □Shelvir | ng | □Wrested vegetation | Σ | Scourin | g □Water staining |
| Height: | | □Bent, | , matted, o | or missing | □Wrack li | ne | □Litter a | nd | ⊠Abrupt plar | nt | □Soil c | haracteristic change |
| N/A□ | | vegetat | | | | | GEDIIS | | community ci | lange | | |
| Width of Waterbo Bank to Top of B | ody - Top Bank: | of Width to To | n of Water e of Slope | body - To : | e of Slope | Width Water | n of Waterb r Edge: | ody - W | ater Edge to | Depth (Approx. | of Wate | r: |
| 7 | _ft. | | <u>1_</u> ft. | | | | | f | t. | | | ft. |
| Sinuosity: | | Wate | r velocity | | | N/A⊠ Bank | height | | | Bank (| slone | |
| (check one) | aight | (Approx | x.) | • | | Bank | Right: | | | Dank | Right | : |
| | aigin | | | fps | | | L offi | <u>6_</u> ft. | | | L off | <u>70</u> degrees |
| □Me | andering | N/A⊠ | 3 | | | | Left: | <u>6_</u> ft. | | | Len | 70_ degrees |
| Qualitative At | ttribute | s | | | | | | | | | | |
| Water Appearand (check one) | ce: ⊠No | o water | □Clear | □Turbid | □Sh or | neen n surfac | ⊡Su ce sc | irface um | □Algal mats | □Othe | r: | |
| Substrate: | □B | edrock 🗆 E | Boulder | | □ Grav | el 🗵 | Sand | Silt/ c | lay 🗆 Organio | | Other: | |
| (check all that apply) % of Substrate: | | _% | % | % | | <u>% _:</u> | <u>30_</u> % | <u>70_</u> % | % | | % | |
| Width of Riparia | n Zone: | Vegetati | ve Layers | : | × - | | | | (0) | E. | | |
| NI/A 🖂 | <u>ft</u> . | Avg. DB | H of Dom | inants: | [™] Trees <u>10</u> in. | • | | ⊠ Saplir _ <u>0.5_</u> in | ngs/Shrubs: | Þ | Herbs | |
| Dominant Bank | Vegetatio | n (list): | | | | | | | | | | |
| Fern, ground o | cedar, tu | ılip tree, pir | ne | | | | | | | | | |
| Aquatic Habitats | (ex: subm | erged or emerg | ged aquatic | vegetation, o | overhanging | banks/r | oots, leaf pao | cks, large | submerged wood | l, riffles, | deep pool | s): |
| none | | | | | | | | | | | | |
| Aquatic Organis | ms Obsei | rved (list): | | | | | | | | | | |
| none | | | | | | | | | | | | |
| T&E Species Ob | served (lis | s <i>t)</i> : | | | | | | | | | | |
| none | | | | | | | | | | | | |
| Disturbances (ex | : livestock | access, manure | e in waterbo | dy, waste di | scharge pip | es): | | | | | | |
| none | | | | | | | | | | | | |
| Tributary is: (check one) | | ☑ Natural | | □ Artific | cial, man-m | ade | 🗆 Manip | ulated | | | | |
| Stream Quality ^a (check one) | : | □ High | | □ Mode | erate | | ⊠ Low | | | | | |

Waterbody ID:

Snoe050

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SNOE050 facing southwest upstream



Waterbody SNOE050 facing northeast downstream



Waterbody SNOE050 facing southeast across

| Survey Description | on | | | | | | <u> </u> | | | | |
|----------------------------------------------|------------------|-------------------------|---------------------|-----------------|---------------|---------------------|---------------|------------------------------|-------------|-----------|----------------------|
| Project Name: | Waterbody Name: | | | W | laterbody ID: | Date: | | | | | |
| Atlantic Coast Pipe | eline | U | UNT to Lee Lake | | | | S | Snoc102 | | | 11/10/2015 |
| State: | County: | | | Company | • | | Crew I | Member Initials | 5: | Photos: | |
| Virginia | Nottowa | ау | NRG | | | | CR, S | SA | | 1-3 | |
| Tract Number(s): | | | | Nearest N | lilepost: | | | Associated W | etland | ID(s): | |
| 12-105; 12-106 ;12 | 2-107 | | | 247.0 | | | | None | | | |
| Survey Type: (check one) | □c | enterline | ⊠Re | -Route | | ccess Road | ł | □Other: | | | |
| Physical Attribute | es | | | | | | | | | | |
| Stream Classification (check one) | n: □E | phemeral | ⊠Int | ermittent | □F | Perennial | | | | | |
| Waterbody Type: | | | | | | | | | | | |
| (check one) | □River | ⊠ Strea | im 🗆 Di | itch 🗆 | Canal | □ Other | : | | | | |
| OHWM Width: | OHWN (check a | Indicato | r: | ⊠ Clear | line | □Shelvir | ng | □ Wrested | | ∃Scourin | g □Water |
| <u>4</u> tt. | | | | ON DANK | | | | vegetation | | | stairing |
| Height: ft. N/A□ | C V | ⊠Bent, ma /egetation | tted, or miss | ing ⊡Wracl | k line | ⊠Litter a debris | nd | □Abrupt plar community ch | nt nange | □Soil cl | haracteristic change |
| Width of Waterbody - | Top of | Width of | Waterbody | - Toe of Slo | pe Widtl | n of Waterb | ody - W | ater Edge to | Depth | of Water | 1 |
| Bank to Top of Bank: | | to Toe of | Slope: | | Wate | r Edge: | | | (Approx. |) | |
| <u>_10</u> ft. | | 1 | ft. | | | | <u>4_</u> ft. | | | | <u>_0.5_</u> ft. |
| Sinuosity: | | Water ve | locity: | | N/A∟ Bank | height | | | Bank | slone | |
| (check one) | | (Approx.) | loonyi | | 20111 | Right: | | | Dunit | Right | : |
| | | | <u>_1_</u> fp | s | | L off: | <u>4_</u> ft. | | | Loft | <u>70</u> degrees |
| □Meande | ring | N/A□ | | | | Leit. | _4_ft. | | | Leit | . <u>70</u> degrees |
| Qualitative Attrib | utes | | | | | | | | 1 | | |
| Water Appearance: (check one) | | MCIe | ar ⊡Tu | rbid 🗆 | Sheen | | Irface | | ⊡Othe | r. | |
| (| | | | | on surfac | ce sc | um | mats | | 1. | |
| Substrate: (check all that apply) | Bedrock | 🗆 Boul | der 🗆 Col | oble 🛛 Gra | avel 🛛 | I Sand | ⊠ Silt/ o | clay 🗆 Organio | | Other: | |
| % of Substrate: | % | | _% | <u>% 10 %</u> | , D | <u>70_</u> % | <u>20_</u> % | % | , | % | |
| Width of Riparian Zor | ne: Ve | egetative L | avers: | | | | | | | | |
| 20 ft. | (ch | eck all that ap | ply) f Dominants | ⊠ Tre | es: | [| ⊠ Sapliı | ngs/Shrubs: | Σ | I Herbs | |
| N/A 🗆 | (ap | prox.) | Dominanto | <u>-8</u> 1 | 1. | • | <u>_2</u> in. | | | | |
| Dominant Bank Vege | tation (list): | | | | | | | | | | |
| Willow oak, sweet- | -gum, red | maple, | red cedar, | white oak | , Iobioli | y pine, Ja | apanes | se honeysuch | kle | | |
| Aquatic Habitats (ex: | submerged o | r emerged a | iquatic vegetat | ion, overhangi | ng banks/i | roots, leaf pao | cks, large | submerged wood | l, riffles, | deep pool | s): |
| Leaf Packs | | | | | | | | | | | |
| Aquatic Organisms O | bserved (li | st): | | | | | | | | | |
| Frogs | | | | | | | | | | | |
| T&E Species Observe | ed (list): | | | | | | | | | | |
| None | | | | | | | | | | | |
| Disturbances (ex: lives | stock access, | manure in v | waterbody, was | ste discharge p | pipes): | | | | | | |
| None | | | | | | | | | | | |
| Tributary is: (check one) | | latural | | Artificial, man | -made | 🗆 Manip | ulated | | | | |
| Stream Quality ^a : (check one) | | ligh | | Noderate | | □ Low | | | | | |

