S-	Δ	1	2-	1	Q	6
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Created	2018-07-24 12:20:59 UTC by Laura Giese
Updated	2018-09-06 14:06:17 UTC by Joseph Roy
Location	36.8232403, -79.3525951
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/24
Date2	180724

Field Crew	Laura Giese, Simon King	
Lead Scientist's Initials	A18	
Resource Series Number	186	
Resource ID	S-A18-186	
Do you need to override the resource id?	No	
Pasource ID = Pasource Type - Scientist Initials - Pasource Series Number		

# Stream Inventory

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

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE
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	

#### **Stream Measurements**

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

## Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
eft Erosion Potential	Low
Left Bank Substrate	Vegetated
Left Bank Riparian Buffer Condition	on
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
ow suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
ow marginal (0.75) [Left]	0.2
High poor (0.6) [Left]	0.5
_ow poor (0.5) [Left]	0
eft bank total	0.7
Right Bank	
Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Dialet Danie Dinamina Duffen Condi	<b>A</b> :
<b>Right Bank Riparian Buffer Condi</b> t Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.2) [Right]	0
	0
High marginal (0.85) [Right]	
Low marginal (0.75) [Right]	0.4
High poor (0.6) [Right]	0.3
Low poor (0.5) [Right]	0
Right bank total	0.7
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
n-channel structure	Weak
Particle size of stream substrate	Weak
	Absent
Active or relict floodplain	Absent
	Absent
Active or relict floodplain Depositional bars or benches Recent alluvial deposits	
Depositional bars or benches	Absent
Depositional bars or benches Recent alluvial deposits	Absent Absent
Depositional bars or benches Recent alluvial deposits Headcuts	Absent Absent Absent
Depositional bars or benches Recent alluvial deposits Headcuts Grade control	Absent Absent Absent Absent

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?	Yes
Stream Hydrology Total	4.5

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	6.75
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction N

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

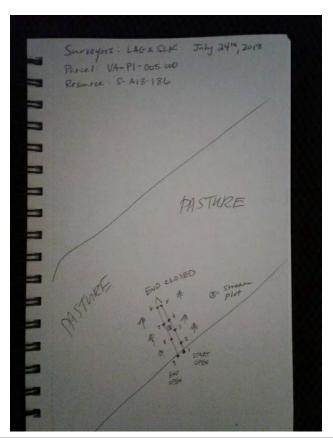
S



Across stream photo direction 1

Ε

Sketch of Stream



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

S-	Δ	1	2-	1	Q	Q
J-	_		O-		u	u

Created	2018-07-25 13:36:22 UTC by Laura Giese
Updated	2018-09-06 14:14:09 UTC by Joseph Roy
Location	36.6618691, -79.5112719
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/25
Date2	180725

Laura Giese, Simon King
A18
188
S-A18-188
No

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

# Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	33.75
Calculated Stream Type	Perennial

## **Stream Conditions**

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

### **Channel Alteration**

Negligible (1.5) Channel Alteration	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

Left Bank Height (feet)	4	
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	า	
Optimal (1.5) [Left]	0.5	
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]	0.4	
Low poor (0.5) [Left]	0	
Left bank total	0.9	
Right Bank		
Right Bank Height (feet)	3	
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping	
Right Erosion Potential	Low	
Right Bank Substrate	Sand, Vegetated	
Right Bank Riparian Buffer Condition Optimal (1.5) [Right]	on 1.5	
High suboptimal (1.2) [Right]	0	
	<u> </u>	
Low suboptimal (1.1) [Right]	0	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right]		
	0	
High marginal (0.85) [Right]	0	
High marginal (0.85) [Right] Low marginal (0.75) [Right]	0 0 0	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]	0 0 0 0	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total	0 0 0 0	
High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	0 0 0 0	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology	0 0 0 0 0 0 1.5	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank	0 0 0 0 0 0 1.5 Strong	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg	0 0 0 0 0 0 1.5 Strong	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure	0 0 0 0 0 1.5 Strong Strong Moderate	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate	0 0 0 0 0 1.5  Strong Strong Moderate Strong	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain	0 0 0 0 0 1.5 Strong Strong Moderate Strong Weak	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches	0 0 0 0 1.5 Strong Strong Moderate Strong Weak Moderate	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits	0 0 0 0 1.5  Strong Strong Moderate Strong Weak Moderate Weak	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts	0 0 0 0 1.5  Strong Strong Moderate Strong Weak Moderate Weak Absent	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts  Grade control	0 0 0 0 0 1.5  Strong Strong Moderate Strong Weak Moderate Weak Moderate Weak Absent Moderate	

Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	9.75
Notes	Dammed upslope to create pond
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

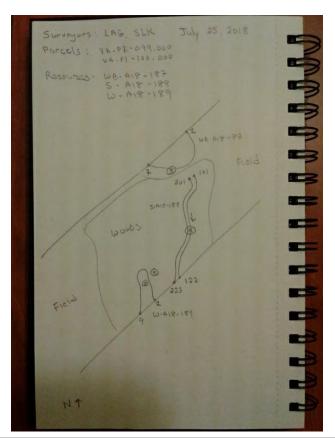
S



Across stream photo direction 1

Е

Sketch of Stream



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

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Created	2018-07-26 12:10:57 UTC by Laura Giese
Updated	2018-09-06 14:28:00 UTC by Joseph Roy
Location	36.6545178, -79.5173958
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
Resource Series Number	190
Resource ID	S-A18-190A
Do you need to override the resource id?	Yes
Resource ID Override	S-A18-190A
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

## Stream Inventory

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

#### **Stream Conditions**

Water Flow Velocity	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	1.1
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.1

#### **Stream Measurements**

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

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

## Left Bank Riparian Buffer Condition

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

# 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	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]	0.2	
Low marginal (0.75) [Right]	0.5	
High poor (0.6) [Right]	0	
Low poor (0.5) [Right]	0	
Right bank total	0.7	

# Stream Geomorphology

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

Stream Hydrology

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

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	7.5
Notes	Pond upslope, culverted under dirt road
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Ε

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

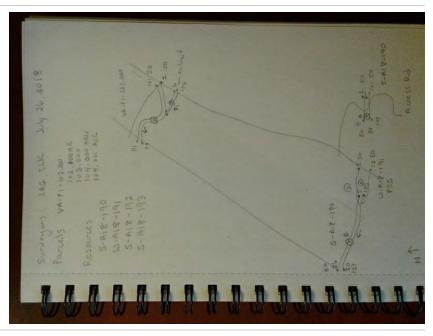
S

#### Additional Stream Photos



Headcut by flag 9 and 108

Sketch of Stream



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

S-A1	I Q_1	I an	R
3-M	0-	IフU	ID

Created	2018-07-26 14:17:11 UTC by Laura Giese
Updated	2018-09-13 15:53:47 UTC by Phil Jacques
Location	36.6553104, -79.5188945
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Field Crew	Laura Giese, Simon King	
Lead Scientist's Initials	A18	
Resource Series Number	190	
Resource ID	S-A18-190B	
Do you need to override the resource id?	Yes	
Resource ID Override S-A18-190B		
Resource ID = Resource Type - Scientist Initials	- Resource Series Number	

## Stream Inventory

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

#### **Stream Conditions**

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	NW
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)	3	
Average Water Width (ft)	2	
Bank to Bank (ft)	4	
Bankfull Width (ft)	4	
Probed Stream Depth	0 to 6 inches	

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

## Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	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	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

# Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	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

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

Stream Hydrology

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

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Absent
Stream Biology Total	7.5
Notes	Trash in upper parts
·	Trasti in apper pares

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

SE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

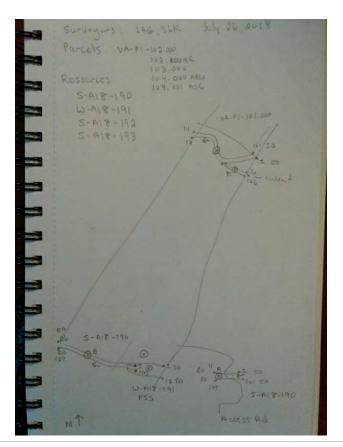
NW



Across stream photo direction 1

S

Sketch of Stream



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

S-	Δ	1	۵.	.1	q	7
	_		O-		J	_

Created	2018-07-26 15:50:14 UTC by Laura Giese
Updated	2018-09-06 14:16:36 UTC by Joseph Roy
Location	36.6574209, -79.5169315
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Laura Giese, Simon King	
A18	
192	
S-A18-192	
No	
_	

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

## Stream Inventory

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

## **Stream Conditions**

Water Flow Velocity	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	1.1
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.1

#### **Stream Measurements**

#### 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

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	10

# Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
- Infous roots in streambed	Austrit
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent

Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	7
Notes	Upper reach has been straightened

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo





Downstream photo direction

W

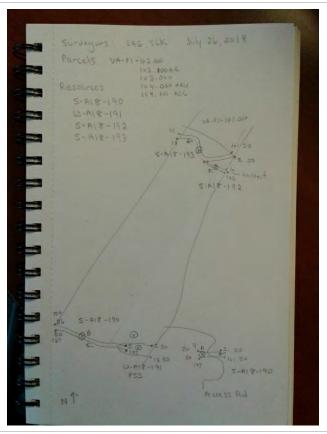
Across Stream Photo 1



Across stream photo direction 1

Sketch of Stream

S



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

S-	Δ	1	Q.	.1	a	2
	_		O-		J	_

Created	2018-07-26 16:28:27 UTC by Laura Giese
Updated	2018-09-06 14:17:08 UTC by Joseph Roy
Location	36.6573811, -79.5174392
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
Resource Series Number	193
Resource ID	S-A18-193
Do you need to override the resource id?	No
Pesource ID = Resource Type - Scientist Initials	Posource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	40
Calculated Stream Type	Perennial

## **Stream Conditions**

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	NW
Channel condition	Suboptimal
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)	13
Average Water Width (ft)	3
Bank to Bank (ft)	13
Bankfull Width (ft)	13
Probed Stream Depth	0 to 6 inches

## Left Bank

Left Bank Height (feet)	4		
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]	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	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping		
Right Erosion Potential	Low		
Right Bank Substrate	Silt-Mud, Vegetated		
Dight Dank Dinarian Duffer Condition			
Right Bank Riparian Buffer Conditio			
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			
Stream deamorphology			
Continuity of channel bed and bank	Strong		
	Strong Strong		
Continuity of channel bed and bank			
Continuity of channel bed and bank Sinuosity of channel along thalweg	Strong		
Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure	Strong Strong		
Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	Strong Strong Strong		
Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	Strong Strong Weak		
Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	Strong Strong Strong Weak Moderate		
Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	Strong Strong Strong Weak Moderate Weak		
Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	Strong Strong Strong Weak Moderate Weak Absent		
Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts Grade control	Strong Strong Strong Weak Moderate Weak Absent Weak		

Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Weak
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Stream Biology Total	11.5

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

N



Across stream photo direction 1

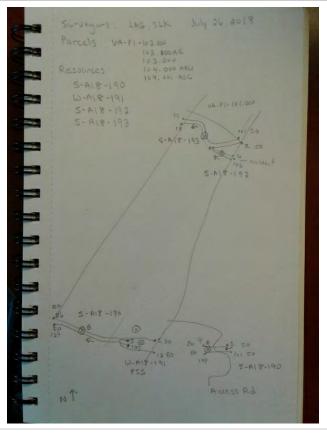
SW

#### Additional Stream Photos



in existing ROW, facing downstream

Sketch of Stream



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

S-	Δ	1	Q.	.1	a	1
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Created	2018-07-26 17:38:07 UTC by Laura Giese
Updated	2018-09-06 14:35:38 UTC by Joseph Roy
Location	36.6536265, -79.5198733
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Field Crew	Laura Giese, Simon King		
Lead Scientist's Initials	A18		
Resource Series Number	194		
Resource ID	S-A18-194		
Do you need to override the resource id?	No		
Resource ID = Resource Type - Scientist Initials - Resource Series Number			

# Stream Inventory

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

## **Stream Conditions**

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

### **Channel Alteration**

0
1.3
0
0
0
0
1.3

#### **Stream Measurements**

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

## Left Bank

Left Bank Height (feet)	3		
Left Bank Slope	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]	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	8 to 15% (5 to 9 deg) Moderately Sloping		
Right Erosion Potential	Moderate		
Right Bank Substrate	Silt-Mud, Vegetated		
Right Bank Riparian Buffer Condition	0		
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		
	1.5		
Right bank total	1.3		
Stream Geomorphology			
Continuity of channel bed and bank	Strong		
Cinyosity of shappal along the lives	Strong		
Sinuosity of channel along thalweg	•		
In-channel structure	Moderate		
In-channel structure	Moderate		
In-channel structure Particle size of stream substrate	Moderate Strong		
In-channel structure Particle size of stream substrate Active or relict floodplain	Moderate Strong Absent		
In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches	Moderate Strong Absent Weak		
In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits	Moderate Strong Absent Weak Weak		
In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts	Moderate Strong Absent Weak Weak Weak		
In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts Grade control	Moderate Strong Absent Weak Weak Weak Moderate		

Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	8
Notes	Pond upslope: Sandy substrate in southern reach

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

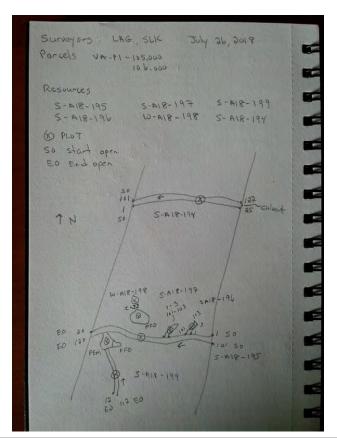
NW



Across stream photo direction 1

NE

Sketch of Stream



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

S-	Δ	1	2-	1	q	5
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Created	2018-07-26 18:54:02 UTC by Laura Giese
Updated	2018-09-06 15:01:23 UTC by Joseph Roy
Location	36.6517325, -79.5214818
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
Resource Series Number	195
Resource ID	S-A18-195
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials -	Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	37.5
Calculated Stream Type	Perennial

## **Stream Conditions**

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	NW
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)	3	
Average Water Width (ft)	2	
Bank to Bank (ft)	4	
Bankfull Width (ft)	4	
Probed Stream Depth	0 to 6 inches	

## Left Bank

Left Bank Height (feet)	3
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Sand, Vegetated
Left Bank Riparian Buffer Condition	on
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	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Sand, Vegetated
Right Bank Riparian Buffer Condit	ion
Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	
In-channel structure	Strong
Particle size of stream substrate	Strong
Active or relict floodplain	Strong Weak
Depositional bars or benches	Moderate
· · · · · · · · · · · · · · · · · · ·	
Recent alluvial deposits	Weak Weak
Headcuts  Grade central	
Grade control  Netural valley	Weak
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	21.5

Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	8

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

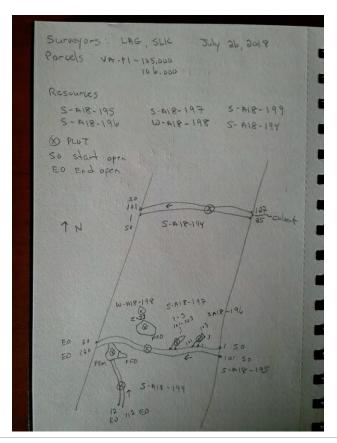
NW



Across stream photo direction 1

S

Sketch of Stream



S-	Δ	1	Q_	1	a	6
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Created	2018-07-26 18:20:58 UTC by Laura Giese
Updated	2018-09-06 14:39:48 UTC by Joseph Roy
Location	36.6517339, -79.5212734
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
Resource Series Number	196
Resource ID	S-A18-196
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	21
Calculated Stream Type	Intermittent

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	W
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	

#### **Stream Measurements**

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

## Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated
Left Bank Riparian Buffer Conditi	ion
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	Vegetated
Right Bank Riparian Buffer Condi	ition
Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	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 Stream Geomorphology Total	No 6

Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	7
Notes	Seepage out of hillside

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

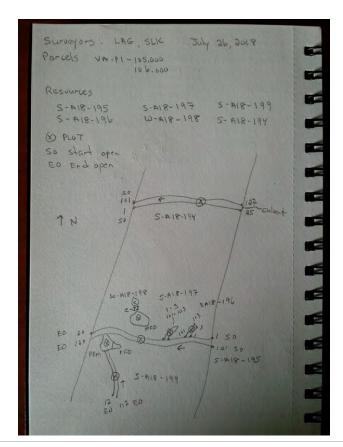
W



Across stream photo direction 1

S

Sketch of Stream



S-	Δ	1	۵.	.1	q	7
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Created	2018-07-26 18:45:30 UTC by Laura Giese
Updated	2018-09-06 14:58:08 UTC by Joseph Roy
Location	36.6519039, -79.5214832
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Field Crew	Laura Giese, Simon King	
Lead Scientist's Initials	A18	
Resource Series Number	197	
Resource ID	S-A18-197	
Do you need to override the resource id?	No	
Resource ID = Resource Type - Scientist Initials - Resource Series Number		

# Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	21.25
Calculated Stream Type	Intermittent

## **Stream Conditions**

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

#### **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)	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	
Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	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	Weak
Second or greater order channel	No
Stream Geomorphology Total	6.5
St. cam decimorphology rotal	

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7

# 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
Notes	Seepage out of hillside
Character Desired Plants	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

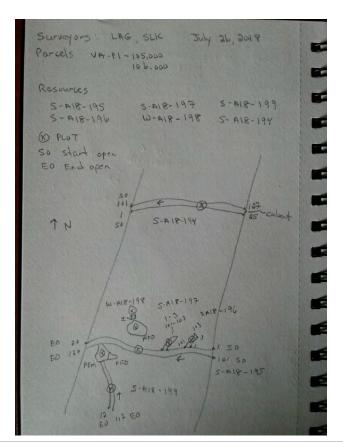
NW



Across stream photo direction 1

Ν

Sketch of Stream



S-	Δ	1	<b>Q</b> _	1	a	a
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Created	2018-07-26 20:22:44 UTC by Laura Giese
Updated	2018-09-06 15:02:43 UTC by Joseph Roy
Location	36.6515719, -79.5221889
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
Resource Series Number	199
Resource ID	S-A18-199
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
Calculated Stream Type	Perennial

## **Stream Conditions**

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

### **Channel Alteration**

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

#### **Stream Measurements**

OHWM Width (ft)	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)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	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
Dicht Dank	
Right Bank	
Right Bank Height (feet)	3
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	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	Const
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	15

Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	8

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

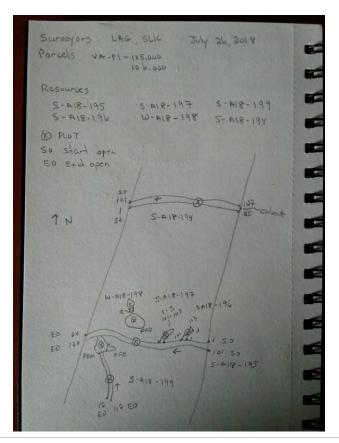
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Across stream photo direction 1

SW

Sketch of Stream



S-	Δ	1	Q.	. つ	n	2
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Created	2018-07-31 13:23:15 UTC by Laura Giese
Updated	2018-09-06 15:28:28 UTC by Joseph Roy
Location	36.5865443, -79.5861588
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/31
Date2	180731

Field Crew	Laura Giese, Susan Thebert
Lead Scientist's Initials	A18
Resource Series Number	203
Resource ID	S-A18-203
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	26.5
Calculated Stream Type	Intermittent

