## S-B18-20

Created	2018-05-15 12:46:28 EDT by James Bolduc
Updated	2018-05-23 08:31:50 EDT by Sam Edmonds
Location	36.1466205, -79.4072891
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/15
Date2	180515

## Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	B18
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	20
Resource ID	S-B18-20
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
Calculated Stream Type	Intermittent
Wildlife Observed	Turtles
Observed Use	Drainage

## 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	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

OHWM Width (ft)	2	
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)	2
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	Rubble, Mud or muck, 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)	2
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Rubble, Mud or muck, 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

1 07	
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	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate

Second or greater order channel	No
Stream Geomorphology Total	13

## Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Weak
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	6

# Stream Biology

Absent
Absent
Absent
Absent
Absent
Weak
Absent
Absent
OBL
8
Drainage from wetland

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

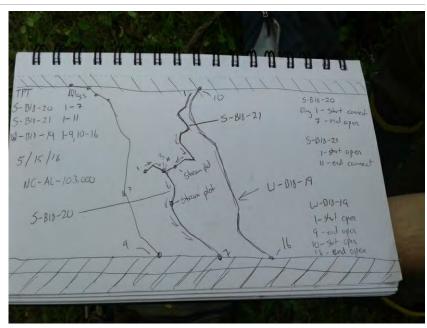
S



#### Across stream photo direction 2

#### Sketch of Stream

NE



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

## S-B18-21

Created	2018-05-15 17:13:25 UTC by James Bolduc
Updated	2018-09-20 19:23:01 UTC by Susie Gifford (SBG)
Location	36.1466514, -79.4072729
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/15
Date2	180515

## Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	B18
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	21
Resource ID	S-B18-21
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - F	Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	20
Calculated Stream Type	Intermittent
Wildlife Observed	none
Observed Use	Drainage

## Stream Conditions

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

## **Channel Alteration**

1.5
0
0
0
0
0
1.5

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	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	Moderate	
Left Bank Substrate	Sand, Mud or muck	

# 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	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Moderate	
Right Bank Substrate	Sand, Mud or muck	

# **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

1 07	
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	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Weak

Second or greater order channel	No
Stream Geomorphology Total	8.5

# Stream Hydrology

Weak
Absent
Weak
Weak
Absent
Yes
5.5

# Stream Biology

Absent	
Absent	
Other	
6	
Flows from wetland to stream S-B18-20	
	Absent Absent Absent Absent Absent Absent Absent Other 6

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

S



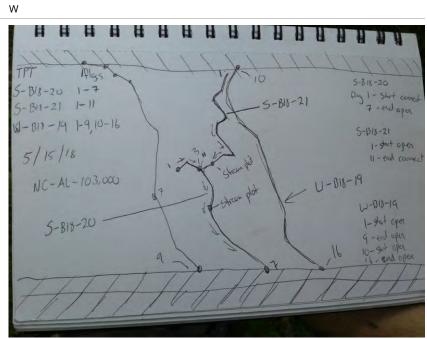
Across stream photo direction 1

SE



#### Across stream photo direction 2

Sketch of Stream



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

### S-B18-22

Created	2018-05-16 10:45:31 EDT by James Bolduc	
Updated	2018-05-23 08:36:20 EDT by Sam Edmonds	
Location	36.147305, -79.4210198	
Status	Finalized & Approved	
Client	NextEra	
Project	MVP Southgate	
Date	18/05/16	
Date2	180516	

## Resource Crew Info

Jim Bolduc, Tony Tredway
5
JGB
Tony Tredway
NA
22
S-B18-22
No
esource Series Number

# Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	24
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	Drainage

## Stream Conditions

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

## **Channel Alteration**

1.5
0
0
0
0
0
1.5

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	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	High	
Left Bank Substrate	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)	2
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

1 07	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Absent
Active or relict floodplain	Weak
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Strong
Grade control	Weak
Natural valley	Weak

Second or greater order channel	No
Stream Geomorphology Total	10

## 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

Absent
Absent
Weak
Absent
Other
6.5
Flat area with multiple channels

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

NE

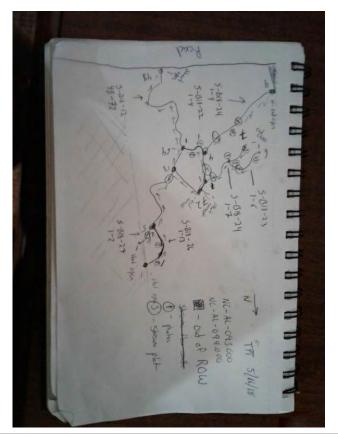


Across stream photo direction 2

Additional Stream Photos

S





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

### S-B18-23

Created	2018-05-16 12:32:22 EDT by James Bolduc
Updated	2018-05-23 08:37:37 EDT by Sam Edmonds
Location	36.1473987, -79.421041
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/16
Date2	180516

### Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	23
Resource ID	S-B18-23
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
Wildlife Observed	None observed
Observed Use	forested drainage

## Stream Conditions

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

## **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

OHWM Width (ft)	4
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)	1	
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]	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	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Right Erosion Potential	Low	
Right Bank Substrate	Mud or muck	

## **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

1 07	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Absent
In-channel structure	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Moderate
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	4.5

# Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Weak
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	5

# Stream Biology

Absent
Absent
Other
6
Groundwater discharge

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

S

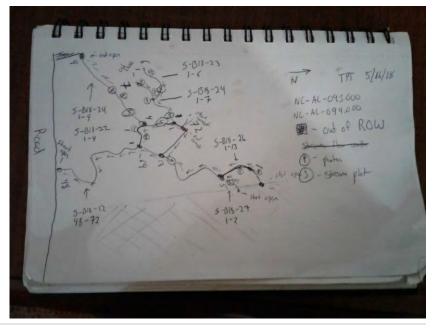


Across stream photo direction 2

Additional Stream Photos

Ν





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

### S-B18-24

Created	2018-05-16 11:39:22 EDT by James Bolduc
Updated	2018-06-11 10:40:44 EDT by Sam Edmonds
Location	36.1467052, -79.4207956
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/16
Date2	180516

## Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	B18
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	24
Resource ID	S-B18-24
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	32.5
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	overland drainage

## Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	NE
Channel condition	Optimal
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

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)	1	
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping	
Left Erosion Potential	Moderate	
Left Bank Substrate	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)	1	
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping	
Right Erosion Potential	Moderate	
Right Bank Substrate	Sand	

# **Right Bank Riparian Buffer Condition**

0 1		
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

1 07	
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	Strong
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	15.5	
Stream Hydrology		

Sticani riyul ology	
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

Absent
Absent
Moderate
Moderate
Absent
Absent
Moderate
Absent
Other
11
State Protected, Corps Jurisdictional
Stream flowing at the time of observation

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

Ν

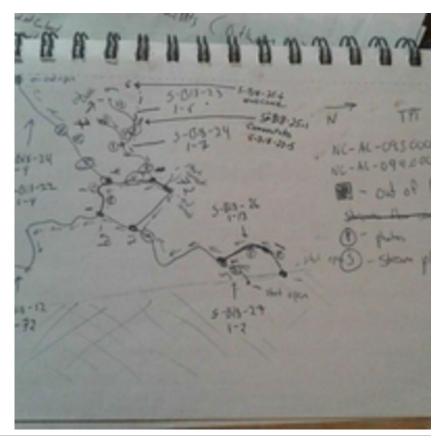


Across stream photo direction 2

SE



Sketch of Stream



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

# S-JGB-26

Created	2018-05-16 18:03:46 UTC by James Bolduc
Updated	2018-09-20 19:23:23 UTC by Susie Gifford (SBG)
Location	36.1477216, -79.4208646
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

## Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	26
Resource ID	S-JGB-26
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	28.25
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	Drainage through forest

## Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
Channel condition	Suboptimal
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

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

Bankfull Width (ft)	5
Probed Stream Depth	6 to 12 inches

## Left Bank

Left Bank Height (feet)	1	
Left Bank Slope	25 to 35% (14 to 20 deg) Steep	
Left Erosion Potential	Moderate	
Left Bank Substrate	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)	1
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Moderate
Right Bank Substrate	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

1 05	
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	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate

Second or greater order channel	No
Stream Geomorphology Total	15.5

# 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

Weak
Absent
Moderate
Absent
FACW
6.75
Stream flowing

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

W

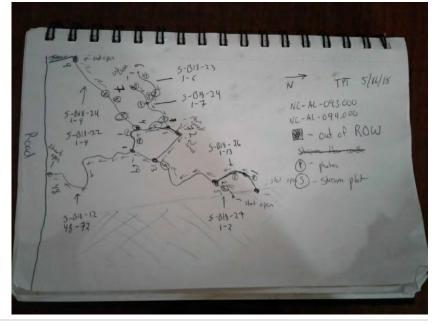


Across stream photo direction 2

Additional Stream Photos

Е





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

### S-B18-27

Created	2018-05-16 14:25:22 EDT by James Bolduc
Updated	2018-05-23 09:12:36 EDT by Sam Edmonds
Location	36.1477694, -79.4207182
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/16
Date2	180516

### Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	27
Resource ID	S-B18-27
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
Wildlife Observed	None observed
Observed Use	Drainage through forest

## 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	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

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)	0.2
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	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)	0.2
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Sand

# **Right Bank Riparian Buffer Condition**

1.5
0
0
0
0
0
0
1.5

1 07	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Absent
In-channel structure	Absent
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Absent
Natural valley	Absent

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	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	Absent	
Aquatic mullusks	Absent	
Fish	Absent	
Crayfish	Absent	
Amphibians	Absent	
Algae	Absent	
Wetland plants in streambed	Other	
Stream Biology Total	6	
Stream Overview Report Photos		

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

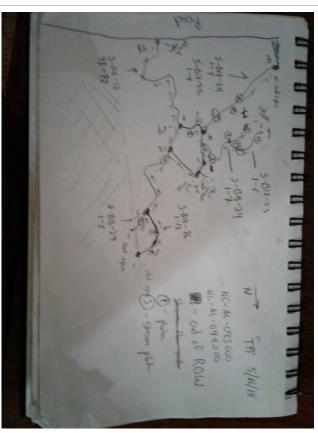
W



Across stream photo direction 2

Sketch of Stream

Е



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

### S-B18-29

Created	2018-05-17 12:17:28 EDT by James Bolduc
Updated	2018-05-23 09:07:58 EDT by Sam Edmonds
Location	36.1474191, -79.4202173
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/17
Date2	180517

#### Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	29
Resource ID	S-B18-29
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
Wildlife Observed	none
Observed Use	forested drainage

### Stream Conditions

Water Flow Velocity	Dry or Minimal	
Direction of Flow	SW	
Channel condition	Optimal	
In stream habitat	Poor	

### **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)	0.1	
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Left Erosion Potential	Low	
Left Bank Substrate	Silt-Mud	

# 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)	0.1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud

### **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	

1 07	
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	Absent
Grade control	Weak
Natural valley	Absent

Second or greater order channel	No
Stream Geomorphology Total	4.5

# Stream Hydrology

,,	
Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	5.5

# Stream Biology

Absent
Moderate
Absent
Other
4
NJD Forest drainage

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

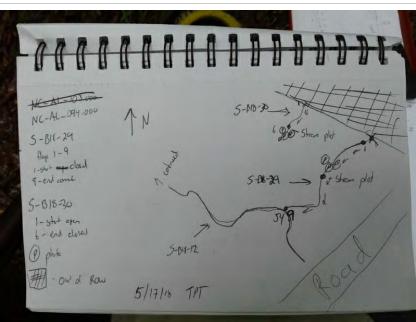
Ν





Sketch of Stream

S



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

#### S-B18-33

Created	2018-05-17 15:31:20 EDT by James Bolduc
Updated	2018-05-23 09:13:43 EDT by Sam Edmonds
Location	36.1478545, -79.4235907
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Project Date	MVP Southgate 18/05/17

#### Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	33
Resource ID	S-B18-33
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	15.25
Calculated Stream Type	Ephemeral
Wildlife Observed	None observed
Observed Use	forested drainage

### Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	5
Channel condition	Optimal
In stream habitat	Poor

### **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)	2	

Bankfull Width (ft)	2
Probed Stream Depth	0 to 6 inches

### Left Bank

Left Bank Height (feet)	0.1	
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]	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)	0.1	
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]	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	

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Moderate
In-channel structure	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Weak
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	4

### Stream Hydrology

eak
osent
oderate
osent
osent
25
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	
Wetland plants in streambed	FACW	
Stream Biology Total	6.75	
Stream Overview Report Photos		

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

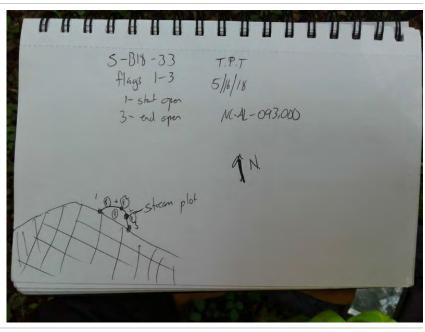
Е



Across stream photo direction 2

Sketch of Stream

W



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

#### S-B18-38

Created	2018-05-21 12:46:53 EDT by James Bolduc
Updated	2018-06-07 10:05:22 EDT by Sam Edmonds
Location	36.4952994, -79.6783592
Status	Finalized & Approved
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	

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

Weak Absent
Absent
Absent
FACW
5.75
State Protected, Corps Jurisdictional
Old irrigation ditch

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1



Across stream photo direction 1

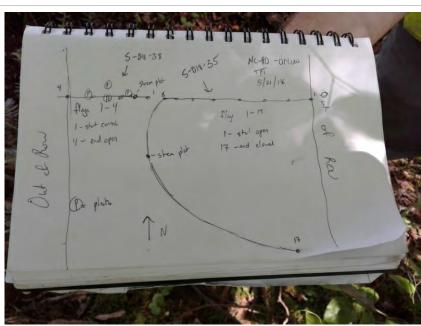
Ν



#### Across stream photo direction 2

Sketch of Stream

S



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

#### S-B18-41

Created	2018-05-22 11:39:12 EDT by James Bolduc
Updated	2018-06-14 14:08:48 EDT by Sam Edmonds
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	

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





Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

S



Across stream photo direction 2

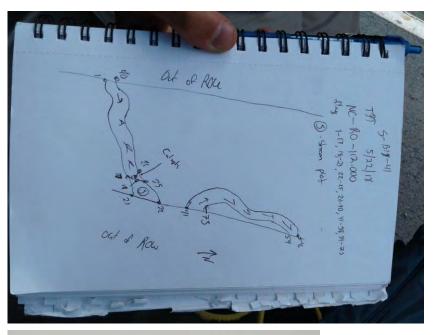
Additional Stream Photos

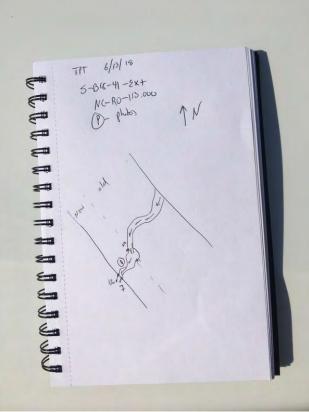
Ν











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

#### S-B18-42

Created	2018-05-22 11:10:15 EDT by James Bolduc
Updated	2018-06-08 09:52:47 EDT by Sam Edmonds
Location	36.3696007, -79.6197758
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

#### 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**

0 1		
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	

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

Absent Weak
Absent
Other
5
State Protected, Corps Jurisdictional
Trampled by cattle

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

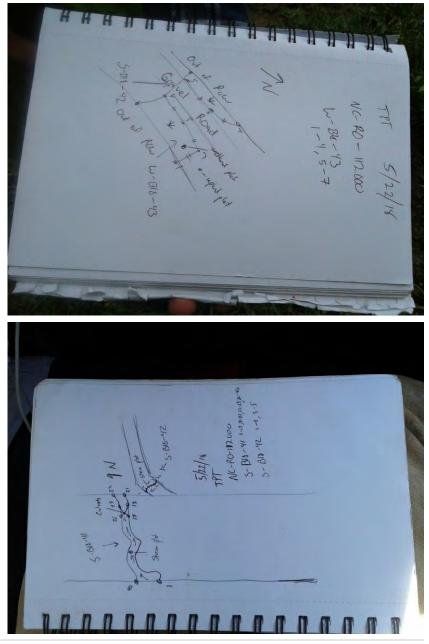
NE

Across Stream Photo 2



Across stream photo direction 2

S



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

#### S-B18-44

Created	2018-05-22 13:09:12 EDT by James Bolduc
Updated	2018-06-21 07:56:38 EDT by Sam Edmonds
Location	36.3714115, -79.6206739
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

#### Resource Crew Info

Field Crew	Jeremy Hummel and Jake Brillo
Lead Scientist's Initials	B18
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	44
Resource ID	S-B18-44
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	26.25
Calculated Stream Type	Intermittent
Observed Use	stream draining through forested canopy

#### Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	E
Channel condition	Severe
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)	3	
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)	5	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	High	
Left Bank Substrate	Bedrock, 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**

0	
Right Bank Height (feet)	6
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Bedrock, 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	

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	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	No

Stream Geomorphology Total
----------------------------

#### Stream Hydrology

Sacamingarology	
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

13.5

# Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	6.75
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Additional stream photos for extension P1 up, P2 dn, P3 across, P4 across and P5 fork at upper end

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

S



Across stream photo direction 2

Additional Stream Photos

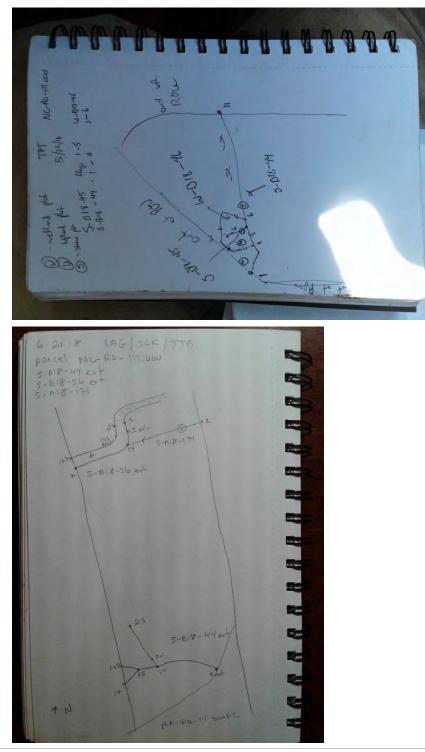
Ν







Sketch of Stream



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

#### S-B18-45

Created2018-05-22 13:36:45 EDT by James BolducUpdated2018-06-08 09:51:33 EDT by Sam EdmondsLocation36.371453, -79.6206095StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/22Date2180522		
Location36.371453, -79.6206095StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/22	Created	2018-05-22 13:36:45 EDT by James Bolduc
StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/22	Updated	2018-06-08 09:51:33 EDT by Sam Edmonds
Client     NextEra       Project     MVP Southgate       Date     18/05/22	Location	36.371453, -79.6206095
ProjectMVP SouthgateDate18/05/22	Status	Finalized & Approved
Date 18/05/22	Client	NextEra
	Project	MVP Southgate
Date2 180522	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	45
Resource ID	S-B18-45
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
Observed Use	ephemeral seep into intermittent stream

### Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
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)	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]	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**

	0.5	Right Bank Height (feet)
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### **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	Absent
In-channel structure	Absent
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	5

### 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	Strong
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	OBL
Stream Biology Total	4.5
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

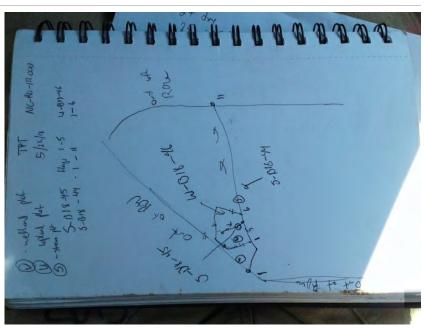
Е



Across stream photo direction 2

Sketch of Stream

Е



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

#### S-B18-47

Created2018-05-23 14:05:03 UTC by James BolducUpdated2018-09-20 19:26:23 UTC by Susie Gifford (SBG)Location36.5083667, -79.6653658StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/23Date2180523		
Location36.5083667, -79.6653658StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/23	Created	2018-05-23 14:05:03 UTC by James Bolduc
StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/23	Updated	2018-09-20 19:26:23 UTC by Susie Gifford (SBG)
Client     NextEra       Project     MVP Southgate       Date     18/05/23	Location	36.5083667, -79.6653658
ProjectMVP SouthgateDate18/05/23	Status	Finalized & Approved
Date 18/05/23	Client	NextEra
	Project	MVP Southgate
Date2 180523	Date	18/05/23
	Date2	180523

### **Resource Crew Info**

Field Crew	Jim Bolduc, Tony Tredway, Heather Patti
Lead Scientist's Initials	B18
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	47
Resource ID	S-B18-47
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-47
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Ephemeral	
Calculated Stream Score	14	
Calculated Stream Type	Ephemeral	
Wildlife Observed	Turtles	
Observed Use	Drainage	

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	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)	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	

### 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	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	
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	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Weak
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	3.5

# Stream Hydrology

, .,	
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Strong
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	3

### 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
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Additional stream photos for extension P1 up, P2 dn, P3 across. Flags 1-3
Stream Overview Report Photos	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Е



Across stream photo direction 2

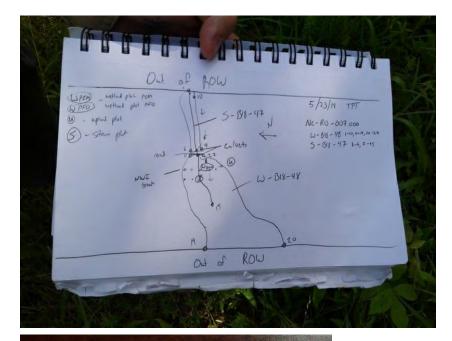
Additional Stream Photos

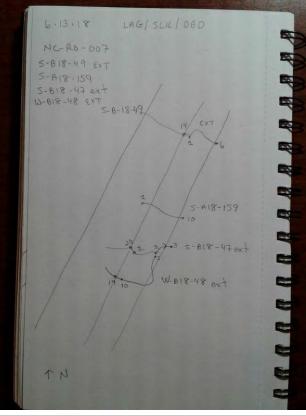
W





Sketch of Stream







#### S-B18-49

Created2018-05-23 15:05:27 UTC by James BolducUpdated2018-09-20 19:26:36 UTC by Susie Gifford (SBG)Location36.5115508, -79.6622522StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/23Date2180523		
Location36.5115508, -79.6622522StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/23	Created	2018-05-23 15:05:27 UTC by James Bolduc
StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/23	Updated	2018-09-20 19:26:36 UTC by Susie Gifford (SBG)
Client     NextEra       Project     MVP Southgate       Date     18/05/23	Location	36.5115508, -79.6622522
ProjectMVP SouthgateDate18/05/23	Status	Finalized & Approved
Date 18/05/23	Client	NextEra
	Project	MVP Southgate
Date2 180523	Date	18/05/23
	Date2	180523

### 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	49
Resource ID	S-B18-49
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-49
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	32
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	Drainage

### Stream Conditions

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

### **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)	2

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

### Left Bank Riparian Buffer Condition

0	
1.2	
0	
0	
0	
0	
0	
1.2	
	1.2         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0

### **Right Bank**

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

### **Right Bank Riparian Buffer Condition**

0 1	
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

i	
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	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak

Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	13

### Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
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	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Moderate
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	11
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Nice small perennial stream. Additional stream photos for extension, P1 up, P2 dn, P3 across. Flags 1-6

#### Stream Overview Report Photos

Upstream Stream Photo



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

SW



Across stream photo direction 2

Additional Stream Photos

NE









Sketch of Stream

LAGI SLICI DOD 6.13.18 --5-818-49 EXT 5-618-159 5-618-159 5-618-47 ext W-618-48 EXT 5-6-18-49 AA A -RAARRABB A18-159 B18-47 ext W-B18-48 ext TN

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

### S-B18-50

Created	2018-05-23 14:25:28 EDT by James Bolduc
Updated	2018-06-07 10:15:56 EDT by Sam Edmonds
Location	36.5062322, -79.6682191
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

### 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	50
Resource ID	S-B18-50
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-50
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Ephemeral	
Calculated Stream Score	12.5	
Calculated Stream Type	Ephemeral	
Wildlife Observed	None observed	
Observed Use	Drainage	
Stream Conditions		
Water Flow Velocity	Dry or Minimal	

Direction of Flow	SW
Channel condition	Poor
In stream habitat	Poor

### **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)	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	25 to 35% (14 to 20 deg) 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]	0.5	
Left bank total	0.5	

### **Right Bank**

Right Bank Height (feet)	1
Right Bank Slope	25 to 35% (14 to 20 deg) 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]	0.5	
Right bank total	0.5	

### Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Weak
In-channel structure	Absent
Particle size of stream substrate	Absent
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	3.5

## Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	No
Stream Hydrology Total	1.5

### 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
Wetland plants in streambed	OBL
Stream Biology Total	7.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo

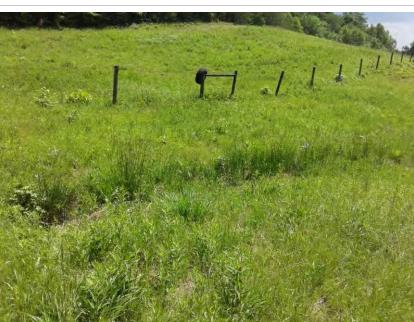




Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

S



Across stream photo direction 2

Sketch of Stream

NW



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

### S-B18-51

Created	2018-05-24 09:11:25 EDT by James Bolduc
Updated	2018-06-07 10:16:56 EDT by Sam Edmonds
Location	36.3840467, -79.6309219
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	51
Resource ID	S-B18-51
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-51
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	34
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	5
Channel condition	Suboptimal
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)	4
Average Water Width (ft)	2

Bank to Bank (ft)	10
Bankfull Width (ft)	20
Probed Stream Depth	0 to 6 inches

### Left Bank

Left Bank Height (feet)	15	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	High	
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)	20
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

1 00	
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	Absent
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Moderate
Grade control	Moderate

Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	20

## Stream Hydrology

Presence of baseflow	Moderate
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	7

### Stream Biology

Absent
Absent
Moderate
Absent
Other
7
State Protected, Corps Jurisdictional
Stream in deep ravine

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1



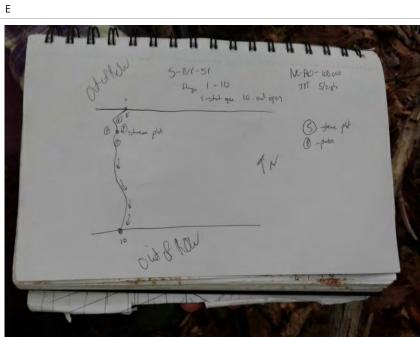
Across stream photo direction 1

W



Across stream photo direction 2

Sketch of Stream



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	2018-08-28 23:54:09 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

3	
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 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	

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

, .,	
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

0		
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





Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

Е



Across stream photo direction 2

Additional Stream Photos

W





Upstream

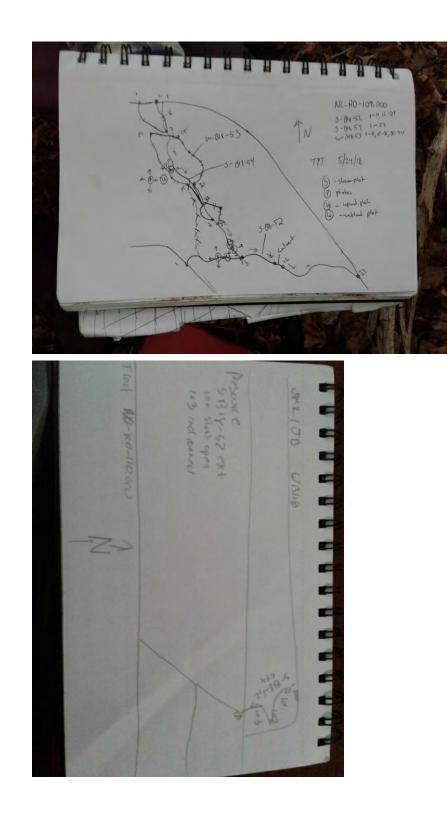


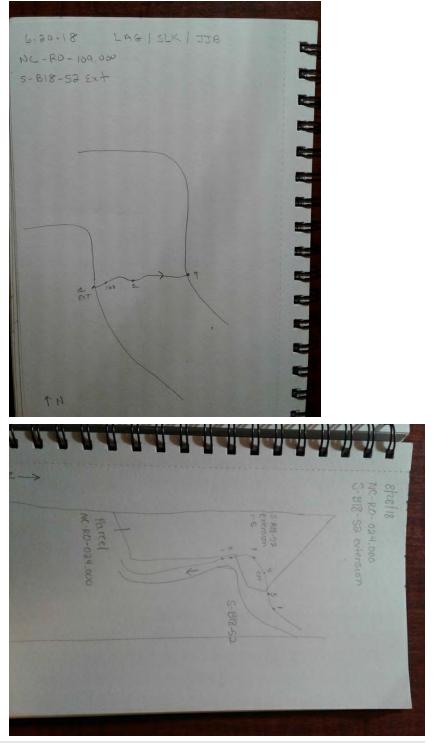
Downstream



Across

Sketch of Stream





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

#### S-B18-54

2018-05-24 13:43:03 EDT by James Bolduc 2018-06-07 10:20:09 EDT by Sam Edmonds 36.3826955, -79.6280999
26 2826055 70 6280000
30.3620933, -73.0280999
Finalized & Approved
NextEra
MVP Southgate
MVP Southgate 18/05/24

#### 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	54
Resource ID	S-B18-54
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-54
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

<b>,</b>	
Stream / Waterbody Type	Intermittent
Calculated Stream Score	31
Calculated Stream Type	Perennial
Wildlife Observed	Salamanders
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	5
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)	3
Average Water Width (ft)	2

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

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

## Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0.45	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	0	
Low marginal (0.75) [Left]	0.525	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	0.975	

# 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	Cobble-Gravel, Vegetated

#### **Right Bank Riparian Buffer Condition**

Optimal (1.5) [Right]	0.45	
High suboptimal (1.2) [Right]	0	
Low suboptimal (1.1) [Right]	0	
High marginal (0.85) [Right]	0	
Low marginal (0.75) [Right]	0.525	
High poor (0.6) [Right]	0	
Low poor (0.5) [Right]	0	
Right bank total	0.975	

Moderate
Strong
Moderate
Moderate
Absent
Weak
Weak
Strong
Moderate

Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	15.5

Moderate
Moderate
Weak
Moderate
Weak
Yes
9.5

#### Stream Biology

2.1.2.1.1.2.2.0.0)	
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	6
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Stream Overview Report Photos

Upstream Stream Photo



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

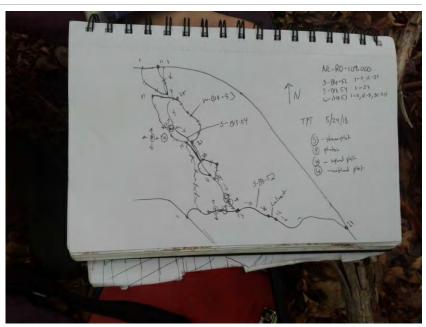
SE



Across stream photo direction 2

Sketch of Stream

NW



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

#### S-B18-56

Created2018-05-25 09:50:44 EDT by James BolducUpdated2018-06-21 07:55:49 EDT by Sam EdmondsLocation36.3773942, -79.6252066StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/25		
Location36.3773942, -79.6252066StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/25	ated	2018-05-25 09:50:44 EDT by James Bolduc
StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/05/25	lated	2018-06-21 07:55:49 EDT by Sam Edmonds
Client     NextEra       Project     MVP Southgate       Date     18/05/25	ation	36.3773942, -79.6252066
ProjectMVP SouthgateDate18/05/25	us	Finalized & Approved
Date 18/05/25	nt	NextEra
	ject	MVP Southgate
400525	e	18/05/25
Date2 180525	e2	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	Ν
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 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	

Strong
Strong
Moderate
Strong
Strong
Strong
Moderate
Absent
Weak

Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	23.5

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





Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

NE



Across stream photo direction 2

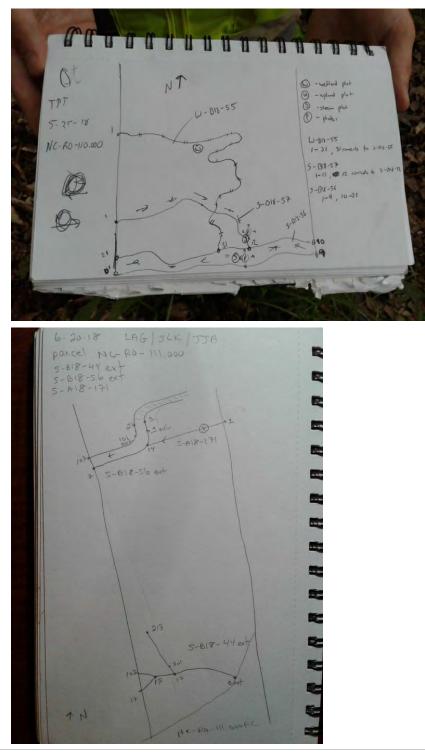
Additional Stream Photos

SW





Sketch of Stream



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

#### S-B18-57

Created	2018-05-25 13:25:04 UTC by James Bolduc
cicated	2010 03 23 13.23.04 01C by junics bolduc
Updated	2018-09-20 19:26:56 UTC by Susie Gifford (SBG)
Location	36.377501, -79.6254709
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

#### Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	57
Resource ID	S-B18-57
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-57
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	30.5
Calculated Stream Type	Perennial
Wildlife Observed	Frogs

## Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)	
Direction of Flow	E	
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)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3

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

Left Bank Height (feet)	0.1	
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, 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)	0.1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Mud or muck, 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	

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

Second or greater order channel	No
Stream Geomorphology Total	9

Moderate
Moderate
Absent
Moderate
Weak
Yes
10

## Stream Biology

tional

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

Е

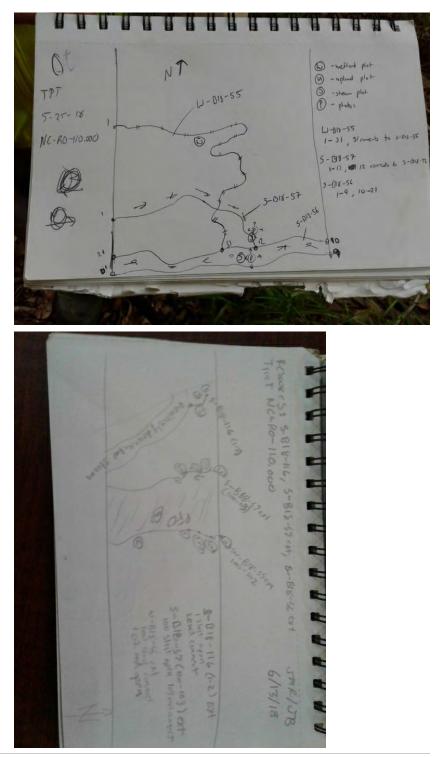


Across stream photo direction 2

W



Sketch of Stream



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

#### S-B18-58

Created	2018-05-26 15:46:29 UTC by James Bolduc
Updated	2018-09-20 19:27:15 UTC by Susie Gifford (SBG)
Location	36.0636979, -79.3617107
Status	Finalized & Approved
Client	NextEra
	Nexteria
Project	MVP Southgate

## Resource Crew Info

Field Crew	Jim Bolduc, Tony Tredway
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	58
Resource ID	S-B18-58
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-58
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	48
Calculated Stream Type	Perennial
Wildlife Observed	Turtles
Observed Use	did not observe anything

#### Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SW
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)	100
Average Water Width (ft)	90

Bank to Bank (ft)	130
Bankfull Width (ft)	130
Probed Stream Depth	> 36 inches

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

## Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0	
	v	
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)	12	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	High	
Right Bank Substrate	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	

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	Strong
Depositional bars or benches	Strong
Recent alluvial deposits	Strong
Headcuts	Absent
Grade control	Absent

Natural valley	Weak
Second or greater order channel	Yes
Stream Geomorphology Total	21.5

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

Absent
Absent
Strong
Absent
Other
16.5
State Protected, Corps Jurisdictional
Haw River

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

W



Sketch of Stream





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

#### S-B18-59

Created	2018-05-30 09:41:30 EDT by Will Buetow
Updated	2018-06-13 12:46:16 EDT by Sam Edmonds
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**

Probed Stream Depth

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		

0 to 6 inches

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**

0		
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	

1 05	
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

, , ,	
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



Across Stream Photo 1

NW



Across stream photo direction 1

Ν



Across stream photo direction 2

Additional Stream Photos

S



stream braided 100 series flagging



Sketch of Stream

W B 18 60 B 18 59 (12) Flay 1 Stuff 101 11 12 162 endipe H H undergun plst\_ 103 start ales Ð 104 17 13 X plat 0 doje 5-C14-65 1-13 5-B18-59-2×1 1-21 W-C14-69 -1-11 6/12/18 TPT TN B18-51-EXT

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

#### S-B18-62

Created	2018-05-30 16:26:19 UTC by Will Buetow
Updated	2018-09-20 19:27:32 UTC by Susie Gifford (SBG)
Location	36.2073212, -79.5119161
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	62
Resource ID	S-B18-62
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Re	source Series Number

## Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	8
Calculated Stream Type	Ephemeral
Observed Use	Drainage

## Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	Ν

## **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)	6
Bankfull Width (ft)	3
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	Low
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	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	clay

# **Right Bank Riparian Buffer Condition**

0		
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	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	4

# 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	Moderate
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	3
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Two channels of one feature, ephemeral scour in uplamd
Notes Stream Overview Report Photos	I wo channels of one feature, ephemeral scour in uplamd

Upstream Stream Photo





Across Stream Photo 1

Е



Across stream photo direction 1

S



Additional Stream Photos

10 5618 62 sturt core Stu (du 4 clused Corrido Transmission flags 105 The to flag 4 101-105

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

## S-B18-63

Created	2018-05-30 14:24:36 EDT by Will Buetow
Updated	2018-06-12 11:38:21 EDT by Sam Edmonds
Location	36.2014314, -79.5053529
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	63
Resource ID	S-B18-63
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - F	Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	17.25
Calculated Stream Type	Ephemeral

## Stream Conditions

Stream Conditions	
Water Flow Velocity	Slow (< 1 cfs)
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)	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 0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping		
Left Erosion Potential	Low	
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	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Right Erosion Potential	Low	
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	Weak
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	Absent
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	4

# Stream Hydrology

Presence of baseflow	Weak
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	5.5

# 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	
Wetland plants in streambed	FACW	
Stream Biology Total	7.75	
Regulatory Status	State Protected, Corps Jurisdictional	
Notes	Weak broad intermittent channel. No vegetation in the channel. Feature drains outside of survey area	

## Stream Overview Report Photos

Upstream Stream Photo





Across Stream Photo 1



Across stream photo direction 1

Е



Across stream photo direction 2

Sketch of Stream

W



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

#### S-B18-65

Created	2018-05-30 20:05:53 UTC by Will Buetow
Updated	2018-09-20 19:27:47 UTC by Susie Gifford (SBG)
Location	36.2005342, -79.5013905
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	65
Resource ID	S-B18-65
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
Observed Use	Drainage

## **Stream Conditions**

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	5

## **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		
	2	

# OHWM Width (ft) 2 Average Water Width (ft) 2 Bank to Bank (ft) 5 Bankfull Width (ft) 2 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

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	0 0 0 0 0 0 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**

0		
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	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Weak
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	7.5

# 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

Sti cam 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
Notes	Goes through 36in culvert
Stream Overview Report Photos	

Upstream Stream Photo





Across Stream Photo 1

SE



Across stream photo direction 1

S

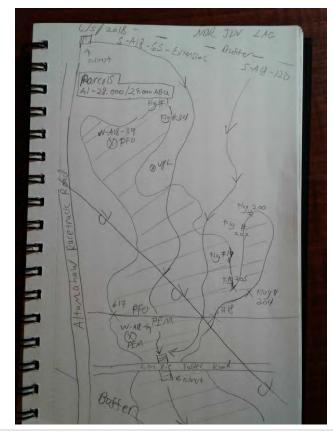


Across stream photo direction 2

Sketch of Stream

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

#### S-B18-66

Created	2018-05-31 09:46:57 EDT by Will Buetow
Updated	2018-06-11 10:44:47 EDT by Sam Edmonds
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 - F	Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	17.75
Calculated Stream Type	Ephemeral

# **ا**م:

Stream Conditions	
Water Flow Velocity	Dry or Minimal
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

## 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

0	
0	
0	
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0	
0	
0	
0	
	0 0 0 0 0 0 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**

0
0
0
0
0
0
0
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

0	
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



Across Stream Photo 1

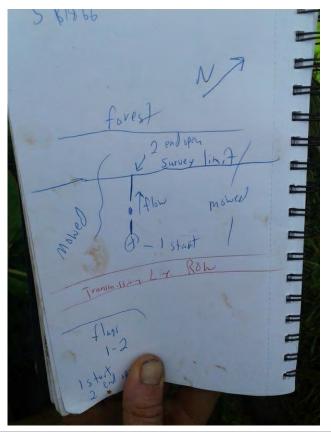
NW



Across stream photo direction 1

Ν

Sketch of Stream



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

#### S-B18-68

Created	2018-06-01 12:18:47 UTC by Will Buetow
Updated	2018-08-23 18:34:06 UTC by Will Buetow
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 Alteration**

charmer / accration			
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**

0 1		
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

Sti cam 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





Across Stream Photo 1

NE



Across stream photo direction 1

NW



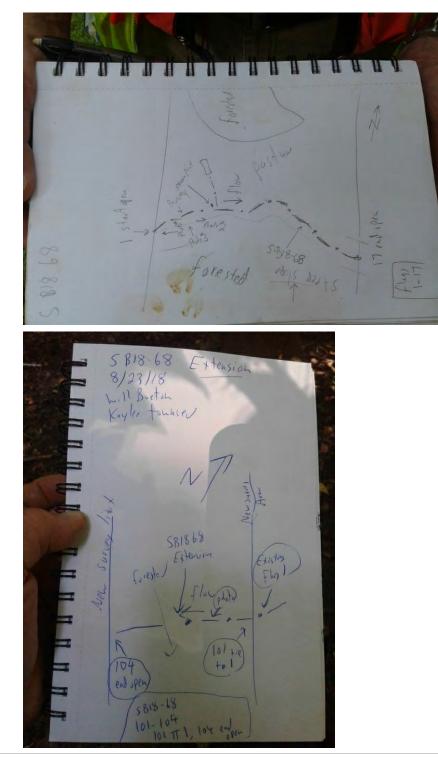
Across stream photo direction 2

Additional Stream Photos

NE



Sketch of Stream



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

## S-B18-69

Created	2018-06-01 13:02:55 UTC by Will Buetow
Updated	2018-09-20 19:28:00 UTC by Susie Gifford (SBG)
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 Alteration**

charmer, accration			
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**

<u> </u>		
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

Ser cann Bronogy	
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





Across Stream Photo 1

Across stream photo direction 1

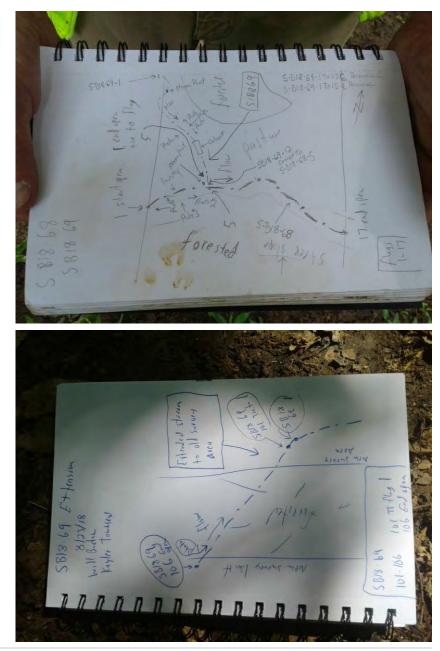
S



Across stream photo direction 2

Ν





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

### S-B18-70

Created	2018-06-01 09:41:43 EDT by Will Buetow
Updated	2018-06-11 10:46:15 EDT by Sam Edmonds
Location	36.322711, -79.5964685
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	70
Resource ID	S-B18-70
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	20
Calculated Stream Type	Intermittent

## Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	Ν
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	8 to 15% (5 to 9 deg) Moderately 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)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately 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

1 05	
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	Weak
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Weak
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	Absent
Organic debris lines or piles	Strong
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	Well developed ephemeral stream.
Straam Overview Pepert Photos	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

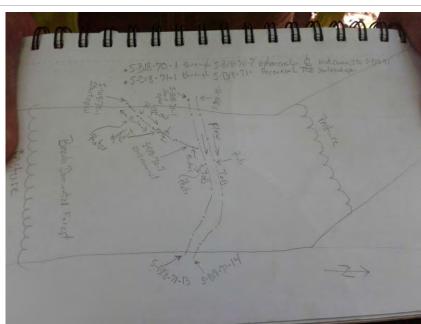
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Across stream photo direction 2

Sketch of Stream

Е



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	2018-08-23 18:34:49 UTC by Will Buetow
Location	36.3229528, -79.596341
Status	Field Crew Collected
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 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

0		
0		
0		
0		
0		
0		
0		
0		
	0 0 0 0 0 0 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**

0		
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

Strong
Absent
Weak
Absent
Moderate
Yes
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



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

Ν



Across stream photo direction 2

Additional Stream Photos

S





Downstream



EXT UP

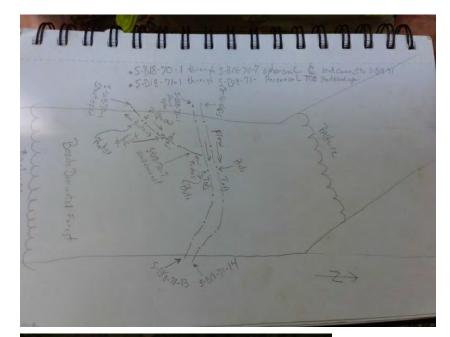


EXT DN



EXT Across

Sketch of Stream







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

### S-B18-72

Created	2018-06-01 13:20:25 EDT by Will Buetow
Updated	2018-06-11 10:47:28 EDT by Sam Edmonds
Location	36.4022481, -79.6443483
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	72
Resource ID	S-B18-72
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	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)	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	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	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

1 05	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Strong
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	13

# 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?	Νο
Stream Hydrology Total	1.5

# Stream Biology

0	
Fibrous roots in streambed	Moderate
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	3
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Ephemeral stream, well defined, few scour holes (4') deep.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Е



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

Ν



#### Across stream photo direction 2

Sketch of Stream

S



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

### S-B18-73

Created	2018-06-01 14:21:27 EDT by Will Buetow
Updated	2018-06-11 10:48:00 EDT by Sam Edmonds
Location	36.4013448, -79.6432616
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	73
Resource ID	S-B18-73
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	

### **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)	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	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)	2
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	Weak
Sinuosity of channel along thalweg	Weak
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	Moderate
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	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

0	
Fibrous roots in streambed	Moderate
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	3
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Е



Across stream photo direction 2

Sketch of Stream

W



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

#### S-B18-74

Created	2018-06-01 18:46:12 UTC by Will Buetow
Updated	2018-09-20 19:28:26 UTC by Susie Gifford (SBG)
Location	36.4006748, -79.6427513
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	74
Resource ID	S-B18-74
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	41.75
Calculated Stream Type	Perennial
Wildlife Observed	frogs, crawfish, macroinvertebrates

#### 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)	4
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	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	clay

### Left Bank Riparian Buffer Condition

0	
0	
0	
0	
0	
0	
0	
0	
	0 0 0 0 0 0 0

# **Right Bank**

Right Bank Height (feet)	4	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	High	
Right Bank Substrate	clay	

# **Right Bank Riparian Buffer Condition**

0		
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

1 07	
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	Moderate
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	19.5

# Stream Hydrology

Presence of baseflow	Moderate
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	8

## Stream Biology

Sti cum 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	FACW	
Stream Biology Total	14.25	
Regulatory Status	State Protected, Corps Jurisdictional	
Notes	Stream flows from pond outlet. Extension continues downstream of confluence. Flags 1-8 and 101-105	

#### Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

SW



Across stream photo direction 2

Additional Stream Photos

NE





Upstream



Downstream



Across Stream



Sketch of Stream

4 107 END 281 -813-74 OF WET 100 (R) Fro UP X Por PEM 7 -7 7 = = 188 1 1 Continuo -S14/458/JCB 095.000 / S-BR-74 & W-BY8-78 6/2/18 NC-RO-N-Br8-78 5-B18-74 aut r r r r r r r FOREST Connect 14-73-44 5-74-119

6.20.18 LAGISLK/JJB NC-RO-092.000 S-B18-74 ext S-A18-172 5-018-74 ext Ka seit 800 to 101 -418-172 TN

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

#### S-B18-75

Created	2018-06-01 15:16:17 EDT by Will Buetow
Updated	2018-06-11 10:48:59 EDT by Sam Edmonds
Location	36.4008457, -79.6422968
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
	Simon King
GPS Surveyor	
GPS ID	NA
Resource Series Number	75
Resource ID	S-B18-75
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Re	esource Series Number

## Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	10.5
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)	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	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)	2
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	Weak
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Absent
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	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

Strong Moderate Absent Absent Absent Absent
Absent Absent Absent Absent
Absent Absent Absent
Absent Absent
Absent
Abcont
Absent
Absent
Other
1
State Protected, Corps Jurisdictional
Ephemeral stream starts in transmission line right of way, trains into s-b18-74.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Ν



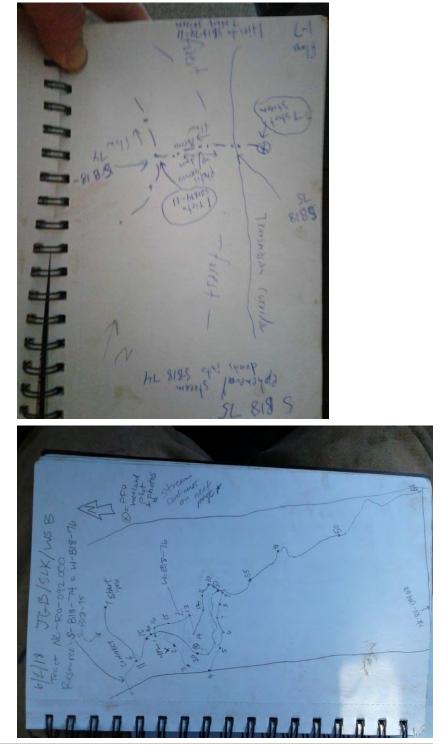
Across stream photo direction 2

Additional Stream Photos

S



Sketch of Stream



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

### WB-B18-77

Created	2018-06-02 10:18:59 EDT by Will Buetow
Updated	2018-06-07 10:52:23 EDT by Sam Edmonds
Location	36.3976306, -79.6403065
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/02
Date2	180602

### 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	77	
Resource ID	WB-B18-77	
Do you need to override the resource id?	Yes	
esource ID Override WB-B18-77		
Resource ID = Resource Type - Scientist Initials	- Resource Series Number	

### Stream Inventory

Stream inventory		
Stream / Waterbody Type	Pond	
Calculated Stream Score	0	
Calculated Stream Type	Undetermined	
Wildlife Observed	Frogs	
Stream Conditions		
Water Flow Velocity	Slow (< 1 cfs)	
Direction of Flow	Ν	
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)	75	
Average Water Width (ft)	60	

## 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

	NL.	
Second or greater order channel	No	
Stream Geomorphology Total	0	
Stream Hydrology		
Stream Hydrology Total	0	
Stream Biology		
Stream Biology Total	0	
Regulatory Status	State Protected, Corps Jurisdictional	
Notes	Old pond, overgrown with Lily pads. Approximately 60' x 75' in size, not completel survey area. S-B18-74 flows through this waterbody.	
Stream Overview Report Photos		



Upstream photo direction

Downstream Stream Photo

SE



Downstream photo direction

NE



Across stream photo direction 1

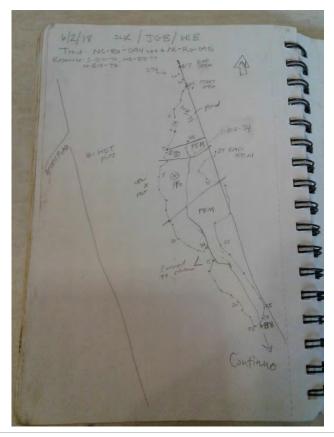
Across Stream Photo 2

Е



Across stream photo direction 2

S



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

### S-B18-79

Created	2018-06-02 14:13:14 EDT by Will Buetow
	2010-00-02 14.15.14 EDT by Will Buckow
Updated	2018-06-11 10:49:37 EDT by Sam Edmonds
Location	36.3942017, -79.6381826
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Project Date	MVP Southgate 18/06/02

### Resource Crew Info

Field Crew	Jim Bolduc, Simon King, Will Buetow	
	jin bolade, sinon king, win baccow	
Lead Scientist's Initials	B18	
GPS Surveyor	Simon King	
GPS ID	NA	
Resource Series Number	79	
Resource ID	S-B18-79	
Do you need to override the resource id?	No	
Resource ID = Resource Type - Scientist Initials - Res	ource Series Number	

# Stream Inventory

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

## Stream Conditions

Stream Conditions	
Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	Ν
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)	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)	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

Moderate
Absent
Weak
Strong
Absent
Weak
Weak
Strong
Absent
Weak
No
11.5

# Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Weak
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	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	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	Small intermittent channel, starts with large head cut at flag 3, where water seeps from the ground. Drains into SB18-74.

### Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

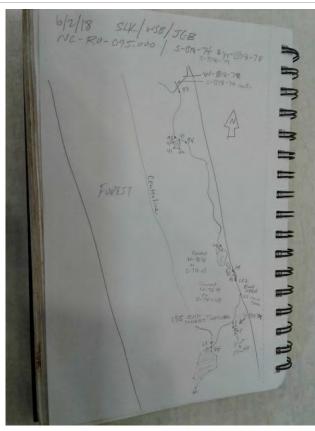
Е



Across stream photo direction 2

Sketch of Stream

W



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

### S-B18-80

Created	2018-06-04 10:25:05 EDT by Will Buetow
Updated	2018-06-11 10:50:10 EDT by Sam Edmonds
Location	36.122658, -79.373294
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/04
Date2	180604

### 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	80
Resource ID	S-B18-80
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	32
Calculated Stream Type	Perennial
Wildlife Observed	Frogs

### Stream Conditions

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

## **Channel Alteration**

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

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

### 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	clay

## Left Bank Riparian Buffer Condition

0	
0	
0	
0	
0	
0	
0	
0	
	0 0 0 0 0 0 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	clay

# **Right Bank Riparian Buffer Condition**

0		
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	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Strong
Headcuts	Moderate
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	17

# 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	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	6.5
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

W



Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

S

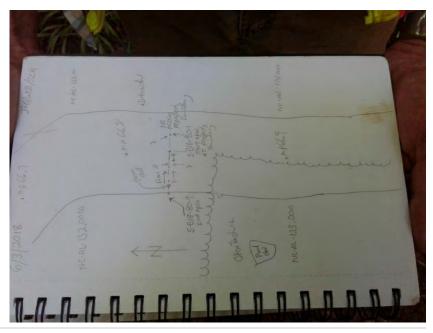


Across stream photo direction 2

Additional Stream Photos

Ν





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

#### S-B18-88

Created	2018-06-05 14:50:27 EDT by Will Buetow
Updated	2018-06-11 10:56:44 EDT by Sam Edmonds
Location	36.0936591, -79.3690225
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/05
Date2	180605

### 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	88
Resource ID	S-B18-88
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	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)	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	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	8 to 15% (5 to 9 deg) Moderately Sloping	
Right Erosion Potential	Low	
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

1 00	
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	Absent
Headcuts	Weak
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	6

# 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	Weak	
Rooted upland plants in streambed	Moderate	
Macrobenthos	Absent	
Aquatic mullusks	Absent	
Fish	Weak	
Crayfish	Absent	
Amphibians	Absent	
Algae	Absent	
Wetland plants in streambed	Other	
Stream Biology Total	3.5	
Regulatory Status	State Protected, Corps Jurisdictional	
Notes	Small ephemeral channel drains to the Haw River, which is offsite. Stream originates from a headset at the edge of a field.	

### Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

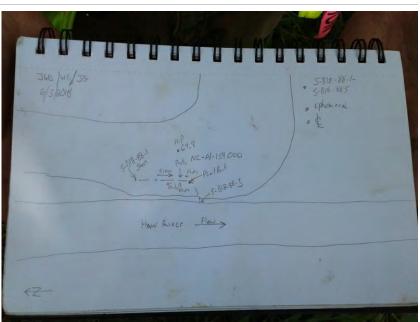
Е



Across stream photo direction 2

Sketch of Stream

W



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

### S-B18-89

Created	2018-06-06 13:13:47 UTC by Will Buetow	
	2018-00-00 15.15.47 OTC by Will Buelow	
Updated	2018-09-06 15:31:04 UTC by Joseph Roy	
Location	36.3651551, -79.6149117	
Status	Finalized & Approved	
Client	NextEra	
	INEXLLIA	
Project	MVP Southgate	
Project	MVP Southgate	

### 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	89	
Resource ID	S-B18-89	
Do you need to override the resource id?	No	
Resource ID = Resource Type - Scientist Initials - R	esource 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	Ν	
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	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)	2
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

Moderate
Weak
Moderate
Absent
Absent
Weak
Absent
Moderate
Moderate
Strong
No
10.5

# Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	1

# Stream Biology

Fibrous roots in streambed	Moderate	
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	3	
Regulatory Status	State Protected, Corps Jurisdictional	
Notes	Near the start of an ephemeral stream that continues on a red parcel. This is only smal part of stream. Start point is 70 to 80 feet to south. Additional stream photos for extension P1 up, P2 dn, P3 across: flags 1-3 end	

### Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

W



Across stream photo direction 2

Additional Stream Photos

Е







EXT 100s UP



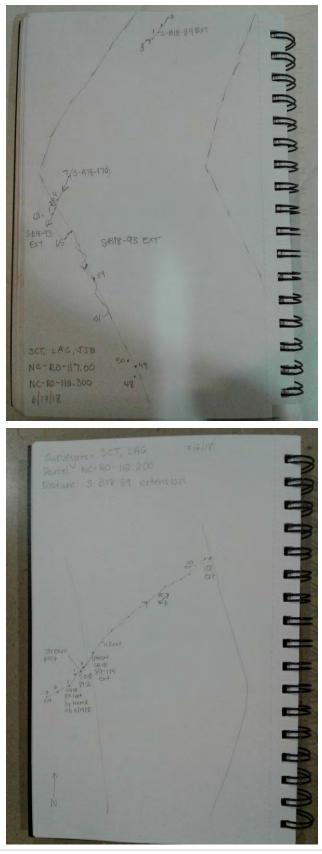
EXT 100s across NW



EXT 100s DN



Sketch of Stream



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

#### S-B18-90a

Created	2018-06-06 14:39:30 UTC by Will Buetow
Updated	2018-09-13 15:58:05 UTC by Phil Jacques
Location	36.3607902, -79.6134581
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

## 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	90
Resource ID	S-B18-90a
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-90a
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	34
Calculated Stream Type	Perennial
Wildlife Observed	Frogs

### Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE

#### **Channel Alteration**

charmer / accration			
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)	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	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	8 to 15% (5 to 9 deg) Moderately 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	Weak
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Strong
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	21.5

# Stream Hydrology

, ,	
Presence of baseflow	Absent
Iron oxidizing bacteria	Moderate
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

Sti cum 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	Intermittent stream located below an ephemeral part of the same stream. Strong bed and bank.

#### Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

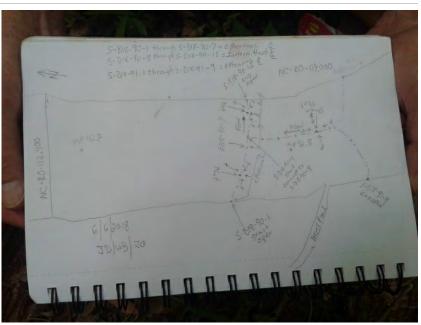
NE



Across stream photo direction 2

Sketch of Stream

SW



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

#### S-B18-90b

Created	2018-06-06 14:20:57 UTC by Will Buetow
Updated	2018-09-13 15:58:55 UTC by Phil Jacques
Location	36.3611337, -79.6140512
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

#### 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	90
Resource ID	S-B18-90b
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-90b
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	19
Calculated Stream Type	Intermittent

### Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE

### **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			
	1		

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	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	8 to 15% (5 to 9 deg) Moderately Sloping	
Right Erosion Potential	Moderate	
Right Bank Substrate	clay	

# **Right Bank Riparian Buffer Condition**

0		
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	Absent
Particle size of stream substrate	Moderate
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Strong
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	16

### 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	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	2
Notes	Headwater ephemeral stream, near the start of the stream.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

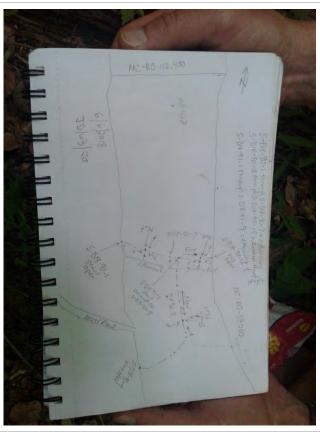
Е



Across stream photo direction 2

Sketch of Stream

W



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

#### S-B18-91

Created	2018-06-06 10:54:37 EDT by Will Buetow
Updated	2018-06-11 10:58:17 EDT by Sam Edmonds
Location	36.3605719, -79.6139901
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

#### Resource Crew Info

Jim Bolduc, Will Burrow, Jake Brillo
B18
Jake Brillo
NA
91
S-B18-91
No
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	Ν
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)	1	
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping	
Left Erosion Potential	Low	
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	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
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	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	Moderate
Natural valley	Moderate
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	Moderate
Rooted upland plants in streambed	Moderate
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	2
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Headwater, ephemeral stream. Bed, bank and sediment sorting.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

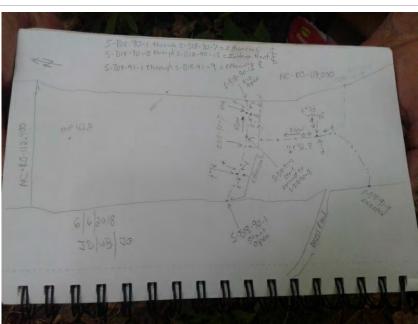
W



Across stream photo direction 2

Sketch of Stream

Е



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

#### S-B18-92

Created	2018-06-06 17:14:16 UTC by Will Buetow
Updated	2018-09-11 15:54:58 UTC by Maggie Molnar
Location	36.3548702, -79.6137181
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

#### 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	92
Resource ID	S-B18-92
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - R	esource Series Number

### Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	44.5
Wildlife Observed	Fish

### **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)	5
Average Water Width (ft)	5
Bank to Bank (ft)	6
Bankfull Width (ft)	6
Probed Stream Depth	6 to 12 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)	2
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

1 05	
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	Strong
Recent alluvial deposits	Strong
Headcuts	Moderate
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	26

# 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	Weak
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Strong
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	10
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Nice perennial stream, lots of fish and crawfish. Very well defined. Narrow channel in the power line right of way and gets wider in the woods.

#### Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

Ν



Across stream photo direction 2

Additional Stream Photos

S



east ext.



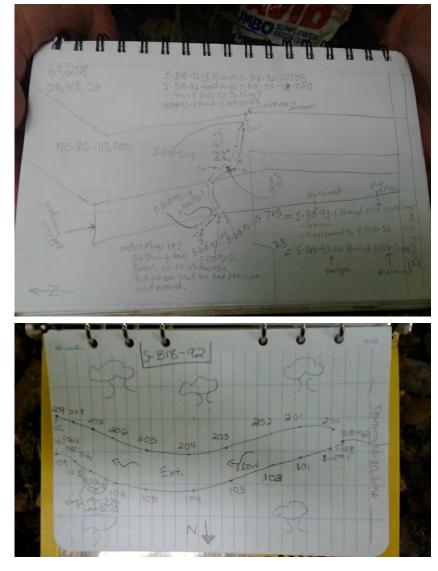
west ext.



north ext.



south ext.



extension sketch

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

#### S-B18-93

Created	2018-06-06 13:53:28 EDT by Will Buetow
Updated	2018-06-20 09:46:07 EDT by Sam Edmonds
Location	36.354768, -79.6140542
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

#### **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	93
Resource ID	S-B18-93
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - F	Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial	
Calculated Stream Score	41	
Calculated Stream Type	Perennial	

Stream Conditions	
Water Flow Velocity	Moderate (1 - 5 cfs)
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)	5
Average Water Width (ft)	5
Bank to Bank (ft)	6
Bankfull Width (ft)	6

0 to 6 inches

#### Left Bank

Probed Stream Depth

Left Bank Height (feet)	2
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)	2
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	Strong
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Strong
Recent alluvial deposits	Strong
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	24.5

# Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Weak
Leaf litter	Moderate
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	Weak	
Aquatic mullusks	Absent	
Fish	Moderate	
Crayfish	Weak	
Amphibians	Absent	
Algae	Absent	
Wetland plants in streambed	Other	
Stream Biology Total	8.5	
Regulatory Status	State Protected, Corps Jurisdictional	
Notes	Nice perennial stream, flows into s-b18-92. Well defined bed and bank. Additional stream photos for extension P1 up, P2 dn, P3 across. Upper stream flags 51-54 additional photos P4 up, P5 dn, P6 Across	

#### Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Е



Across stream photo direction 2

Additional Stream Photos

W



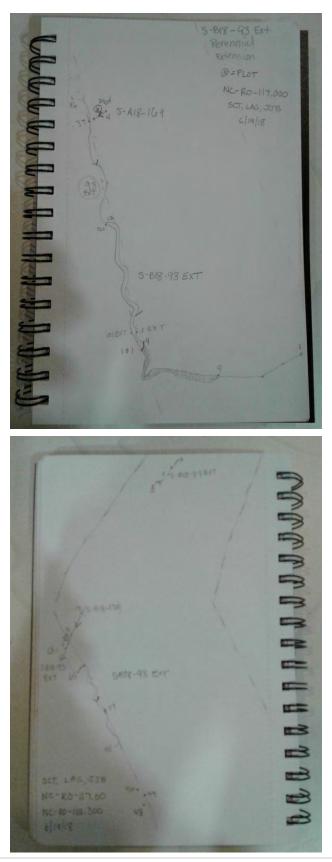






Scholls Sch

Sketch of Stream



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

#### S-B18-94

Created	2018-06-07 09:04:28 EDT by Will Buetow
Updated	2018-06-11 11:00:00 EDT by Sam Edmonds
Location	36.2416368, -79.5315985
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/07
Date2	180607

### 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	94
Resource ID	S-B18-94
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
Calculated Stream Type	Perennial
Wildlife Observed	Frogs

#### Stream Conditions

Water Flow Velocity	Slow (< 1 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)	4
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	> 35% (> 20 deg) Very Steep
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)	3
Right Bank Slope	> 35% (> 20 deg) Very Steep
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	Weak
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	Weak
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	20

# Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak
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

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	Perennial stream makes up property boundary between two parcels. We only have access to one parcel. Water is turbid.

#### Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

Ν



Across stream photo direction 2

Additional Stream Photos

Е



Sketch of Stream

5818. 191,1-6 Ŧ F

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

Created2018-06-07 12:05:52 EDT by Will BuetowUpdated2018-06-25 10:18:34 EDT by Sam EdmondsLocation36.4829388, -79.6866229StatusInilized & ApprovedClientNextEraProjectMVP SouthgateDate18/06/07Date2180607			
Location36.4829388, -79.6866229StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/06/07	Created	2018-06-07 12:05:52 EDT by Will Buetow	
StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/06/07	Updated	2018-06-25 10:18:34 EDT by Sam Edmonds	
Client     NextEra       Project     MVP Southgate       Date     18/06/07	Location	36.4829388, -79.6866229	
ProjectMVP SouthgateDate18/06/07	Status	Finalized & Approved	
Date 18/06/07	Client	NextEra	
	Project	MVP Southgate	
Date2 180607	Date	18/06/07	
	Date2	180607	

#### 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	95
Resource ID	S-B18-95
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

2	
Stream / Waterbody Type	Perennial
Calculated Stream Score	43
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	Drainage

### Stream Conditions

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

#### **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)	25	
Average Water Width (ft)	20	
Bank to Bank (ft)	30	
Bankfull Width (ft)	30	
Probed Stream Depth	6 to 12 inches	

#### Left Bank

Left Bank Height (feet)	4
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Bedrock, 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)	4
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Low
Right Bank Substrate	Bedrock, Cobble-Gravel, Silt-Mud

### **Right Bank Riparian Buffer Condition**

0	
0	
0	
0	
0	
0	
0	
0	
	0 0 0 0 0 0 0 0 0

# Stream Geomorphology

1 07	
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	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Moderate
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	23.5

# Stream Hydrology

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

### Stream Biology

Absent
Absent
Strong
Absent
Weak
Strong
Absent
Absent
Other
11
State Protected, Corps Jurisdictional
Broad stream, strongly defined bed and bank, numerous riffle-pool sequences in the stream.

#### Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

Е

Across Stream Photo 2

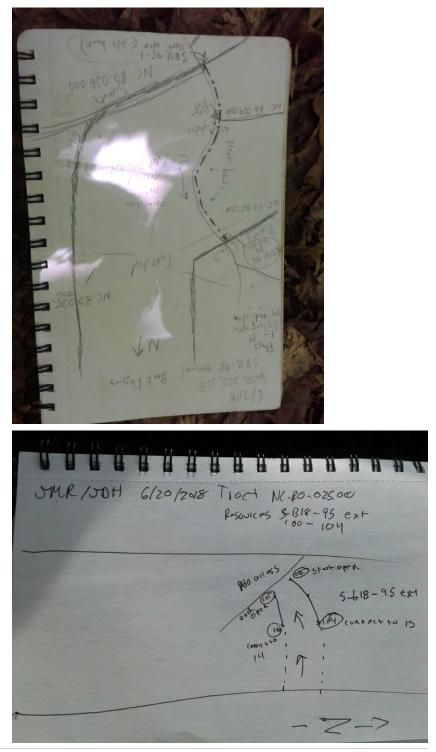


Across stream photo direction 2

W



Sketch of Stream



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

Created	2018-06-07 13:29:19 EDT by Will Buetow
Updated	2018-06-25 10:53:42 EDT by Sam Edmonds
Location	36.4809277, -79.6906671
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/07
Date2	180607

#### 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	96
Resource ID	S-B18-96
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	Ν
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	> 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)	2
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	Absent
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	Strong
Second or greater order channel	No
Stream Geomorphology Total	9.5

# 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?	No
Stream Hydrology Total	1.5

# Stream Biology

Fibrous roots in streambed	Moderate
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	3
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Ephemeral stream in valley. Well defined bed and bank. Steeper Channel gradient. Stream extends beyond survey limits. Additional flags for extension 1-7.

#### Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

Е



Across stream photo direction 2

Additional Stream Photos

W



Upstream

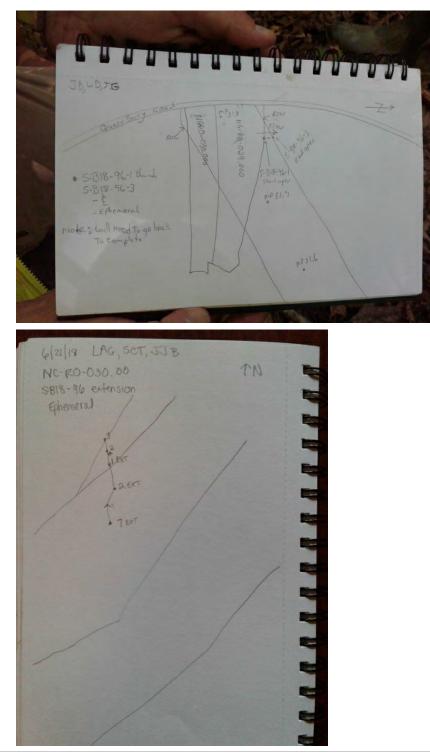


Downstream



Across

Sketch of Stream



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

Created2018-06-08 15:47:09 UTC by Will BuetowUpdated2018-09-20 19:29:43 UTC by Susie Gifford (SBG)Location36.5365369, -79.637551StatusInalized & ApprovedClientNextEraProjectMVP SouthgateDate//Date2180611		
Location       36.5365369, -79.637551         Status       Finalized & Approved         Client       NextEra         Project       MVP Southgate         Date       //	Created	2018-06-08 15:47:09 UTC by Will Buetow
Status     Finalized & Approved       Client     NextEra       Project     MVP Southgate       Date     //	Updated	2018-09-20 19:29:43 UTC by Susie Gifford (SBG)
Client     NextEra       Project     MVP Southgate       Date     //	Location	36.5365369, -79.637551
Project     MVP Southgate       Date     //	Status	Finalized & Approved
Date //	Client	NextEra
	Project	MVP Southgate
Date2 180611	Date	1/
	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	99
Resource ID	S-B18-99
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - R	esource Series Number

### Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	22
Calculated Stream Type	Intermittent

#### **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)	1		
Average Water Width (ft)	1		
Bank to Bank (ft)	2		
Bankfull Width (ft)	2		

0 to 6 inches

#### Left Bank

Probed Stream Depth

Left Bank Height (feet)	1
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Sand

# 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	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Moderate
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

Weak
Weak
Weak
Strong
Weak
Weak
Moderate
Weak
Weak
Moderate
No
12.5

# 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	Weak
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	5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Intermittent stream within WETLAND W-B18-98. Weak bed and bank.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

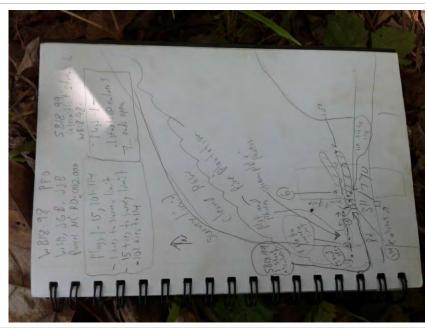
SE



Across stream photo direction 2

Sketch of Stream

NW



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

Created	2018-06-08 15:36:17 EDT by Will Buetow
Updated	2018-06-11 10:14:39 EDT by Sam Edmonds
Location	36.4856341, -79.685156
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	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

0	
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 photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

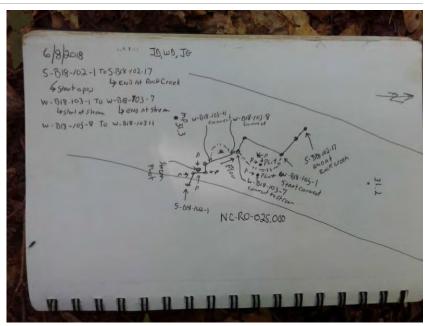
NE



Across stream photo direction 2

Sketch of Stream

SW



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

Created	2018-06-09 09:28:40 EDT by Will Buetow
Updated	2018-06-11 10:17:20 EDT by Sam Edmonds
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 - R	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**

Bankfull Width (ft) Probed Stream Depth

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	

5

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

-

# **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

Strong
Absent
Absent
Absent
Absent
Yes
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

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

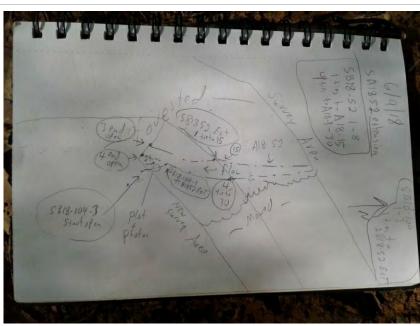
S



Across stream photo direction 2

Sketch of Stream

Ν



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

Created	2018-06-09 11:16:38 EDT by Will Buetow
Updated	2018-06-11 10:18:24 EDT by Sam Edmonds
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 - R	esource 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 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	

#### 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**

0		
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

1 05	
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

Moderate
Absent
Moderate
Absent
Moderate
Yes
6.5

### Stream Biology

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



Downstream photo direction

Across Stream Photo 1



Across stream photo direction 1

S



Across stream photo direction 2

Sketch of Stream



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

Created	2018-06-11 12:44:16 EDT by Will Buetow
Updated	2018-06-12 11:34:30 EDT by Sam Edmonds
Location	36.4947989, -79.678245
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/11
Date2	180611

### Resource Crew Info

Field Crew	Jim Bolduc, Simon King, Doreen Donvan
Lead Scientist's Initials	JGB
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	106
Resource ID	S-B18-106
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-106
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	20
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	NE
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)	4
Average Water Width (ft)	3

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

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

# Left Bank Riparian Buffer Condition

0	
1.2	
0	
0	
0	
0	
0	
1.2	
	1.2         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0

# **Right Bank**

Right Bank Height (feet)	1	
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	

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

Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	7.5

Presence of baseflow	Moderate
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	7

# Stream Biology

Weak
Absent
Weak
Absent
Other
5.5
State Protected, Corps Jurisdictional
Old ditched stream



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

Е



Across stream photo direction 2

Sketch of Stream

W

a a			40		
	- Plan out	- 5-B18-106-104-104 5-018-106-45 - Perennul - 4 - 5-B18-107-1 through 5-D18-107-9	G/11/2018 JB, SK, DD		いたの
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Environmental Field Coordinator: Karla Fortier GIS Contact: Dan Sweeney Project Manager: Lisa Walker

#### S-B18-108

Created	2018-06-11 16:23:09 EDT by Will Buetow
Updated	2018-06-12 11:36:03 EDT by Sam Edmonds
Location	36.3869421, -79.6357517
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/11
Date2	180611

# Resource Crew Info

Field Crew	Jim Bolduc, Simon King
Lead Scientist's Initials	Jgb
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	108
Resource ID	S-B18-108
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-108
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	36
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	forested stream

# 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)	8
Average Water Width (ft)	5

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

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, Boulder/Slabs, Rubble, 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	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Bedrock, Boulder/Slabs, Silt-Mud

# **Right Bank Riparian Buffer Condition**

0 1		
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	

i	
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	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate

Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	18

Moderate
Absent
Absent
Absent
Weak
Yes
7

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Weak
Fish	Moderate
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	11
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Nice stream in forested canopy
Stream Overview Report Photos	



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

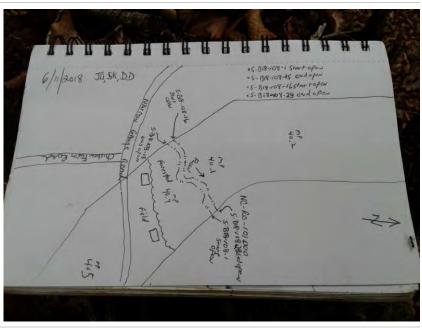
Ν



Across stream photo direction 2

Sketch of Stream

SW



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

#### S-B18-109

Created	2018-06-12 09:42:08 EDT by Will Buetow
Updated	2018-06-13 11:18:03 EDT by Sam Edmonds
Location	36.3869066, -79.6362679
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

#### Resource Crew Info

Field Crew	Jim Bolduc, Joe Roy
Lead Scientist's Initials	JGB
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	109
Resource ID	S-B18-109
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-109
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Ephemeral
12.75
Ephemeral
none observed
Drainage

# Stream Conditions

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

# **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)	2

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

Left Bank Height (feet)	2	
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping	
Left Erosion Potential	Low	
Left Bank Substrate	Mud or muck	

# 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	Moderate
Right Bank Substrate	Mud or muck

# **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	

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

Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	3

, .,	
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Strong
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	3

# 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	FACW
Stream Biology Total	6.75
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Ephemeral drainage from side slopes seep

Stream Overview Report Photos





Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

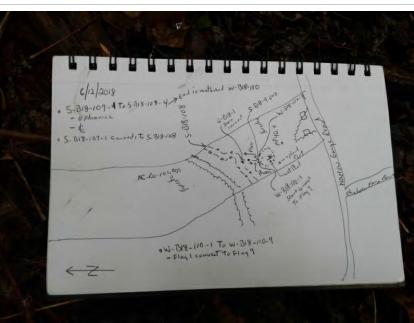
Е



Across stream photo direction 2

Sketch of Stream

W



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

#### S-B18-111

Created2018-06-12 13:29:35 EDUpdated2018-06-13 11:18:57 EDLocation36.3872799, -79.636957StatusFinalized & ApproveClientNextEraProjectMVP SouthgateDate18/06/12	
Location36.3872799, -79.636957StatusFinalized & ApproveClientNextEraProjectMVP SouthgateDate18/06/12	T by Will Buetow
StatusFinalized & ApproveClientNextEraProjectMVP SouthgateDate18/06/12	T by Sam Edmonds
Client     NextEra       Project     MVP Southgate       Date     18/06/12	1
ProjectMVP SouthgateDate18/06/12	d
Date 18/06/12	
Date2 180612	

#### Resource Crew Info

Field Crew	Jim Bolduc, Joe Roy
Lead Scientist's Initials	JGB
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	111
Resource ID	S-B18-111
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-111
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream / Waterbody Type	Intermittent	
Calculated Stream Score	23.75	
Calculated Stream Type	Intermittent	
Wildlife Observed	Frogs	
Observed Use	Drainage	

#### 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	0.9	
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)	5
Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

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]	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)	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]	0.6	
Low poor (0.5) [Right]	0	
Right bank total	0.6	

1 07	
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	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate

Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	10

Moderate
Absent
Weak
Weak
Absent
Yes
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	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	7.25
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Stream begins from hole in the ground

Stream Overview Report Photos





Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

SW



Across stream photo direction 2

Sketch of Stream

NE



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

#### S-B18-113

Created	2018-06-13 13:53:22 UTC by Will Buetow
Updated	2018-09-20 19:21:07 UTC by Susie Gifford (SBG)
Location	36.1461019, -79.4178398
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

#### Resource Crew Info

Field Crew	Jim Bolduc, Joe Roy
Lead Scientist's Initials	JGB
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	113
Resource ID	S-B18-113
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-113
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

5	
Stream / Waterbody Type	Intermittent
Calculated Stream Score	21.5
Calculated Stream Type	Intermittent
Wildlife Observed	none observed
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Dry or Minimal
Direction of Flow	E
Channel condition	Poor
In stream habitat	Poor

#### **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)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

Left Bank Height (feet)	2	
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]	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)	2
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]	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	

1 07	
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	Moderate
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	7.5

Moderate
Weak
Weak
Weak
Weak
Yes
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	Other
Stream Biology Total	6
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	





Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

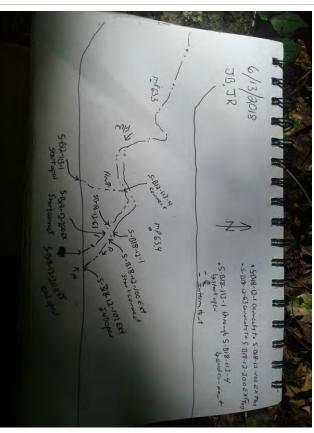
Ν



Across stream photo direction 2

Sketch of Stream

S



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

#### S-B18-116

Created	2018-06-13 15:27:49 EDT by Will Buetow
Updated	2018-06-14 13:59:19 EDT by Sam Edmonds
Location	36.3771774, -79.6254157
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/13
Date	10/0/15

#### Resource Crew Info

Field Crew	Jim Bolduc, Joe Roy
Lead Scientist's Initials	JGB
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	116
Resource ID	S-B18-116
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-116
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream inventory	
Stream / Waterbody Type	Intermittent
Calculated Stream Score	18.5
Calculated Stream Type	Ephemeral
Wildlife Observed	none observed
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Dry or Minimal
Direction of Flow	NE
Channel condition	Severe
In stream habitat	Poor
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)	2

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

Left Bank Height (feet)	5	
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]	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	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	

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	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

, ,,	
Presence of baseflow	Moderate
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	6.5

# Stream Biology

Absent
Absent
Other
6
State Protected, Corps Jurisdictional
Drainage ditch





Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

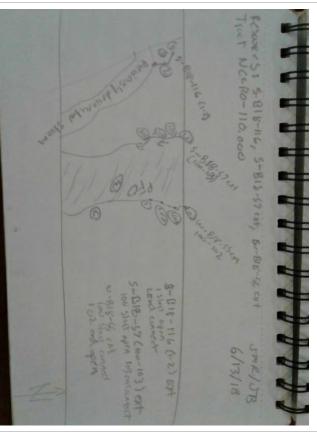
NW



Across stream photo direction 2

Sketch of Stream

SE



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	2018-08-29 12:45:11 UTC by Will Buetow
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	5
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 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	

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

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

Absent
Absent
Moderate
Weak
Strong
Weak
Moderate
Absent
Other
12
State Protected, Corps Jurisdictional
Clear flow



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

W



Across stream photo direction 2

Additional Stream Photos

Е



Sketch of Stream

6/14/2018 JEB, JB 5- B18-117-1 mP37.7 Flor NC-RO-078.000 rp 37.8 Red track · mp 37.9 · 5-818-117-1 start open to 13 · 5-818-117-18 adopen To 3 +5-318-117-19 start open TOB +5-318-117-36 ENdopen TOB SB18-117 EXTENSION 8/29/18 will Breton RO. 079.000 Kayler Towasen 078.00 -079.00-5818-117 80.040 entop

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

### S-C18-71

Created	2018-06-13 14:07:11 EDT by Jeremy Hummel [Sabal]
Updated	2018-06-14 14:06:55 EDT by Sam Edmonds
Location	36.2695962, -79.559506
Status	Finalized & Approved
Client	NextEra
	WEATER
Project	MVP Southgate

#### Resource Crew Info

Field Crew	Will Buetow
Lead Scientist's Initials	B18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	71
Resource ID	S-C18-71
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-71
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream inventory	
Stream / Waterbody Type	Perennial
Calculated Stream Score	14.25
Calculated Stream Type	Ephemeral
Wildlife Observed	Frogs
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SE
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
	0.7

# 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)	1	
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately 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]	0.6	
Low poor (0.5) [Left]	0	
Left bank total	0.6	

# **Right Bank**

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
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	
Low marginal (0.75) [Right]	0	
High poor (0.6) [Right]	0.6	
Low poor (0.5) [Right]	0	
Right bank total	0.6	

1 07	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Absent
In-channel structure	Absent
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	Absent
Second or greater order channel	No
Stream Geomorphology Total	2.5

# Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	4

## Stream Biology

Ser carri Brorogy	
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Moderate
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	7.75
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Farm drainage, cattle
Stream Overview Report Photos	



Upstream photo direction

Downstream Stream Photo

NW



Downstream photo direction

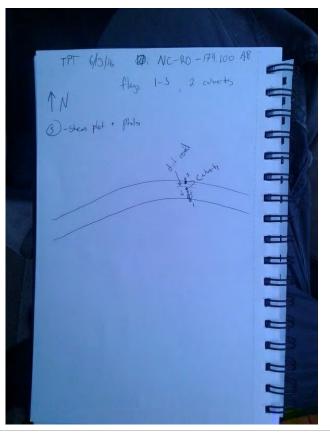


Across Stream Photo 2

SW



Across stream photo direction 2



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

Created	2018-05-30 16:58:16 UTC by Don Lockwood
Updated	2018-09-20 19:32:21 UTC by Susie Gifford (SBG)
Location	36.1794446, -79.4949279
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/30
Date2	180530

#### Resource Crew Info

Field Crew	Donald J Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	1
Resource ID	S-C18-1
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - I	Resource Series Number

#### Stream Inventory

,		
Stream / Waterbody Type	Perennial	
Calculated Stream Score	40.25	
Calculated Stream Type	Perennial	
Wildlife Observed	Frogs	
Observed Use	Drainage	

#### Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	S
Channel condition	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

OHWM Width (ft)	14	
Average Water Width (ft)	8	
Bank to Bank (ft)	16	
Bankfull Width (ft)	14	
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	Moderate
Left Bank Substrate	Silt-Mud, 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)	5
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

# **Right Bank Riparian Buffer Condition**

0 1		
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	

i	
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	Strong
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	19.5

# Stream Hydrology

, , , , , , , , , , , , , , , , , , , ,	
Presence of baseflow	Moderate
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	8.5

## Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Moderate
Aquatic mullusks	Moderate
Fish	Moderate
Crayfish	Moderate
Amphibians	Moderate
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	12.25
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

SW



Downstream photo direction

Across Stream Photo 1

NE



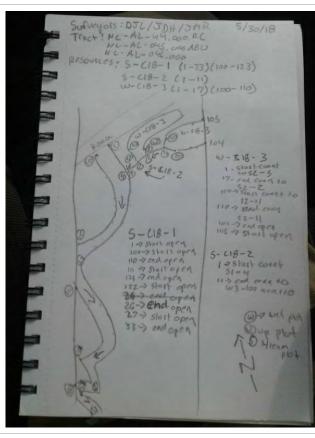
Across stream photo direction 1

W



Sketch of Stream

W



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

Created	2018-05-30 11:18:44 EDT by Don Lockwood
Updated	2018-06-07 09:04:39 EDT by Sam Edmonds
Location	36.1808241, -79.494298
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/30
Date2	180530

#### Resource Crew Info

Field Crew	Donald J Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	2
Resource ID	S-C18-2
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-2
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	19.75
Calculated Stream Type	Intermittent
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	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		

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	> 35% (> 20 deg) Very Steep	
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	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	0	

# **Right Bank**

0	
Right Bank Height (feet)	1
Right Bank Slope	> 35% (> 20 deg) Very Steep
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	
High poor (0.6) [Right]	0	
Low poor (0.5) [Right]	0	
Right bank total	0	

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	Weak
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

0	
0	

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?	Yes
Stream Hydrology Total	4

# Stream Biology

0,	
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
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



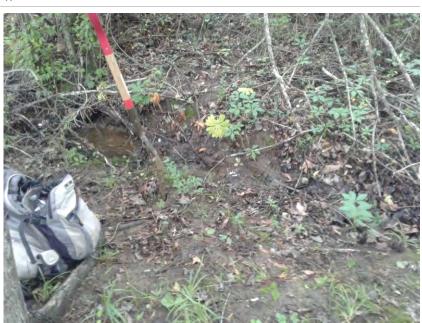
Upstream photo direction



Downstream photo direction

Across Stream Photo 1

W



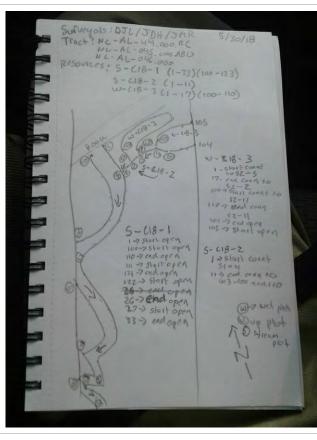
Across stream photo direction 1

S



#### Sketch of Stream

Ν



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

Created	2018-05-30 15:11:37 EDT by Don Lockwood
Updated	2018-06-06 14:24:18 EDT by Sam Edmonds
Location	36.1785084, -79.4943439
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/30
Date2	180530

## Resource Crew Info

Donald J Lockwood
DJL
Joe Roy
4
S-C18-4
Yes
S-C18-4
esource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	15.75
Calculated Stream Type	Ephemeral

## 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	

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)	2	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	Low	
Left Bank Substrate	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)	1	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Low	
Right Bank Substrate	Organic	

# **Right Bank Riparian Buffer Condition**

0 1		
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	

1 05	
Continuity of channel bed and bank	Weak
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	Weak
Grade control	Moderate
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	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?	Yes
Stream Hydrology Total	6

## Stream Biology

5	
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
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

Е

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

W



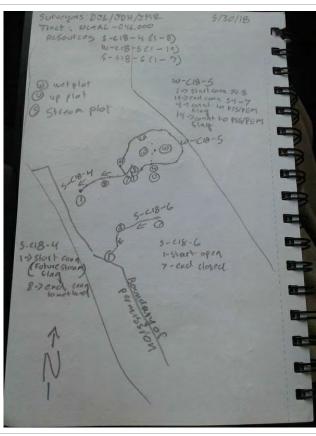
Across stream photo direction 1

S



Sketch of Stream

Ν



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

Created	2018-05-30 15:50:32 EDT by Don Lockwood
Updated	2018-06-06 14:27:49 EDT by Sam Edmonds
Location	36.1782892, -79.494379
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/30
Date2	180530

## Resource Crew Info

Donald J Lockwood	
DJL	
Joe Roy	
6	
S-C18-6	
Yes	
S-C18-6	
esource Series Number	

## Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	15.25
Calculated Stream Type	Ephemeral
Observed Use	Drainage

#### Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SW
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	

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	25 to 35% (14 to 20 deg) Steep	
Left Erosion Potential	Low	
Left Bank Substrate	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**

0	
Right Bank Height (feet)	1
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Low
Right Bank Substrate	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	

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	Absent
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No

#### Stream Geomorphology Total

5
2

## 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?	Yes
Stream Hydrology Total	3.5

# 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	
Wetland plants in streambed	FACW	
Stream Biology Total	6.75	
Regulatory Status	State Protected, Corps Jurisdictional	
Stream Overview Report Photos		

Upstream Stream Photo



Upstream photo direction

NE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



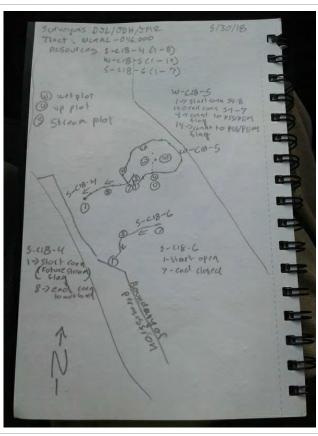
Across stream photo direction 1

Е



Sketch of Stream

W



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

Created	2018-05-31 09:49:04 EDT by Don Lockwood		
Updated	2018-06-06 14:31:20 EDT by Sam Edmonds		
Location	36.1778972, -79.4939861		
Status	Finalized & Approved		
Client	NextEra		
Project	MVP Southgate		
Date	18/05/31		
Date2	180531		

#### Resource Crew Info

Field Crew	Donald J Lockwood	
Lead Scientist's Initials	DJL	
GPS Surveyor	Joe Roy	
Resource Series Number	8	
Resource ID	S-C18-8	
Do you need to override the resource id?	Yes	
Resource ID Override	S-C18-8	
Resource ID = Resource Type - Scientist Initials	- Resource Series Number	

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	22.75
Calculated Stream Type	Intermittent
Observed Use	Drainage

#### Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SE
Channel condition	Optimal
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	

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	8 to 15% (5 to 9 deg) Moderately 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	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	0	

# **Right Bank**

0	
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

# **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	

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	Absent
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No

#### Stream Geomorphology Total

0	
õ	

Sacamingarology	
Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
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	9

# Stream Biology

Fibrous roots in streambed	Weak
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	5.75
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Likely associated with drain tile outlet
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



#### Downstream photo direction

Across Stream Photo 1

SE



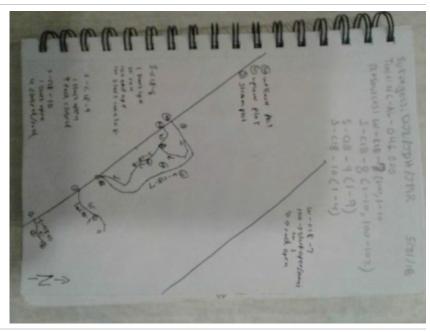
Across stream photo direction 1

Е



Sketch of Stream

W



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

Created	2018-05-31 10:04:25 EDT by Don Lockwood
Updated	2018-06-07 09:05:06 EDT by Sam Edmonds
Location	36.1774621, -79.4935754
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/31
Date2	180531

#### Resource Crew Info

Field Crew	Donald J Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	9
Resource ID	S-C18-9
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-9
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	28.25
Calculated Stream Type	Intermittent
Observed Use	Drainage

#### **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	

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)	4	
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) 4	
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	

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

#### Stream Geomorphology Total

Stream Hydrolo	ogv
----------------	-----

Sacanniyarology	
Presence of baseflow	Moderate
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?	Yes
Stream Hydrology Total	7

12

# 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

NE



Downstream photo direction

Across Stream Photo 1

SW



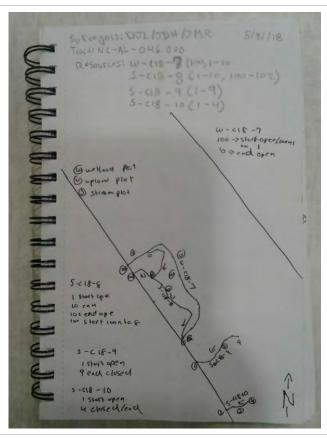
Across stream photo direction 1

Ν



#### Sketch of Stream

S



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

Created	2018-05-31 10:29:18 EDT by Don Lockwood
Updated	2018-06-06 14:36:09 EDT by Sam Edmonds
Location	36.1764511, -79.4930563
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/31
Date2	180531

## Resource Crew Info

Field Crew	Donald J Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	10
Resource ID	S-C18-10
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-10
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	19.75
Calculated Stream Type	Intermittent
Observed Use	Drainage

#### Stream Conditions

Water Flow Velocity	Dry or Minimal
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		

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	25 to 35% (14 to 20 deg) Steep	
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]	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**

0	
Right Bank Height (feet)	1
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
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	
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	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	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	Weak
Macrobenthos	Weak
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
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

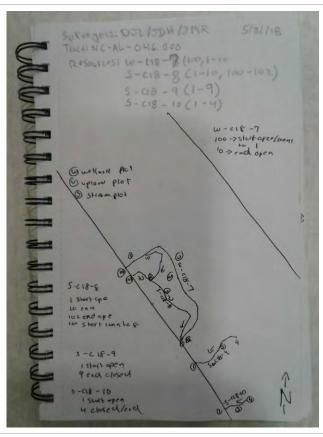
S



#### Across stream photo direction 2

#### Sketch of Stream

Ν



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

### S-C18-11

Created	2018-05-31 13:13:10 EDT by Don Lockwood
Updated	2018-06-08 09:56:55 EDT by Sam Edmonds
Location	36.1723745, -79.4856017
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/31
Date2	180531

## Resource Crew Info

Donald J Lockwood
DJL
Joe Roy
11
S-C18-11
Yes
S-C18-11
Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	31.25
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	Drainage

## Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)	
Direction of Flow	W	
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)	16	
Bank to Bank (ft)	30	