Waterbody ID:

Snoc102

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SNOC102 facing west upstream



Waterbody SNOC102 facing east downstream



Waterbody SNOC102 facing south across

| Survey Description | | | | | 10/ | anh a du ID. | Deter |
|--------------------------------------------------|------------------------|---------------------|-------------------------------|--------------------------|-------------------------------|------------------------|------------------------------|
| Project Name: Southeast Reliability | | I INT TO BLA | | ĸ | SN | CK030a | Date: 8/29/2014 |
| State: | | | | | | | |
| Virginia No | ottoway | | W&C | | JS, EB, | , SG | 2475-2477, X U D |
| Tract Number(s): | | | Nearest Mile | epost: | A | ssociated Wetla | and ID(s): |
| 12-110 | | | 243 | | V | WNOK026F | |
| Survey Type: (check one) | ⊠Centerline | □Re-F | Route | □ Access Road | |]Other: | |
| Physical Attributes | | | | | | | |
| Stream Classification: (check one) | ⊠Ephemera | l □Inter | mittent | Perennial | | | |
| Waterbody Type: (check one) | ver 🛛 Stre | eam 🗆 Ditc | h 🗆 Ca | anal 🗌 Other: | : | | |
| ОНWM | OHWM Indicat | or: | | | | | |
| Width: <u>3</u> ft. | (check all that apply |) | ☑ Clear lin on bank | ne ⊠Shelving | g | ⊠Wrested vegetation | ⊠Scouring ⊠Water staining |
| Height: | □Bent, m | natted, or missin | g | ne ⊠Litter ar | nd | Abrupt plant | □Soil characteristic change |
| N/A□ | vegetation | n | | debris | (| community chang | Je |
| Width of Waterbody - Top Bank to Top of Bank: | of Width of to Toe of | of Waterbody - 1 | Foe of Slope | Width of Waterbe | ody - Wat | ter Edge to Del | pth of Water: |
| | | o # | | Mater Lage. | tı. | | ft |
| <u>_0</u> 11. | - | <u>.3_</u> π. | | N/A⊠ | <u> </u> | N/A | n. \⊠ |
| Sinuosity: | Water v | /elocity: | | Bank height | | Bai | nk slope |
| | (Approx.) | fno | | Right: | 3 ft | | Right: 85 degrees |
| ⊠Meandering | | ips | | Left: | <u> </u> | | Left: |
| | IN/A⊠ | | | | <u></u> II. | | <u></u> degrees |
| Qualitative Attributes | 5 | | | | | | |
| (check one) | water DC | Clear □Turb | id □Sh on | een 🗆 Sur surface scu | rface um | □Algal □O mats | ther: |
| Substrate: Be (check all that apply) | edrock 🗌 Bo | ulder 🛛 Cobb | le 🛛 Grave | el 🛛 Sand 🛛 | ⊠ Silt/ cla | y 🛛 Organic | □ Other: |
| % of Substrate: <u>NA</u> | % <u>NA</u> % | % <u>NA</u> % | <u> 10 </u> % | <u> 50 </u> % | <u>30_</u> % | <u> 10 </u> % | <u>NA %</u> |
| Width of Riparian Zone: | Vegetative | Layers: | M - | 5 | | · /0 · · · · | |
| <u>>100 ft</u> · | Avg. DBH | of Dominants: | ⊡ I rees: _ <u>10_</u> in. | - | ≤ Saplings _ <u>2_</u> in. | s/Shruds: | |
| N/A | (approx.) | | | | | | |
| SWEET GUM, TULIP | TREE, BLAC PET VINE | CK OAK, WIL | OW OAK, | VIRGINIA MAG | GNOLIA | , BLUEBERR | Y,GRAPE, GRASSES, |
| Aquatic Habitats (ex: subme | erged or emerged | l aquatic vegetatio | n, overhanging | banks/roots, leaf pac | ks, large su | ubmerged wood, riff | les, deep pools): |
| Aquatic Organisms Obser | ved (list): | | | | | | |
| NA | | | | | | | |
| T&E Species Observed (lis | st): | | | | | | |
| NA | | | | | | | |
| Disturbances (ex: livestock a | access, manure ir | n waterbody, waste | e discharge pipe | es): | | | |
| NA | | | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Art | ificial, man-m | ade 🗆 Manipu | ulated | | |
| Stream Quality ^a : (check one) | 🗆 High | □ Mo | derate | ⊠ Low | | | |

| | Waterbody ID: SNOK030a |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| ^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types availab disturbance by livestock or man. | each side; banks stable and protected by le; diverse and stable aquatic habitat; no |
| Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the ac function or riparian vegetation only moderately compromised; banks moderately unstable; water color is greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance b | tive channel width on each side; filtering cloudy, submerged objects covered with by livestock or man. |
| Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natu channel width on each side; lack of regeneration; filtering function severely compromised; banks unst turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fis severe disturbance from livestock or man. | aral vegetation less than 1/3 of the active able (eroding); water color is muddy and sh movement; little to no aquatic habitat; |
| Notes: | |
| EPHEMERAL STREAM PORTION OF SNOK030, FLOWS NE AND BECOMES IN WETLAND WNOK026 INTO WNOK025. SEVERAL POOLS, A FEW WITH <1 INCH (EVENING OF 8/28. | NTERMITTENT. FLOWS FROM OF WATER FROM RAIN EVENT |
| SNIK0305 Waterbody Sketch (Include north arrow, centerline distance from centerline, data point location, survey) | / boundary, and IDs of associated features) |
| NUICO31 VPLAND Forest WNOKO26 YS | NOKOZO |
| 22, 1501 | |
| | Form Rev. 07/09/2014 |



