S-A18-08

Created	2019-01-10 21:14:38 UTC by Laura Giese
Updated	2019-03-08 14:46:38 UTC by Karla Fortier
Location	36.4041256, -79.6467659
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/10
Date2	190110

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	8
Resource ID	S-A18-08
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	47
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	NE

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	30
Average Water Width (ft)	25
Bank to Bank (ft)	30
Bankfull Width (ft)	30
Probed Stream Depth	24 to 36 inches

Left Bank

Left Bank Height (feet)	9
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	7
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Strong
Particle size of stream substrate	Moderate
Active or relict floodplain	Strong
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	Yes
Stream Geomorphology Total	23

Stream Hydrology

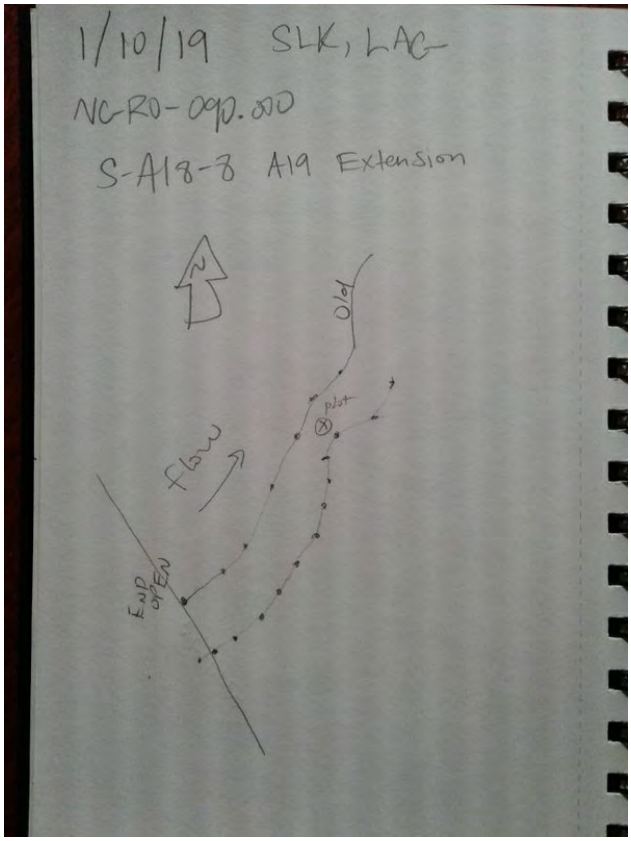
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Strong
Fish	Strong
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Stream Biology Total	15.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	SW

Downstream Stream Photo	
Downstream photo direction	NE
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-10

Created	2018-05-12 13:11:33 UTC by Laura Giese
Updated	2019-01-10 16:34:18 UTC by Simon King
Location	36.0960034, -79.3691353
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/12
Date2	180512

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	10
Resource ID	S-A18-10
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	17
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	N
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	1.3
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.3

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	4
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	1.1
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.1

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0.44
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.225
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0.15
Right bank total	0.815

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	8.5

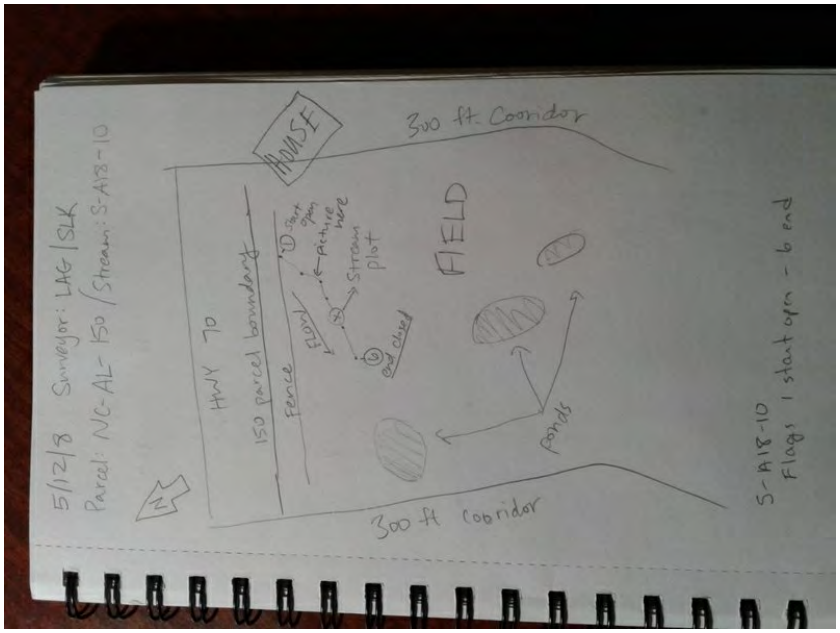
Stream Hydrology

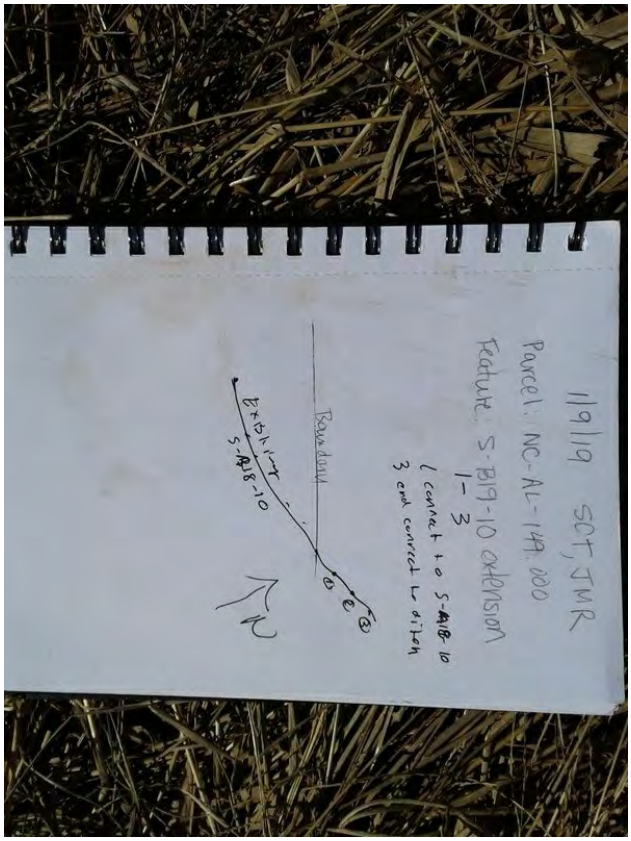
Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	3

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Absent
Stream Biology Total	5.5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Channel ends in grasses area. Collects road runoff
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	SW
Sketch of Stream	





extension labelled S-B19-10

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-40

Created	2018-05-21 13:46:08 UTC by Laura Giese
Updated	2019-02-07 14:22:35 UTC by Karla Fortier
Location	36.5250325, -79.6476307
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/21
Date2	180521

Resource Crew Info

Field Crew	Joe Roy, Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	40
Resource ID	S-A18-40
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	30.5
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	1.3
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.3

Stream Measurements

OHWM Width (ft)	40
Average Water Width (ft)	30
Bank to Bank (ft)	45
Bankfull Width (ft)	45
Probed Stream Depth	> 36 inches

Left Bank

Left Bank Height (feet)	12
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	1.5
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.5

Right Bank

Right Bank Height (feet)	6
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0.3
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0.5
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.8

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Strong
Depositional bars or benches	Moderate
Recent alluvial deposits	Strong
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	20.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Strong
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	10

Stream Biology

Stream Biology Total	0
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Water too high to determine biology on initial visit. Additional stream photos for extension, P1 up, P2 dn, P3 across
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

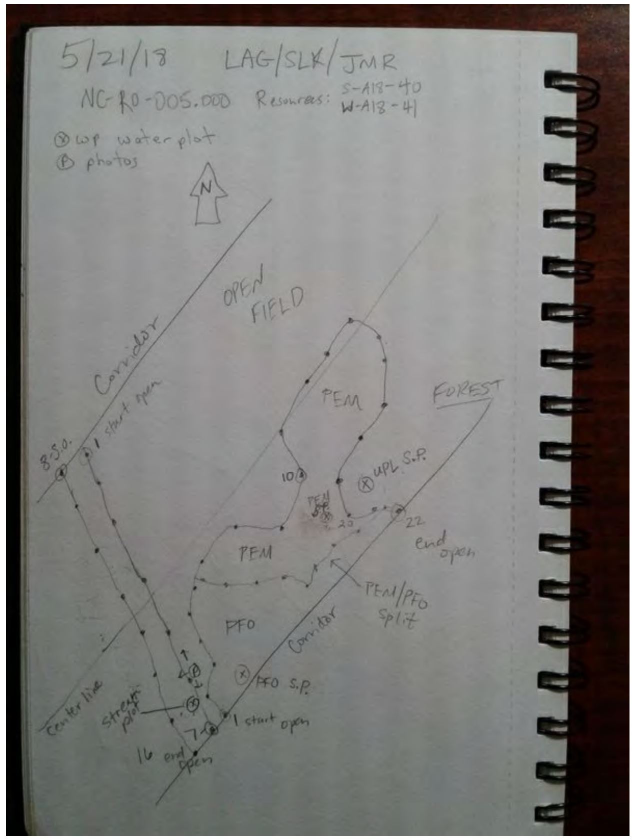
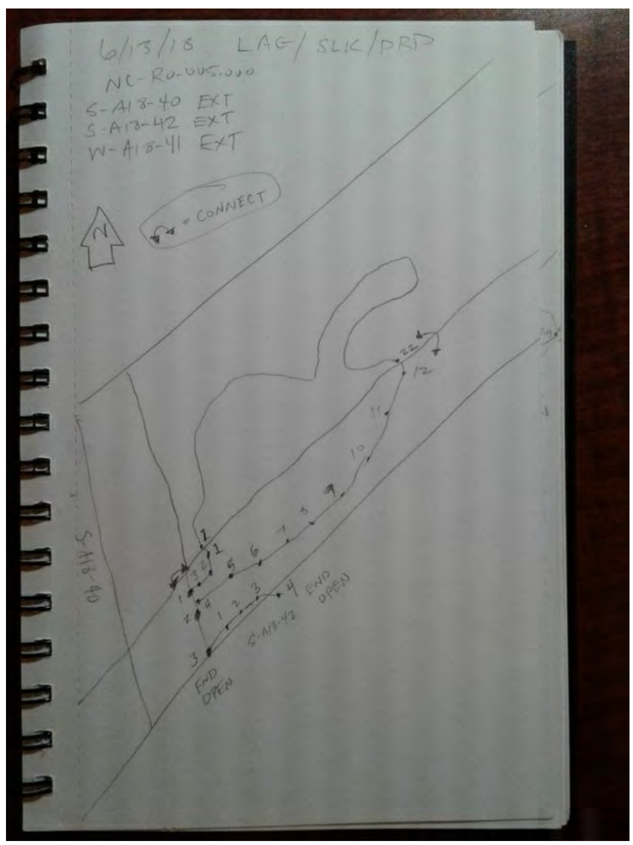
Additional Stream Photos

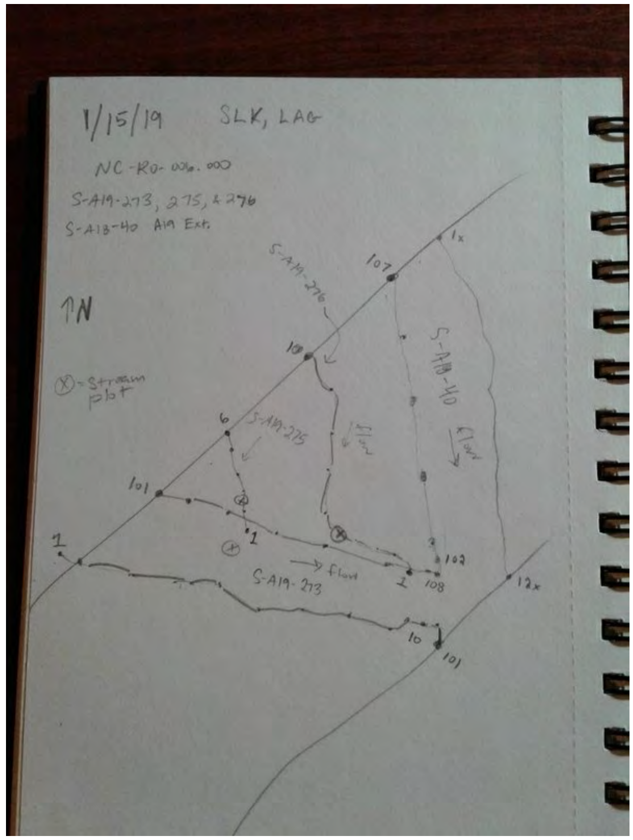
A19 ext, upstream, north

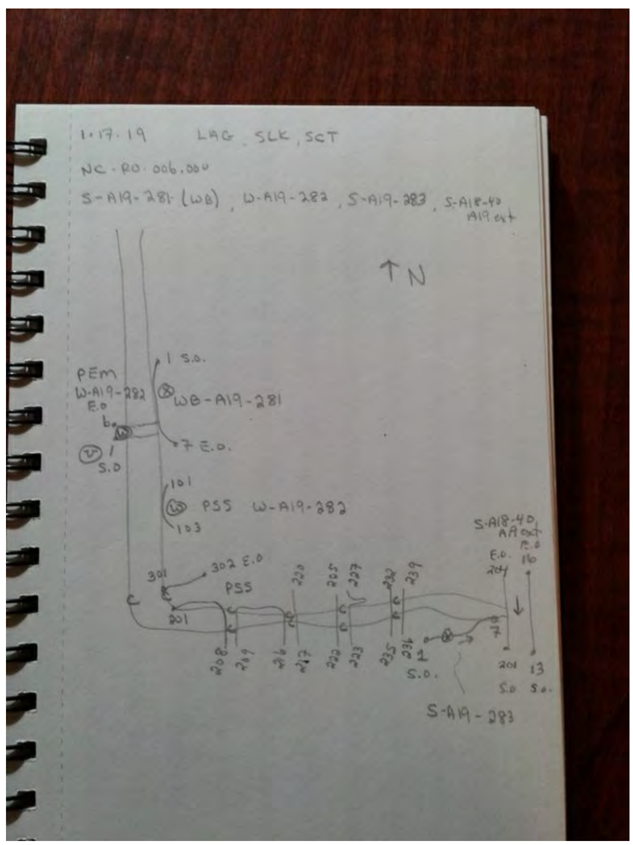
A19 ext, downstream, south

A19 ext, across, west

Sketch of Stream


5/21/18 LAG/SLK/JMR
NC-R0-005.000 Resources: S-A18-40 W-A18-41
wp water plot
photos
N
OPEN FIELD
Corridor
PEM
FOREST
UPL S.P.
end open
PEM
PEM/PFO split
PFO
Corridor
PFO S.P.
Center line
Stream plot
1 start open
16 end open

6/13/18 LAG/SLK/PRD
NC-R0-005.000
S-A18-40 EXT
S-A18-42 EXT
W-A18-41 EXT
= CONNECT
N
END OPEN
S-A18-42
S-A18-40


1/15/19 SLK, LAG
NC-RO-006.000
S-A19-273, 275, & 276
S-A18-40 A19 Ext.
↑N
S-A19-276
S-A19-275
S-A18-40
S-A19-273
flow


1.17.19 LAG, SLK, SCT
NC-RO-006.000
S-A19-281 (WB), W-A19-282, S-A19-283, S-A18-40 A19 ext
↑N
PEM
W-A19-282
WB-A19-281
PSS W-A19-282
PSS
S-A18-40 A19 ext
S-A19-283

S-A18-42

Created	2018-05-21 16:02:51 UTC by Laura Giese
Updated	2019-02-07 14:25:29 UTC by Karla Fortier
Location	36.5264717, -79.6465469
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/21
Date2	180521

Resource Crew Info

Field Crew	Joe Roy, Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	42
Resource ID	S-A18-42
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	29
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
Channel condition	Suboptimal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	1.3
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.3

Stream Measurements

OHWM Width (ft)	10
Average Water Width (ft)	8
Bank to Bank (ft)	10
Bankfull Width (ft)	10
Probed Stream Depth	> 36 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0.3
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0.4
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.7

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0.75
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.35
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.1

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	19.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Moderate
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9.5

Stream Biology

Stream Biology Total	0
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Recent heavy rains caused flooding. Couldn't determine biology during initial site visit. Additional stream photos for extension P1 up, P2 dn, P3 across: flag 0-13 and 100-113.
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	E

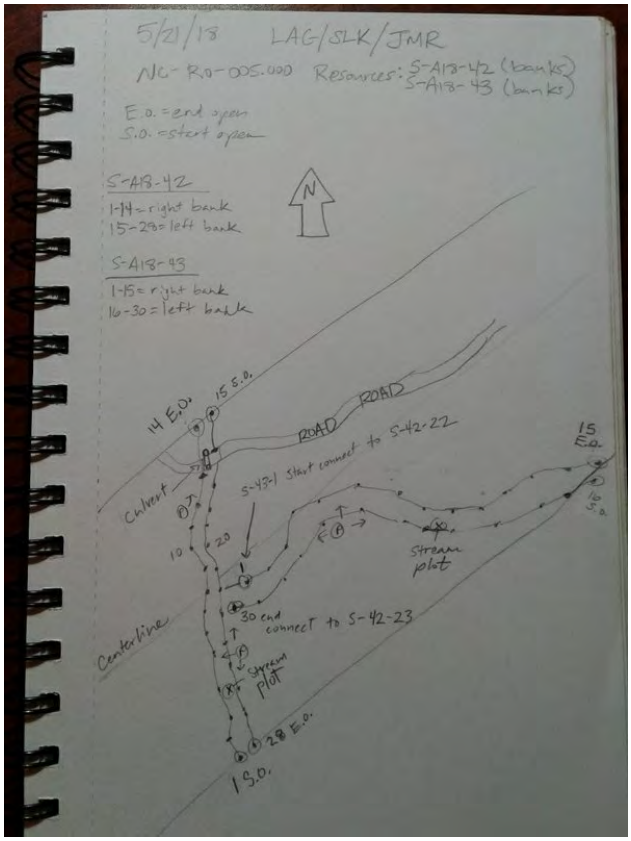
Additional Stream Photos

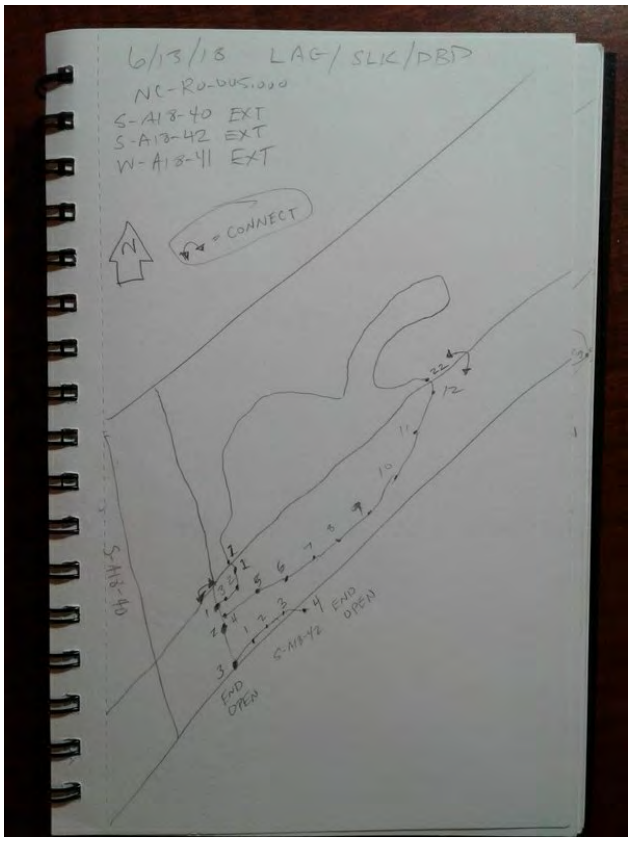
A19 ext, downstream, south

A19 ext, upstream, NW

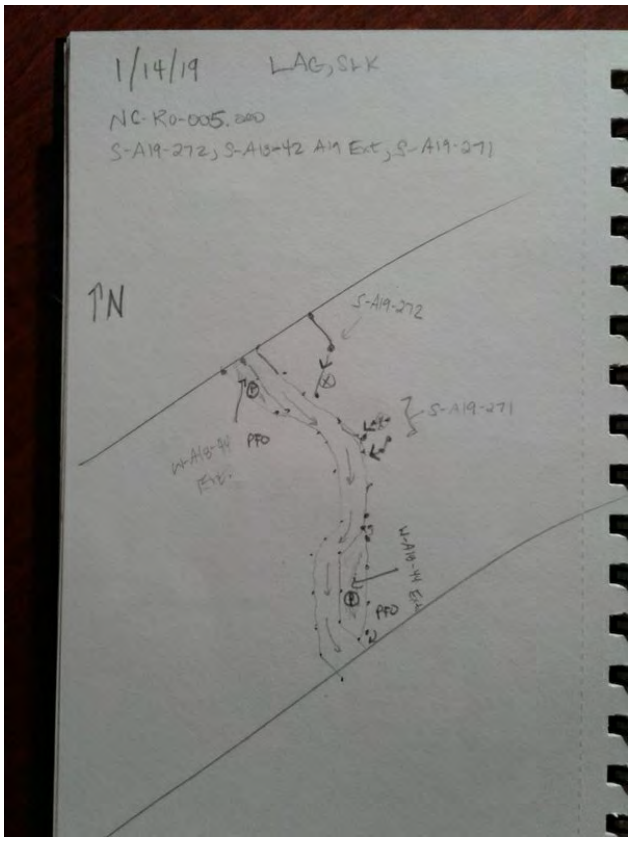
S19 ext, across, SW

Sketch of Stream


5/21/18 LAG/SLK/JMR
NC- R.O-005.020 Resources: S-A13-42 (banks)
S-A13-43 (banks)
E.O. = end open
S.O. = start open
S-A13-42
1-14 = right bank
15-29 = left bank
S-A13-43
1-15 = right bank
16-30 = left bank
N
14 E.O.
15 S.O.
ROAD
ROAD
Culvert
S-43-1 start connect to S-42-22
15 E.O.
30 S.O.
10
20
Stream plot
30 end connect to S-42-23
Centerline
Stream plot
28 E.O.
1 S.O.


6/13/18 LAG/SLK/DBD
NC-RO-005.000
S-A18-40 EXT
S-A18-42 EXT
W-A18-41 EXT
= CONNECT
N
S-A18-40
S-A18-42
END OPEN
END OPEN


6/13/18 LAG/SLK/DBD
NC-RO-005
S-A18-42 EXT
= CONNECT
N
S-A18-42
W-A18-41
EXTENSION
END OPEN



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-55

Created	2018-05-25 15:39:52 UTC by Laura Giese
Updated	2019-01-22 00:20:18 UTC by Laura Giese
Location	36.2824509, -79.5640092
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/25
Date2	180525

Resource Crew Info

Field Crew	Joe Roy, Laura Giese
Lead Scientist's Initials	A18
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	55
Resource ID	S-A18-55
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	34
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	W
Channel condition	Marginal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	1.1
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.1

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75

Right Bank

Right Bank Height (feet)	5
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.75
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.75

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Absent
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	16.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Moderate
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	10

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	7.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

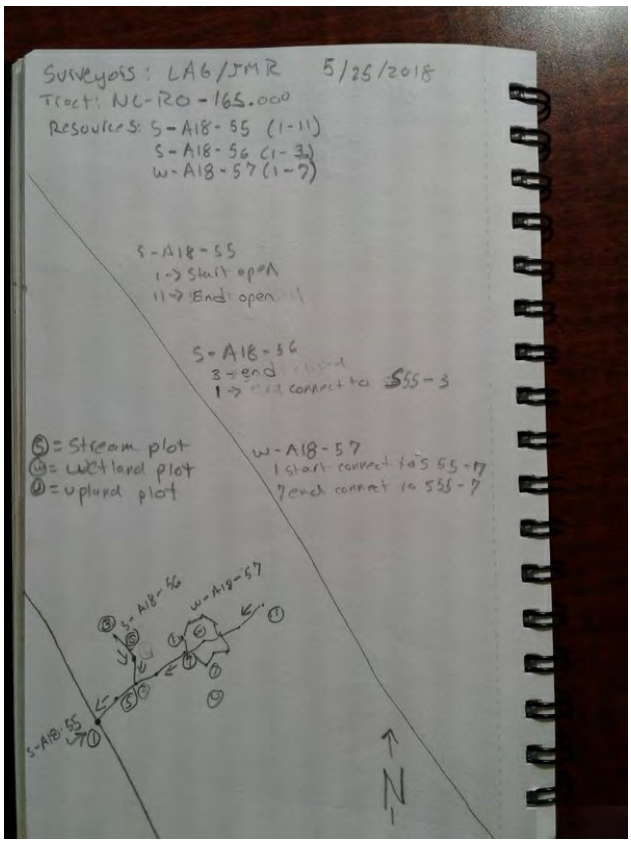
Downstream Stream Photo	
Across Stream Photo 1	
Across stream photo direction 1	N

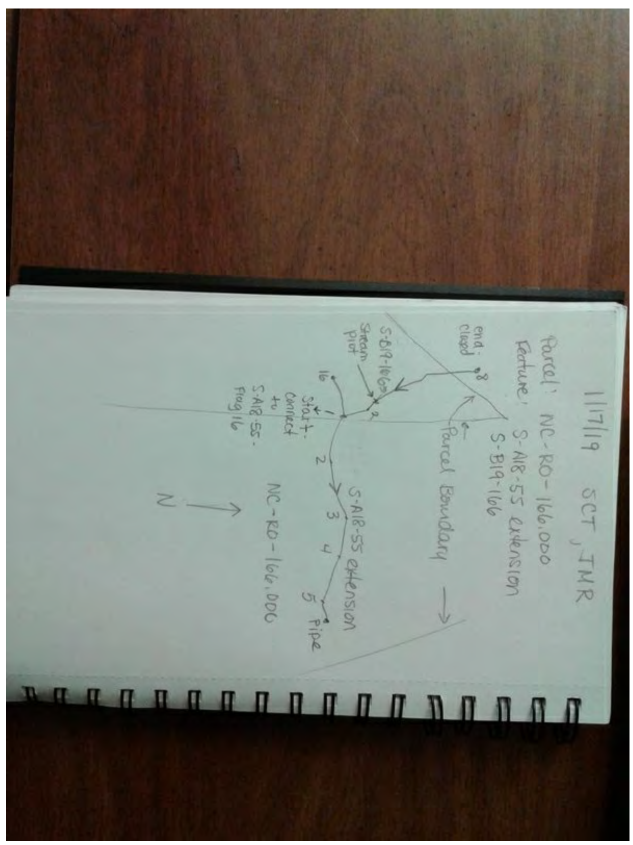
Additional Stream Photos

upstream east extension parcel RO 166

extension west parcel RO-166 1/17/19 team B19

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-102

Created	2018-06-02 16:57:13 UTC by Laura Giese
Updated	2019-02-07 18:25:38 UTC by Karla Fortier
Location	36.3416606, -79.6058149
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/02
Date2	180602

Resource Crew Info

Field Crew	Laura Giese, Jeff Vandeveer, Nate Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Jeff Vandeveer
GPS ID	NA
Resource Series Number	102
Resource ID	S-A18-102
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	36
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	NE
Channel condition	Suboptimal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	5
Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	18.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	9.5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Adjacent hillside recently harvested
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	SE

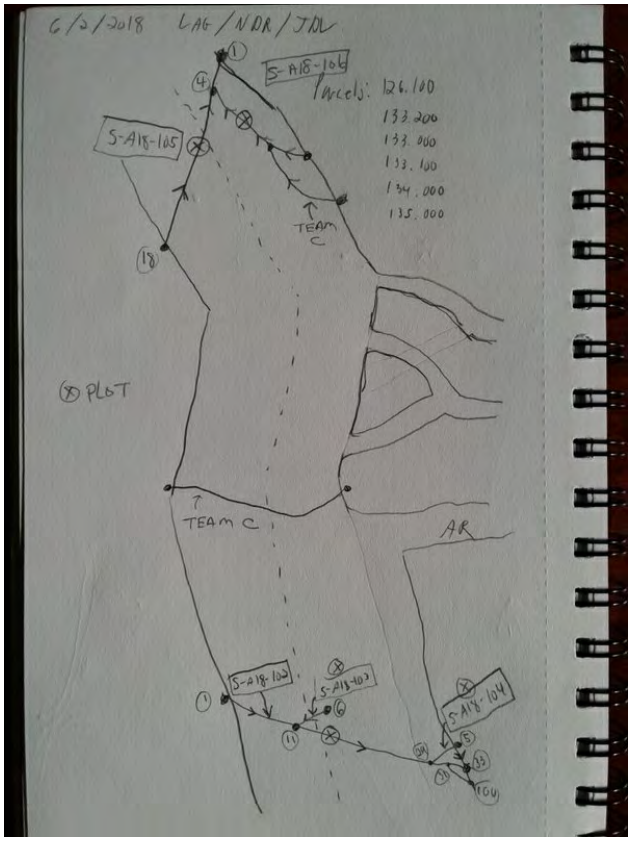
Downstream Stream Photo	
Downstream photo direction	W
Across Stream Photo 1	
Across stream photo direction 1	NE
Additional Stream Photos	

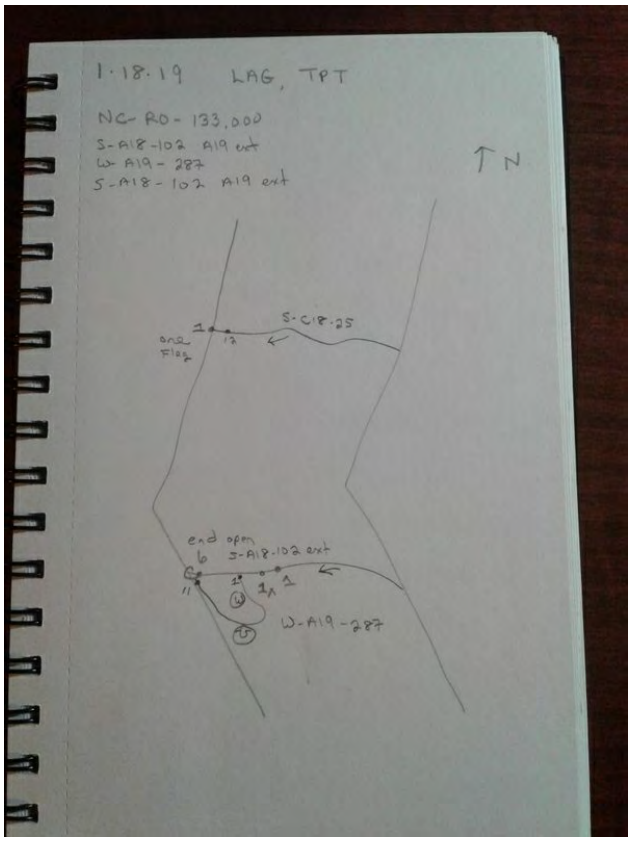
A19 extension upstream east

A19 extension downstream west

A19 extension across North

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-120

Created	2018-06-05 19:23:42 UTC by Laura Giese
Updated	2019-02-07 18:51:46 UTC by Karla Fortier
Location	36.1997769, -79.5004784
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/05
Date2	180605

Resource Crew Info

Field Crew	Laura Giese, Jeff Vandeveer, Nate Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Jeff Vandeveer
GPS ID	NA
Resource Series Number	120
Resource ID	S-A18-120
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	30
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	13

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Strong
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	10.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	6.5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Stream supported by groundwater seepage
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	W

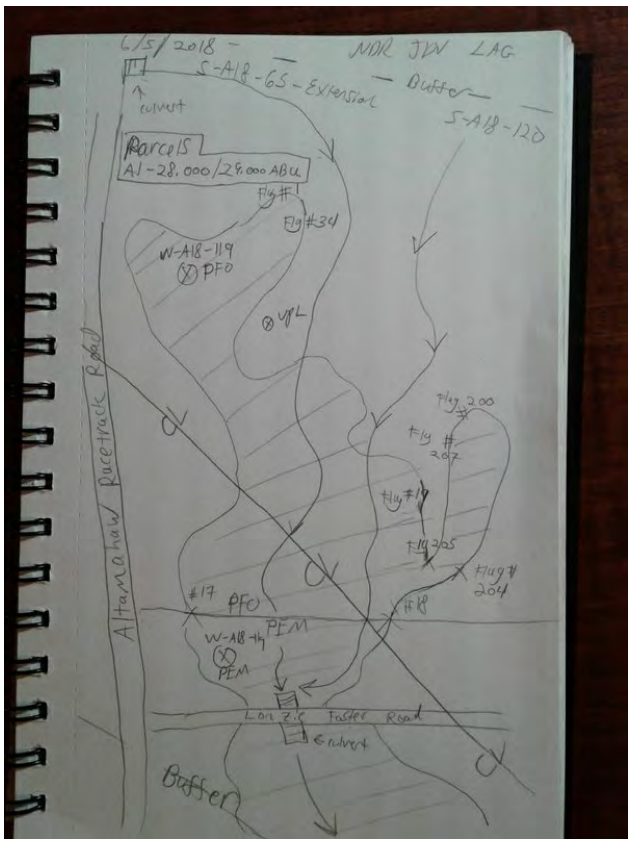
Additional Stream Photos

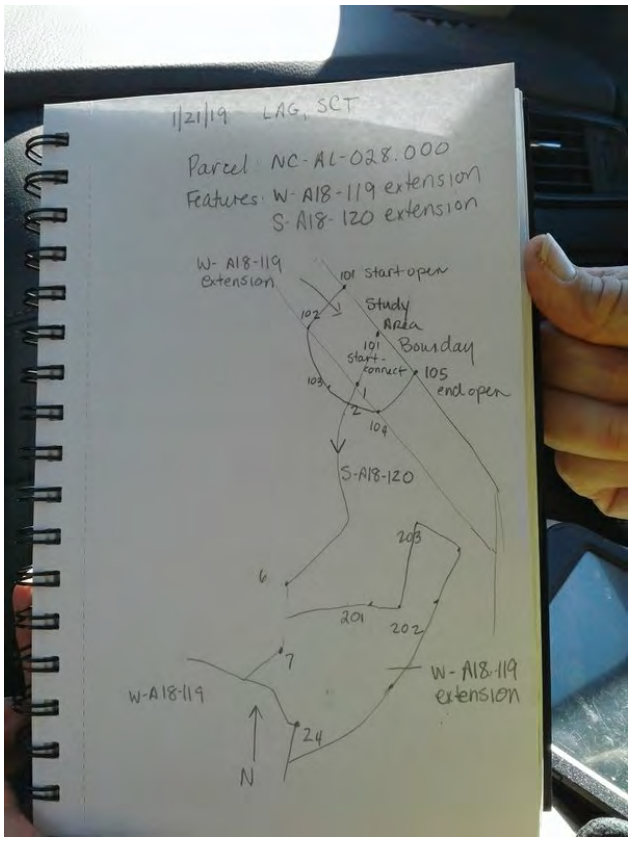
A19 ext, downstream, west

A19 ext, upstream, east

A19 ext, across, south

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-140

Created	2018-06-08 15:55:10 UTC by Nathan Renaudin
Updated	2019-02-05 19:57:55 UTC by Karla Fortier
Location	36.4772514, -79.6955983
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180608

Resource Crew Info

Field Crew	Laura Giese, Jeff Vandeveer, Nate Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Jeff Vandeveer
GPS ID	NA
Resource Series Number	140
Resource ID	S-A18-140
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	31.75
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	Drainage

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SW
Channel condition	Marginal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	4
Average Water Width (ft)	3
Bank to Bank (ft)	5

Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	Sand

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate

Second or greater order channel	Yes
Stream Geomorphology Total	18.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Moderate
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	5.75
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	W

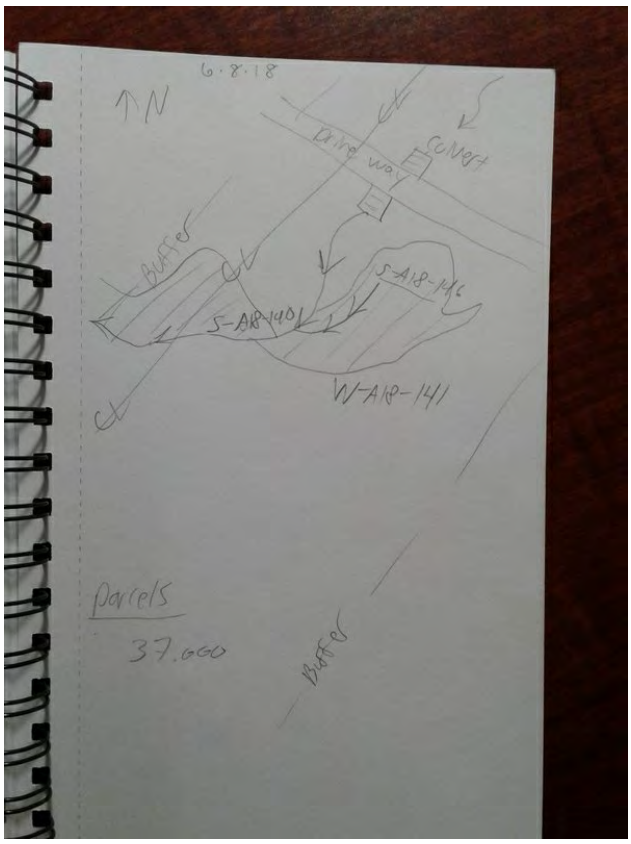
Across Stream Photo 2	
Across stream photo direction 2	E
Additional Stream Photos	

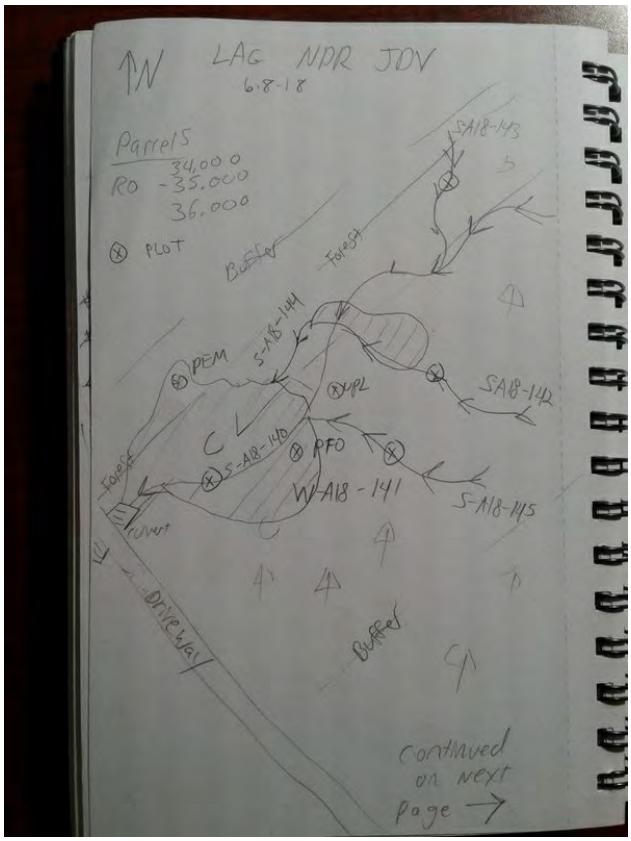
A19 ext up, NR

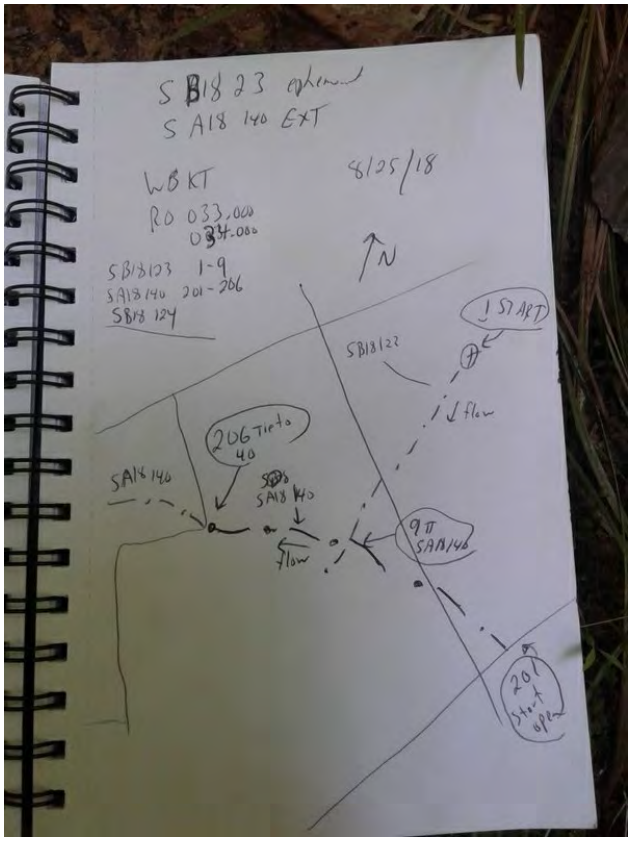
A19 ext, down, SW

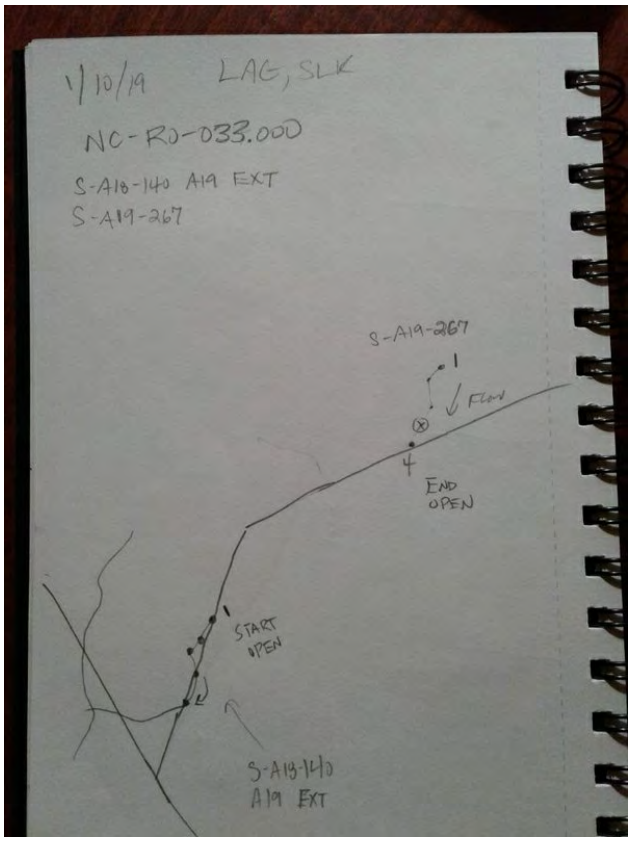
A19 ext, across, west

Sketch of Stream




N
LAG NDR JDV
6-8-18
Parrels
RO -35.000
36,000
PLOT
Buffer
Forest
SA18-143
S-A18-144
PEM
PSS
SA18-142
S-A18-140
PFO
W-A18-141
S-A18-145
Forest
culvert
DRIVEWAY
Buffer
Continued on next Page