## **Stream Conditions**

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	NW
Channel condition	Optimal
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)	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)  Left Bank Slope  8 to 15% (5 to 9 deg) Moderately Sloping  Left Erosion Potential  Low  Left Bank Riparian Buffer Condition  Optimal (1.5) [Left]  1.5  High suboptimal (1.2) [Left]  Low suboptimal (1.1) [Left]  O  Low arginal (0.55) [Left]  Low marginal (0.55) [Left]  O  Light Bank Riparian Buffer Condition  Optimal (1.5) [Left]  Low fligh poor (0.6) [Left]  O  Low fligh Bank (feet)  Right Bank Height (feet)  Right Bank Slope  8 to 15% (5 to 9 deg) Moderately Sloping  Right Bank Substrate  Vegetated  Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  0.75	
Left Bank Substrate Sand, 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 Low poor (0.6) [Left] 0 Low poor (0.5) [Left] 0 Left bank total 1.5  Right Bank Right Bank Height (feet) 1 Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Bank Substrate Vegetated  Right Bank Riparian Buffer Condition	
Left Bank Riparian Buffer Condition   Optimal (1.5) [Left] 1.5   High suboptimal (1.2) [Left] 0   Low suboptimal (1.1) [Left] 0   High marginal (0.85) [Left] 0   Low marginal (0.75) [Left] 0   High poor (0.6) [Left] 0   Low poor (0.5) [Left] 0   Left bank total 1.5   Right Bank   Right Bank Height (feet) 1   Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping   Right Bank Substrate Vegetated    Right Bank Riparian Buffer Condition	
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  Ligh poor (0.6) [Left] 0  Low poor (0.5) [Left] 0  Left bank total 1.5  Right Bank  Right Bank  Right Bank Height (feet) 1  Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping  Right Bank Substrate Vegetated  Right 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 Right Bank Height (feet) 1  Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping  Right Bank Substrate Vegetated  Right 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 1.5  Right Bank Right Bank Height (feet) 1 Right Book Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Book Substrate Vegetated  Right Bank Riparian Buffer Condition	
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 Right Bank Height (feet) 1 Right Bonk Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low Right Bank Substrate Vegetated  Right Bank Riparian Buffer Condition	
High marginal (0.85) [Left] 0  Low marginal (0.75) [Left] 0  High poor (0.6) [Left] 0  Low poor (0.5) [Left] 0  Left bank total 1.5  Right Bank Right Bank Height (feet) 1  Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low  Right Bank Substrate Vegetated	
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 Right Bank Height (feet) 1 Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low Right Bank Substrate Vegetated  Right Bank Riparian Buffer Condition	
High poor (0.6) [Left] 0  Low poor (0.5) [Left] 0  Left bank total 1.5  Right Bank Right Bank Height (feet) 1  Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping  Right Erosion Potential Low  Right Bank Substrate Vegetated  Right Bank Riparian Buffer Condition	
Low poor (0.5) [Left] 0  Left bank total 1.5  Right Bank Right Bank Height (feet) 1  Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low  Right Bank Substrate Vegetated  Right Bank Riparian Buffer Condition	
Right Bank Right Bank Height (feet) Right Bank Slope Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condition	
Right Bank Right Bank Height (feet) 1 Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low Right Bank Substrate Vegetated  Right Bank Riparian Buffer Condition	
Right Bank Height (feet)  Right Bank Slope  8 to 15% (5 to 9 deg) Moderately Sloping  Right Erosion Potential  Low  Right Bank Substrate  Vegetated  Right Bank Riparian Buffer Condition	
Right Bank Height (feet)  Right Bank Slope  8 to 15% (5 to 9 deg) Moderately Sloping  Right Erosion Potential  Low  Right Bank Substrate  Vegetated  Right Bank Riparian Buffer Condition	
Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low Right Bank Substrate Vegetated  Right Bank Riparian Buffer Condition	
Right Erosion Potential Low Right Bank Substrate Vegetated  Right Bank Riparian Buffer Condition	
Right Bank Substrate Vegetated  Right Bank Riparian Buffer Condition	
Right Bank Riparian Buffer Condition	
<u> </u>	
<u> </u>	
High suboptimal (1.2) [Right] 0	
Low suboptimal (1.1) [Right] 0	
High marginal (0.85) [Right] 0	
Low marginal (0.75) [Right] 0.35	
High poor (0.6) [Right] 0	
Low poor (0.5) [Right] 0	
Right bank total 1.1	
Stream Geomorphology	
Continuity of channel bed and bank Strong	
Sinuosity of channel along thalweg  Moderate	
In-channel structure Weak	
Particle size of stream substrate Moderate	
Active or relict floodplain Absent	
Depositional bars or benches Absent	
Recent alluvial deposits Absent	
Headcuts Absent  Crade control  Mederate	
Grade control Moderate	
Natural valley Moderate	
Second or greater order channel Yes	
Stream Geomorphology Total 13	

Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	7
Street Organization Department District	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Ν

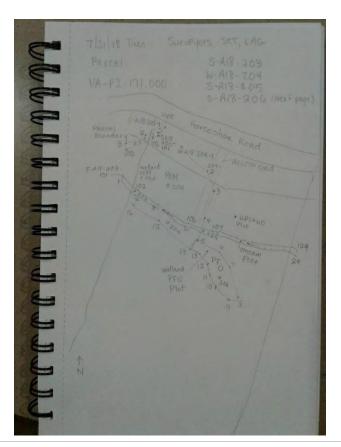
Additional Stream Photos



Upper end, UP



mid reach DN



Created	2018-07-31 12:12:49 UTC by Laura Giese
Updated	2018-08-10 19:47:31 UTC by Laura Giese
Location	36.5871083, -79.5870889
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/31
Date2	180731

Field Crew	Laura Giese, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	205
Resource ID	S-A18-205
Do you need to override the resource id?	No
Description ID - Description Type Colembiat Initials	Pageurge Coving Number

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

# Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	28.25
Calculated Stream Type	Intermittent

## **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	0.9
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)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

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

# Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0.75	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	0	
Low marginal (0.75) [Left]	0.4	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	1.15	

# 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	Silt-Mud, Vegetated

# Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	1
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.3
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.3

# Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	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	Weak
Second or greater order channel	Yes
Stream Geomorphology Total	9.5

# Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent	
Rooted upland plants in streambed	Absent	
Macrobenthos	Weak	
Aquatic mullusks	Absent	
Fish	Absent	
Crayfish	Absent	
Amphibians	Weak	
Algae	Absent	
Wetland plants in streambed	FACW	
Stream Biology Total	8.25	
Stream Overview Report Photos		

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

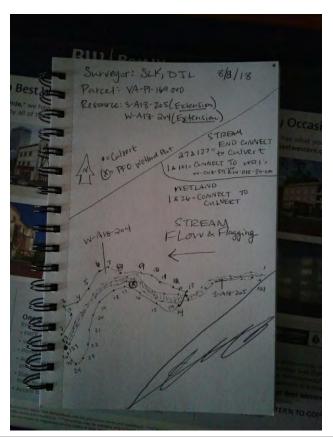
Across Stream Photo 1

W

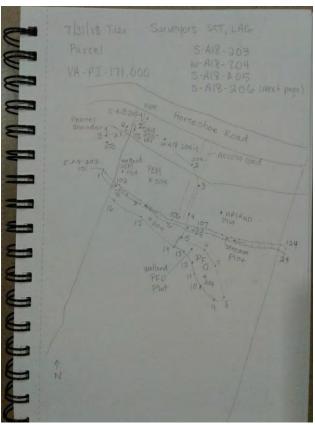


Across stream photo direction 1

Ν



Sketch of Stream



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Created	2018-07-31 14:45:45 UTC by Laura Giese
Updated	2018-09-20 19:07:02 UTC by Susie Gifford (SBG)
Location	36.5855907, -79.5881254
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/31
Date2	180731

Field Crew	Laura Giese, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	206
Resource ID	S-A18-206
Do you need to override the resource id?	No
Pasourca ID = Pasourca Typa - Scientist Initials - Pasourca Sarias Number	

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

### Stream Inventory

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

## **Stream Conditions**

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

## **Channel Alteration**

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

## **Stream Measurements**

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	5
Bankfull Width (ft)	5
Probed Stream Depth	0 to 6 inches

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

# 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	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated, leaves

# Right Bank Riparian Buffer Condition

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

# Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	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	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	12

Stream Hydrology

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

Stream Biology

Fibrous roots in streambed	Absent	
Rooted upland plants in streambed	Absent	
Macrobenthos	Absent	
Aquatic mullusks	Absent	
Fish	Absent	
Crayfish	Absent	
Amphibians	Absent	
Algae	Absent	
Stream Biology Total	6	
Notes	Lower part of channel through ROW and vegetated	
Ctroom Overview Depart Dhates		

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

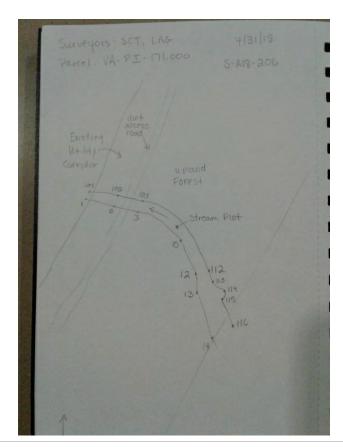
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Across stream photo direction 1

NE

Sketch of Stream



S-	Δ	1	R.	-2	n	7
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Created	2018-08-01 15:41:54 UTC by Laura Giese
Updated	2018-08-02 13:43:16 UTC by Laura Giese
Location	36.0561797, -79.3647361
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/01
Date2	180801

Field Crew	Laura Giese, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	207
Resource ID	S-A18-207
Do you need to override the resource id?	No
Pasource ID = Pasource Type - Scientist Initials	- Pasquirca Sarias Number

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

### Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	21.5
Calculated Stream Type	Intermittent

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	NW
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

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

Left Bank Height (feet)	1
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Bank Slope Left Erosion Potential	Low
Left Bank Substrate	
Left Bank Substrate	Cobble-Gravel, Vegetated
Left Bank Riparian Buffer Condit	ion
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	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Right Bank Riparian Buffer Cond	ition
Optimal (1.5) [Right]	0.75
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.4
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.15
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate

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	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	11

Absent
Absent
Weak
Absent
Weak
Yes
4.5

Stream Biology

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

Upstream Stream Photo



Upstream photo direction SE



Downstream photo direction

Across Stream Photo 1

NW



207-100s UP

Across stream photo direction 1

Ν

Additional Stream Photos





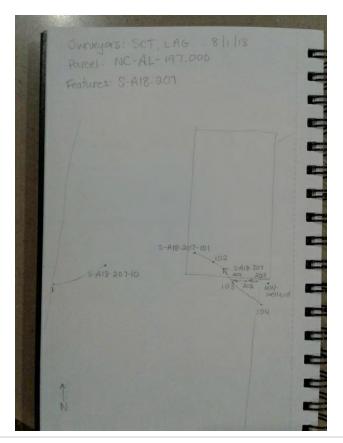
207-100s DN



207-200s UP

Sketch of Stream





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

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Created	2018-08-02 12:44:14 UTC by Laura Giese
Updated	2018-08-03 10:52:29 UTC by Laura Giese
Location	36.3867494, -79.6386409
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/02
Date2	180802

### Resource Crew Info

Field Crew	Laura Giese, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	209
Resource ID	S-A18-209
Do you need to override the resource id?	No
Pasource ID = Pasource Type - Scientist Initials	- Pesquirce Series Number

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

## Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	30
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)	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	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
-	
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Weak
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	15

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	7
Notes	Heavy rains obscured biological component

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



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

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Created	2018-08-02 15:26:54 UTC by Laura Giese
Updated	2018-08-03 10:53:37 UTC by Laura Giese
Location	36.3839612, -79.6328417
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/02
Date2	180802

### Resource Crew Info

Field Crew	Laura Giese, Susan Thebert	
Lead Scientist's Initials	A18	
GPS Surveyor	Susan Thebert	
GPS ID	NA	
Resource Series Number	210	
Resource ID	S-A18-210	
Do you need to override the resource id?	No	
Passuurca ID = Passuurca Tyna - Scientist Initials - Passuurca Sarias Number		

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

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	28
Calculated Stream Type	Intermittent

# **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)	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	Sand, Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	1
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Dight Bank Dinarian Buffer Condition	
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]	0
	0
High suboptimal (1.2) [Right]	
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	14.5
1 65	

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Notes	Two ephemeral streams converge upslope. Flow is after heavy rains
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction N



Downstream photo direction

Across Stream Photo 1

S



Confluence

Across stream photo direction 1

W

Additional Stream Photos

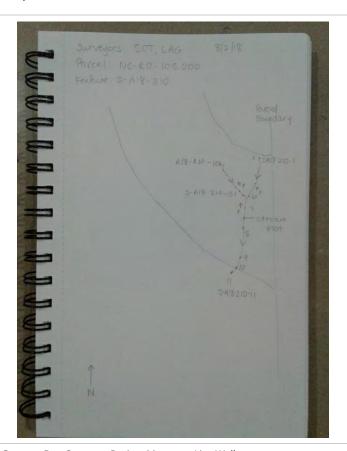


Ephemeral 1-5 UP



Ephemeral 100s UP

Sketch of Stream



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

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Created	2018-08-23 16:22:42 UTC by Will Buetow
Updated	2018-08-23 18:35:34 UTC by Will Buetow
Location	36.3227502, -79.5955593
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/23
Date2	180823

### Resource Crew Info

Field Crew	Will Buetow Kalee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	211
Resource ID	S-A18-211
Do you need to override the resource id?	Yes
Resource ID Override	S-A18-211
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

### Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	13
Calculated Stream Type	Ephemeral
Wildlife Observed	none
Observed Use	none

# **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**

OHWM Width (ft)	2	
Average Water Width (ft)	0	
Bank to Bank (ft)	4	
Bankfull Width (ft)	4	

Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	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	
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
D: 1 . D . C . D . C . D . C . D . C . D . C . D . C . D . C . D . C . D . C . D . C . D . C . D . C . D . C .	
Right Bank Riparian Buffer Condit 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
Hight bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Absent
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	No

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
Stream Biology Total	2
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

NW



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

SW

Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

NE



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

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Created	2018-08-03 14:54:41 UTC by Laura Giese
Updated	2018-08-04 10:58:02 UTC by Laura Giese
Location	36.3231625, -79.5956415
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/03
Date2	180803

### Resource Crew Info

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

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

## Stream Inventory

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

# **Stream Conditions**

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

#### **Channel Alteration**

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

#### **Stream Measurements**

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

# Left Bank

Left Bank Height (feet)	4
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Low
Left Bank Substrate	Sand, Silt-Mud, leaves
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	3
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Sand, Silt-Mud, leaves
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	10

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Notes	Flow after heavy rains

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

S



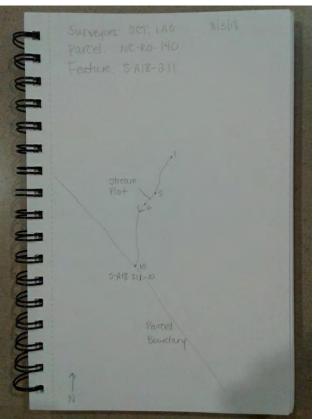
Across stream photo direction 1

W

#### Additional Stream Photos



Sketch of Stream



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

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Created	2018-08-03 17:07:12 UTC by Laura Giese
Updated	2018-08-04 10:56:16 UTC by Laura Giese
Location	36.3221583, -79.5938681
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/03
Date2	180803

### Resource Crew Info

Laura Giese, Susan Thebert
A18
Susan Thebert
NA
212
S-A18-212
No

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

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	27.5
Calculated Stream Type	Intermittent

# **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)	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	Cobble-Gravel, Sand, Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Cobble-Gravel, Vegetated
Distribut Describe Distribut Desffer Constitution	
Right Bank Riparian Buffer Condition	0
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]	0
	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
n-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
	Weak
Grade control	
	Strong
Grade control Natural valley Second or greater order channel	Strong Yes

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Notes	Strong flow after heavy rains

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

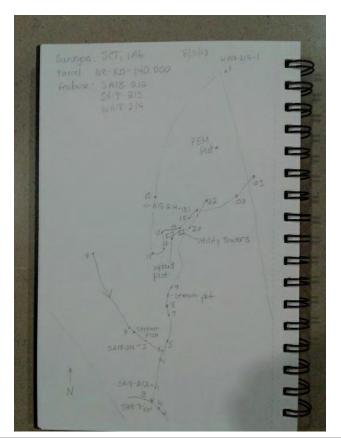
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Across stream photo direction 1

Ε

Sketch of Stream



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

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Created	2018-08-03 16:53:24 UTC by Laura Giese
Updated	2018-08-04 10:55:11 UTC by Laura Giese
Location	36.3220722, -79.5940055
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/03
Date2	180803

### Resource Crew Info

Field Crew	Laura Giese, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	213
Resource ID	S-A18-213
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials -	Resource Series Number

## Stream Inventory

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

# **Stream Conditions**

Water Flow Velocity	Slow (< 1 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)	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)	3
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated
Left Bank Riparian Buffer Condition	1
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
Diabt David	
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Right Bank Riparian Buffer Conditio	on
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
High poor (0.6) [Right] Low poor (0.5) [Right]	0
Low poor (0.5) [Right]	
Low poor (0.5) [Right] Right bank total	0
Low poor (0.5) [Right] Right bank total  Stream Geomorphology	0 0
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank	0 0 Strong
Low poor (0.5) [Right] Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg	0 0 Strong Weak
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	0 0 Strong Weak Weak
Cow poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg n-channel structure  Particle size of stream substrate	0 0 Strong Weak Weak Weak
Cow poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg n-channel structure Particle size of stream substrate Active or relict floodplain	0 0 Strong Weak Weak Weak Weak Absent
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	0 0 Strong Weak Weak Weak Weak Absent Absent
Cow poor (0.5) [Right] Right bank total  Stream Geomorphology  Continuity of channel bed and bank Sinuosity of channel along thalweg n-channel structure  Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	0 0 Strong Weak Weak Weak Absent Absent Absent
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	0 0 Strong Weak Weak Weak Absent Absent Absent Absent
Low poor (0.5) [Right] Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts  Grade control	0 0 Strong Weak Weak Weak Absent Absent Absent Absent Absent Absent
	0 0 Strong Weak Weak Weak Absent Absent Absent Absent

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Notes	Some flow after heavy rains

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction NW



Downstream photo direction

Across Stream Photo 1

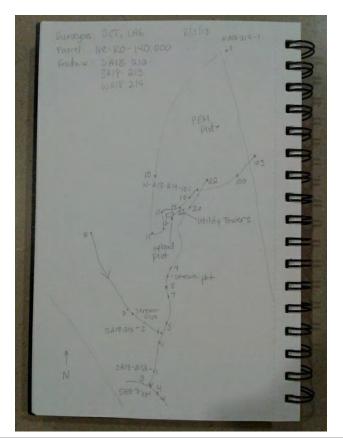
SE



Across stream photo direction 1

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Sketch of Stream



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

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Created	2018-08-04 15:23:59 UTC by Laura Giese
Updated	2018-08-04 21:40:36 UTC by Laura Giese
Location	36.216964, -79.5203027
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/04
Date2	180804

Laura Giese
A18
Susan Thebert
NA
215
S-A18-215
No

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

## Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	33.5
Calculated Stream Type	Perennial

# **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)	4	
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	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Vegetated
Left Bank Riparian Buffer Condition	n
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	3
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Right Bank Riparian Buffer Condition	on
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
	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
In-channel structure Particle size of stream substrate	Moderate Moderate
In-channel structure Particle size of stream substrate Active or relict floodplain	Moderate  Moderate  Weak
In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches	Moderate  Moderate  Weak  Weak
In-channel structure Particle size of stream substrate Active or relict floodplain	Moderate  Moderate  Weak  Weak  Weak
In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts	Moderate  Moderate  Weak  Weak
In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	Moderate  Moderate  Weak  Weak  Weak
In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts	Moderate  Moderate  Weak  Weak  Weak  Absent
In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts Grade control	Moderate  Moderate  Weak  Weak  Weak  Absent  Absent

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	7.5
Notes	Likely confluence of C62 and C63, Biology obscured due to murky water after heavy rains, rocky Ford for dirt road crossing.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν



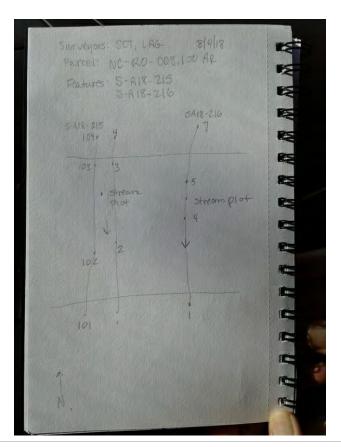
Downstream photo direction

Across Stream Photo 1

S



Sketch of Stream



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

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Created	2018-08-04 15:42:38 UTC by Laura Giese
Updated	2018-08-04 21:41:01 UTC by Laura Giese
Location	36.2170297, -79.5201664
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/04
Date2	180804

A18
Susan Thebert
NA
216
S-A18-216
No

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

## Stream Inventory

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

# **Stream Conditions**

Water Flow Velocity	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)	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	Silt-Mud, Vegetated
Left Book Biography Buffer Condition	
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Dight Bank Dinarian Duffer Condition	
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]	0
	0
High suboptimal (1.2) [Right]	
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	12.5
. 5	

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?	Yes
Stream Hydrology Total	5.5

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Notes	Rocky ford for dirt road crossing
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction N



Downstream photo direction

Across Stream Photo 1

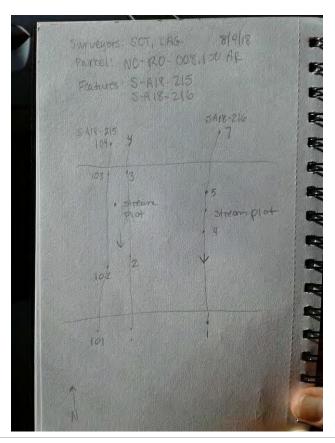
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Across stream photo direction 1