Waterbody data point snok030a facing across



Waterbody data point snok030a facing upstream



Waterbody data point snok030a facing downstream

| Survey Descript | ion | | <u></u> | | Wa | torbody ID: | | Data |
|----------------------------------------------|----------------------------------|------------------------|----------------------------------------|----------------------------|---------------------|----------------------------|-------------------|----------------------|
| Southeast Reliab | ility | | | | SN | | | 8/28/2014 |
| State: | County | | | | | ombor Initials: | Photos | 0,20,2011 |
| Virginia | Nottoway | | W&C | | JS, EB | | 100-02 | 267 TO 0269 U D X |
| Tract Number(s): | | | Nearest Mile | epost: | 4 | Associated We | etland ID(s): | |
| 12-108 & 12-110 | | | 243 | | Y | WNOK023F | | |
| Survey Type: (check one) | ⊠Centerlir | ne □Re- | Route | □ Access Road | | Other: | | |
| Physical Attribu | tes | | | | | | | |
| Stream Classificatio (check one) | n: □Epheme | ral 🛛 🖾 Inte | rmittent | Perennial | | | | |
| Waterbody Type: (check one) | □River ⊠ S | tream 🗆 Dite | ch 🗆 Ca | anal 🛛 Other: | : | | | |
| OHWM Width: <u>5.</u> ft. | OHWM Indic (check all that ap | e ator: ply) | ⊠ Clear lir on bank | ne 🗆 Shelving | g | ⊠Wrested vegetation | ⊠Scourin | g ⊟Water staining |
| Height: N/A□ | □Bent, vegetat | matted, or missir | ng ⊡Wrack li | ne ⊠Litter ar debris | nd | Abrupt plant community cha | ange □Soil c | haracteristic change |
| Width of Waterbody Bank to Top of Bank | - Top of Width | of Waterbody - | Toe of Slope | Width of Waterbo | ody - Wa | ter Edge to | Depth of Wate | r: |
| <u>_8 ft</u> . | | _4_ft. | | | ft. | Ì | N/A⊠ | ft. |
| Sinuosity: | Wate | r velocity: | | Bank height | | E | Bank slope | |
| (check one) | (Approx | (.) | | Right: | 4 ft. | | Right | : 70 degrees |
| ⊠Meand | ering N/AR | ips | | Left: | | | Lef | t: 70 degrees |
| Qualitative Attri | hutes | | | | | | | <u></u> ==g. = = = |
| Water Appearance: | | | | | | | | |
| (check one) | [⊠] No water □ |]Clear □Turl | oid ⊡Sh on | neen ⊡Sur i surface scu | rface um | □Algal □ mats | ∃Other: | |
| Substrate: (check all that apply) | | Boulder 🗆 Cobl | ble 🛛 Grave | el 🛛 Sand 🛛 | □ Silt/ cla | ay 🛛 Organic | □ Other: | |
| % of Substrate: | <u>NA</u> % <u>NA</u> | <u>_% NA</u> % | <u> 10 </u> % | <u> 80 </u> % | <u>NA </u> % | <u> 10 </u> % | <u>NA</u> % | |
| Width of Riparian Zo | one: Vegetati | ve Layers: | × T | | | o /Ohmuh au | ∑7 I I anh a | |
| <u>>100 ft</u> · N/A□ | Avg. DB (approx.) | H of Dominants: | [™] Trees _ <u>10_</u> in. | : 2 | ⊴ Sapiing _2_in. | js/Shruds: | | |
| Dominant Bank Veg GRASSES, FERI | etation (list): NS, BLACK GU | M, | | | | | | |
| Aquatic Habitats (ex POOLS | submerged or emerg | ed aquatic vegetatio | on, overhanging | banks/roots, leaf pac | ks, large s | ubmerged wood, | riffles, deep poo | s): |
| Aquatic Organisms | Observed (list): | | | | | | | |
| FROGS, CRAYF | ISH BURROWS | 5 | | | | | | |
| T&E Species Observ | /ed (list): | | | | | | | |
| Disturbances (ex: live | estock access, manure | e in waterbody, wast | e discharge pipe | es): | | | | |
| NA | | | 30 P/P/ | , | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Ar | tificial, man-m | ade 🗌 Manipu | ulated | | | |
| Stream Quality ^a : (check one) | 🗆 High | | oderate | ⊠ Low | | | | |

| Waterbody ID: |
|---------------|
| SNOK030b |
| |

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

INTERMITTENT PORTION OF REACH FLOWS INTO WETLAND WNOK023F. POOLS PRESENT BUT NO FLOW AT TIME OF SURVEY.