Bankfull Width (ft)	30
Probed Stream Depth	12 to 24 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	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	25 to 35% (14 to 20 deg) 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

1 07	
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	Moderate
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Absent
Natural valley	Absent

Second or greater order channel	No
Stream Geomorphology Total	15

## Stream Hydrology

Presence of baseflow	Moderate
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?	Yes
Stream Hydrology Total	7

## Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Moderate
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





Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

Ν



Across stream photo direction 2

Additional Stream Photos

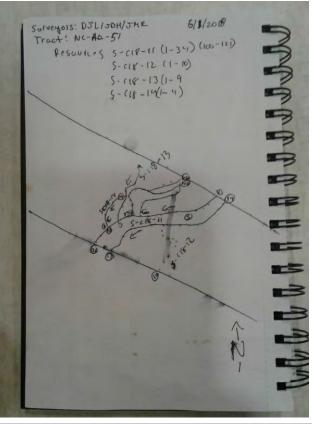
S







Sketch of Stream



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

### S-C18-12

Created	2018-05-31 13:20:39 EDT by Don Lockwood
Updated	2018-06-08 09:57:21 EDT by Sam Edmonds
Location	36.172306, -79.4857902
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/31
Date2	180531

## Resource Crew Info

Field Crew	Donald J Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	12
Resource ID	S-C18-12
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-12
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	19.75
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	Drainage

## Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	Ν
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)	2	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
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]	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	> 35% (> 20 deg) Very Steep
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	
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

1 07	
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	Absent
Headcuts	Weak
Grade control	Absent
Natural valley	Absent

Second or greater order channel	No
Stream Geomorphology Total	8

## Stream Hydrology

, , , , , , , , , , , , , , , , , , , ,	
Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak
Leaf litter	Moderate
Sediment on plants or debris	Weak
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	Moderate
Rooted upland plants in streambed	Moderate
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	4.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

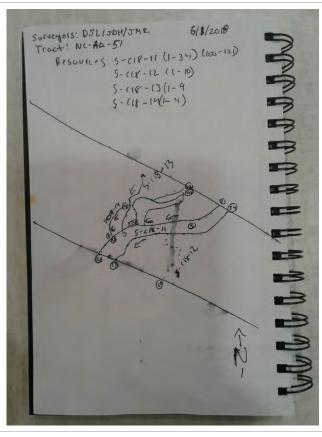
W



Across stream photo direction 2

Sketch of Stream

Е



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

### S-C18-13

Created	2018-05-31 13:33:41 EDT by Don Lockwood
Updated	2018-06-08 09:57:40 EDT by Sam Edmonds
Location	36.1726777, -79.4858315
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/05/31
Date2	180531

## Resource Crew Info

Field Crew	Donald J Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	13
Resource ID	S-C18-13
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-13
Resource ID = Resource Type - Scientist Initials - Re	esource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	20.25
Calculated Stream Type	Intermittent
Observed Use	Drainage

### Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SW
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)	2	
Left Bank Slope	25 to 35% (14 to 20 deg) Steep	
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]	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**

0		
Right Bank Height (feet)	2	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
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	
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	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No

#### Stream Geomorphology Total

7	

#### Stream Hydrology

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

# Stream Biology

0,		
Fibrous roots in streambed	Weak	
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	5.75	
Regulatory Status	State Protected, Corps Jurisdictional	
Stream Overview Report Photos		

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

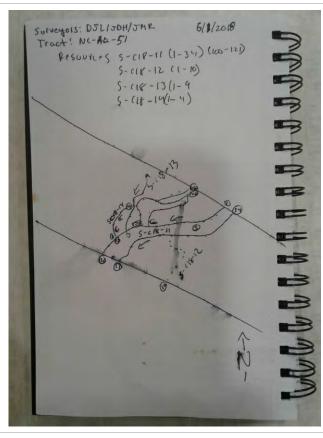
SE



Across stream photo direction 2

Sketch of Stream

NW



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

### S-C18-14

Created	2018-05-31 14:06:35 EDT by Don Lockwood		
Updated	2018-06-08 09:58:04 EDT by Sam Edmonds		
Location	36.1724989, -79.4862239		
Status	Finalized & Approved		
Client	NextEra		
Project	MVP Southgate		
Date	18/05/31		
Date2	180531		

## Resource Crew Info

Donald J Lockwood		
DJL		
Joe Roy		
14		
S-C18-14		
Do you need to override the resource id? Yes		
S-C18-14		
Resource Series Number		

## Stream Inventory

Stream / Waterbody Type	Intermittent	
Calculated Stream Score	14.25	
Calculated Stream Type	Ephemeral	

## Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)	
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

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

#### 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	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	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud

## **Right Bank Riparian Buffer Condition**

0 1		
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	Weak
Sinuosity of channel along thalweg	Absent
In-channel structure	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
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	1

## Stream Hydrology

Weak
Strong
Moderate
Absent
Absent
Yes
7.5

## Stream Biology

Stream Bronogy	
Fibrous roots in streambed	Weak
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	5.75
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

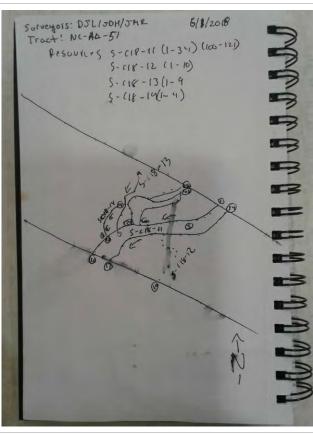
W



Across stream photo direction 2

Sketch of Stream

Е



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

#### S-C18-15

Created	2018-06-01 13:35:04 UTC by Don Lockwood
Updated	2018-08-04 21:42:28 UTC by Laura Giese
Location	36.2480365, -79.5392892
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/06/01
Date2	180601

### Resource Crew Info

Field Crew	Donald J Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	15
Resource ID	S-C18-15
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-15
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

## Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	27.25
Calculated Stream Type	Intermittent
Observed Use	Drainage

## Stream Conditions

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

## **Channel Alteration**

0	
0	
0	
0	
0	
0	
0	
	0 0 0 0 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)	2	
Left Bank Slope	25 to 35% (14 to 20 deg) Steep	
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	
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	25 to 35% (14 to 20 deg) Steep
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	
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

1 07	
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	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Absent

Second or greater order channel	No
Stream Geomorphology Total	10

# Stream Hydrology

Presence of baseflow	Moderate
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	7.5

# Stream Biology

ted, Corps Jurisdictional

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

W



Across stream photo direction 2

Additional Stream Photos

W



EXT UP



EXT DN



EXT across by flag 25

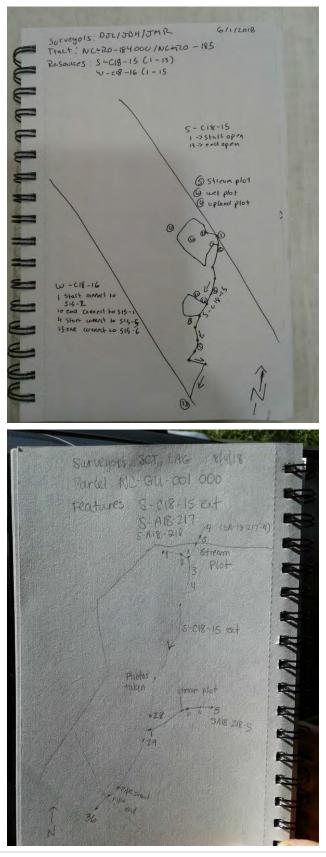


down stream of access rd UP



dnstream of access rd DN

Sketch of Stream



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

#### WB-C18-19

Created	2018-06-01 14:02:44 EDT by Don Lockwood
Updated	2018-06-15 09:51:54 EDT by Sam Edmonds
Location	36.2564846, -79.5458218
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/01
Date2	180601

### Resource Crew Info

Field Crew	Jeremy Hummel
Lead Scientist's Initials	JDH
GPS Surveyor	Joe Roy
Resource Series Number	19
Resource ID	WB-C18-19
Do you need to override the resource id?	Yes
Resource ID Override	WB-C18-19
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Impoundment
Calculated Stream Score	14.75
Calculated Stream Type	Ephemeral
Wildlife Observed	Turtles
Observed Use	Drainage

## Stream Conditions

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

#### **Channel Alteration**

charmer / accrucion		
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

## Left Bank

Left Bank Riparian Buffer Condition				
0				
0				
	l <b>ition</b> 0 0	l <b>ition</b> 0 0	l <b>ition</b> 0 0 0	l <b>ition</b> 0 0 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		
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# Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
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

Macrobenthos	Moderate
Fish	Moderate
Crayfish	Moderate
Amphibians	Moderate
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	6.25
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Beaver dam at West end; farm access road at Eastern end
Stream Overview Report Photos	



Upstream photo direction

Downstream Stream Photo

Е



Downstream photo direction

W



Across stream photo direction 1

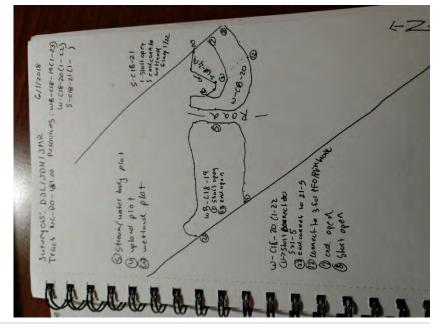
Across Stream Photo 2

Ν



Across stream photo direction 2

SW



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

#### S-C18-21

Created	2018-06-27 12:56:20 UTC by Will Buetow
Updated	2018-07-11 14:40:35 UTC by Susie Gifford (SBG)
Location	36.2565821, -79.5453974
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/27
Date2	180627

### Resource Crew Info

Field Crew	Simon King, Susan Thebert
Lead Scientist's Initials	C18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	21
Resource ID	S-C18-21
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
Wildlife Observed	Turtles

#### 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)	7
Average Water Width (ft)	6
Bank to Bank (ft)	10
Bankfull Width (ft)	11
Probed Stream Depth	24 to 36 inches

### Left Bank

Left Bank Height (feet)	5	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	Moderate	
Left Bank Substrate	Mud or muck, 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	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

# **Right Bank Riparian Buffer Condition**

0		
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

1 02	
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	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Weak
Natural valley	Weak
Second or greater order channel	Yes
Stream Geomorphology Total	21

# Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Weak
Leaf litter	Absent
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	5.5

# Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Strong
Fish	Moderate
Crayfish	Weak
Amphibians	Strong
Algae	Moderate
Wetland plants in streambed	Other
Stream Biology Total	13
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

Ν



Across stream photo direction 2

S

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

#### S-C18-22

Created	2018-06-02 10:26:08 EDT by Don Lockwood
Updated	2018-06-06 15:05:53 EDT by Sam Edmonds
Location	36.2578996, -79.5466562
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/02
Date2	180602

#### Resource Crew Info

Field Crew	Jeremy Hummel
Lead Scientist's Initials	JDH
GPS Surveyor	Joe Roy
Resource Series Number	22
Resource ID	S-C18-22
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-22
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	18.25
Calculated Stream Type	Ephemeral
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)	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	25 to 35% (14 to 20 deg) Steep	
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]	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**

0	
Right Bank Height (feet)	1
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
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	
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	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No

#### Stream Geomorphology Total

#### Stream Hydrology

Sacamingarology	
Presence of baseflow	Weak
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	6.5

7

# Stream Biology

Weak
Weak
Absent
FACW
4.75
State Protected, Corps Jurisdictional

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1



Across stream photo direction 1

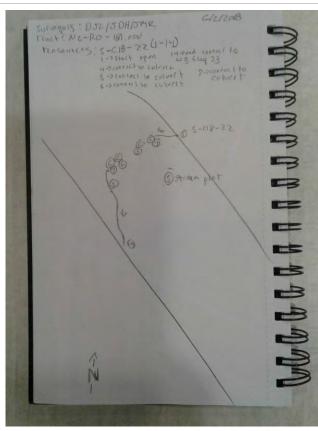
W



Across stream photo direction 2

Sketch of Stream

Е



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

#### S-C18-23

Created	2018-06-02 11:20:54 EDT by Don Lockwood
Updated	2018-06-06 15:10:04 EDT by Sam Edmonds
Location	36.2629331, -79.5505605
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/02
Date2	180602

#### Resource Crew Info

Field Crew	Jeremy Hummel
Lead Scientist's Initials	JDH
GPS Surveyor	Joe Roy
Resource Series Number	23
Resource ID	S-C18-23
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-23
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	9.5
Calculated Stream Type	Ephemeral
Observed Use	Drainage

#### Stream Conditions

Water Flow Velocity	Fast (> 5 cfs)
Direction of Flow	NW
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)	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	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]	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**

5	
Right Bank Height (feet)	3
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud

# **Right Bank Riparian Buffer Condition**

0 1		
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	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No

#### Stream Geomorphology Total

#### Stream Hydrology

Sacamingarology	
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

5

# Stream Biology

Fibrous roots in streambed	Weak
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	4
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

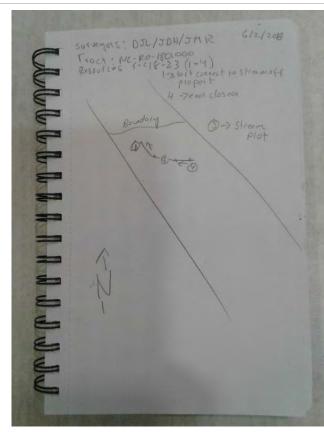
W



Across stream photo direction 2

Sketch of Stream

Е



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

#### WB-C18-24

Created	2018-06-02 16:19:03 UTC by Don Lockwood
Updated	2018-09-20 19:36:31 UTC by Susie Gifford (SBG)
Location	36.2551895, -79.544059
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

#### Resource Crew Info

Jeremy Hummel
JDH
Joe Roy
24
WB-C18-24
Yes
WB-C18-24
esource Series Number

#### Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	0
Calculated Stream Type	Undetermined
Wildlife Observed	American bittern; turtle

#### Stream Conditions

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

#### Left Bank

# Left Bank Riparian Buffer Condition

0	
0	
0	
0	
	0 0 0 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 Cor	ndition
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, Corps Jurisdictional
Notes	Embankment pond (northend)

#### Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

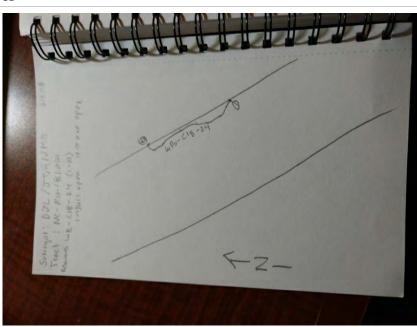
Е



Across stream photo direction 2

Additional Stream Photos

SE



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

#### S-C18-25

Created	2018-06-02 16:53:48 EDT by Don Lockwood
Updated	2018-06-07 09:01:35 EDT by Sam Edmonds
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
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

1 07	
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

Weak
Weak
Weak
Weak
Weak
Yes
7

# Stream Biology

t
t
Protected, Corps Jurisdictional
1

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

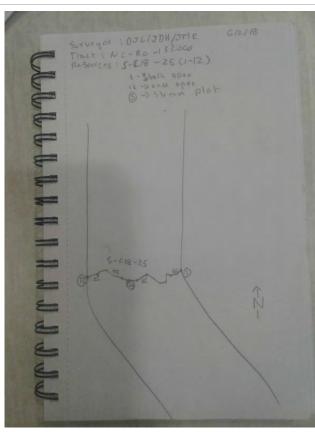
W



Across stream photo direction 2

Sketch of Stream

Е



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

#### S-C18-27

Created	2018-06-02 20:08:09 UTC by Don Lockwood
Updated	2018-09-20 19:33:29 UTC by Susie Gifford (SBG)
Location	36.3467017, -79.605876
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/02
Date2	180602

#### Resource Crew Info

Field Crew	Jeremy Hummel
Lead Scientist's Initials	JDH
GPS Surveyor	Joe Roy
Resource Series Number	27
Resource ID	S-C18-27
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-27
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	8.5
Calculated Stream Type	Ephemeral
Observed Use	Drainage

#### **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	W
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)	2	

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	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]	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**

0	
Right Bank Height (feet)	3
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
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	
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	Absent
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No

#### Stream Geomorphology Total

4	

#### 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

Weak
Weak
Absent
Other
4
State Protected, Corps Jurisdictional
-

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

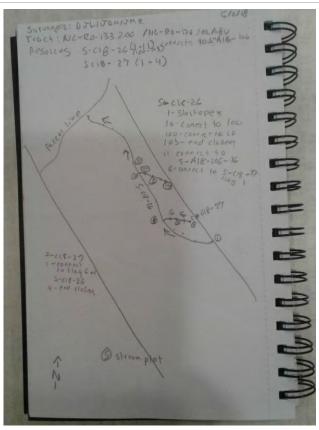
NE



Across stream photo direction 2

Sketch of Stream

SW



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

#### S-C18-28

Created	2018-06-04 12:57:34 EDT by Don Lockwood
Updated	2018-06-07 09:00:17 EDT by Sam Edmonds
Location	36.1606257, -79.4536633
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/04
Date2	180604

### Resource Crew Info

Field Crew	Joe Roy, Donald Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	28
Resource ID	S-C18-28
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-28
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
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	SW
Channel condition	Optimal
In stream habitat	Optimal

### **Channel Alteration**

0	
1.3	
0	
0	
0	
0	
1.3	
	0 0 0 0 0

#### Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	4

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

#### Left Bank

Leite Burnt		
Left Bank Height (feet)	1	
Left Bank Slope	25 to 35% (14 to 20 deg) Steep	
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	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Organic, Vegetated

### **Right Bank Riparian Buffer Condition**

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

1 07	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Absent
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	No
Stream Geomorphology Total	10

### Stream Hydrology

Weak
Weak
Weak
Weak
Absent
Yes
6.5

# Stream Biology

Upstream Stream Photo



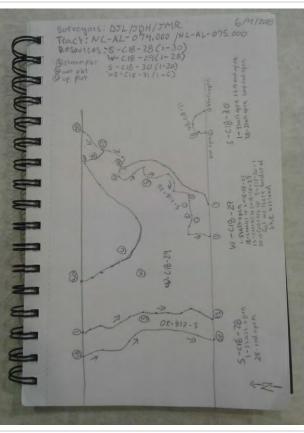
Downstream Stream Photo



Across Stream Photo 1



Sketch of Stream



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

#### S-C18-30

Created	2018-06-04 13:31:36 EDT by Don Lockwood
Updated	2018-06-07 18:30:04 EDT by Sam Edmonds
Location	36.1607265, -79.4548756
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	MVP Southgate     18/06/04

#### Resource Crew Info

Field Crew	Jeremy Hummel	
Lead Scientist's Initials	JDH	
GPS Surveyor	Joe Roy	
GPS ID	NA	
Resource Series Number	30	
Resource ID	S-C18-30	
Do you need to override the resource id?	Yes	
Resource ID Override S-C18-30		
Resource ID = Resource Type - Scientist Initials	- Resource Series Number	

#### Stream Inventory

Calculated Stream Score	29.75
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
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	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)	8
Average Water Width (ft)	6

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

## Left Bank

Left Bank Height (feet)	5
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

	â	
Optimal (1.5) [Left]	U	
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	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           Low poor (0.6) [Right]         0           Low poor (0.5) [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	Optimal (1.5) [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	High suboptimal (1.2) [Right]	0		
Low marginal (0.75) [Right]         0           High poor (0.6) [Right]         0           Low poor (0.5) [Right]         0	Low suboptimal (1.1) [Right]	0		
High poor (0.6) [Right]       0         Low poor (0.5) [Right]       0	High marginal (0.85) [Right]	0		
Low poor (0.5) [Right] 0	Low marginal (0.75) [Right]	0		
	High poor (0.6) [Right]	0		
	Low poor (0.5) [Right]	0		
Right bank total U	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	Moderate
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak

Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	14.5

# 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

0,	
Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Moderate
Macrobenthos	Moderate
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	7.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

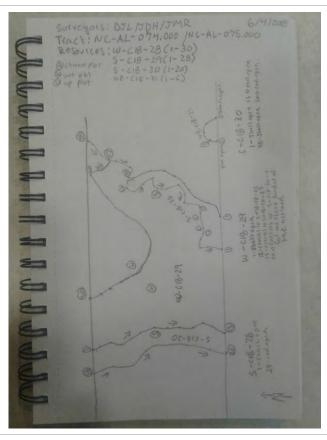
Е



#### Across stream photo direction 2

#### Sketch of Stream

W



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

#### WB-C18-31

Created	2018-06-04 19:03:54 UTC by Don Lockwood
Updated	2018-09-20 19:36:45 UTC by Susie Gifford (SBG)
Location	36.1602501, -79.4503317
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/04
Date2	180604

#### Resource Crew Info

Field Crew	Jeremy Hummel
Lead Scientist's Initials	JDH
GPS Surveyor	Joe Roy
Resource Series Number	31
Resource ID	WB-C18-31
Do you need to override the resource id?	Yes
Resource ID Override	WB-C18-31

#### Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	1
Calculated Stream Type	Ephemeral
Wildlife Observed	Frogs
Observed Use	Irrigation

#### 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

#### 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

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 Hydrology

, 0,		
Stream Hydrology Total	0	

## Stream Biology

Regulatory Status	State Protected, Corps Jurisdictional	
Stream Biology Total	1	
Amphibians	Moderate	

Stream Overview Report Photos

Upstream Stream Photo



Downstream Stream Photo



#### Downstream photo direction

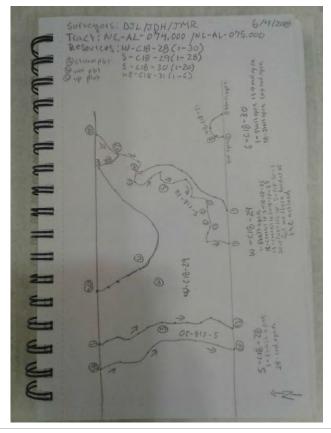
Across Stream Photo 1

S



#### Across stream photo direction 1

S



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

#### WB-C18-32

Created	2018-06-04 19:33:44 UTC by Don Lockwood
Updated	2018-09-20 19:37:06 UTC by Susie Gifford (SBG)
Location	36.1631472, -79.4481967
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/04
Date2	180604

#### Resource Crew Info

Field Crew	Jeremy Hummel
Lead Scientist's Initials	JDH
GPS Surveyor	Joe Roy
Resource Series Number	32
Resource ID	WB-C18-32
Do you need to override the resource id?	Yes
Resource ID Override	WB-C18-32
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	3.25
Calculated Stream Type	Ephemeral
Wildlife Observed	Frogs
Observed Use	Irrigation

## Stream Conditions

Direction of Flow	SW
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

## Left Bank

Left Bank Riparian Buffer Condition				
0				
0				
	l <b>ition</b> 0 0	l <b>ition</b> 0 0	l <b>ition</b> 0 0 0	l <b>ition</b> 0 0 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

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	
Charles I had a la su		
Stream Hydrology	-	
Stream Hydrology Total	0	
Stream Biology		
Fish	Moderate	
Amphibians	Strong	
Wetland plants in streambed	FACW	
Stream Biology Total	3.25	
Regulatory Status	State Protected, Corps Jurisdictional	



Upstream photo direction

Downstream Stream Photo

W



Downstream photo direction

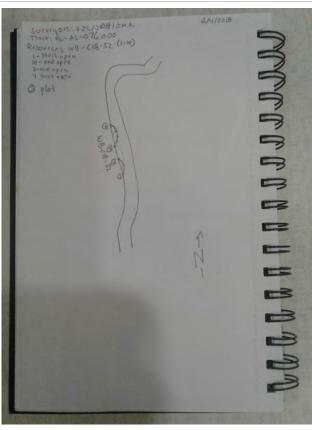
S



Across stream photo direction 1

Sketch of Stream

SW



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

#### WB-C18-33

Created	2018-06-04 20:01:24 UTC by Don Lockwood
Updated	2018-09-20 19:37:26 UTC by Susie Gifford (SBG)
Location	36.1638266, -79.4532265
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/04
Date2	180604

#### Resource Crew Info

Jeremy Hummel	
JDH	
Joe Roy	
33	
WB-C18-33	
Yes	
WB-C18-33	
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	Frogs

#### 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**

#### Left Bank

## Left Bank Riparian Buffer Condition

0	
0	
0	
0	
	0 0 0 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 Cor	ndition	
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

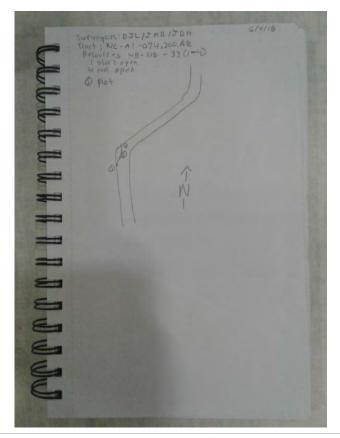


Downstream photo direction

Across Stream Photo 1

S





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

#### S-C18-34

Created	2018-06-05 10:37:10 EDT by Don Lockwood
Updated	2018-06-25 10:53:04 EDT by Sam Edmonds
Location	36.430429, -79.6686556
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/05
Date2	180605

