

Appendix D Waterbody Forms & Photographs

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Created	2018-06-13 14:49:09 UTC by Jacob Fleckenstein
Updated	2018-10-15 14:21:09 UTC by Jenn Favela
Location	36.8291082, -79.3447892
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/13
Date2	180613

Field Crew	Alexi Weber, Jacob Fleckenstein, Eileen Nakahata
Lead Scientist's Initials	F18
Resource Series Number	6
Resource ID	S-F18-6
Do you need to override the resource id?	Yes
Resource ID Override	S-F18-6
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	25
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	natural

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	90
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	10
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	100

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)	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]	80	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	0	
Low marginal (0.75) [Left]	10	
High poor (0.6) [Left]	10	
Low poor (0.5) [Left]	0	
Left bank total	100	
Right Bank		
Right Bank Height (feet)	3	
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping	
0 1 1 1 1 1		
Right Erosion Potential	Moderate	
Right Erosion Potential Right Bank Substrate	Moderate Silt-Mud, Vegetated	
Right Bank Substrate Right Bank Riparian Buffer Conditio	Silt-Mud, Vegetated	
Right Bank Substrate Right Bank Riparian Buffer Conditio Optimal (1.5) [Right]	Silt-Mud, Vegetated	
Right Bank Substrate Right Bank Riparian Buffer Conditio Optimal (1.5) [Right] High suboptimal (1.2) [Right]	Silt-Mud, Vegetated on 80	
Right Bank Substrate Right Bank Riparian Buffer Conditio Optimal (1.5) [Right]	Silt-Mud, Vegetated 80 0	
Right Bank Substrate Right Bank Riparian Buffer Conditio Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	Silt-Mud, Vegetated 80 0 0	
Right Bank Substrate Right Bank Riparian Buffer Conditio Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	Silt-Mud, Vegetated 80 0 0 0 0	
Right Bank Substrate Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10	
Right Bank Substrate Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 0	
Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 10	
Right Bank Substrate Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 10	
Right Bank Riparian Buffer Conditio 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	Silt-Mud, Vegetated 80 0 0 0 10 10 100	
Right Bank Substrate Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 10 100 Weak	
Right Bank Substrate Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 10 100 Weak Moderate	
Right Bank Substrate Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 0 10 10 Weak Moderate Moderate	
Right Bank Riparian Buffer Conditio 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	Silt-Mud, Vegetated 80 0 0 0 10 10 10 Weak Moderate Moderate Moderate Moderate	
Right Bank Substrate Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 10 10 100 Weak Moderate Moderate Moderate Absent	
Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 10 10 100 Weak Moderate Moderate Moderate Absent Moderate Moderate Moderate	
Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 0 10 10 100 Weak Moderate Moderate Moderate Absent Moderate Weak Weak Weak Moderate Woderate Woderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	
Right Bank Riparian Buffer Conditio 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, Vegetated 80 0 0 0 10 0 10 10 100 Weak Moderate Moderate Moderate Absent Moderate Weak Absent	

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	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Weak
Algae	Absent
Stream Biology Total	8.5
Regulatory Status	Corps Jurisdictional

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

Across Stream Photo 2

Е



Across stream photo direction 2

W

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

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Created	2018-06-14 11:33:45 EDT by Beth Clements
Updated	2018-07-05 17:14:24 EDT by Sam Edmonds
Location	36.8254736, -79.3446516
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/14
Date2	180614

Beth Clements, Mike Smith
F18
10
S-F18-10
No

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

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	19.5
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	Natural

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	100
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	100

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)	0.5
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Mud or muck

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	10	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	90	
Low marginal (0.75) [Left]	0	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	100	

Right Bank

Right Bank Height (feet)	0.7
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Mud or muck

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100	
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	100	

Stream Geomorphology

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

Presence of baseflow	Moderate
Sediment on plants or debris	Moderate
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	7

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	5.5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Downstream Stream Photo



Across Stream Photo 1



Across Stream Photo 2



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

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Created	2018-08-03 16:42:49 UTC by Beth Clements
Updated	2018-08-17 17:39:07 UTC by Alexi Weber
Location	36.8227257, -79.3474638
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/03
Date2	180803

Jacob Fleckenstein, Eileen Nakahata, Jennifer Favela
F18
65
S-F18-65
No

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

Stream Inventory

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

Stream Conditions

Water Flow Velocity	Fast (> 5 cfs)
Direction of Flow	S
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)	10
Average Water Width (ft)	10
Bank to Bank (ft)	14
Bankfull Width (ft)	14
Probed Stream Depth	6 to 12 inches

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	80
High suboptimal (1.2) [Left]	20
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	100

Right Bank

Right Bank Height (feet)	3.5
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Sand, Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	80
High suboptimal (1.2) [Right]	20
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	100

Stream Geomorphology

1 03	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Strong
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Moderate
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	23

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

Absent
Absent
Weak
Absent
Absent
Absent
Weak
7.5
Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction NE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

NW

Across Stream Photo 2



Across stream photo direction 2

SE

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

S-	F1	۱8-	63
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Created	2018-08-03 12:40:02 UTC by Beth Clements
Updated	2018-08-15 22:12:20 UTC by Alexi Weber
Location	36.8212207, -79.3479455
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/03
Date2	180803

Field Crew	Jacob Fleckenstein, Eileen Nakahata, Jennifer Favela		
Lead Scientist's Initials	F18		
Resource Series Number	63		
Resource ID	S-F18-63		
Do you need to override the resource id?	Yes		

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	Frogs
Observed Use	Natural

Stream Conditions

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

Channel Alteration

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

Stream Measurements

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

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Left Bank Height (feet)	3.5
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Sand, Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	80	
High suboptimal (1.2) [Left]	20	
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	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	80	
Low suboptimal (1.1) [Right]	20	
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	100	