Waterbody point snok030b facing South and upstream



Waterbody point snok030b facing North and downstream



Waterbody point snok030b facing West and across

| Survey Desc | cription | | - | | | | | 1 | | | | |
|--------------------------------|----------------------------|------------------------------|------------------------------|--------------|----------------------|----------------|---------------|-----------------------------|------------------|------------------|-------------|------------------|
| Project Name: | | | Waterbody Name: | | | | | w | Waterbody ID: | | |): |
| Southeast Reliability | | | UNT TO BLAND CREEK | | | | | S | SNOK031 | | | 9/2014 |
| State: County: | | • | Company: | | | | Crew I | rew Member Initials: Photos | | | | |
| Virginia Nottoway | | ottoway | 1 | | W&C | | JS, E | EB, SG | | 2447-2449, X U D | | |
| Tract Number(s | s): | | | N | earest Mile | post: | | | Associated W | etland I | D(s): | |
| 12-110 | | | | 2 | 43 | | | | WNOK024 | & WN0 | OK025F | |
| (check one) | | ⊠Centerlir | ne | □Re-Ro | ute | □Ac | cess Roa | ad | □Other: | | | |
| Physical Att | ributes | | | | | | | | | | | |
| Stream Classifi (check one) | ication: | ⊠Epheme | ral | □Interm | ittent | □Pe | erennial | | | | | |
| Waterbody Typ | e: | | | | | | | | | | | |
| (check one) | □Riv | ver ⊠ S | tream | Ditch | □ Ca | anal | □ Othe | ər: | | | | |
| онwм | | | ator: | | | | | • | 5714/ | 534 | . | |
| Width: f | t. | (спеск ал тасар) | <i>лу)</i> | | ☑ Clear line | | | ing | vegetation | | Scouring | staining |
| Height: | | □Bent, | matted, o | or missing | □Wrack lir | ne | ⊠Litter | and | □ Abrupt plan | t í | □Soil chara | cteristic change |
| | <u>5 ft.</u> | vegetat | egetation debris | | | | community ch | ange | | | | |
| Width of Water | body - Top | of Width | of Wate | rbody - To | e of Slope | Width | of Water | body - W | ater Edge to | Depth o | of Water: | |
| Bank to Top of | Bank: | to Io | e of Slop | e: | | water | Edge: | | | (Approx.) | | |
| | <u>8</u> ft. | | <u>2</u> ft. | | | | | <u>ft</u> . | | NI/A 🖂 | | <u>f</u> t. |
| Sinuosity: | | Wate | velocitv | <i>.</i> | | N/A⊠ Bank I | heiaht | | | Bank sl | ope | |
| (check one) | traight | (Approx | :.) | - | | | Right: | | | | Right: | |
| | dagn | | | fps | | | l oft· | <u>2.5</u> ft. | | | _ <u>70</u> | degrees |
| ⊠M | leandering | N/A⊠ | | | | | Lont | <u>2.5</u> ft. | | | | <u>)</u> degrees |
| Qualitative A | Attributes | 5 | | | | | | | | | | |
| (check one) | ince: ⊠No | water | Clear | □Turbid | ⊡Sh on | een surface | ⊐S e s | Surface cum | □Algal I mats | □Other: | | |
| Substrate: | 🗆 Be | edrock 🗆 E | oulder | | □ Grave | el 🛛 | Sand | ⊠ Silt/ c | lay 🛛 Organic | | ther: | |
| % of Substrate: | : <u>NA</u> | % <u>NA</u> | <u>%</u> | <u>NA</u> % | <u>NA</u> % | 5 | <u>0 </u> % | <u>40</u> % | <u> 10 </u> % | NA | _% | |
| Width of Ripari | ian Zone: | Vegetati | ve Layers | 5: | | | | | | | | |
| >100 |) ft. | (check all the Avg. DB | at apply) H of Dom | inants: | ⊠ Trees: | | | ⊠ Saplir | ngs/Shrubs: | \boxtimes | Herbs | |
| N/A 🗆 | <u> </u> | (approx.) | | | <u> 12 </u> 11. | | | <u></u> _III. | | | | |
| Dominant Bank | k Vegetation | ו <i>(list)</i> : דחרה חו | | | | | | | | | | |
| BUGLEWEE | M, TULIP <u>D. TRUM</u> | PET VINE | | K, WILC | W OAK, | VIRG | | | | RRY,G | | RASSES, |
| NA | LS (ex. Subme | erged of enlerg | eu aqualic | vegetation, | overnanging | Dariks/TO | iois, ieai pa | acks, large | submerged wood | , nines, u | eep pools): | |
| Aquatic Organi | isms Obser | ved (list): | | | | | | | | | | |
| NA | | | | | | | | | | | | |
| T&E Species O | bserved (lis | st): | | | | | | | | | | |
| NA | | , | | | | | | | | | | |
| Disturbances (e | ex: livestock a | access, manure | in waterbo | ody, waste d | lischarge pipe | es): | | | | | | |
| NA | | | | | | | | | | | | |
| Tributary is: (check one) | | ⊠ Natural | | □ Artifi | cial, man-m | ade | □ Mani | pulated | | | | |
| Stream Quality (check one) | a | □ High | | | erate | | ⊠ Low | | | | | |

| | Waterbody ID: |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| | SNOK031 |
| ^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; di disturbance by livestock or man. | n side; banks stable and protected by iverse and stable aquatic habitat; no |
| Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active function or riparian vegetation only moderately compromised; banks moderately unstable; water color is clougreenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by live | channel width on each side; filtering udy, submerged objects covered with estock or man. |
| Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural v channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish m severe disturbance from livestock or man. | regetation less than 1/3 of the active (eroding); water color is muddy and ovement; little to no aquatic habitat; |
| Notes: | |
| EPHEMERAL STREAM FLOWS FROM HEADWATER WETLAND WNOK025F, FLOWS N | E INTO SNOK030. |
| Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey bou | ndary, and IDs of associated features) |
| VPLAND Forest NOKOZS SOF | |

WNOKOZU



Waterbody point snok031 facing across



Waterbody point snok031 facing upstream



Waterbody point snok031 facing downstream

| Survey Description | | | | | har. | atasha da IDa | | Deter | |
|--------------------------------------------------|------------------------|------------------------------------------|------------------------|--------------------------------|--------------------------------------|-----------------------------------------------|---------------------------|--------------------------|--|
| Project Name: Southeast Reliability | | I INT TO BL | | K | SM SN | aterbody ID: | | Date: 8/29/2014 | |
| State: | | | | | | Dhete | 0/23/2014 | | |
| Virginia Nottoway | | | W&C | JS, EB, SG | | | 2475 | -2477, X U D | |
| Tract Number(s): | | | Nearest Mile | epost: | | Associated Wetland | | | |
| 12-110 | | | 243 | | | WNOK026F | | | |
| Survey Type: (check one) | ⊠Centerline | □Re-F | Route | □ Access Road | | □Other: | | | |
| Physical Attributes | | | | | | | | | |
| Stream Classification: (check one) | ⊠Ephemera | I □Inter | mittent | Perennial | | | | | |
| Waterbody Type: (check one) | ver 🛛 Stre | eam 🗆 Dito | h 🗆 Ca | anal 🗌 Other | : | | | | |
| ОНWM | OHWM Indicat | or: | | | | | | | |
| Width: <u>3</u> ft. | (check all that apply |) | ⊠ Clear lir on bank | ne ⊠Shelvin | g | ⊠Wrested ⊠Scouring ⊠Water vegetation staining | | | |
| Height: | □Bent, m | natted, or missin | g | ne ⊠Litter ar | nd | □Abrupt plant □Soil characteristic char | | | |
| N/A□ | vegetation | 1 | | debris | | community change | | | |
| Width of Waterbody - Top Bank to Top of Bank: | of Width of to Toe | of Waterbody - ⁻ of Slope: | Foe of Slope | Width of Waterb Water Edge: | ody - Wa | ater Edge to | Depth of Wat (Approx.) | er: | |
| 6 ft | | 3 ft | | J. J. J. | ft | | | ft. | |
| <u></u> !!! | | <u>o_</u> n. | | N/A⊠ | <u> </u> | | N/A⊠ | <u> </u> | |
| Sinuosity: (check one) | Water (Approx.) | elocity: | | Bank height | | | Bank slope | | |
| □Straight | | fps | | Right: | <u>3_</u> ft. | | Rig | nt: <u>85</u> degrees | |
| ⊠Meandering | N/A⊠ | | | Left: | 2 ft. | | Le | Left: 70 degrees | |
| Qualitative Attributes | ; ; | | | | | | | | |
| Water Appearance: | | | | | | | | | |
| | | lear ⊔iurb | id LISh on | surface scu | um | mats | | | |
| Substrate: Be (check all that apply) | edrock 🗆 Bo | ulder 🗆 Cobb | le 🛛 Grave | el 🛛 Sand 🛛 | ⊠ Silt/ cl | ay 🛛 Organic | □ Other: | | |
| % of Substrate: <u>NA</u> | % <u>NA</u> % | <u>NA</u> % | <u> 10 </u> % | <u> 50 </u> % | <u>30 </u> % | <u> 10 </u> % | <u>NA</u> % | | |
| Width of Riparian Zone: | Vegetative | Layers: | ⊠ ⊤ | - 5 | | | | _ | |
| <u>>100 ft</u> · | Avg. DBH | of Dominants: | □ Trees: _10_in. | . 2 | ⊠ Saplings/Snrubs: ⊠ Herbs _2_in. | | | | |
| N/A Dominant Bank Vegetation | (approx.) | | | | | | | | |
| SWEET GUM, TULIP BUGLEWEED, TRUM | TREE, BLAC PET VINE | CK OAK, WIL | .OW OAK, | VIRGINIA MAG | GNOLI | A, BLUEBEF | RRY,GRAF | PE, GRASSES, | |
| Aquatic Habitats (ex: subme | erged or emerged | l aquatic vegetation | n, overhanging | banks/roots, leaf pac | ks, large s | submerged wood, | riffles, deep po | ools): | |
| Aquatic Organisms Obser | ved (list): | | | | | | | | |
| NA | . , | | | | | | | | |
| T&E Species Observed (lis | st): | | | | | | | | |
| NA | | | | | | | | | |
| Disturbances (ex: livestock a | access, manure ir | n waterbody, waste | e discharge pipe | es): | | | | | |
| NA | | | | | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Art | ificial, man-m | ade 🗆 Manipi | ulated | | | | |
| Stream Quality ^a : (check one) | 🗆 High | □ Mo | derate | ⊠ Low | | | | | |