SB18 23 extension
SA18 140 EXT
WBKT
8/25/18
RO 033,000
SB18123 1-9
SA18140 201-206
SB18 124
N
1 START
SB18122
flow
206 Tinta 40
SA18 140
SA18 140
flow
9 TT SA18140
201 start open



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-142

Created	2018-06-08 16:13:27 UTC by Nathan Renaudin
Updated	2019-02-05 19:55:46 UTC by Karla Fortier
Location	36.4774734, -79.6956271
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180608

Resource Crew Info

Field Crew	Laura Giese, Jeff Vandeveer, Nate Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Jeff Vandeveer
GPS ID	NA
Resource Series Number	142
Resource ID	S-A18-142
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	25.75
Calculated Stream Type	Intermittent
Wildlife Observed	Invertebrates
Observed Use	Drainage

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	NW
Channel condition	Poor
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	3

Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Mud or muck

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate

Second or greater order channel	No
Stream Geomorphology Total	10.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak
Leaf litter	Moderate
Sediment on plants or debris	Moderate
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Moderate
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	7.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

Downstream Stream Photo	
Downstream photo direction	W
Across Stream Photo 1	
Across stream photo direction 1	N

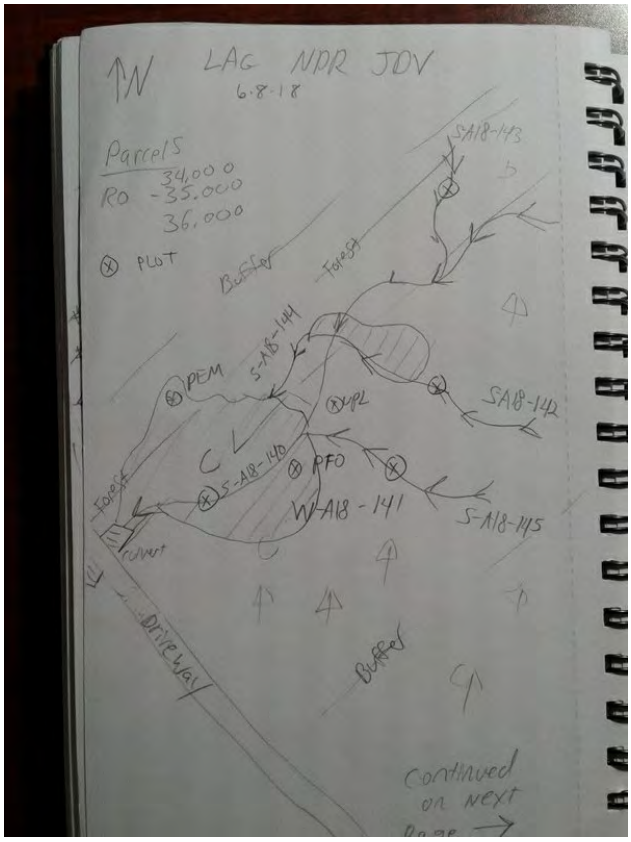
Additional Stream Photos

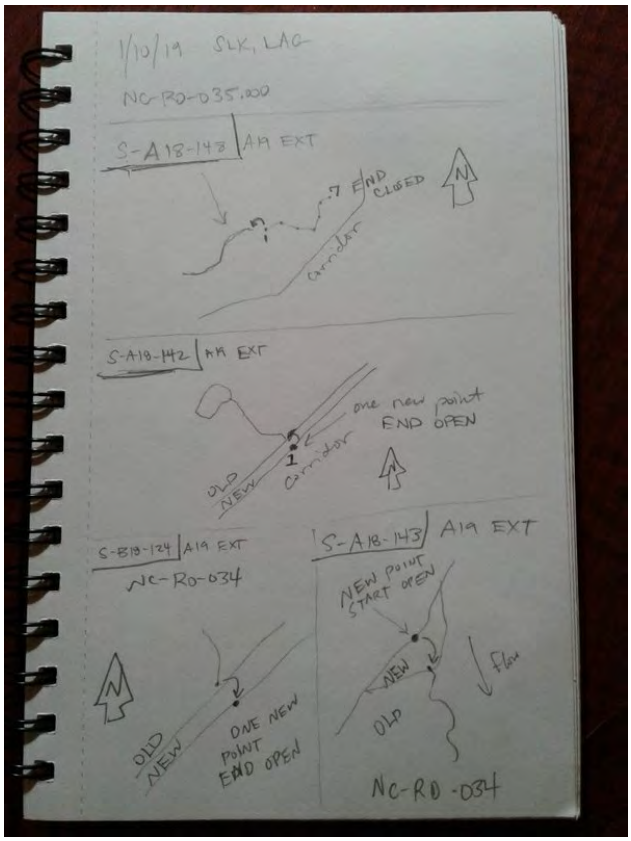
S19 ext, down, west

A19 ext, up east

A19 ext, across south

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-143

Created	2018-06-08 16:47:45 UTC by Nathan Renaudin
Updated	2019-02-05 19:56:49 UTC by Karla Fortier
Location	36.4782921, -79.6947593
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180608

Resource Crew Info

Field Crew	Laura Giese, Jeff Vandeveer, Nate Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Jeff Vandeveer
GPS ID	NA
Resource Series Number	143
Resource ID	S-A18-143
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	28.75
Calculated Stream Type	Intermittent
Wildlife Observed	Invertebrates
Observed Use	Drainage

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	3

Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	Mud or muck, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	4
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate

Second or greater order channel	No
Stream Geomorphology Total	13.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak
Leaf litter	Moderate
Sediment on plants or debris	Moderate
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Moderate
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	7.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

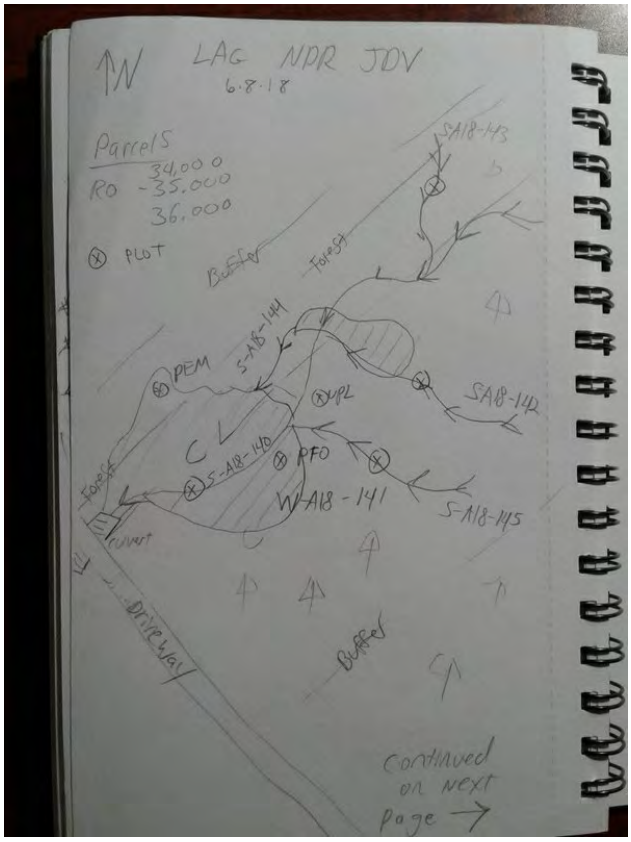
Additional Stream Photos

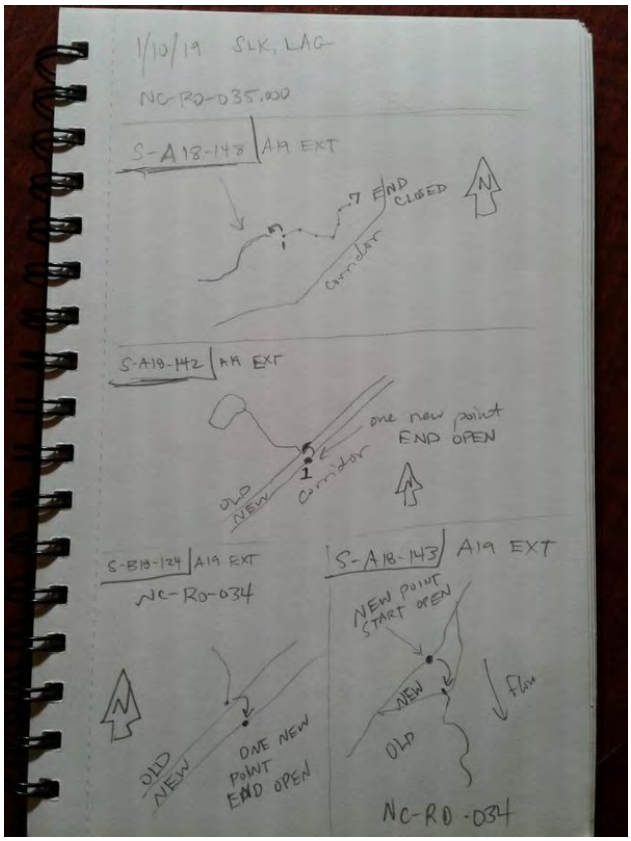
A19 ext, up, north

A19 ext, down, south

A19 ext, across, west

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-148

Created	2018-06-08 20:20:36 UTC by Laura Giese
Updated	2019-02-05 19:55:08 UTC by Karla Fortier
Location	36.4756012, -79.6971135
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	//
Date2	180611

Resource Crew Info

Field Crew	Laura Giese, Jeff Vandeveer, Nate Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Jeff Vandeveer
GPS ID	NA
Resource Series Number	148
Resource ID	S-A18-148
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	15.5
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	W

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	6
Bankfull Width (ft)	6
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	7.5

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	2

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	6
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Broad wash area in upper reach
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

Downstream Stream Photo	
Downstream photo direction	W
Across Stream Photo 1	
Across stream photo direction 1	N

Additional Stream Photos

Broad wash area in upper reach-Additional of original survey

Downstream

Upstream

Across

S-A18-182

Created	2018-06-23 12:46:21 UTC by Laura Giese
Updated	2019-02-07 18:40:12 UTC by Karla Fortier
Location	36.2746887, -79.5584437
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/23
Date2	180623

Resource Crew Info

Field Crew	Laura Giese, Jake Brillo
Lead Scientist's Initials	A18
GPS Surveyor	Jake Brillo
GPS ID	NA
Resource Series Number	182
Resource ID	S-A18-182
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SW
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	7.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	OBL
Stream Biology Total	7.5
Notes	Narrow fringe of hydrophytic vegetation on banks
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	E
Additional Stream Photos	

Extension b19, west, 1.18.19

Extension upstream east, team b19, 1.18.19

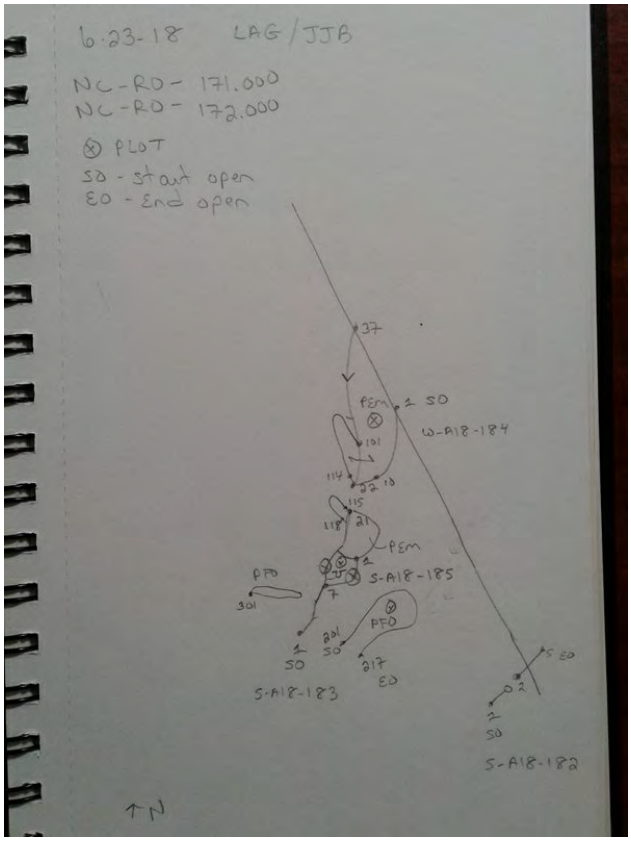
Extension s, team b19, 1.18.19

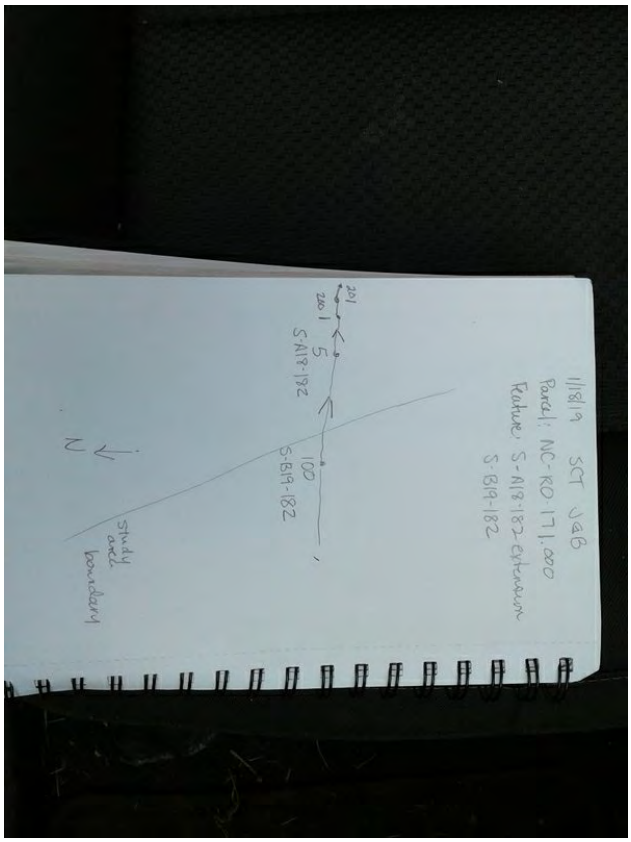
Extension w downstream, b19, 1.18.19

Extension upstream flag 101, e, team b19, 1.18.19

Extension s, near flagb101, team b19, 1.18.19

Sketch of Stream





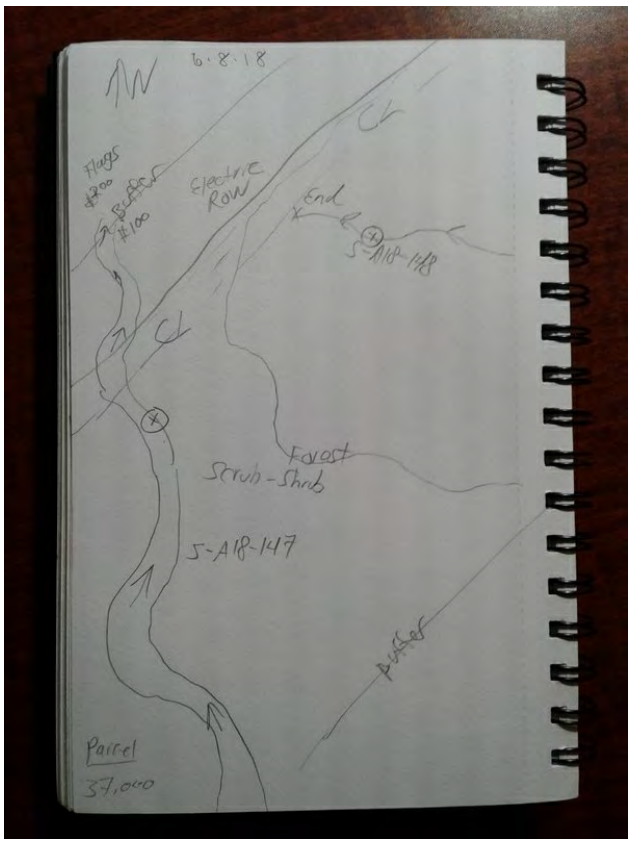
Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

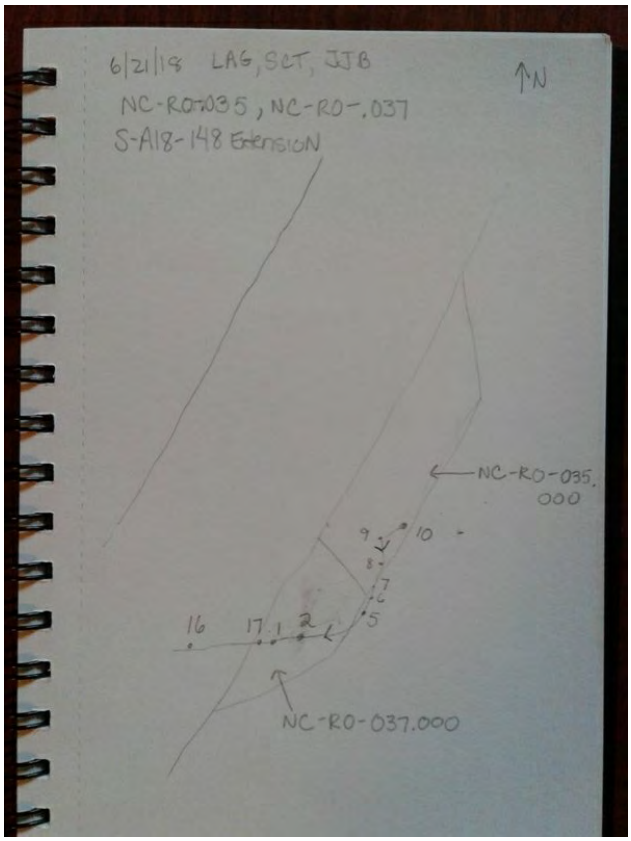
A19 ext, up, north

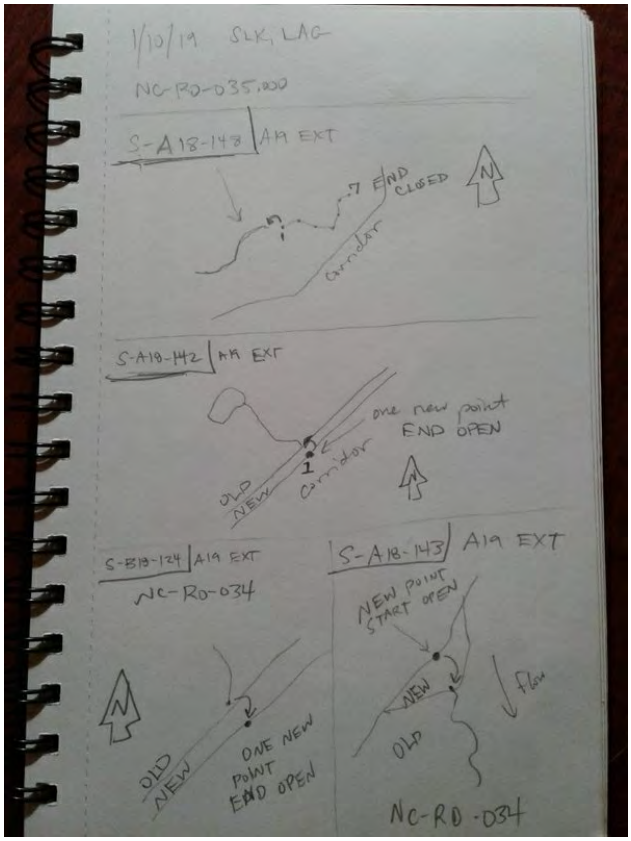
A19 ext, down, west

A19 ext, across, south

Sketch of Stream







Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-150

Created	2018-06-11 16:28:57 UTC by Laura Giese
Updated	2019-02-05 19:54:23 UTC by Karla Fortier
Location	36.4713621, -79.7010792
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/11
Date2	180611

Resource Crew Info

Field Crew	Joe Roy, Laura Giese, Jake Brillo
Lead Scientist's Initials	A18
GPS Surveyor	Jake Brillo
GPS ID	NA
Resource Series Number	150
Resource ID	S-A18-150
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	17
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	W

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	9

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	2

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	6
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Channel vegetated through ROW
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

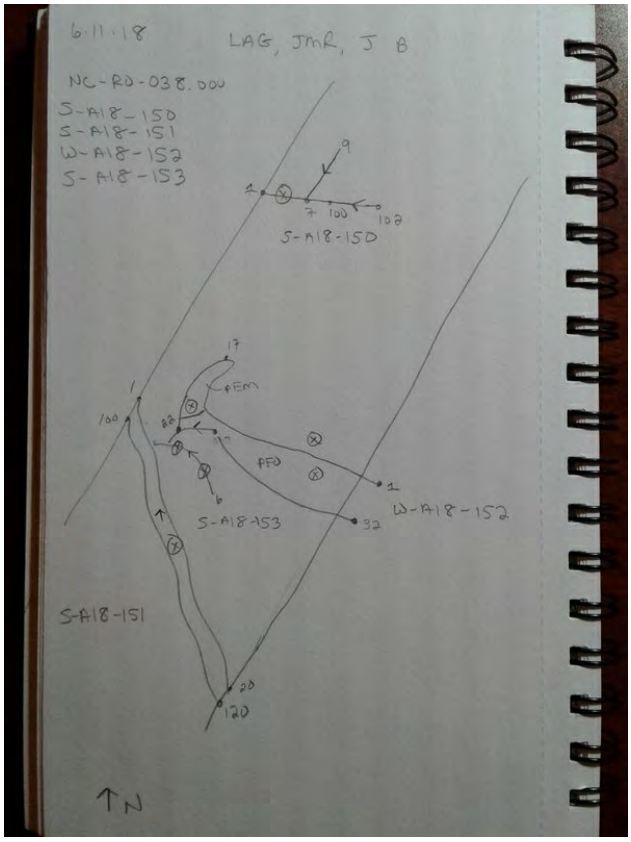
Downstream Stream Photo	
Downstream photo direction	W
Across Stream Photo 1	
Across stream photo direction 1	S
Additional Stream Photos	

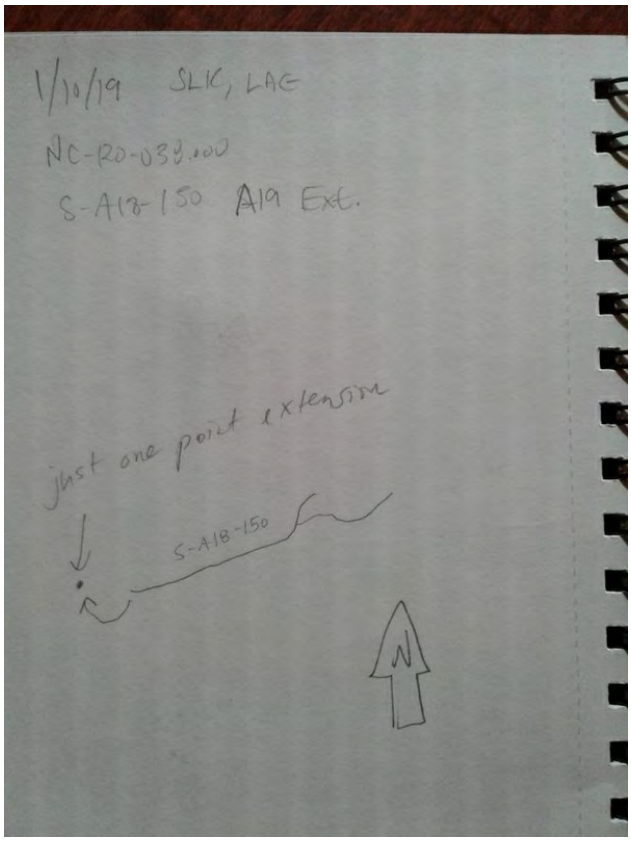
A19 ext down, west

A19 ext up, east

A19 ext, across, south

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-183

Created	2018-06-23 15:01:30 UTC by Laura Giese
Updated	2019-02-07 18:38:46 UTC by Karla Fortier
Location	36.2747995, -79.5590965
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/23
Date2	180623

Resource Crew Info

Field Crew	Laura Giese, Jake Brillo
Lead Scientist's Initials	A18
GPS Surveyor	Jake Brillo
GPS ID	NA
Resource Series Number	183
Resource ID	S-A18-183
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	35.5
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	S
Channel condition	Suboptimal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	4
Average Water Width (ft)	4
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	18

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Weak
Algae	Absent
Stream Biology Total	9.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	SE

Additional Stream Photos

Extension s, team b19, 1.18.19

Extension n team B19, 1.18.19

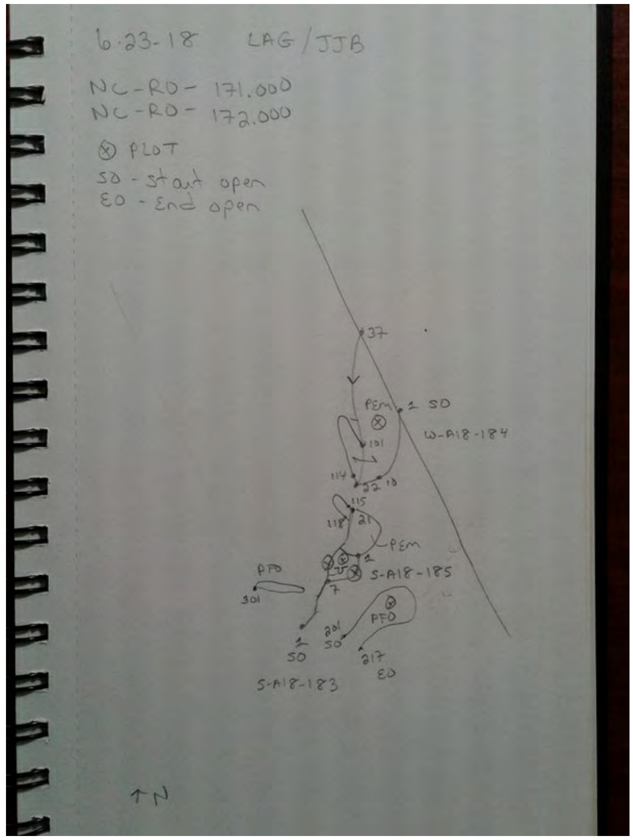
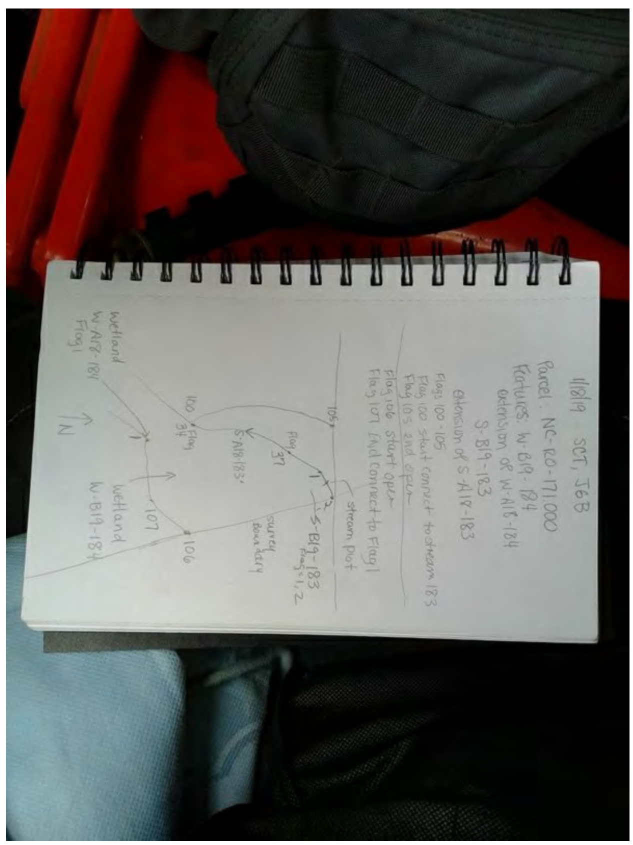
Extension w, b19, 1.18.19

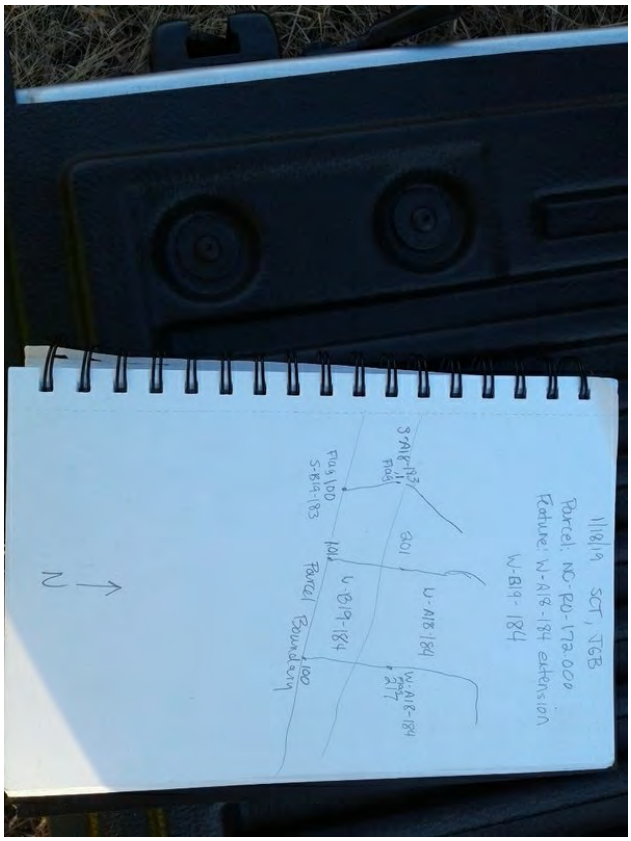
Extension upstream n, B19, 1.18.19

Extension downstream s, b19, 1.18.19

Extension across w, b19,1.18.19

Sketch of Stream


6-23-18 LAG/JJB
NC-RO- 171.000
NC-RO- 172.000
⊗ PLOT
SO - start open
EO - End open
W-A18-184
S-A18-185
S-A18-183
PEM
PFO
↑N




Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-211

Created	2018-08-03 14:54:41 UTC by Laura Giese
Updated	2019-02-06 17:55:41 UTC by Karla Fortier
Location	36.3231625, -79.5956415
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/03
Date2	180803

Resource Crew Info

Field Crew	Laura Giese
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	211
Resource ID	S-A18-211
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	18.5
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Low
Left Bank Substrate	Sand, Silt-Mud, leaves

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Sand, Silt-Mud, leaves

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	10

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Notes	Flow after heavy rains
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

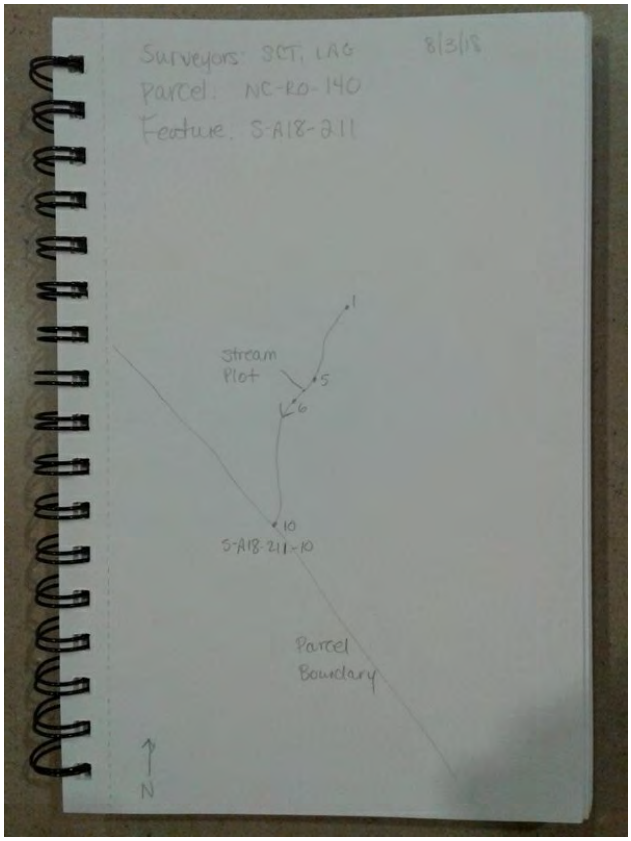
Additional Stream Photos

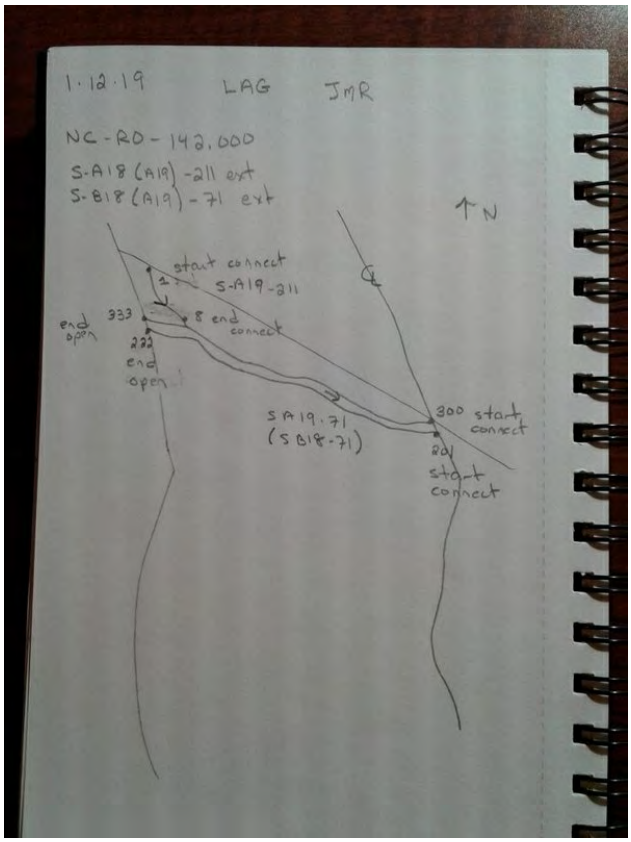
A19 extension, upstream, west

A19 ext, downstream, east

A19 ext, across, south

Sketch of Stream


Surveyors: SCT, LAG 8/3/18
Parcel: NC-RO-140
Feature: S-A18-211
1
Stream Plot
5
6
10
S-A18-211-10
Parcel Boundary
N


1.12.19 LAG JMR
NC-RO-142.000
S-A18 (A19) -211 ext
S-B18 (A19) -71 ext
N
start connect S-A19-211
1
333
8 end connect
end open
222 end open
S A19-71 (S B18-71)
300 start connect
221 start connect

S-A18-238

Created	2018-09-04 18:24:09 UTC by Laura Giese
Updated	2019-02-07 19:13:08 UTC by Karla Fortier
Location	36.3085975, -79.5947623
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/09/04
Date2	180904

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	238
Resource ID	S-A18-238
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	20.25
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	E
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	8.5

S-A18-252

Created	2018-09-07 18:08:47 UTC by Laura Giese
Updated	2019-02-07 19:03:15 UTC by Karla Fortier
Location	36.1392599, -79.3802933
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/09/07
Date2	180907

Resource Crew Info

Field Crew	Laura Giese, Simon King, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	252
Resource ID	S-A18-252
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	22.5
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	11.5

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	4.5

Stream Biology

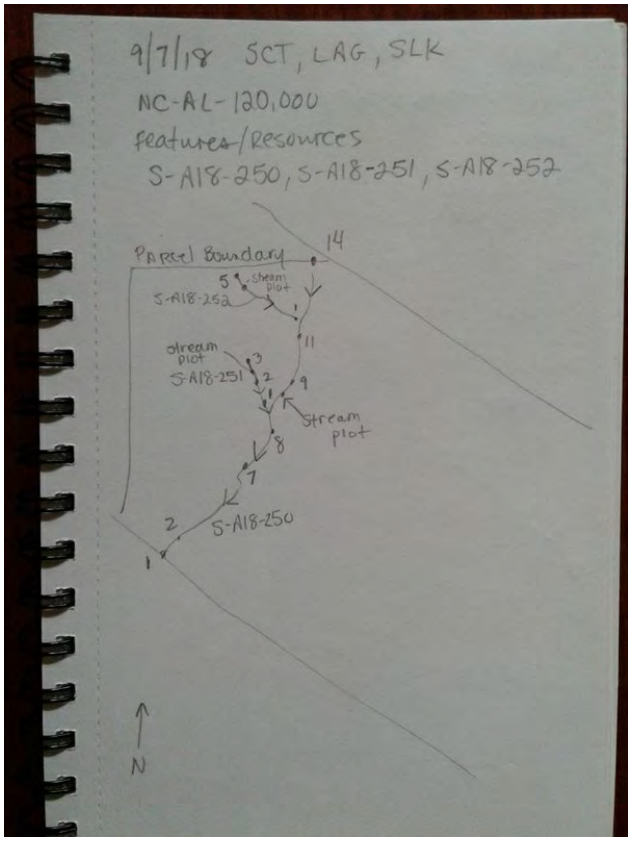
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	6.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

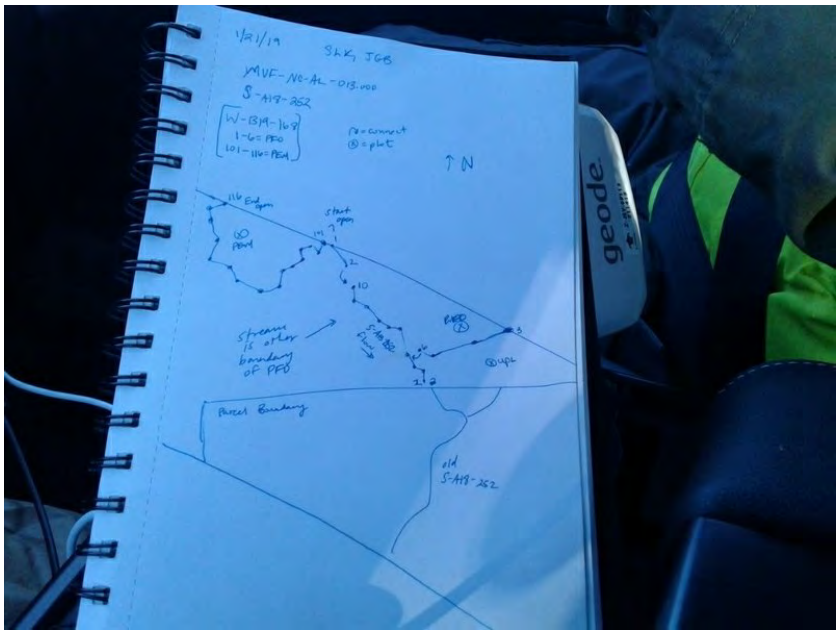
Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	NE
Additional Stream Photos	

extension S-A18-252 upstream

extension S-A18-252 downstream

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-259

Created	2019-01-07 20:35:14 UTC by Laura Giese
Updated	2019-01-31 20:18:10 UTC by Karla Fortier
Location	36.5127055, -79.7199196
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/07
Date2	190107