Stream Geomorphology

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

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

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Amphibians	Weak
Stream Biology Total	8.5
Regulatory Status	Corps Jurisdictional
Street Organization Department District	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction NW

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

NE

Across Stream Photo 2



Across stream photo direction 2

SW

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

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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

Laura Giese, Simon King		
A18		
186		
S-A18-186		
No		

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

Stream Inventory

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

Stream Conditions

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

Channel Alteration

1.5
0
0
0
0
0
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
Left 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
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]	0.4
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
Active or relict floodplain	Absent
Active or relict floodplain	Absent Absent
Active or relict floodplain Depositional bars or benches	Absent
Active or relict floodplain Depositional bars or benches Recent alluvial deposits	Absent Absent
Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	Absent Absent Absent
Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts Grade control	Absent Absent Absent Absent

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

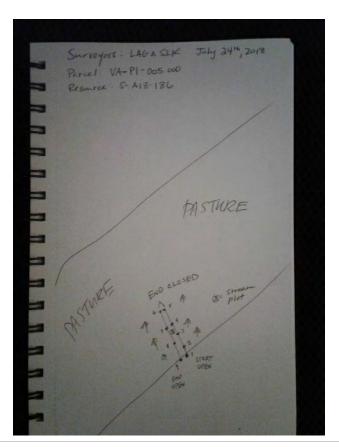
S



Across stream photo direction 1

Ε

Sketch of Stream



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

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Created	2018-06-12 20:43:20 UTC by Alexi Weber
Updated	2018-10-15 15:56:27 UTC by Jenn Favela
Location	36.8145393, -79.3553949
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/12
Date2	180612

Field Crew	Troy Savage, Eileen Nakahata, Sara Sanderlin
Lead Scientist's Initials	E18
Resource Series Number	18
Resource ID	S-E18-18
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	32
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	100
High Minor (1.1) 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	100

Stream Measurements

OHWM Width (ft)	6
Average Water Width (ft)	4
Bank to Bank (ft)	9
Bankfull Width (ft)	10
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	Moderate
Left Bank Substrate	Cobble-Gravel, Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	100	
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	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	100	
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	100	

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	Weak
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Weak
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	15

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	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Weak
Fish	Strong
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Stream Biology Total	11.5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Stream Overview Report in

Upstream Stream Photo



Upstream photo direction

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Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Ν

Across Stream Photo 2



Across stream photo direction 2

SW



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

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Created	2018-06-15 17:10:57 UTC by Alexi Weber
Updated	2018-07-19 21:08:17 UTC by Beth Clements
Location	36.8113418, -79.3590313
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/15
Date2	180615

Field Crew	Alexi Weber, Jacob Fleckenstein, Sara Sanderlin
Lead Scientist's Initials	F18
Resource Series Number	10
Resource ID	S-F18-56
Do you need to override the resource id?	Yes
Resource ID Override	S-F18-56
Resource ID = Resource Type - Scientist Initials	- Pasource Series Number

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

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	27.5
Calculated Stream Type	Intermittent
Observed Use	natural

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	100
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	100

Stream Measurements

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

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Left Bank Height (feet)	0.6
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Sand, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

Stream Geomorphology

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

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	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	7
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

Ε

Across Stream Photo 2



Across stream photo direction 2

W

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

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Created	2018-06-17 10:02:41 EDT by Jacob Fleckenstein
Updated	2018-07-05 13:28:28 EDT by Sam Edmonds
Location	36.8084979, -79.3630479
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/17
Date2	180617

Beth Clements, Jacob Fleckenstein, Mike Smith
D18
18
S-D18-18
No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	30
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	Natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

OHWM Width (ft)	25
Average Water Width (ft)	20
Bank to Bank (ft)	25
Bankfull Width (ft)	25
Probed Stream Depth	24 to 36 inches

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Left Bank Height (feet)	5	
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]	90	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	0	
Low marginal (0.75) [Left]	10	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	100	

Right Bank

Right Bank Height (feet)	5
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]	90
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	10
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	100

Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Weak
In-channel structure	Absent
Particle size of stream substrate	Weak
Active or relict floodplain	Strong
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	Yes
Stream Geomorphology Total	15

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	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	8
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction W

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

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Across stream photo direction 1

Across Stream Photo 2

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Across stream photo direction 2

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Created	2018-06-17 17:36:48 UTC by Alexi Weber	
Updated	2018-10-15 15:06:15 UTC by Jenn Favela	
Location	36.8020877, -79.3672414	
Status	Finalized & Approved	
Client	NextEra	
Project	MVP Southgate	
Date	18/06/17	
Date2	180617	

Field Crew	Eileen Nakahata, Sara Sanderlin, Mike Smith	
Lead Scientist's Initials	G18	
Resource Series Number	3	
Resource ID	S-D18-20	
you need to override the resource id? Yes		
Resource ID Override	S-D18-20	
Resource ID Override Resource ID = Resource Type - Scientist Initials		

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	19
Calculated Stream Type	Intermittent
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	95
Low Minor (1.3) Channel Alteration	5
High Minor (1.1) 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	100

OHWM Width (ft)	2
Average Water Width (ft)	1
Bank to Bank (ft)	4
Bankfull Width (ft)	5
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]	10	
High marginal (0.85) [Left]	0	
Low marginal (0.75) [Left]	80	
High poor (0.6) [Left]	10	
Low poor (0.5) [Left]	0	
Left bank total	100	

Right Bank

Right Bank Height (feet)	2.5
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]	100
Low poor (0.5) [Right]	0
Right bank total	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Absent
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Absent
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	12.5

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

Algae	Moderate
Stream Biology Total	1
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Downstream Stream Photo



Across Stream Photo 1



Across Stream Photo 2



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Created	2018-06-06 14:37:51 UTC by Janelle Bernosky
Updated	2018-10-15 15:45:01 UTC by Jenn Favela
Location	36.7916916, -79.3808716
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