| | Waterbody ID: SNOK030a |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ^a High Quality: Natural channel, natural vegetation extends at least one roots; water color is clear to tea-colored; no barriers to fish movemer disturbance by livestock or man. | e or two active channel widths on each side; banks stable and protected by ent; many fish cover types available; diverse and stable aquatic habitat; no |
| Moderate Quality: Altered channel evidenced by rip-rap; natural veg function or riparian vegetation only moderately compromised; banks m greenish film; moderate odor; minor barriers to fish movement; fair aqua | getation extends 1/3-1/2 of the active channel width on each side; filtering noderately unstable; water color is cloudy, submerged objects covered with atic habitat; minimum disturbance by livestock or man. |
| Low Quality: Channel is actively down cutting or widening; rip rap ar channel width on each side; lack of regeneration; filtering function se turbid; obvious pollutants (algal mats, surface scum, surface sheen); severe disturbance from livestock or man. | ind channelization excessive; natural vegetation less than 1/3 of the active everely compromised; banks unstable (eroding); water color is muddy and heavy odor; severe barriers to fish movement; little to no aquatic habitat; |
| Notes: | |
| EPHEMERAL STREAM PORTION OF SNOK030, FLOW WETLAND WNOK026 INTO WNOK025. SEVERAL POOLS EVENING OF 8/28. | /S NE AND BECOMES INTERMITTENT. FLOWS FROM S, A FEW WITH <1 INCH OF WATER FROM RAIN EVENT |
| Waterbody Sketch (Include north arrow, centerline distance from ce | enterline, data point location, survey boundary, and IDs of associated features) |
| VPLAND Forst WNOKOZO | WNOKODS ¹ / ₂ / ₂ ¹ / ₂ / ₂ / ₃ / ₃ / ₂ / ₃ / ₃ / ₂ / ₃ |
| 5, 50 f | 1 1 5 0 Ft |
| | Form Rev. 07/09/2014 |



Waterbody data point snok030a facing across



Waterbody data point snok030a facing upstream


Waterbody data point snok030a facing downstream

| Survey Descrip | tion | Watarb | ody Nome | | | 14 | /starbady/D | | Data |
|----------------------------------------------|---------------------------------|------------------------------------|---------------|------------------------------|----------------------|--------------------|------------------------------|-----------------------|----------------------------|
| Southeast Reliat | UNT 1 | O BI AN | ID CRFF | к | S | | | 8/28/2014 | |
| State: | County | | | | | Crow | Mombor Initials | . 0 | botos: |
| Virginia Nottoway | | | W&C JS, | | | JS, E | B | . 1 | 00-0267 TO 0269 U D X |
| Tract Number(s): | | | N | earest Mile | epost: | | Associated W | etland II | D(s): |
| 12-108 & 12-110 | | | 2 | 43 | | | WNOK023 | = | |
| Survey Type: (check one) | ⊠Cent | erline | □Re-Ro | ute | □Access Roa | ad | □Other: | | |
| Physical Attribu | ites | | | | | | | | |
| Stream Classification (check one) | on: □Ephe | emeral | ⊠Intermi | ttent | Perennial | | | | |
| Waterbody Type: (check one) | | ⊠ Stream | Ditch | □ Ca | anal 🗆 Oth | er: | | | |
| OHWM Width: <u>5</u> ft. | OHWM In (check all the | dicator: at apply) | | ☑ Clear lin on bank | ne ⊡Shelv | ing | ⊠Wrested vegetation | ⊠S | couring ⊟Water staining |
| Height: ft. N/A□ | ⊟Be vege | ent, matted, c etation | or missing | □Wrack lii | ne ⊠Litter debris | and | □Abrupt plan community ch | t 🛛 | Soil characteristic change |
| Width of Waterbody Bank to Top of Ban | /-Topof Wi k: to | idth of Water | body - To | e of Slope | Width of Water | rbody - W | ater Edge to | Depth of (Approx.) | f Water: |
| _ <u>8 f</u> t. | | <u>4_ft.</u> | | | N/AM | ft. | | N/A 🖂 | ft. |
| Sinuosity: | W | ater velocity | : | | Bank height | | | Bank slo | оре |
| (check one) | nt (Ar | oprox.) | fra | | Right: | ⊿ ft | | | Right: |
| ⊠Meano | dering N/ | | ips | | Left: | <u> </u> | | | Left: |
| | | AA | | | | <u>4_</u> 11. | | | <u></u> degrees |
| Qualitative Attri Water Appearance: | butes | | | | | | | | |
| (check one) | [⊠] No water | □Clear | □Turbid | ⊡Sh on | een □S surface s | Surface | □Algal I mats | □Other: | |
| Substrate: | Bedrock | Boulder | | ⊠ Grave | el 🛛 Sand | □ Silt/ c | clay 🛛 Organic | : 🗆 Ot | her: |
| % of Substrate: | <u>NA</u> % | <u>NA %</u> | <u>NA </u> % | <u> 10 </u> % | <u> 80 </u> % | <u>NA</u> % | <u> 10 </u> % | NA | % |
| Width of Riparian Z | one: Veget | tative Layers | : | | | | | | |
| <u>>100 ft</u> · N/A□ | (check a Avg. l (approx | all that apply) DBH of Dom) | inants: | ⊠ Trees: _ <u>10_</u> in. | : | ⊠ Saplir _2_in. | ngs/Shrubs: | | Herbs |
| Dominant Bank Veç GRASSES, FER | getation (list): NS, BLACK G | GUM, | | | | | | | |
| Aquatic Habitats (e) POOLS | : submerged or em | nerged aquatic | vegetation, o | overhanging | banks/roots, leaf p | acks, large | submerged wood | , riffles, de | eep pools): |
| Aquatic Organisms | Observed (list): | | | | | | | | |
| FROGS, CRAYF | ISH BURROW | WS | | | | | | | |
| T&E Species Obser | ved (list): | | | | | | | | |
| Disturbances (ex: liv NA | vestock access, ma | nure in waterbo | ody, waste di | ischarge pipe | es): | | | | |
| Tributary is: (check one) | ⊠ Natu | ural | □ Artific | cial, man-m | ade 🗆 Man | ipulated | | | |
| Stream Quality ^a : (check one) | □ High | 1 | □ Mode | erate | ⊠ Low | | | | |