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
Resource Series Number	259
Resource ID	S-A19-259
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	20.75
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	E

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	0.5
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping

Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	0.5
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	7

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak

Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	5.75
Notes	Flows from wetland upslope, rock-lined along road
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	S

Additional Stream Photos

Head of stream-wnw

Sketch of Stream

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-261

Created	2019-01-08 14:10:55 UTC by Laura Giese
Updated	2019-03-08 14:50:18 UTC by Karla Fortier
Location	36.5129802, -79.713595
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/08
Date2	190108

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
Resource Series Number	261
Resource ID	S-A19-261
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	15.5
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	E
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

S-A19-271

Created	2019-01-14 17:49:19 UTC by Laura Giese
Updated	2019-02-07 14:17:24 UTC by Karla Fortier
Location	36.5284808, -79.6463647
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/14
Date2	190114

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	271
Resource ID	S-A19-271
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	24
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SW
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	10.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	6.5

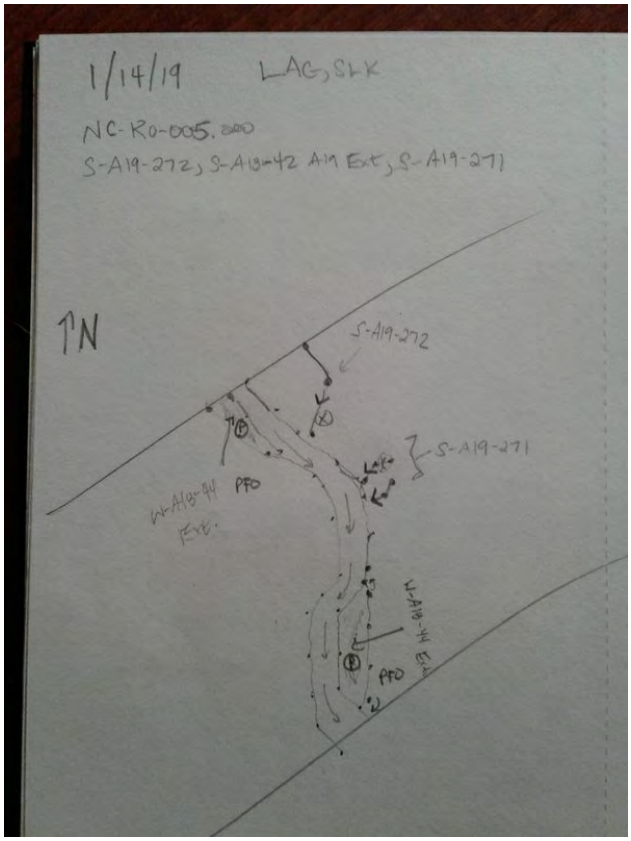
Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	7
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	N

Across Stream Photo 2	
Across stream photo direction 2	SE
Additional Stream Photos	 100 series, upstream, NE

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-272

Created	2019-01-14 17:57:42 UTC by Laura Giese
Updated	2019-02-07 14:19:07 UTC by Karla Fortier
Location	36.0768969, -79.9620748
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/14
Date2	190114

Resource Crew Info

Field Crew	Laura Giese
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	272
Resource ID	S-A19-272
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	27.25
Calculated Stream Type	Intermittent
Wildlife Observed	crayfish burrows

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SE
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	4
Bankfull Width (ft)	4

Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

Stream Geomorphology Total	13.5

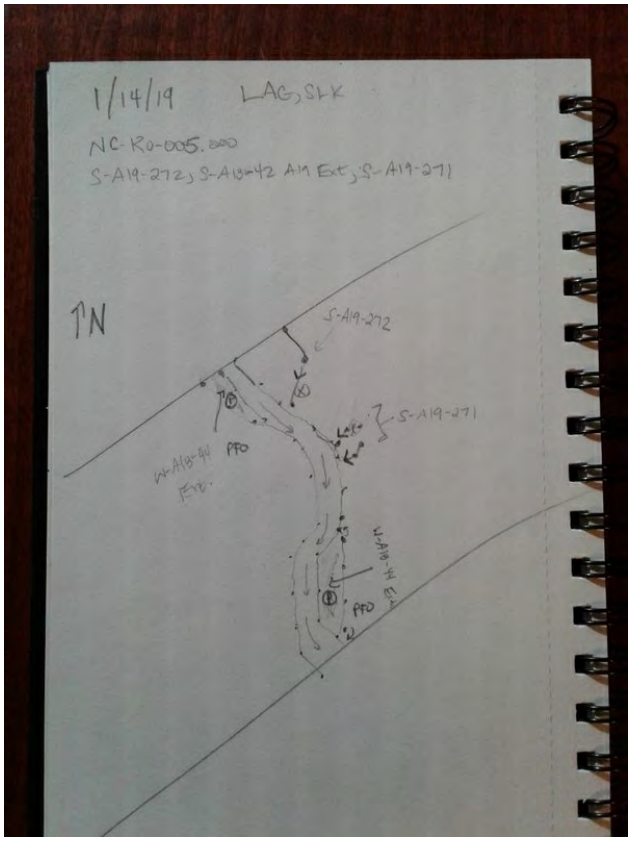
Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	4.75
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	N

Across Stream Photo 2	
Across stream photo direction 2	E
Sketch of Stream	

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-273

Created	2019-01-15 15:17:03 UTC by Laura Giese
Updated	2019-02-07 14:48:37 UTC by Karla Fortier
Location	36.525958, -79.6490815
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/15
Date2	190115

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	273
Resource ID	S-A19-273
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	36.5
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	E
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	30
Average Water Width (ft)	30
Bank to Bank (ft)	32
Bankfull Width (ft)	32
Probed Stream Depth	6 to 12 inches

Left Bank

Left Bank Height (feet)	5
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	7
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Sand, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	18

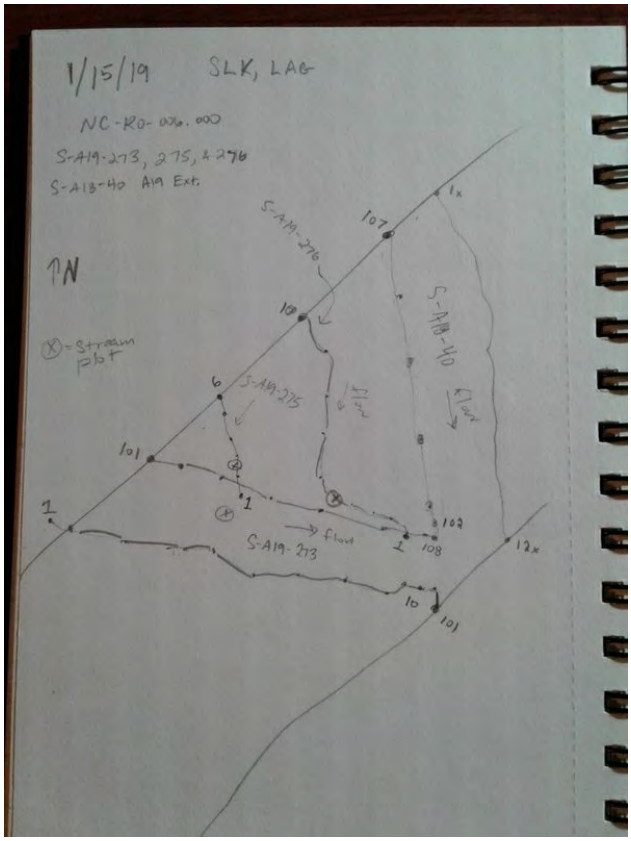
Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	10.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	S

Across Stream Photo 2	
Across stream photo direction 2	N
Sketch of Stream	

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-275

Created	2019-01-15 18:30:49 UTC by Laura Giese
Updated	2019-02-07 14:54:42 UTC by Karla Fortier
Location	36.5259482, -79.6489823
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/15
Date2	190115

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	275
Resource ID	S-A19-275
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	25
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SE
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	10.5

Stream Hydrology

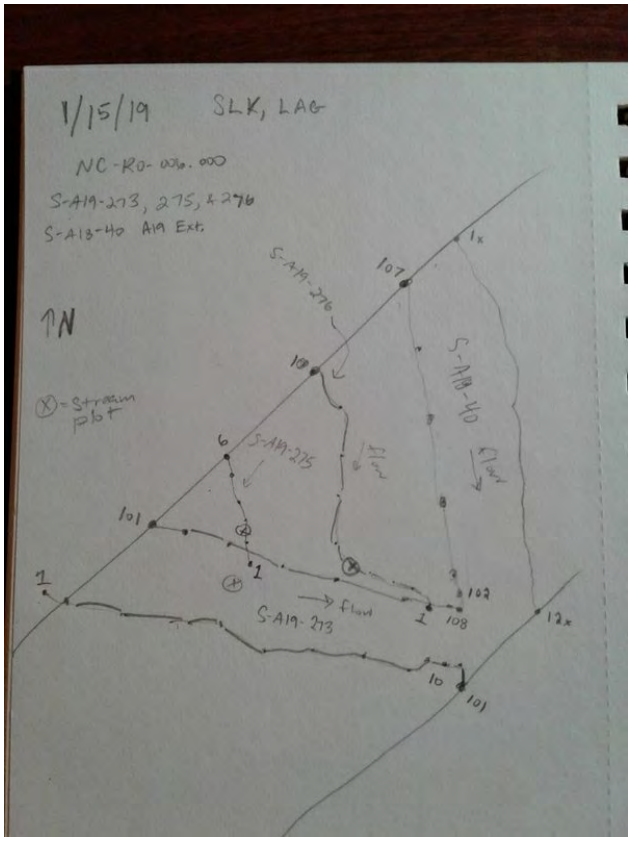
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	7
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	SW

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-276

Created	2019-01-15 18:44:37 UTC by Laura Giese
Updated	2019-02-07 14:56:14 UTC by Karla Fortier
Location	36.5259295, -79.6485134
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/15
Date2	190115

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	276
Resource ID	S-A19-276
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	14.5
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	7

Stream Hydrology

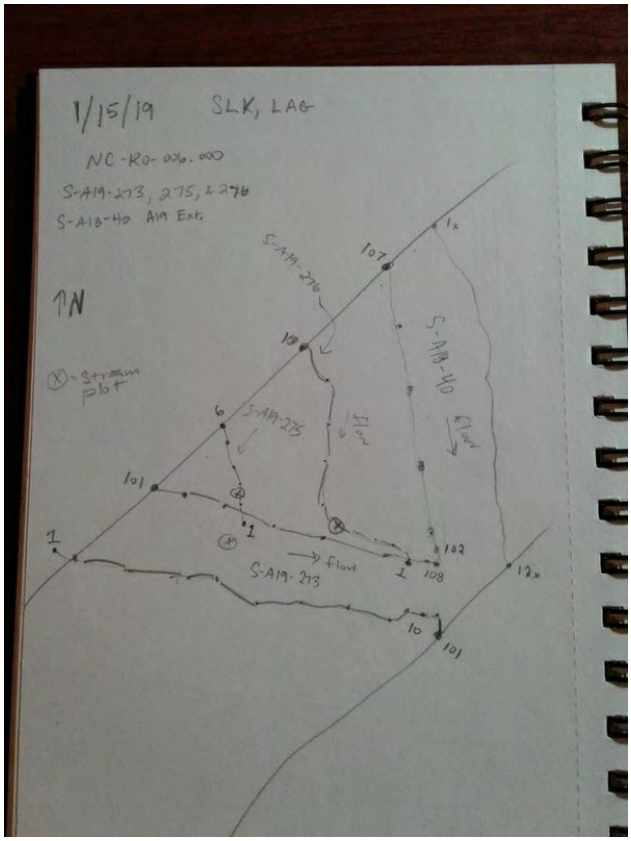
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	S

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-278

Created	2019-01-17 15:22:51 UTC by Laura Giese
Updated	2019-02-07 15:45:51 UTC by Karla Fortier
Location	36.5196279, -79.658769
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/17
Date2	190117

Resource Crew Info

Field Crew	Laura Giese
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	278
Resource ID	S-A19-278
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Impoundment
Calculated Stream Score	24
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	10.5

Stream Hydrology

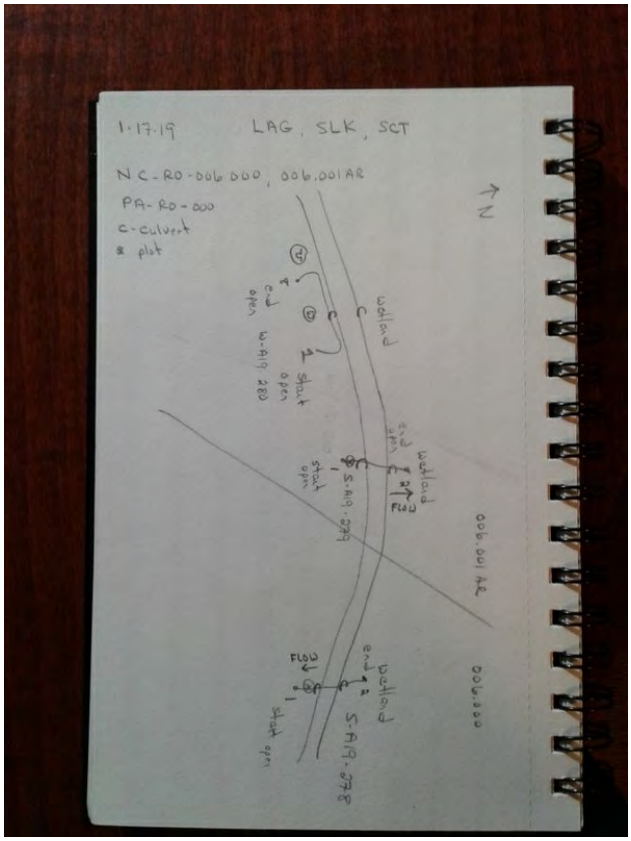
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-279

Created	2019-01-17 15:44:34 UTC by Laura Giese
Updated	2019-02-07 15:48:06 UTC by Karla Fortier
Location	36.519781, -79.6679981
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/17
Date2	190117

Resource Crew Info

Field Crew	Laura Giese
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	279
Resource ID	S-A19-279
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	26
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	N
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	2
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Cobble-Gravel, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Cobble-Gravel, Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	9

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Moderate
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	10.5

Stream Biology

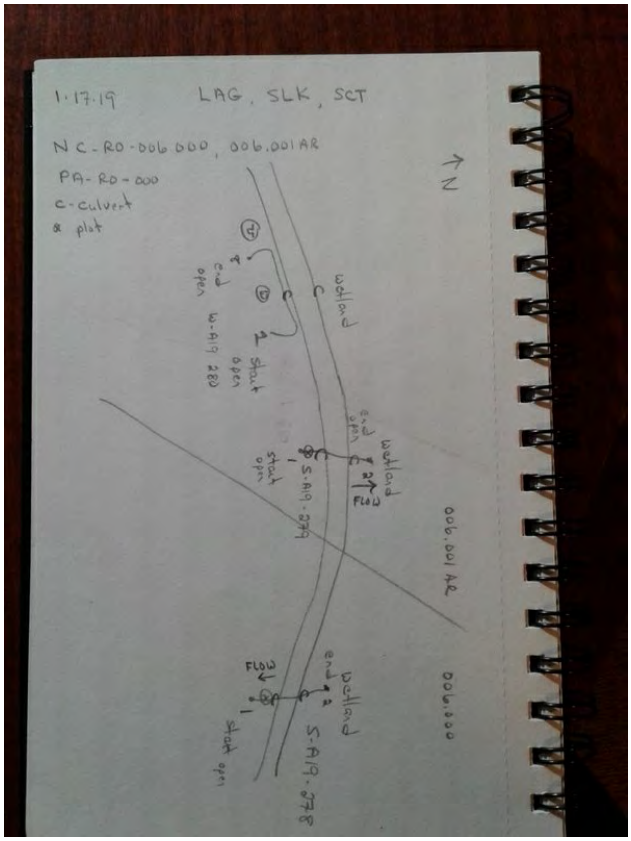
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	6.5
Notes	Gravel from road has washed downstream. Narrow PEM fringe. Immediately downstream of culvert 30-36" pool
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	E
Additional Stream Photos	

upstream on south side of culvert

Across stream on south side of culvert, East

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	7.5

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Stream Biology Total	5.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	N

Across Stream Photo 2	
Across stream photo direction 2	S

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-264

Created	2019-01-08 20:26:43 UTC by Laura Giese
Updated	2019-02-05 15:59:21 UTC by Karla Fortier
Location	36.1086766, -79.657069
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/08
Date2	190108

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	264
Resource ID	S-A19-264
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23.5
Calculated Stream Type	Intermittent
Wildlife Observed	Invertebrates

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	3
Bankfull Width (ft)	3

Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	.5
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	.5
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

Stream Geomorphology Total	9.5

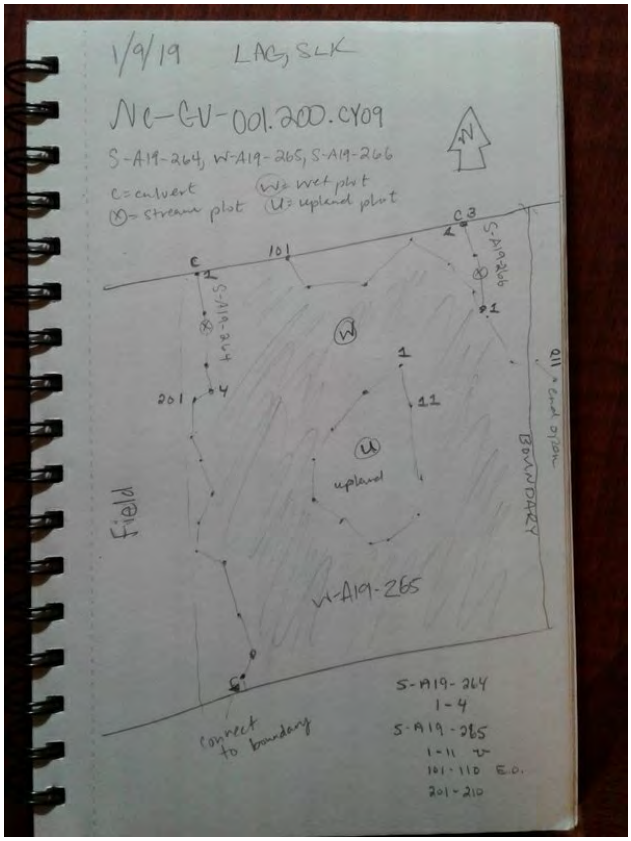
Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Weak
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Moderate
Stream Biology Total	6.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	E

Across Stream Photo 2	
Across stream photo direction 2	W
Sketch of Stream	

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-266

Created	2019-01-09 15:07:00 UTC by Laura Giese
Updated	2019-02-05 16:42:40 UTC by Karla Fortier
Location	36.1087822, -79.6569752
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/09
Date2	190109

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	266
Resource ID	S-A19-266
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23.5
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Sand, Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	9

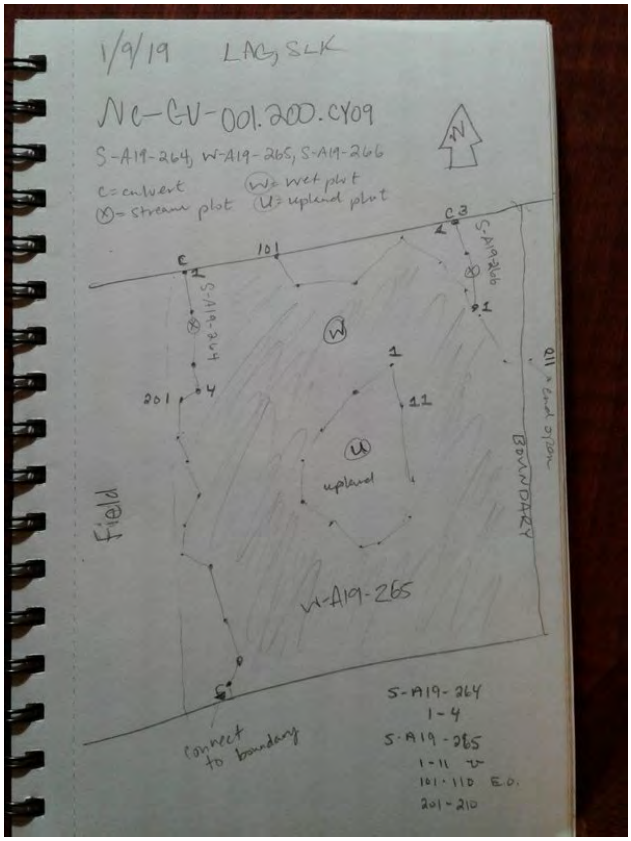
Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Moderate
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Moderate
Stream Biology Total	6.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

Across Stream Photo 2	
Across stream photo direction 2	E
Sketch of Stream	

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-267

Created	2019-01-10 14:15:40 UTC by Laura Giese
Updated	2019-03-08 14:46:17 UTC by Karla Fortier
Location	36.4793728, -79.6918903
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/10
Date2	190110

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	267
Resource ID	S-A19-267
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	14
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SW

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	.5
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud, Organic

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	.5
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud, Organic

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Absent
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	9.5

Stream Hydrology

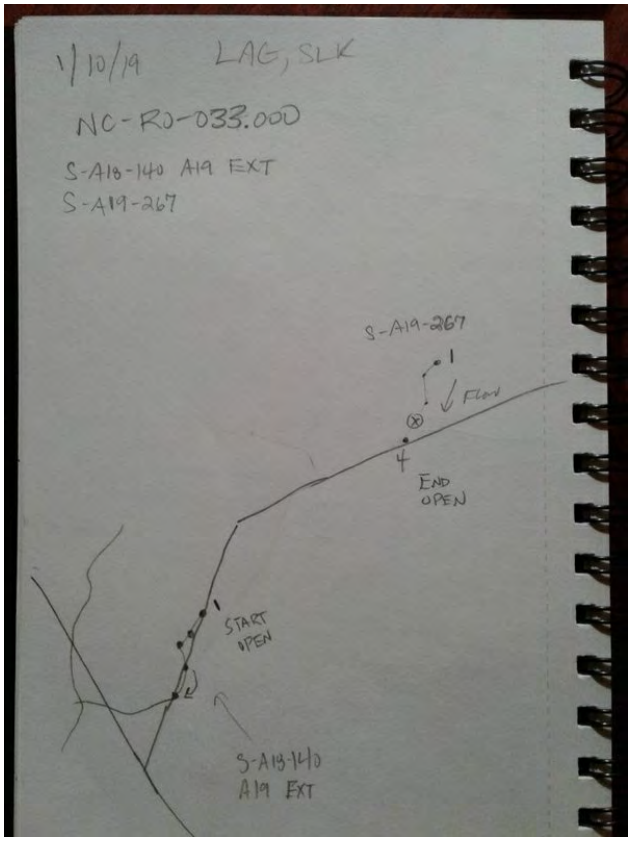
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	No
Stream Hydrology Total	0.5

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	4
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-269

Created	2019-01-11 14:43:50 UTC by Laura Giese
Updated	2019-02-06 16:17:23 UTC by Karla Fortier
Location	36.4070258, -79.6468279
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/11
Date2	190111

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
Resource Series Number	269
Resource ID	S-A19-269
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	27.25
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	N
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	11.5

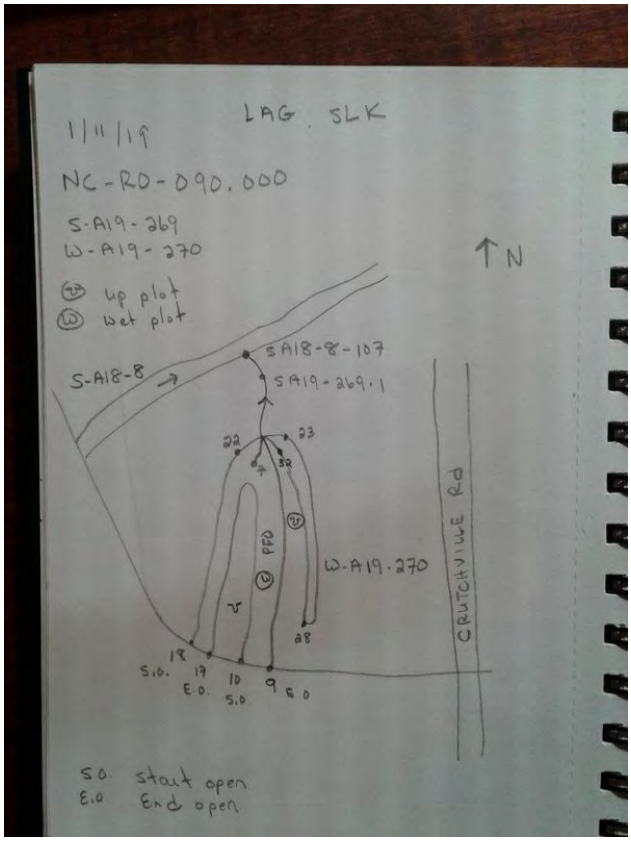
Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	6.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	E

Across Stream Photo 2	
Across stream photo direction 2	W
Sketch of Stream	

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	4

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	7.75
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	N

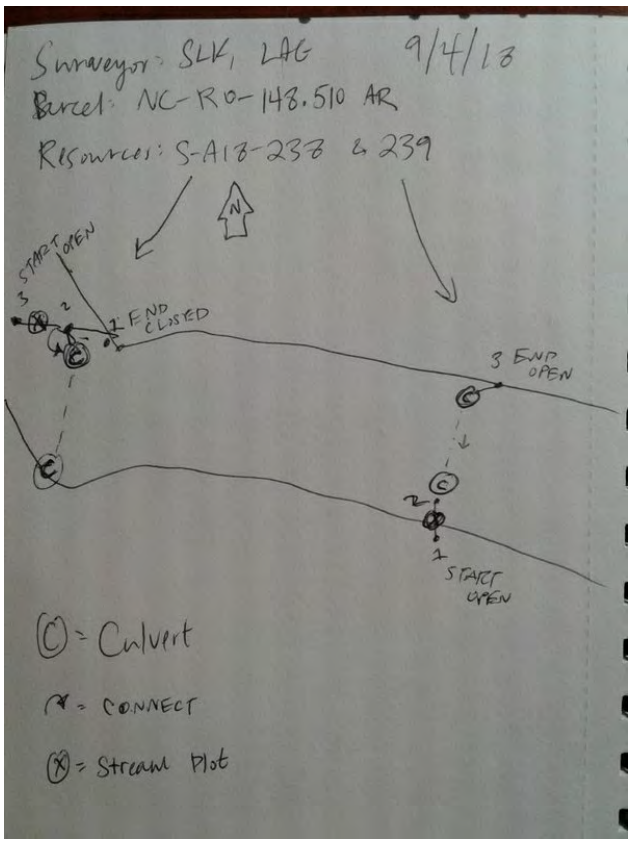
Additional Stream Photos

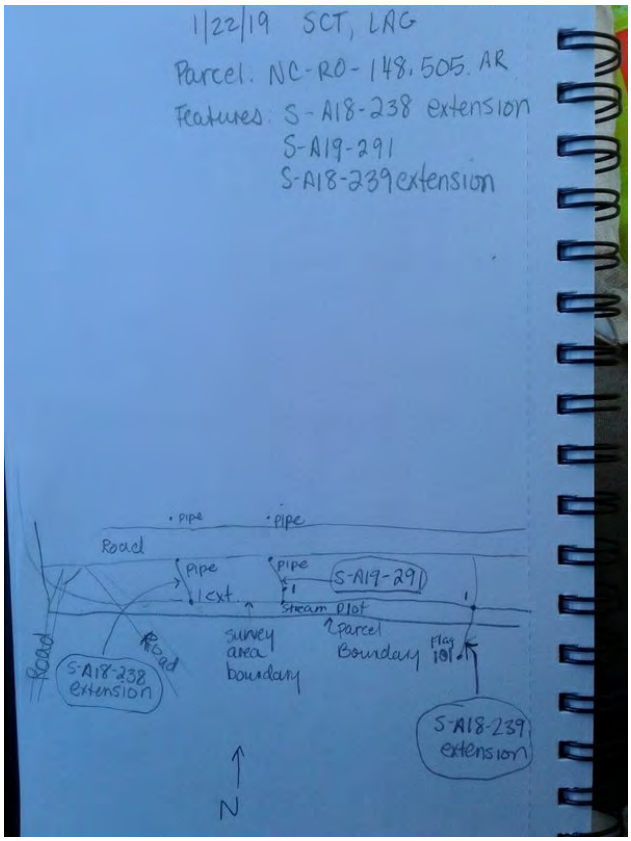
A19 ext upstream north

A19 ext, downstream, south

A19 ext across east

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-239

Created	2018-09-04 18:34:03 UTC by Laura Giese
Updated	2019-02-07 19:14:06 UTC by Karla Fortier
Location	36.3084302, -79.5934306
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/09/04
Date2	180904

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	239
Resource ID	S-A18-239
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	12

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	4.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	6.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

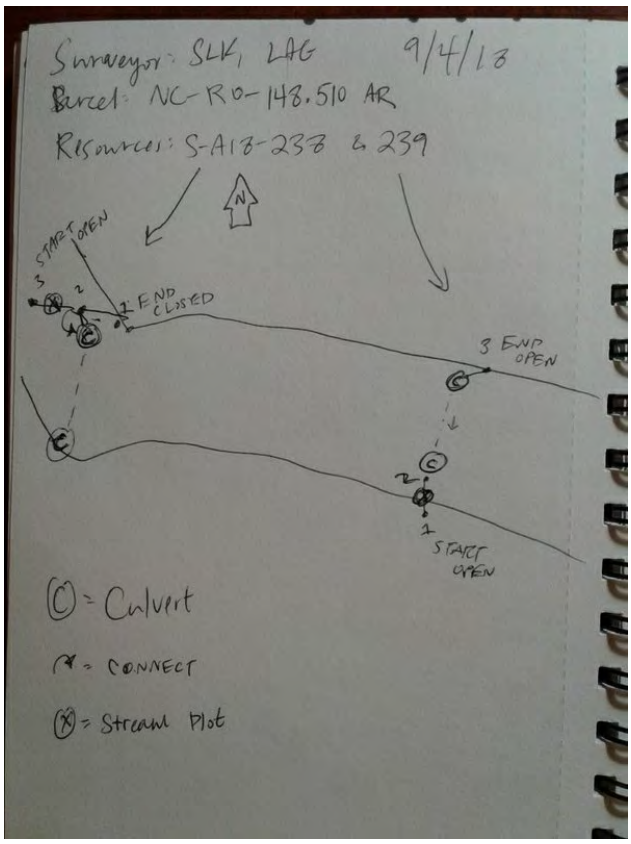
Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	SW
Additional Stream Photos	

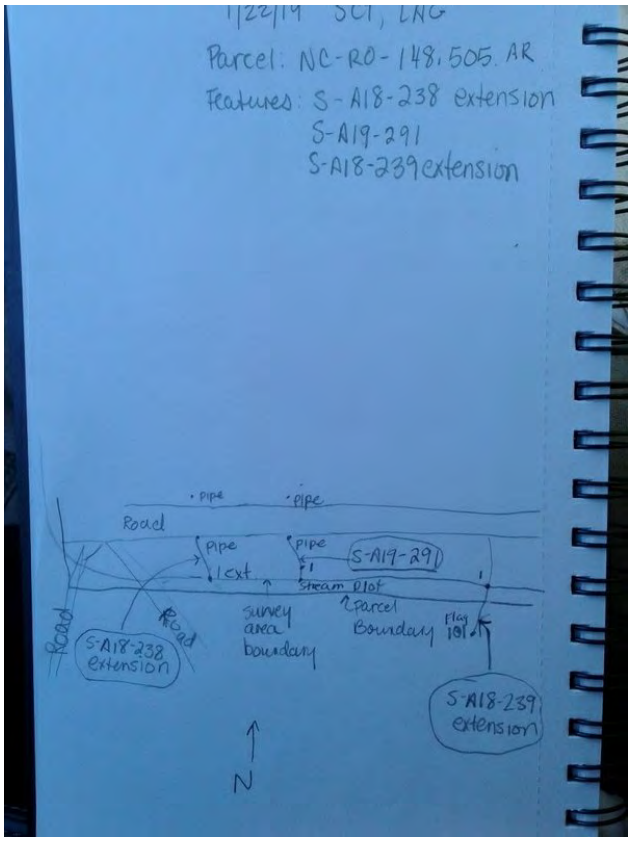
A19 ext upstream, north

A19 ext across, east

A19 ext, downstream, south

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A18-242

Created	2018-09-05 16:09:20 UTC by Laura Giese
Updated	2019-02-07 18:36:31 UTC by Karla Fortier
Location	36.2976176, -79.5812589
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/09/05
Date2	180905

Resource Crew Info

Field Crew	Laura Giese, Chris Covington
Lead Scientist's Initials	A18
GPS Surveyor	Chris Covington
GPS ID	NA
Resource Series Number	242
Resource ID	S-A18-242
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	38
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	N
Channel condition	Suboptimal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	4
Average Water Width (ft)	2
Bank to Bank (ft)	7
Bankfull Width (ft)	7
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Cobble-Gravel, Sand, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Strong
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	20

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Stream Biology Total	9.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	W

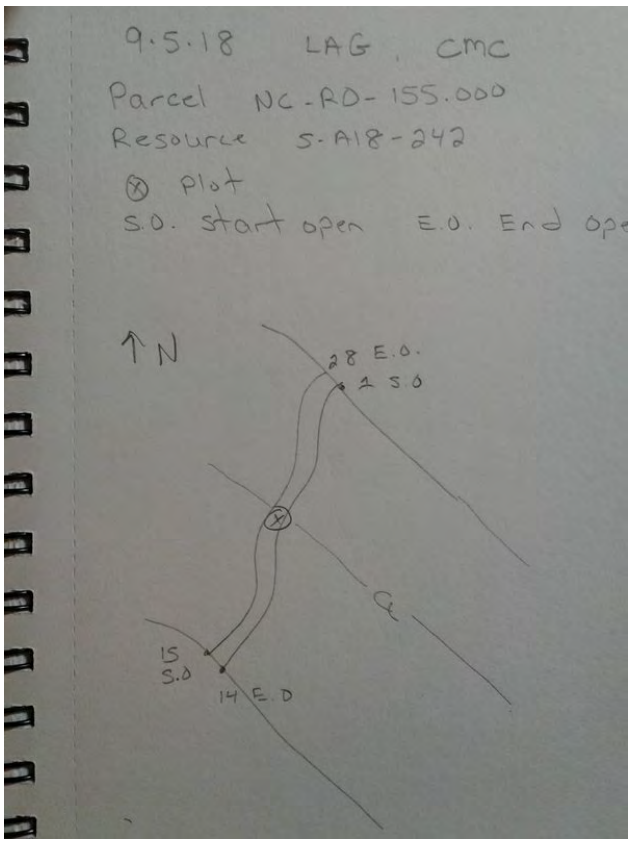
Additional Stream Photos

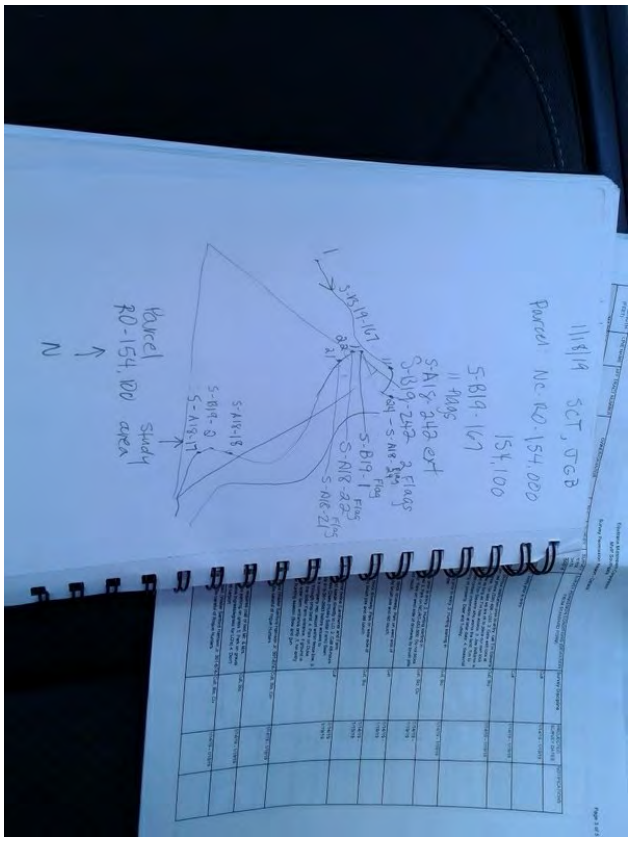
extension upstream west team B19 01/18/19

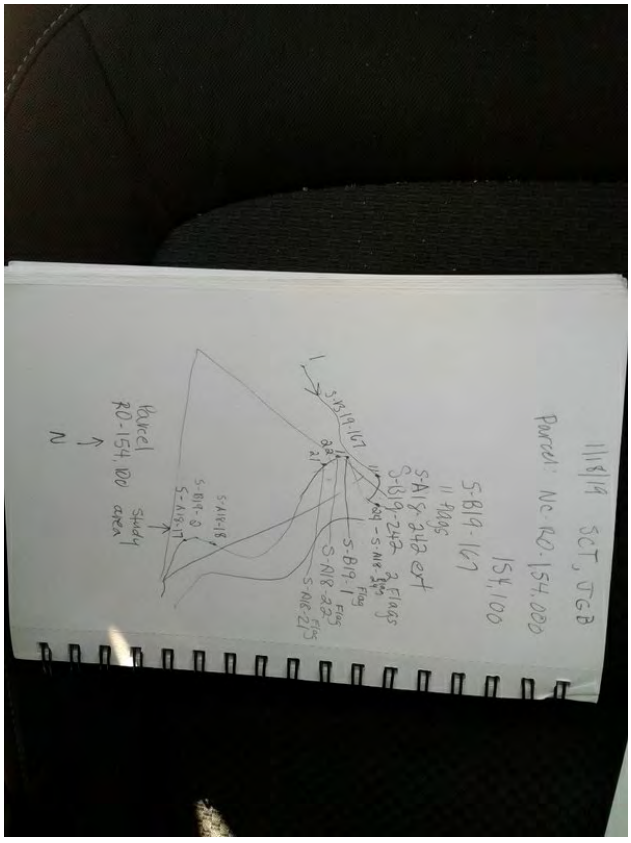
extension downstream east team B19 01/18/19

extension team B19 south 01/18/19

Sketch of Stream







Extension, team b19, 1/18/19

S-A18-250

Created	2018-09-07 17:53:21 UTC by Laura Giese
Updated	2019-02-07 19:01:56 UTC by Karla Fortier
Location	36.1389459, -79.3805345
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/09/07
Date2	180907

Resource Crew Info

Field Crew	Laura Giese, Simon King, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	250
Resource ID	S-A18-250
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	37
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SW
Channel condition	Suboptimal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	4
Average Water Width (ft)	3
Bank to Bank (ft)	5
Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	17.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Weak
Amphibians	Strong
Algae	Absent
Stream Biology Total	11.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	E

Additional Stream Photos

S-A18-252

Created	2018-09-07 18:08:47 UTC by Laura Giese
Updated	2019-02-07 19:03:15 UTC by Karla Fortier
Location	36.1392599, -79.3802933
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/09/07
Date2	180907

Resource Crew Info

Field Crew	Laura Giese, Simon King, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	252
Resource ID	S-A18-252
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	22.5
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	11.5

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	4.5

Stream Biology

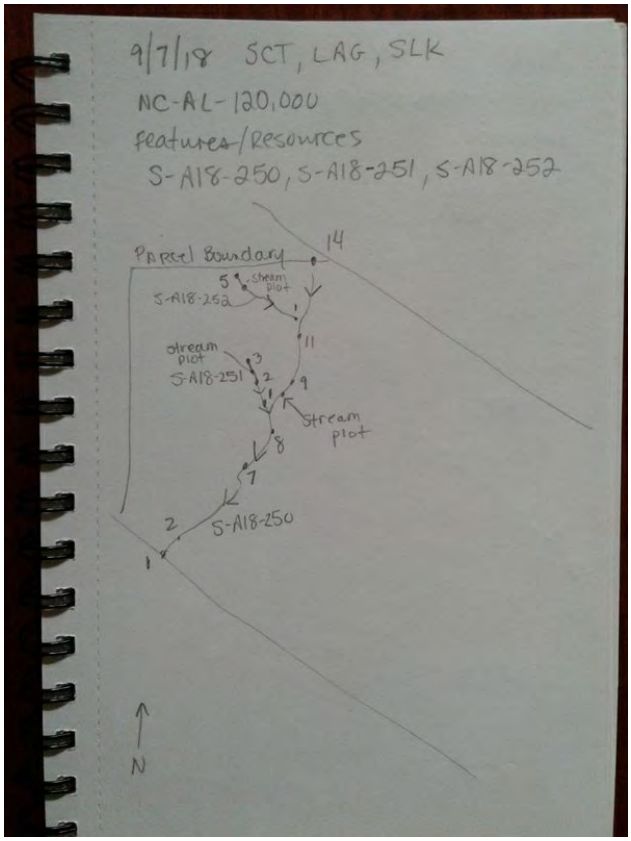
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	6.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