Ε

Sketch of Stream



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

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Created	2018-08-04 17:41:21 UTC by Laura Giese
Updated	2018-08-04 21:42:52 UTC by Laura Giese
Location	36.2479003, -79.5390868
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/04
Date2	180804

Field Crew	Laura Giese
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	217
Resource ID	S-A18-217
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

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

## Stream Inventory

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

# **Stream Conditions**

Water Flow Velocity	Slow (< 1 cfs)
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)	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	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated
Left Bank Riparian Buffer Conditio	on
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	Vegetated
Diabt Dank Dinavian Duffey Candit	···
<b>Right Bank Riparian Buffer Condit</b> Optimal (1.5) [Right]	0
	0
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]	0
	0
High marginal (0.85) [Right]	
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
	Weak
Sinuosity of channel along thalweg	
	Weak
n-channel structure	Weak Weak
n-channel structure Particle size of stream substrate	
In-channel structure Particle size of stream substrate Active or relict floodplain	Weak
In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	Weak Absent
Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	Weak Absent Absent
In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	Weak Absent Absent Absent
In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	Weak Absent Absent Absent Absent
In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts Grade control	Weak Absent Absent Absent Absent Absent Absent

Presence of baseflow	Moderate
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	6

# Stream Biology

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

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

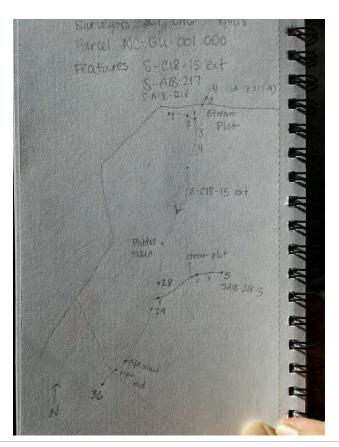
SW



Across stream photo direction 1

SE

Sketch of Stream



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

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Created	2018-08-04 18:39:42 UTC by Laura Giese
Updated	2018-09-20 19:08:14 UTC by Susie Gifford (SBG)
Location	36.2466066, -79.5388977
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/04
Date2	180804

Laura Giese, Susan Thebert
A18
Susan Thebert
NA
218
S-A18-218
No

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

## Stream Inventory

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

# **Stream Conditions**

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

### **Channel 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)	1	
eft 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 Conditio	on	
Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	0	
_ow suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	0	
ow marginal (0.75) [Left]	0	
High poor (0.6) [Left]	0	
_ow poor (0.5) [Left]	0	
eft bank total	0	
Right Bank		
Right Bank Height (feet)	1	
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Right Erosion Potential	Low	
Right Bank Substrate	Vegetated	
Right Bank Riparian Buffer Conditi	ion	
Optimal (1.5) [Right]	0	
	<u> </u>	
High suboptimal (1.2) [Right]	0	
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]	0 0	
Low suboptimal (1.1) [Right]		
ow suboptimal (1.1) [Right] High marginal (0.85) [Right]	0	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right]	0	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	0 0 0	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	0 0 0 0	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	0 0 0 0	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	0 0 0 0 0	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank	0 0 0 0 0 0 0	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	0 0 0 0 0 0 0 0 Strong	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg n-channel structure	0 0 0 0 0 0 0 0 0 Strong Weak Weak	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg n-channel structure Particle size of stream substrate	0 0 0 0 0 0 0 0 Strong Weak Weak Weak	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg n-channel structure Particle size of stream substrate Active or relict floodplain	0 0 0 0 0 0 0 0 0 Strong Weak Weak Weak Absent	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg n-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	0 0 0 0 0 0 0 0 0 Strong Weak Weak Weak Absent Absent	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	0 0 0 0 0 0 0 0 0 Strong Weak Weak Weak Absent Absent Absent	
Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  n-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts	0 0 0 0 0 0 0 0 Strong Weak Weak Weak Absent Absent Absent Absent	
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg n-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts Grade control	0 0 0 0 0 0 0 0 Strong Weak Weak Weak Absent Absent Absent Absent Absent Absent	
Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  n-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts	0 0 0 0 0 0 0 0 Strong Weak Weak Weak Absent Absent Absent Absent	

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	8.25
Notes	Seepage stream
Character Description	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

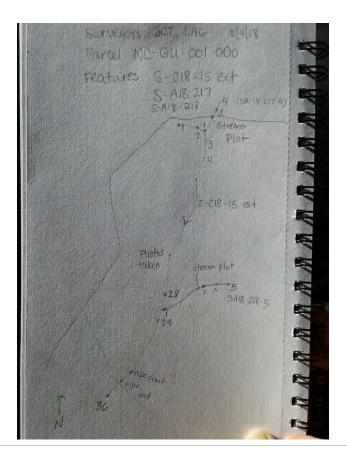
SW



Across stream photo direction 1

NW

Sketch of Stream



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

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Created	2018-08-04 19:33:42 UTC by Laura Giese
Updated	2018-08-04 21:41:45 UTC by Laura Giese
Location	36.2444412, -79.5361564
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/04
Date2	180804

Field Crew	Laura Giese, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	219
Resource ID	S-A18-219
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials -	

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

## Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	35
Calculated Stream Type	Perennial

# **Stream Conditions**

Water Flow Velocity	Moderate (1 - 5 cfs)
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)	7	
Average Water Width (ft)	4	
Bank to Bank (ft)	7	
Bankfull Width (ft)	7	
Probed Stream Depth	0 to 6 inches	

### Left Bank

Left Bank Height (feet)	3
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently 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
_ow suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
ow marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
_ow poor (0.5) [Left]	0
eft bank total	0
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated
Dight Dank Dinarian Duffer Condition	-
Right Bank Riparian Buffer Conditior 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
Ngiit bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
n-channel structure	Strong
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Note and a file	Strong
Natural valley	
Natural valley Second or greater order channel	Yes

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Moderate
Algae	Absent
Stream Biology Total	10
Notes	Stream rocks are jagged

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction SE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

S

Additional Stream Photos



upstream of ROW UP

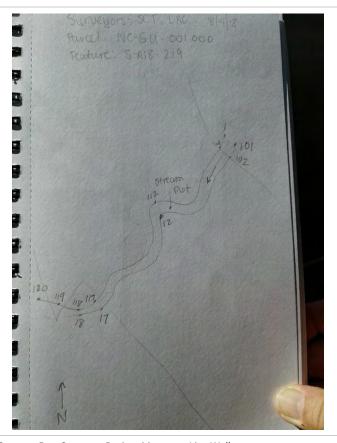


in ROW UP



in ROW DN

Sketch of Stream



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

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Created	2018-08-28 07:54:44 EDT by Simon King
Updated	2018-09-19 08:43:47 EDT by Nathan Renaudin
Location	36.4613197, -79.7016058
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/28
Date2	180828

Field Crew	Nathan Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	220
Resource ID	S-A18-220
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

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

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	13
Calculated Stream Type	Ephemeral
Observed Use	Drainage

# **Stream Conditions**

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

### **Channel Alteration**

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

# **Stream Measurements**

OHWM Width (ft)	3
Average Water Width (ft)	1
Bank to Bank (ft)	4
Bankfull Width (ft)	4

Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	1.5
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Left Bank Riparian Buffer Conditi	ion
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	Moderate
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Condi	ition
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	1.1
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.1
Stream Geomorphology	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	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
C	
Grade control	Weak
Natural valley	Weak Absent

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

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Wetland plants in streambed	Other
Stream Biology Total	5.5
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Е



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

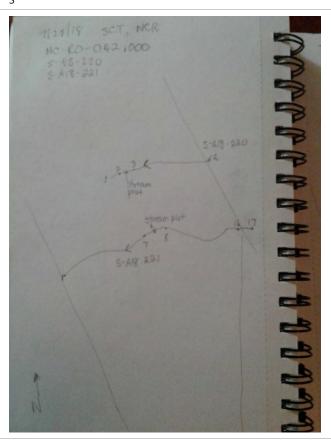
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Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream



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

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Created	2018-08-28 08:25:13 EDT by Simon King
Updated	2018-09-19 08:45:55 EDT by Nathan Renaudin
Location	36.4608361, -79.7010679
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/28
Date2	180828

Field Crew	Nathan Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	221
Resource ID	S-A18-221
Do you need to override the resource id?	No
Pasourca ID - Pasourca Typa - Scientist Initials	- Pasaurca Sarias Number

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

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	31
Calculated Stream Type	Perennial
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	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)	2	
Bank to Bank (ft)	5	
Bankfull Width (ft)	5	

Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	0.5
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	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	High
0	0
Right Bank Substrate	Silt-Mud
Right Bank Substrate	Silt-Mud
Right Bank Substrate  Right Bank Riparian Buffer Condition	Silt-Mud
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right]	Silt-Mud  On  0
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right]  High suboptimal (1.2) [Right]	Silt-Mud  On  0  0
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]	Silt-Mud  On  0  0  0
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	Silt-Mud  On  0  0  0  0  0
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]	Silt-Mud  On  0  0  0  0  0  0  0  0  0  0  0  0
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	Silt-Mud  On  0  0  0  0  0  0  0  0  0  0  0  0  0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	Silt-Mud  On  0  0  0  0  0  0  0  0  0  0  0  0  0
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	Silt-Mud  On  0  0  0  0  0  0  0  0  0  0  0  0  0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	Silt-Mud  On  0  0  0  0  0  0  0  0  0  0  0  0  0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	Silt-Mud  On  0  0  0  0  0  0  0  0  0  0  0  0  0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology	Silt-Mud  On  0  0  0  0  0  0  0  0  0  0.75  0  0  0.75
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Stream Geomorphology Continuity of channel bed and bank	Silt-Mud  On  O  O  O  O  O  O  O  O  O  O  O  O
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	Silt-Mud  On  O  O  O  O  O  O  O  O  O  O  O  O
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure	Silt-Mud  On  O  O  O  O  O  O  O  O  O  O  O  The state of the state
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	Silt-Mud  On  O  O  O  O  O  O  O  O  O  O  O  O
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	Silt-Mud  On  O  O  O  O  O  O  O  O  O  O  O  O
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	Silt-Mud  On  O  O  O  O  O  O  O  O  O  O  O  O
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	Silt-Mud  On  O  O  O  O  O  O  O  O  O  O  O  O
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	Silt-Mud  On  O  O  O  O  O  O  O  O  O  O  O  O

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	Weak
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	7.5
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

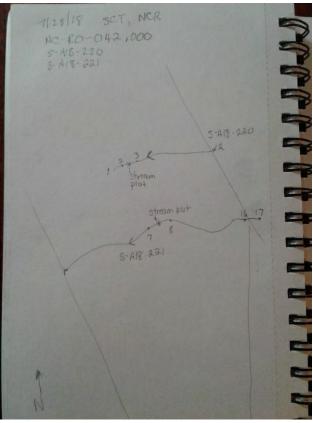
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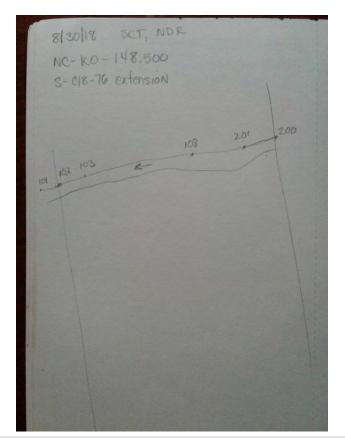
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream





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

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2018-08-28 11:04:27 EDT by Simon King
2018-09-19 08:48:54 EDT by Nathan Renaudin
36.4556881, -79.698158
Field Crew Collected
NextEra
MVP Southgate
18/08/28
180828

A18
Susan Thebert
NA
223
S-A18-223
No

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

### Stream Inventory

Stream / Waterbody Type	Intermittent	
Calculated Stream Score	21.5	
Calculated Stream Type	Intermittent	
Observed Use	Drainage	

## **Stream Conditions**

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	W
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	0.5	
Channel Alteration Total	0.5	

## **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)	0.5
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
. 6.5 1.5 1.5 5.6 6.10	
Left Bank Riparian Buffer Conditi	
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)	0.5
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Condi	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.75
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0.75
Stream Geomorphology	
Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No

Presence of baseflow	Weak
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	6.5

# Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Moderate
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Weak
Wetland plants in streambed	OBL
Stream Biology Total	6.5
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

Ν

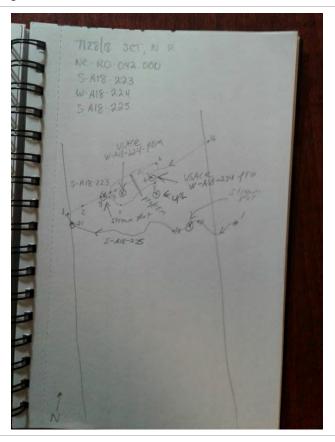
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

S



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Created	2018-08-28 12:18:05 EDT by Simon King
Updated	2018-09-19 08:53:25 EDT by Nathan Renaudin
Location	36.4552234, -79.6971078
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/28
Date2	180828

Field Crew	Nathan Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	225
Resource ID	S-A18-225
Do you need to override the resource id?	No
Pasource ID = Pasource Type - Scientist Initials	- Resource Series Number

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

### Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	31.75
Calculated Stream Type	Perennial
Wildlife Observed	Fish
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)	4
Bank to Bank (ft)	6

Bankfull Width (ft)	6		
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	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		
Dight Dank			
Right Bank	7		
Right Bank Height (feet)			
Right Bank Slope Right Erosion Potential	15 to 25% (9 to 14 deg) Steeply Sloping		
	High Silt-Mud		
Right Bank Substrate	SIIL-IVIUU		
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			
Continuity of channel bed and bank	Moderate		
Sinuosity of channel along thalweg	Moderate		
In-channel structure	Moderate		
Particle size of stream substrate	Moderate		
Active or relict floodplain	Weak		
Depositional bars or benches	Weak		
Recent alluvial deposits	Weak		
Headcuts	Moderate		
Grade control	Weak		
Natural valley	Weak		

Second or greater order channel	No
Stream Geomorphology Total	14

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

O	
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	9.25
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction E



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

Ν

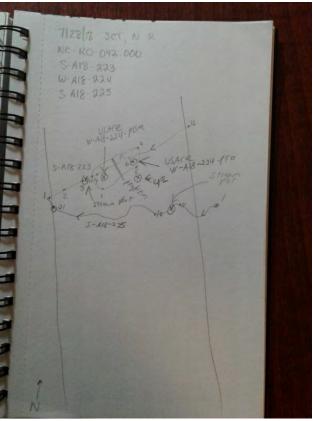
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

5



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Created	2018-08-29 14:14:04 UTC by Will Buetow
Updated	2018-08-29 14:37:27 UTC by Will Buetow
Location	36.3380105, -79.6040188
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/29
Date2	180829

Nathan Renaudin
A18
Kaylee Townsend
NA
226
S-A18-226
No

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

### Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	12
Calculated Stream Type	Ephemeral

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	W
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)	0
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

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

## Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	0	
Low marginal (0.75) [Left]	0.75	
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	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud

# Right Bank Riparian Buffer Condition

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

# Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	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	Weak
Second or greater order channel	No
Stream Geomorphology Total	7.5

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?	No
Stream Hydrology Total	1.5

Stream Biology

<b>-</b>	
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
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

Ν

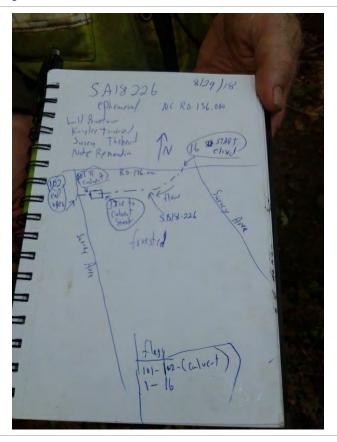
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

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Created	2018-08-29 15:02:06 UTC by Will Buetow
Updated	2018-08-29 15:28:25 UTC by Will Buetow
Location	36.336271, -79.6025009
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/29
Date2	180829

Field Crew	Nathan Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	228
Resource ID	S-A18-228
Do you need to override the resource id?	No
Pasource ID = Pasource Type - Scientist Initials	- Pasourca Sarias Number

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

### Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	16
Calculated Stream Type	Ephemeral

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

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Left Bank Height (feet)	5
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]	0.85	
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)	5	
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]	0.75	
High poor (0.6) [Right]	0	
Low poor (0.5) [Right]	0	
Right bank total	0.75	

# Stream Geomorphology

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

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?	No
Stream Hydrology Total	1.5

Stream Biology

<b>-</b>	
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Wetland plants in streambed	Other
Stream Biology Total	4.5
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction SW



Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

Ν

#### Sketch of Stream



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Created	2018-08-29 15:07:06 UTC by Will Buetow
Updated	2018-08-29 15:28:49 UTC by Will Buetow
Location	36.3361956, -79.6022192
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/29
Date2	180829

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	A18
GPS Surveyor	kaylee townsend
GPS ID	NA
Resource Series Number	229
Resource ID	S-A18-229
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

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

### Stream Inventory

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

## **Stream Conditions**

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

### Left Bank

Left Bank Height (feet)	7
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
2: 1 . 2 . 1	
Right Bank	
Right Bank Height (feet)	7
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
	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	
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	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	19.5

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

# Stream Biology

Fibrous roots in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Weak
Stream Biology Total	4
C: 0 : D : D :	

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 2



Across stream photo direction 2

Sketch of Stream

S



S-	Δ	1	Q.	. つ	2	U
.)-	~		o.	۰_	J	u

Created	2018-08-29 15:17:36 UTC by Will Buetow
Updated	2018-08-29 15:29:10 UTC by Will Buetow
Location	36.3361954, -79.6023213
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/29
Date2	180829

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	A18
GPS Surveyor	kaylee townsend
GPS ID	NA
Resource Series Number	230
Resource ID	S-A18-230
Do you need to override the resource id?	No
Pasaurea ID - Pasaurea Typa Cciantist Initials	Pagaurga Carios Number

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

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	28.5
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)	3
Average Water Width (ft)	1
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

L	.eft	Bai	nk

Left Bank Height (feet)	6	
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)	6	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	High	
Right Bank Substrate	Silt-Mud	

# Right Bank Riparian Buffer Condition

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

## Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	14

Presence of baseflow	Moderate
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	8

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	6.5

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

Ν

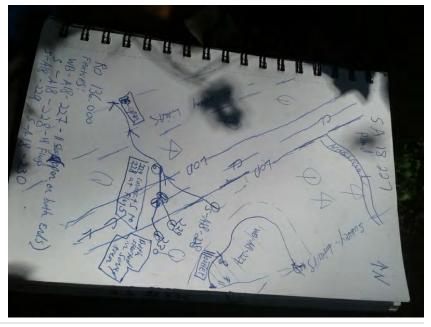
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

S



Created	2018-08-29 17:31:02 UTC by Will Buetow
Updated	2018-08-29 17:47:19 UTC by Will Buetow
Location	36.3133373, -79.5892996
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/29
Date2	180829

Field Crew	Nathan Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	231
Resource ID	S-A18-231
Do you need to override the resource id?	No
Pasourca ID - Pasourca Type - Scientist Initials	- Pasourca Sarias Number

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

### Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	15.5
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	1.3	
High Minor (1.1) Channel Alteration	0	
Low Moderate (0.9) Channel Alteration	0	
High Moderate (0.7) Channel Alteration	0	
Severe (0.5) Channel Alteration	0	
Channel Alteration Total	1.3	

## **Stream Measurements**

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

Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	2
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Left Bank Riparian Buffer Conditi	ion
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	1.1
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.1
Right Bank	
Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Condi	ition
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	1.1
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.1
Stream Geomorphology	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	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	Absent
Second or greater order channel	No

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?	No
Stream Hydrology Total	2.5

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	5
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

W

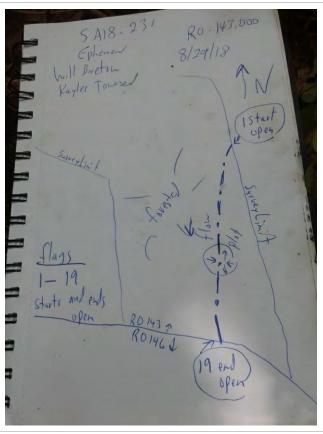
Across Stream Photo 2



Across stream photo direction 2

Ε

Sketch of Stream



S-	Δ	1	Q.	. つ	2	7
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Created	2018-08-29 17:53:42 UTC by Will Buetow
Updated	2018-09-20 19:08:30 UTC by Susie Gifford (SBG)
Location	36.3138943, -79.5901291
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/29
Date2	180829