| Waterbody ID: |
|---------------|
| SNOK030b |
| |

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

INTERMITTENT PORTION OF REACH FLOWS INTO WETLAND WNOK023F. POOLS PRESENT BUT NO FLOW AT TIME OF SURVEY.





Waterbody point snok030b facing South and upstream



Waterbody point snok030b facing North and downstream



Waterbody point snok030b facing West and across

| Survey Description | n | h | | | | | |
|------------------------------------------------|-----------------------------------------|-------------------------|-----------------------|------------------------|--------------------------|-----------------------------|-----|
| Project Name: | Waterbody Nar | ne: | ali | Waterbody ID: | Date: | | |
| | У | | | ek | SINCIVIOUT | 8/29/2014 | |
| State: | County: | | Company: | | Crew Member Initials | s: Photos: | |
| Virginia | Nottoway | | W&C | | SG, EB | 2506-2508, X U D | |
| Tract Number(s): | | | Nearest Mile | epost: | Associated V | /etland ID(s): | |
| 12-113 Survey Tyme: | | | 244 | | VINOIVIOUI | | |
| (check one) | | Re-F | Route | □ Access Road | □Other: | | |
| Physical Attribute | S | | | | | | |
| Stream Classification: (check one) | | al 🗌 Inter | mittent | | | | |
| Waterbody Type: | | | | | | | |
| (check one) | River Str | eam 🗌 Dito | h 🗆 Ca | anal 🛛 🗆 Other: | | | |
| онwм | OHWM Indica | tor: | | | | | |
| Width: _ <u>2</u> ft. | (спеск ан тпат аррі) | /) | ⊠ Clear In on bank | ie ⊠Shelvinę | g ⊠Wrested vegetation | Scouring Water staining | |
| Height: | ⊟Bent, n | natted, or missin | g | ne ⊠Litter an | nd 🛛 🗆 Abrupt plai | nt Soil characteristic char | nge |
| ft. N/A□ | vegetatio | n | - | debris | community cl | nange | - |
| Width of Waterbody - T Bank to Top of Bank: | op of Width of | of Waterbody - | Foe of Slope | Width of Waterbo | ody - Water Edge to | Depth of Water: | |
| | 10 100 | or Siope. | | Water Euge. | | () (pp (0) | |
| <u>_10 ft</u> . | - | <u>_2_</u> ft. | | N/A⊠ | <u></u> ft. | n. N/A⊠ | |
| Sinuosity: | Water | velocity: | | Bank height | | Bank slope | |
| | (,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | fos | | Right: | 2_ ft. | Right: 45 degrees | |
| ⊠Meanderii | | | | Left: | 15 ft | Left: 50 degrees | |
| | | | | | <u></u> n. | dog:000 | |
| Water Appearance: | les | | | | | | |
| (check one) | ³ No water □C | Clear □Turb | id □Sh on | een | face □Algal ım mats | □Other: | |
| Substrate: | Bedrock 🗆 Bo | ulder 🗆 Cobb | le 🗆 Grave | el 🛛 Sand 🛛 | 🛛 Silt/ clay 🖾 Organi | c 🗆 Other: | |
| % of Substrate: | <u>NA</u> % <u>NA</u> % | % <u>NA</u> % | <u>NA</u> % | <u>20</u> % | <u>30 % <u>50 </u>%</u> | <u>NA</u> % | |
| Width of Riparian Zone | e: Vegetative | E Layers: | | | | | |
| >100 ft· | (check all that Avg. DBH | apply) of Dominants: | ⊠ Trees: 8 in | : 2 | Saplings/Shrubs: | ⊠ Herbs | |
| N/A 🗆 | (approx.) | | <u>_0_</u> m. | - | <u></u> | | |
| LOBLOLLY PINE, A | AMERICAN EL | M, SWEET G | UM, RED | CEDAR, FALS | E NETTLE, BIDEI | NS, BONESET | |
| Aquatic Habitats (ex: su | ubmerged or emerged | d aquatic vegetation | n, overhanging | banks/roots, leaf pacl | ks, large submerged wood | d, riffles, deep pools): | |
| NA | | | | | | | |
| Aquatic Organisms Ob | served (list): | | | | | | |
| NA | | | | | | | |
| T&E Species Observed | (list): | | | | | | |
| NA | | | | | | | |
| | ock access, manure i | n waterbody, waste | e discharge pipe | | | | |
| | | RESULTING | INSIKEA | | NU ALIEKEU HY | | |
| (check one) | ⊠ Natural | □ Art | ificial, man-m | ade 🗆 Manipu | ulated | | |
| Stream Quality ^a : (check one) | 🗆 High | | derate | ⊠ Low | | | |

| Waterbody ID: |
|---------------|
| SNOM001 |
| |

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:





Waterbody point snom001 facing across



Waterbody point snom001 facing upstream



Waterbody point snom001 facing downstream

| Survey Description | n | | | | | |
|------------------------------------------------|-----------------------------|---------------------------|------------------|-----------------------|--------------------------|------------------------------|
| Project Name: | Waterbody Nar | me: | | Waterbody ID: | Date: | |
| Southeast Reliability | y | | Lakes | | SNOWIUUZ | 8/30/2014 |
| State: | County: | | Company: | | Crew Member Initials | : Photos: |
| Virginia | Nottoway | | W&C | | SG, EB | 2540-2542, X U D |
| Tract Number(s): | | | Nearest Mile | epost: | Associated W | /etland ID(s): |
| 12-114 | | | 244 | | WNOM003 | F |
| Curvey Type: (check one) | | Re-F | Route | □Access Road | □Other: | |
| Physical Attribute: | S | | | | | |
| Stream Classification: | Enhemera | al ⊠Inter | mittent | | | |
| | | | millem | | | |
| (check one) | River 🛛 Str | eam 🗆 Dito | :h □Ca | anal 🛛 🗆 Other: | | |
| OHWM | OHWM Indicat | tor: | | | a | |
| <u>8 ft.</u> | | <i>')</i> | on bank | | vegetation | staining |
| Height: | ⊟Bent, n | natted, or missin | g □Wrack li | ne ⊠Litter ar | nd 🛛 🗆 Abrupt plan | t Soil characteristic change |
| ft. N/A□ | vegetatio | n | | debris | community ch | nange |
| Width of Waterbody - T Bank to Top of Bank: | op of Width of | of Waterbody - | Toe of Slope | Width of Waterbo | ody - Water Edge to | Depth of Water: |
| Ballk to Top of Ballk. | lo roe | or Siope. | | water Euge. | | |
| <u>_12</u> ft. | - | <u>8_</u> ft. | | | <u>2</u> ft. | <u>0.5</u> π. N/A□ |
| Sinuosity: | Water | velocity: | | Bank height | | Bank slope |
| | (Approx.) | 0.1 fpg | | Right: | 25 ft | Right: 60 degrees |
| ⊠Meanderir | | <u>_0.1_</u> ips | • | Left: | <u>2.0_</u> n. | Left: |
| | | | | - | <u>2.5_</u> ft. | <u>_85</u> degrees |
| Qualitative Attribu | tes | | | | | |
| (check one) | []] No water ⊠C | Clear □Turb | id ⊡Sh on | surface scu | face □Algal um mats | □Other: |
| Substrate: | Bedrock 🗆 Bo | ulder 🗆 Cobb | ole 🛛 Grave | el 🛛 Sand 🛛 | 🛛 Silt/ clay 🛛 Organio | c □ Other: |
| % of Substrate: _ | <u>NA</u> % <u>NA</u> % | % <u>NA</u> % | <u>30</u> % | <u>60</u> % | <u>10 % NA %</u> | <u>NA</u> % |
| Width of Riparian Zone | : Vegetative | Eayers: | | | | |
| >100 ft. | (check all that Avg. DBH | apply) of Dominants: | ⊠ Trees | : 🛛 🛛 | Saplings/Shrubs: | ⊠ Herbs |
| | (approx.) | | <u>_10_</u> iii. | - | <u></u> _III. | |
| RED OAK, SWEET | | TREE, LOBLO | OLLY PINE | , BLACK OAK, | , IRONWOOD, FL | OWERING DOGWOOD, |
| Aquatic Habitats (ex: su | I. RASPBERR | Y d aquatic vegetation | n, overhanging | banks/roots, leaf pac | ks, large submerged wood | l, riffles, deep pools): |
| POOLS, SAND BAR | RS, OVERHAN | IGING ROOT | S, DOWN | ED LOGS, SHE | ELVES WITH WET | LAND VEGETATION |
| Aquatic Organisms Ob | served (list): | | | | | |
| FISH, FROGS, WATER | STRIDERS, WAT | ER BEETLE | | | | |
| T&E Species Observed | (list): | | | | | |
| NA | | | | | | |
| Disturbances (ex: livesto | ock access, manure i | n waterbody, waste | e discharge pipe | es): | | |
| | | | | | | |
| (check one) | ⊠ Natural | □ Art | tificial, man-m | ade 🗌 Manipu | ulated | |
| Stream Quality ^a : (check one) | ⊠ High | □ Mo | oderate | □ Low | | |

| | | Waterbody ID: |
|---|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| | | SNOM002 |
| а | ^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each s | side; banks stable and protected by |

roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

ACTIVE FLOW AT TIME OF SURVEY. SOURCE IS UPSTREAM POND.FLOWS INTO TWIN LAKES. STREAM MAY BE PERENNIAL. RAIN EVENT ON 8-29-14. CHARACTERISTICS ARE HIGHLY VARIABLE. FLOW IS TO THE SOUTH





Waterbody point snom002 facing across



Waterbody point snom002 facing upstream



Waterbody point snom002 facing downstream

| Survey Description | | | | | Watark adv ID- | Deter |
|---------------------------------------------------------------------|----------------------------------------------|-------------------------|------------------------|--------------------------|--------------------------|----------------------------------------------|
| Project Name: | | Waterbody Na | me: | | Waterbody ID: | Date: 8/30/2014 |
| | 1 | | Lakes | | SINCINIOUS | 0/30/2014 |
| State: Co | ounty: | | Company: | | Crew Member Initials | s: Photos: |
| Virginia No | ottoway | | W&C | | SG, EB | 2544-2546, X U D |
| 1 ract Number(s): | | | Nearest Mile | epost: | Associated V | Vetland ID(s): |
| | | | 244 | | WNOM003 | F |
| (check one) | ⊠Centerline | □Re-F | Route | □ Access Road | □Other: | |
| Physical Attributes | | | | | | |
| Stream Classification: (check one) | ⊠Ephemera | I 🗌 Inter | mittent | | | |
| Waterbody Type | _p | | | | | |
| (check one) | ver 🛛 Stre | eam 🗆 Dito | ch 🗆 Ca | anal 🛛 🗆 Other: | : | |
| онwм | OHWM Indicat | or: | | | | |
| Width: <u>3</u> ft. | (check all that apply |) | ⊠ Clear lir on bank | ne 🗆 Shelving | g ⊠Wrested vegetation | Scouring □Water Staining |
| Height: | ⊡Bent. m | natted. or missin | a ⊡Wrack li | ne ⊠Litter ar | nd 🗆 Abrupt plar | nt Soil characteristic change |
| | vegetatio | n | 5 | debris | community cl | hange |
| Width of Waterbody - Top | of Width o | of Waterbody - | Toe of Slope | Width of Waterbo | ody - Water Edge to | Depth of Water: |
| Bank to Top of Bank: | to Toe | of Slope: | | Water Edge: | | (Approx.) |
| <u>_7_ft</u> . | _ | <u>3_</u> ft. | | | ft. | ft. |
| Sinuosity: | Water v | elocity: | | N/AKA Bank height | | Bank slope |
| (check one) | (Approx.) | | | Right: | | Right: |
| | | fps | | Left: | <u>2.0_</u> ft. | <u>90</u> degrees Left: |
| Meandering | N/A⊠ | | | - | <u>1.5_</u> ft. | _ <u>70</u> degrees |
| Qualitative Attributes | 6 | | | | | |
| (check one) | o water □C | Clear □Turb | oid □Sh on | leen ⊡Sur surface scu | face □Algal ım mats | □Other: |
| Substrate: Be | edrock 🗆 Bo | ulder 🗆 Cobb | ole 🛛 Grave | el 🛛 Sand 🛛 | 🗆 Silt/ clay 🛛 Organie | c 🗆 Other: |
| % of Substrate: <u>NA</u> | % <u>NA</u> % | % <u>NA</u> % | <u>20</u> % | <u> 80 </u> % | <u>NA % NA %</u> | <u>NA</u> % |
| Width of Riparian Zone: | Vegetative | Lavers: | | | | |
| 400 (| (check all that | apply) | [⊠] Trees | : 🛛 🛛 | Saplings/Shrubs: | ⊠ Herbs |
| <u>_>100_ft</u> · N/A□ | AV g. DBH (approx.) | of Dominants: | <u>10</u> in. | - | <u>_2_</u> in. | |
| Dominant Bank Vegetation | n (list): | | | | | |
| RED OAK, SWEET G AMERICAN BEECH. (Aquatic Habitats (ex: subm | UM, TULIP 1 CHRISTMAS erged or emerged | REE, LOBLO FERN. RAS | OLLY PINE PBERRY | banks/roots, leaf pack | , IRONWOOD, FL | OWERING DOGWOOD, d. riffles, deep pools): |
| OVERHANGING ROC | DTS | | | · · | | |
| Aquatic Organisms Obser | ved (list): | | | | | |
| NA | | | | | | |
| T&E Species Observed (lis | st): | | | | | |
| NA | | | | | | |
| Disturbances (ex: livestock | access, manure ir | n waterbody, waste | e discharge pipe | es): | | |
| NA | | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Art | tificial, man-m | ade 🗆 Manipu | ulated | |
| Stream Quality ^a : (check one) | 🗆 High | □ Mo | oderate | ⊠ Low | | |