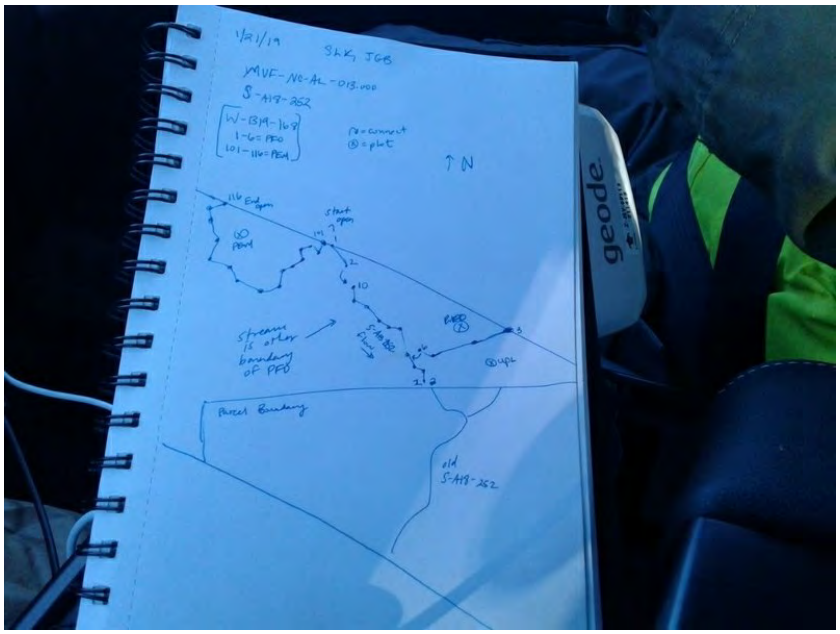
Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	NE
Additional Stream Photos	

extension S-A18-252 upstream

extension S-A18-252 downstream

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-259

Created	2019-01-07 20:35:14 UTC by Laura Giese
Updated	2019-01-31 20:18:10 UTC by Karla Fortier
Location	36.5127055, -79.7199196
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/07
Date2	190107

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
Resource Series Number	259
Resource ID	S-A19-259
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	20.75
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	E

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	0.5
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping

Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	0.5
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	7

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak

Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	5.75
Notes	Flows from wetland upslope, rock-lined along road
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	S

Additional Stream Photos

Head of stream-wnw

Sketch of Stream

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-261

Created	2019-01-08 14:10:55 UTC by Laura Giese
Updated	2019-03-08 14:50:18 UTC by Karla Fortier
Location	36.5129802, -79.713595
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/08
Date2	190108

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
Resource Series Number	261
Resource ID	S-A19-261
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	15.5
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	E
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

S-A19-271

Created	2019-01-14 17:49:19 UTC by Laura Giese
Updated	2019-02-07 14:17:24 UTC by Karla Fortier
Location	36.5284808, -79.6463647
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/14
Date2	190114

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	271
Resource ID	S-A19-271
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	24
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SW
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	10.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	6.5

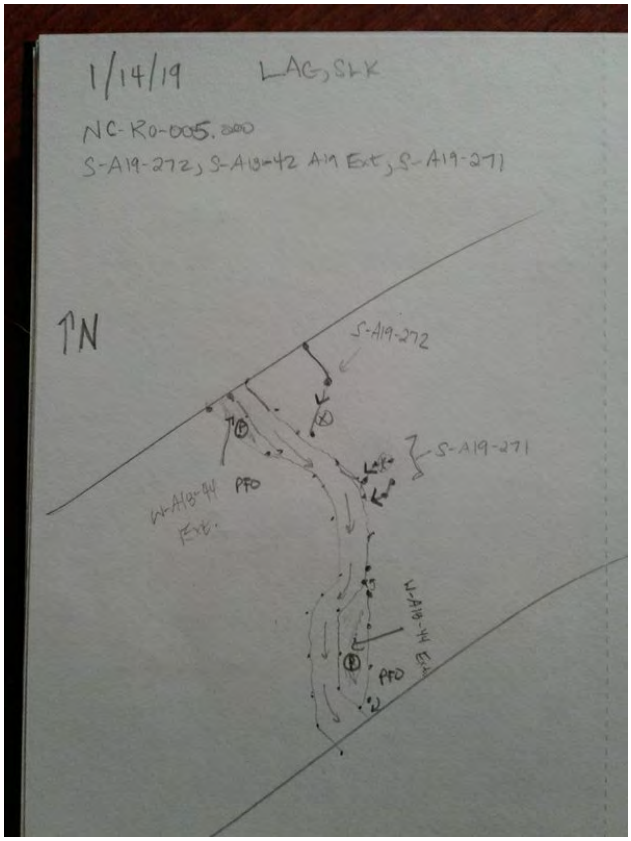
Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	7
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	N

Across Stream Photo 2	
Across stream photo direction 2	SE
Additional Stream Photos	 100 series, upstream, NE

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-272

Created	2019-01-14 17:57:42 UTC by Laura Giese
Updated	2019-02-07 14:19:07 UTC by Karla Fortier
Location	36.0768969, -79.9620748
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/14
Date2	190114

Resource Crew Info

Field Crew	Laura Giese
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	272
Resource ID	S-A19-272
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	27.25
Calculated Stream Type	Intermittent
Wildlife Observed	crayfish burrows

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SE
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	4
Bankfull Width (ft)	4

Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

S-A19-283

Created	2019-01-17 19:17:34 UTC by Laura Giese
Updated	2019-02-07 16:04:27 UTC by Karla Fortier
Location	36.5281251, -79.6488542
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/17
Date2	190117

Resource Crew Info

Field Crew	Laura Giese
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	283
Resource ID	S-A19-283
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	25
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	E
Channel condition	Suboptimal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	Yes
Stream Geomorphology Total	11

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8.5

Stream Biology

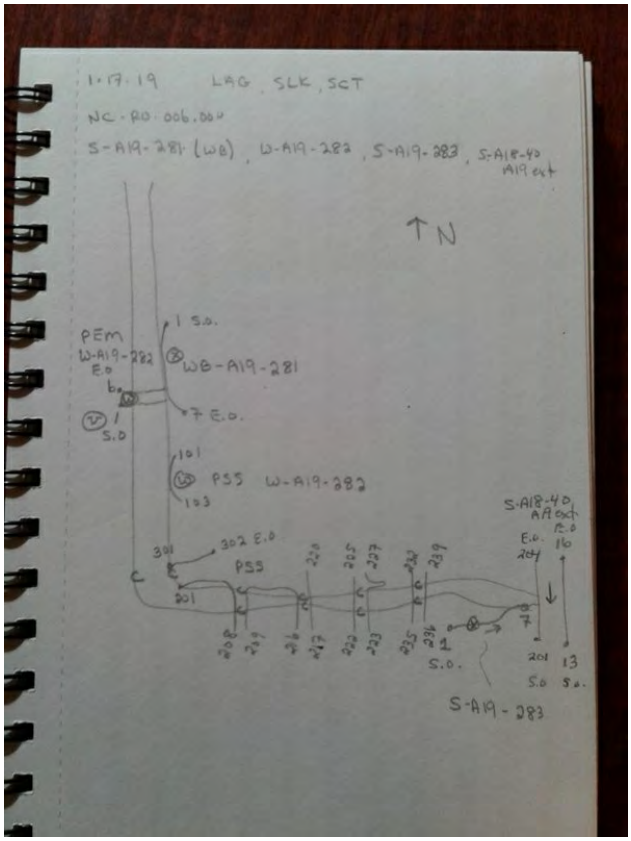
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Stream Biology Total	5.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	S

Additional Stream Photos

eastern end near confluence. eroding soils

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-285

Created	2019-01-18 14:50:36 UTC by Laura Giese
Updated	2019-02-07 18:03:31 UTC by Karla Fortier
Location	36.258693, -79.546322
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/18
Date2	190118

Resource Crew Info

Field Crew	Laura Giese, Tony Tredway
Lead Scientist's Initials	A19
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	285
Resource ID	S-A19-285
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23.25
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SW
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	8.5

Stream Hydrology

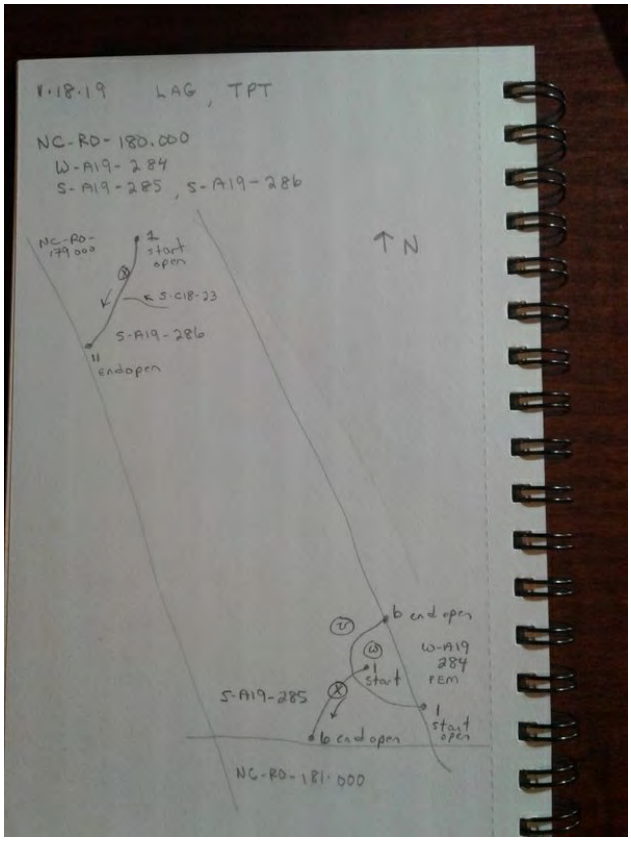
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Strong
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	6.25
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	E

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-286

Created	2019-01-18 16:28:22 UTC by Laura Giese
Updated	2019-02-07 18:18:31 UTC by Karla Fortier
Location	36.264305, -79.550845
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/18
Date2	190118

Resource Crew Info

Field Crew	Laura Giese, Tony Tredway
Lead Scientist's Initials	A19
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	286
Resource ID	S-A19-286
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	39.5
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SE
Channel condition	Optimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	20
Average Water Width (ft)	20
Bank to Bank (ft)	21
Bankfull Width (ft)	21
Probed Stream Depth	6 to 12 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	4
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	18.5

S-B18-38

Created	2018-05-21 16:46:53 UTC by James Bolduc
Updated	2019-02-08 14:45:18 UTC by Susan Thebert
Location	36.4952994, -79.6783592
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/05/21
Date2	180521

Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	B18
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	38
Resource ID	S-B18-38
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	16.25
Calculated Stream Type	Ephemeral
Wildlife Observed	None observed
Observed Use	Irrigation

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	E
Channel condition	Severe
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0.9
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0.9

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	6

Bankfull Width (ft)	6
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0.85
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.85

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Absent
In-channel structure	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Strong
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Absent

Second or greater order channel	No
Stream Geomorphology Total	6

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	4.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	5.75
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Old irrigation ditch
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	N

S-B18-68

Created	2018-06-01 12:18:47 UTC by Will Buetow
Updated	2019-02-06 17:49:11 UTC by Karla Fortier
Location	36.3202096, -79.5939072
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/01
Date2	180601

Resource Crew Info

Field Crew	Jim Bolduc, Simon King, Will Buetow
Lead Scientist's Initials	B18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	68
Resource ID	S-B18-68
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	36.5
Calculated Stream Type	Perennial
Wildlife Observed	fish, tadpole crawfish
Observed Use	water for cattle

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	NE
Channel condition	Optimal
In stream habitat	Optimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	6

Bankfull Width (ft)	6
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	clay

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	4
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	clay

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Strong

Second or greater order channel	No
Stream Geomorphology Total	16

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Weak
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Moderate
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	OBL
Stream Biology Total	12
Regulatory Status	State Protected, Corps Jurisdictional
Notes	NHD mapped stream
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	NE
Across Stream Photo 1	
Across stream photo direction 1	NW

Across Stream Photo 2	
Across stream photo direction 2	NE
Additional Stream Photos	

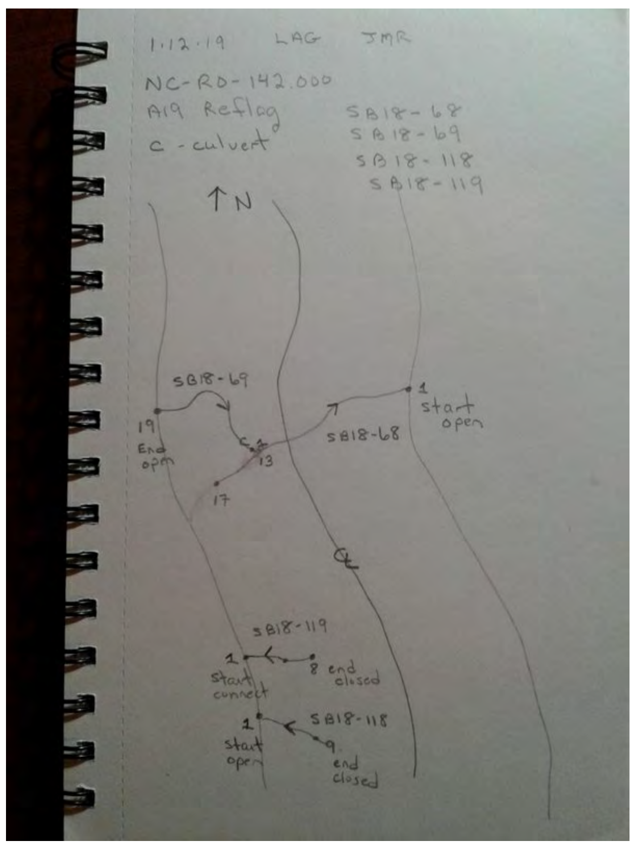
A19 reflag, downstream, NE

A19 reflag, across, south

A19 reflag, upstream, west

Sketch of Stream


SB18-68 Extension
8/23/18
N
New Survey Limit
SB1868 Extension
forested
flow
photo
Existing flag
104 end open
101 tie to 1
SB18-68
101-104
101 TT 1, 104 end open


1.12.19 LAG JMR
NC-RD-142.000
A19 Reflag
c - culvert
SB18-68
SB18-69
SB18-118
SB18-119
N
SB18-69
19
End open
13
17
SB18-68
1
start open
SB18-119
1
start connect
8 end closed
SB18-118
1
start open
9
end closed

S-B18-69

Created	2018-06-01 13:02:55 UTC by Will Buetow
Updated	2019-02-06 17:51:11 UTC by Karla Fortier
Location	36.3203805, -79.5941427
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/01
Date2	180601

Resource Crew Info

Field Crew	Jim Bolduc, Simon King, Will Buetow
Lead Scientist's Initials	B18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	69
Resource ID	S-B18-69
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	35.75
Calculated Stream Type	Perennial
Wildlife Observed	invertebrate, tadpoles crawfish
Observed Use	water for cattle

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SE
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	6

Bankfull Width (ft)	6
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	clay

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	4
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	clay

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate

Second or greater order channel	No
Stream Geomorphology Total	16.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Weak
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	10.25
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Strong sediment sorting, well defined bed bank
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	S

Across Stream Photo 2	
Across stream photo direction 2	N
Additional Stream Photos	

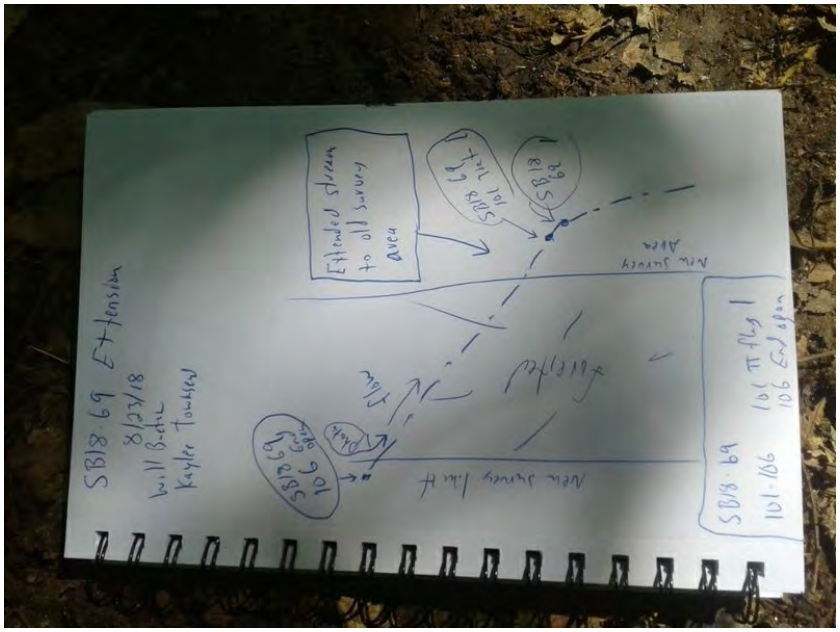
A19 reflag, downstream, south

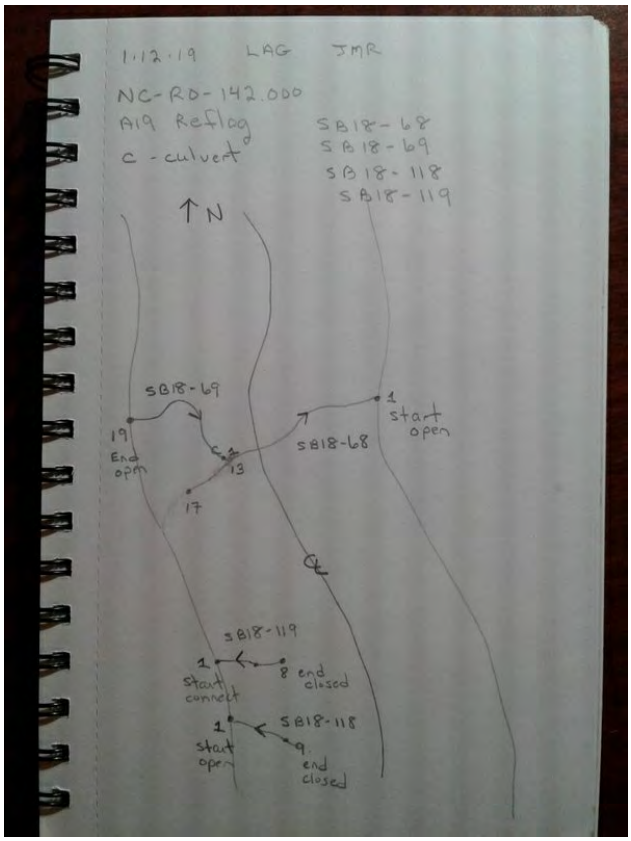
A19 reflag, across, east

A19 reflag, upstream, NNW

Sketch of Stream


S-B18-69-1
stream Plot
forested
SB18-69
S-B18-69-1 To 17
S-B18-69-1 To 15
pasture
SB18-69-12
Connect To
S-B18-68-5
1 start pin
end open
tie to flag
5
S-B18-68
slope
start
17 end pin
SB18 69
SB18 69
forested
Aug 1-17


SB18 69 Extension
8/23/18
Will Bittle
Kayler Tomberg
Extended stream to old survey area
SB18 69 to 71
SB18 69
New Survey Area
New Survey Line
SB18 69 to 68
SB18 69
101 Flag 1
101.166
106 End open



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-71

Created	2018-06-01 13:57:28 UTC by Will Buetow
Updated	2019-02-06 17:47:30 UTC by Karla Fortier
Location	36.3229528, -79.596341
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/01
Date2	180601

Resource Crew Info

Field Crew	Jim Bolduc, Simon King, Will Buetow
Lead Scientist's Initials	B18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	71
Resource ID	S-B18-71
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	43
Calculated Stream Type	Perennial
Wildlife Observed	fish, frogs, crawfish, tadpoles, macroinvertebrates

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SE
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	12
Average Water Width (ft)	4
Bank to Bank (ft)	14
Bankfull Width (ft)	14

Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	6
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	High
Left Bank Substrate	clay

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	6
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	High
Right Bank Substrate	clay

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Strong
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Strong
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	No

Stream Geomorphology Total	21.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Strong
Amphibians	Strong
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	13.5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Very well developed stream, coarse substrate, abundant wildlife
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	N

Across Stream Photo 2	
Across stream photo direction 2	S
Additional Stream Photos	

Downstream

EXT UP

EXT DN

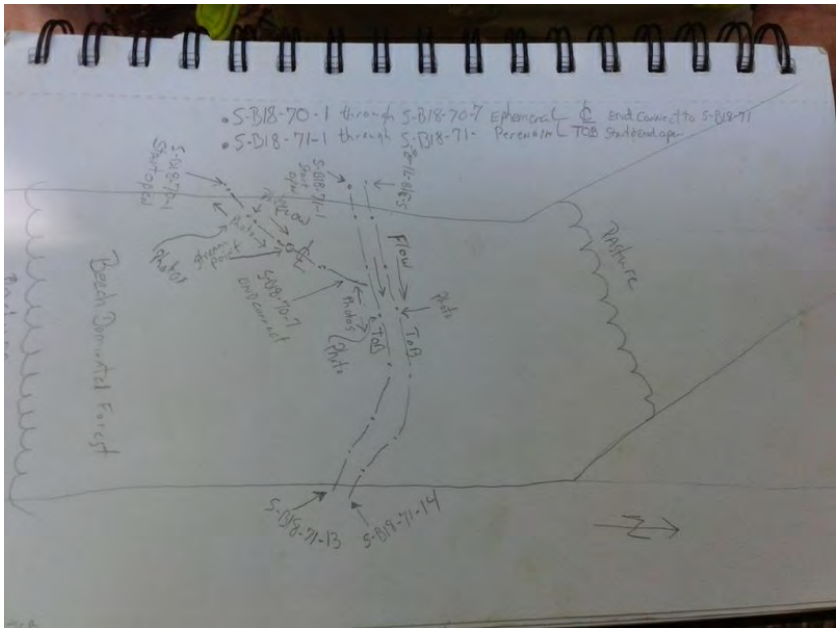
EXT Across

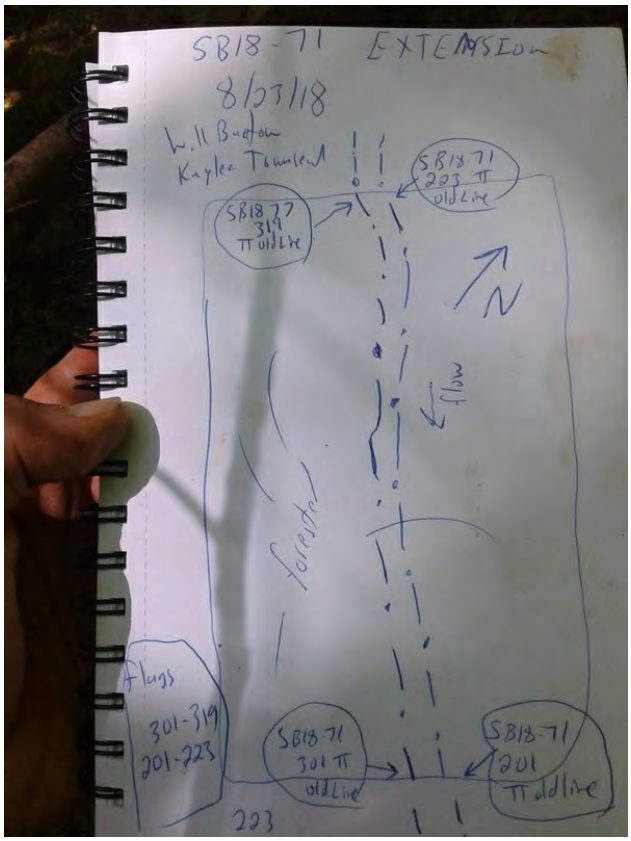
A19 reflag, downstream, east

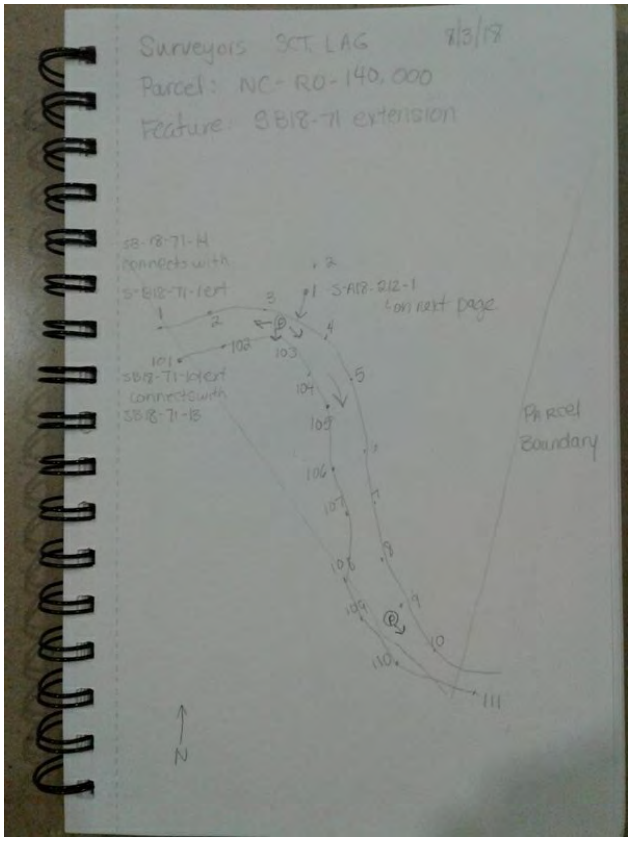
A19 reflag, across, South

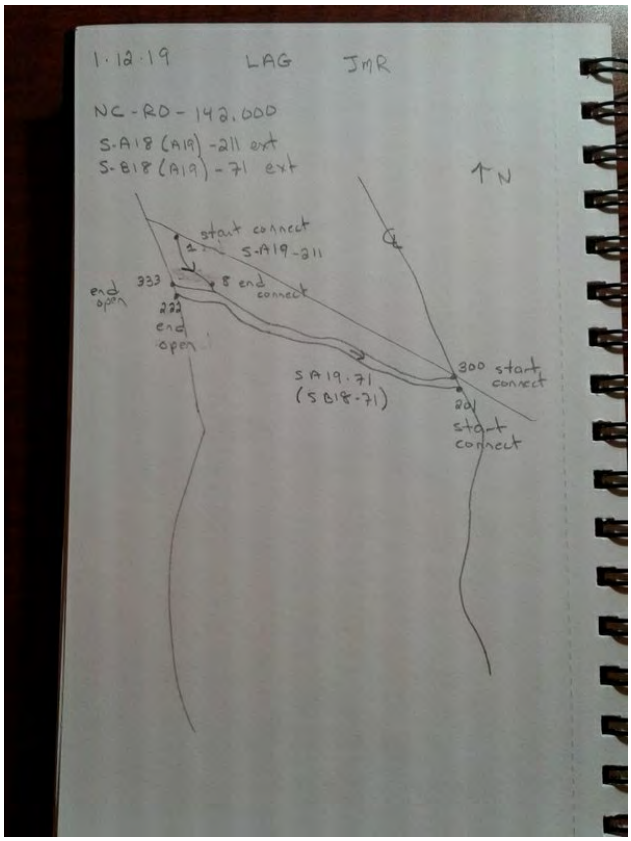
A19 reflag, upstream, NW

Sketch of Stream




SB18-71 EXTENSION
8/23/18
Will Burton
Kaylee Townsend
SB18 77 319 π old Line
SB18 71 223 π old Line
flow
forest
flags
301-319
201-223
SB18-71 301 π old Line
SB18-71 201 π old line
223


Surveyors SCT LAG 7/3/18
Parcel: NC-RO-140,000
Feature: SB18-71 extension
SB-18-71-H connects with SB18-71-1ext
SB18-71-2 on next page
SB18-71-1ext connects with SB18-71-1B
Parcel Boundary
N



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-102

Created	2018-06-08 19:36:17 UTC by Will Buetow
Updated	2019-01-10 16:44:59 UTC by Simon King
Location	36.4856341, -79.685156
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	//
Date2	180611

Resource Crew Info

Field Crew	Jim Bolduc, Joe Roy, Will Burrow, Jake Brillo
Lead Scientist's Initials	B18
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	102
Resource ID	S-B18-102
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	35.75
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	NW

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	High
Left Bank Substrate	clay

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	High
Right Bank Substrate	clay

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	17.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Strong
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	10.75
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Steep gradient stream, strong bed and bank.
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	SE

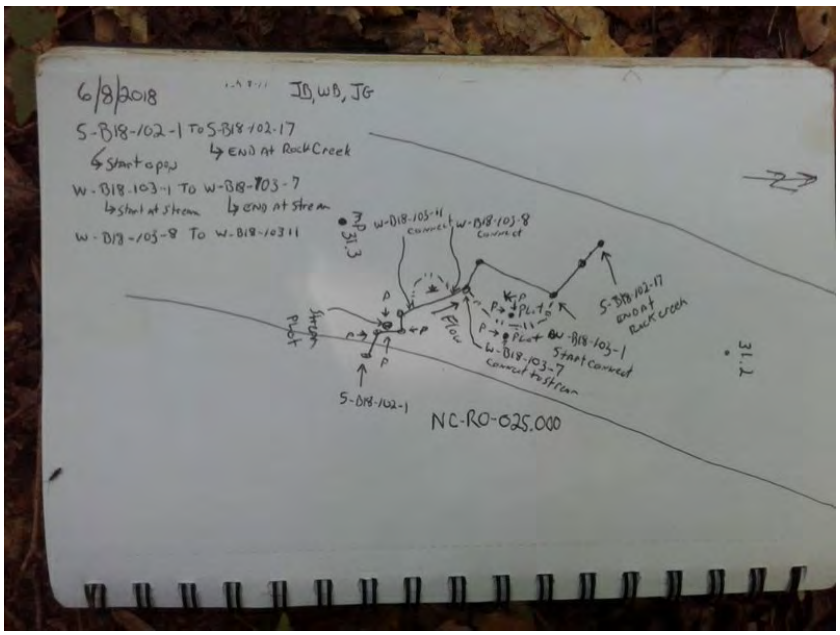
Downstream Stream Photo	
Downstream photo direction	NW
Across Stream Photo 1	
Across stream photo direction 1	NE

Across Stream Photo 2	
Across stream photo direction 2	SW
Additional Stream Photos	 extension downstream nw at flag 4

extension upstream se at flag 4

extension across sw at flag 4

Sketch of Stream



extension

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-104

Created	2018-06-09 13:28:40 UTC by Will Buetow
Updated	2019-01-18 02:31:27 UTC by Simon King
Location	36.4887799, -79.6841809
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	//
Date2	180611

Resource Crew Info

Field Crew	Jim Bolduc, Will Burrow, Jake Brillo
Lead Scientist's Initials	B18
GPS Surveyor	Jake Brillo
GPS ID	NA
Resource Series Number	104
Resource ID	S-B18-104
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	33
Calculated Stream Type	Perennial
Wildlife Observed	Invertebrates

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	W

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	5
Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	5
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	clay

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	5
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	High
Right Bank Substrate	clay

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	16.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Weak
Fish	Absent
Crayfish	Moderate
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	9
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Well developed bed and bank. Entrenched stream. 6/9/2018.
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

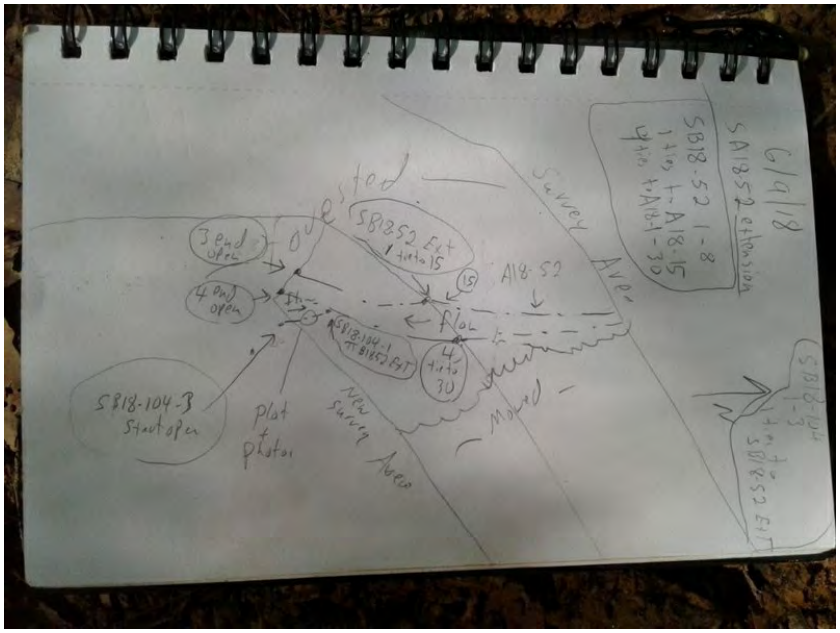
Downstream Stream Photo	
Downstream photo direction	W
Across Stream Photo 1	
Across stream photo direction 1	S

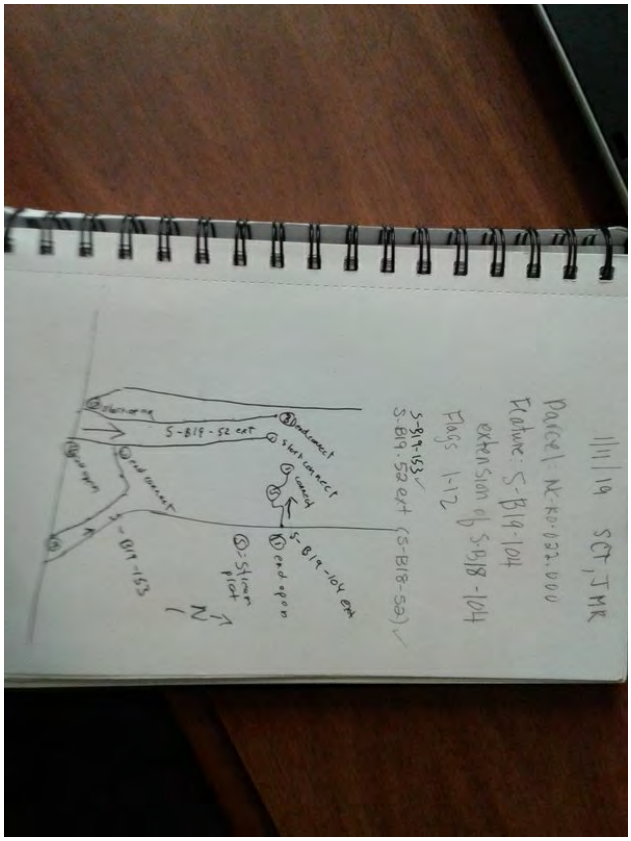
Across Stream Photo 2	
Across stream photo direction 2	N
Additional Stream Photos	
	upstream east extension

downstream west extension

Across north extension

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-105

Created	2018-06-09 15:16:38 UTC by Will Buetow
Updated	2019-03-08 14:52:51 UTC by Karla Fortier
Location	36.4868407, -79.6854313
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	//
Date2	180611

Resource Crew Info

Field Crew	Jim Bolduc, Will Buetow, Jake Brillo
Lead Scientist's Initials	B18
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	105
Resource ID	S-B18-105
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	29.5
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	W
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	2
Bank to Bank (ft)	2
Bankfull Width (ft)	2

Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	clay

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	clay

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	No

Stream Geomorphology Total	14.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	6.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	8.5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Moderately developed bed and bank, does have low flow. Strongly defined drainage. 6/9/2018.
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

Downstream Stream Photo	
Downstream photo direction	W
Across Stream Photo 1	
Across stream photo direction 1	S

Across Stream Photo 2	
Across stream photo direction 2	N
Additional Stream Photos	 A19 ext Down, north

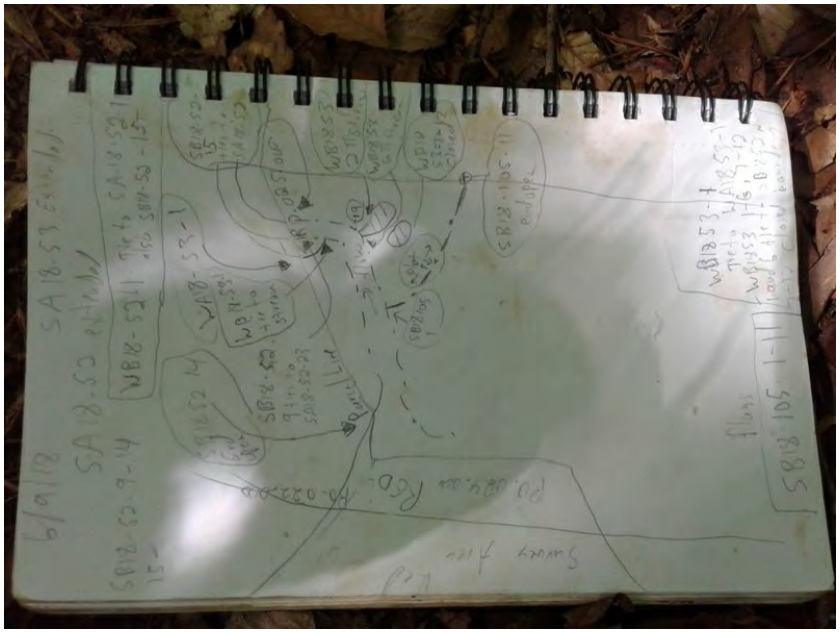
A19 ext, across, NW

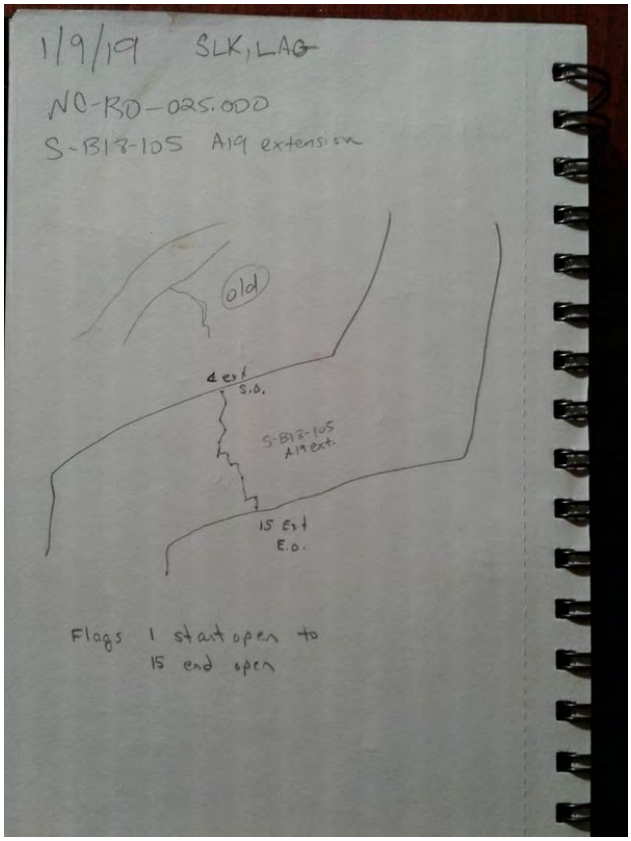
A19 ext, upstream, south, by flag 5-ext

A19 ext, down, north, by flag 14-ext

A19 ext, up, south, by flag 14-ext

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-117

Created	2018-06-14 15:00:08 UTC by Will Buetow
Updated	2019-01-11 20:16:14 UTC by Simon King
Location	36.4169134, -79.6503488
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/14
Date2	180614

Resource Crew Info

Field Crew	Jim Bolduc, Jake Brillo
Lead Scientist's Initials	JGB
GPS Surveyor	Jake Brillo
GPS ID	NA
Resource Series Number	117
Resource ID	S-B18-117
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-117
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	42.5
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	Drainage

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	S
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.5

Stream Measurements

OHWM Width (ft)	7
Average Water Width (ft)	5

Bank to Bank (ft)	15
Bankfull Width (ft)	15
Probed Stream Depth	6 to 12 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Bedrock, Cobble-Gravel, Sand, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	1.5
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.5

Right Bank

Right Bank Height (feet)	5
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Bedrock, Cobble-Gravel, Sand, Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Strong
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Strong
Recent alluvial deposits	Strong
Headcuts	Absent
Grade control	Weak

Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	22.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Weak
Fish	Strong
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	12
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Clear flow
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