Field Crew	Nathan Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	232
Resource ID	S-A18-232
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Pasourca Sarias Number

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

## Stream Inventory

Stream / Waterbody Type	Ephemeral	
Calculated Stream Score	13	
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	Poor

## **Channel Alteration**

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

## **Stream Measurements**

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	3
Bankfull Width (ft)	3

Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	3
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Left Bank Riparian Buffer Condition Optimal (1.5) [Left]	
	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	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	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Condit Optimal (1.5) [Right]	0 0
	0
High suboptimal (1.2) [Right]	
Low suboptimal (1.1) [Right]	1.1
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.1
Stream Geomorphology	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	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	
second of greater order chairner	No

## Stream Hydrology

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

Weak
Weak
Absent
Other
4

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Ε

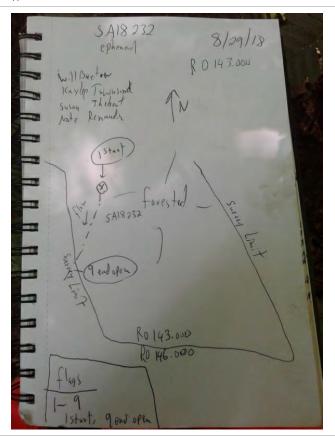
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

W



S-	Δ	1	Q.	. つ	2	2
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Created	2018-08-31 12:28:22 UTC by Simon King
Updated	2018-08-31 13:05:35 UTC by Simon King
Location	36.1168487, -79.372524
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/31
Date2	180831

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

## Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	42
Calculated Stream Type	Perennial
Wildlife Observed	Invertebrates
Observed Use	Drainage

## **Stream Conditions**

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	W
Channel condition	Optimal
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)	15
Average Water Width (ft)	12
Bank to Bank (ft)	18

Bankfull Width (ft)	18
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	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
Dicht Dool.	
Right Bank	_
Right Bank Height (feet)	7
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]	1.1
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.1
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Moderate
Natural valley	Weak

Second or greater order channel	Yes
Stream Geomorphology Total	21.5

# Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Moderate
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	11

## Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Weak
Macrobenthos	Strong
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Weak
Amphibians	Moderate
Algae	Weak
Wetland plants in streambed	Other
Stream Biology Total	9.5
Regulatory Status	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

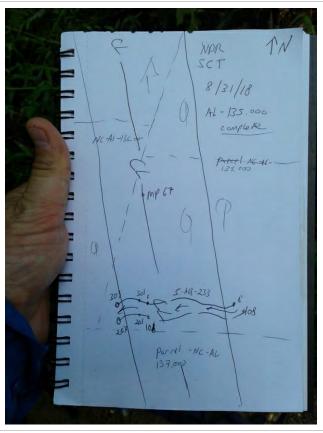
Across Stream Photo 2



Across stream photo direction 2

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Sketch of Stream



C_	Δ	1	Q.	-23	1
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Created	2018-09-04 13:37:51 UTC by Laura Giese
Updated	2018-09-05 09:45:23 UTC by Laura Giese
Location	36.312354, -79.5894415
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/04
Date2	180904

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
Resource Series Number	234
Resource ID	S-A18-234
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	21.25
Calculated Stream Type	Intermittent

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	NE

## **Channel Alteration**

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

## **Stream Measurements**

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

LCIT Dalik		
Left Bank Height (feet)	2	

Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Cobble-Gravel, Sand, Vegetated
	<del>_</del>
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Cobble-Gravel, Sand, Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
-	
Stream Geomorphology Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg In-channel structure	Weak Weak
Particle size of stream substrate	
	Weak Absort
Active or relict floodplain	Absent
Depositional bars or benches  Recent alluvial deposits	Absent Weak
<u> </u>	
Headcuts Grade control	Moderate  Weak
Natural valley	Strong
Second or greater order channel	No 10
Stream Geomorphology Total	10
Stream Hydrology	
Presence of baseflow	Absent

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

## Stream Biology

<b>0</b> 3	
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
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



ς_	Δ	1	Q.	. ว	2	5

Created	2018-09-04 14:50:16 UTC by Laura Giese
Updated	2018-09-05 09:45:47 UTC by Laura Giese
Location	36.3125191, -79.5895617
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/04
Date2	180904

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
Resource Series Number	235
Resource ID	S-A18-235
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	43.25
Calculated Stream Type	Perennial

## **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)	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)	3	

Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Cobble-Gravel, Sand, Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Cobble-Gravel, Sand, Vegetated
Right Bank Riparian Buffer Conditio	in
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	Ci
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg In-channel structure	Strong
Particle size of stream substrate	Moderate
	Moderate
Active or relict floodplain  Depositional bars or benches	Weak Moderate
Recent alluvial deposits Headcuts	Moderate Weak
Grade control	Weak
Natural valley Second or greater order channel	Strong Yes
Stream Coomerphology Total	
Stream Geomorphology Total	21
Stream Hydrology	
Presence of baseflow	Strong

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

## Stream Biology

<b>-</b>	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Moderate
Crayfish	Moderate
Amphibians	Strong
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	13.25
Stroom Overview Benert Photos	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

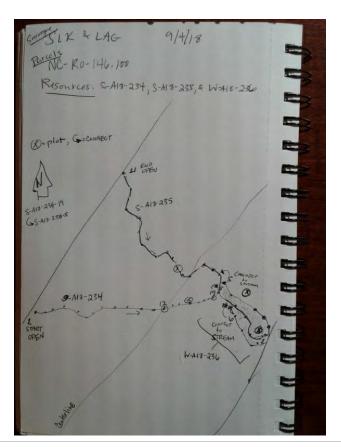
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Across stream photo direction 1

Ν

Sketch of Stream



S-	Δ	1	Q.	2	3.	7
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Created	2018-09-04 16:48:07 UTC by Laura Giese
Updated	2018-09-20 19:08:44 UTC by Susie Gifford (SBG)
Location	36.311551, -79.5943253
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/04
Date2	180904

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
Resource Series Number	237
Resource ID	S-A18-237
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	21
Calculated Stream Type	Intermittent

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	S

## **Channel Alteration**

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

## **Stream Measurements**

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

Left Bank Height (feet)	1
-------------------------	---

Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated
Left Bank Riparian Buffer Condition	on
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
Dieht Dank	
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated, leaf litter
Right Bank Riparian Buffer Condit	ion
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	10.5
Stream Hydrology	
Presence of baseflow	Absent

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

SW

Sketch of Stream



S-	Δ	1	Q.	. つ	3	Q
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Created	2018-09-04 18:24:09 UTC by Laura Giese	
Updated	2018-09-05 09:43:36 UTC by Laura Giese	
Location	36.3085975, -79.5947623	
Status	Field Crew Collected	
Client	NextEra	
Project	MVP Southgate	
Date	18/09/04	
Date2	180904	

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

## Stream Inventory

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

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	E

#### **Channel 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

ECIT BUILK		
Left Bank Height (feet)	2	

Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Low
Left Bank Substrate	Vegetated
Laft Bank Birming Buffer Condition	
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	8.5
Stream Hydrology	
Presence of baseflow	Absent

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

# Stream Biology

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

Upstream Stream Photo



Upstream photo direction

W



Downstream photo direction

Across Stream Photo 1

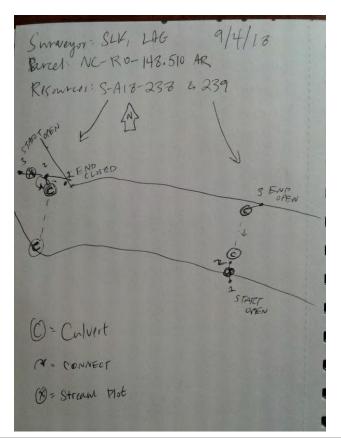
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Across stream photo direction 1

Ν

Sketch of Stream



S-	Δ	1	Q.	. つ	2	a
.)-	$\overline{}$	ч	O.		_)	3

Created	2018-09-04 18:34:03 UTC by Laura Giese
Updated	2018-09-05 09:43:13 UTC by Laura Giese
Location	36.3084302, -79.5934306
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/04
Date2	180904

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

## Stream Inventory

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

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	S

## **Channel 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 Height (feet)	1	

Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Right Bank Riparian Buffer Conditio	n
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
-	
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	12
Stream Hydrology	
Presence of baseflow	Absent
	********

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

## Stream Biology

Absent
Absent
Weak
Absent
6.5

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

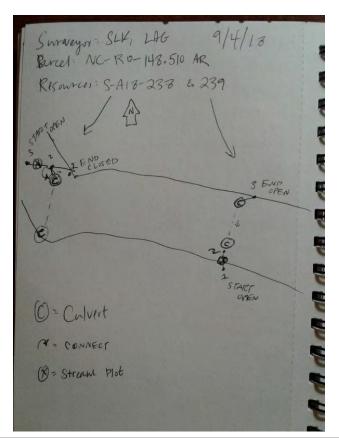
S



Across stream photo direction 1

SW

Sketch of Stream



S-	Δ	1	R.	-2	42
	$\overline{}$		U.	- <b>~</b> :	74

Created	2018-09-05 16:09:20 UTC by Laura Giese		
Updated	2018-09-06 10:24:28 UTC by Laura Giese		
Location	36.2976176, -79.5812589		
Status	Field Crew Collected		
Client	NextEra		
Project	MVP Southgate		
Date	18/09/05		
Date2	180905		

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

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

## Stream Inventory

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

## **Stream Conditions**

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

## **Channel Alteration**

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

#### **Stream Measurements**

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

Left Bank Height (feet)	2	
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Left Erosion Potential	Low	
Left Bank Substrate	Sand, Vegetated	
Left Bank Riparian Buffer Condition	า	
Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	0	
ow marginal (0.75) [Left]	0	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	0	
Right Bank		
Right Bank Height (feet)	2	
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping	
Right Erosion Potential	Moderate	
Right Bank Substrate	Cobble-Gravel, Sand, Vegetated	
Right Bank Riparian Buffer Conditio	20	
Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	0	
Low suboptimal (1.1) [Right]	0	
Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]	0	
High marginal (0.85) [Right]		
High marginal (0.85) [Right] Low marginal (0.75) [Right]	0	
High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	0	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]	0 0 0	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total	0 0 0 0	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology	0 0 0 0 0	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank	0 0 0 0 0 0	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg	0 0 0 0 0 0 0 Strong Moderate	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  n-channel structure	0 0 0 0 0 0 Strong Moderate Strong	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  n-channel structure  Particle size of stream substrate	0 0 0 0 0 0 0 Strong Moderate Strong Moderate	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  n-channel structure  Particle size of stream substrate  Active or relict floodplain	0 0 0 0 0 0 Strong Moderate Strong Moderate Weak	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  n-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches	0 0 0 0 0 0 Strong Moderate Strong Moderate Weak Moderate	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  n-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits	0 0 0 0 0 0 Strong Moderate Strong Moderate Weak Moderate Moderate Moderate Moderate	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts	0 0 0 0 0 0 0 Strong Moderate Strong Moderate Weak Moderate Weak Moderate Absent	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  n-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts  Grade control	0 0 0 0 0 Strong Moderate Strong Moderate Weak Moderate Weak Moderate	
High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits	0 0 0 0 0 0 0 Strong Moderate Strong Moderate Weak Moderate Weak Moderate Absent	

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

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Stream Biology Total	9.5
Stream Overview Penort Photos	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

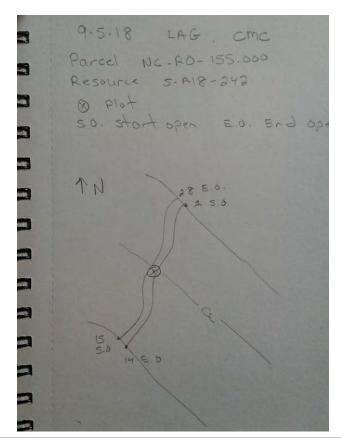
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Across stream photo direction 1

W

Sketch of Stream



S-	Δ	1	Q.	.24	13
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Created	2018-09-06 13:31:03 UTC by Laura Giese
Updated	2018-09-06 13:38:24 UTC by Laura Giese
Location	36.2693323, -79.5574625
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/06
Date2	180906

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	243
Resource ID	S-A18-243
Do you need to override the resource id?	No
Pasource ID = Pasource Type - Scientist Initials	- Resource Series Number

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

## Stream Inventory

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

# **Stream Conditions**

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	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)	8
Average Water Width (ft)	5
Bank to Bank (ft)	10
Bankfull Width (ft)	10
Probed Stream Depth	0 to 6 inches

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, Vegetated
20120	one many regulation
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
Dight Pank	
Right Bank Height (feet)	3
Right Bank Height (feet)	
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	
Particle size of stream substrate	Strong
	Strong
Active or relict floodplain  Depositional bars or benches	Weak
<u> </u>	Moderate
Recent alluvial deposits	Weak
Headcuts Crade control	Weak
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	21

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

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Stream Biology Total	10.5
Stroom Overview Penert Photos	

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

S-	Δ	1	R.	-2	4	4
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Created	2018-09-06 14:01:56 UTC by Laura Giese
Updated	2018-09-20 19:09:21 UTC by Susie Gifford (SBG)
Location	36.270853, -79.5564293
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/06
Date2	180906

Laura Giese, Simon King
A18
Simon King
NA
244
S-A18-244
No

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

## Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	34.5
Calculated Stream Type	Perennial

# **Stream Conditions**

Water Flow Velocity	Slow (< 1 cfs)
Direction of Flow	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)	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	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated, leaf litter
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
D' L. D. J.	
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated, leaf litter
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	17
	17

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

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	9.5

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

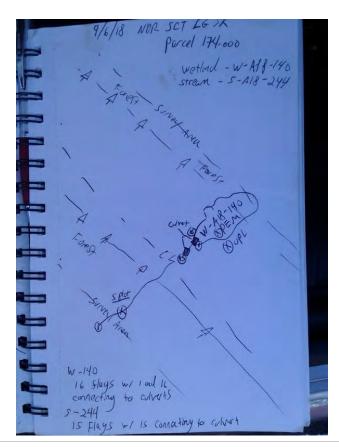
S



Across stream photo direction 1

W

Sketch of Stream



S-	Δ	1	R.	-2	4	ς
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Created	2018-09-07 12:21:43 UTC by Laura Giese
Updated	2018-09-07 22:32:38 UTC by Laura Giese
Location	36.5094701, -79.7175871
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/07
Date2	180907

Laura Giese, Simon King, Susan Thebert
A18
Simon King
NA
246
S-A18-246
No

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

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	21
Calculated Stream Type	Intermittent

# **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	E

#### **Channel Alteration**

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

#### **Stream Measurements**

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

1.6 B. (1.11.11.16.11)	
Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud
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
Dight Donk	
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No

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

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Notes	Dry vernal pool upslope

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

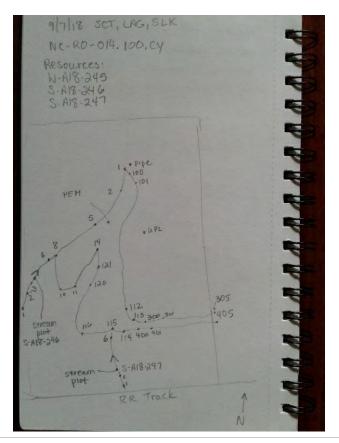
Ε



Across stream photo direction 1

Ν

Sketch of Stream



S-	Δ	1	R.	-2	47	7
	$\overline{}$		U.		-	,

Created	2018-09-07 13:05:46 UTC by Laura Giese
Updated	2018-09-07 22:32:15 UTC by Laura Giese
Location	36.5089405, -79.7169117
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/07
Date2	180907

Laura Giese, Simon King, Susan Thebert
A18
Simon King
NA
247
S-A18-247
No

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

## Stream Inventory

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

# **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	N

## **Channel Alteration**

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

#### **Stream Measurements**

OHWM Width (ft)	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)	2
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
<u> </u>	
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud
Disha Basal Bisasias Buffes Conditio	
Right Bank Riparian Buffer Conditio	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	10.5

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

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	7

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

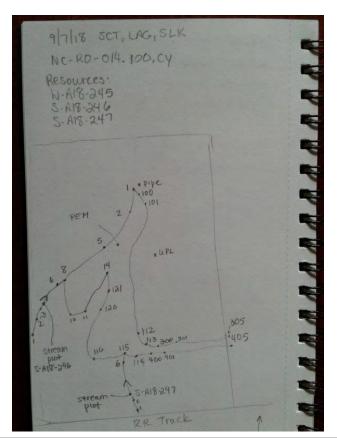
Ν



Across stream photo direction 1

W

Sketch of Stream



S-	Δ	1	R.	-24	48
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Created	2018-09-07 13:49:58 UTC by Laura Giese
Updated	2018-09-07 22:33:06 UTC by Laura Giese
Location	36.518831, -79.7210607
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/07
Date2	180907

A18
Simon King
NA
248
S-A18-248
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	E

#### **Channel Alteration**

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

#### **Stream Measurements**

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

1
0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Low
Silt-Mud, Vegetated
0
0
0
0
0
0
0
0
1
8 to 15% (5 to 9 deg) Moderately Sloping
Low
Silt-Mud, Vegetated
0
0
0
0
0
0
0
0
Strong
Weak
Weak
Weak
Absent
Weak
Weak No

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?	No
Stream Hydrology Total	1

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

Upstream Stream Photo



Upstream photo direction W



Downstream photo direction

Across Stream Photo 1

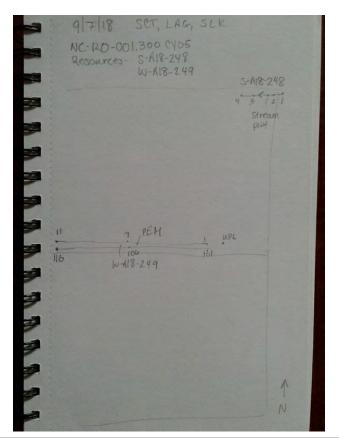
Ε



Across stream photo direction 1

S

Sketch of Stream



S-	Δ	1	Q.	. つ	5	n
	_	ч	O.		J	u

Created	2018-09-07 17:53:21 UTC by Laura Giese
Updated	2018-09-20 19:09:40 UTC by Susie Gifford (SBG)
Location	36.1389459, -79.3805345
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/07
Date2	180907