| | SNOM003 |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a | ^a High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man. |
| | Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man. |
| | Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man. |
| | Notes: |

Waterbody ID:

FLOW BECOMES DENDRITIC NEAR DOWNSTREAM ROW BOUNDARY. FLOW IS TO THE SOUTH. Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features) upland Forest RUEY SNOM 003 ExTERY DP FURITE STRAT vNOM003 Fores 150 64 Form Rev. 07/09/2014



Waterbody point snom003 facing across



Waterbody point snom003 facing upstream



Waterbody point snom003 facing downstream

| Survey Description | n | her | | | | | — |
|----------------------------------------------|--------------------------|--------------------|--------------------|-------------------------|-----------------|-----------------------|-----------------------------|
| Project Name: | ., | Waterbody Nar | ne: | | W. | aterbody ID: | Date: |
| | y | | Lakes | | 31 | 101004 | 0/30/2014 |
| State: | County: | | Company: | | Crew N | lember Initials: | Photos: |
| Virginia | Nottoway | | W&C | | SG, E | В | 2564-2566, X U D |
| Tract Number(s): | | | Nearest Mile | epost: | | Associated Wetlan | d ID(s): |
| 12-116 | | | 244 | | | WNOM004F | |
| Survey Type: (check one) | ⊠Centerline | Re-F | Route | □Access Road | | □Other: | |
| Physical Attribute | s | | | | | | |
| Stream Classification: (check one) | Ephemera | al 🗌 Inter | mittent | Perennial | | | |
| Waterbody Type: | | | | | | | |
| (check one) | River Str | eam 🗆 Dito | h 🗆 Ca | anal 🛛 🗆 Other: | | | |
| OHWM | OHWM Indicat | tor: | | | ~ | ⊠W/reated | |
| <u>3 ft.</u> | (check all that apply | <i>')</i> | on bank | | g | vegetation | staining |
| Height: | □Bent, n | natted, or missin | g ⊡Wrack li | ne ⊠Litter ar | nd | □ Abrupt plant | □Soil characteristic change |
| <u>0.3 f</u> t. N/A□ | vegetatio | n | • | debris | | community change | Ŭ |
| Width of Waterbody - T | op of Width o | of Waterbody - | Foe of Slope | Width of Waterbo | ody - W | ater Edge to Dept | h of Water: |
| Bank to Top of Bank: | to Toe | of Slope: | | Water Edge: | | (Appro: | x.) |
| <u>_3 ft</u> . | - | <u>3_</u> ft. | | | <u>ft</u> . | N/A 🖂 | ft. |
| Sinuosity: | Water | velocity: | | Bank height | | Bank | slope |
| (check one) Straight | (Approx.) | | | Right: | | | Right: |
| Ŭ | | fps | | Left: | <u>0.5_</u> ft. | | <u>50</u> degrees Left: |
| | ng N/A⊠ | | | - | <u>0.5_</u> ft. | | <u>50</u> degrees |
| Qualitative Attribu | tes | | | | | | |
| Water Appearance: (check one) | []] No water □C | Clear □Turb | id □Sh on | een ⊡Sur surface scu | rface um | □Algal □Oth mats | er: |
| Substrate: | Bedrock 🗆 Bo | ulder 🗆 Cobb | le 🗆 Grave | el 🛛 Sand 🛛 | ⊠ Silt/ cl | lay 🛛 Organic 🛛 | Other: |
| (check all that apply) % of Substrate: | NA % NA % | 6 NA % | NA % | 20 % | 40 % | 40 % N | IA % |
| Width of Discrime Zana | | | | | | | |
| width of Riparian Zone | (check all that | apply) | [⊠] Trees | : 2 | ⊠ Saplin | gs/Shrubs: | ⊠ Herbs |
| <u>>100 ft</u> · | Avg. DBH | of Dominants: | <u> 10 </u> in. | - | <u>3</u> in. | | |
| Dominant Bank Vegeta | tion (list): | | | | | | |
| RED OAK, SWEET AMERICAN BEECH | GUM, TULIP | TREE, LOBLO | OLLY PINE | , CHESTNUT | OAK, I | HOLLY, FLOWE | RING DOGWOOD, |
| NA | ibmerged or emerged | aquatic vegetation | n, overnanging | banks/roots, lear pac | ks, large | submerged wood, rimes | s, deep pools): |
| Aquatic Organisms Ob | served (list): | | | | | | |
| NA | | | | | | | |
| T&E Species Observed | (<i>list</i>): | | | | | | |
| Disturbances (ex: livesto | ock access, manure i | n waterbody, waste | e discharge pipe | es): | | | |
| RUTTING FROM P | AST TIMBER I | HARVEST | | | | | |
| Tributary is: (check one) | ⊠ Natural | □ Art | ificial, man-m | ade 🗌 Manipu | ulated | | |
| Stream Quality ^a : (check one) | □ High | | derate | ⊠ Low | | | |

| Waterbody ID: |
|---------------|
| SNOM004 |
| |

High Quality: Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

FLOW IS DENDRITIC THROUGHOUT. MAIN CHANNEL ONLY SLIGHTLY MORE DEFINED THAN OTHERS. FLOW IS TO THE SOUTH.





Waterbody point snom004 facing across



Waterbody point snom004 facing upstream



Waterbody point snom004 facing downstream