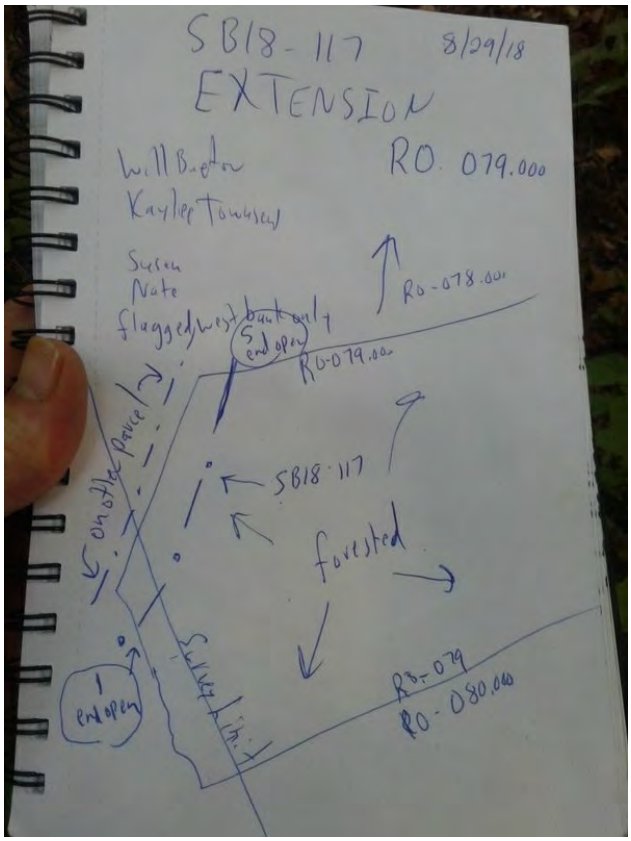
Across Stream Photo 2	
Across stream photo direction 2	E
Additional Stream Photos	

extension upstream north

extension downstream s

extension across w

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-118

Created	2018-08-23 12:32:56 UTC by Will Buetow
Updated	2019-02-06 17:52:38 UTC by Karla Fortier
Location	36.3188646, -79.5932087
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/23
Date2	180823

Resource Crew Info

Field Crew	Will Burrow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	118
Resource ID	S-B18-118
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-118
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	22.5
Calculated Stream Type	Intermittent
Wildlife Observed	None
Observed Use	Drainage

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	NW
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	4
Average Water Width (ft)	0

Bank to Bank (ft)	4
Bankfull Width (ft)	8
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Moderate
Grade control	Weak

Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	17

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Moderate
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	3
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	SE

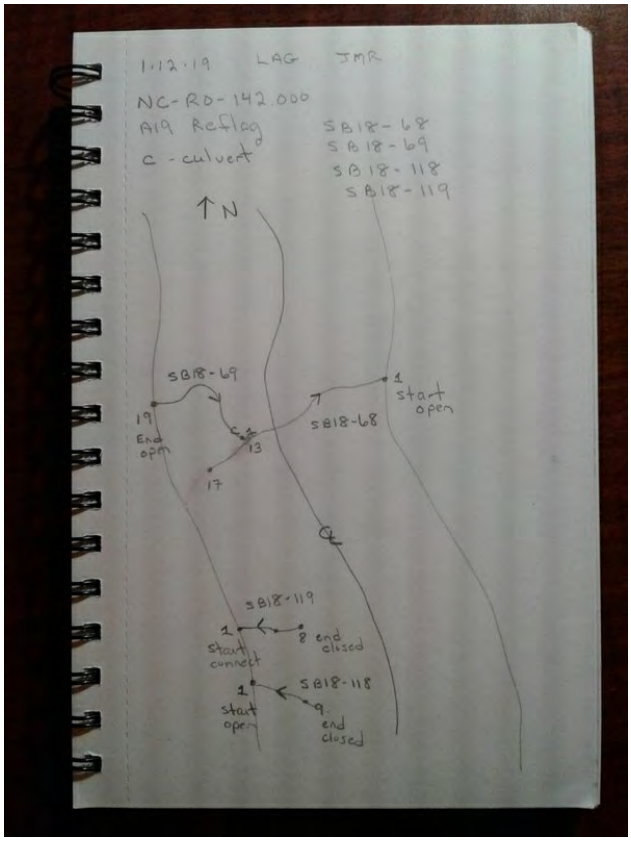
Downstream Stream Photo	
Downstream photo direction	NW
Across Stream Photo 1	
Across stream photo direction 1	SW

Across Stream Photo 2	
Across stream photo direction 2	NE
Additional Stream Photos	 A19 reflag, downstream, west

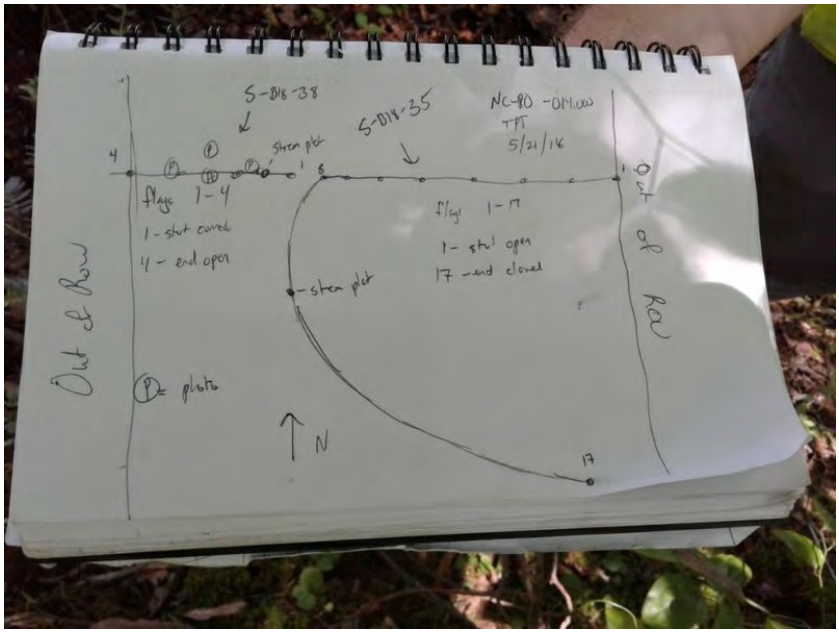
A19 reflag, across, south

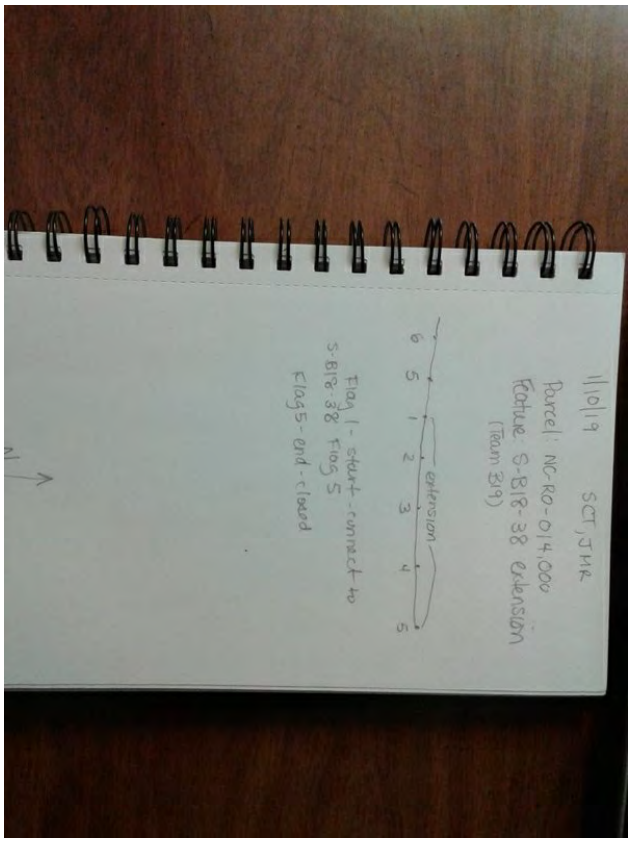
A19 reflag, upstream, east

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

Across Stream Photo 2	
Across stream photo direction 2	S
Sketch of Stream	



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-41

Created	2018-05-22 15:39:12 UTC by James Bolduc
Updated	2019-02-07 15:24:49 UTC by Karla Fortier
Location	36.369576, -79.620653
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/22
Date2	180522

Resource Crew Info

Field Crew	Jeremy Hummel and Jake Brillo
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	41
Resource ID	S-B18-41
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-41
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	34.25
Calculated Stream Type	Perennial
Wildlife Observed	None observed
Observed Use	Drainage

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	E
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.5

Stream Measurements

OHWM Width (ft)	5
Average Water Width (ft)	2

Bank to Bank (ft)	8
Bankfull Width (ft)	8
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	High
Left Bank Substrate	Sand, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	High
Right Bank Substrate	Sand, Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak

Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	17.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Moderate
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	7.75
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Stream flowing clear. Feature extended by Team C18 on 6/14, conditions same
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	S

Across Stream Photo 2	
Across stream photo direction 2	N
Additional Stream Photos	

A19 ext-north, downstream, east

A19 ext- N, upstream, west

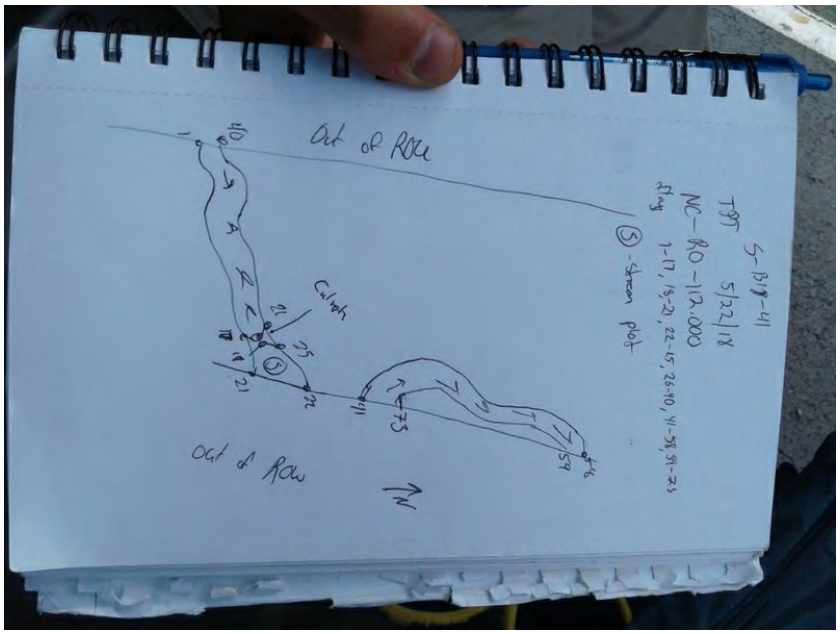
A19 ext-N, across, north

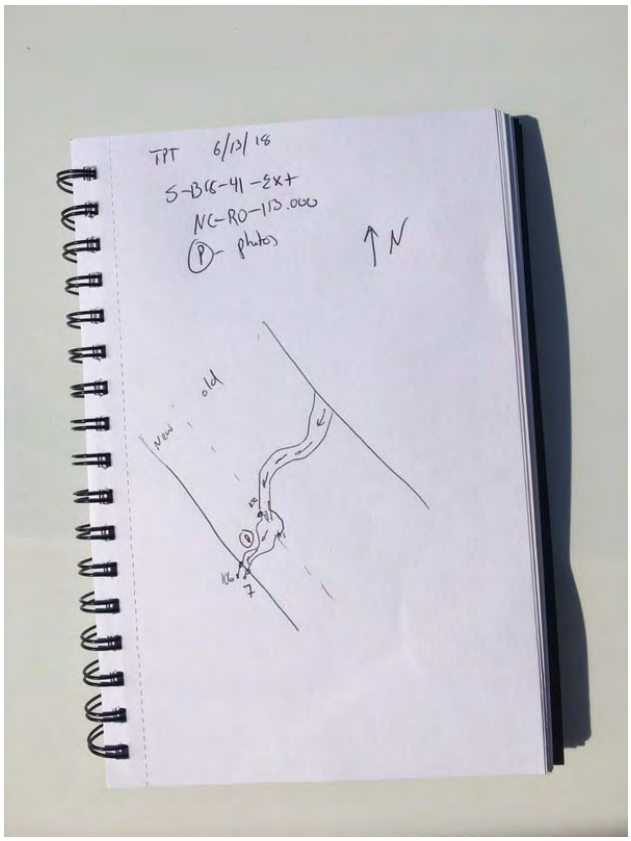
A19 ext-S, downstream, west

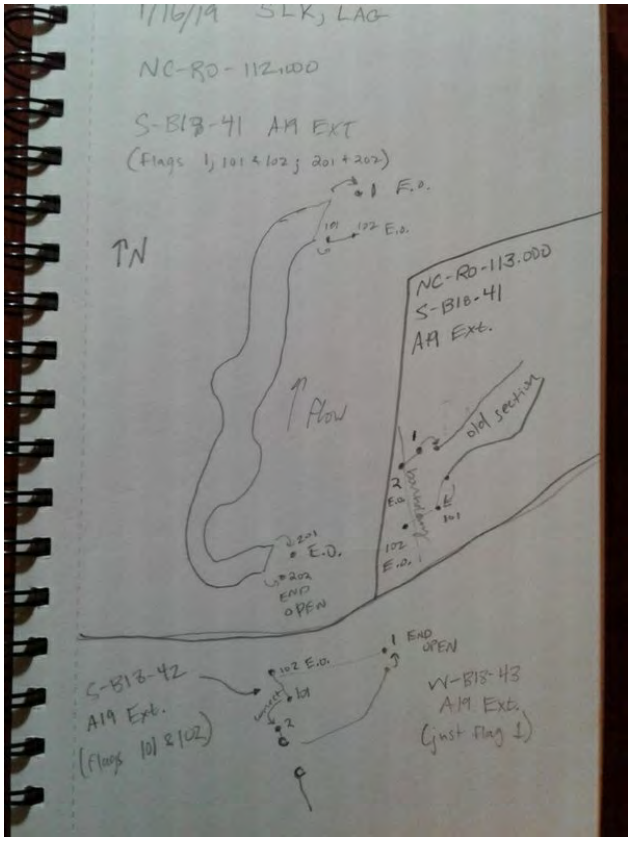
A19 ext-S, across, SW

A19 ext-S, upstream, south

Sketch of Stream







Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-42

Created	2018-05-22 15:10:15 UTC by James Bolduc
Updated	2019-02-07 15:25:56 UTC by Karla Fortier
Location	36.3696007, -79.6197758
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/22
Date2	180522

Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	B18
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	42
Resource ID	S-B18-42
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	23
Calculated Stream Type	Intermittent
Wildlife Observed	none
Observed Use	stream flowing through cattle farm

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	NW
Channel condition	Poor
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.5

Stream Measurements

OHWM Width (ft)	4
Average Water Width (ft)	2
Bank to Bank (ft)	6

Bankfull Width (ft)	6
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	Mud or muck

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0.85
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.85

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Mud or muck

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0.85
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.85

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Absent
Natural valley	Weak

Second or greater order channel	No
Stream Geomorphology Total	9.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Trampled by cattle
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	SE

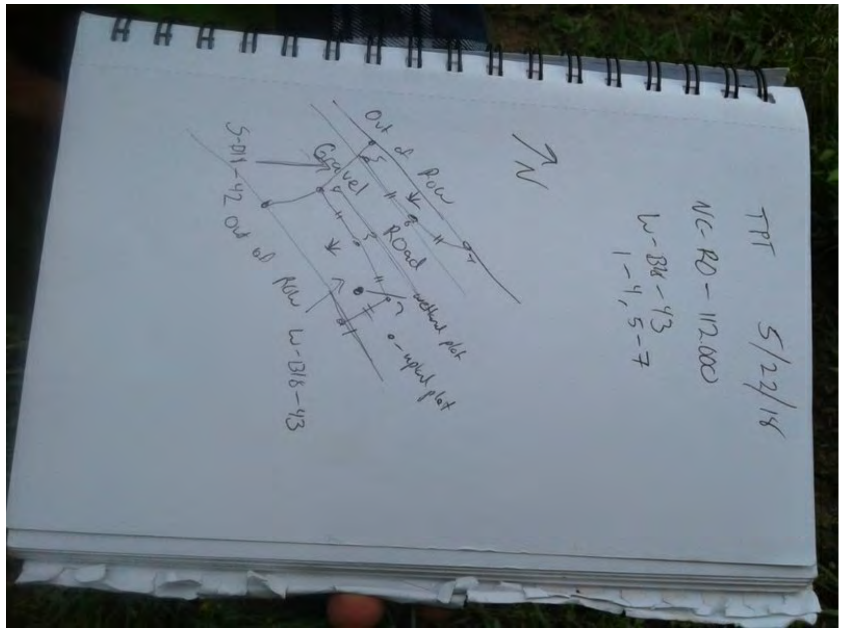
Downstream Stream Photo	
Downstream photo direction	NW
Across Stream Photo 1	
Across stream photo direction 1	NE

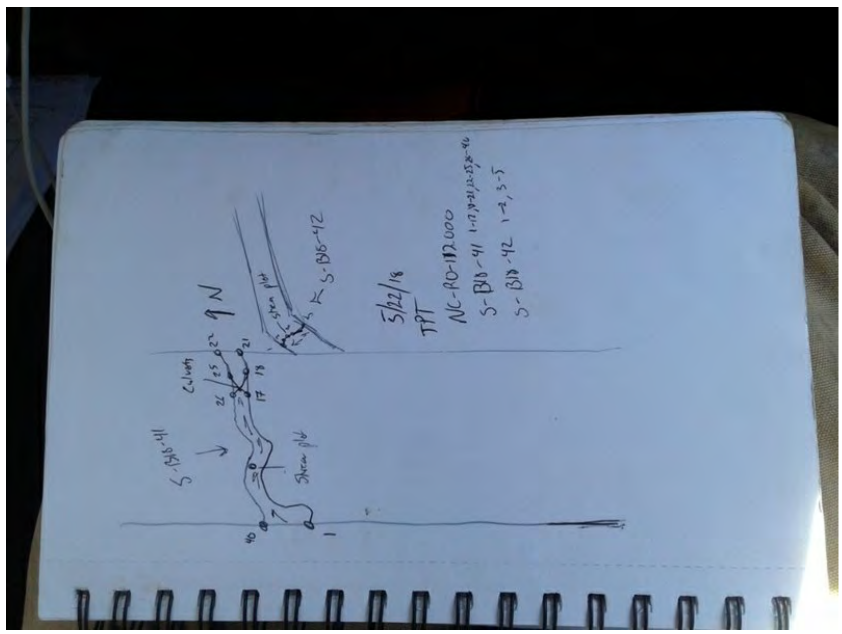
Across Stream Photo 2	
Across stream photo direction 2	S
Additional Stream Photos	 A19 ext, downstream. west

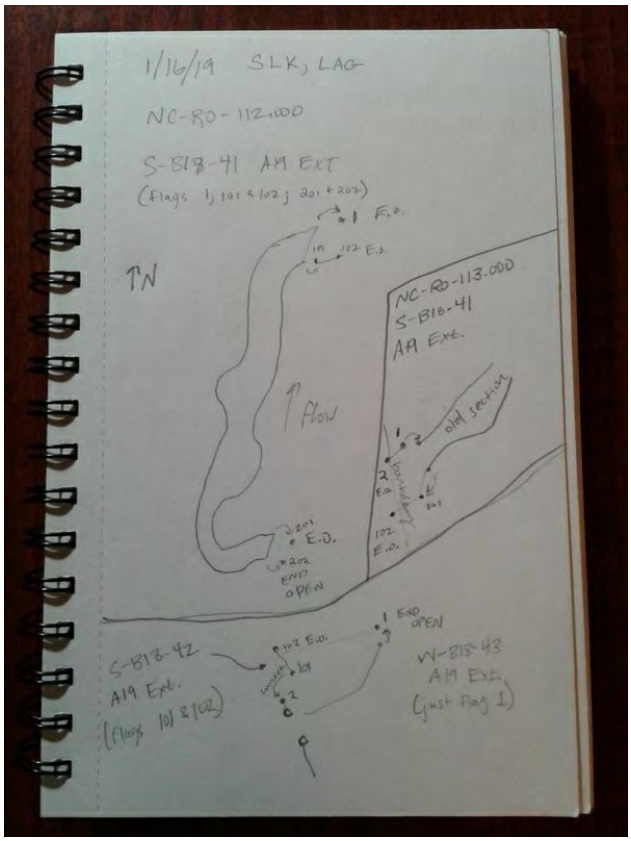
A19 ext, downstream, SE

A19 ext, across, SW

Sketch of Stream


TPT 5/22/18
NC-RO-112,000
W-B18-43
1-4, 5-7
Out of ROW
Gravel
Road
wetland plot
o - upland plot
S-B18-42 Out of ROW
W-B18-43


5/22/18
TPT
NC-RO-112,000
S-B18-42
Culvert
Stream plot



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-52

Created	2018-05-24 17:27:04 UTC by James Bolduc
Updated	2019-01-18 02:30:32 UTC by Simon King
Location	36.383199, -79.628158
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/24
Date2	180524

Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway, Heather Patti
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	52
Resource ID	S-B18-52
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-52
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	37.5
Calculated Stream Type	Perennial
Wildlife Observed	Salamanders
Observed Use	Drainage

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	E
Channel condition	Marginal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	1.3
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.3

Stream Measurements

OHWM Width (ft)	4
Average Water Width (ft)	3

Bank to Bank (ft)	5
Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Cobble-Gravel, Sand

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	1.5
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.5

Right Bank

Right Bank Height (feet)	4
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	High
Right Bank Substrate	Cobble-Gravel, Sand

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Moderate

Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	18

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Moderate
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Moderate
Amphibians	Strong
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	11
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Drainage through forest. One flag for extension.
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	E

Across Stream Photo 2	
Across stream photo direction 2	W
Additional Stream Photos	

Upstream

Downstream

Across

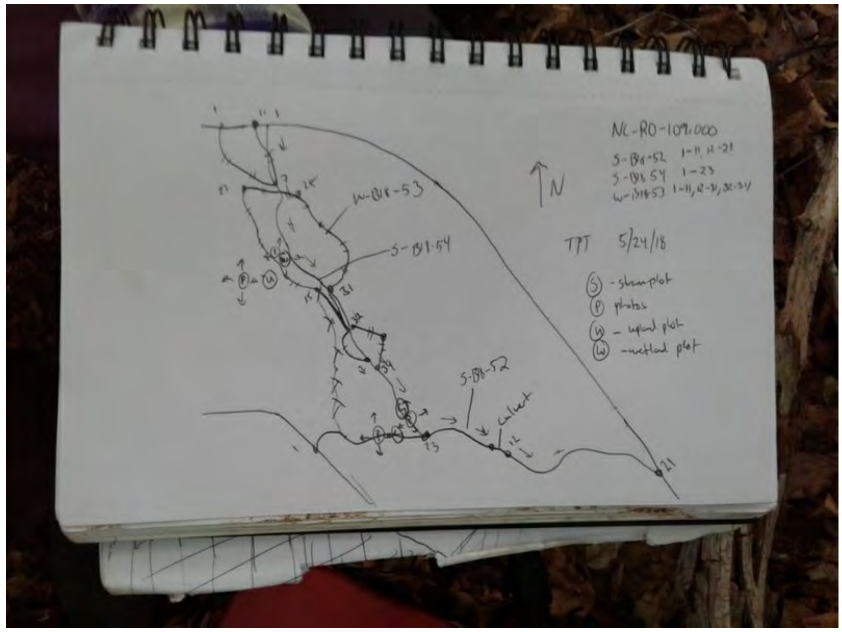
b19 extension across east

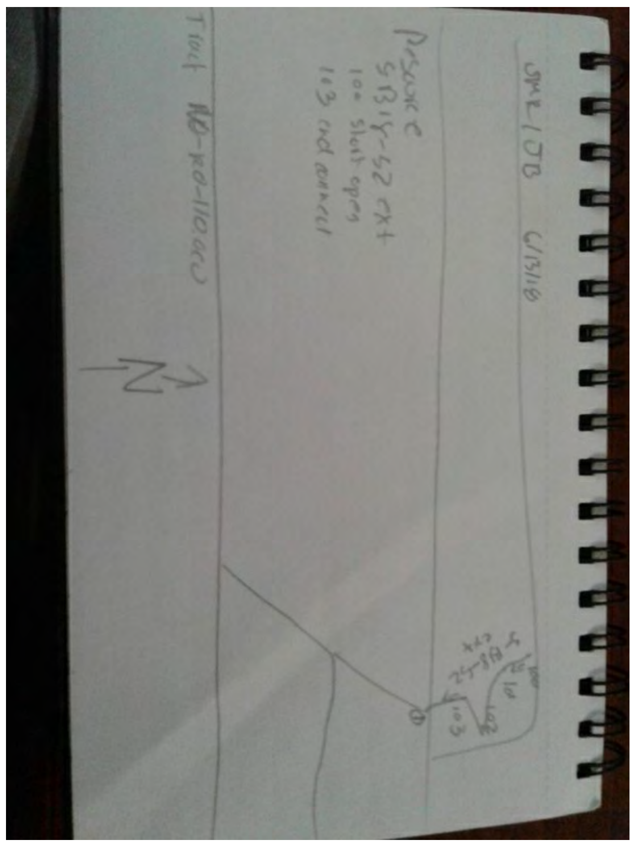
upstream sw b19 extension

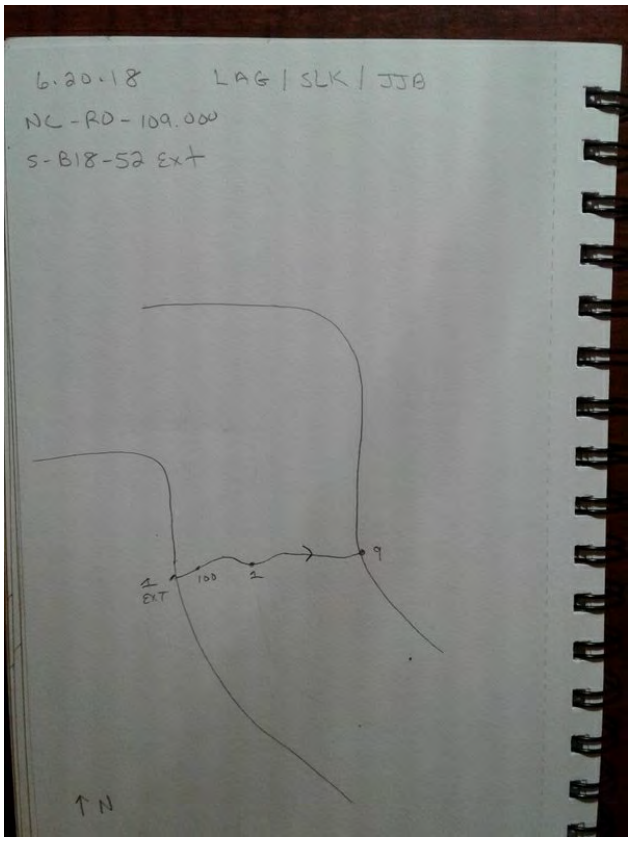
downstream ne b19 extension

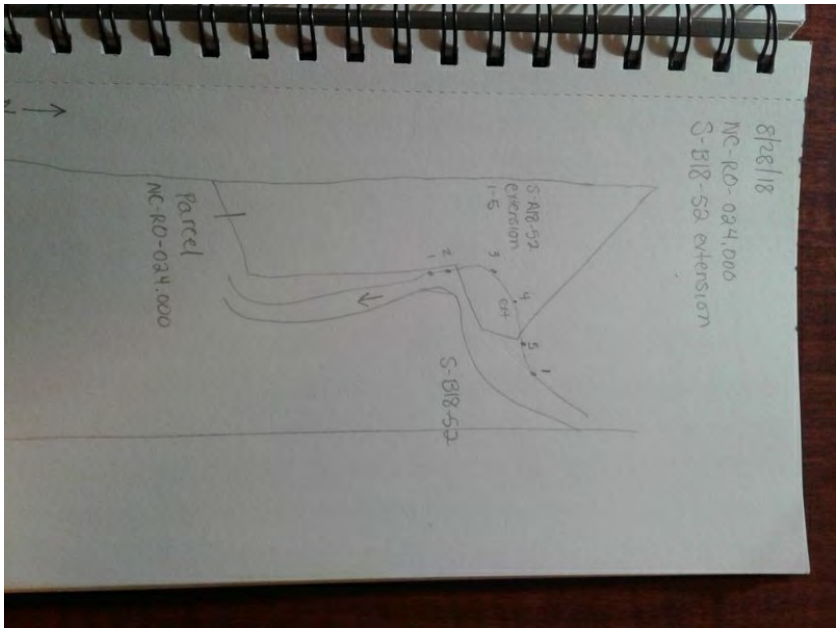
across sw b19 extension

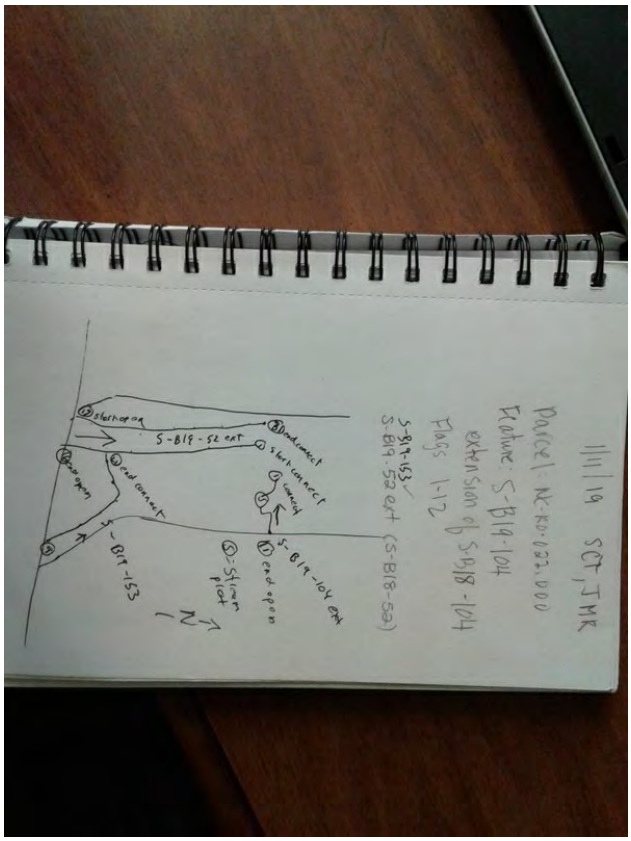
Sketch of Stream


NC-RO-109.000
TPT 5/24/18
S-BJ8-52
W-BJ8-53
S-BJ8-54




6.20.18 LAG | SLK | JJB
NC-RD-109.000
S-B18-52 Ext
EXT
100
2
9
↑N


8/28/18
NC-RD-024.000
S-B18-52 extension
S-B18-52 extension
1-5
Parrel
NC-RD-024.000
S-B18-52
EXT



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-56

Created	2018-05-25 13:50:44 UTC by James Bolduc
Updated	2019-02-06 17:24:48 UTC by Karla Fortier
Location	36.3773942, -79.6252066
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/25
Date2	180525

Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	56
Resource ID	S-B18-56
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-56
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	46
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	forested drainage

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	N
Channel condition	Marginal
In stream habitat	Optimal

Channel Alteration

Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.5

Stream Measurements

OHWM Width (ft)	15
Average Water Width (ft)	8

Bank to Bank (ft)	25
Bankfull Width (ft)	25
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	10
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	High
Left Bank Substrate	Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0.75
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0.55
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.3

Right Bank

Right Bank Height (feet)	10
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	High
Right Bank Substrate	Sand, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0.75
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0.55
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.3

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Strong
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak

Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	23.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak
Leaf litter	Absent
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Strong
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	OBL
Stream Biology Total	13.5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Additional stream photos for extension P1 up, P2 dn, P3 across
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	NE

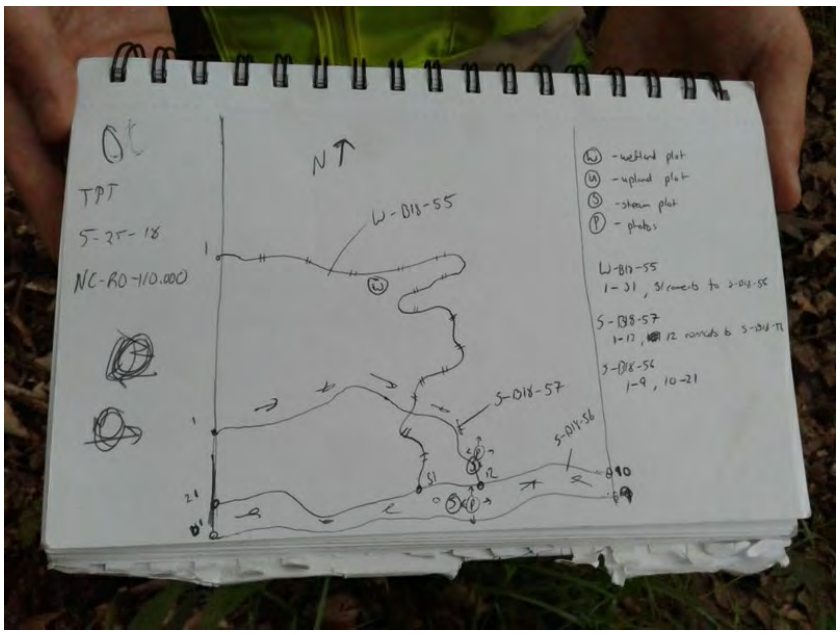
Across Stream Photo 2	
Across stream photo direction 2	SW
Additional Stream Photos	

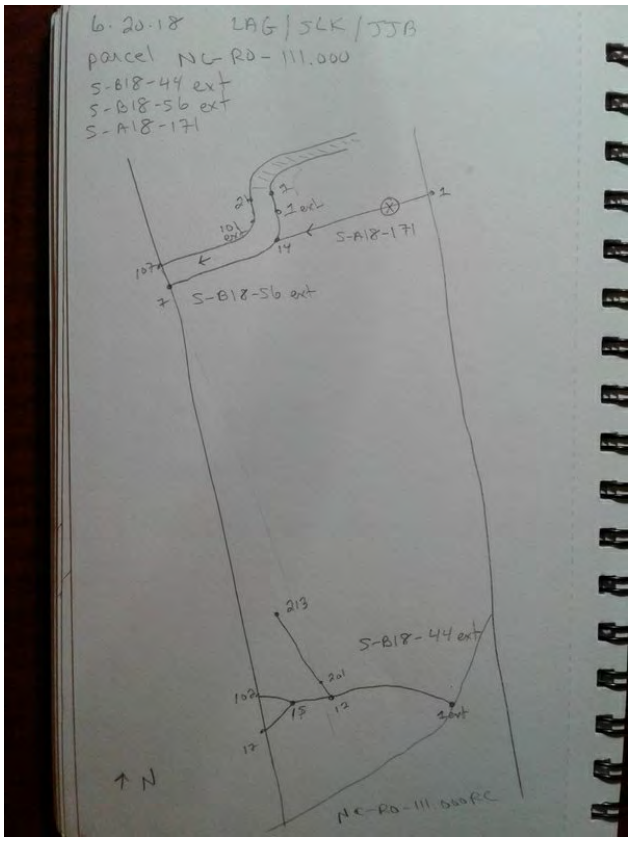
A19 ext upstream, SW

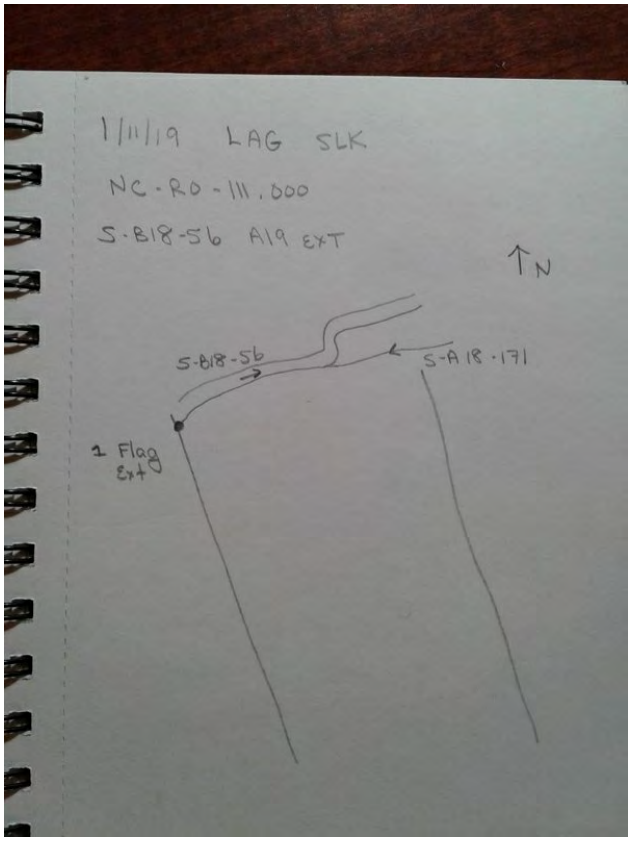
A19 ext, across, NW

A19 ext, downstream, NE

Sketch of Stream







Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-59

Created	2018-05-30 13:41:30 UTC by Will Buetow
Updated	2019-01-18 02:07:48 UTC by Simon King
Location	36.2088178, -79.5159789
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/30
Date2	180530

Resource Crew Info

Field Crew	Will Buetow
Lead Scientist's Initials	B18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	59
Resource ID	S-B18-59
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	34.25
Calculated Stream Type	Perennial
Observed Use	Drainage

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	NW

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	clay

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	clay

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	15.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9

Stream Biology

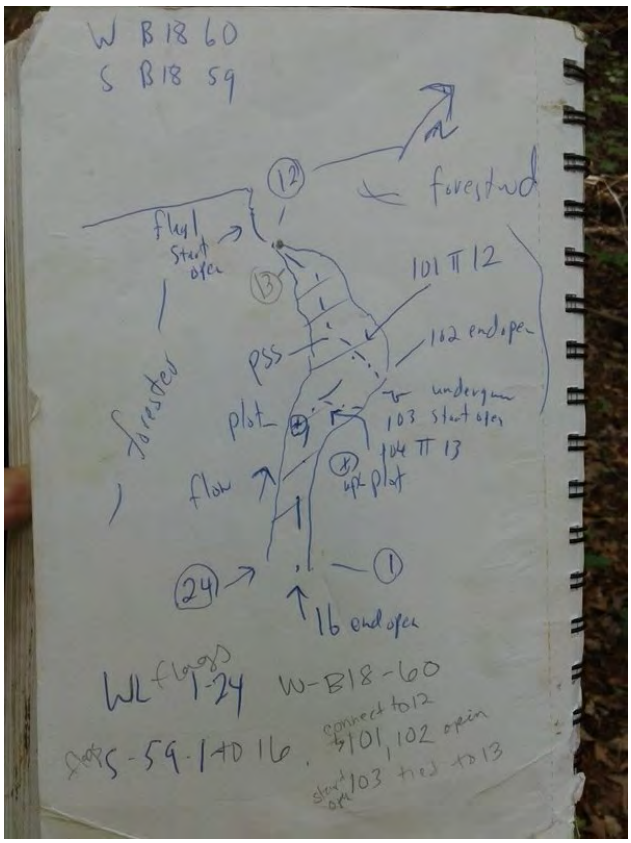
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Strong
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	9.75
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	SE

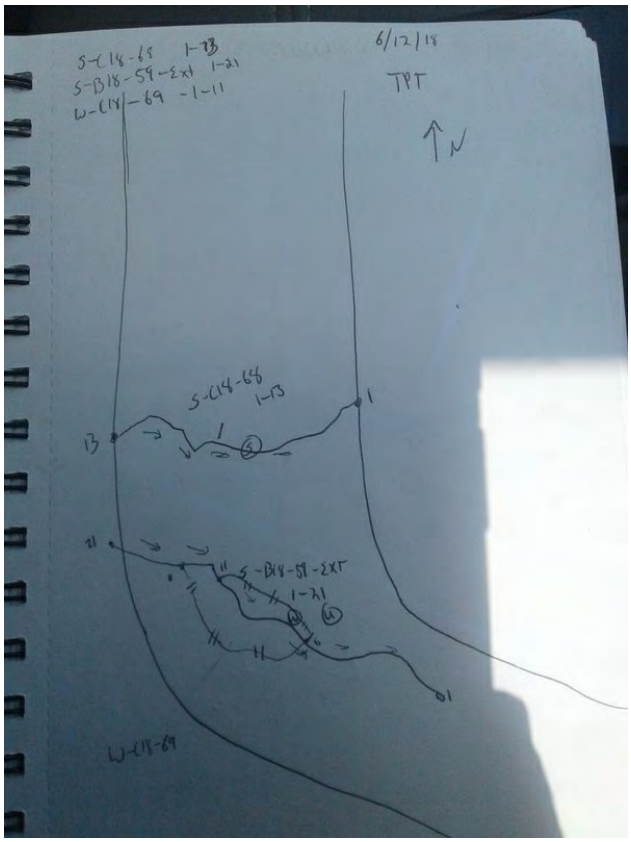
Downstream Stream Photo	
Downstream photo direction	NW
Across Stream Photo 1	
Across stream photo direction 1	N