Field Crew	Tsavage
Lead Scientist's Initials	E18
Resource Series Number	2
Resource ID	S-E18-2
Do you need to override the resource id?	Yes
Resource ID Override	S-E18-2
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	29
Calculated Stream Type	Intermittent
Observed Use	natural

Stream Conditions

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

OHWM Width (ft)	8
Average Water Width (ft)	5
Bank to Bank (ft)	8
Bankfull Width (ft)	8
Probed Stream Depth	0 to 6 inches

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Left Bank Height (feet)	7	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	High	
Left Bank Substrate	Sand	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	50
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	50
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100

Right Bank

Right Bank Height (feet)	10
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Sand

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	50	
Low suboptimal (1.1) [Right]	0	
High marginal (0.85) [Right]	0	
Low marginal (0.75) [Right]	50	
High poor (0.6) [Right]	0	
Low poor (0.5) [Right]	0	
Right bank total	100	

Stream Geomorphology

1 03	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
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	13

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

Stream Biology

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Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Weak
Algae	Weak
Stream Biology Total	8.5
Regulatory Status	Corps Jurisdictional
Notes	Highly eroded
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Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction NW

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

Across Stream Photo 2

W



Across stream photo direction 2

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Created	2018-06-06 14:01:51 UTC by Beth Clements
Updated	2018-10-15 15:59:15 UTC by Jenn Favela
Location	36.7872269, -79.3800657
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

Field Crew	Beth Clements, Jacob Fleckenstein
Lead Scientist's Initials	D18
Resource Series Number	3
Resource ID	S-D18-3
Do you need to override the resource id?	Yes
Resource ID Override	S-D18-3
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

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

Probed Stream Depth	6 to 12 inches	
Left Bank		
Left Bank Height (feet)	0.8	
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 Conditi	ion	
Optimal (1.5) [Left]	100	
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	100	
Right Bank		
Right Bank Height (feet)	0.8	
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Right Erosion Potential	Low	
Right Bank Substrate	Silt-Mud	
Right Bank Rinarian Buffer Condi	ition	
Right Bank Riparian Buffer Condi	ition 100	
Optimal (1.5) [Right]		
Optimal (1.5) [Right] High suboptimal (1.2) [Right]	100	
Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	100 0	
Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	100 0 0	
Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right]	100 0 0	
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]	100 0 0 0 0	
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]	100 0 0 0 0 0	
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]	100 0 0 0 0 0 0	
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]	100 0 0 0 0 0 0	
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	100 0 0 0 0 0 0	
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	100 0 0 0 0 0 0 0 0	
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	100 0 0 0 0 0 0 0 100 Strong	
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	100 0 0 0 0 0 0 0 0 0 0 100 Strong Weak	
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	100 0 0 0 0 0 0 0 0 0 100 Strong Weak Absent	
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	100 0 0 0 0 0 0 0 0 0 0 0 100 Strong Weak Absent Weak	
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	100 0 0 0 0 0 0 0 0 0 0 100 Strong Weak Absent Weak Weak	
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	100 0 0 0 0 0 0 0 0 0 0 0 100 Strong Weak Absent Weak Weak Weak	
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	100 0 0 0 0 0 0 0 0 0 0 100 Strong Weak Absent Weak Weak Weak Weak Weak	
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	100 0 0 0 0 0 0 0 0 0 0 100 Strong Weak Absent Weak Weak Weak Weak Weak Weak Absent	
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	100 0 0 0 0 0 0 0 0 0 100 Strong Weak Absent Weak Weak Weak Weak Weak Absent Absent Absent Absent	

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

Stream Biology

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
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

W

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

Ν

Across Stream Photo 2



Across stream photo direction 2

S

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5-	D1	გ-	b

Created	2018-06-06 16:40:02 UTC by Beth Clements
Updated	2018-10-15 15:57:55 UTC by Jenn Favela
Location	36.7879396, -79.384141
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

8-6
8-6

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	21.5
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	5
Bankfull Width (ft)	7

Probed Stream Depth	6 to 12 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
. 6.5 1.5:	
Left Bank Riparian Buffer Conditio Optimal (1.5) [Left]	n <u> </u>
<u> </u>	
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100
Right Bank	
Right Bank Height (feet)	0.8
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud
Right Bank Riparian Buffer Conditi	on
Optimal (1.5) [Right]	100
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	100
Stream Geomorphology	
Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Moderate
In-channel structure	Absent
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Second or Breater order chariffel	110

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

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	Weak
Stream Biology Total	7
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

NW

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

SW

Across Stream Photo 2



Across stream photo direction 2

NE

S-	F1	8-	67
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Created	2018-08-06 13:58:57 UTC by Beth Clements
Updated	2018-08-17 23:15:24 UTC by Alexi Weber
Location	36.7835233, -79.3874335
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/06
Date2	180806

Field Crew	Beth Clements, Sara Sanderlin, Josh Clements
Lead Scientist's Initials	F18
Resource Series Number	67
Resource ID	S-F18-67
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	25.5
Calculated Stream Type	Intermittent

Stream Conditions

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

Channel Alteration

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

Stream Measurements

OHWM Width (ft)	3	
Average Water Width (ft)	2	
Bank to Bank (ft)	3	
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	Mud or muck
Left Bank Riparian Buffer Conditio	n
Optimal (1.5) [Left]	25
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]	75
Low poor (0.5) [Left]	0
Left bank total	100
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	Mud or muck
Right Bank Riparian Buffer Conditi	on
Optimal (1.5) [Right]	25
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]	75
Low poor (0.5) [Right]	0
Right bank total	100
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	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	12.5

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

Weak
Absent
Weak
Absent
Absent
Absent
Weak
Absent
Other
6.5
Corps Jurisdictional
Caddis fly larvae and flathead stonefly