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

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

## Stream Inventory

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

# **Stream Conditions**

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

#### **Channel Alteration**

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

#### **Stream Measurements**

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

Left Bank Slope         8 to 15% (5 to 9 deg) Moderately Sloping           Left Bank Slope         Sand, Vegetated           Left Bank Riparian Buffer Condition         Description (1.5) [Left]           Optimal (1.5) [Left]         0           High suboptimal (1.1) [Left]         0           Low suboptimal (1.1) [Left]         0           Low marginal (0.75) [Left]         0           Low marginal (0.75) [Left]         0           Low poor (0.5) [Left]         0           Low poor (0.5) [Left]         0           Low poor (0.5) [Left]         0           Left bank Stotal         0           Right Bank Fleight (feet)           Right Bank Fleight (feet)         3           Right Bank Slobse         8 to 15% (5 to 9 deg) Moderately Sloping           Right Erosion Potential         Low           Noty (1.5) [Right]         0           Potimal (1.5) [Right]         0           High suboptimal (1.2) [Right]         0           Low suboptimal (1.2) [Right]         0           Low marginal (0.85) [Right]         0           Low	L G Beel Heider G	
Left Bank Substrate         Moderate           Left Bank Riparian Buffer Condition           Optimal (1.5) [Left]         0           High suboptimal (1.2) [Left]         0           Low suboptimal (1.7) [Left]         0           High marginal (0.75) [Left]         0           Low marginal (0.75) [Left]         0           Low poor (0.5) [Left]         0           Low poor (0.5) [Left]         0           Left bank total         0           Right Bank Substrate         3           Right Bank Height (feet)         3           Right Bank Substrate         3 Silt-Mud, Vegetated           Right Bank Substrate         3 Silt-Mud, Vegetated           Right Bank Riparian Buffer Condition         0           Right Bank Riparian Buffer Condition         0           Optimal (1.5) [Right]         0           Use wuboptimal (1.1) [Right]         0           Low suboptimal (1.5) [Right]         0           Low suboptimal (1.5) [Right]         0           Low suboptimal (1.5) [Right]         0           Low poor (0.5) [Right]         0           Low poor (0.5) [Right]         0           Low poor (0.5) [Right]         0           Stream Geomorphology		
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           Low more (0.5) [Left]         0           Low poor (0.5) [Left]         0           Left bank total         0           Right Bank           Right Bank Height (feet)         3           Right Bank Slope         8 to 15% (5 to 9 deg) Moderately Sloping           Right Bank Substrate         Silk-Mud, Vegetated           Right Bank Riparian Buffer Condition         0           Optimal (1.5) [Right]         0           Low suboptimal (1.2) [Right]         0           Low suboptimal (1.2) [Right]         0           Low marginal (0.75) [Right]         0           Low marginal (0.75) [Right]         0           Low marginal (0.75) [Right]         0           Low poor (0.6) [Right]         0           Low poor (0.6) [Right]         0           Low poor (0.6) [Right]         0           Christinuity of channel bed and bank         Strong           Sinuosity of channel along thaliw		
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 Low marginal (0.75) [Left] 0 Low poor (0.6) [Left] 0 Low poor (0.6) [Left] 0 Left bank total 0 Right Bank Right Bank Right Bank Height (feet) 3 Right Bank Substrate Silt-Mud, Vegetated Right Bank Riparian Buffer Condition Optimal (1.5) [Right] 0 Low suboptimal (1.2) [Right] 0 Low suboptimal (1.1) [Right] 0 Low suboptimal (1.1) [Right] 0 Low suboptimal (1.1) [Right] 0 Low suboptimal (0.75) [Right] 0 Low marginal (0.75) [Right] 0 Low poor (0.6) [Right] 0 Right bank total 0 Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak		
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           Low poor (0.5) [Left]         0           Left bank total         0           Right Bank           Right Bank Height (feet)           Right Bank Slope         8 to 15% (5 to 9 deg) Moderately Sloping           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           Low suboptimal (1.2) [Right]         0           Low marginal (0.75) [Right]         0           Low marginal (0.75) [Right]         0           Low poor (0.5) [Right]         0           Low poor (0.5) [Right]         0           Continuity of channel along thalweg         Strong           Sinuosity of channel along thalweg         Strong           In-channel structure         Moderate           Active or relict floodplain         Absent           Depositional bars or benches <td>Left Bank Substrate</td> <td>Sand, Vegetated</td>	Left Bank Substrate	Sand, Vegetated
High suboptimal (1.2) [Left] 0 Low suboptimal (1.1) [Left] 0 High marginal (0.85) [Left] 0 Low marginal (0.75) [Left] 0 Low poor (0.6) [Left] 0 Low poor (0.6) [Left] 0 Left bank total 0 Right Bank Right Bank Naber Na	Left Bank Riparian Buffer Condition	1
Low suboptimal (1.1) [Left] 0 High marginal (0.75) [Left] 0 High poor (0.6) [Left] 0 Low poor (0.5) [Left] 0 Low poor (0.5) [Left] 0 Left bank total 0 Right Bank Right Bank Height (feet) 3 Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Ension Potential Low Right Bank Substrate Silt-Mud, Vegetated  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] 0 Optimal (1.1) [Right] 0 Low suboptimal (1.1) [Right] 0 Low suboptimal (1.1) [Right] 0 Low marginal (0.85) [Right] 0 Low marginal (0.75) [Right] 0 Low marginal (0.75) [Right] 0 Low poor (0.5) [Right] 0 Low poor (0.5) [Right] 0 Low poor (0.5) [Right] 0 Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits	Optimal (1.5) [Left]	0
High marginal (0.85) [Left]         0           Low marginal (0.75) [Left]         0           Low poor (0.5) [Left]         0           Low poor (0.5) [Left]         0           Left bank total         0           Right Bank           Right Bank Height (feet)           3           Right Bank Slope         8 to 15% (5 to 9 deg) Moderately Sloping           Right Bank Substrate         Silt-Mud, Vegetated           Right Bank Riparian Buffer Condition           Optimal (1.5) [Right]         0           Low suboptimal (1.1) [Right]         0           Low suboptimal (1.2) [Right]         0           Low suboptimal (0.85) [Right]         0           Low marginal (0.85) [Right]         0           Low marginal (0.85) [Right]         0           Low por (0.5) [Right]         0           Low por (0.5) [Right]         0           Stream Geomorphology         Continuity of channel bed and bank         Strong           Sinuosity of channel along thalweg         Strong           In-channel structure         Moderate           Active or relict floodplain         Absent           Depositional bars or benches         Moderate	High suboptimal (1.2) [Left]	0
Low marginal (0.75) [Left]       0         Low poor (0.5) [Left]       0         Left bank total       0         Right Bank         Right Bank Height (feet)       3         Right Bank Slope       8 to 15% (5 to 9 deg) Moderately Sloping         Right 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         Right bank total       0         Stream Geomorphology         Continuity of channel along thalweg       Strong         In-channel structure       Moderate         Particle size of stream substrate       Moderate         Active or relict floodplain       Absent         Depositional bars or benches       Moderate         Recent alluvial deposits       Weak	Low suboptimal (1.1) [Left]	0
High poor (0.6) [Left] 0 Low poor (0.5) [Left] 0 Left bank total 0  Right Bank Right Bank Right Bank Height (feet) 3 Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low Right Bank Riparian Buffer Condition Optimal (1.5) [Right] 0 Chimal (1.2) [Right] 0 Low suboptimal (1.2) [Right] 0 Low suboptimal (1.1) [Right] 0 Low marginal (0.85) [Right] 0 Low marginal (0.75) [Right] 0 Low marginal (0.75) [Right] 0 Right bank total 0 Right Bank Riparian Buffer Condition 0 Right Bank Riparian Buffer Condition 0 Right Bank Riparian Buffer Condition 0 Continuity of channel along thalweg Strong In-channel structure Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	High marginal (0.85) [Left]	0
Low poor (0.5) [Left] 0  Right Bank  Right Bank Height (feet) 3  Right Bank Holey (feet) 3  Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping  Right Erosion Potential Low Right Bank Riparian Buffer Condition  Optimal (1.5) [Right] 0  High suboptimal (1.1) [Right] 0  High marginal (0.85) [Right] 0  Low marginal (0.85) [Right] 0  Low marginal (0.75) [Right] 0  High poor (0.5) [Right] 0  Stream Geomorphology  Continuity of channel bank Strong  Sinuosity of channel along thalweg  In-channel structure Moderate  Active or relict floodplain Absent  Depositional bars or benches Moderate  Recent alluvial deposits Weak	Low marginal (0.75) [Left]	0
Right Bank Right Bank Height (feet) 3 Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low Right Bank Riparian Buffer Condition Optimal (1.5) [Right] 0 High suboptimal (1.2) [Right] 0 Low suboptimal (1.1) [Right] 0 Low marginal (0.85) [Right] 0 Low marginal (0.75) [Right] 0 Low por (0.5) [Right] 0 Right bank total 0 Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	High poor (0.6) [Left]	0
Right Bank Height (feet) 3 Right Bank Height (feet) 3 Right Bank Slope 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low Right Bank Riparian Buffer Condition  Optimal (1.5) [Right] 0 High suboptimal (1.2) [Right] 0 Low suboptimal (1.1) [Right] 0 Low suboptimal (1.1) [Right] 0 Low marginal (0.85) [Right] 0 Low marginal (0.75) [Right] 0 Low poor (0.6) [Right] 0 Low poor (0.5) [Right] 0 Low poor (0.5) [Right] 0 Right bank total 0  Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	Low poor (0.5) [Left]	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 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 (0.85) [Right] 0 Low oc (0.6) [Right] 0 High poor (0.6) [Right] 0 Low poor (0.5) [Right] 0 Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	Left bank total	0
Right Bank Height (feet) 8 to 15% (5 to 9 deg) Moderately Sloping Right Erosion Potential Low Right Bank Substrate Silt-Mud, Vegetated  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] 0 High suboptimal (1.2) [Right] 0 Low suboptimal (1.1) [Right] 0 High marginal (0.85) [Right] 0 Low marginal (0.85) [Right] 0 Low poor (0.6) [Right] 0 Low poor (0.6) [Right] 0 Right bank total 0  Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	Diabet Donals	
Right Bank Slope Right Erosion Potential Low Right Bank Substrate Silt-Mud, Vegetated  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] 0 High suboptimal (1.2) [Right] 0 Low suboptimal (1.1) [Right] 0 Liow suboptimal (1.1) [Right] 0 Low marginal (0.85) [Right] 0 Low marginal (0.75) [Right] 0 Low poor (0.6) [Right] 0 Cottinuity of channel bed and bank Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak		
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 (0.85) [Right] 0 Low poor (0.6) [Right] 0 Low poor (0.6) [Right] 0 Low poor (0.5) [Right] 0 Right bank total 0  Stream Geomorphology  Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak		
Right Bank Substrate  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 (0.5) [Right] 0  High poor (0.6) [Right] 0  Stream Geomorphology  Continuity of channel bed and bank Strong  Sinuosity of channel along thalweg Strong  In-channel structure Moderate  Active or relict floodplain Absent  Depositional bars or benches Moderate  Recent alluvial deposits West		
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right] 0  High suboptimal (1.2) [Right] 0  Low suboptimal (1.1) [Right] 0  High marginal (0.85) [Right] 0  Low marginal (0.75) [Right] 0  High poor (0.6) [Right] 0  Low poor (0.5) [Right] 0  Right bank total 0  Stream Geomorphology  Continuity of channel bed and bank Strong  Sinuosity of channel along thalweg Strong  In-channel structure Moderate  Particle size of stream substrate Moderate  Active or relict floodplain Absent  Depositional bars or benches Moderate  Recent alluvial deposits Weak		
Optimal (1.5) [Right] 0 High suboptimal (1.2) [Right] 0 Low suboptimal (1.1) [Right] 0 High marginal (0.85) [Right] 0 Low marginal (0.75) [Right] 0 High poor (0.6) [Right] 0 Low poor (0.5) [Right] 0 Right bank total 0 Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	Right Bank Substrate	Silt-Mud, Vegetated
Optimal (1.5) [Right] 0 High suboptimal (1.2) [Right] 0 Low suboptimal (1.1) [Right] 0 High marginal (0.85) [Right] 0 Low marginal (0.75) [Right] 0 High poor (0.6) [Right] 0 Low poor (0.5) [Right] 0 Right bank total 0 Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	Right Bank Riparian Buffer Conditio	on
Low suboptimal (1.1) [Right] 0 High marginal (0.85) [Right] 0 Low marginal (0.75) [Right] 0 High poor (0.6) [Right] 0 Low poor (0.5) [Right] 0 Right bank total 0  Stream Geomorphology  Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	<u> </u>	
High marginal (0.85) [Right] 0 Low marginal (0.75) [Right] 0 High poor (0.6) [Right] 0 Low poor (0.5) [Right] 0 Right bank total 0  Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	High suboptimal (1.2) [Right]	0
Low marginal (0.75) [Right] 0 High poor (0.6) [Right] 0 Low poor (0.5) [Right] 0 Right bank total 0  Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	Low suboptimal (1.1) [Right]	0
High poor (0.6) [Right] 0  Low poor (0.5) [Right] 0  Right bank total 0  Stream Geomorphology  Continuity of channel bed and bank Strong  Sinuosity of channel along thalweg Strong  In-channel structure Moderate  Particle size of stream substrate Moderate  Active or relict floodplain Absent  Depositional bars or benches Moderate  Recent alluvial deposits Weak	High marginal (0.85) [Right]	0
Low poor (0.5) [Right] 0 Right bank total 0  Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	Low marginal (0.75) [Right]	0
Low poor (0.5) [Right] 0 Right bank total 0  Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg Strong In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	High poor (0.6) [Right]	0
Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Depositional bars or benches Recent alluvial deposits  O  Strong Moderate Moderate Moderate Moderate Moderate Moderate Moderate		0
Stream Geomorphology Continuity of channel bed and bank Strong Sinuosity of channel along thalweg In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak		0
Continuity of channel bed and bank Strong Sinuosity of channel along thalweg In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak		
Sinuosity of channel along thalweg In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	. 63	Character -
In-channel structure Moderate Particle size of stream substrate Moderate Active or relict floodplain Absent Depositional bars or benches Moderate Recent alluvial deposits Weak	•	
Particle size of stream substrate Moderate  Active or relict floodplain Absent  Depositional bars or benches Moderate  Recent alluvial deposits Weak	, , , , , , , , , , , , , , , , , , , ,	
Active or relict floodplain Absent  Depositional bars or benches Moderate  Recent alluvial deposits Weak		
Depositional bars or benches Moderate Recent alluvial deposits Weak		
Recent alluvial deposits Weak		
Headcuts Absent	Recent alluvial deposits	Weak
Grade control Weak	Grade control	Weak
Natural valley Moderate	Natural valley	Moderate
Second or greater order channel Yes	Second or greater order channel	Yes
Stream Geomorphology Total 17.5	Stream Geomorphology Total	17.5

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

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Weak
Amphibians	Strong
Algae	Absent
Stream Biology Total	11.5
Stream Overview Penort Photos	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

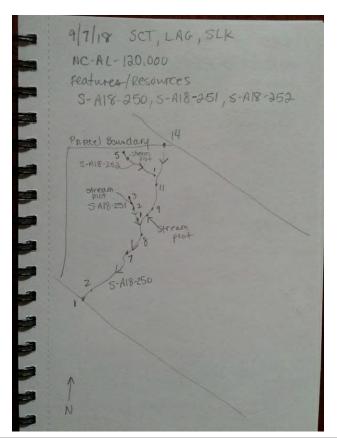
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Across stream photo direction 1

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Sketch of Stream



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7 18:00:49 UTC by Laura Giese
0 21:48:05 UTC by Laura Giese
95, -79.3803725
Crew Collected
hgate

Field Crew	Laura Giese, Simon King, Susan Thebert
Lead Scientist's Initials	A18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	251
Resource ID	S-A18-251
Do you need to override the resource id?	No
Pasquirce ID = Pasquirce Type - Scientist Initials - Pasquirce Series Number	

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

## Stream Inventory

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

# **Stream Conditions**

Water Flow Velocity	Slow (< 1 cfs)
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 Height (feet)	2
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Pi Lub L	
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	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
Low poor (0.5) [Right] Right bank total	
Right bank total	0
Right bank total Stream Geomorphology	0 0
Stream Geomorphology Continuity of channel bed and bank	0
Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	0 0 Strong
Stream Geomorphology Continuity of channel bed and bank	0 0 Strong Absent
Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	0 0 Strong Absent Weak
Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	0 0 Strong Absent Weak Weak
Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	0 0 Strong Absent Weak Weak Absent
Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	0 0 Strong Absent Weak Weak Absent Absent
Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	0 0 Strong Absent Weak Weak Absent Absent Absent Weak Weak
Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts Grade control	0 0 Strong Absent Weak Weak Absent Absent Absent
Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	0 0 Strong Absent Weak Weak Absent Absent Absent Weak Absent Absent Absent

Presence of baseflow	Moderate
Iron oxidizing bacteria	Moderate
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	7.5

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	8
Notes	Short seepage channel
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction NE



Downstream photo direction

Across Stream Photo 1

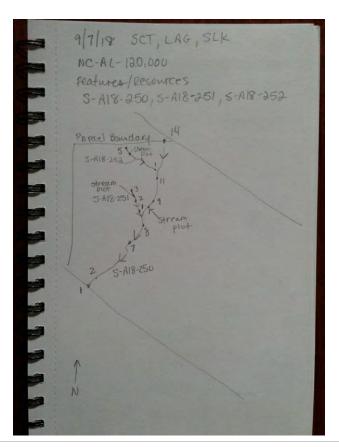
SW



Across stream photo direction 1

Ε

Sketch of Stream



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

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Created	2018-09-07 18:08:47 UTC by Laura Giese
Updated	2018-09-07 22:31:37 UTC by Laura Giese
Location	36.1392599, -79.3802933
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/07
Date2	180907

Laura Giese, Simon King, Susan Thebert
A18
Simon King
NA
252
S-A18-252
No

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

### Stream Inventory

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

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE

#### **Channel Alteration**

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

#### **Stream Measurements**

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

### Left Bank

Left Bank Height (feet)	1
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Sand, Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Left bank total	
Right Bank	
Right Bank Height (feet)	1
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
	***

Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent	
Rooted upland plants in streambed	Absent	
Macrobenthos	Absent	
Aquatic mullusks	Absent	
Fish	Absent	
Crayfish	Absent	
Amphibians	Weak	
Algae	Absent	
Stream Biology Total	6.5	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction NW



Downstream photo direction

Across Stream Photo 1

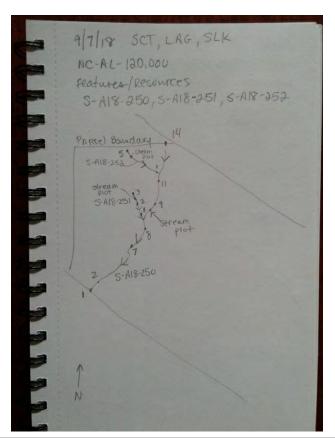
SE



Across stream photo direction 1

NE

Sketch of Stream



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

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Created	2018-09-10 15:37:02 UTC by Susie Gifford (SBG)
Updated	2018-09-10 21:51:27 UTC by Susie Gifford (SBG)
Location	36.1849742, -79.493087
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/10
Date2	180910

Field Crew	Laura Giese, Susie Gifford
Lead Scientist's Initials	A18
Resource Series Number	253
Resource ID	S-A18-253
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	27.5
Calculated Stream Type	Intermittent
Wildlife Observed	Invertebrates
Observed Use	Drainage

## **Stream Conditions**

Water Flow Velocity	Slow (< 1 cfs)
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)	3	
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)	1
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Vegetated
Left bank Substrate	Sanu, vegetateu
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
B: 1 - B - 1	
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, Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
-	
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	12.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Absent
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Stream Biology Total	8

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 2



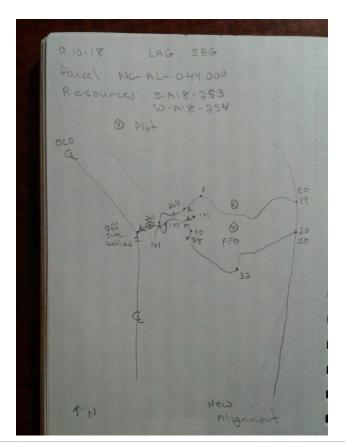
Across stream photo direction 2
Additional Stream Photos

S



upstream of 101 flag

Sketch of Stream



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

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Created	2018-09-11 17:28:58 UTC by Maggie Molnar
Updated	2018-09-12 01:14:01 UTC by Maggie Molnar
Location	36.3570349, -79.6137376
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/11
Date2	180911

Field Crew	Maggie Molnar
Lead Scientist's Initials	A18
GPS Surveyor	Susie Gifford
GPS ID	NA
Resource Series Number	256
Resource ID	S-A18-256
Do you need to override the resource id?	No
Pasource ID = Pasource Type - Scientist Initials	- Pasourca Sarias Number

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

### Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	22.75
Wildlife Observed	Frogs
Observed Use	Drainage

## **Stream Conditions**

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

### **Channel Alteration**

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

## **Stream Measurements**

OHWM Width (ft)	2	
Average Water Width (ft)	1	
Bank to Bank (ft)	4	
Bankfull Width (ft)	3	

Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
Left Bank Substrate	Silt-Mud
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	4
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Condit	
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	Weak
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
second of greater order challier	110

Stream (	Geomorpho	logy Total
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10

# Stream Hydrology

Weak
Weak
Strong
Moderate
Strong
No
4.5

# Stream Biology

Absent
Absent
Weak
Absent
Absent
Absent
Weak
Absent
FACW
8.25

Upstream Stream Photo



Upstream photo direction

Е



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

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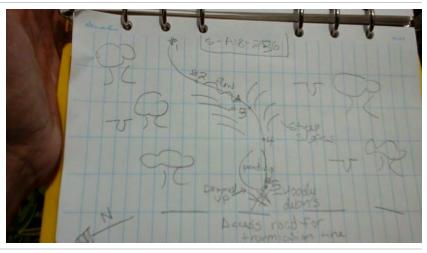
Across Stream Photo 2



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

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Created	2018-08-23 12:32:56 UTC by Will Buetow
Updated	2018-08-23 18:32:02 UTC by Will Buetow
Location	36.3188646, -79.5932087
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/23
Date2	180823

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

## Stream Inventory

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

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	NW

### **Channel Alteration**

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

## **Stream Measurements**

OHWM Width (ft)	4
Average Water Width (ft)	0
Bank to Bank (ft)	4
Bankfull Width (ft)	8

Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	1
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Ecit Balli Substitute	Sit Mad
Left Bank Riparian Buffer Condition	on
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	1
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Condit	o 0
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	
Light as a (0.6) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes

Stream Geomor	phology Total
---------------	---------------

17

Stream	Hydrology

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

# Stream Biology

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

Upstream Stream Photo



Upstream photo direction

SE



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

SW

Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

NE



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

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Created	2018-08-23 13:01:21 UTC by Will Buetow
Updated	2018-08-23 18:33:31 UTC by Will Buetow
Location	36.3193412, -79.5935722
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/23
Date2	180823