Across Stream Photo 2	
Across stream photo direction 2	S
Additional Stream Photos	

stream braided 100 series flagging

Sketch of Stream


W B18 60
S B18 59
12
forestwd
flag1
Start
open
13
101 T 12
102 end open
PSS
forested
plot
undergrow
103 start open
104 T 13
flow
4ft plot
24
1
16 end open
WL flags 1-24
W-B18-60
S-59-1 TO 16.
connect to 12
101, 102 open
start 103 tied to 13


S-C14-69 1-13
S-B18-59-2XT 1-21
W-C14-69 -1-11
6/12/18
TPT
N
S-C14-69
1-13
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1
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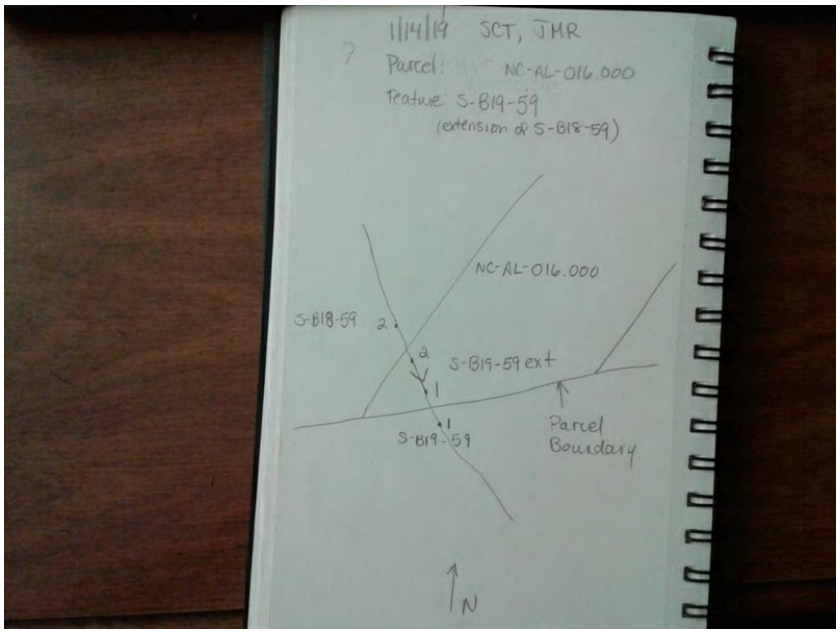
1-21
01
W-C14-69



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-66

Created	2018-05-31 13:46:57 UTC by Will Buetow
Updated	2019-02-07 15:17:22 UTC by Karla Fortier
Location	36.3340271, -79.6022555
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/31
Date2	180531

Resource Crew Info

Field Crew	Will Buetow
Lead Scientist's Initials	B18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	66
Resource ID	S-B18-66
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	17.75
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	NW
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	6
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	clay

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	6
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	clay

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Absent
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Weak
Headcuts	Strong
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	10.5

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	4.75
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	SE

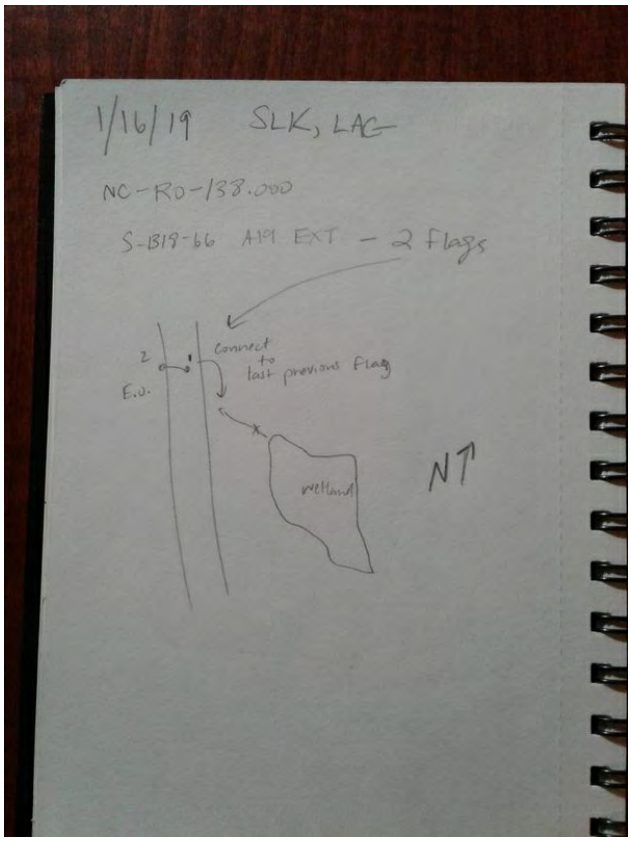
Downstream Stream Photo	
Downstream photo direction	NW
Across Stream Photo 1	
Across stream photo direction 1	N
Additional Stream Photos	

A19 ext, downstream, NW

A19 ext, upstream, SE

A19 ext, across, NW

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

Stream Hydrology

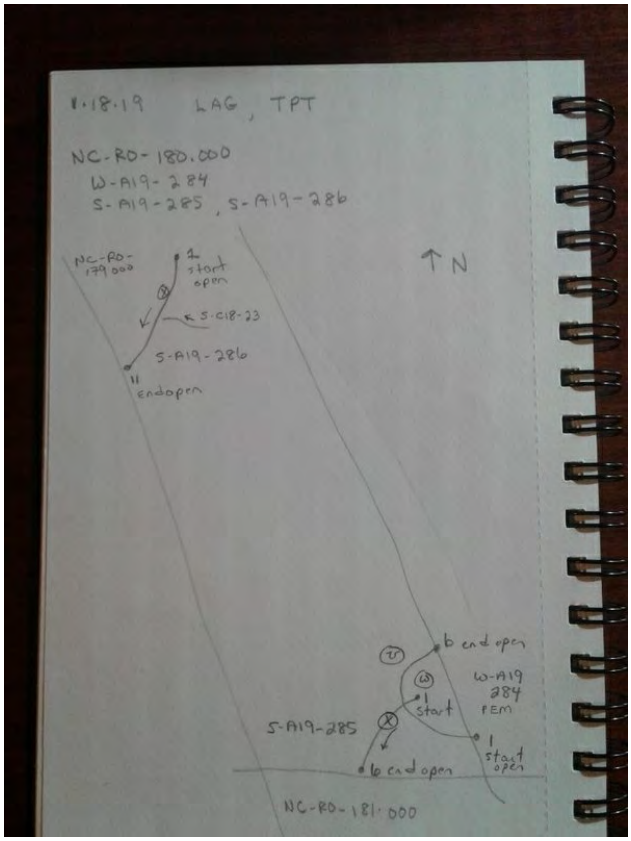
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Strong
Fish	Moderate
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Stream Biology Total	14
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	N

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-289

Created	2019-01-19 15:39:01 UTC by Laura Giese
Updated	2019-02-07 18:45:29 UTC by Karla Fortier
Location	36.2689131, -79.533472
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/19
Date2	190119

Resource Crew Info

Field Crew	Jim Bolduc, Laura Giese, Tony Tredway
Lead Scientist's Initials	A19
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	289
Resource ID	S-A19-289
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	20
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SW
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	1
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	8.5

Stream Hydrology

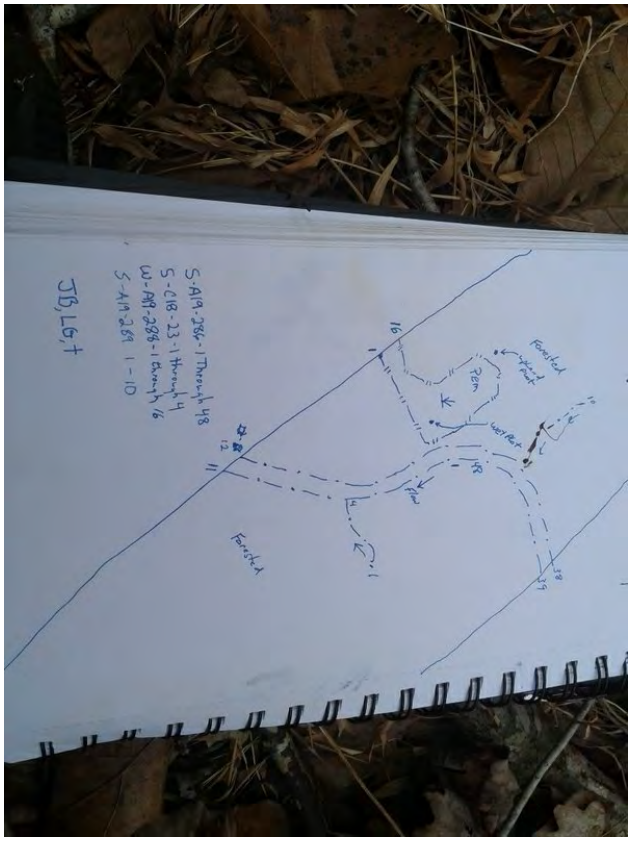
Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Strong
Sediment on plants or debris	Moderate
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Moderate
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Stream Biology Total	4.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	W

Additional Stream Photos



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-290

Created	2019-01-21 14:34:46 UTC by Laura Giese
Updated	2019-02-07 18:53:32 UTC by Karla Fortier
Location	36.1855174, -79.4941879
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/21
Date2	190121

Resource Crew Info

Field Crew	Laura Giese, Susan Thebert
Lead Scientist's Initials	A19
GPS Surveyor	Susie Thebert
GPS ID	NA
Resource Series Number	290
Resource ID	S-A19-290
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	14
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SW
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Absent
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	5.5

Stream Hydrology

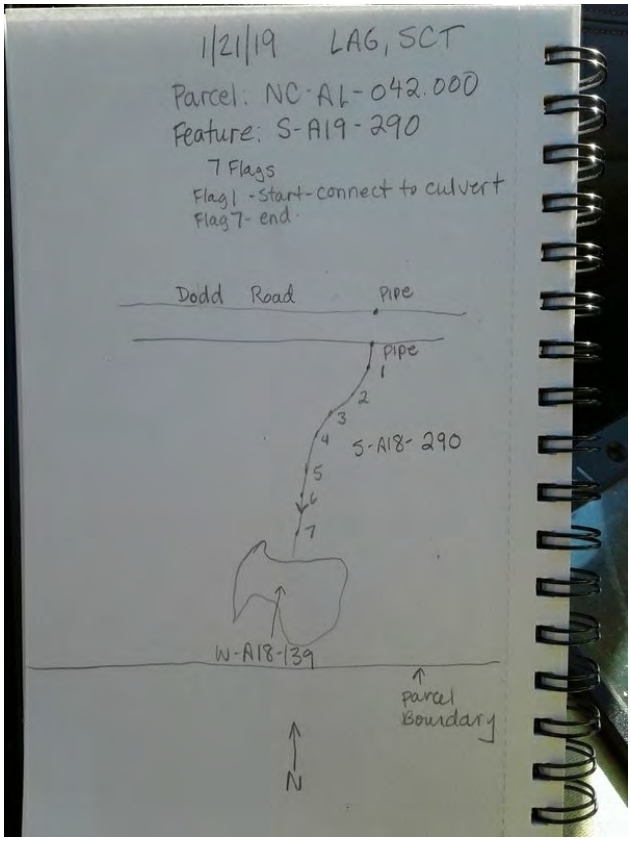
Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	3.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	5
Notes	Road culvert was being worked on last visit
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-291

Created	2019-01-22 14:16:53 UTC by Laura Giese
Updated	2019-02-07 19:15:21 UTC by Karla Fortier
Location	36.3079174, -79.5946743
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/22
Date2	190122

Resource Crew Info

Field Crew	Laura Giese, Susan Thebert
Lead Scientist's Initials	A19
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	291
Resource ID	S-A19-291
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	21.5
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	9

Stream Hydrology

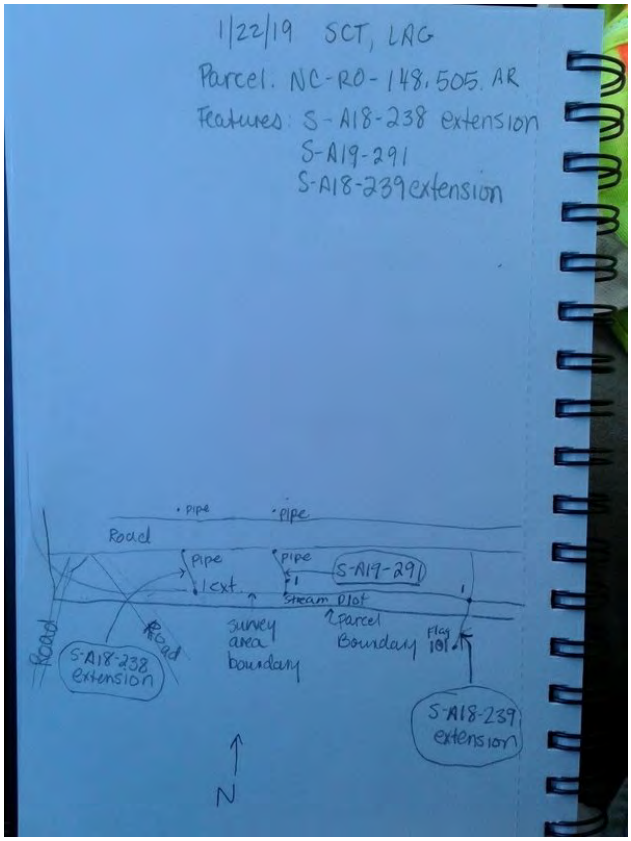
Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	6.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	SW

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-38

Created	2018-05-21 16:46:53 UTC by James Bolduc
Updated	2019-02-08 14:45:18 UTC by Susan Thebert
Location	36.4952994, -79.6783592
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/05/21
Date2	180521

Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	B18
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	38
Resource ID	S-B18-38
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	16.25
Calculated Stream Type	Ephemeral
Wildlife Observed	None observed
Observed Use	Irrigation

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	E
Channel condition	Severe
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0.9
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0.9

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	6

Bankfull Width (ft)	6
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0.85
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.85

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Absent
In-channel structure	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Strong
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Absent

Second or greater order channel	No
Stream Geomorphology Total	6

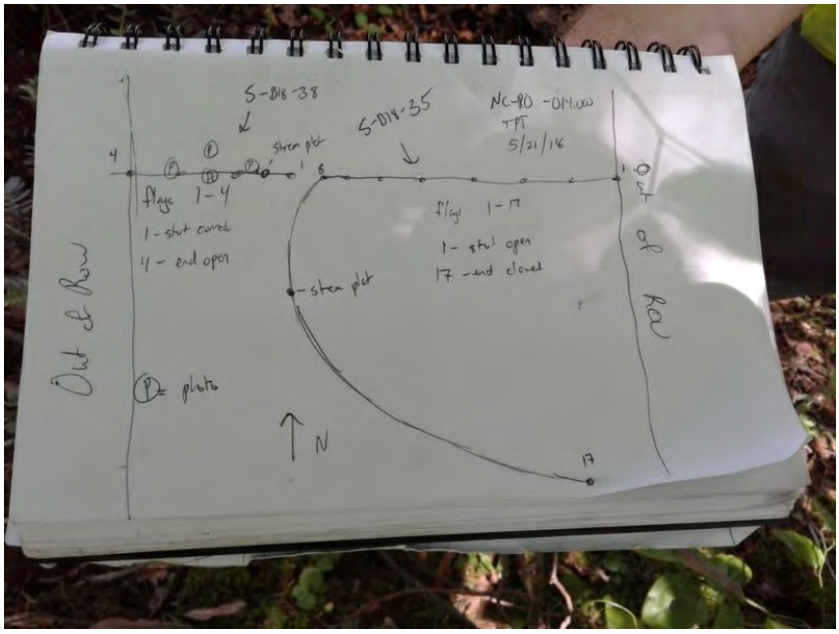
Stream Hydrology

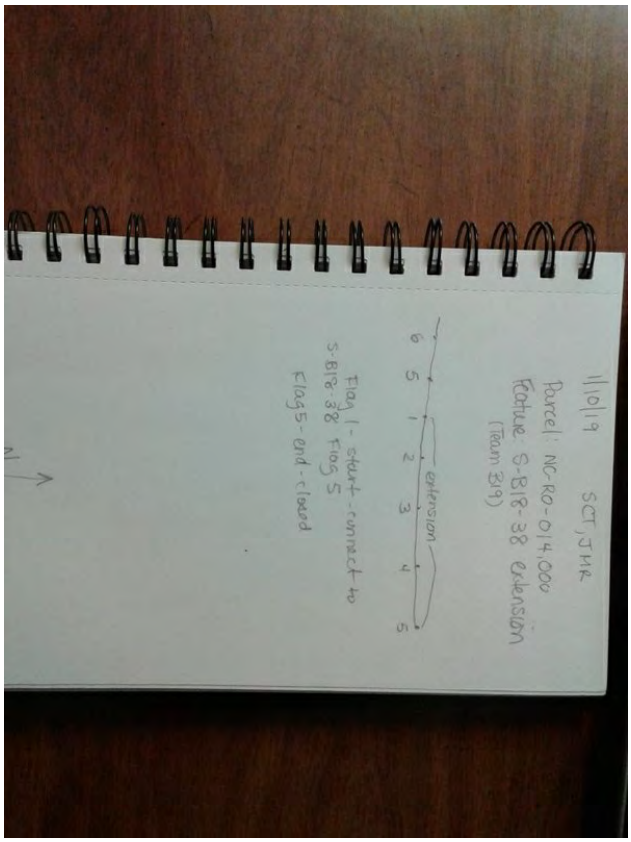
Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	4.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	5.75
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Old irrigation ditch
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	N

Across Stream Photo 2	
Across stream photo direction 2	S
Sketch of Stream	



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

Stream Geomorphology Total	13.5

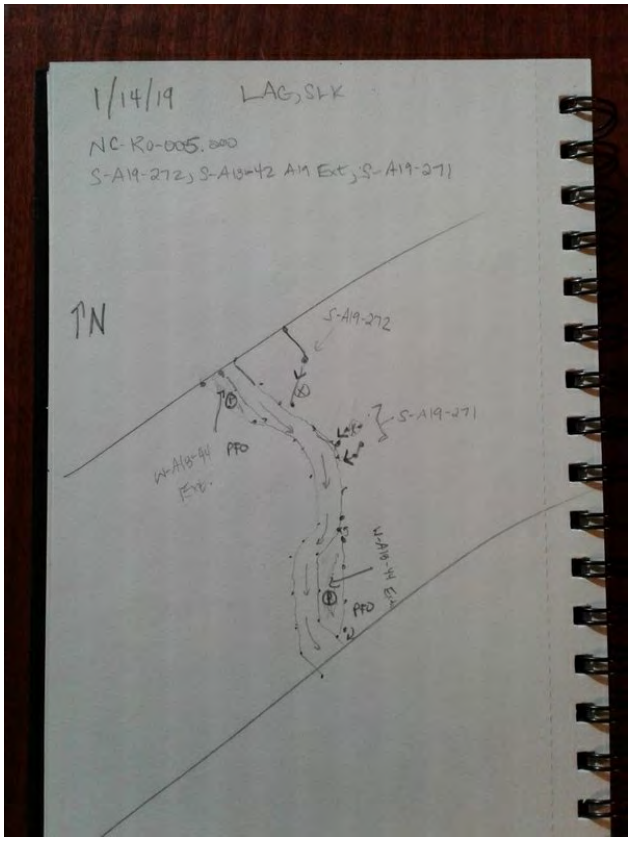
Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	4.75
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	N

Across Stream Photo 2	
Across stream photo direction 2	E
Sketch of Stream	

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-273

Created	2019-01-15 15:17:03 UTC by Laura Giese
Updated	2019-02-07 14:48:37 UTC by Karla Fortier
Location	36.525958, -79.6490815
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/15
Date2	190115

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	273
Resource ID	S-A19-273
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	36.5
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	E
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	30
Average Water Width (ft)	30
Bank to Bank (ft)	32
Bankfull Width (ft)	32
Probed Stream Depth	6 to 12 inches

Left Bank

Left Bank Height (feet)	5
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	7
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Sand, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	18

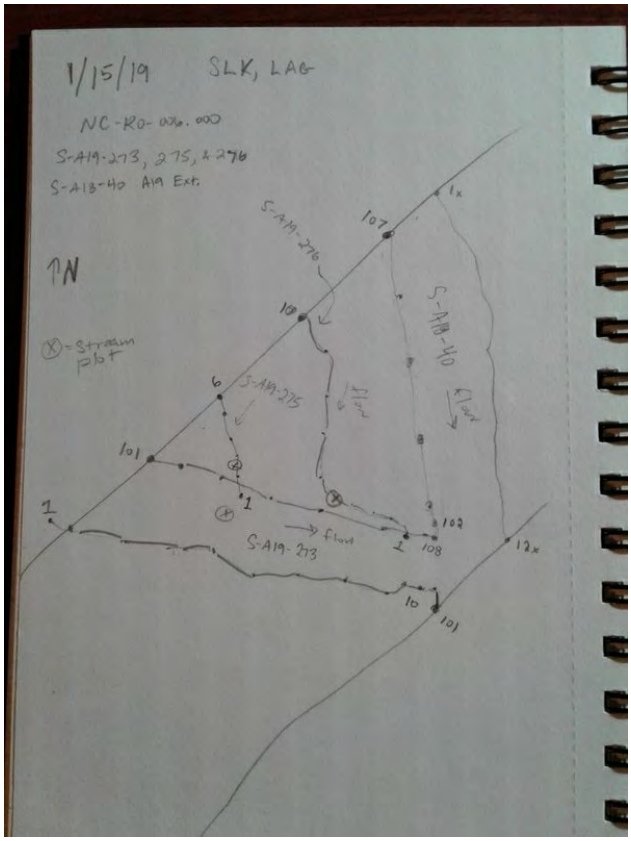
Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	10.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	S

Across Stream Photo 2	
Across stream photo direction 2	N
Sketch of Stream	

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-275

Created	2019-01-15 18:30:49 UTC by Laura Giese
Updated	2019-02-07 14:54:42 UTC by Karla Fortier
Location	36.5259482, -79.6489823
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/15
Date2	190115

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	275
Resource ID	S-A19-275
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	25
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SE
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	10.5

Stream Hydrology

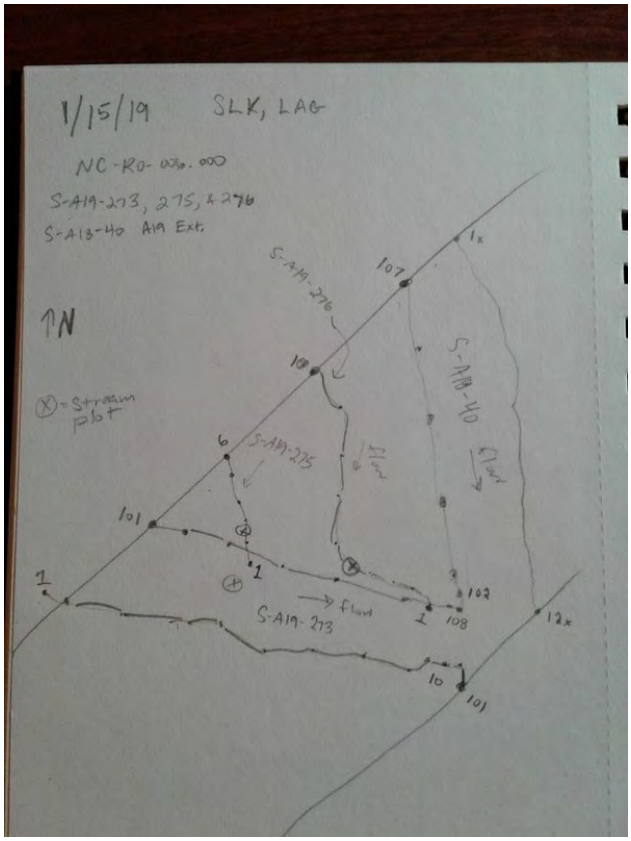
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	7
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	SW

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-276

Created	2019-01-15 18:44:37 UTC by Laura Giese
Updated	2019-02-07 14:56:14 UTC by Karla Fortier
Location	36.5259295, -79.6485134
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/15
Date2	190115

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	276
Resource ID	S-A19-276
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	14.5
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	7

Stream Hydrology

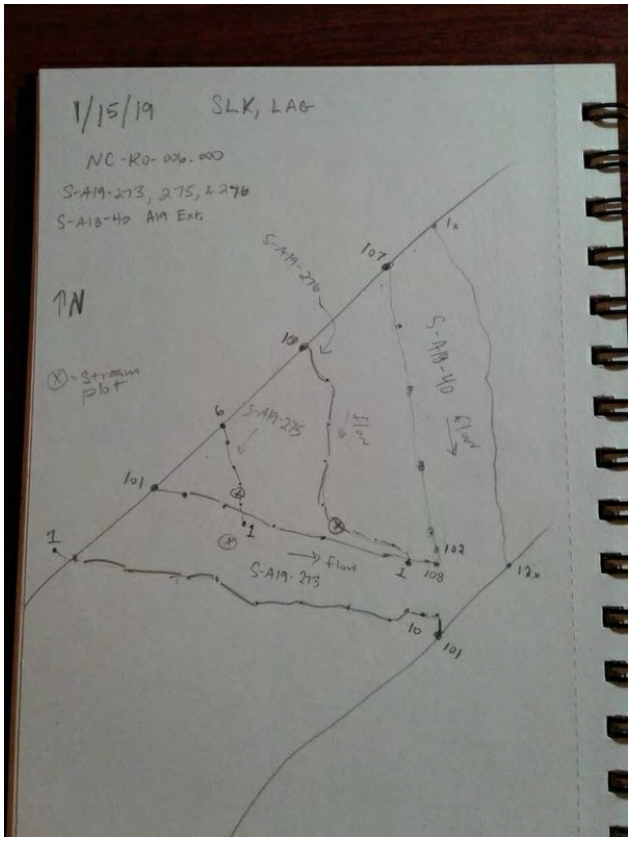
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	S

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-278

Created	2019-01-17 15:22:51 UTC by Laura Giese
Updated	2019-02-07 15:45:51 UTC by Karla Fortier
Location	36.5196279, -79.658769
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/17
Date2	190117

Resource Crew Info

Field Crew	Laura Giese
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	278
Resource ID	S-A19-278
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Impoundment
Calculated Stream Score	24
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	10.5

Stream Hydrology

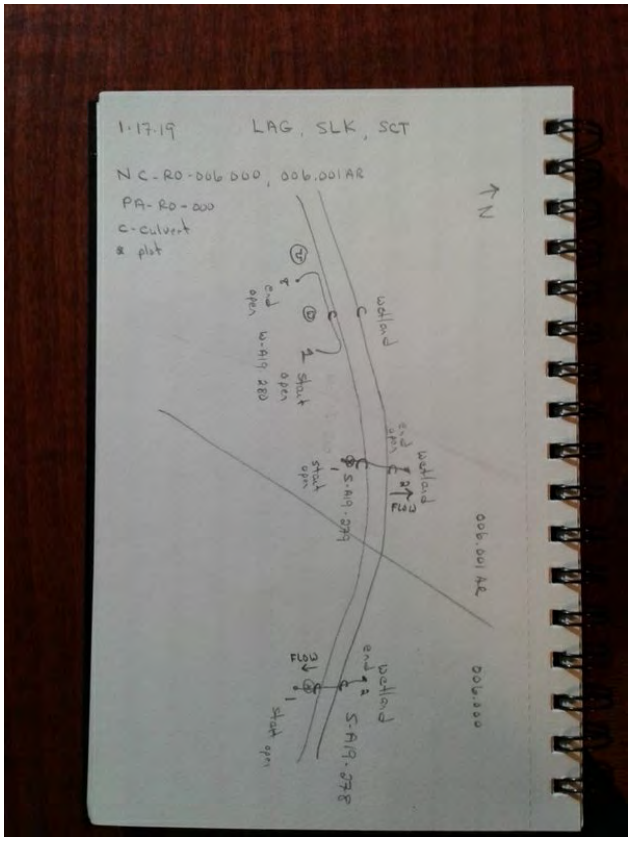
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-279

Created	2019-01-17 15:44:34 UTC by Laura Giese
Updated	2019-02-07 15:48:06 UTC by Karla Fortier
Location	36.519781, -79.6679981
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/17
Date2	190117

Resource Crew Info

Field Crew	Laura Giese
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	279
Resource ID	S-A19-279
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	26
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	N
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	2
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Cobble-Gravel, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Cobble-Gravel, Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	9

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Moderate
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	10.5

Stream Biology

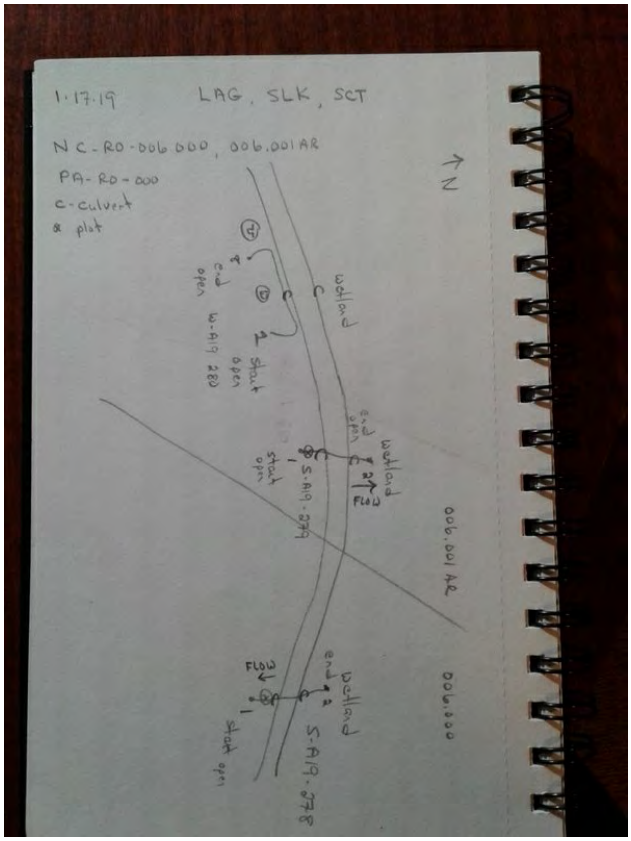
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	6.5
Notes	Gravel from road has washed downstream. Narrow PEM fringe. Immediately downstream of culvert 30-36" pool
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	E
Additional Stream Photos	

upstream on south side of culvert

Across stream on south side of culvert, East

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	7.5

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Stream Biology Total	5.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	N

Across Stream Photo 2	
Across stream photo direction 2	S

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-264

Created	2019-01-08 20:26:43 UTC by Laura Giese
Updated	2019-02-05 15:59:21 UTC by Karla Fortier
Location	36.1086766, -79.657069
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/08
Date2	190108

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	264
Resource ID	S-A19-264
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23.5
Calculated Stream Type	Intermittent
Wildlife Observed	Invertebrates

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	3
Bankfull Width (ft)	3

Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	.5
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	.5
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

Stream Geomorphology Total	9.5

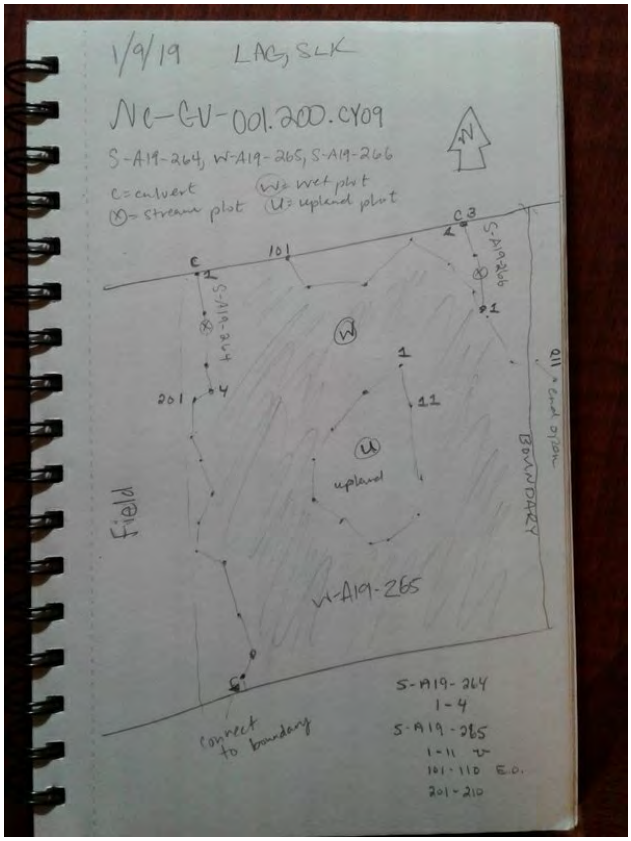
Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Weak
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Moderate
Stream Biology Total	6.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	E

Across Stream Photo 2	
Across stream photo direction 2	W
Sketch of Stream	

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-266

Created	2019-01-09 15:07:00 UTC by Laura Giese
Updated	2019-02-05 16:42:40 UTC by Karla Fortier
Location	36.1087822, -79.6569752
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/09
Date2	190109

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	266
Resource ID	S-A19-266
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23.5
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Sand, Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	9

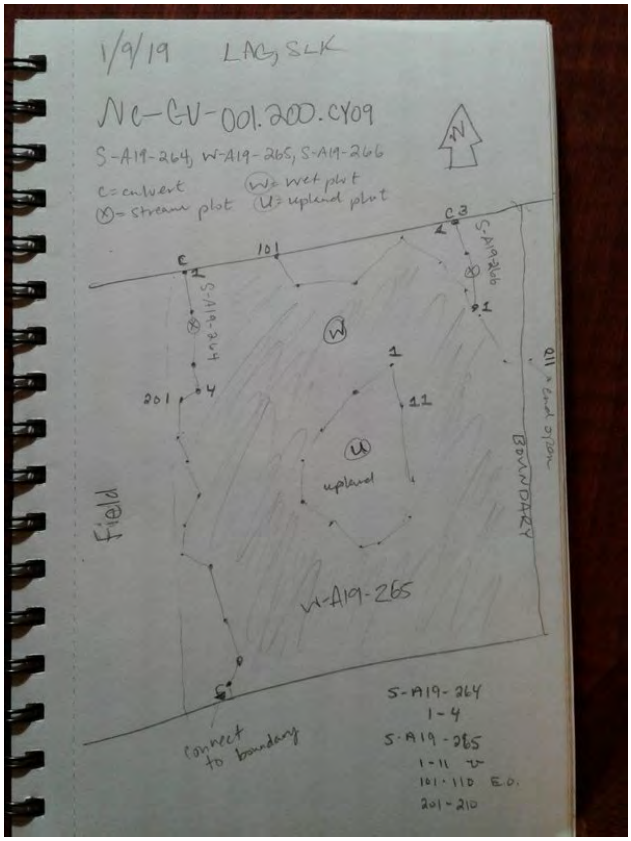
Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Moderate
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	8

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Moderate
Stream Biology Total	6.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

Across Stream Photo 2	
Across stream photo direction 2	E
Sketch of Stream	

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-267

Created	2019-01-10 14:15:40 UTC by Laura Giese
Updated	2019-03-08 14:46:17 UTC by Karla Fortier
Location	36.4793728, -79.6918903
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/10
Date2	190110

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	267
Resource ID	S-A19-267
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	14
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SW

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	.5
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud, Organic

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	.5
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud, Organic

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Absent
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	9.5

Stream Hydrology

S-B18-119

Created	2018-08-23 13:01:21 UTC by Will Buetow
Updated	2019-02-06 17:53:49 UTC by Karla Fortier
Location	36.3193412, -79.5935722
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/23
Date2	180823

Resource Crew Info

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	119
Resource ID	S-B18-119
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-119
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	15
Calculated Stream Type	Ephemeral
Wildlife Observed	none

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	NW
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	0
Bank to Bank (ft)	5

Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong

Second or greater order channel	No
Stream Geomorphology Total	11

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	1

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	3
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

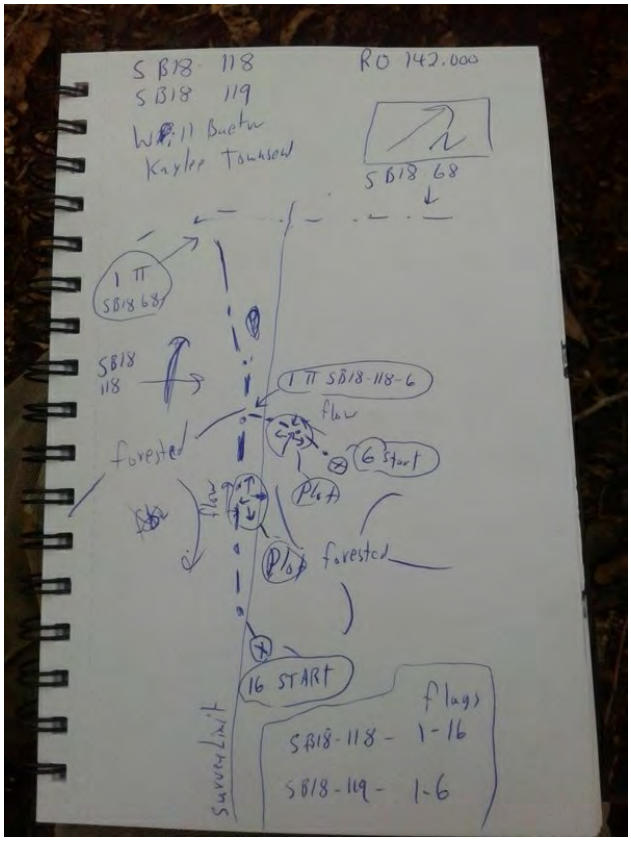
Downstream Stream Photo	
Downstream photo direction	NW
Across Stream Photo 1	
Across stream photo direction 1	N

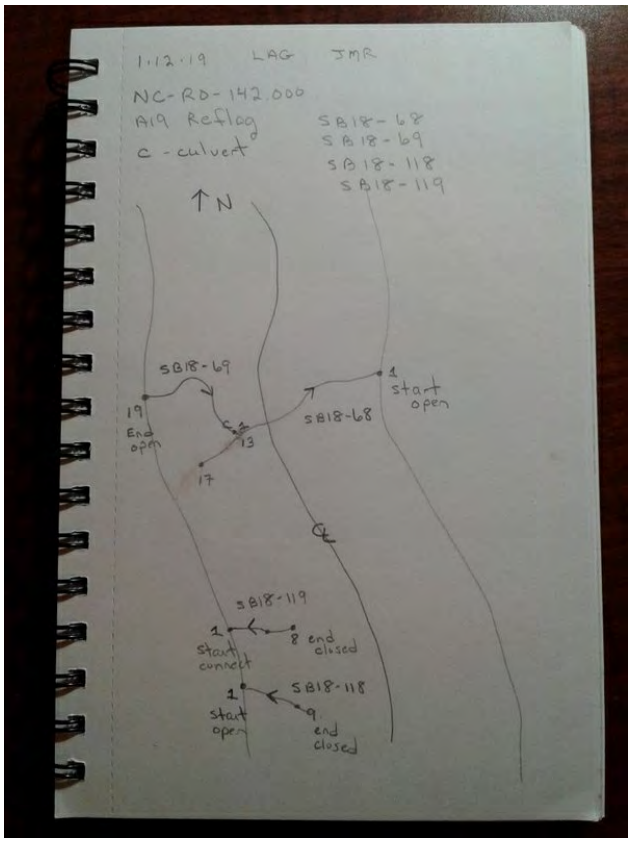
Across Stream Photo 2	
Across stream photo direction 2	S
Additional Stream Photos	 A19 reflag, upstream, east

A19 reflag, downstream, NW

A19 reflag, across, north

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-120

Created	2018-08-25 13:15:12 UTC by Will Buetow
Updated	2019-02-05 20:10:53 UTC by Karla Fortier
Location	36.479563, -79.6925896
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/25
Date2	180825

Resource Crew Info

Field Crew	will buetow, kaylee townsend
Lead Scientist's Initials	B18
GPS Surveyor	kaylee townsend
GPS ID	NA
Resource Series Number	120
Resource ID	S-B18-120
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	11.5
Calculated Stream Type	Ephemeral
Wildlife Observed	none

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	0
Bank to Bank (ft)	4
Bankfull Width (ft)	4

Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No

Stream Geomorphology Total	8

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	1.5

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Moderate
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	2
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