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Ε

Across Stream Photo 2



Across stream photo direction 2

W

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Created	2018-06-08 10:32:52 EDT by Alexi Weber
Updated	2018-07-05 15:15:14 EDT by Sam Edmonds
Location	36.7829354, -79.3889373
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180705

Field Crew	Beth Clements, Alexi Weber, Jacob Fleckenstein, Sara Sanderlin
Lead Scientist's Initials	D18
Resource Series Number	10
Resource ID	S-D18-10
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	24.5
Calculated Stream Type	Intermittent
Observed Use	natural

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	100
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	100

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

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Left Bank Height (feet)	1.5
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	40
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]	60
Left bank total	100

Right Bank

Right Bank Height (feet)	1.5
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	70
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]	30
Right bank total	100

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	Moderate
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	13.5

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

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction NE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

SE

Across Stream Photo 2



Across stream photo direction 2

NW

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Created	2018-06-08 12:48:41 UTC by Alexi Weber
Updated	2018-10-15 17:42:52 UTC by Jenn Favela
Location	36.7825573, -79.3904472
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180705

Beth Clements, Alexi Weber, Jacob Fleckenstein, Sara Sanderlin
D18
9
S-D18-9
Yes
S-D18-9

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	24.5
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

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)	2.5
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 Conditi	ion
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	60
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]	40
Left bank total	100
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 Condi	ition
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	60
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]	40
Right bank total	100
Stream Geomorphology	
Continuity of channel bed and bank	Weak
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	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

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	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	5.5
Regulatory Status	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

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2018-06-08 18:22:17 UTC by Alexi Weber
2018-10-12 16:14:51 UTC by Jenn Favela
36.7792166, -79.394032
Finalized & Approved
NextEra
MVP Southgate
18/06/08

Beth Clements, Jacob Fleckenstein, Sara Sanderlin
D18
12
S-D18-12
No

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

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	19
Calculated Stream Type	Intermittent
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	100
High Minor (1.1) 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	100

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

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Left Bank Height (feet)	1.5
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply 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]	5	
Low marginal (0.75) [Left]	95	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	100	

Right Bank

Right Bank Height (feet)	1.5
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]	5	
Low marginal (0.75) [Right]	0	
High poor (0.6) [Right]	93	
Low poor (0.5) [Right]	2	
Right bank total	100	

Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Absent
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	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	7

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

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

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D -		O-	4

Created	2018-06-07 14:21:35 UTC by Janelle Bernosky
Updated	2018-10-15 17:54:09 UTC by Jacob Fleckenstein
Location	36.7755237, -79.3985503
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/07
Date2	180607

Field Crew	Troy Savage, Alexi Weber, Jacob Fleckenstein, Eileen Nakahata, Sara Sanderlin
Lead Scientist's Initials	E18
Resource Series Number	4
Resource ID	S-E18-4
Do you need to override the resource id?	Yes
Resource ID Override	S-E18-4

The source Type Scientise minutes The source Series II

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 condition	Marginal
In stream habitat	Marginal

Channel Alteration

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

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

Left Bank Height (feet)	1	
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Left Erosion Potential	Moderate	
Left Bank Substrate	Cobble-Gravel, Sand, 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]	100	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	100	
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	High	
Right Bank Substrate	Cobble-Gravel, Sand, Vegetated	
	-	
Right Bank Riparian Buffer Condit	tion	
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]	100	
High poor (0.6) [Right]	0	
Low poor (0.5) [Right]	0	
Right bank total	100	
Stream Geomorphology		
Continuity of channel bed and bank	Strong	
Sinuosity of channel along thalweg	Weak	
n-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	Weak	
Natural valley	Weak	
Second or greater order channel	No	

11

Stream Geomorphology Total

Stream Hydrology

Presence of baseflow	Moderate
Iron oxidizing bacteria	Strong
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	9.5

Stream Biology

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

on carrier report

Upstream Stream Photo



Upstream photo direction

NW



Downstream photo direction

S

Across Stream Photo 1



Across stream photo direction 1

SW

Across Stream Photo 2



Across stream photo direction 2

NE

Additional Stream Photos



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5-	וט	18-8	

Created	2018-06-07 15:03:50 UTC by Jen Feese
Updated	2018-10-15 21:15:22 UTC by Jacob Fleckenstein
Location	36.7745151, -79.398364
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/07
Date2	180607

Field Crew	Troy Savage
Lead Scientist's Initials	E18
Resource Series Number	8
Resource ID	S-D18-8
Do you need to override the resource id?	Yes
Resource ID Override	S-D18-8
Resource ID = Resource Type - Scientist Initials -	- Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	25.25
Calculated Stream Type	Intermittent
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

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)	0.5
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]	100	
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	100	

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]	100
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	100

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	Strong
Depositional bars or benches	Moderate
Recent alluvial deposits	Strong
Headcuts	Absent
Grade control	Absent
Natural valley	Absent
Second or greater order channel	No
Stream Geomorphology Total	11

Stream Hydrology

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

Stream Biology

- · · · · · · · · · · · · · · · · · · ·	
Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Moderate
Wetland plants in streambed	FACW
Stream Biology Total	5.75
Regulatory Status	Corps Jurisdictional
C. D. I. D. I. D. I.	