#### Resource Crew Info

Field Crew	Jeremy Hummel
Lead Scientist's Initials	JDH
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	34
Resource ID	S-C18-34
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-34
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	15
Calculated Stream Type	Ephemeral
Observed Use	Drainage

## Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	NE
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)	2
Bank to Bank (ft)	4

Bankfull Width (ft)	4
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	Moderate	
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	
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	> 35% (> 20 deg) Very Steep	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Moderate		
Right Bank Substrate	Cobble-Gravel	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	
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	Moderate
Grade control	Absent
Natural valley	Absent

Second or greater order channel	No
Stream Geomorphology Total	8

## Stream Hydrology

Presence of baseflow	Weak
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?	No
Stream Hydrology Total	2

## Stream Biology

Weak	
Absent	
Other	
5	
State Protected, Corps Jurisdictional	
Additional flags for extension 1-7	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

W



Across stream photo direction 2

Additional Stream Photos

Е



Upstream



Downstream



Across

Sketch of Stream

SUTVEYOR JMRIDIL TRACT: NC-RO-OGICO/NC-RO-BSE 615/2016 S-C18-34 1 stort open 3 and closed 5-C18-35 1-Start connt to culor too. Start connel to cu 3 End apen 106 ence open 5-018-30 -1 start closed 9 end open 6/21/18 LAG, SCT, JJB 0 NC-RO-061.000 11 WB-A18-173 5- C18-34 extension WB-A18-173 .7 Extension C18-34 extension

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

#### S-C18-35

Created	2018-06-05 15:29:03 UTC by Don Lockwood	
Updated	2018-08-28 23:53:01 UTC by Simon King	
Location	36.4333497, -79.6707577	
Status	Finalized & Approved	
	NextEra	
Client	NextEra	
Client Project	NextEra MVP Southgate	

#### Resource Crew Info

Field Crew	Jeremy Hummel	
Lead Scientist's Initials	JDH	
GPS Surveyor	Joe Roy	
GPS ID	NA	
Resource Series Number	35	
Resource ID	S-C18-35	
Do you need to override the resource id?	Yes	
Resource ID Override	S-C18-35	
Resource ID = Resource Type - Scientist Initials	- Resource Series Number	

#### Stream Inventory

Stream / Waterbody Type	Perennial	
Calculated Stream Score	29.75	
Calculated Stream Type	Intermittent	
Wildlife Observed	box turtle	
Observed Use	Drainage	

## Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SW
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)	6

Bank to Bank (ft)	15
Bankfull Width (ft)	15
Probed Stream Depth	0 to 6 inches

## Left Bank

Left Bank Height (feet)	5
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Cobble-Gravel

## Left Bank Riparian Buffer Condition

	â	
Optimal (1.5) [Left]	U	
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	Moderate
Right Bank Substrate	Cobble-Gravel

## **Right Bank Riparian Buffer Condition**

0	
0	
0	
0	
0	
0	
0	
0	
	0 0 0 0 0 0

## Stream Geomorphology

1 07	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Absent

Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	12

# Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
Leaf litter	Moderate
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

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Moderate
Macrobenthos	Moderate
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Absent
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	8.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

W



Across stream photo direction 2

Sketch of Stream

Е



a a a a a a a a a a a a a a a a a NC-RO-060,000 S-C-18-35 extension S-C18-36 extension 5-018-36 5-A18-36

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

#### S-C18-38

Created	2018-06-06 16:02:05 UTC by Don Lockwood
Updated	2018-09-26 14:18:53 UTC by Simon King
Location	36.4460406, -79.6893099
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

#### Resource Crew Info

Field Crew	Joe Roy, Donald Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	38
Resource ID	S-C18-38
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-38
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Perennial	
Calculated Stream Score	30.5	
Calculated Stream Type	Perennial	
Wildlife Observed	Fish	
Observed Use	Drainage	

## Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	NE
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)	10
Average Water Width (ft)	8

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

## Left Bank

Left Bank Height (feet)	6
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

	â	
Optimal (1.5) [Left]	U	
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	Moderate
Right Bank Substrate	Silt-Mud

## **Right Bank Riparian Buffer Condition**

0		
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

1 07	
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	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Absent

Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	14

# Stream Hydrology

Presence of baseflow	Moderate
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	8.5

# Stream Biology

0,	
Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Weak
Macrobenthos	Moderate
Aquatic mullusks	Weak
Fish	Moderate
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	8
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

W



Across stream photo direction 2

Additional Stream Photos

Е

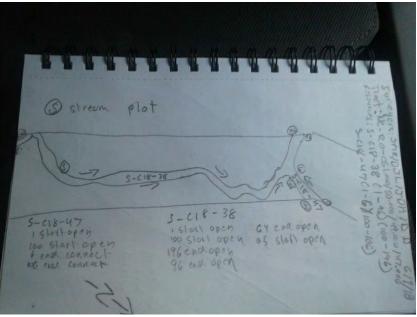


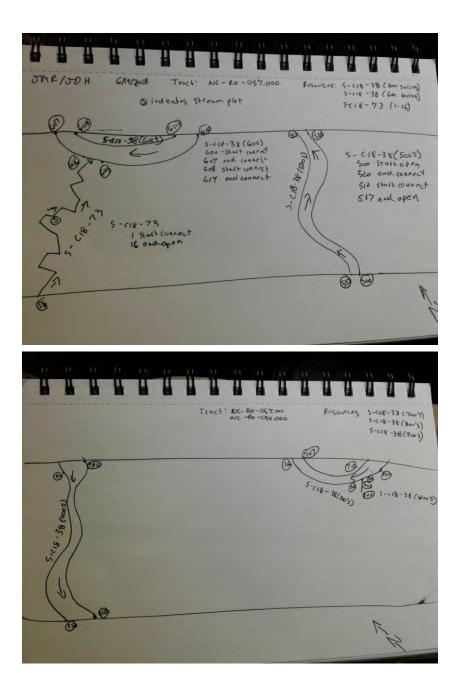


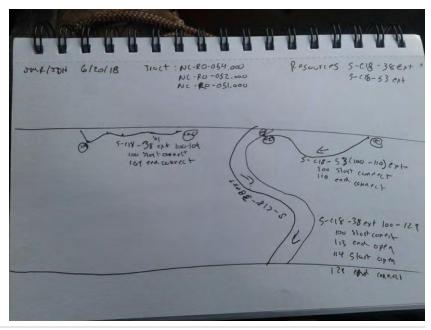




Sketch of Stream







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

### S-C18-39

Created	2018-06-06 11:46:33 EDT by Don Lockwood
Updated	2018-06-25 10:13:09 EDT by Sam Edmonds
Location	36.4457432, -79.6893138
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

### Resource Crew Info

Field Crew	Joe Roy, Donald Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	39
Resource ID	S-C18-39
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-39
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent	
Calculated Stream Score	17	
Calculated Stream Type	Ephemeral	
Wildlife Observed	None	
Observed Use	Drainage	
Stream Conditions		
Water Flow Velocity	Dry or Minimal	

Direction of Flow	NE	
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)	3	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
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]	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	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           High marginal (0.85) [Right]         0           Low marginal (0.75) [Right]         0           Low poor (0.6) [Right]         0           Low poor (0.5) [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	Optimal (1.5) [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	High suboptimal (1.2) [Right]	0		
Low marginal (0.75) [Right]         0           High poor (0.6) [Right]         0           Low poor (0.5) [Right]         0	Low suboptimal (1.1) [Right]	0		
High poor (0.6) [Right]       0         Low poor (0.5) [Right]       0	High marginal (0.85) [Right]	0		
Low poor (0.5) [Right] 0	Low marginal (0.75) [Right]	0		
	High poor (0.6) [Right]	0		
	Low poor (0.5) [Right]	0		
Right bank total U	Right bank total	0		

# Stream Geomorphology

1 07	
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	Absent
Headcuts	Weak
Grade control	Absent

Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	6

# Stream Hydrology

, 0,	
Presence of baseflow	Weak
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	8
Stream Hydrology Total	8

# Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Moderate
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	3
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

Ν

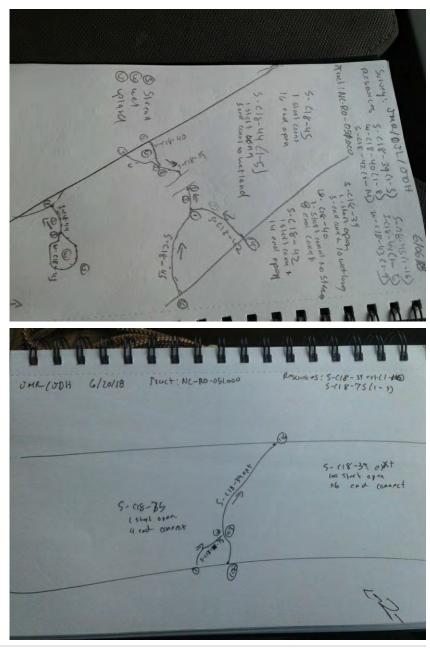
Across Stream Photo 2



Across stream photo direction 2

S





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

#### S-C18-41

Created	2018-06-06 12:32:12 EDT by Don Lockwood
Updated	2018-06-08 10:00:24 EDT by Sam Edmonds
Location	36.4470512, -79.689248
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

## Resource Crew Info

Joe Roy, Donald Lockwood
DJL
Joe Roy
41
S-C18-41
Yes
S-C18-41
esource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	18.5
Calculated Stream Type	Ephemeral
Observed Use	Drainage

### Stream Conditions

Water Flow Velocity	Dry or Minimal
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)	2	
Bank to Bank (ft)	2	
Bankfull Width (ft)	2	

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	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]	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**

0	
Right Bank Height (feet)	3
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
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	
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	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
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

Ctroam	Hydrology	
Stream	<b>UARIANCES</b>	

Presence of baseflowWeakIron oxidizing bacteriaWeakLeaf litterWeakSediment on plants or debrisAbsentOrganic debris lines or pilesAbsentSoil-based evidence of high water table?YesStream Hydrology Total6	Stream right ology	
Leaf litterWeakSediment on plants or debrisAbsentOrganic debris lines or pilesAbsentSoil-based evidence of high water table?Yes	Presence of baseflow	Weak
Sediment on plants or debrisAbsentOrganic debris lines or pilesAbsentSoil-based evidence of high water table?Yes	Iron oxidizing bacteria	Weak
Organic debris lines or piles     Absent       Soil-based evidence of high water table?     Yes	Leaf litter	Weak
Soil-based evidence of high water table? Yes	Sediment on plants or debris	Absent
	Organic debris lines or piles	Absent
Stream Hydrology Total 6	Soil-based evidence of high water table?	Yes
	Stream Hydrology Total	6

7

# 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	Absent
Wetland plants in streambed	Other
Stream Biology Total	5.5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Channel substrate is bedrock
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

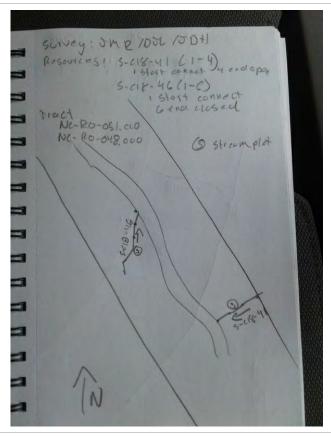
Е



Across stream photo direction 2

Sketch of Stream

W



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

#### S-C18-42

Created	2018-06-06 13:17:02 EDT by Don Lockwood
Updated	2018-06-08 10:00:56 EDT by Sam Edmonds
Location	36.4461004, -79.6886217
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

## Resource Crew Info

Joe Roy, Donald Lockwood
DJL
Joe Roy
42
S-C18-42
Yes
S-C18-42
esource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	10
Calculated Stream Type	Ephemeral
Observed Use	Drainage

### Stream Conditions

Water Flow Velocity	Dry or Minimal
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)	2	
Bank to Bank (ft)	2	
Bankfull Width (ft)	2	

Probed Stream Depth	0 to 6 inches	
Left Bank		
Left Bank Height (feet)	8	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
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]	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)8Right Bank Slope> 35% (> 20 deg) Very SteepRight Erosion PotentialModerate	
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	Moderate
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	Absent
Second or greater order channel	No

### Stream Geomorphology Total

6	

### Stream Hydrology

Absent
Absent
Moderate
Absent
Absent
No
0.5

# Stream Biology

Weak
Moderate
Absent
Absent
Absent
Absent
Weak
Absent
Other
3.5
State Protected, Corps Jurisdictional

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

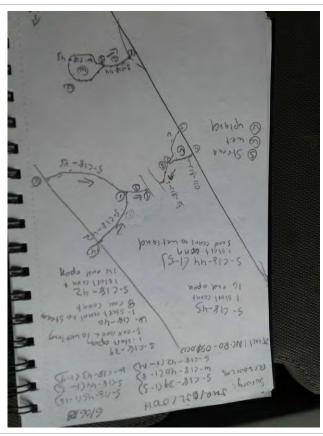
W



Across stream photo direction 2

Sketch of Stream

Е



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

#### S-C18-44

Created	2018-06-06 15:15:22 EDT by Don Lockwood
Updated	2018-06-08 10:01:24 EDT by Sam Edmonds
Location	36.4448345, -79.6884863
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

### Resource Crew Info

Field Crew	Joe Roy, Donald Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	44
Resource ID	S-C18-44
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-44
Resource ID = Resource Type - Scientist Initials - F	Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	19
Calculated Stream Type	Intermittent

## Stream Conditions

Water Flow Velocity	Moderate (1 - 5 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)	2	
Bank to Bank (ft)	2	
Bankfull Width (ft)	2	
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	Sand

## 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	Moderate
Right Bank Substrate	Sand

# **Right Bank Riparian Buffer Condition**

<u> </u>		
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	4
Second or greater order channel	No
Natural valley	Absent
Grade control	Absent
Headcuts	Absent
Recent alluvial deposits	Absent
Depositional bars or benches	Absent
Active or relict floodplain	Absent
Particle size of stream substrate	Weak
In-channel structure	Weak
Sinuosity of channel along thalweg	Weak
Continuity of channel bed and bank	Weak

# Stream Hydrology

Moderate
Moderate
Absent
Absent
Absent
Yes
8.5

## Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	OBL
Stream Biology Total	6.5
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

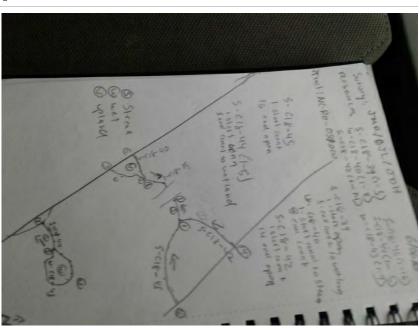
W



Across stream photo direction 2

Sketch of Stream

Е



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

#### S-C18-45

Created	2018-06-06 15:30:22 EDT by Don Lockwood
Updated	2018-06-08 10:01:45 EDT by Sam Edmonds
Location	36.4457568, -79.6888454
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

## Resource Crew Info

Joe Roy, Donald Lockwood
DJL
Joe Roy
45
S-C18-45
Yes
S-C18-45
esource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	16.5
Calculated Stream Type	Ephemeral
Observed Use	Drainage

### Stream Conditions

Water Flow Velocity	Dry or Minimal
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)	2	
Bank to Bank (ft)	3	
Bankfull Width (ft)	5	

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	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]	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**

0	
Right Bank Height (feet)	6
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
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	
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	Absent
Natural valley	Absent
Second or greater order channel	No

### Stream Geomorphology Total

7

#### Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Weak
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

Moderate
Moderate
Weak
Absent
Other
3
State Protected, Corps Jurisdictional

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

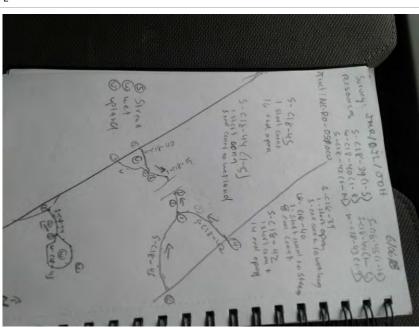
W



Across stream photo direction 2

Sketch of Stream

Е



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

#### S-C18-46

Created	2018-06-07 09:28:00 EDT by Don Lockwood
Updated	2018-06-08 09:11:23 EDT by Sam Edmonds
Location	36.4478698, -79.6909759
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/07
Date2	180607

### Resource Crew Info

Joe Roy, Donald Lockwood
DJL
Joe Roy
46
S-C18-46
Yes
S-C18-46
Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	18.75
Calculated Stream Type	Ephemeral
Observed Use	Drainage

### **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	Ν
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)	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)	1
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]	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)	1.5
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**

0 1		
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	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	Moderate
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	No

#### Stream Geomorphology Total

#### Stream Hydrology

Stream right of ogy	
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?	Yes
Stream Hydrology Total	4

11

# Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	3.75
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

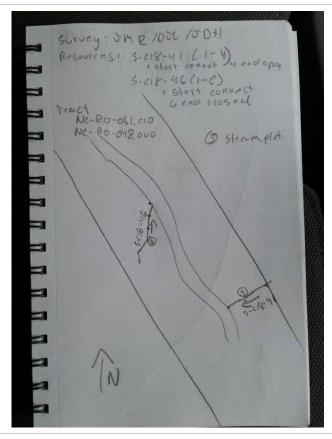
Е



Across stream photo direction 2

#### Sketch of Stream

W



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

Created	2018-06-07 14:16:58 UTC by Don Lockwood
Updated	2018-09-20 19:33:46 UTC by Susie Gifford (SBG)
Location	36.4503036, -79.6924449
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/07
Date2	180607

### Resource Crew Info

Field Crew	Joe Roy, Donald Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	47
Resource ID	S-C18-47
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-47
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	38.25
Calculated Stream Type	Perennial
Wildlife Observed	racoon & deer tracks
Observed Use	Fishing, Drainage

### Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SW
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)	20	
Average Water Width (ft)	16	
Bank to Bank (ft)	30	

Bankfull Width (ft)	20
Probed Stream Depth	0 to 6 inches

### Left Bank

Left Bank	
Left Bank Height (feet)	4
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, 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]	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

# **Right Bank**

Right Bank Height (feet)	4
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Sand, Silt-Mud, Organic, 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	

1 07	
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	Absent
Headcuts	Absent
Grade control	Moderate
Natural valley	Moderate

Second or greater order channel	Yes
Stream Geomorphology Total	16

### Stream Hydrology

Presence of baseflow	Strong
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	8.5

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Moderate
Fish	Moderate
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	13.75
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

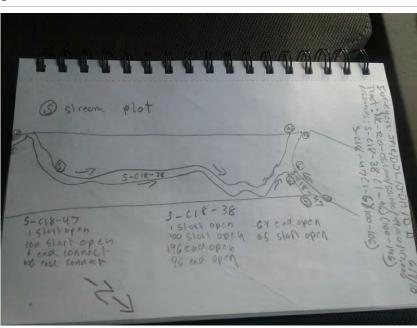
W



Across stream photo direction 2

Sketch of Stream

Е



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

Created	2018-06-07 12:36:50 EDT by Don Lockwood
Updated	2018-06-08 09:14:34 EDT by Sam Edmonds
Location	36.4519468, -79.6942982
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/07
Date2	180607

### Resource Crew Info

Field Crew	Jeremy Hummel
Lead Scientist's Initials	JDH
GPS Surveyor	Joe Roy
Resource Series Number	48
Resource ID	S-C18-48
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-48
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	14.75
Calculated Stream Type	Ephemeral

### Stream Conditions

Dry or Minimal
SW
Poor
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)	4	
Bankfull Width (ft)	2	

### 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	Sand, Silt-Mud

### Left Bank Riparian Buffer Condition

0	
0	
0	
0	
0	
0	
0	
0	
	0 0 0 0 0 0 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	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	

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	Weak
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	7

# Stream Hydrology

, 0,	
Presence of baseflow	Absent
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?	No
Stream Hydrology Total	2

### Stream Biology

5	
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	FACW
Stream Biology Total	5.75
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

SW



Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

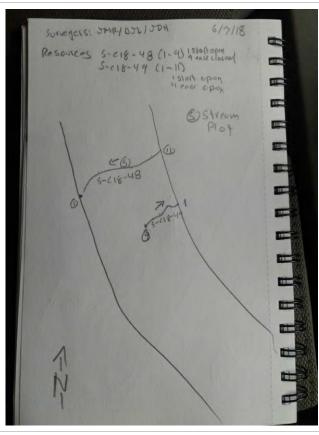
SE



Across stream photo direction 2

Sketch of Stream

NW



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

Created	2018-06-07 13:37:27 EDT by Don Lockwood
Updated	2018-06-08 18:27:09 EDT by Sam Edmonds
Location	36.4531281, -79.6956379
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/07
Date2	180607

### Resource Crew Info

Joe Roy, Donald Lockwood
DJL
Joe Roy
49
S-C18-49
Yes
S-C18-49
esource Series Number

# Stream Inventory

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

### Stream Conditions

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

### **Channel Alteration**

Negligible (1.5) Channel Alteration	0	
Low Minor (1.3) Channel Alteration	1.	
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	

#### Stream Measurements

OHWM Width (ft)	4
Average Water Width (ft)	2
Bank to Bank (ft)	5

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	Low	
Left Bank Substrate	Bedrock, Sand, Silt-Mud	

# 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	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Bedrock, Sand, Silt-Mud

### **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	

1 07	
Continuity of channel bed and bank	Moderate
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	Weak
Grade control	Moderate
Natural valley	Moderate

### Stream Geomorphology Total

Stream	Hvd	drologv
--------	-----	---------

Stream Hydrology	
Presence of baseflow	Strong
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	8.5

13

# 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
Wetland plants in streambed	FACW
Stream Biology Total	7.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

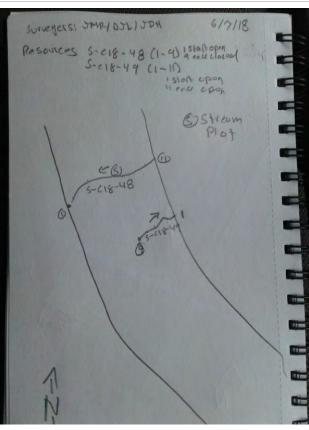
Ν



Across stream photo direction 2

Sketch of Stream

S



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

Created	2018-06-07 14:24:40 EDT by Don Lockwood
Updated	2018-06-08 16:49:13 EDT by Sam Edmonds
Location	36.4534744, -79.690453
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/07
Date2	180607

### Resource Crew Info

Field Crew	Joe Roy, Donald Lockwood	
Lead Scientist's Initials	DJL	
GPS Surveyor	Joe Roy	
Resource Series Number	50	
Resource ID	S-C18-50	
Do you need to override the resource id?	Yes	
Resource ID Override	S-C18-50	
Resource ID = Resource Type - Scientist Initials - I	Resource Series Number	

### Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	18.75
Calculated Stream Type	Ephemeral
Observed Use	Drainage

### **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)	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	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]	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**

0	
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

# **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	

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	Absent
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No

#### Stream Geomorphology Total

#### Stream Hydrology

Sacaminyarology	
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

7

# Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
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





Across Stream Photo 1



Across stream photo direction 1

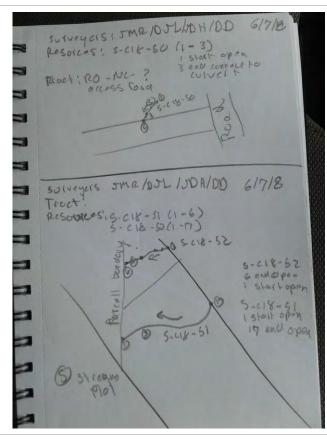
Е



Across stream photo direction 2

#### Sketch of Stream

W



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

2018-06-07 19:40:32 UTC by Don Lockwood 2018-09-20 19:34:25 UTC by Susie Gifford (SBG) 36.4581986, -79.6993331
36.4581986, -79.6993331
Finalized & Approved
NextEra
MVP Southgate
18/06/07

### Resource Crew Info

Field Crew	Joe Roy, Donald Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	51
Resource ID	S-C18-51
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-51
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	22.25
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs

### 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	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)	5

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	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	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Right Erosion Potential	Low	
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	

1 07	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate

Second or greater order channel	No	
Stream Geomorphology Total	9	

# Stream Hydrology

Strong
Absent
Weak
Weak
Moderate
No
5.5

# Stream Biology

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nt
1
Protected, Corps Jurisdictional
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Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