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	119
Resource ID	S-B18-119
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-119
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	15
Calculated Stream Type	Ephemeral
Wildlife Observed	none

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	NW

## **Channel Alteration**

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

### **Stream Measurements**

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

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

# Left Bank Riparian Buffer Condition

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

# Right Bank

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

# Right Bank Riparian Buffer Condition

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

# Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	11

Stream Hydrology

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

Stream Biology

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

Upstream Stream Photo



Upstream photo direction E



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

Ν

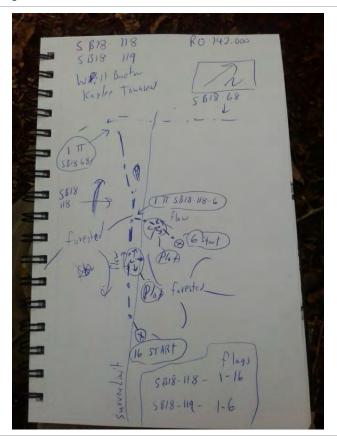
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

S



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

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Created	2018-08-25 13:15:12 UTC by Will Buetow	
Updated	2018-08-25 13:47:54 UTC by Will Buetow	
Location	36.479563, -79.6925896	
Status	Field Crew Collected	
Client	NextEra	
Project	MVP Southgate	
Date	18/08/25	
Date2	180825	

will buetow, kaylee townsend
B18
kaylee townsend
NA
120
S-B18-120
No

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

### Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	11.5
Calculated Stream Type	Ephemeral
Wildlife Observed	none

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	S

## **Channel Alteration**

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

### **Stream Measurements**

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

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

## Left Bank Riparian Buffer Condition

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

# Right Bank

Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

# Right Bank Riparian Buffer Condition

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

# Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	8

Stream Hydrology

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

Stream Biology

Moderate Moderate
Moderate
Absent
2

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Е

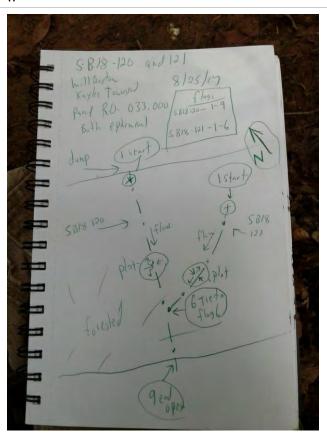
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

W



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

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Created	2018-08-25 13:47:57 UTC by Will Buetow
Updated	2018-08-25 13:55:16 UTC by Will Buetow
Location	36.4795436, -79.6925015
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/25
Date2	180825

Field Crew	will buetow, kaylee townsend
Lead Scientist's Initials	B18
GPS Surveyor	kaylee townsend
GPS ID	NA
Resource Series Number	121
Resource ID	S-B18-121
Do you need to override the resource id?	No
Passures ID = Passures Type Scientist Initials	Pacauras Carios Number

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

## Stream Inventory

Stream / Waterbody Type	Ephemeral	
Calculated Stream Score	11.5	
Calculated Stream Type	Ephemeral	
Wildlife Observed	none	

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	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)	0	
Bank to Bank (ft)	4	
Bankfull Width (ft)	4	
Probed Stream Depth	0 to 6 inches	

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

## Left Bank Riparian Buffer Condition

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

# Right Bank

Right Bank Height (feet)	3
Right Bank Slope	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

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	8

# Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed  Rooted upland plants in streambed  Macrobenthos  Adsent  Aquatic mullusks  Absent  Crayfish  Amphibians  Absent  Algae  Absent  Stream Biology Total  Stream Overview Report Photos		
Macrobenthos Absent Aquatic mullusks Absent Fish Absent Crayfish Absent Amphibians Absent Algae Absent Stream Biology Total 2	Fibrous roots in streambed	Strong
Aquatic mullusks Absent Fish Absent Crayfish Absent Amphibians Absent Algae Absent Stream Biology Total 2	Rooted upland plants in streambed	Weak
Fish Absent Crayfish Absent Amphibians Absent Algae Absent Stream Biology Total 2	Macrobenthos	Absent
Crayfish Absent Amphibians Absent Algae Absent Stream Biology Total 2	Aquatic mullusks	Absent
Amphibians Absent Algae Absent Stream Biology Total 2	Fish	Absent
Algae Absent Stream Biology Total 2	Crayfish	Absent
Stream Biology Total 2	Amphibians	Absent
-	Algae	Absent
Stream Overview Report Photos	Stream Biology Total	2
	Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Ε

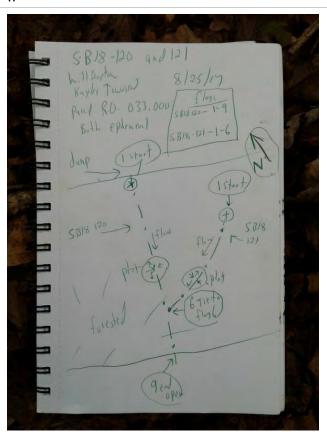
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

W



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5-	В	18-1	122

2018-08-28 21:18:49 UTC by Will Buetow 2018-09-21 11:54:02 UTC by Will Buetow
36.0770807, -79.9620556
Field Crew Reviewed
NextEra
MVP Southgate
18/08/28

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	122
Resource ID	S-B18-122
Do you need to override the resource id?	No
Pasourca ID - Pasourca Typa - Scientist Initials	- Pasaurca Sarias Number

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

### Stream Inventory

Stream / Waterbody Type	Ephemeral	
Calculated Stream Score	13.5	
Calculated Stream Type	Ephemeral	
Wildlife Observed	none	

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	S

## **Channel Alteration**

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

### **Stream Measurements**

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

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Left Bank Height (feet)	2
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

## Left Bank Riparian Buffer Condition

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

# Right Bank

Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

## Right Bank Riparian Buffer Condition

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

## Stream Geomorphology

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

Stream Hydrology

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

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	2
Notes	Photos of stream not collected in the field.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

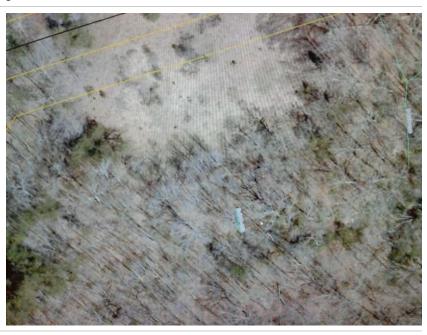
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Downstream photo direction

Across Stream Photo 1

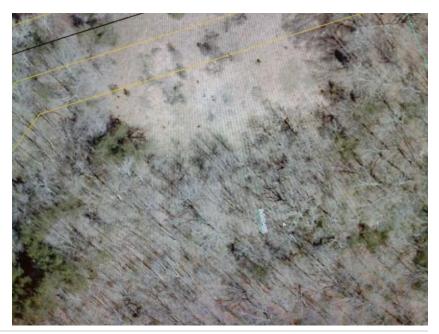
S



Across stream photo direction 1

Ε

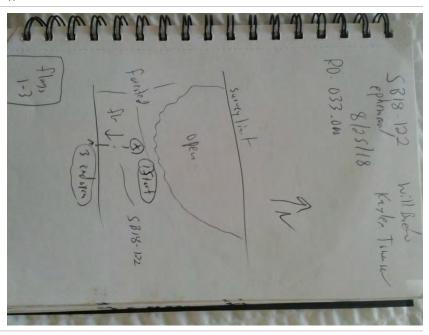
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

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Created	2018-08-25 14:41:54 UTC by Will Buetow
Updated	2018-08-25 15:12:08 UTC by Will Buetow
Location	36.4783538, -79.6942561
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/25
Date2	180825

Field Crew	will buetow, kaylee townsend
Lead Scientist's Initials	B18
GPS Surveyor	kaylee townsend
GPS ID	NA
Resource Series Number	123
Resource ID	S-B18-123
Do you need to override the resource id?	No
Pasource ID = Pasource Type - Scientist Initials	- Pasourca Sarias Number

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

### Stream Inventory

Stream / Waterbody Type	Ephemeral	
Calculated Stream Score	13.5	
Calculated Stream Type	Ephemeral	
Wildlife Observed	none	

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	S

## **Channel Alteration**

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

### **Stream Measurements**

OHWM Width (ft)	2	
Average Water Width (ft)	0	
Bank to Bank (ft)	5	
Bankfull Width (ft)	5	
Probed Stream Depth	0 to 6 inches	

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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

## Stream Geomorphology

Sa cam acomorphology	
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	Weak
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	10

Stream Hydrology

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

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	2
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction N



Downstream photo direction

Across Stream Photo 1

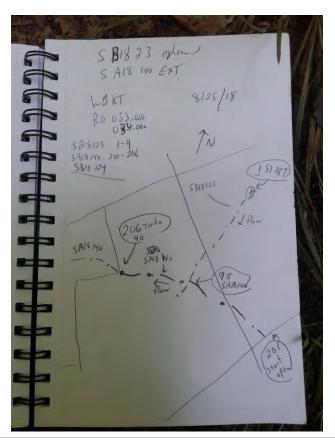
S



Across stream photo direction 1

W

Sketch of Stream



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.)-	ВΙ	გ-	124

Created	2018-08-25 15:17:04 UTC by Will Buetow	
Updated	2018-08-28 21:30:14 UTC by Will Buetow	
Location	36.4779193, -79.6944047	
Status	Field Crew Collected	
Client	NextEra	
Project	MVP Southgate	
Date	18/08/25	
Date2	180825	

Field Crew	will buetow, kaylee townsend	
Lead Scientist's Initials	B18	
GPS Surveyor	kaylee townsend	
GPS ID	NA	
Resource Series Number	124	
Resource ID	S-B18-124	
Do you need to override the resource id?	No	

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

## Stream Inventory

Stream / Waterbody Type	Ephemeral	
Calculated Stream Score	13.5	
Calculated Stream Type	Ephemeral	
Wildlife Observed	none	

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	N

### **Channel Alteration**

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

### **Stream Measurements**

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

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Left Bank Height (feet)	1.5
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	
Left bank total	0	

# Right Bank

Right Bank Height (feet)	1.5	
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	
Right bank total	0	

## Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Weak
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	8

Stream Hydrology

Absent
Absent
Weak
Absent
Weak
No
1.5

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	4

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

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Across stream photo direction 1

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Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

W



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Created	2018-08-27 12:12:47 UTC by Will Buetow
Updated	2018-08-28 21:14:03 UTC by Will Buetow
Location	36.0546397, -79.364577
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/27
Date2	

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	125
Resource ID	S-B18-125
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-125
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

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	W

## **Channel Alteration**

0	
0	
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0	
0	
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0	
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## Stream Measurements

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

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

## Left Bank Riparian Buffer Condition

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

# Right Bank

Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

# Right Bank Riparian Buffer Condition

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

# Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
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	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	14

Stream Hydrology

Absent
Absent
Weak
Absent
Weak
Yes
4.5

Stream Biology

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

Upstream Stream Photo



Upstream photo direction E



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

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Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

S



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Created	2018-08-27 12:37:15 UTC by Will Buetow
Updated	2018-08-28 21:32:53 UTC by Will Buetow
Location	36.0548549, -79.3640706
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/27
Date2	180827

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	126
Resource ID	S-B18-126
Do you need to override the resource id?	No

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

## Stream Inventory

Stream / Waterbody Type	Ephemeral	
Calculated Stream Score	13.5	
Calculated Stream Type	Ephemeral	
Wildlife Observed	Turtles	

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

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

## Left Bank Riparian Buffer Condition

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

## Right Bank

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

# Right Bank Riparian Buffer Condition

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

## Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	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	Absent
Soil-based evidence of high water table?	No
Stream Hydrology Total	0.5

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	2
Ctroom Overview Depart Dhates	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

S

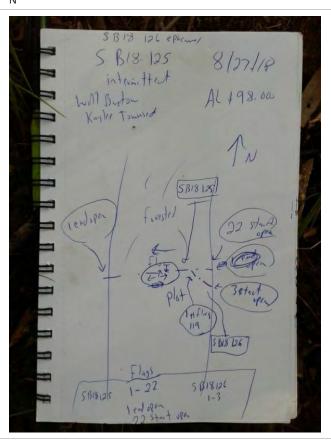
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

Ν



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Created	2018-08-27 14:24:43 UTC by Will Buetow
Updated	2018-09-20 19:22:06 UTC by Susie Gifford (SBG)
Location	36.0524169, -79.3650877
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/27

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
Resource Series Number	127
Resource ID	S-B18-127
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

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

## **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	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)	5	
Average Water Width (ft)	0	
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	> 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)	4
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	Yes
Stream Geomorphology Total	17.5
1 65	

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?	Yes
Stream Hydrology Total	5.5

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	6.5

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Ε

#### Across Stream Photo 2



Across stream photo direction 2

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Created	2018-08-27 13:06:44 UTC by Will Buetow
Updated	2018-08-27 14:43:40 UTC by Will Buetow
Location	36.0522142, -79.3652315
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/27
Date2	180827

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
Resource Series Number	128
Resource ID	S-B18-128
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

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

### **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	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)	0
Bank to Bank (ft)	3
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

#### Left Bank

Leit Dailk		
Left Bank Height (feet)	2	

Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Artificial
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	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	Moderate
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	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	2
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

SE



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

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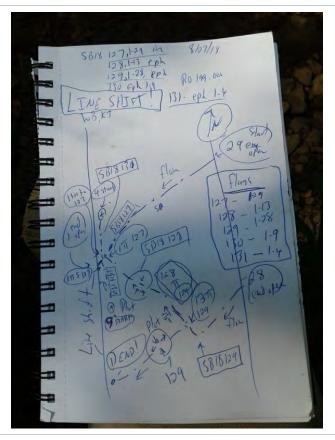
Across Stream Photo 2



Across stream photo direction 2

W

Sketch of Stream



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Created	2018-08-27 13:25:42 UTC by Will Buetow
Updated	2018-08-27 14:44:40 UTC by Will Buetow
Location	36.0514816, -79.3650438
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/27

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
Resource Series Number	129
Resource ID	S-B18-129
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

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

# **Stream Conditions**

Water Flow Velocity	Dry or Minimal
Direction of Flow	N

#### **Channel Alteration**

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

#### **Stream Measurements**

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

# Left Bank

Left Bank Height (feet)	3
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
<u> </u>	
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	Silt-Mud
Dight Doub Dinaging Duffey Condition	_
Right Bank Riparian Buffer Conditio	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
	Weak Weak
Grade control	

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
Stream Biology Total	3
Notes	Stream ends does not connect to other resource

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

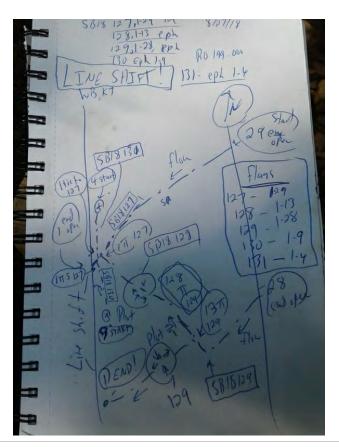
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Across stream photo direction 1

W

Sketch of Stream



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Created	2018-08-27 13:59:54 UTC by Will Buetow
Updated	2018-08-27 14:47:15 UTC by Will Buetow
Location	36.0518267, -79.3655771
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/27
Date2	180827

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
Resource Series Number	130
Resource ID	S-B18-130
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	N

#### **Channel Alteration**

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

#### **Stream Measurements**

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

#### Left Bank

zere Barin			
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]	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	High
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	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	Weak
Recent alluvial deposits	Absent
Headcuts	Moderate
Grade control	Weak
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	6.5
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	Moderate
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	3
Notes	Stream is in floodplain of larger river.
Character Description	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

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Across stream photo direction 1

Ε

#### Across Stream Photo 2

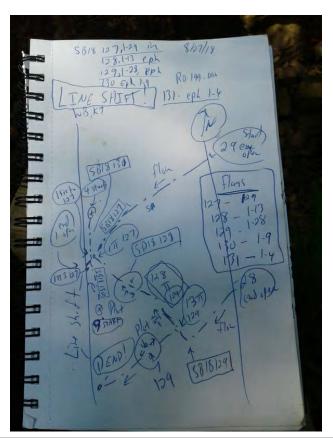


Across stream photo direction 2
Additional Stream Photos

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#### Sketch of Stream



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Created	2018-08-27 14:12:56 UTC by Will Buetow
Updated	2018-08-29 15:28:23 UTC by Will Buetow
Location	36.0520944, -79.3656005
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/27
Date2	180827

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	131
Resource ID	S-B18-131
Do you need to override the resource id?	No
Pagaringa ID = Pagaringa Tima. Cajantist Initials	Describes Cories Number

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

### Stream Inventory

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

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

#### Left Bank

Left Bank Height (feet)	4
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Left Book Dissuing Buffey Condition	
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
Dight Bank Diparian Buffer Condition	
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]	0
	0
High suboptimal (1.2) [Right]	
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Absent
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Strong
Grade control	Absent
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	11.5
1 65	

Stream Hydrology

Presence of baseflow	Weak
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	6.5

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Notes	Stream is in floodplain of large river

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

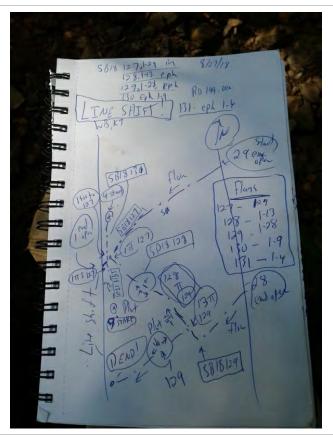
Across Stream Photo 2



Across stream photo direction 2

Ε

Sketch of Stream



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Created	2018-08-28 15:55:37 UTC by Will Buetow
Updated	2018-08-28 16:38:29 UTC by Will Buetow
Location	36.0938923, -79.3649197
Status	Field Crew Reviewed
Client	NextEra
Project	MVP Southgate
Date	18/08/28

Field Crew	Will Buetow, Kaylee Townsend
Lead Scientist's Initials	B18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	132
Resource ID	S-B18-132
Do you need to override the resource id?	No
Page uses ID - Page uses Time Crientist Initials Page uses Coving Number	

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

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	39
Calculated Stream Type	Perennial
Wildlife Observed	fish, snapping turtle, stone fly

# **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)	6
Average Water Width (ft)	5
Bank to Bank (ft)	9
Bankfull Width (ft)	9

#### 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	Cobble-Gravel, Silt-Mud			
Left Book Disseries Buffer Condition				
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			
Dight Bank Dinarian Buffer Condition				
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]	0			
	0			
High suboptimal (1.2) [Right]				
Low suboptimal (1.1) [Right]	0			
High marginal (0.85) [Right]	0			
Low marginal (0.75) [Right]	0			
High poor (0.6) [Right]	0			
Low poor (0.5) [Right]	0			
Right bank total	0			
Stream Geomorphology				
Continuity of channel bed and bank	Strong			
Sinuosity of channel along thalweg	Moderate			
In-channel structure	Moderate			
Particle size of stream substrate	Strong			
Active or relict floodplain	Strong			
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	23			
1 0,				

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?	Yes
Stream Hydrology Total	5.5

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Weak
Crayfish	Weak
Amphibians	Strong
Stream Biology Total	10.5
Notes	Nice perennial stream, only on parcel AL-163 for two flags.
Stream Overview Report Photos	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

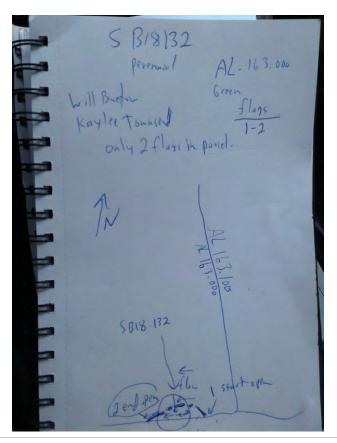
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Across stream photo direction 1

NW

Sketch of Stream



S-	R <sub>1</sub>	Q	.1	2	2
.)-	DІ	0-	• 1		

Created	2018-08-31 14:30:29 UTC by Will Buetow
Updated	2018-08-31 14:48:52 UTC by Will Buetow
Location	36.0833984, -79.3606346
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/31
Date2	180831

B18
Kaylee Townsend
NA
133
S-B18-133
No
-

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

### Stream Inventory

Stream / Waterbody Type	Perennial	
Calculated Stream Score	40.5	
Calculated Stream Type	Perennial	
Wildlife Observed	Frogs	

# **Stream Conditions**

Water Flow Velocity	Moderate (1 - 5 cfs)	
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)	15	
Average Water Width (ft)	8	
Bank to Bank (ft)	25	
Bankfull Width (ft)	25	
Probed Stream Depth	0 to 6 inches	