Stream Overview Report Photos

Upstream Stream Photo





Across Stream Photo 1



Across stream photo direction 1

SW

Across Stream Photo 2



Across stream photo direction 2

NE

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Created	2018-06-06 20:37:21 UTC by Janelle Bernosky
Updated	2018-10-15 17:54:32 UTC by Jacob Fleckenstein
Location	36.7740488, -79.3984986
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/06
Date2	180606

Field Crew	Tsavage
Lead Scientist's Initials	E18
Resource Series Number	3
Resource ID	S-E18-3
Do you need to override the resource id?	Yes
Resource ID Override	S-E18-3
Resource ID Override Resource ID = Resource Type - Scientist Initials - R	

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	42
Calculated Stream Type	Perennial

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	100
High Minor (1.1) 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	100

OHWM Width (ft)	48
Average Water Width (ft)	42
Bank to Bank (ft)	50
Bankfull Width (ft)	50
Probed Stream Depth	24 to 36 inches

Left Bank Height (feet)	10	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	High	
Left Bank Substrate	Sand, Silt-Mud	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	12	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	High	
Right Bank Substrate	Sand, Silt-Mud	

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	100
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	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Strong
Depositional bars or benches	Moderate
Recent alluvial deposits	Strong
Headcuts	Strong
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	22

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Strong
Organic debris lines or piles	Strong
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	Strong
Crayfish	Moderate
Amphibians	Absent
Algae	Absent
Stream Biology Total	9.5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo





Across Stream Photo 1



Across Stream Photo 2



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Created	2018-06-05 20:27:15 UTC by Beth Clements
Updated	2018-10-15 18:02:39 UTC by Jacob Fleckenstein
Location	36.7733894, -79.3983176
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/05
Date2	180605

Field Crew	Troy Savage, Alexi Weber, Jacob Fleckenstein, Eileen Nakahata, Sara Sanderlin
Lead Scientist's Initials	E18
Resource Series Number	3
Resource ID	S-D18-2
Do you need to override the resource id?	Yes
Resource ID Override	S-D18-2

71

Stream Inventory

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

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	100
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	100

OHWM Width (ft)	20	
Average Water Width (ft)	16	
Bank to Bank (ft)	22	
Bankfull Width (ft)	22	
Probed Stream Depth	12 to 24 inches	

Left Bank Height (feet)	2.5	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	High	
Left Bank Substrate	silly clay	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	2.5	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Moderate	
Right Bank Substrate	silly clay	

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	100	
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	100	

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	Strong
Depositional bars or benches	Weak
Recent alluvial deposits	Strong
Headcuts	Moderate
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	17.5

Stream Hydrology

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

Stream Biology

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Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Moderate
Fish	Moderate
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	Other
Stream Biology Total	13
Regulatory Status	Corps Jurisdictional
Ci D i D	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

NE

Across Stream Photo 2



Across stream photo direction 2

SW

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Created	2018-06-11 14:50:11 UTC by Jacob Fleckenstein
Updated	2018-08-13 21:43:26 UTC by Beth Clements
Location	36.76343056, -79.4125
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/11
Date2	180611

Beth Clements, Jacob Fleckenstein, Mike Smith
D18
15
S-D18-15
No

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

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	14
Calculated Stream Type	Ephemeral
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0	
Low Minor (1.3) Channel Alteration	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)	2	
Bank to Bank (ft)	8	
Bankfull Width (ft)	5	
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	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	95
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]	5
Low poor (0.5) [Left]	0
Left bank total	100

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]	95
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]	5
Low poor (0.5) [Right]	0
Right bank total	100

Stream Geomorphology

20 cam acama photogy	
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	Weak
Headcuts	Weak
Grade control	Absent
Natural valley	Strong
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	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	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	4
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction N



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Across Stream Photo 2

Е



Across stream photo direction 2

W

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Created	2018-06-11 15:57:29 UTC by Jacob Fleckenstein
Updated	2018-10-15 22:05:54 UTC by Jacob Fleckenstein
Location	36.76157778, -79.41416667
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/11
Date2	180611

Beth Clements, Jacob Fleckenstein, Mike Smith
D18
16
S-D18-16
No

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

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	17.5
Calculated Stream Type	Ephemeral
Observed Use	Drainage

Stream Conditions

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

Channel Alteration

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

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	10
High suboptimal (1.2) [Left]	90
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	100

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	10
High suboptimal (1.2) [Right]	90
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	100

Stream Geomorphology

Moderate
Weak
Weak
Weak
Absent
Absent
Absent
Weak
Weak
Weak
No
7

Stream Hydrology

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

Stream Biology

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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
Regulatory Status	Corps Jurisdictional
Notes	soils not hydric
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Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction NW



Downstream photo direction

SE

Across Stream Photo 1



Across stream photo direction 1

Ε

Across Stream Photo 2



Across stream photo direction 2

W

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Created	2018-06-11 17:29:21 UTC by Alexi Weber
Updated	2018-10-12 16:38:58 UTC by Jenn Favela
Location	36.7578327, -79.417744
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/11
Date2	180705

Troy Savage, Sara Sanderlin
E18
12
S-E18-12
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
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

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

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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	Sand, Silt-Mud, Vegetated	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

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	Sand, Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

Stream Geomorphology

1 03	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	9.5

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

Stream Biology

Stream Biology	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Moderate
Crayfish	Moderate
Amphibians	Absent
Algae	Strong
Stream Biology Total	11.5
Regulatory Status	Corps Jurisdictional
Notes	Seep fed headwater stream
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction W



Downstream photo direction

Across Stream Photo 1

F



Across stream photo direction 1

S

Across Stream Photo 2



Across stream photo direction 2

Ν

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Created	2018-06-09 15:59:10 UTC by Jen Feese
Updated	2018-10-15 16:12:04 UTC by Jenn Favela
Location	36.756743, -79.4193469
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/09
Date2	180705

Field Crew	Beth Clements, Jacob Fleckenstein, Sara Sanderlin, Mike Smith, Troy Savage
Lead Scientist's Initials	E18
Resource Series Number	9
Resource ID	S-D18-36
Do you need to override the resource id?	Yes
Resource ID Override	S-D18-36

Stream Inventory

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Stream / Waterbody Type	Intermittent
Calculated Stream Score	20
Calculated Stream Type	Intermittent
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