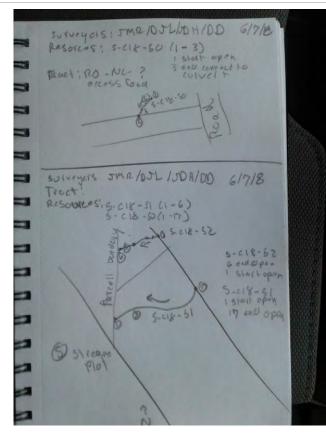
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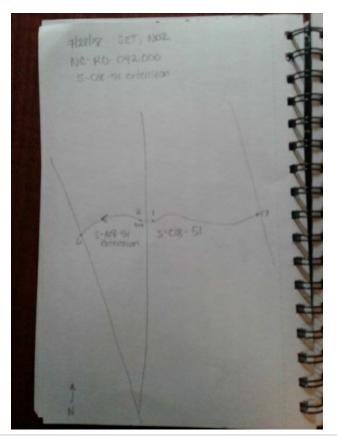


Across stream photo direction 2

Sketch of Stream

SW





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

Created	2018-06-07 20:08:47 UTC by Don Lockwood
Updated	2018-09-20 19:34:42 UTC by Susie Gifford (SBG)
Location	36.459516, -79.6999506
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

### Resource Crew Info

Field Crew	Joe Roy, Donald Lockwood
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	52
Resource ID	S-C18-52
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-52
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

,	
Stream / Waterbody Type	Intermittent
Calculated Stream Score	25.25
Calculated Stream Type	Intermittent

### Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	W
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)	5	
Average Water Width (ft)	3	
Bank to Bank (ft)	6	
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	Boulder/Slabs, 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**

0	
Right Bank Height (feet)	3
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Boulder/Slabs, 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	

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	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

Stream Geomorphology Total
----------------------------

#### Stream Hydrology

Stream right blogy	
Presence of baseflow	Weak
Iron oxidizing bacteria	Weak
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	4

15.5

### 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
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

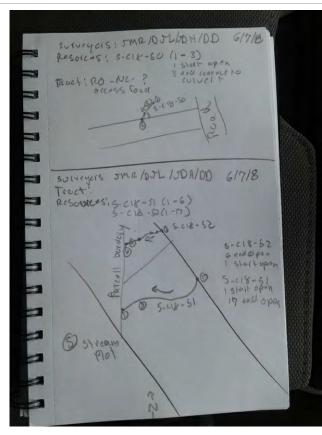
Ν

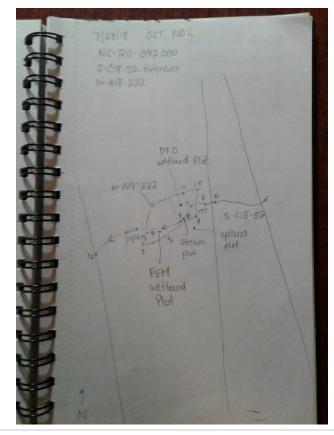


Across stream photo direction 2

Sketch of Stream

S





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

Created	2018-06-08 11:16:02 EDT by Don Lockwood
Updated	2018-06-25 10:14:49 EDT by Sam Edmonds
Location	36.4441645, -79.6879995
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180608

### Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	JMR
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	53
Resource ID	S-C18-53
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-53
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Balcalli interneory	
Stream / Waterbody Type	Intermittent
Calculated Stream Score	23.25
Calculated Stream Type	Intermittent
Wildlife Observed	None
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Dry or Minimal
Direction of Flow	W
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

### Stream Measurements

Channel Alteration Total

OHWM Width (ft)	2
Average Water Width (ft)	1

1.3

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	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	Moderate	
Left Bank Substrate	Sand, Organic, 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)	2
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Sand, Organic, Vegetated

### **Right Bank Riparian Buffer Condition**

0 1	
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

1 07	
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	Moderate
Recent alluvial deposits	Moderate
Headcuts	Moderate
Grade control	Weak

Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	15

# Stream Hydrology

, ,	
Presence of baseflow	Absent
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?	No
Stream Hydrology Total	2.5

### Stream Biology

2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2	
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
Stream Overview Report Photos	

Stream Overview Report Photos

Upstream Stream Photo



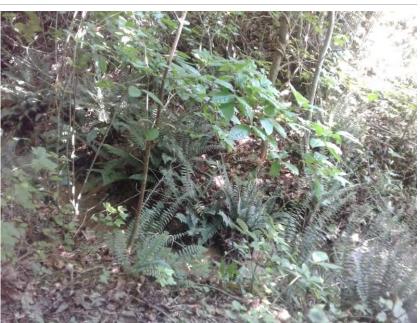
Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

Ν

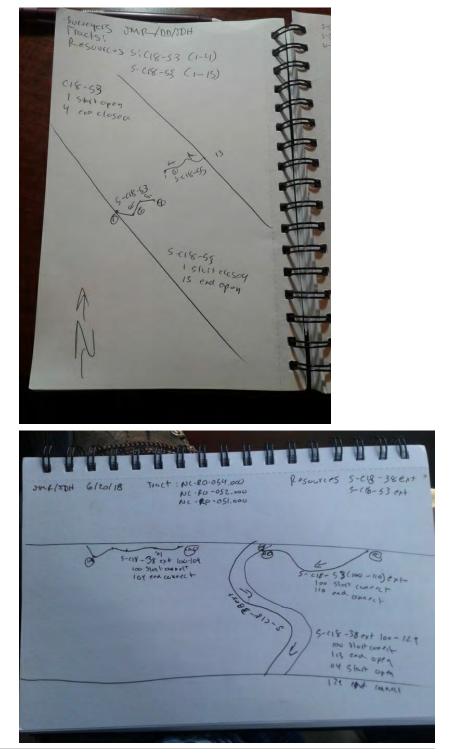


Across stream photo direction 2

NW



Sketch of Stream



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

#### S-C18-54

Created	2018-06-08 11:00:28 EDT by Don Lockwood
Updated	2018-06-18 15:43:04 EDT by Sam Edmonds
Location	36.4443345, -79.68727
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180608

#### Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	JMR
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	54
Resource ID	S-C18-54
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-54
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream inventory	
Stream / Waterbody Type	Intermittent
Calculated Stream Score	21.75
Calculated Stream Type	Intermittent
Wildlife Observed	None
Observed Use	Drainage
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	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 1.5

OHWM Width (ft)	2
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)	2	
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping	
Left Erosion Potential	Low	
Left Bank Substrate	Sand, Organic, Vegetated	

# Left Bank Riparian Buffer Condition

0	
1.2	
0	
0	
0	
0	
0	
1.2	
	1.2 0 0 0 0 0 0 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	Sand, Organic, Vegetated

## **Right Bank Riparian Buffer Condition**

Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	1.	
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	

# 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	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak

Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	9.5

# Stream Hydrology

Absent
Weak
Moderate
Absent
Moderate
Yes
5.5

# Stream Biology

Absent
Absent
FACW
6.75
State Protected, Corps Jurisdictional
Feature morphology decreases nearing corridor

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

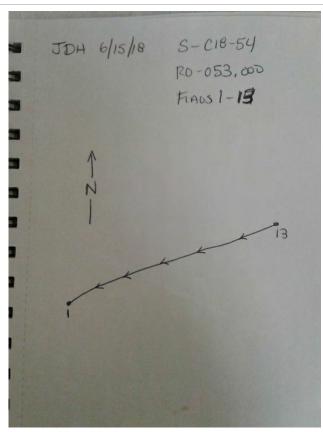
Ν



Across stream photo direction 2

Sketch of Stream

S



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

#### S-C18-55

Created	2018-06-08 12:23:45 EDT by Don Lockwood
Updated	2018-06-18 15:25:52 EDT by Sam Edmonds
Location	36.4427122, -79.6856353
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180608

#### Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	JMR
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	55
Resource ID	S-C18-55
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-55
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	10.5
Calculated Stream Type	Ephemeral
Wildlife Observed	None
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Dry or Minimal
Direction of Flow	W
Channel condition	Suboptimal
In stream habitat	Poor
Channel Alteration	
Negligible (1.5) Channel Alteration	1.5
Low Minor (1.3) Channel Alteration	0

LOW MINOR (1.5) Charmer 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)	2

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	25 to 35% (14 to 20 deg) Steep	
Left Erosion Potential	Low	
Left Bank Substrate	Organic, Vegetated	

# Left Bank Riparian Buffer Condition

0	
1.2	
0	
0	
0	
0	
0	
1.2	
	1.2         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0

# **Right Bank**

Right Bank Height (feet)	2
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Low
Right Bank Substrate	Organic, 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	Moderate
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	Absent
Headcuts	Absent
Grade control	Moderate

Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	6.5

# Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	No
Stream Hydrology Total	1.5

# Stream Biology

0,	
Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Moderate
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	2.5
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Connects to S-C18-38
Stream Quantique Danart Dhatas	

Stream Overview Report Photos

Upstream Stream Photo



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

S

Across Stream Photo 2

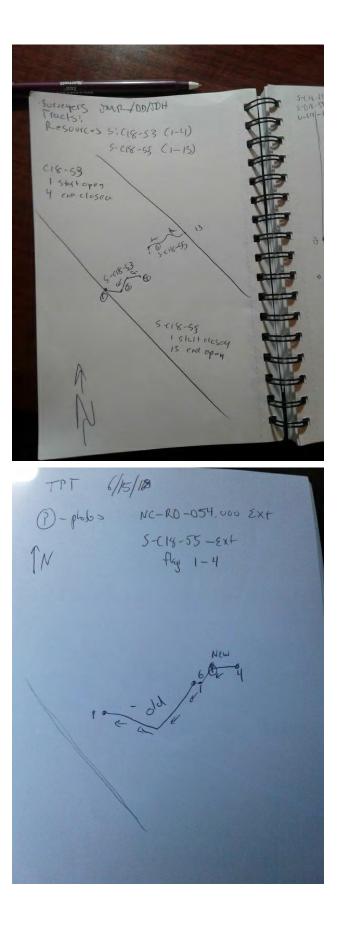


Across stream photo direction 2

Ν



Sketch of Stream



TPT 6/15/118 ()-pholos NC-RD-054,000 EXT S-C18-55-EXT fly 1-4 New 012

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

#### S-C18-56

Created	2018-06-08 13:58:40 EDT by Don Lockwood
Updated	2018-06-18 15:26:13 EDT by Sam Edmonds
Location	36.4411987, -79.6841923
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180608

#### Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	JMR
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	56
Resource ID	S-C18-56
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-56
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	31
Calculated Stream Type	Perennial
Wildlife Observed	None
Observed Use	Drainage
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	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)	2

Bank to Bank (ft)	5
Bankfull Width (ft)	4
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	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)	3
Right Bank Slope	> 35% (> 20 deg) Very Steep
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

1 07	
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	Weak
Grade control	Strong

Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	15.5

# Stream Hydrology

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

# Stream Biology

Fibrous roots in streambedWeakRooted upland plants in streambedAbsentMacrobenthosWeakAquatic mullusksWeakFishAbsentCrayfishWeakAmphibiansWeakAlgaeAbsentWetland plants in streambedOtherStream Biology Total8Regulatory StatusState Protected, Corps JurisdictionalStream Overview Report PhotosStream State Stream State		
MacrobenthosWeakAquatic mullusksWeakFishAbsentCrayfishWeakAmphibiansWeakAlgaeAbsentWetland plants in streambedOtherStream Biology Total8Regulatory StatusState Protected, Corps Jurisdictional	Fibrous roots in streambed	Weak
Aquatic mullusksWeakFishAbsentCrayfishWeakAmphibiansWeakAlgaeAbsentVetland plants in streambedOtherStream Biology Total8Regulatory StatusState Protected, Corps Jurisdictional	Rooted upland plants in streambed	Absent
FishAbsentCrayfishWeakAmphibiansWeakAlgaeAbsentVetland plants in streambedOtherStream Biology Total8Regulatory StatusState Protected, Corps Jurisdictional	Macrobenthos	Weak
CrayfishWeakAmphibiansWeakAlgaeAbsentWetland plants in streambedOtherStream Biology Total8Regulatory StatusState Protected, Corps Jurisdictional	Aquatic mullusks	Weak
AmphibiansWeakAlgaeAbsentWetland plants in streambedOtherStream Biology Total8Regulatory StatusState Protected, Corps Jurisdictional	Fish	Absent
Algae     Absent       Wetland plants in streambed     Other       Stream Biology Total     8       Regulatory Status     State Protected, Corps Jurisdictional	Crayfish	Weak
Wetland plants in streambedOtherStream Biology Total8Regulatory StatusState Protected, Corps Jurisdictional	Amphibians	Weak
Stream Biology Total     8       Regulatory Status     State Protected, Corps Jurisdictional	Algae	Absent
Regulatory Status     State Protected, Corps Jurisdictional	Wetland plants in streambed	Other
	Stream Biology Total	8
Stream Overview Report Photos	Regulatory Status	State Protected, Corps Jurisdictional
	Stream Overview Report Photos	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

S



Across stream photo direction 2

Ν



Sketch of Stream

Surveyors JM2/DD/JDH Posoukos S-C18-55 (1-0) S-C18/56 (1-10) S-C18-55 OSLOFT COMPECT O ENCLOPE 5-08-95 S-C18-5C O Short count (15mg Dence open 5- (18-54 0. NL-10-056000 TPT 6/15/18 5-618-56-5x1 flyc 1-9 N D- platos NOW & B 919 t a 4

TPT 6/15/13 NC-80-056000 5-C18-56-2xt flgc 1-3 New 99 E

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

#### S-C18-57

Created	2018-06-08 19:53:12 UTC by Don Lockwood
Updated	2018-09-20 19:34:58 UTC by Susie Gifford (SBG)
Location	36.4395621, -79.6827474
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180608

## Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	JMR
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	57
Resource ID	S-C18-57
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-57
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	25.75
Calculated Stream Type	Intermittent
Wildlife Observed	None
Observed Use	Drainage
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	0.9
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)	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	Silt-Mud, Organic, 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)	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**

0	
1.2	
0	
0	
0	
0	
0	
1.2	
	1.2 0 0 0 0 0 0

# 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	Weak	
Recent alluvial deposits	Weak	
Headcuts	Weak	
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	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7

# Stream Biology

Weak	
Absent	
Weak	
Absent	
FACW	
9.25	
State Protected, Corps Jurisdictional	
Connects to S-C18-38	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1



Across stream photo direction 1

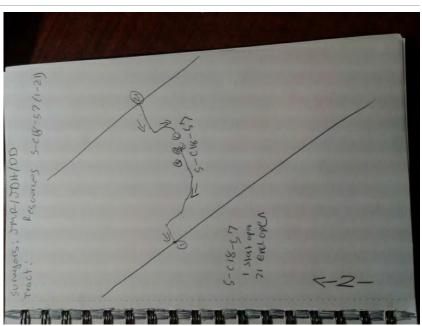
S





Sketch of Stream

Ν



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

#### WB-C18-58

Created	2018-06-09 09:43:58 EDT by Don Lockwood
Updated	2018-06-13 11:00:34 EDT by Sam Edmonds
Location	36.2133811, -79.5173012
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	//
Date2	180612

#### Resource Crew Info

, Donald Lockwood
3-58
3-58
ies Number

#### Stream Inventory

2	
Stream / Waterbody Type	Pond
Calculated Stream Score	0
Calculated Stream Type	Undetermined
Wildlife Observed	Frogs
Observed Use	Irrigation, Livestock

#### 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

#### 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 Co	ondition	
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 Total	0	
Regulatory Status	State Protected, Corps Jurisdictional	

Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

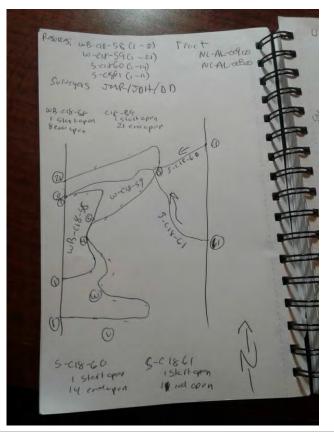
Across Stream Photo 1

S



Across stream photo direction 1

W



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

#### S-C18-60

Created	2018-06-09 14:52:31 UTC by Don Lockwood
Updated	2018-09-11 16:22:03 UTC by Will Buetow
Location	36.2140216, -79.5169703
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	//
Date2	180612

#### Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	60
Resource ID	S-C18-60
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-60
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

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

#### Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SW
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)	4	
Average Water Width (ft)	4	
Bank to Bank (ft)	5	
Bankfull Width (ft)	5	

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	High	
Left Bank Substrate	Sand	

# 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	High
Right Bank Substrate	Sand

# **Right Bank Riparian Buffer Condition**

<u> </u>		
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	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

|--|

#### Stream Hydrology

Stream right blogy	
Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Moderate
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	6

11.5

# Stream Biology

0,	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	7.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Ν



Across stream photo direction 2

Additional Stream Photos

SE



extension upstream facing ne



downstream facing sw



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

Sketch of Stream

#### S-C18-61

Created	2018-06-09 14:42:35 UTC by Don Lockwood
Updated	2018-09-11 15:55:41 UTC by Will Buetow
Location	36.2138415, -79.5169846
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	//
Date2	180612

#### Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	61
Resource ID	S-C18-61
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-61
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	28.75
Calculated Stream Type	Intermittent

#### **Stream Conditions**

Water Flow Velocity	Slow (< 1 cfs)
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)	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	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	Moderate
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No

#### Stream Geomorphology Total

Stream Hydrology		
Presence of baseflow	Strong	
Iron oxidizing bacteria	Weak	
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	6.5	

15

# Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Strong
Algae	Absent
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



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

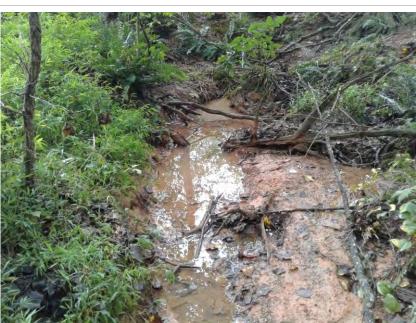
NE



Across stream photo direction 2

Additional Stream Photos

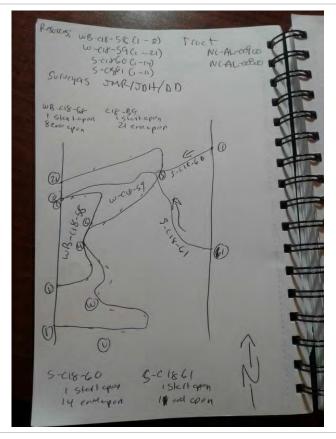
S



extension upstream facing east



extension downstream facing west



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

Sketch of Stream

#### S-C18-62

Created	2018-06-09 11:34:08 EDT by Don Lockwood	
Updated	2018-06-13 11:01:49 EDT by Sam Edmonds	
Location	36.2177724, -79.5191586	
Status	Finalized & Approved	
Client	NextEra	
Project	MVP Southgate	
Date	//	
Date2	180612	
Resource Crew Info		
Field Crew	Joe Roy	
Lead Scientist's Initials	DJL	
GPS Surveyor	Joe Roy	
Resource Series Number	62	

Resource ID	S-C18-62
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-62
Resource ID = Resource Type - Scientist Initials - R	Resource Series Number

#### Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	31.5
Calculated Stream Type	Perennial

#### **Stream Conditions**

Ser carri corrateorio		
Water Flow Velocity	Slow (< 1 cfs)	
Direction of Flow	SW	
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)	4	
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)	1.5
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	
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	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

1 07	
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	Strong
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	19.5

# Stream Hydrology

Strong
Weak
Weak
Weak
Moderate
No
6.5

# Stream Biology

0,	
Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	5.5
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Е



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

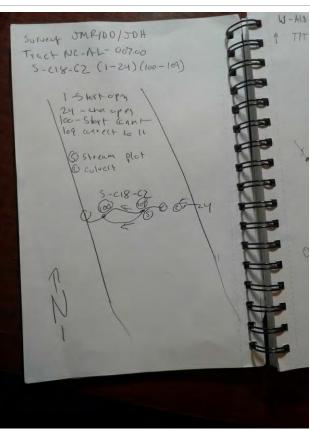
NE



Across stream photo direction 2

Sketch of Stream

S



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

#### S-C18-63

Created	2018-06-09 12:34:13 EDT by Don Lockwood
Updated	2018-06-13 11:02:35 EDT by Sam Edmonds
Location	36.2192596, -79.5201847
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	//
Date2	180612

#### Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	63
Resource ID	S-C18-63
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-63
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	33.5
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	Drainage

### Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	S
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)	4	
Average Water Width (ft)	3	
Bank to Bank (ft)	6	

Bankfull Width (ft)	4
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	Low	
Left Bank Substrate	Silt-Mud, Organic, 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	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Low	
Right Bank Substrate	Silt-Mud, Organic, Vegetated	

### **Right Bank Riparian Buffer Condition**

1.2 0 0
0
0
0
0
1.2

# Stream Geomorphology

1 07		
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	Weak	
Grade control	Moderate	
Natural valley	Moderate	

Second or greater order channel	Yes
Stream Geomorphology Total	18

### Stream Hydrology

Weak
Weak
Weak
Weak
Weak
Yes
7

# Stream Biology

Weak	
Absent	
Weak	
Absent	
Other	
8.5	
State Protected, Corps Jurisdictional	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

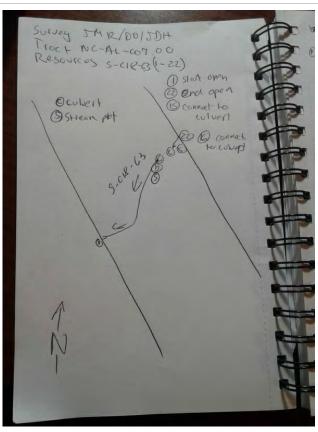
Е



Across stream photo direction 2

Additional Stream Photos

W



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

#### WB-C18-64

Created	2018-06-09 17:13:15 UTC by Don Lockwood		
Updated	2018-09-20 19:37:41 UTC by Susie Gifford (SBG)		
Location	36.2202152, -79.5217328		
Status	Finalized & Approved		
Client	NextEra		
Project	MVP Southgate		
Date	1/		
Date2	180612		

#### Resource Crew Info

Field Crew	d Crew Joe Roy		
Lead Scientist's Initials	DJL		
GPS Surveyor	Joe Roy		
GPS ID	NA		
Resource Series Number	64		
Resource ID	burce ID WB-C18-64		
o you need to override the resource id? Yes			
Resource ID Override	purce ID Override WB-C18-64		
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		
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	
	0	
Low Moderate (0.9) Channel Alteration	0	
	0	
Low Moderate (0.9) Channel Alteration High Moderate (0.7) Channel Alteration Severe (0.5) Channel Alteration		

Left Bank

# Left Bank Riparian Buffer Condition

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

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 Hydrology

,,			
Stream Hydrology Total	Total 0		
Stream Biology			
Stream Biology Total	0		
Regulatory Status	State Protected, Corps Jurisdictional	State Protected, Corps Jurisdictional	

#### Stream Overview Report Photos

Upstream Stream Photo



Downstream Stream Photo

Ν



Downstream photo direction

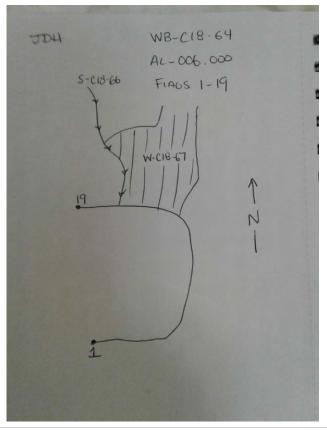
Across Stream Photo 1

W



Across stream photo direction 1

NE



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

### S-C18-66

Created	2018-06-09 14:10:54 EDT by Don Lockwood
Updated	2018-06-13 11:03:45 EDT by Sam Edmonds
Location	36.2200397, -79.5216104
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	//
Date2	180612

### Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	66
Resource ID	S-C18-66
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-66
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	25
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
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	0.9
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)	4
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

### Left Bank

Left Bank Height (feet)	2	2	
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping	15 to 25% (9 to 14 deg) Steeply Sloping	
Left Erosion Potential	Low		
Left Bank Substrate	Silt-Mud, Organic, Vegetated		

# Left Bank Riparian Buffer Condition

D D 1.1 D
0
0
0
0
1.1

# **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	Silt-Mud, Organic, Vegetated	

### **Right Bank Riparian Buffer Condition**

0	
0	
0	
0	
0	
0	
0.5	
0.5	
	0 0 0 0 0 0 0.5

# 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	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
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	Weak
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	6.5