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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

# Stream Geomorphology

Sa carri decirror priology	
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	Strong
Recent alluvial deposits	Strong
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
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	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	9

Stream Biology

<b>-</b>	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	8
Stream Overview Report Photos	

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Upstream Stream Photo



Upstream photo direction NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

SE

#### Across Stream Photo 2



Across stream photo direction 2

NW

C	$D_1$	8-	1	2	1
2-	D I	O-	1	.54	ł

Created	2018-08-31 14:54:59 UTC by Will Buetow
Updated	2018-08-31 15:36:17 UTC by Will Buetow
Location	36.0836432, -79.3605126
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/08/31
Date2	180831

Will Buetow, Kaylee Townsend
B18
Kaylee Townsend
NA
134
S-B18-134
No

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

### Stream Inventory

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

# **Stream Conditions**

Water Flow Velocity	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)	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	High		
Left Bank Substrate	Silt-Mud		
Left Bank Riparian Buffer Condition	on		
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	High		
Right Bank Substrate	Silt-Mud		
Right Bank Riparian Buffer Condi	tion 0		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right]	0 0		
Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	tion 0 0 0		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	tion 0 0 0 0 0		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right]	tion  0 0 0 0 0 0 0		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	tion  0 0 0 0 0 0 0 0 0 0		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	tion  0 0 0 0 0 0 0 0 0 0 0 0		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	tion  0 0 0 0 0 0 0 0 0 0		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology	tion  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank	tion  0 0 0 0 0 0 0 0 0 0 0 0		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	tion  0 0 0 0 0 0 0 0 0 0 0 0 0 0 Moderate Weak		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank	tion  0  0  0  0  0  0  0  0  0  0  0  0  Moderate		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	tion  0 0 0 0 0 0 0 0 0 0 0 0 0 0 Moderate Weak		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	tion  0  0  0  0  0  0  0  0  0  0  0  Moderate  Weak  Weak		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	tion  0  0  0  0  0  0  0  0  0  0  0  Moderate  Weak  Weak  Moderate		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	tion  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  Moderate  Weak  Weak  Weak  Moderate  Absent		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	tion  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  Moderate Weak Weak Weak Moderate Absent Weak		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	### To a control of the control of t		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	O		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts Grade control	tion  0  0  0  0  0  0  0  0  0  0  0  0  0		

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?	Yes
Stream Hydrology Total	5.5

# Stream Biology

Absent
Absent
5

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 2

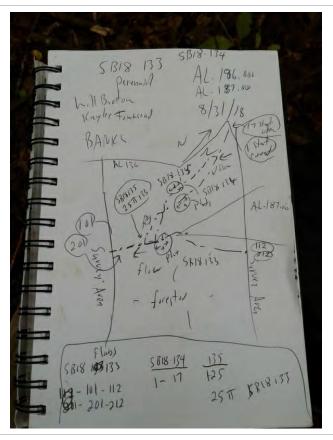


Across stream photo direction 2

s stream photo an ection 2

W

Sketch of Stream



S-	R1	Q_	.1	2	5
.)-	DI	О-	. 1		J

Created	2018-08-31 15:23:20 UTC by Will Buetow		
Updated	2018-08-31 15:35:30 UTC by Will Buetow		
Location	36.0843047, -79.3605792		
Status	Field Crew Collected		
Client	NextEra		
Project	MVP Southgate		
Date	18/08/31		
Date2	180831		

Field Crew	Will Buetow, Kaylee Townsend		
Lead Scientist's Initials	B18		
GPS Surveyor	Kaylee Townsend		
GPS ID	NA		
Resource Series Number	135		
Resource ID	S-B18-135		
Do you need to override the resource id?	No		
Resource ID = Resource Type - Scientist Initials	Posource Series Number		

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

### Stream Inventory

Stream / Waterbody Type	Ephemeral	
Calculated Stream Score	16.5	
Calculated Stream Type	Ephemeral	
Wildlife Observed	none	

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

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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

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	

# Stream Geomorphology

Sa cam acomorphology	
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	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Weak
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	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	5

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Moderate
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	2
Notes	Ephemeral stream parallels S-B18-134.
Strang Overview Depart Dhetes	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

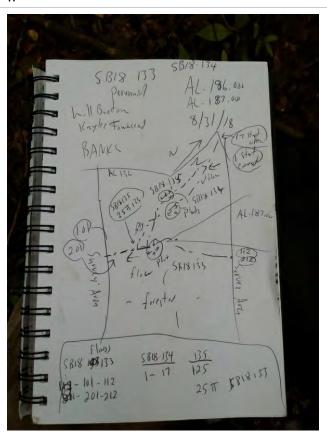
Ε



Across stream photo direction 2

Sketch of Stream

W



C D1	10 1	27
S-B1	I O- I	15/

Created	2018-09-04 11:02:36 EDT by Will Buetow
Updated	2018-09-19 08:56:14 EDT by Nathan Renaudin
Location	36.1513464, -79.4089016
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/04
Date2	180904

Field Crew	Nate Renaudin, Susie Thebert
Lead Scientist's Initials	B18
GPS Surveyor	Susie Thebert
GPS ID	NA
Resource Series Number	137
Resource ID	S-B18-137
Do you need to override the resource id?	No
Pasource ID - Pasource Type - Scientist Initials - Pasource Series Number	

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

### Stream Inventory

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

## **Stream Conditions**

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

### **Channel Alteration**

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

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)	1
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	1
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud
Right Bank Substrate  Right Bank Riparian Buffer Condition	
Right Bank Substrate  Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]	Silt-Mud 0
Right Bank Substrate  Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]	Silt-Mud  0 0
Right Bank Substrate  Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]	Silt-Mud 0
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	Silt-Mud  0 0
Right Bank Substrate  Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]	Silt-Mud  0 0 0 0 0 0 0
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	Silt-Mud  0 0 0 0 0 0 0 0 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0
Right Bank Substrate  Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	Silt-Mud  0 0 0 0 0 0 0 0 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0 0 0 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Stream Geomorphology Continuity of channel bed and bank	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Weak
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0 0 Weak Weak
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0 0 0 Weak Weak Weak
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0 Weak Weak Weak Weak
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0 0 Weak Weak Weak Weak Weak Moderate
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0 0 0 Weak Weak Weak Weak Weak Moderate Absent
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	Silt-Mud  0 0 0 0 0 0 0 0 0 0 0 0 0 0 Weak Weak Weak Weak Weak Weak Absent Absent

Second or greater order channel	No
Stream Geomorphology Total	7
Stream Hydrology	
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
Stream Biology	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	6.75

Corps Jurisdictional

Stream connects to wetland

Stream Overview Report Photos

Upstream Stream Photo

Regulatory Status

Notes



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

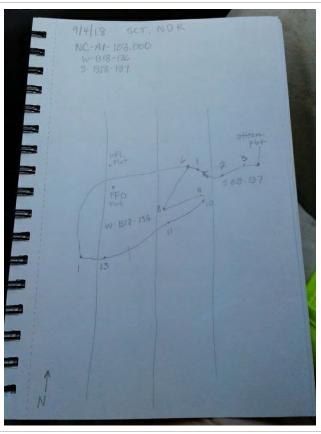
S



Across stream photo direction 2

Sketch of Stream

Ν



C	D 1	0	120
2-	D I	O-	138

Created	2018-09-04 11:36:22 EDT by Will Buetow
Updated	2018-09-19 08:59:00 EDT by Nathan Renaudin
Location	36.1494008, -79.4090689
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/04
Date2	180904

Nate Renaudin, Susie Thebert
B18
Susie Thebert
NA
138
S-B18-138
No

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

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	30.75
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	Drainage

## **Stream Conditions**

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

### **Channel Alteration**

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

OHWM Width (ft)	3
Average Water Width (ft)	1
Bank to Bank (ft)	4

Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	1
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.75
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0.75
Dight Pank	
Right Bank Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud
Man Bulli Bubblidte	Siit-iviuu
Right Bank Riparian Buffer Condition	Sitt-iviuu
-	0
Right Bank Riparian Buffer Condition	
Right Bank Riparian Buffer Condition Optimal (1.5) [Right]	0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right]	0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	0 0 0
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]	0 0 0 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right]	0 0 0 0 0 0
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]	0 0 0 0 0 0.75
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total	0 0 0 0 0 0.75 0
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]	0 0 0 0 0 0.75 0
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank	0 0 0 0 0 0.75 0 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology	0 0 0 0 0 0 0.75 0 0 0 0.75
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg	0 0 0 0 0 0.75 0 0 0 0.75
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate	0 0 0 0 0 0 0 0.75 0 0 0 0 Moderate Moderate Moderate
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure	0 0 0 0 0 0 0.75 0 0 0 0.75  Moderate Moderate Moderate Moderate Moderate
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches	0 0 0 0 0 0.75 0 0 0 0.75  Moderate Moderate Moderate Moderate Weak
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain	0 0 0 0 0 0.75 0 0 0.75  Moderate Moderate Moderate Moderate Weak Weak
Right Bank Riparian Buffer Condition  Optimal (1.5) [Right]  High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits	0 0 0 0 0 0.75 0 0 0.75  Moderate Moderate Moderate Moderate Weak Weak Weak
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	0 0 0 0 0 0 0.75 0 0 0.75  Moderate Moderate Moderate Moderate Weak Weak Weak Weak Moderate

Second or greater order channel	Yes
Stream Geomorphology Total	17.5

# Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Moderate
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	7.25
Regulatory Status	Corps Jurisdictional
Notes	Stream connects to wetland
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction E



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

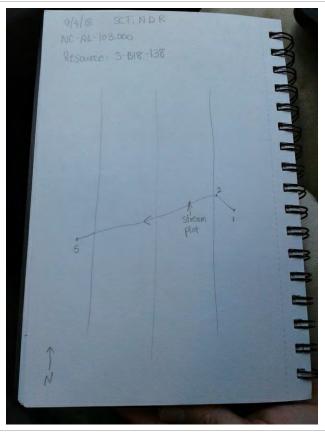
S



Across stream photo direction 2

Ν

Sketch of Stream



S-	R1	8-	1	42
	ப	<b>U</b> -		74

Created	2018-09-11 15:43:07 UTC by Thomas Errico
Updated	2018-09-13 14:48:34 UTC by Karla Fortier
Location	36.2136026, -79.5162355
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/11
Date2	180911

Tom Errico
THE
Susan Thebert
142
S-B18-142
Yes
S-B18-142

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

### Stream Inventory

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

## **Stream Conditions**

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

## **Channel Alteration**

0	
0	
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	0 0 0 0 0 0

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

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

# Left Bank Riparian Buffer Condition

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

# Right Bank

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

# Right Bank Riparian Buffer Condition

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

# Stream Geomorphology

Continuity of channel bed and bank	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	Absent
Recent alluvial deposits	Absent
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	7.5

Stream Hydrology

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

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
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

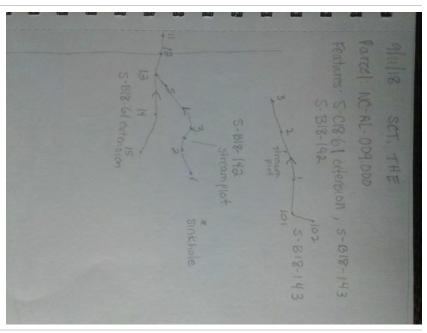
Ν



Across stream photo direction 2

Ν

Sketch of Stream



S-	R <sub>1</sub>	R.	-1	43

Created	2018-09-11 15:58:40 UTC by Thomas Errico
Updated	2018-09-13 14:48:58 UTC by Karla Fortier
Location	36.2136983, -79.5162973
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/11
Date2	180911

Tom Errico
THE
Susan Thebert
143
S-B18-143
Yes
S-B18-143

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

### Stream Inventory

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

## **Stream Conditions**

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

## **Channel Alteration**

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

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

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L	.ef	ι	В	a	m	κ

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

# Left Bank Riparian Buffer Condition

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

# Right Bank

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

# Right Bank Riparian Buffer Condition

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

# Stream Geomorphology

Continuity of channel bed and bank	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	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	5.5

Stream Hydrology

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

Stream Biology

O		
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

Е



Downstream photo direction

Across Stream Photo 1

W



Across stream photo direction 1

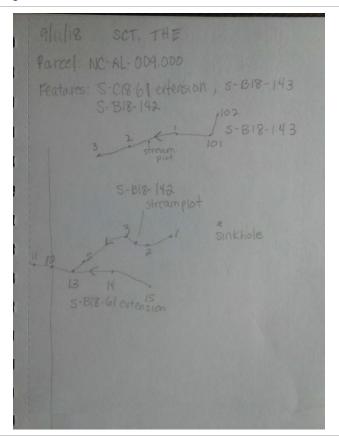
S



Across stream photo direction 2

Sketch of Stream

S



_	<b>D</b> 4	0	1	^	1
S-	ВΙ	ŏ.	-2	u	Z

Created	2018-08-24 17:48:42 UTC by Will Buetow	
Updated	2018-09-06 19:37:39 UTC by Joseph Roy	
Location	36.6420623, -79.5290332	
Status	Finalized & Approved	
Client	NextEra	
Project	MVP Southgate	
Date	18/08/24	
Date2	180824	

Field Crew	will buetow, kaylee townsend
Lead Scientist's Initials	B18
GPS Surveyor	kaylee townsend
GPS ID	NA
Resource Series Number	202
Resource ID	S-B18-202
Do you need to override the resource id?	Yes
Resource ID Override	S-B18-202
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	39
Calculated Stream Type	Perennial
Wildlife Observed	Frogs

## **Stream Conditions**

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

OHWM Width (ft)	6
Average Water Width (ft)	5
Bank to Bank (ft)	8

Bankfull Width (ft)	8
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	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
Diabt David	
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
Ngiit balik Substitate	Sherwad
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
High marginal (0.85) [Right] Low marginal (0.75) [Right]	
	0
Low marginal (0.75) [Right]	0 0
Low marginal (0.75) [Right] High poor (0.6) [Right]	0 0 0
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	0 0 0 0
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology	0 0 0 0
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank	0 0 0 0 1.1
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology	0 0 0 0 1.1 Strong
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	0 0 0 1.1 Strong Moderate Moderate
Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate	0 0 0 0 1.1 Strong Moderate
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	0 0 0 1.1 Strong Moderate Moderate Strong
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	0 0 0 1.1 Strong Moderate Moderate Strong Moderate Strong Moderate Moderate Moderate
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	0 0 0 1.1 Strong Moderate Moderate Strong Moderate Strong
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	0 0 0 1.1 Strong Moderate Moderate Strong Moderate Strong Moderate Strong Strong
Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts	0 0 0 1.1 Strong Moderate Moderate Strong Moderate Strong Moderate Strong Absent

Second or greater order channel	Yes
Stream Geomorphology Total	21.5

# Stream Hydrology

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

# Stream Biology

O	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	7.5

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

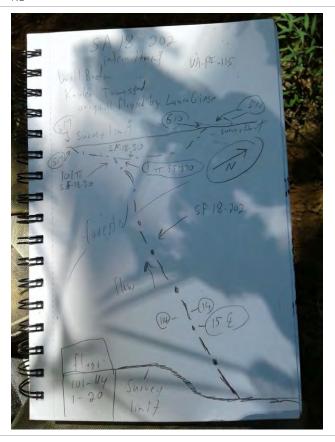
SW



Across stream photo direction 2

Sketch of Stream

NE



C	C1	O	OF
<b>D</b> -	C I	0-	85

2018-08-06 14:26:55 UTC by Simon King
2018-09-06 14:06:54 UTC by Joseph Roy
36.701454, -79.4733166
Finalized & Approved
NextEra
MVP Southgate
18/08/06
180806

Field Crew	Don Lockwood
Lead Scientist's Initials	C18
GPS Surveyor	Simon King
Resource Series Number	85
Resource ID	S-C18-85
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

# Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	36.5
Calculated Stream Type	Perennial
Wildlife Observed	Frogs

## **Stream Conditions**

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

## **Channel Alteration**

Negligible (1.5) Channel Alteration	1.2
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	0.14
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.34

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

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Left Bank Height (feet)	2
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, 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	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated

# Right Bank Riparian Buffer Condition

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

# Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Strong
Particle size of stream substrate	Moderate
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	17

Stream Hydrology

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

Stream Biology

Absent
Absent
Moderate
Absent
Absent
Moderate
Strong
Absent
Other
10.5
State Protected, Corps Jurisdictional

Upstream Stream Photo



Upstream photo direction NW



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

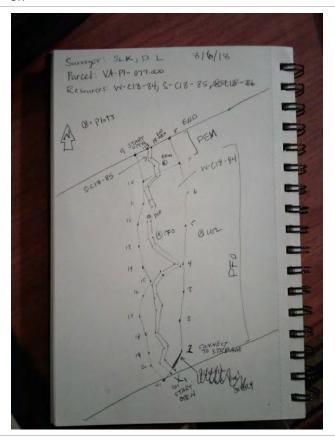
NE



Across stream photo direction 2

Sketch of Stream

SW



C	C1	O	O	c
<b>D</b> -	C1	0-	O	O

Created	2018-08-06 16:17:47 UTC by Don Lockwood
Updated	2018-09-06 14:12:38 UTC by Joseph Roy
Location	36.6983155, -79.4761626
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/06
Date2	180806

Field Crew	Simon King, Donald Lockwood
Lead Scientist's Initials	C18
GPS Surveyor	Simon King
Resource Series Number	86
Resource ID	S-C18-86
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

resource 1D - resource Type - Scientist Initials - resource Series Number

## Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	42
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	Suboptimal
In stream habitat	Optimal

#### **Channel Alteration**

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	1.04
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0.18
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.22

OHWM Width (ft)	15
Average Water Width (ft)	5
Bank to Bank (ft)	20
Bankfull Width (ft)	20

Probed Stream Depth	6 to 12 inches
Left Bank	
Left Bank Height (feet)	5
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Vegetated
Loft Bank Dinarian Buffor Conditio	n.
Left Bank Riparian Buffer Conditio Optimal (1.5) [Left]	1.2
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.15
High poor (0.6) [Left]	0
Low poor (0.5) [Left] Left bank total	1.25
Left bank total	1.35
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	Cobble-Gravel, Sand, Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	1.2
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.15
High poor (0.6) [Right]	
	0
Low poor (0.5) [Right]	0
Low poor (0.5) [Right]	0
Low poor (0.5) [Right] Right bank total	0
Low poor (0.5) [Right] Right bank total  Stream Geomorphology	1.35
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank	0 1.35 Strong
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	0 1.35 Strong Strong
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure	0 1.35 Strong Strong Strong
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	0 1.35  Strong Strong Strong Strong Strong
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	0 1.35  Strong Strong Strong Strong Moderate
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	0 1.35  Strong Strong Strong Strong Strong Strong Strong Strong Strong
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	0 1.35  Strong Strong Strong Strong Strong Strong Strong Strong Moderate Strong Strong
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	0 1.35  Strong Strong Strong Strong Strong Strong Strong Moderate Strong Strong Absent
Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts Grade control	0 1.35  Strong Strong Strong Strong Strong Strong Moderate Strong Strong Absent Weak

## Stream Hydrology

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

# Stream Biology

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

Upstream Stream Photo



Upstream photo direction

NW



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

Ε



Across stream photo direction 2

Sketch of Stream

W



C C1	0 00
2-C	8-88

Created	2018-09-12 17:02:18 UTC by Simon King	
Updated	2018-09-12 17:13:04 UTC by Katelyn Wheeler	
Location	36.551067, -79.616049	
Status	Finalized & Approved	
Client	NextEra	
Project	MVP Southgate	
Date	18/09/12	
Date2	180912	

Field Crew	Don Lockwood
Lead Scientist's Initials	C18
GPS Surveyor	Simon King
Resource Series Number	88
Resource ID	S-C18-88
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

#### Resource ID - Resource Type - Scientist Initials - Resource Series Numb

# Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	28.25
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs

# **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	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**

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

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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, Vegetated

# Left Bank Riparian Buffer Condition

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

# Right Bank

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

# Right Bank Riparian Buffer Condition

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

# Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	13.5

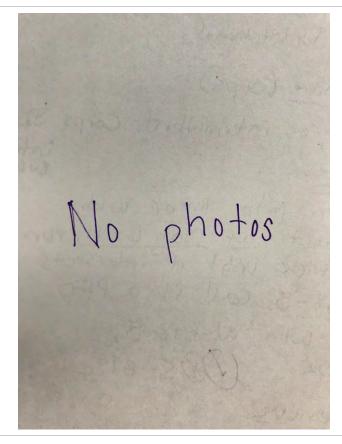
Stream Hydrology

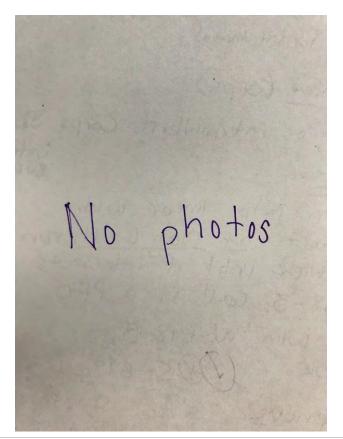
Presence of baseflow	Moderate
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7.5