OHWM Width (ft)	2
Average Water Width (ft)	2
Bank to Bank (ft)	3
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	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	80	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	20	
Low marginal (0.75) [Left]	0	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	100	

Right Bank

Right Bank Height (feet)	2.5
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 Condition

Optimal (1.5) [Right]	30	
High suboptimal (1.2) [Right]	0	
Low suboptimal (1.1) [Right]	0	
High marginal (0.85) [Right]	70	
Low marginal (0.75) [Right]	0	
High poor (0.6) [Right]	0	
Low poor (0.5) [Right]	0	
Right bank total	100	

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	Moderate
Second or greater order channel	No
Stream Geomorphology Total	10.5

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

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

NW



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

SW

Across Stream Photo 2



Across stream photo direction 2

NE

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Created	2018-06-08 17:26:24 UTC by Janelle Bernosky
Updated	2018-10-15 18:38:18 UTC by Jacob Fleckenstein
Location	36.752897, -79.4230471
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/08
Date2	180608

Field Crew	Troy Savage, Alexi Weber, Jacob Fleckenstein, Eileen Nakahata, Sara Sanderlin
Lead Scientist's Initials	E18
Resource Series Number	6
Resource ID	S-E18-6
Do you need to override the resource id?	Yes
Resource ID Override	S-E18-6

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	29
Calculated Stream Type	Intermittent
Wildlife Observed	Fish
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	100
High Minor (1.1) 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	100

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

Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	3
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	Cobble-Gravel, Sand, Vegetated
	<u> </u>
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	100
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	100
Right Bank	
Right Bank Height (feet)	3
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
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]	100
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	100
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	Moderate No

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

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Weak
Crayfish	Weak
Amphibians	Absent
Algae	Weak
Stream Biology Total	8.5
Regulatory Status	Corps Jurisdictional
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

W

Across Stream Photo 2



Across stream photo direction 2

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Created	2018-06-09 13:00:04 UTC by Jacob Fleckenstein
Updated	2018-10-15 22:20:45 UTC by Jacob Fleckenstein
Location	36.7531574, -79.4232326
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/09
Date2	180609

Beth Clements, Jacob Fleckenstein, Sara Sanderlin, Mike Smith		
D18		
7		
S-E18-7		
Yes		
S-E18-7		

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	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

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

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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 Condition

Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	70	
High marginal (0.85) [Left]	0	
Low marginal (0.75) [Left]	30	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	90
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	10
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	100

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	Moderate
Headcuts	Absent
Headcuts Grade control	Absent Weak
Grade control	Weak
Grade control Natural valley	Weak Weak

Weak
Absent
Weak
Absent
Weak
Yes
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
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

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Across Stream Photo 1



Across stream photo direction 1

Е

Across Stream Photo 2



Across stream photo direction 2

W

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Created2018-06-10 13:32:31 UTC by Jacob FleckensteinUpdated2018-10-15 22:03:32 UTC by Jacob FleckensteinLocation36.7457263, -79.4298047StatusFinalized & ApprovedClientNextEraProjectMVP SouthgateDate18/06/10Date2180610		
Location 36.7457263, -79.4298047 Status Finalized & Approved Client NextEra Project MVP Southgate Date 18/06/10	Created	2018-06-10 13:32:31 UTC by Jacob Fleckenstein
Status Finalized & Approved Client NextEra Project MVP Southgate Date 18/06/10	Updated	2018-10-15 22:03:32 UTC by Jacob Fleckenstein
Client NextEra Project MVP Southgate Date 18/06/10	Location	36.7457263, -79.4298047
Project MVP Southgate Date 18/06/10	Status	Finalized & Approved
Date 18/06/10	Client	NextEra
	Project	MVP Southgate
Date2 180610	Date	18/06/10
	Date2	180610

Beth Clements, Jacob Fleckenstein, Sara Sanderlin, Mike Smith
D18
13
S-D18-13
No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	30
Calculated Stream Type	Perennial
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

OHWM Width (ft)	4
Average Water Width (ft)	3
Bank to Bank (ft)	5
Bankfull Width (ft)	6
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	Moderate
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	90
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	10
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	90
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	10
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Strong
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	15

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

Stream Biology

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

Across Stream Photo 2

NE



Across stream photo direction 2

SW

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Created	2018-06-15 16:47:47 UTC by Jen Feese
Updated	2018-08-09 17:30:47 UTC by Beth Clements
Location	36.7414498, -79.433931
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/15
Date2	180615

Field Crew	Beth Clements, Jacob Fleckenstein, Sara Sanderlin, Mike Smith	
Lead Scientist's Initials	E18	
Resource Series Number	13	
Resource ID	S-F18-13	
Do you need to override the resource id?	Yes	
Resource ID Override	S-F18-13	
Resource ID = Resource Type - Scientist Initials	- Resource Series Number	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	25
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

OHWM Width (ft)	1
Average Water Width (ft)	1
Bank to Bank (ft)	3
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
Left Bank Riparian Buffer Conditi	ion
Optimal (1.5) [Left]	80
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]	20
Low poor (0.5) [Left]	0
Left bank total	100
Right Pank	
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	Moderate
Right Bank Substrate	Mud or muck
Right Bank Riparian Buffer Condi Optimal (1.5) [Right]	80
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]	20
Low poor (0.5) [Right]	0
Right bank total	100
Stream Geomorphology	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Absent
Particle size of stream substrate	Weak
Active or relict floodplain	Moderate
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No

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Stream	Geomorph	ology Total

11.5

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Weak
Leaf litter	Weak
Sediment on plants or debris	Weak
Organic debris lines or piles	Absent
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	Absent
Macrobenthos	Absent
Aquatic mullusks	Weak
Fish	Absent
Crayfish	Absent
Amphibians	Moderate
Algae	Absent
Stream Biology Total	7
Regulatory Status	Corps Jurisdictional