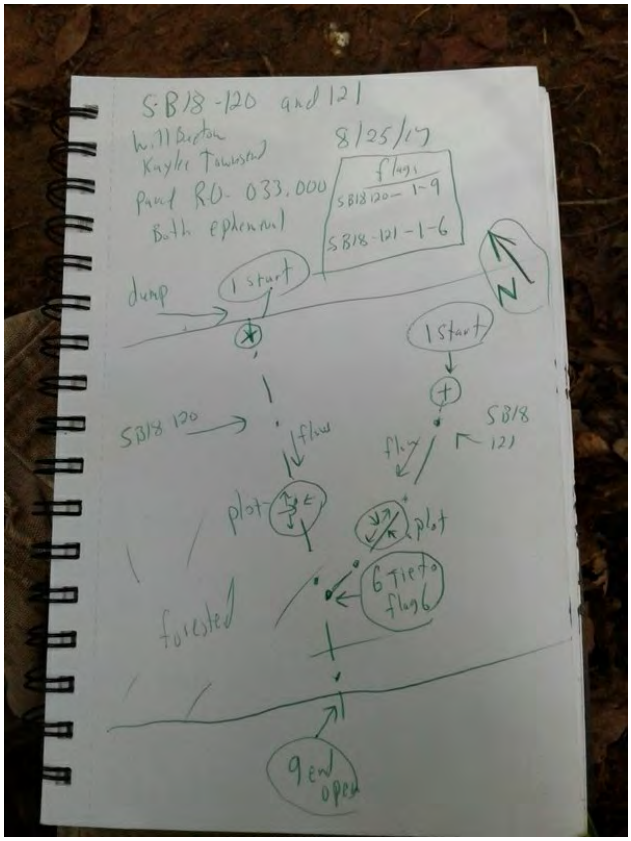
Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	E

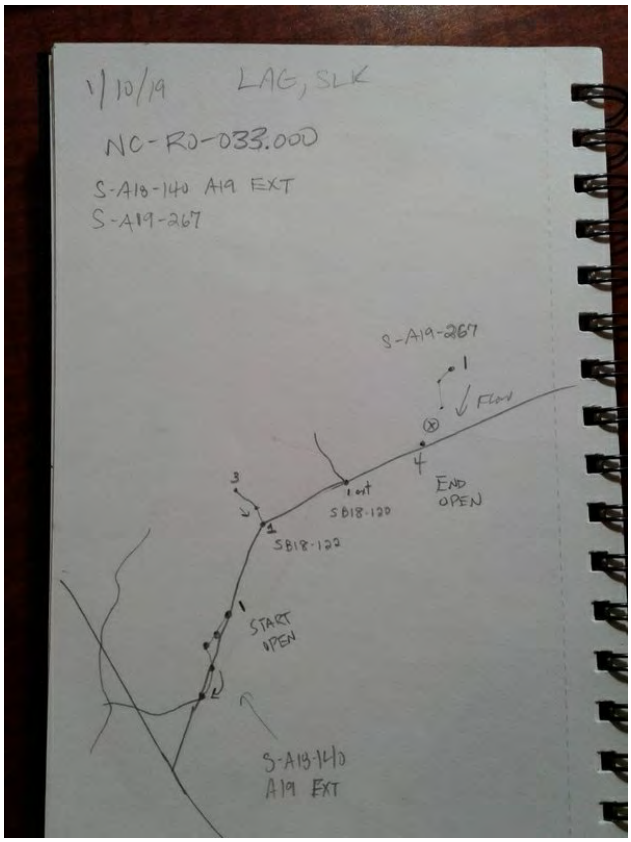
Across Stream Photo 2	
Across stream photo direction 2	W
Additional Stream Photos	 A19 ext, up, north

A19 ext, dn, south

A19 ext, across, west

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-122

Created	2018-08-28 21:18:49 UTC by Will Buetow
Updated	2019-02-05 20:08:04 UTC by Karla Fortier
Location	36.478986, -79.693012
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/28
Date2	180828

Resource Crew Info

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	122
Resource ID	S-B18-122
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	13.5
Calculated Stream Type	Ephemeral
Wildlife Observed	none

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Poor
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	0
Bank to Bank (ft)	2
Bankfull Width (ft)	2

Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Absent
In-channel structure	Weak
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	No

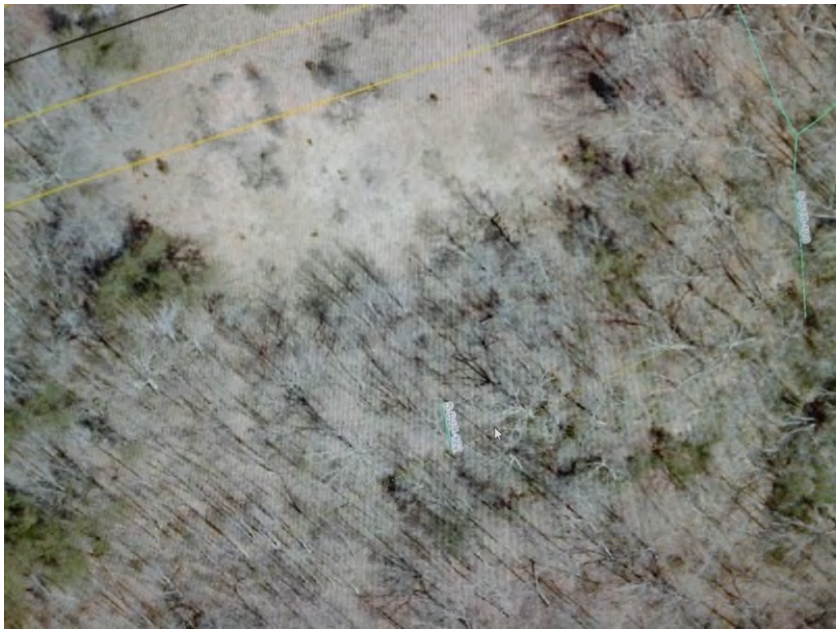
Stream Geomorphology Total	9.5

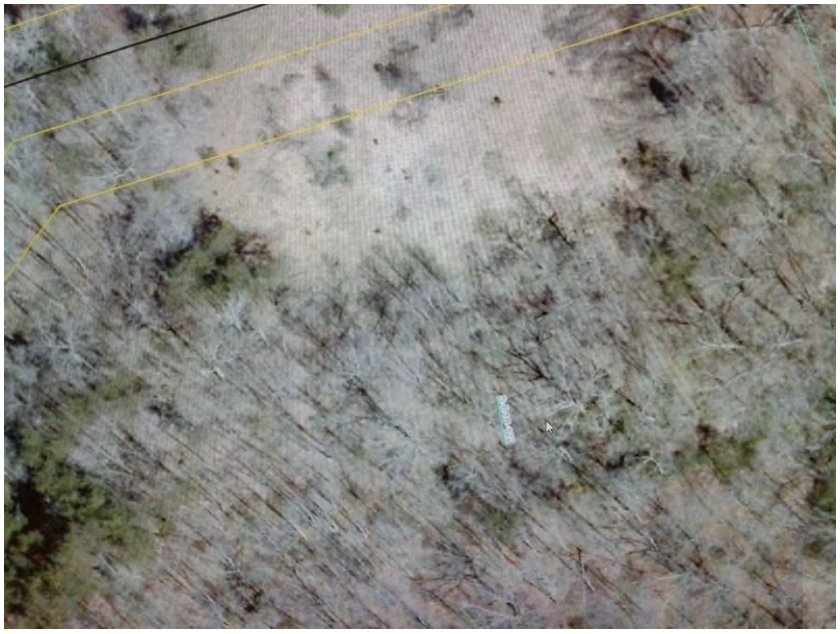
Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	2

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	2
Notes	Photos of stream not collected in the field.
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

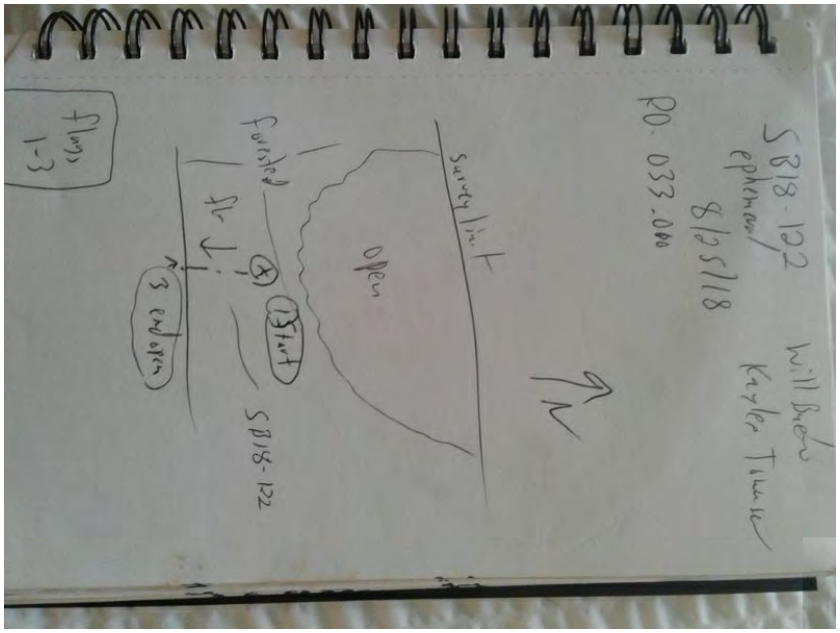
Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	E

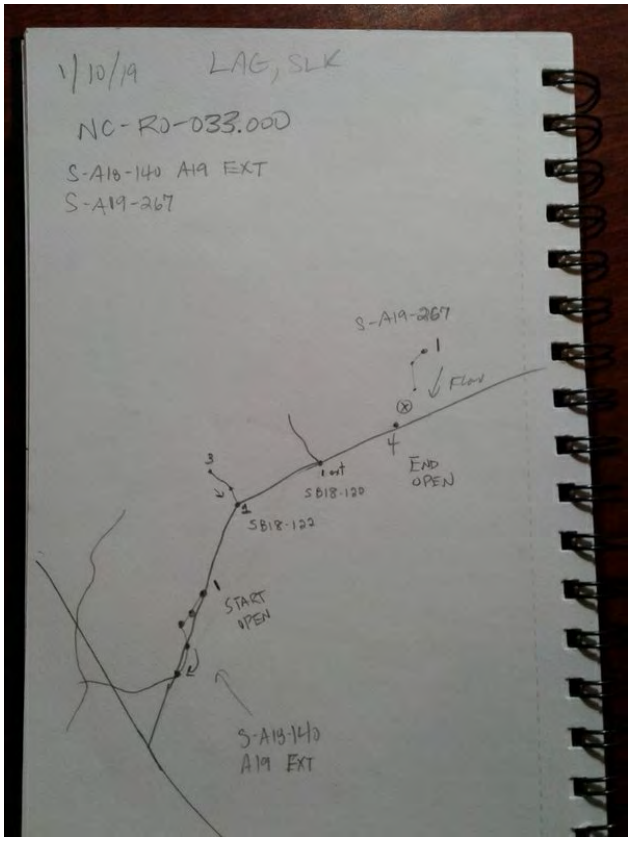
Across Stream Photo 2	
Across stream photo direction 2	W
Additional Stream Photos	 A19 up, north

A19 down, south

A19 across, west

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B18-138

Created	2018-09-04 15:36:22 UTC by Will Buetow
Updated	2019-02-07 18:49:08 UTC by Karla Fortier
Location	36.1494008, -79.4090689
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/09/04
Date2	180904

Resource Crew Info

Field Crew	Nate Renaudin, Susie Thebert
Lead Scientist's Initials	B18
GPS Surveyor	Susie Thebert
GPS ID	NA
Resource Series Number	138
Resource ID	S-B18-138
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	30.75
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	Drainage

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	W
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	1.3
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.3

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	1
Bank to Bank (ft)	4

Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.75
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.75

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Moderate
Natural valley	Weak

Second or greater order channel	Yes
Stream Geomorphology Total	17.5

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	6

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Moderate
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	7.25
Regulatory Status	Corps Jurisdictional
Notes	Stream connects to wetland
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

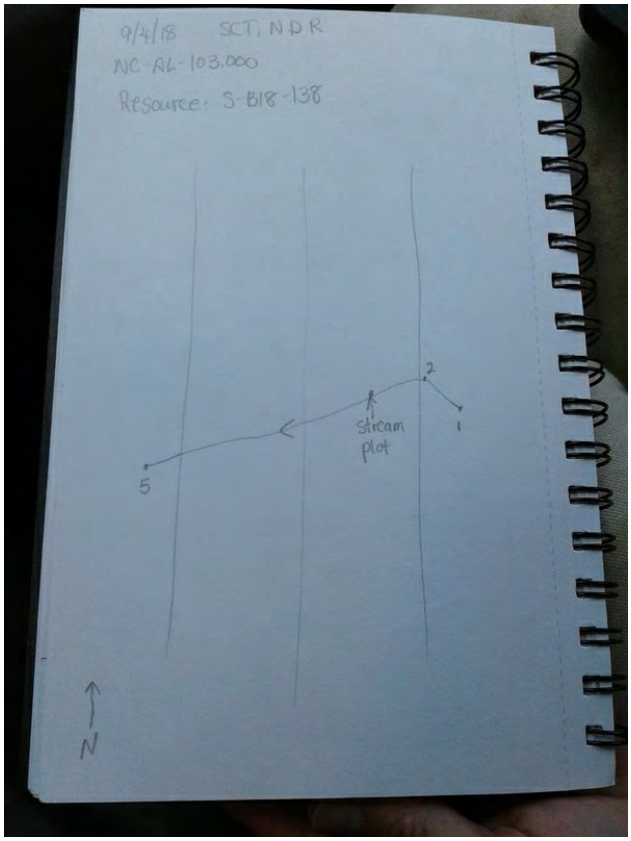
Downstream Stream Photo	
Downstream photo direction	W
Across Stream Photo 1	
Across stream photo direction 1	S

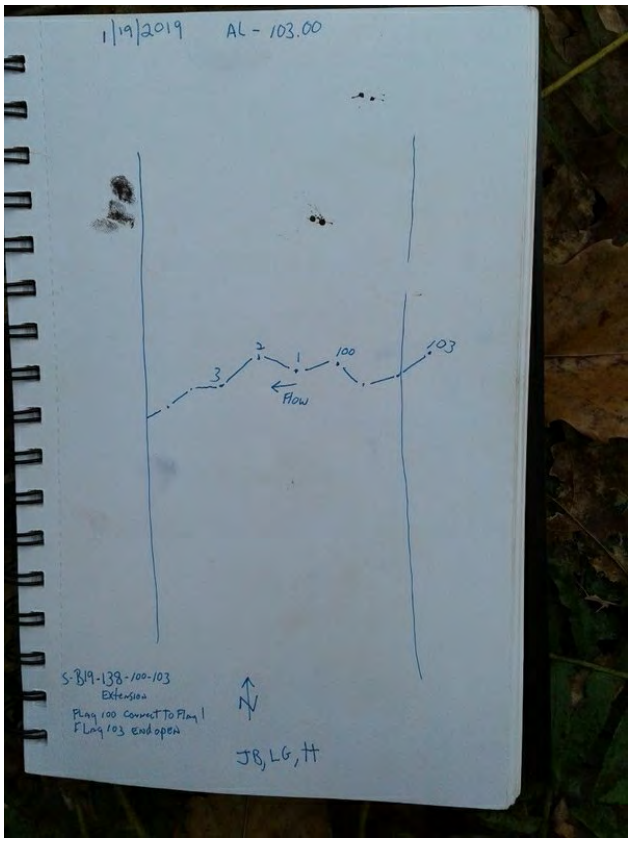
Across Stream Photo 2	
Across stream photo direction 2	N
Additional Stream Photos	 A19 ext, downstream, west

A19 ext, across, north

A19 ext, upstream, east

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-145

Created	2019-01-07 21:33:43 UTC by Simon King
Updated	2019-02-05 14:27:57 UTC by Karla Fortier
Location	36.1053083, -79.3768618
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/07
Date2	190107

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
Resource Series Number	145
Resource ID	S-B19-145
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	34
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	1.9
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.9

Stream Measurements

OHWM Width (ft)	15
Average Water Width (ft)	12
Bank to Bank (ft)	20
Bankfull Width (ft)	20
Probed Stream Depth	12 to 24 inches

Left Bank

Left Bank Height (feet)	18
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Vegetated, Artificial

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75

Right Bank

Right Bank Height (feet)	12
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Sand, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0.85
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.85

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Moderate
Grade control	Moderate
Natural valley	Moderate
Stream Geomorphology Total	19

Stream Hydrology

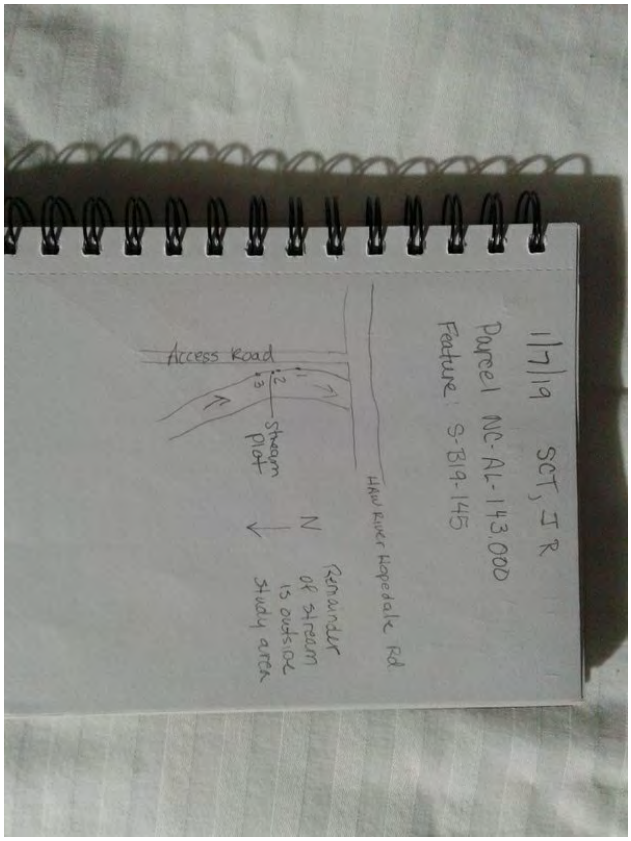
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	6

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	9
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-147

Created	2019-01-08 17:28:07 UTC by Simon King
Updated	2019-02-05 16:17:43 UTC by Karla Fortier
Location	36.0910088, -79.3622637
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/08
Date2	190108

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
Resource Series Number	147
Resource ID	S-B19-147
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	8
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	N
Channel condition	Poor
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0.7
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0.7

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	0
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.75
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.75

Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Absent
In-channel structure	Weak
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	3

Stream Hydrology

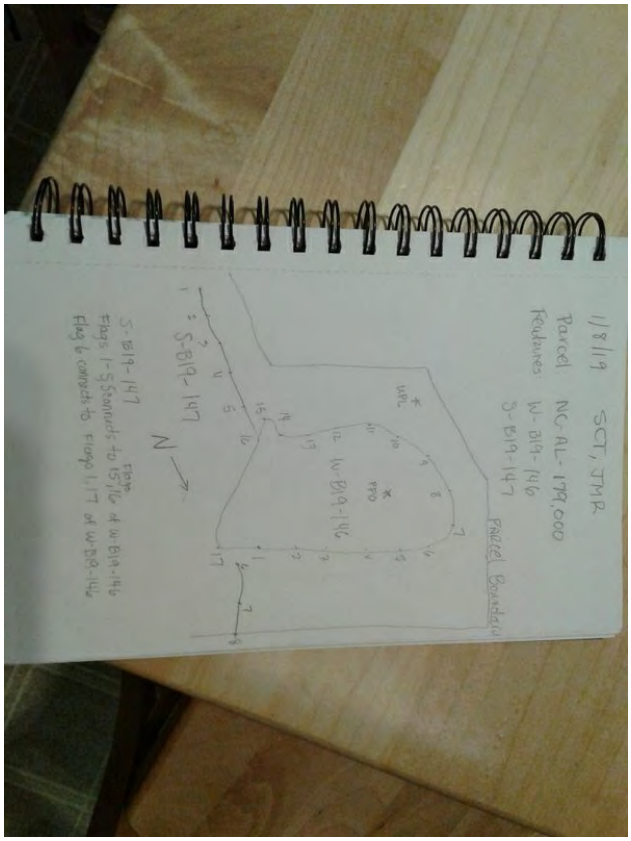
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Strong
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	1.5

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Moderate
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	3.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

Downstream Stream Photo	
Downstream photo direction	W
Across Stream Photo 1	
Across stream photo direction 1	N

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-148

Created	2019-01-08 18:25:12 UTC by Simon King
Updated	2019-03-08 14:47:12 UTC by Karla Fortier
Location	36.0909851, -79.362098
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/08
Date2	190108

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
Resource Series Number	148
Resource ID	S-B19-148
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	21
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0.9
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0.9

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0.85
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.85

Right Bank

Right Bank Height (feet)	4
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Strong
Natural valley	Moderate
Stream Geomorphology Total	10.5

Stream Hydrology

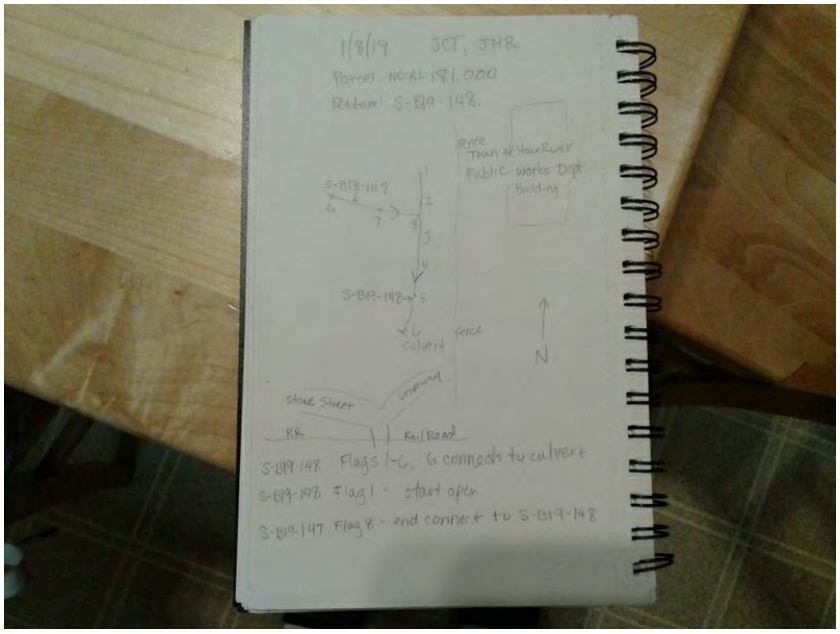
Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	3

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	7.5
Notes	Lots of Boulder sized rocks in the streambed
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

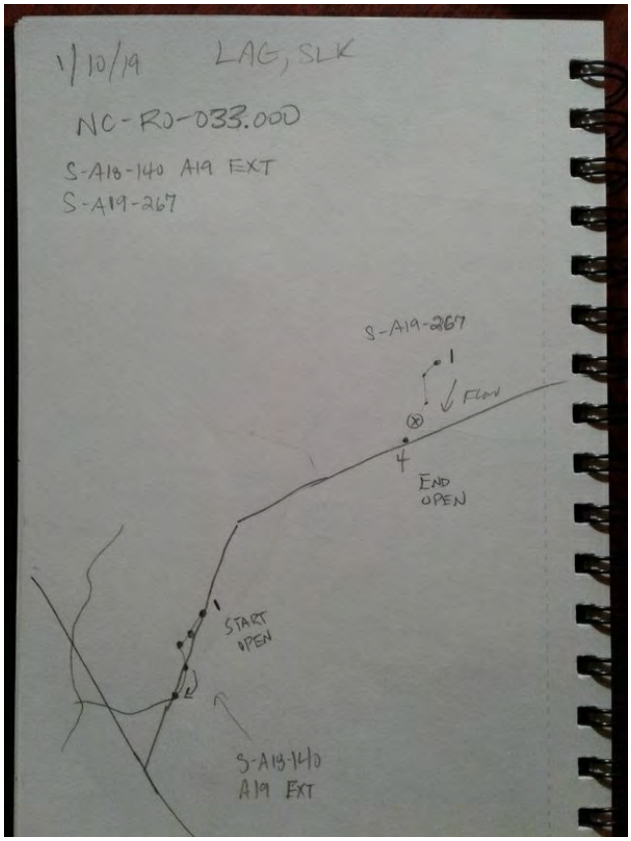
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	No
Stream Hydrology Total	0.5

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	4
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-A19-269

Created	2019-01-11 14:43:50 UTC by Laura Giese
Updated	2019-02-06 16:17:23 UTC by Karla Fortier
Location	36.4070258, -79.6468279
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/11
Date2	190111

Resource Crew Info

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
Resource Series Number	269
Resource ID	S-A19-269
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	27.25
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	N
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	11.5

S-B19-149

Created	2019-01-08 20:42:13 UTC by Simon King
Updated	2019-02-05 16:25:17 UTC by Karla Fortier
Location	36.0452572, -79.3666924
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/08
Date2	190108

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
Resource Series Number	149
Resource ID	S-B19-149
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	41
Calculated Stream Type	Perennial
Wildlife Observed	racoon tracks

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	N
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	1.3
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.3

Stream Measurements

OHWM Width (ft)	55
Average Water Width (ft)	50
Bank to Bank (ft)	75
Bankfull Width (ft)	75
Probed Stream Depth	> 36 inches

Left Bank

Left Bank Height (feet)	18
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	1.2
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.2

Right Bank

Right Bank Height (feet)	18
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	1.2
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.2

Stream Geomorphology

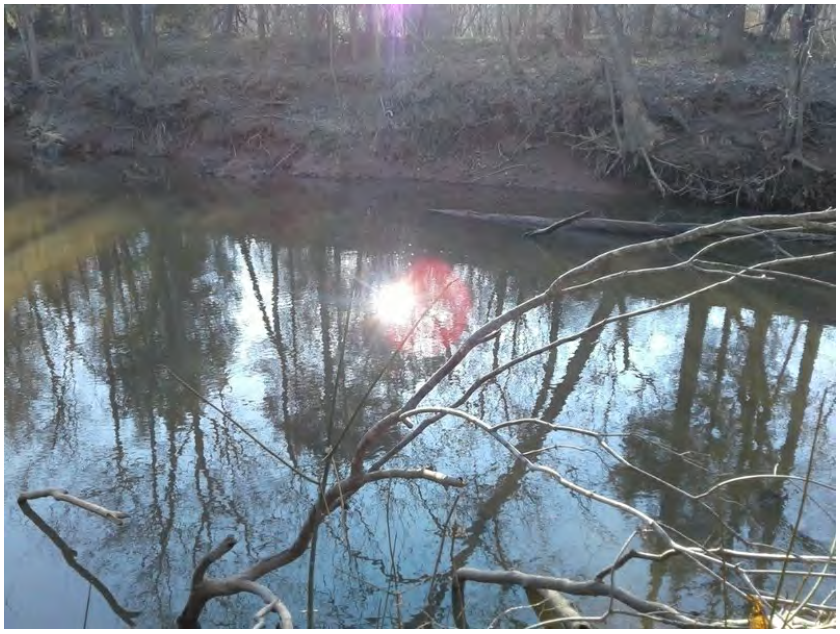
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Strong
Particle size of stream substrate	Moderate
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Strong
Headcuts	Absent
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	22

Stream Hydrology

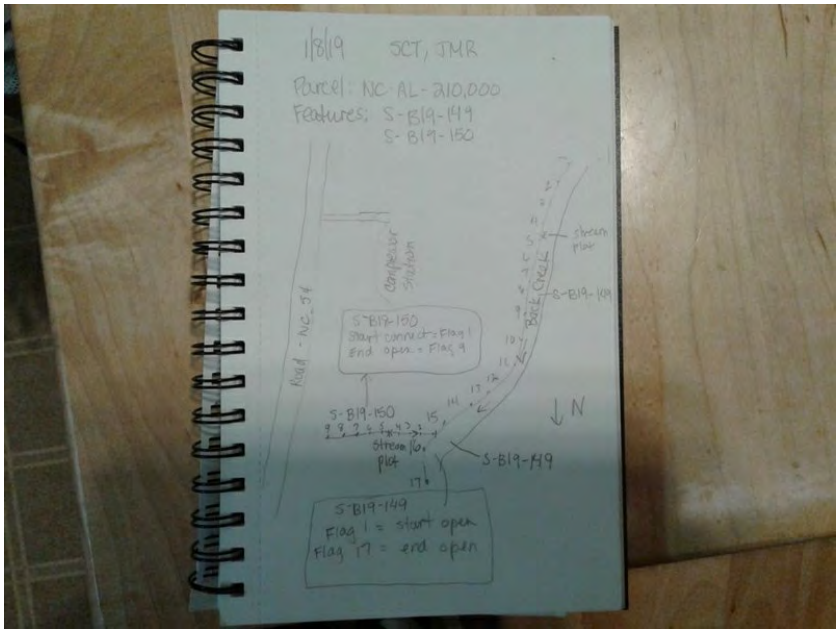
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Strong
Organic debris lines or piles	Strong
Soil-based evidence of high water table?	No
Stream Hydrology Total	7

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Moderate
Fish	Moderate
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	12
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-150

Created	2019-01-08 21:06:41 UTC by Simon King
Updated	2019-02-05 16:28:33 UTC by Karla Fortier
Location	36.0458684, -79.3671563
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/08
Date2	190108

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
Resource Series Number	150
Resource ID	S-B19-150
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	33
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SW
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	6
Bankfull Width (ft)	6
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	12
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Organic, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75

Right Bank

Right Bank Height (feet)	12
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Organic, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.75
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.75

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Strong
Depositional bars or benches	Moderate
Recent alluvial deposits	Strong
Headcuts	Moderate
Grade control	Strong
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	18.5

Stream Hydrology

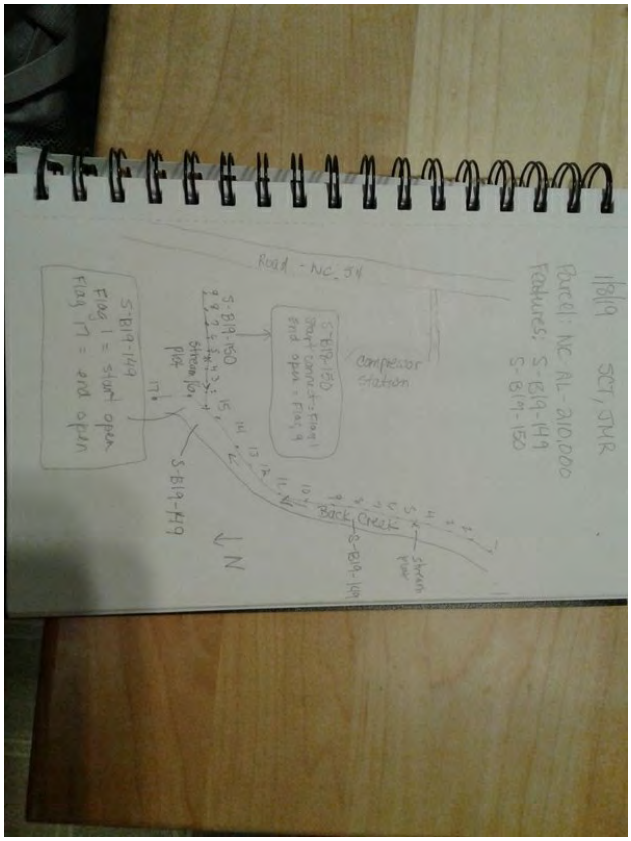
Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak
Leaf litter	Absent
Sediment on plants or debris	Moderate
Organic debris lines or piles	Strong
Soil-based evidence of high water table?	No
Stream Hydrology Total	7

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	7.5
Notes	Receives backflow from Back Creek and possibly Haw River
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	SE

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-152

Created	2019-01-09 16:37:56 UTC by Simon King
Updated	2019-02-05 16:32:13 UTC by Karla Fortier
Location	36.0962356, -79.370119
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/09
Date2	190109

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	152
Resource ID	S-B19-152
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	16
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SW
Channel condition	Poor
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0.9
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0.9

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	1
Bankfull Width (ft)	1
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Organic

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Organic

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.75
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.75

Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	6

S-B19-158

Created	2019-01-11 18:54:10 UTC by Simon King
Updated	2019-02-06 17:32:03 UTC by Karla Fortier
Location	36.4182891, -79.6519023
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/11
Date2	190111

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	158
Resource ID	S-B19-158
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	15
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Poor
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0.7
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0.7

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	0
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.75
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.75

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	10

Stream Hydrology

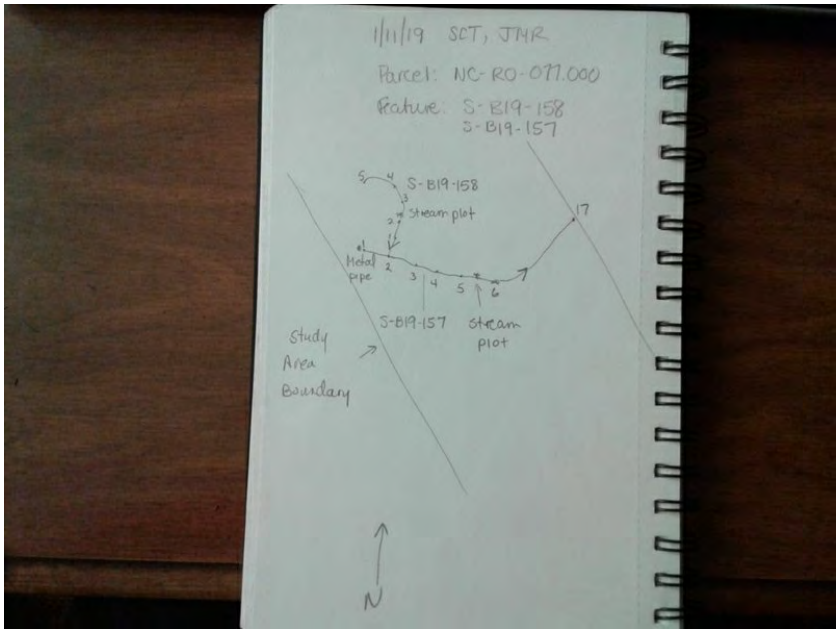
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	2

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	3
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	W

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-160

Created	2019-01-15 15:05:33 UTC by Simon King
Updated	2019-02-07 15:07:24 UTC by Karla Fortier
Location	36.1402659, -79.3825974
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/15
Date2	190115

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	160
Resource ID	S-B19-160
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	19.5
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	1.1
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.1

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	1.1
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.1

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	1.1
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.1

Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Strong
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	10

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	3

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Moderate
Stream Biology Total	6.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NW

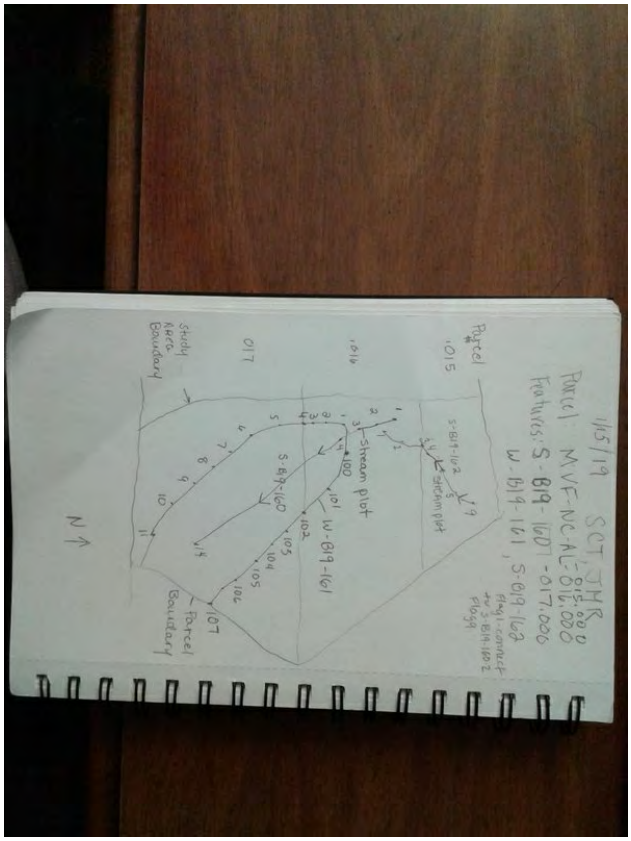
Downstream Stream Photo	
Downstream photo direction	SE
Across Stream Photo 1	
Across stream photo direction 1	SW

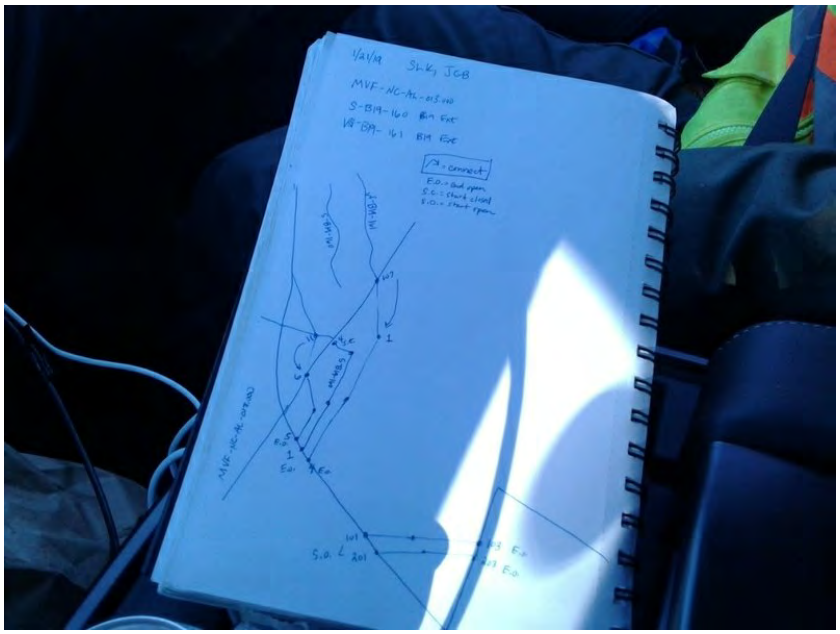
Across Stream Photo 2	
Across stream photo direction 2	W
Additional Stream Photos	
	extension upstream

extension downstream

extension accross stream

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-162

Created	2019-01-15 19:54:24 UTC by Simon King
Updated	2019-02-07 15:12:25 UTC by Karla Fortier
Location	36.1404202, -79.3825891
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/15
Date2	190115

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	162
Resource ID	S-B19-162
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	17
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0.7
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0.7

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	1
Bankfull Width (ft)	1
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Cobble-Gravel

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0.85
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.85

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Cobble-Gravel

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0.85
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.85

Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	8

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	6.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	S
Across Stream Photo 1	
Across stream photo direction 1	E

WB-A19-281

Created	2019-01-17 17:39:58 UTC by Simon King
Updated	2019-02-07 15:55:05 UTC by Karla Fortier
Location	36.5296587, -79.6516657
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/17
Date2	190117

Resource Crew Info

Field Crew	Laura Giese, Simon King,
Lead Scientist's Initials	A19
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	281
Resource ID	WB-A19-281
Do you need to override the resource id?	Yes
Resource ID Override	WB-A19-281

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	1.5
Calculated Stream Type	Ephemeral

Stream Conditions

Direction of Flow	S

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	368

Left Bank

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0

High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Stream Geomorphology Total	0

Stream Hydrology

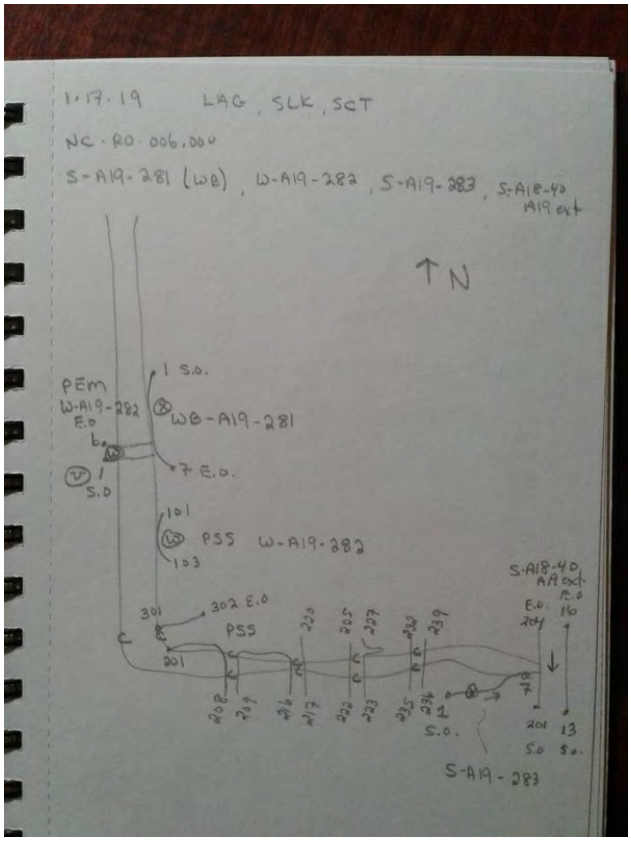
Stream Hydrology Total	0

Stream Biology

Fish	Moderate
Amphibians	Weak
Stream Biology Total	1.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	E