Stream Biology

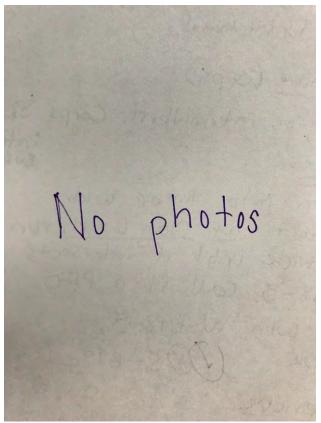
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Moderate
Algae	Weak
Wetland plants in streambed	FACW
Stream Biology Total	7.25
Regulatory Status	State Protected, Corps Jurisdictional
Stream Overview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

Upstream Stream Photo





Across Stream Photo 1



C	C1	O	20
<b>D</b> -	C I	8-	٥y

Created	2018-08-07 15:26:33 UTC by Don Lockwood
Updated	2018-09-06 15:31:17 UTC by Joseph Roy
Location	36.5518292, -79.6213728
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/07
Date2	180807

Field Crew	Simon King, Donald Lockwood
Lead Scientist's Initials	C18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	89
Resource ID	S-C18-89
Do you need to override the resource id?	No

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

## Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	37.5
Calculated Stream Type	Perennial
Wildlife Observed	Salamanders
Observed Use	Drainage

# **Stream Conditions**

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

## **Channel Alteration**

Negligible (1.5) Channel Alteration	1.2
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0.22
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.42

## **Stream Measurements**

OHWM Width (ft)	6
Average Water Width (ft)	6
Bank to Bank (ft)	15

Bankfull Width (ft)	20
Probed Stream Depth	6 to 12 inches
·	
Left Bank	
Left Bank Height (feet)	3
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Cobble-Gravel, Sand
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	1.2
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.15
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.35
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	Cobble-Gravel, Sand
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	1.2
Optimal (1.5) [Right] High suboptimal (1.2) [Right]	1.2 0
High suboptimal (1.2) [Right]	0
High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	0
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]	0 0 0
High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right]	0 0 0 0.15
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]	0 0 0 0.15
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total	0 0 0 0.15 0
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology	0 0 0 0.15 0 0 1.35
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank	0 0 0 0.15 0 0 1.35
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg	0 0 0 0.15 0 0 1.35 Strong Moderate
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure	0 0 0 0.15 0 0 1.35 Strong Moderate Strong
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate	0 0 0 0.15 0 0 1.35 Strong Moderate Strong Strong
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain	0 0 0.15 0 0 1.35 Strong Moderate Strong Strong Moderate
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches	0 0 0.15 0 0 1.35 Strong Moderate Strong Strong Moderate Weak
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits	0 0 0 0.15 0 0 1.35 Strong Moderate Strong Strong Weak Weak
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits  Headcuts	0 0 0 0.15 0 0 1.35  Strong Moderate Strong Strong Weak Weak Weak Absent
High suboptimal (1.2) [Right]  Low suboptimal (1.1) [Right]  High marginal (0.85) [Right]  Low marginal (0.75) [Right]  High poor (0.6) [Right]  Low poor (0.5) [Right]  Right bank total  Stream Geomorphology  Continuity of channel bed and bank  Sinuosity of channel along thalweg  In-channel structure  Particle size of stream substrate  Active or relict floodplain  Depositional bars or benches  Recent alluvial deposits	0 0 0 0.15 0 0 1.35 Strong Moderate Strong Strong Weak Weak

Second or greater order channel	Yes
Stream Geomorphology Total	19.5

# Stream Hydrology

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

# Stream Biology

O	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Weak
Macrobenthos	Moderate
Aquatic mullusks	Absent
Crayfish	Moderate
Amphibians	Strong
Algae	Absent
Stream Biology Total	9.5
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction NW



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

S

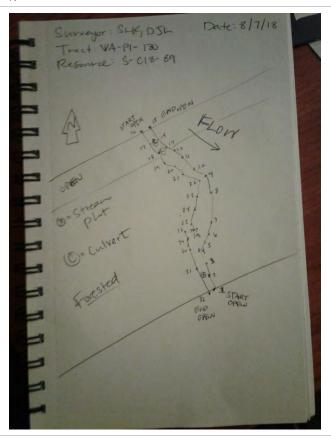
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

Ν



C C1	0 00
2-C	18-90

Created	2018-08-07 17:47:26 UTC by Simon King
Updated	2018-09-06 15:31:43 UTC by Joseph Roy
Location	36.5459248, -79.6282403
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/07
Date2	180807

Field Crew	Simon King, Donald Lockwood
Lead Scientist's Initials	C18
GPS Surveyor	Simon King
Resource Series Number	90
Resource ID	S-C18-90
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	40.5
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	Suboptimal
In stream habitat	Suboptimal

## **Channel Alteration**

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	1.04
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0.14
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.180000000000002

## **Stream Measurements**

OHWM Width (ft)	8
Average Water Width (ft)	5
Bank to Bank (ft)	10
Bankfull Width (ft)	10

Probed Stream Depth	6 to 12 inches
Left Bank	
Left Bank Height (feet)	4
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Vegetated
Ecit Ballic Substitute	Sand, regetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0.96
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.15
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.109999999999999
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, Vegetated
Right Bank Riparian Buffer Condition Optimal (1.5) [Right]	
Right Bank Riparian Buffer Condition	n
Right Bank Riparian Buffer Condition Optimal (1.5) [Right]	<b>n</b> 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right]	n 0 0.96
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	n 0 0.96 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	n 0 0.96 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right]	n 0 0.96 0 0 0.15
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	n 0 0.96 0 0 0.15
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	n 0 0.96 0 0 0 0.15 0 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	n 0 0.96 0 0 0 0.15 0 0
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology	n 0 0.96 0 0 0 0 0 0 1.1099999999999999999999999
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank	0 0.96 0 0 0.15 0 1.10999999999999999999999999999999999
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	0 0.96 0 0 0.15 0 1.10999999999999999999999999999999999
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure	0 0.96 0 0.015 0 1.10999999999999999999999999999999999
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	0 0.96 0 0 0.15 0 1.10999999999999999999999999999999999
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	0 0.96 0 0 0.15 0 0 1.109999999999999999999999999999999
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	0 0.96 0 0 0.15 0 0 1.109999999999999999999999999999999
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	n 0 0.96 0 0 0 0.15 0 0 1.109999999999999999999999999999999
Right Bank Riparian Buffer Condition Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	0 0.96 0 0 0 0.15 0 0 1.109999999999999999999999999999999

# Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Weak
Macrobenthos	Weak
Fish	Moderate
Crayfish	Moderate
Amphibians	Strong
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	9.5
Regulatory Status	State Protected, Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NW



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

Ε

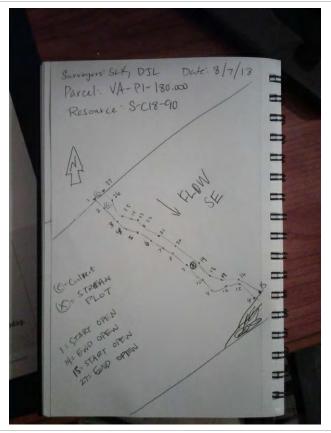
Across Stream Photo 2



Across stream photo direction 2

W

Sketch of Stream



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Created	2018-08-07 20:08:46 UTC by Simon King
Updated	2018-09-06 15:32:01 UTC by Joseph Roy
Location	36.5443052, -79.6299226
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/07
Date2	180807

Field Crew	Simon King, Donald Lockwood
Lead Scientist's Initials	C18
GPS Surveyor	Simon King
Resource Series Number	92
Resource ID	S-C18-92
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	27.75
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
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)	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)	0.5
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Mud or muck, Vegetated
Left Bank Riparian Buffer Conditi	ion
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0.88
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0.15
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	1.03
Right Bank	
Right Bank Height (feet)	0.5
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential Right Bank Substrate	Moderate  Mud or muck, Vegetated
Right Bank Riparian Buffer Condi Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0.88
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.15
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.03
Stream Geomorphology	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

# 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?	No
Stream Hydrology Total	5

# Stream Biology

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

W



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

Ν

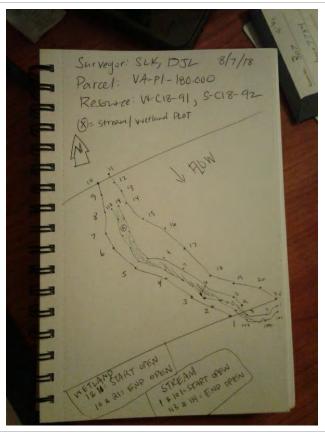
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

S



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<b>D</b> -	L I	Ο-	94	ŀ

Created	2018-08-08 14:31:52 UTC by Simon King
Updated	2018-09-07 13:22:54 UTC by Katelyn Wheeler
Location	36.5901949, -79.5831403
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/08
Date2	180808

Field Crew	Cimon King Danald Ladayaad
rield Crew	Simon King, Donald Lockwood
Lead Scientist's Initials	C18
GPS Surveyor	Simon King
Resource Series Number	94
Resource ID	S-C18-94
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
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	Drainage

## **Stream Conditions**

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

Probed Stream Depth	0 to 6 inches	
Left Bank		
Left Bank Height (feet)	0.5	
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Left Erosion Potential	Moderate	
Left Bank Substrate	Sand, Vegetated	
Left Bank Riparian Buffer Conditi	ion	
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	
Dight Dank		
Right Bank Right Bank Height (feet)	0.5	
	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Pight Rank Slone		
Right Bank Slope		
Right Erosion Potential Right Bank Substrate	Moderate Sand, Vegetated	
Right Erosion Potential	Moderate Sand, Vegetated	
Right Erosion Potential Right Bank Substrate Right Bank Riparian Buffer Condi	Moderate Sand, Vegetated ition	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right]	Moderate Sand, Vegetated ition	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right]  High suboptimal (1.2) [Right]	Moderate Sand, Vegetated  ition  0 1.2	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	Moderate Sand, Vegetated  ition  0 1.2 0	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	Moderate Sand, Vegetated  ition  0 1.2 0 0	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right]	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 0	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 0 0 0	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 0 0 0	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Stream Geomorphology	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Stream Geomorphology Continuity of channel bed and bank	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 0 1.2 1.2 Moderate  Moderate	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] High poor (0.5) [Right] Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 0 1.2  Moderate  Weak	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 0 0 1.2  Moderate  Weak Moderate	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	Moderate         Sand, Vegetated         ition         0         1.2         0         0         0         0         0         0         1.2         Moderate         Weak         Moderate         Weak         Weak	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	Moderate           Sand, Vegetated    ition  0  1.2  0  0  0  0  0  1.2  Moderate  Weak  Moderate  Weak  Weak  Weak  Weak	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 0 0 1.2  Moderate  Weak  Weak  Weak  Weak  Absent	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 0 0 0 1.2  Moderate Weak Moderate Weak Weak Moderate Weak Weak Absent Weak Mosent Weak	
Right Erosion Potential Right Bank Substrate  Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total  Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	Moderate Sand, Vegetated  ition  0 1.2 0 0 0 0 0 0 0 0 1.2  Moderate  Weak  Moderate  Weak  Weak  Absent  Weak  Absent	

C -	_			
Stream	Geomo	rphol	ogv	Lotal

10.5

# Stream Hydrology

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

# Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Weak
Wetland plants in streambed	Other
Stream Biology Total	6
Regulatory Status	State Protected, Corps Jurisdictional
Notes	Ground water seepage stream into wetland W-C18-95
Stroam Overview Papert Photos	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

S

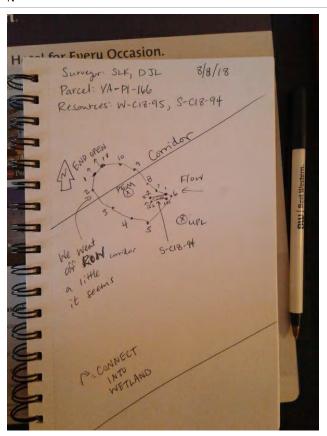
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

Ν



WR.	۸1	IQ	1	Q7

Created	2018-07-25 12:41:17 UTC by Laura Giese
Updated	2018-09-06 14:13:35 UTC by Joseph Roy
Location	36.6623878, -79.5115718
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/25
Date2	180725

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
Resource Series Number	187
Resource ID	WB-A18-187
Do you need to override the resource id?	Yes
Resource ID Override	WB-A18-187
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**

OHWM Width (ft)	170
Average Water Width (ft)	170
Bank to Bank (ft)	170
Probed Stream Depth	> 36 inches

## Left Bank

Left Bank Height (feet)	5
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping

Left Bank Riparian Buffer Condition	1
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 Bank Riparian Buffer Condition	n
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Stream Geomorphology Total	0
Stream Hydrology	
Stream Hydrology Total	0
Stream Biology	
Stream Biology Total	0
Notes	Cattail fringe on pond
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo

Ν



Downstream photo direction

S

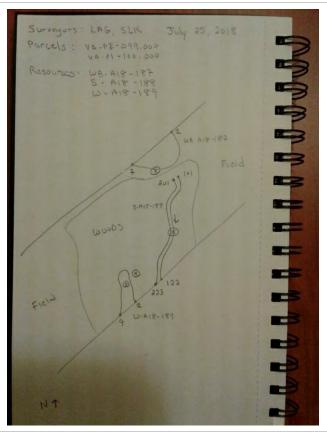
Across Stream Photo 1



Across stream photo direction 1

Sketch of Stream

W



W	/R-	<b>A</b> 1	ጸ.	-22	7
v 1	<i>,</i> ט-	$\boldsymbol{\mathcal{A}}$	0		

Created	2018-08-29 14:48:31 UTC by Will Buetow	
Updated	2018-09-13 16:10:34 UTC by Phil Jacques	
Location	36.3369429, -79.6022479	
Status	Field Crew Collected	
Client	NextEra	
Project	MVP Southgate	
Date	18/08/29	
Date2	180829	

Field Crew	Nathan Renaudin
Lead Scientist's Initials	A18
GPS Surveyor	Kaylee Townsend
GPS ID	NA
Resource Series Number	227
Resource ID	WB-A18-227
Do you need to override the resource id?	Yes
Resource ID Override	WB-A18-227
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

# Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	0
Calculated Stream Type	Undetermined
Observed Use	Boating

# **Stream Conditions**

Direction of Flow
-------------------

## **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) 150	0
---------------------	---

## Left Bank

# Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0

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

# Right Bank

# Right Bank Riparian Buffer Condition

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

## Stream Geomorphology

Stream Geomorphology Total 0

# Stream Hydrology

Stream Hydrology Total 0

## Stream Biology

Stream Biology Total 0

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

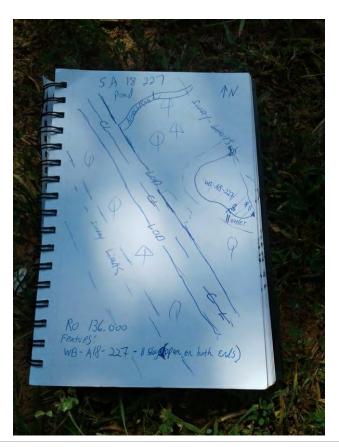
Ε



Across stream photo direction 1

W

Sketch of Stream



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

W	<b>/</b> B-	Α1	IЯ.	-24	10
v 1	<i>,</i> ט-	$\boldsymbol{\mathcal{A}}$	ı O		TV

Created	2018-09-05 13:12:32 UTC by Laura Giese
Updated	2018-09-06 10:23:06 UTC by Laura Giese
Location	36.2935367, -79.5736179
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/05
Date2	180905

Field Crew	Laura Giese, Chris Covington
Lead Scientist's Initials	A18
GPS Surveyor	Chris Covington
GPS ID	NA
Resource Series Number	240
Resource ID	WB-A18-240
Do you need to override the resource id?	Yes
Resource ID Override	WB-A18-240
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	0
Calculated Stream Type	Undetermined

## **Stream Conditions**

## **Channel Alteration**

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

#### **Stream Measurements**

OHWM Width (ft)	115	
Average Water Width (ft)	110	
Bank to Bank (ft)	115	
Bankfull Width (ft)	115	
Probed Stream Depth	> 36 inches	

## Left Bank

Left Bank Height (feet)	2
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	0
Right Bank	
Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	0
Stream Geomorphology	
Stream Geomorphology Total	0
Stream Hydrology	
Stream Hydrology Total	0
Stream Biology	
Stream Biology Total	0
Notes	Cows in the pond, no culvert downslope, overflow in corner
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo

NE



Downstream photo direction

SW

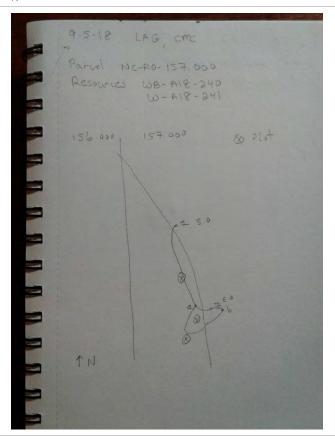
Across Stream Photo 1



Across stream photo direction 1

Sketch of Stream

Ν



W	R-	R1	<b>Q</b> _	141	١
vv			()-	141	П

Created	2018-09-17 15:26:44 UTC by Katelyn Wheeler
Updated	2018-09-20 19:31:29 UTC by Susie Gifford (SBG)
Location	43.6190726, -70.3555671
Status	Field Crew Collected
Client	NextEra
Project	MVP Southgate
Date	18/09/17
Date2	180917

Field Crew	Jim Bolduc
Lead Scientist's Initials	B18
GPS Surveyor	Susan Thebert
GPS ID	NA
Resource Series Number	141
Resource ID	WB-B18-141
Do you need to override the resource id?	Yes
Resource ID Override	WB-B18-141
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## **Stream Inventory**

Pond
0
Undetermined
Fish
Irrigation

## **Stream Conditions**

Direction of Flow E

## **Channel Alteration**

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

## **Stream Measurements**

#### Left Bank

# Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	0

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

# **Right Bank**

# Right Bank Riparian Buffer Condition

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

## Stream Geomorphology

Stream Geomorphology Total 0

# Stream Hydrology

Stream Hydrology Total 0

## Stream Biology

Stream Biology Total 0
Regulatory Status State Protected

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Ν

Across Stream Photo 1



Across stream photo direction 1

Ν

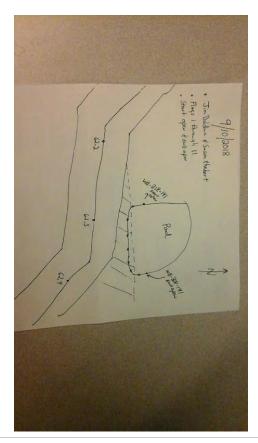
Across Stream Photo 2



Across stream photo direction 2

Ν

#### Sketch of Stream



W	R-C	`1 ຊ	-93

Created	2018-08-08 14:10:19 UTC by Don Lockwood
Updated	2018-09-20 19:37:58 UTC by Susie Gifford (SBG)
Location	36.5884117, -79.5849261
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/08
Date2	180808

Field Crew	Simon King
Lead Scientist's Initials	C18
GPS Surveyor	Simon King
GPS ID	NA
Resource Series Number	93
Resource ID	WB-C18-93
Do you need to override the resource id?	Yes
Resource ID Override	WB-C18-93
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

## Stream Inventory

Stream / Waterbody Type	Pond
Calculated Stream Score	10.25
Calculated Stream Type	Ephemeral
Wildlife Observed	tadpoles
Observed Use	ag/wildlife pond

## **Stream Conditions**

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

## **Channel Alteration**

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

## **Stream Measurements**

OHWM Width (ft)	45
Average Water Width (ft)	45
Bank to Bank (ft)	45

Bankfull Width (ft)	45
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	Cobble-Gravel, Sand
Left Bank Riparian Buffer Condition	1
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	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Low
Right Bank Substrate	Cobble-Gravel, Sand
Right Bank Riparian Buffer Condition	on
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
Stroom Coomorpholom:	
Stream Geomorphology	0
Stream Geomorphology Total	0
Stream Hydrology	
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
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	Weak
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	7.25
Notes	Excavated pond; no inlet; no outlet; nearly dry

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 2



Across stream photo direction 2

Ν

Sketch of Stream