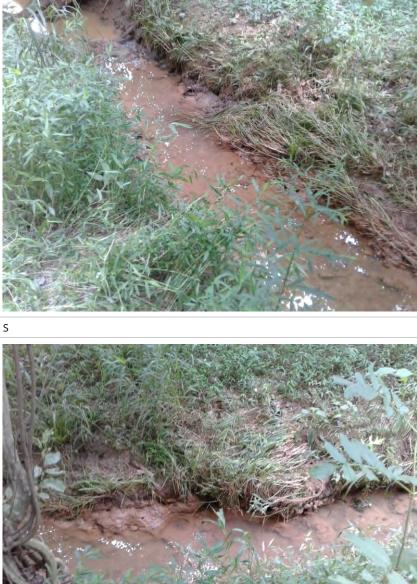
# Stream Biology

0	
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	Other
Stream Biology Total	8.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1



Across stream photo direction 1

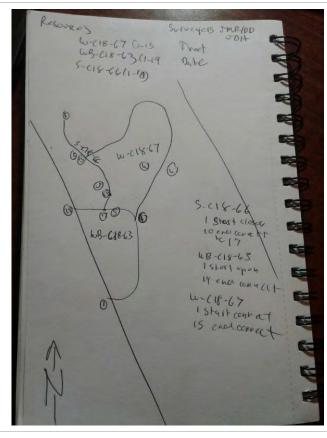
W



Across stream photo direction 2

Sketch of Stream

Е



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

#### S-C18-68

Created	2018-06-11 11:12:33 EDT by Don Lockwood
Updated	2018-06-13 11:04:09 EDT by Sam Edmonds
Location	36.2096842, -79.5167309
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/11
Date2	180611

#### Resource Crew Info

Field Crew	Jeremy Hummel
Lead Scientist's Initials	DJL
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	68
Resource ID	S-C18-68
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-68
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

### Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	40.25
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	Drainage

### Stream Conditions

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

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

### Left Bank

Left Bank Height (feet)	4
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Organic, Vegetated

# Left Bank Riparian Buffer Condition

1.5	
0	
0	
0	
0	
0	
0	
1.5	
	0 0 0 0 0 0

# **Right Bank**

Right Bank Height (feet)	4
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Organic, Vegetated

### **Right Bank Riparian Buffer Condition**

0 1	
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

1 02	
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	Strong
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Strong

Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	22

# 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	Weak
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	10.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo

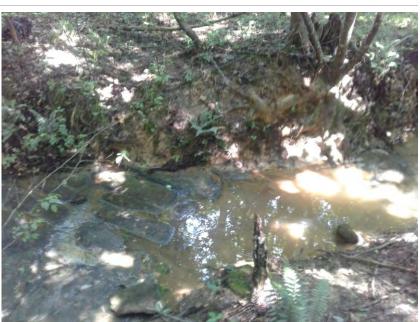




Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

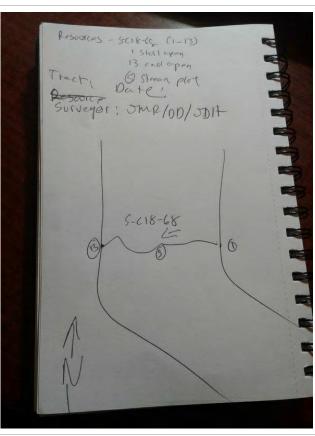
Ν



Across stream photo direction 2

Sketch of Stream

S



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

### S-C18-70

Created	2018-06-12 13:30:28 EDT by Jeremy Hummel [Sabal]
Updated	2018-06-13 13:38:48 EDT by Sam Edmonds
Location	36.0897926, -79.3652372
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/12
Date2	180612

### Resource Crew Info

Field Crew	Tony Tredway, Jeremy Hummel
Lead Scientist's Initials	C18
GPS Surveyor	Tony Tredway
GPS ID	NA
Resource Series Number	70
Resource ID	S-C18-70
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	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)	4
Average Water Width (ft)	1
Bank to Bank (ft)	6
Bankfull Width (ft)	6
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	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]	0.6	
Low poor (0.5) [Left]	0	
Left bank total	0.6	

# **Right Bank**

Right Bank Height (feet)	4
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

# **Right Bank Riparian Buffer Condition**

0 1		
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]	0.6	
Low poor (0.5) [Right]	0	
Right bank total	0.6	

# Stream Geomorphology

1 07	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Absent
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	Absent
Second or greater order channel	No
Stream Geomorphology Total	6.5

# Stream Hydrology

, , ,	
Presence of baseflow	Weak
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	8

#### Stream Biology

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	Weak
Wetland plants in streambed	FACW
Stream Biology Total	8.75
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1



Sketch of Stream





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

Created	2018-06-13 14:07:11 EDT by Jeremy Hummel [Sabal]
Updated	2018-06-14 14:06:55 EDT by Sam Edmonds
Location	36.2695962, -79.559506
Status	Finalized & Approved
Client	NextEra
Cherte	INEXTELIA
Project	MVP Southgate

#### Resource Crew Info

Field Crew	Will Buetow
Lead Scientist's Initials	B18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	71
Resource ID	S-C18-71
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-71
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream inventory	
Stream / Waterbody Type	Perennial
Calculated Stream Score	14.25
Calculated Stream Type	Ephemeral
Wildlife Observed	Frogs
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	SE
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
	0.7

# 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)	1	
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately 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]	0.6	
Low poor (0.5) [Left]	0	
Left bank total	0.6	

# **Right Bank**

Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
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	
Low marginal (0.75) [Right]	0	
High poor (0.6) [Right]	0.6	
Low poor (0.5) [Right]	0	
Right bank total	0.6	

# Stream Geomorphology

1 07	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Absent
In-channel structure	Absent
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	Absent
Second or greater order channel	No
Stream Geomorphology Total	2.5

# Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	No
Stream Hydrology Total	4

#### Stream Biology

Ser carri Brorogy	
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Moderate
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	7.75
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Farm drainage, cattle
Stream Overview Report Photos	



Upstream photo direction

Downstream Stream Photo

NW



Downstream photo direction

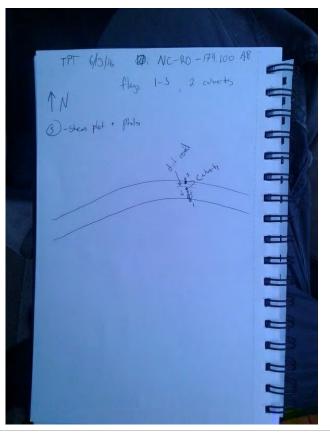


Across Stream Photo 2

SW



Across stream photo direction 2



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

Created	2018-06-19 09:25:45 EDT by Jeremy Hummel [Sabal]
Updated	2018-06-20 08:45:29 EDT by Sam Edmonds
Location	36.4371398, -79.6813923
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/19
Date2	180619

#### Resource Crew Info

Field Crew	Joe Roy
	joe noy
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	72
Resource ID	S-C18-72
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-72
Resource ID = Resource Type - Scientist Initials -	Resource Series Number

#### Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	27.5
Calculated Stream Type	Intermittent
Wildlife Observed	None
Observed Use	Drainage

#### Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	W
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)	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	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Low
Left Bank Substrate	Organic, Vegetated

# Left Bank Riparian Buffer Condition

# **Right Bank**

Right Bank Height (feet)	4	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Low	
Right Bank Substrate	Organic, 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

1 07	
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	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

Weak
Weak
Weak
Weak
Weak
Yes
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	Other
Stream Biology Total	8.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

W



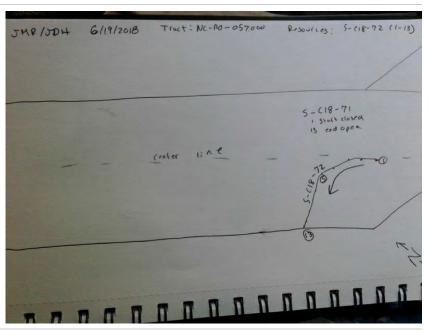
Across stream photo direction 1

S



Sketch of Stream

Ν



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

Updated2018-09-20 19:35:21 UTC by Susie Gifford (SBG)Location36.4399843, -79.6841702StatusFinalized & ApprovedClientNextEra
Status     Finalized & Approved       Client     NextEra
Client NextEra
Project MVP Southgate
Date 18/06/19
Date2 180619

#### Resource Crew Info

Field Crew	Joe Roy
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
Resource Series Number	73
Resource ID	S-C18-73
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - R	Resource Series Number

#### Stream Inventory

j		
Stream / Waterbody Type	Perennial	
Calculated Stream Score	27	
Calculated Stream Type	Intermittent	
Wildlife Observed	None	
Observed Use	Drainage	

#### Stream Conditions

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	NE
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)	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	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	Low	
Left Bank Substrate	Organic, 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**

0		
Right Bank Height (feet)	4	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Low	
Right Bank Substrate	Organic, Vegetated	

# **Right Bank Riparian Buffer Condition**

0 1		
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	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	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

#### Stream Geomorphology Total

#### 11.5

#### Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Weak
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	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	Other
Stream Biology Total	8.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

Е



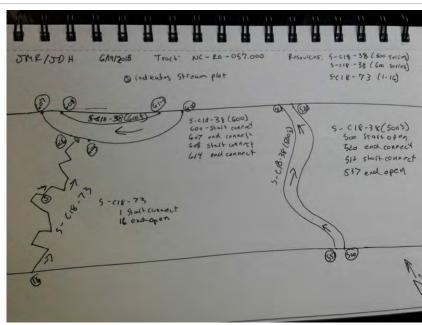
Across stream photo direction 1

Ν



Sketch of Stream

S



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

Created	2018-06-20 09:41:08 EDT by Jeremy Hummel [Sabal]
Updated	2018-06-25 10:07:54 EDT by Sam Edmonds
Location	36.442677, -79.6871283
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/20
Date2	180620

#### Resource Crew Info

Field Crew	Joe Roy, Jeremy Hummel
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	74
Resource ID	S-C18-74
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-74
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

<b>,</b>	
Stream / Waterbody Type	Intermittent
Calculated Stream Score	18.25
Calculated Stream Type	Ephemeral
Wildlife Observed	None
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Dry or Minimal
Direction of Flow	W
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)	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)	2
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]	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	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]	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

i	
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	Moderate
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	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Weak
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	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	6.75
Regulatory Status	State Protected, Corps Jurisdictional
Stroom Quantion Report Photos	

Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

W



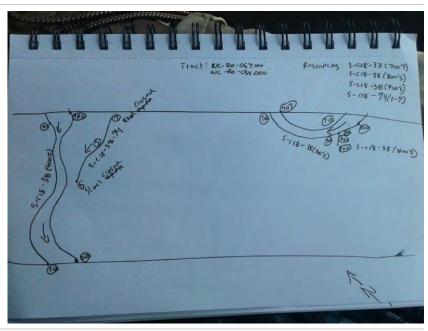
Across stream photo direction 1

Ν



Sketch of Stream

S



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

Created	2018-06-20 11:44:35 EDT by Jeremy Hummel [Sabal]
Updated	2018-06-25 10:09:12 EDT by Sam Edmonds
Location	36.4455509, -79.6903789
Status	Finalized & Approved
Client	NextEra
Project	NextEra MVP Southgate

#### Resource Crew Info

Field Crew	Joe Roy, Jeremy Hummel
Lead Scientist's Initials	DJL
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	75
Resource ID	S-C18-75
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-75
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream inventory	
Stream / Waterbody Type	Ephemeral
Calculated Stream Score	11
Calculated Stream Type	Ephemeral
Wildlife Observed	None
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Dry or Minimal
Direction of Flow	SE
Channel condition	Suboptimal
In stream habitat	Poor
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

#### Stream Measurements

Severe (0.5) Channel Alteration

Channel Alteration Total

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

0

1.3

Bank to Bank (ft)	4
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	Low	
Left Bank Substrate	Organic, 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)	3
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Low
Right Bank Substrate	Organic, 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 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

i	
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	Moderate
Second or greater order channel	No
Stream Geomorphology Total	6

# Stream Hydrology

Absent
Absent
Moderate
Absent
Moderate
No
1.5

# Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	3.5
Notes	Non juridictional
Stream Overview Penert Photos	

Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

SE



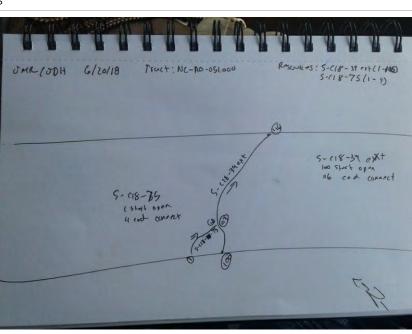
Across stream photo direction 1

Ν



Sketch of Stream

S



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

Created	2018-06-21 19:00:38 UTC by Jeremy Hummel [Sabal]
Updated	2018-08-30 13:51:43 UTC by Will Buetow
Location	36.3055891, -79.5880684
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/21
Date2	180621

#### Resource Crew Info

Joe Roy, Jeremy Hummel
C18
Joe Roy
NA
76
S-C18-76
No
esource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	39.25
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	Drainage

#### Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
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	0.9
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	0.9

#### Stream Measurements

OHWM Width (ft)	12
Average Water Width (ft)	6
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	> 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)	6
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

1 07	
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	Moderate
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate

Second or greater order channel	Yes
Stream Geomorphology Total	16.5

# Stream Hydrology

, ,,	
Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
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	9.5

# Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Moderate
Fish	Moderate
Crayfish	Moderate
Amphibians	Moderate
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	13.25
Regulatory Status	State Protected, Corps Jurisdictional
Notes	South side of channel top of bank within RED No Access tract, Across Photo 2 to the North not accessible

#### Stream Overview Report Photos

Upstream Stream Photo





#### Downstream photo direction

Across Stream Photo 1

Е

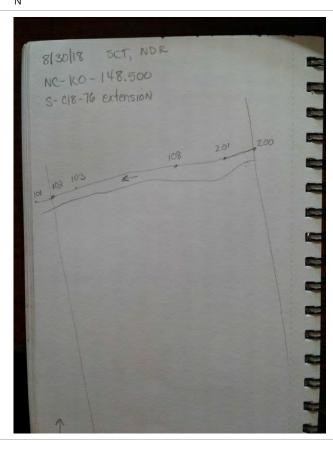


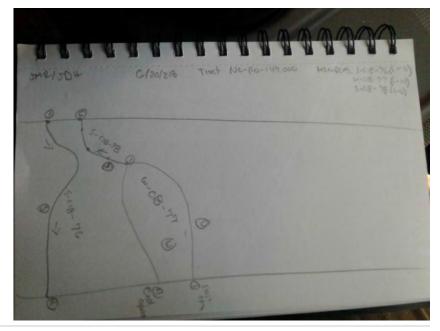
Across stream photo direction 1

S



Additional Stream Photos





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

Created	2018-06-21 16:08:20 EDT by Don Lockwood
Updated	2018-06-25 10:44:11 EDT by Sam Edmonds
Location	36.3055492, -79.5876993
Status	Finalized & Approved
Client	NextEra
Client Project	NextEra MVP Southgate

#### Resource Crew Info

Field Crew	Joe Roy, Jeremy Hummel, Susan Thebert
Lead Scientist's Initials	JDH
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	78
Resource ID	S-C18-78
Do you need to override the resource id?	Yes
Resource ID Override	S-C18-78
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Stream Inventory

Stream inventory	
Stream / Waterbody Type	Intermittent
Calculated Stream Score	20.75
Calculated Stream Type	Intermittent
Wildlife Observed	None
Observed Use	Drainage
Stream Conditions	
Water Flow Velocity	Dry or Minimal
Direction of Flow	NE
Channel condition	Suboptimal
In stream habitat	Poor
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

	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)	2

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

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, Organic, 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)	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**

0	
1.2	
0	
0	
0	
0	
0	
1.2	
	1.2 0 0 0 0 0 0

i	
Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Weak
In-channel structure	Absent
Particle size of stream substrate	Weak
Active or relict floodplain	Strong
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	8.5

Absent
Absent
Weak
Moderate
Weak
Yes
5.5

## Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	6.75
Regulatory Status	State Protected, Corps Jurisdictional
Straam Overview Report Photos	

Stream Overview Report Photos

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

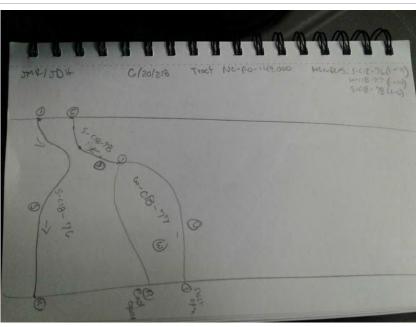
Е



Across stream photo direction 2

Sketch of Stream

W



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

#### S-C18-79

Created	2018-06-22 09:52:05 EDT by Jeremy Hummel [Sabal]
Updated	2018-06-26 10:32:22 EDT by Sam Edmonds
Location	36.300923, -79.5856295
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/22
Date2	180622

### Resource Crew Info

Field Crew	Joe Roy, Jeremy Hummel, Susan Thebert
Lead Scientist's Initials	C18
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	79
Resource ID	S-C18-79
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	31.5
Calculated Stream Type	Perennial
Wildlife Observed	None
Observed Use	Drainage

### Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SW
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)	4	
Average Water Width (ft)	2	
Bank to Bank (ft)	5	

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

Left Bank Height (feet)	6
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Low
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]	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)	5
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Low
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]	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	

1 07	
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	Weak
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Moderate
Natural valley	Strong

Second or greater order channel	Yes
Stream Geomorphology Total	16.5

Weak
Weak
Moderate
Weak
Moderate
Yes
7

## Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Weak
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	8
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

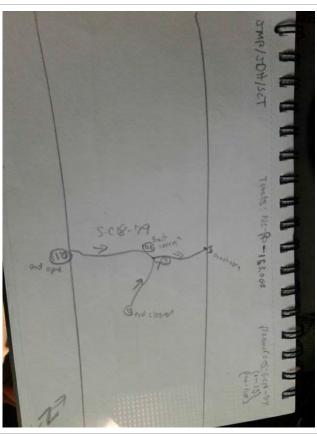
Е



Across stream photo direction 2

Sketch of Stream

W



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

#### S-C18-80

Created	2018-06-22 17:17:55 UTC by Jeremy Hummel [Sabal]
Updated	2018-09-20 19:35:36 UTC by Susie Gifford (SBG)
Location	36.3472917, -79.6072676
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/22
Date2	180622

### Resource Crew Info

Field Crew	Joe Roy, Jeremy Hummel, Susan Thebert
Lead Scientist's Initials	C18
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	80
Resource ID	S-C18-80
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	28
Calculated Stream Type	Intermittent
Wildlife Observed	None
Observed Use	Drainage

### 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	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 Height (feet)	4
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Organic, 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	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Organic, Vegetated

### **Right Bank Riparian Buffer Condition**

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	

1 07	
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	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong

Second or greater order channel	No	
Stream Geomorphology Total	12.5	

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Presence of baseflow	Weak
Iron oxidizing bacteria	Weak
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	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	Other
Stream Biology Total	8.5
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

S



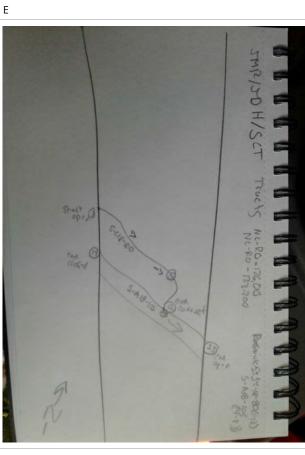
Across stream photo direction 1

W



Across stream photo direction 2

Sketch of Stream



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

### S-C18-81

Created	2018-06-23 10:11:31 EDT by Jeremy Hummel [Sabal]
Updated	2018-06-26 10:33:33 EDT by Sam Edmonds
Location	36.0771916, -79.3577918
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/23
Date2	180623

### Resource Crew Info

Joe Roy, Jeremy Hummel
C18
Joe Roy
NA
81
S-C18-81
No
esource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	34
Calculated Stream Type	Perennial
Wildlife Observed	None
Observed Use	Drainage

### Stream Conditions

Water Flow Velocity	Dry or Minimal
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	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)	12	
Average Water Width (ft)	10	
Bank to Bank (ft)	16	

Bankfull Width (ft)	14
Probed Stream Depth	0 to 6 inches

Left Bank Height (feet)	6
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Low
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]	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)	6
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Low
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]	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	

1 07	
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	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Moderate
Natural valley	Strong

Second or greater order channel	Yes
Stream Geomorphology Total	18.5

Weak
Absent
Weak
Moderate
Weak
Yes
6.5

# Stream Biology

Weak	
Absent	
Weak	
Weak	
Absent	
Moderate	
Moderate	
Absent	
Other	
9	
State Protected, Corps Jurisdictional	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

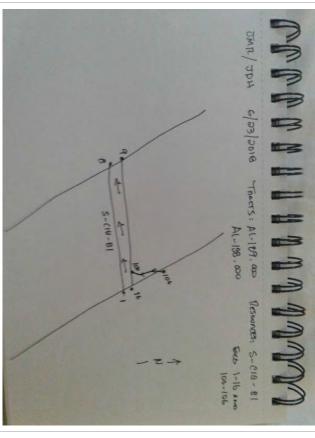
Ν



Across stream photo direction 2

Sketch of Stream

S



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

#### S-C18-82

Created	2018-06-23 14:49:54 UTC by Jeremy Hummel [Sabal]	
Updated	2018-09-20 19:35:58 UTC by Susie Gifford (SBG)	
Location	36.0815221, -79.359591	
Status	Finalized & Approved	
	NextEra	
Client	NextEra	
Client Project	NextEra MVP Southgate	

### Resource Crew Info

Field Crew	Joe Roy, Laura Giese, Jeremy Hummel
Lead Scientist's Initials	C18
GPS Surveyor	Joe Roy
GPS ID	NA
Resource Series Number	82
Resource ID	S-C18-82
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
Wildlife Observed	None
Observed Use	Drainage

### Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	NW
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)	3	
Average Water Width (ft)	3	
Bank to Bank (ft)	5	

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

Left Bank Height (feet)	3	
Left Bank Slope	25 to 35% (14 to 20 deg) Steep	
Left Erosion Potential	Low	
Left Bank Substrate	Silt-Mud, Organic, 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	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Organic, Vegetated

## **Right Bank Riparian Buffer Condition**

1.2 0 0
0
0
0
0
1.2

1 07	
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	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong

Second or greater order channel	No	
Stream Geomorphology Total	11.5	

Presence of baseflow	Absent
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?	Yes
Stream Hydrology Total	5

## Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	6
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo





Downstream photo direction

Across Stream Photo 1



Across stream photo direction 1

Ν



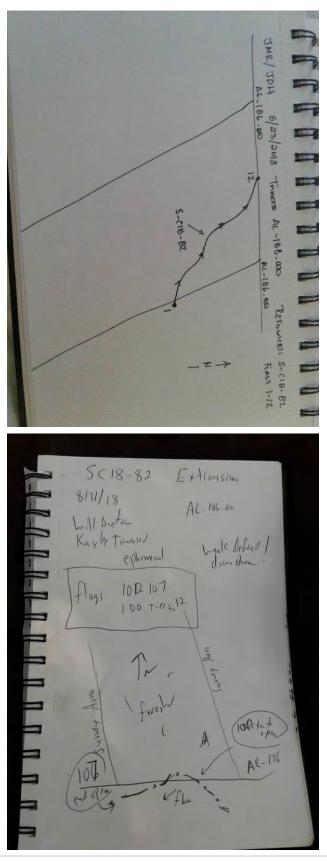
Across stream photo direction 2

Additional Stream Photos

S



Sketch of Stream



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

#### S-C18-83

Created	2018-06-23 15:18:04 UTC by Jeremy Hummel [Sabal]
Updated	2018-09-20 19:36:10 UTC by Susie Gifford (SBG)
Location	36.0796008, -79.35933
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
	8
Date	18/06/23

#### Resource Crew Info

Joe Roy, Jeremy Hummel
C18
Joe Roy
NA
83
S-C18-83
No
esource Series Number

## Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	17.5
Calculated Stream Type	Ephemeral
Wildlife Observed	None
Observed Use	Drainage

### Stream Conditions

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

### **Channel Alteration**

0
1.3
0
0
0
0
1.3
-

#### 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 Height (feet)	2	
Left Bank Slope	25 to 35% (14 to 20 deg) Steep	
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)	2
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
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	

1 07	
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	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Moderate
Natural valley	Strong

Second or greater order channel	No
Stream Geomorphology Total	11.5

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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	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	4.5
Stream Overview Report Photos	

Upstream Stream Photo



Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

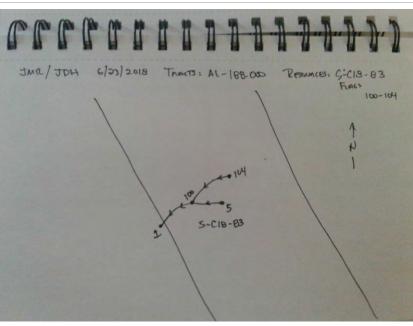
Ν



Across stream photo direction 2

Sketch of Stream

S



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