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

WB-B18-141

Created	2018-09-17 15:26:44 UTC by Katelyn Wheeler
Updated	2019-02-07 18:58:26 UTC by Karla Fortier
Location	36.15146, -79.432329
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/09/17
Date2	180917

Resource Crew Info

Field Crew	Jim Bolduc
Lead Scientist's Initials	B18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	141
Resource ID	WB-B18-141
Do you need to override the resource id?	Yes
Resource ID Override	WB-B18-141
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	0
Calculated Stream Type	Undetermined
Wildlife Observed	Fish
Observed Use	Irrigation

Stream Conditions

Direction of Flow	E

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	200

Left Bank

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0

High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

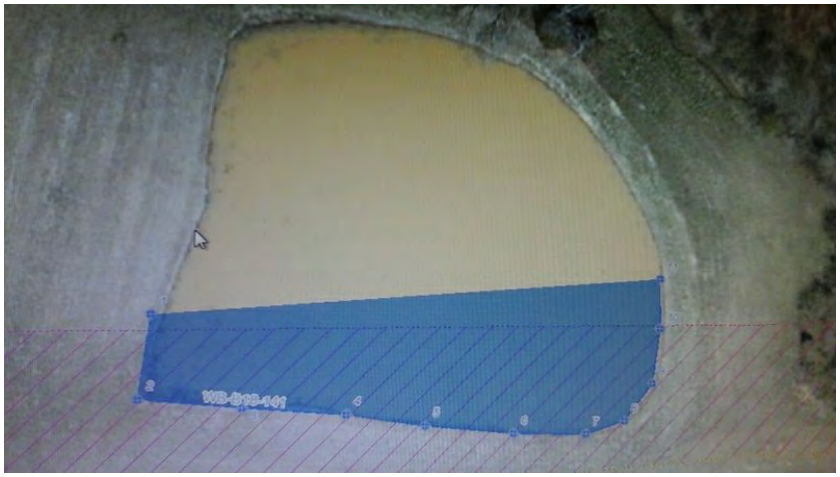
Stream Geomorphology Total	0

Stream Hydrology

Stream Hydrology Total	0

Stream Biology

Stream Biology Total	0
Regulatory Status	State Protected
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	N

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	N
Across Stream Photo 2	
Across stream photo direction 2	N

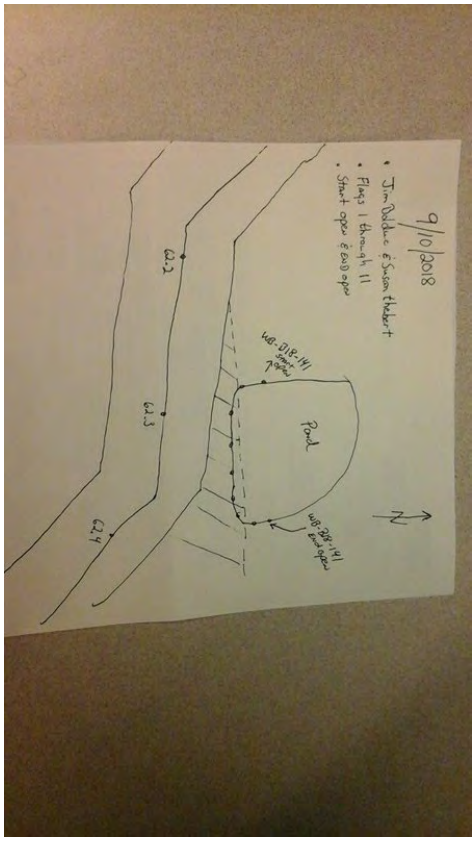
Additional Stream Photos

A19 upstream, west

A19 across, north

A19 downstream, east

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

WB-B19-144

Created	2019-01-07 21:51:49 UTC by Joseph Roy
Updated	2019-02-05 14:23:57 UTC by Karla Fortier
Location	36.1222604, -79.3797206
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/07
Date2	190107

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	SCT
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	144
Resource ID	WB-B19-144
Do you need to override the resource id?	Yes
Resource ID Override	WB-B19-144
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	0
Calculated Stream Type	Undetermined
Wildlife Observed	Domestic animals

Stream Conditions

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	260

Left Bank

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0

High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Stream Geomorphology Total	0

Stream Hydrology

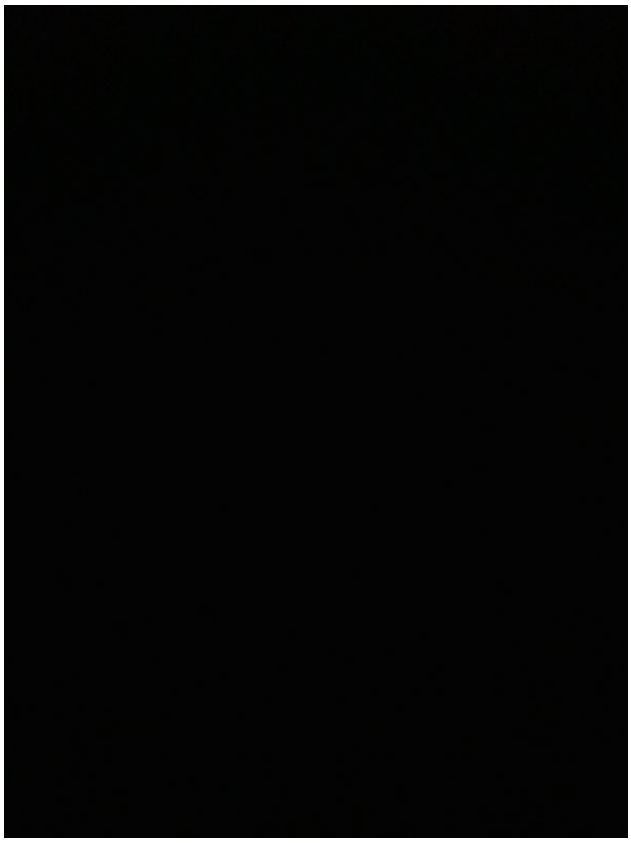
Stream Hydrology Total	0

Stream Biology

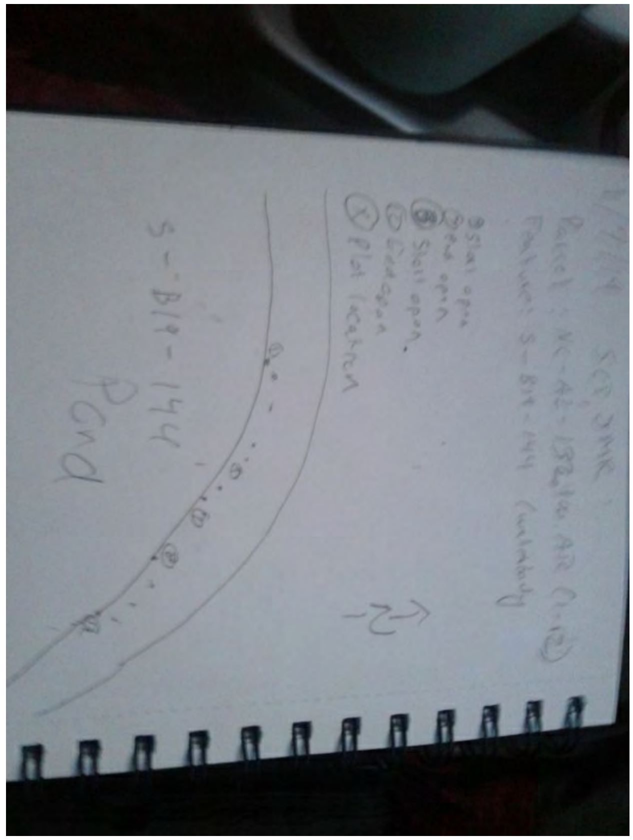
Stream Biology Total	0
Notes	Domestic ducks. Carp like fish seen.
Stream Overview Report Photos	
Upstream Stream Photo	

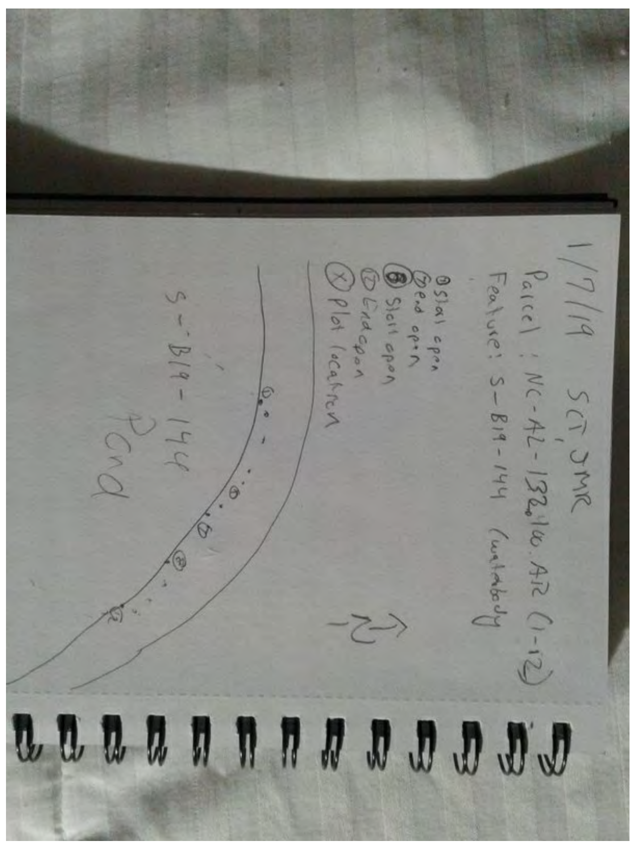
Downstream Stream Photo

Across Stream Photo 1



Sketch of Stream


SCT JMR
Parcel : NC-AL-132.100.AR (1-12)
Feature: S-B19-144 (wetland)
Start open
End open
Start open
End open
Plot location
S-B19-144
Pond


1/7/19 SCT JMR
Parcel : NC-AL-132.100.AR (1-12)
Feature: S-B19-144 (wetland)
Start open
End open
Start open
End open
Plot location
S-B19-144
Pond

WB-B19-169

Created	2019-01-22 14:05:54 UTC by Simon King
Updated	2019-02-07 19:16:53 UTC by Karla Fortier
Location	36.1334447, -79.3696695
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/22
Date2	190122

Resource Crew Info

Field Crew	Jim Bolduc, Simon King
Lead Scientist's Initials	JGB
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	169
Resource ID	WB-B19-169
Do you need to override the resource id?	Yes
Resource ID Override	WB-B19-169
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	0
Calculated Stream Type	Undetermined
Observed Use	cow pond

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	N

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0

Stream Measurements

OHWM Width (ft)	40
Average Water Width (ft)	40
Bank to Bank (ft)	40
Bankfull Width (ft)	40
Probed Stream Depth	> 36 inches

Left Bank

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0

Right Bank

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0

Stream Geomorphology

Stream Geomorphology Total	0

Stream Hydrology

Stream Hydrology Total	0

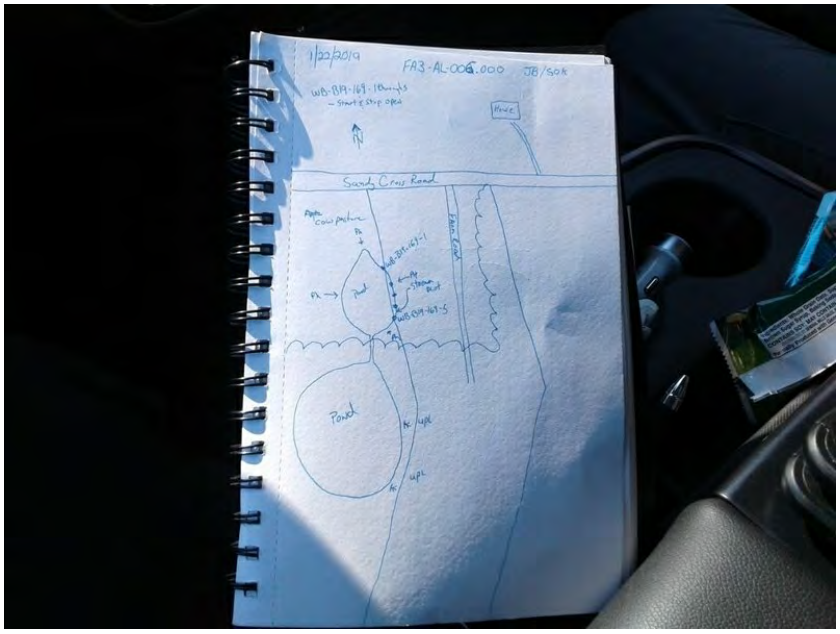
Stream Biology

Stream Biology Total	0
Stream Overview Report Photos	

Upstream Stream Photo	
Upstream photo direction	S
Downstream Stream Photo	
Downstream photo direction	N

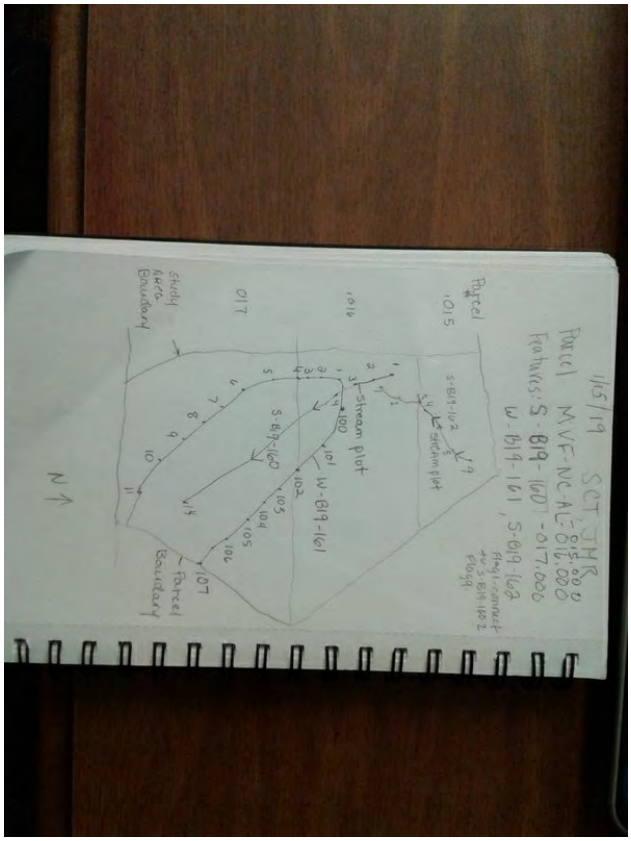
Across Stream Photo 1	
Across stream photo direction 1	W
Across Stream Photo 2	
Across stream photo direction 2	E

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-163

Created	2019-01-16 16:20:34 UTC by Simon King
Updated	2019-02-07 15:28:28 UTC by Karla Fortier
Location	36.1311825, -79.3695292
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/16
Date2	190116

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	163
Resource ID	S-B19-163
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	13.5
Calculated Stream Type	Ephemeral
Wildlife Observed	deer tracks

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SW
Channel condition	Poor
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	1.1
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.1

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	0
Bank to Bank (ft)	2
Bankfull Width (ft)	2

Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.75
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.75

Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No

Stream Geomorphology Total	5.5

Stream Hydrology

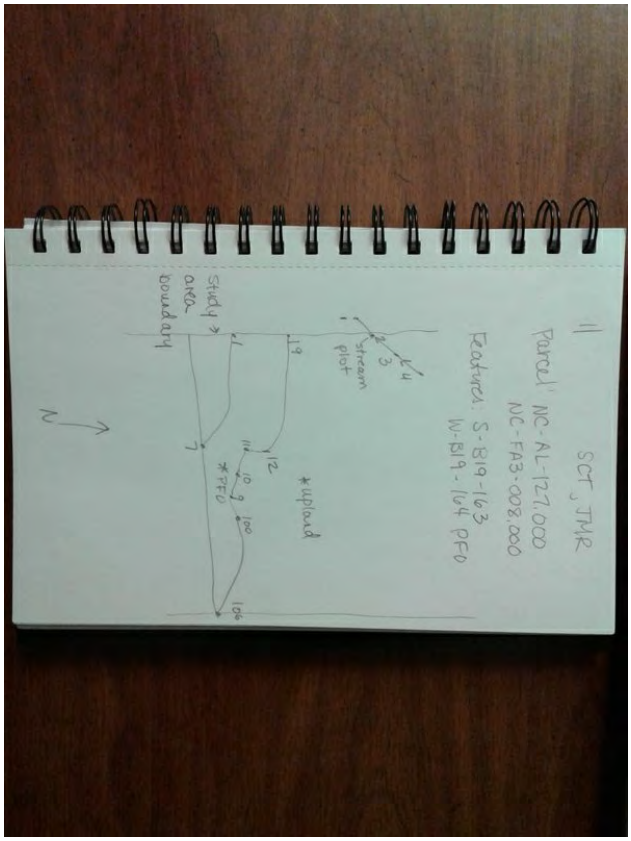
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	5.5
Notes	Drainage between cow pasture.
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	NW

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-166

Created	2019-01-17 14:01:05 UTC by Simon King
Updated	2019-02-07 16:09:39 UTC by Karla Fortier
Location	36.283131, -79.5631956
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/17
Date2	190117

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	166
Resource ID	S-B19-166
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	E
Channel condition	Suboptimal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	1.3
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.3

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	1.2
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.2

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	1.2
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.2

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	12

Stream Hydrology

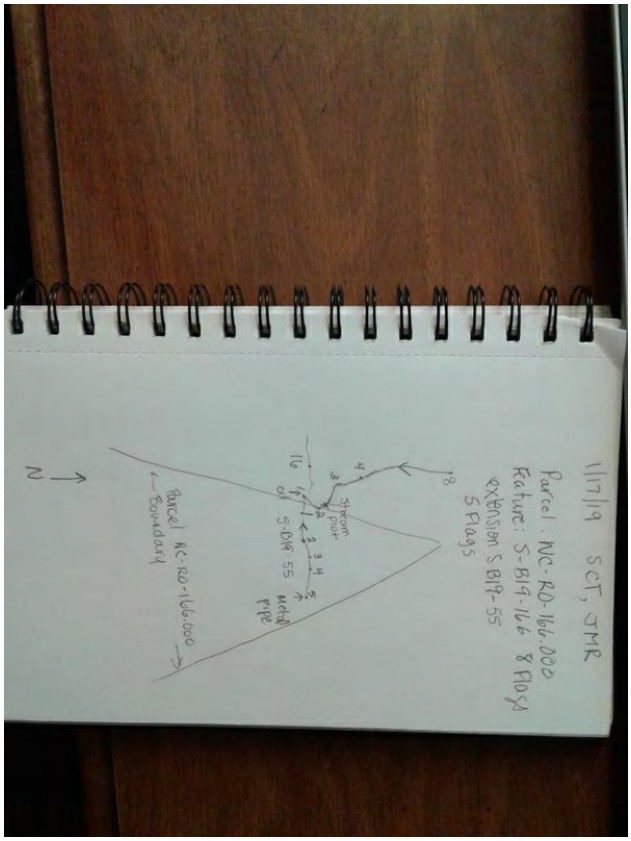
Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	3.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	7.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	S

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-167

Created	2019-01-18 14:28:46 UTC by Simon King
Updated	2019-02-07 18:35:20 UTC by Karla Fortier
Location	36.2976168, -79.5820282
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/18
Date2	190118

Resource Crew Info

Field Crew	Jim Bolduc
Lead Scientist's Initials	B19
GPS Surveyor	susan thebert
GPS ID	NA
Resource Series Number	167
Resource ID	S-B19-167
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	27.5
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	E
Channel condition	Optimal
In stream habitat	Optimal

Channel Alteration

Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.5

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Low
Left Bank Substrate	Sand, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	1.5
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.5

Right Bank

Right Bank Height (feet)	4
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Sand, Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	13

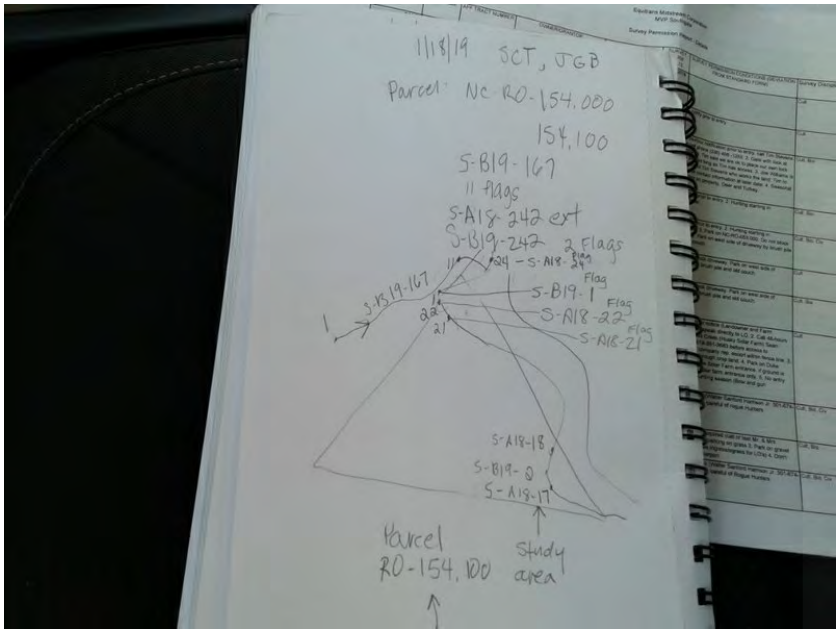
Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Weak
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	7
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	E
Across Stream Photo 1	
Across stream photo direction 1	S

Across Stream Photo 2	
Across stream photo direction 2	N
Sketch of Stream	
Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker	

S-C18-25

Created	2018-06-02 20:53:48 UTC by Don Lockwood
Updated	2019-02-07 18:27:12 UTC by Karla Fortier
Location	36.3424923, -79.6057245
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/02
Date2	180602

Resource Crew Info

Field Crew	Joe Roy, Donald Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	25
Resource ID	S-C18-25
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-25
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	30.25
Calculated Stream Type	Perennial
Wildlife Observed	None
Observed Use	Fishing, Drinking, Drainage

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	W
Channel condition	Optimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.5

Stream Measurements

OHWM Width (ft)	4
Average Water Width (ft)	3

Bank to Bank (ft)	5
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Low
Left Bank Substrate	Organic, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	1.5
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.5

Right Bank

Right Bank Height (feet)	4
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Organic, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Moderate

Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	14

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Weak
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	9.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	SE

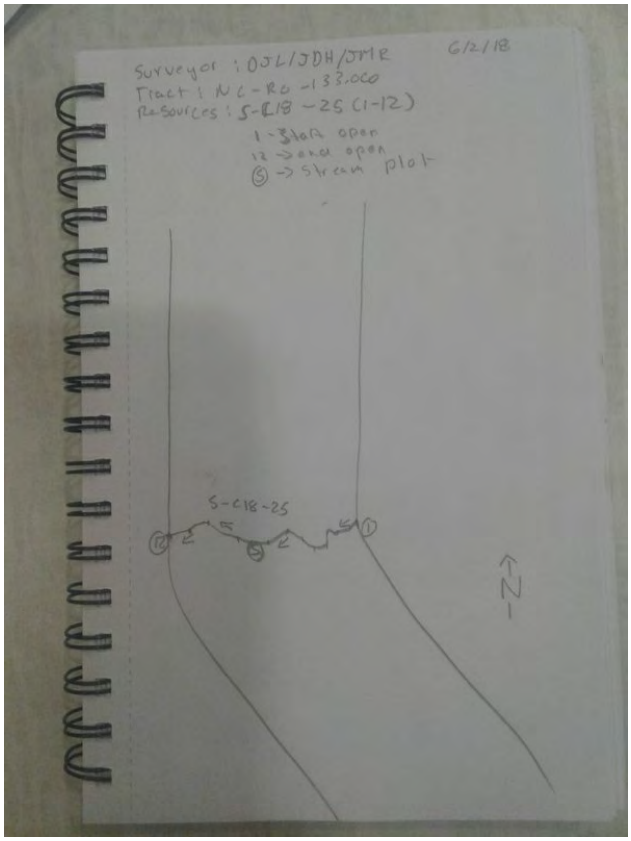
Downstream Stream Photo	
Downstream photo direction	NW
Across Stream Photo 1	
Across stream photo direction 1	W

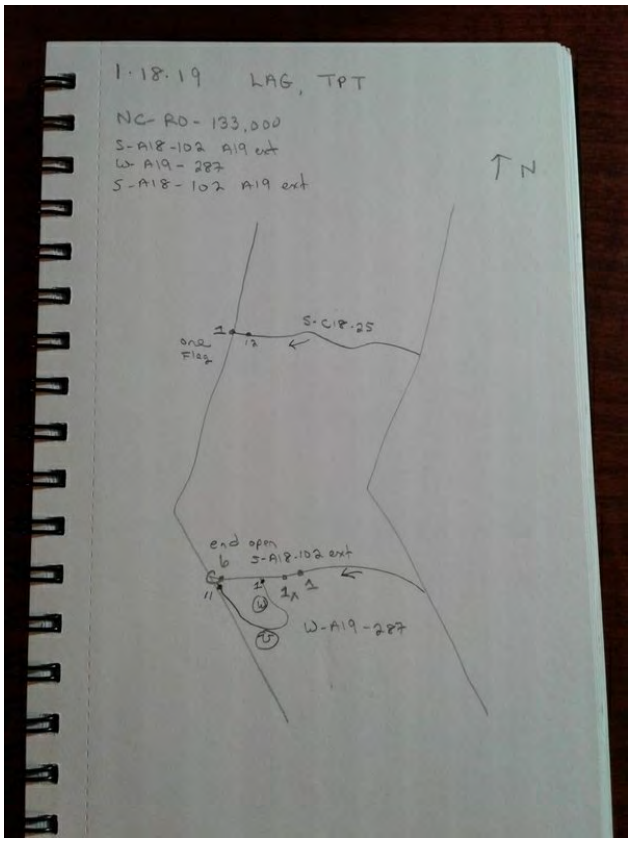
Across Stream Photo 2	
Across stream photo direction 2	E
Additional Stream Photos	 A19 ext, across, north

A19 ext, downstream, west

A19 ext, upstream, east

Sketch of Stream





Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

Stream Hydrology

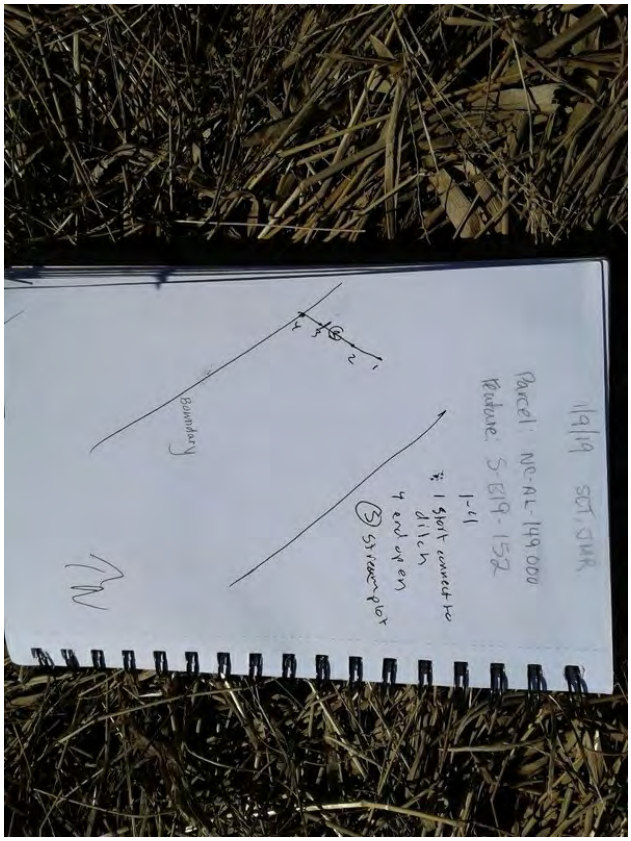
Presence of baseflow	Weak
Iron oxidizing bacteria	Weak
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	No
Stream Hydrology Total	3

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Moderate
Stream Biology Total	7
Notes	Stream is next to NC 70 highway embankment
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	NE

Downstream Stream Photo	
Downstream photo direction	SW
Across Stream Photo 1	
Across stream photo direction 1	NW

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-153

Created	2019-01-09 19:36:06 UTC by Simon King
Updated	2019-02-05 16:33:06 UTC by Karla Fortier
Location	36.4874235, -79.6834655
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/09
Date2	190109

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	153
Resource ID	S-B19-153
Do you need to override the resource id?	No

Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	25.5
Calculated Stream Type	Intermittent

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	N
Channel condition	Optimal
In stream habitat	Optimal

Channel Alteration

Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.5

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Organic, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	1.5
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.5

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Organic, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Strong
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	16.5

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Strong
Soil-based evidence of high water table?	No
Stream Hydrology Total	4.5

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	4.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	NE

Sketch of Stream

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-154

Created	2019-01-09 19:52:24 UTC by Simon King
Updated	2019-02-05 16:35:13 UTC by Karla Fortier
Location	36.487346, -79.6834448
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/09
Date2	190109

Resource Crew Info

Field Crew	Joe Roy, Susan Thebert
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	154
Resource ID	S-B19-154
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	18
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	W
Channel condition	Optimal
In stream habitat	Optimal

Channel Alteration

Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.5

Stream Measurements

OHWM Width (ft)	1
Average Water Width (ft)	0
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Cobble-Gravel, Organic, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	1.5
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.5

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Organic, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Strong
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	12

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Strong
Soil-based evidence of high water table?	No
Stream Hydrology Total	2.5

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	3.5
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	E

Downstream Stream Photo	
Downstream photo direction	NW
Across Stream Photo 1	
Across stream photo direction 1	N

Sketch of Stream

Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-155

Created	2019-01-09 20:55:30 UTC by Simon King
Updated	2019-02-05 16:36:05 UTC by Karla Fortier
Location	36.4854915, -79.6849589
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/09
Date2	190109

Resource Crew Info

Field Crew	Jim Bolduc, Joe Roy, Will Burrow, Jake Brillo
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	155
Resource ID	S-B19-155
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	17.5
Calculated Stream Type	Ephemeral

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	N
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.5

Stream Measurements

OHWM Width (ft)	2
Average Water Width (ft)	0
Bank to Bank (ft)	2
Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Organic, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	1.5
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.5

Right Bank

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Organic, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	11.5

Stream Hydrology

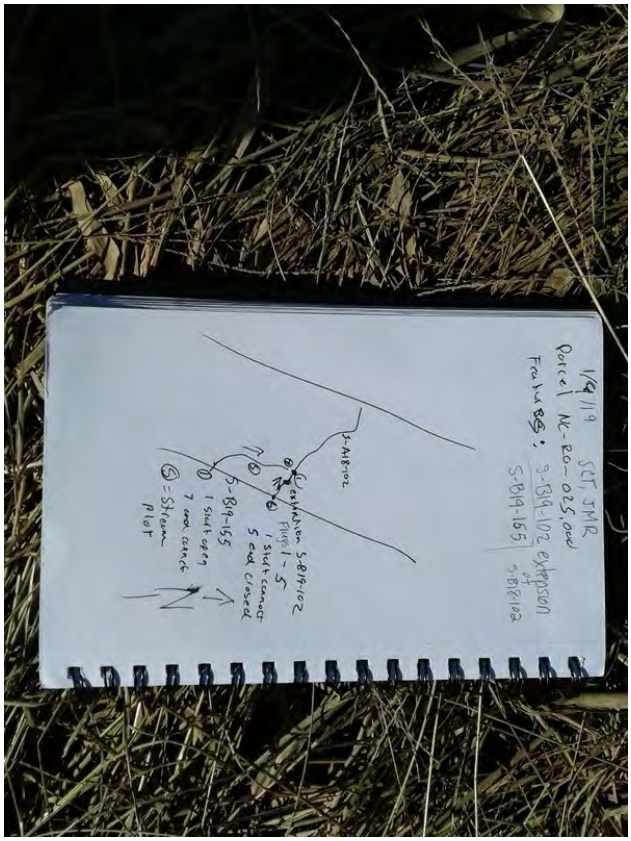
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Strong
Sediment on plants or debris	Weak
Organic debris lines or piles	Strong
Stream Hydrology Total	2

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	4
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	E

Sketch of Stream



Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

S-B19-157

Created	2019-01-11 18:36:57 UTC by Simon King
Updated	2019-02-06 17:31:15 UTC by Karla Fortier
Location	36.4181669, -79.6519851
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	19/01/11
Date2	190111

Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	B19
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	157
Resource ID	S-B19-157
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	34.5
Calculated Stream Type	Perennial

Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	E
Channel condition	Suboptimal
In stream habitat	Suboptimal

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0.7
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0.7

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	5
Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

Left Bank

Left Bank Height (feet)	2
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	1.1
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.1

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	1.1
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.1

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Strong
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Strong
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	18

Stream Hydrology

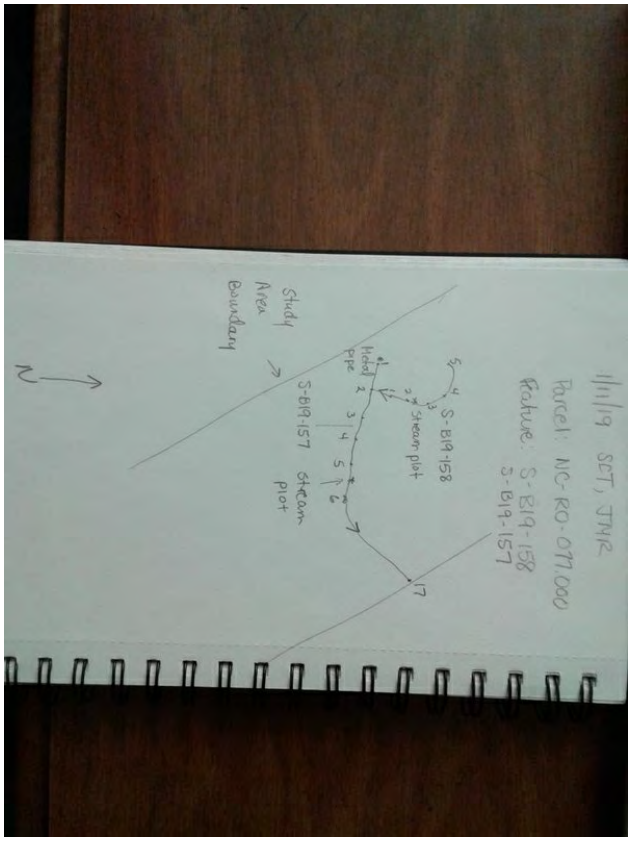
Presence of baseflow	Moderate
Iron oxidizing bacteria	Strong
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Strong
Soil-based evidence of high water table?	No
Stream Hydrology Total	7.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Weak
Crayfish	Absent
Amphibians	Weak
Algae	Moderate
Stream Biology Total	9
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	W

Downstream Stream Photo	
Downstream photo direction	NE
Across Stream Photo 1	
Across stream photo direction 1	N

Sketch of Stream



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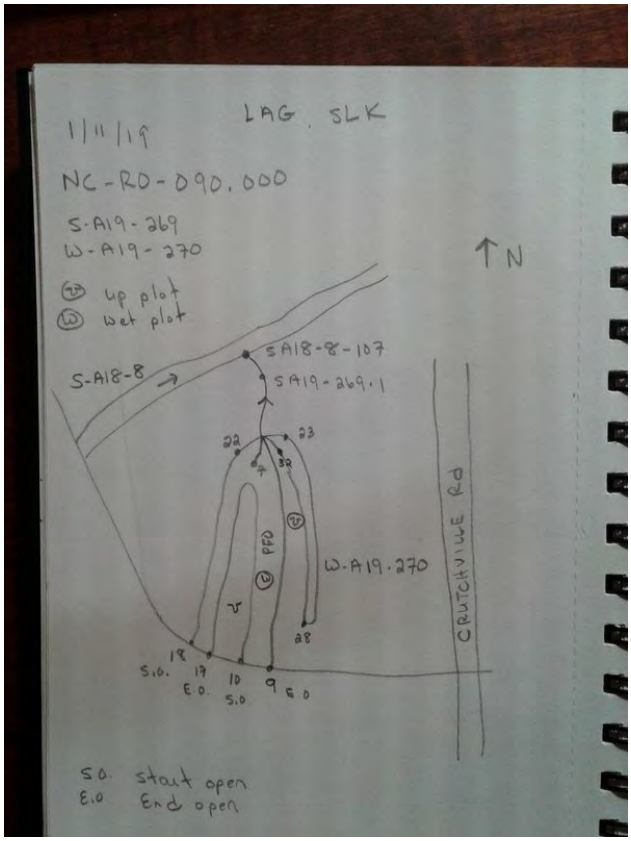
Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9.5

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	6.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	
Upstream Stream Photo	
Upstream photo direction	S

Downstream Stream Photo	
Downstream photo direction	N
Across Stream Photo 1	
Across stream photo direction 1	E

Across Stream Photo 2	
Across stream photo direction 2	W
Sketch of Stream	

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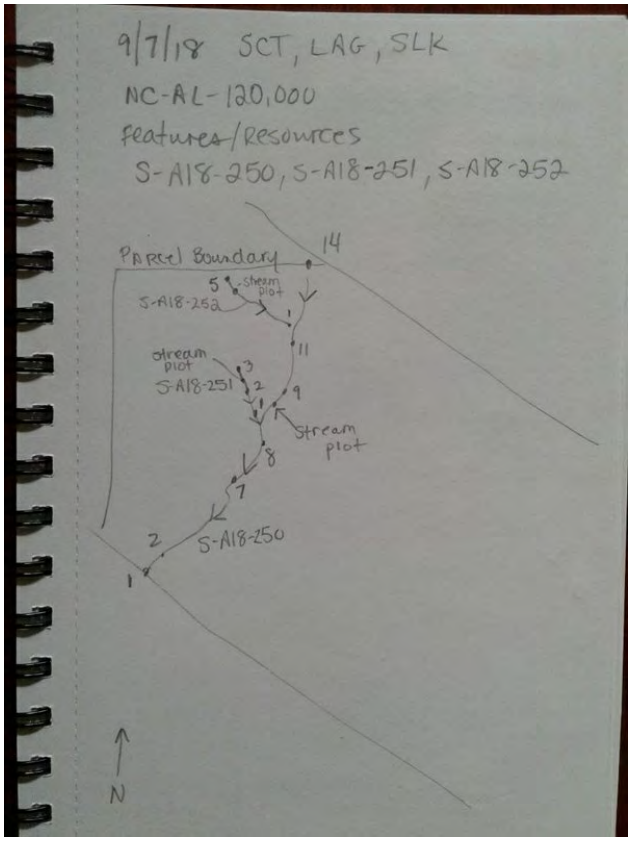
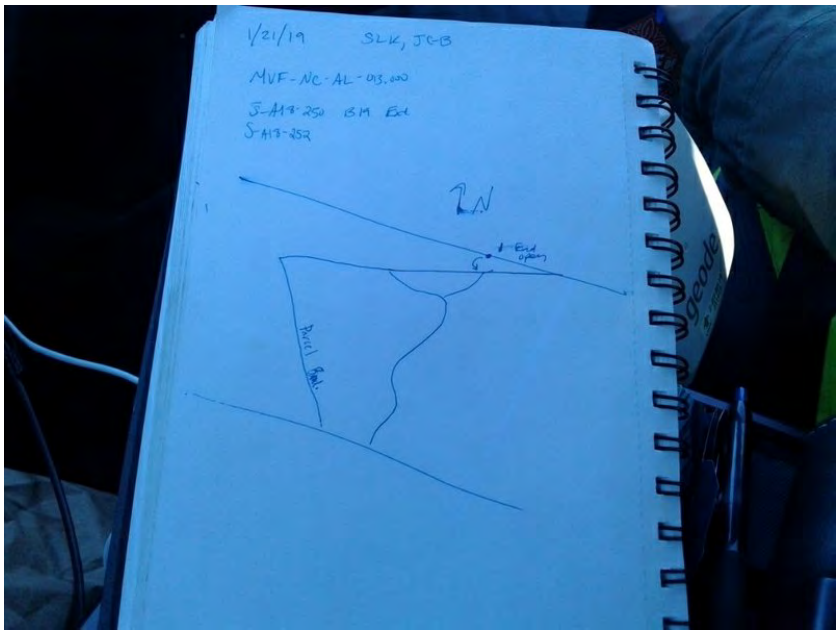
upstream extension S-18-250-1 ext

extention S-A18-250-1 ext

Sketch of Stream





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