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

SW



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

Ν

Across Stream Photo 2



Across stream photo direction 2

S

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Created	2018-06-12 15:49:37 UTC by Janelle Bernosky
Updated	2018-10-15 18:59:33 UTC by Jacob Fleckenstein
Location	36.7348593, -79.4401445
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/12
Date2	180612

Field Crew	Troy Savage, Eileen Nakahata, Sara Sanderlin
Lead Scientist's Initials	E18
Resource Series Number	16
Resource ID	S-E18-16
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	Frogs
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	100
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	100

OHWM Width (ft)	4
Average Water Width (ft)	4
Bank to Bank (ft)	4
Bankfull Width (ft)	5
Probed Stream Depth	6 to 12 inches

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Left Bank Height (feet)	1	
Left Bank Slope	25 to 35% (14 to 20 deg) Steep	
Left Erosion Potential	Low	
Left Bank Substrate	Mud or muck, 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]	100
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	0	
Low suboptimal (1.1) [Right]	100	
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	100	

Stream Geomorphology

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

Presence of baseflow	Weak
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	8

Stream Biology

22	
Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Absent
Amphibians	Absent
Algae	Moderate
Wetland plants in streambed	OBL
Stream Biology Total	9
Regulatory Status	Corps Jurisdictional
Cture on Organism Property Diseases	

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

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Created	2018-06-12 15:03:05 UTC by Janelle Bernosky
Updated	2018-10-15 19:10:47 UTC by Jacob Fleckenstein
Location	36.7346689, -79.4398752
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/12
Date2	180612

Field Crew	Troy Savage, Eileen Nakahata, Sara Sanderlin
Lead Scientist's Initials	E18
Resource Series Number	14
Resource ID	S-E18-14
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	37
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

OHWM Width (ft)	10	
Average Water Width (ft)	7	
Bank to Bank (ft)	12	
Bankfull Width (ft)	12	
Probed Stream Depth	6 to 12 inches	

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Left Bank Height (feet)	2	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	Moderate	
Left Bank Substrate	Sand, Silt-Mud, Vegetated	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Cobble-Gravel, Sand, Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	100
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	100

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	Moderate
Depositional bars or benches	Weak
Recent alluvial deposits	Strong
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	17.5

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

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Moderate
Fish	Weak
Crayfish	Weak
Amphibians	Absent
Algae	Weak
Stream Biology Total	10.5
Regulatory Status	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

NE

Across Stream Photo 2



Across stream photo direction 2

S

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Created	2018-06-12 15:20:35 UTC by Janelle Bernosky
Updated	2018-10-15 19:03:30 UTC by Jacob Fleckenstein
Location	36.7344375, -79.4399647
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/12
Date2	180612

Field Crew	Troy Savage, Eileen Nakahata, Sara Sanderlin	
Lead Scientist's Initials	E18	
Resource Series Number	15	
Resource ID	S-E18-15	
Do you need to override the resource id?	No	

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

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	28
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	natural

Stream Conditions

Water Flow Velocity	Slow (< 1 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	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)	3
Bank to Bank (ft)	4
Bankfull Width (ft)	4
Probed Stream Depth	6 to 12 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	Moderate
Left Bank Substrate	Sand, Mud or muck, Vegetated

Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	100	
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	100	

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	Sand, Mud or muck, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	100
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	100

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	Strong
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	11.5

Presence of baseflow	Weak
Iron oxidizing bacteria	Moderate
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	9

Stream Biology

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

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

W

Across Stream Photo 2



Across stream photo direction 2

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Created	2018-06-18 18:47:07 UTC by Jenn Favela
Updated	2018-10-15 22:24:47 UTC by Jacob Fleckenstein
Location	36.7211433, -79.4550064
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/18
Date2	180618

Field Crew	Eileen Nakahata, Jennifer Favela
Lead Scientist's Initials	F18
Resource Series Number	15
Resource ID	S-F18-15
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	30.5
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	98
Low Minor (1.3) Channel Alteration	2
High Minor (1.1) 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	100

OHWM Width (ft)	4	
Average Water Width (ft)	2	
Bank to Bank (ft)	6	
Bankfull Width (ft)	5	
Probed Stream Depth	0 to 6 inches	

Left Bank	
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Left Bank Height (feet)	2.5	
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Left Erosion Potential	Low	
Left Bank Substrate	Silt-Mud, Organic, Vegetated	

Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	3.5	
Right Bank Slope	25 to 35% (14 to 20 deg) Steep	
Right Erosion Potential	Low	
Right Bank Substrate	Silt-Mud, Organic, Vegetated	

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	5	
High suboptimal (1.2) [Right]	95	
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	100	

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Strong
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	16

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

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Weak
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	7.5
Regulatory Status	Corps Jurisdictional
Notes	In our opinion, based off of field observations, stream is likely perennial.
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Ε

Across Stream Photo 2



Across stream photo direction 2

W

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Created	2018-06-19 16:33:59 UTC by Jacob Fleckenstein
Updated	2018-10-15 19:36:43 UTC by Jacob Fleckenstein
Location	36.7204402, -79.4543676
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/19
Date2	180619

Field Crew	Jacob Fleckenstein, Eileen Nakahata, Jennifer Favela
Lead Scientist's Initials	F18
Resource Series Number	17
Resource ID	S-F18-17
Do you need to override the resource id?	No

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

Stream Inventory

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

Stream Conditions

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

OHWM Width (ft)	10
Average Water Width (ft)	9
Bank to Bank (ft)	10
Bankfull Width (ft)	15
Probed Stream Depth	6 to 12 inches

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Left Bank Height (feet)	2	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	Low	
Left Bank Substrate	Silt-Mud, Vegetated	

Optimal (1.5) [Left]	90	
High suboptimal (1.2) [Left]	10	
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	100	

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Low
Right Bank Substrate	Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100	
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	100	

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	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	14

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

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Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Moderate
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	9
Regulatory Status	Corps Jurisdictional
Notes	Named perennial stream.
C: D : D : D	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

Across Stream Photo 2

S



Across stream photo direction 2

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Created	2018-06-20 16:39:03 EDT by Beth Clements
Updated	2018-07-05 12:47:19 EDT by Sam Edmonds
Location	36.707824, -79.4669004
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/20
Date2	180620

Field Crew	Jacob Fleckenstein, Eileen Nakahata, Jennifer Favela
Lead Scientist's Initials	F18
Resource Series Number	22
Resource ID	S-F18-22
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
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	90
Low Minor (1.3) Channel Alteration	10
High Minor (1.1) 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	100

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

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Left Bank Height (feet)	0.5
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud, Vegetated

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	100
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	100

Right Bank

Right Bank Height (feet)	0.5
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]	100
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	100

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Absent
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	Moderate
Second or greater order channel	No
Stream Geomorphology Total	6

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

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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
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Ε



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

S

Across Stream Photo 2



Across stream photo direction 2

Ν

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Created	2018-07-26 20:34:11 UTC by Troy Savage
Updated	2018-08-09 17:23:55 UTC by Beth Clements
Location	36.7060918, -79.4690257
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/26
Date2	180726

Field Crew	Beth Clements, Josh Clements
Lead Scientist's Initials	D18
Resource Series Number	20
Resource ID	S-F18-20
Do you need to override the resource id?	Yes
Resource ID Override	S-F18-20
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	Moderate (1 - 5 cfs)
Direction of Flow	SE
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

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

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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

Optimal (1.5) [Left]	100	
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	100	

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 Condition

Optimal (1.5) [Right]	100	
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	100	

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	15.5

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

Stream Biology

Weak
Absent
Moderate
Absent
Weak
Absent
Absent
Weak
Other
8
Corps Jurisdictional

Upstream Stream Photo



Upstream photo direction W



Downstream photo direction

Across Stream Photo 1

F



Across stream photo direction 1

SW

Across Stream Photo 2



Across stream photo direction 2

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Created	2018-06-22 19:44:37 UTC by Beth Clements
Updated	2018-10-15 20:32:04 UTC by Jacob Fleckenstein
Location	36.7041042, -79.4703464
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/22
Date2	180622

Field Crew	Jacob Fleckenstein, Eileen Nakahata, Jennifer Favela
Lead Scientist's Initials	F18
Resource Series Number	28
Resource ID	S-F18-28
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
Calculated Stream Type	Intermittent
Wildlife Observed	Invertebrates
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

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

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

Optimal (1.5) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Dielet Francisco Determini	
Right Erosion Potential	Moderate

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100	
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	100	

Continuity of channel bed and bank	Moderate
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	Weak
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Weak
Second or greater order channel	Yes
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	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	Absent
Algae	Absent
Stream Biology Total	7.5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Ε

Across Stream Photo 2



Across stream photo direction 2

W

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Created	2018-08-06 14:26:55 UTC by Simon King
Updated	2018-09-06 14:06:54 UTC by Joseph Roy
Location	36.701454, -79.4733166
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/06
Date2	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

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

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	

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

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

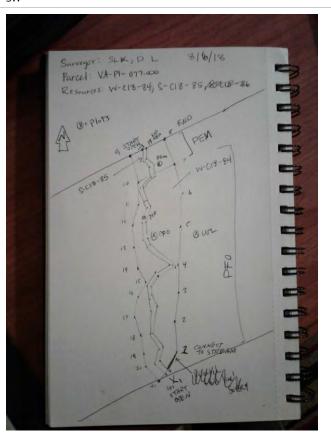
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

SW



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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

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
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]	0.13
Low poor (0.5) [Left]	0
Left bank total	1.35
Left bank total	1.55
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]	on 1.2
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	•
	n
	0
Low marginal (0.75) [Right]	0.15
Low marginal (0.75) [Right] High poor (0.6) [Right]	0.15 0
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	0.15 0 0
Low marginal (0.75) [Right] High poor (0.6) [Right]	0.15 0
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right]	0.15 0 0
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	0.15 0 0
Low marginal (0.75) [Right] High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total Stream Geomorphology	0.15 0 0 1.35
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	0.15 0 0 1.35 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	0.15 0 0 1.35 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	0.15 0 0 1.35 Strong 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	0.15 0 0 1.35 Strong Strong Strong 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	0.15 0 1.35 Strong Strong Strong Strong 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 Depositional bars or benches	0.15 0 1.35 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	0.15 0 1.35 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	0.15 0 1.35 Strong Strong Strong Strong Strong Strong Strong Strong Absent
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	0.15 0 0 1.35 Strong Strong Strong Strong Strong Strong Strong Strong Moderate Strong Strong Moderate Strong Strong

24.5

Stream Hydrology

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

Stream Biology

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

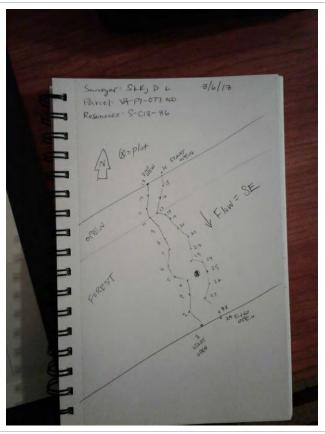
Ε



Across stream photo direction 2

Sketch of Stream

W



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5-	D1	∖ გ.	-2	ı

Created	2018-06-20 15:13:38 UTC by Jen Feese
Updated	2018-08-14 21:48:18 UTC by Jacob Fleckenstein
Location	36.6881258, -79.4857669
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/20
Date2	180620

Field Crew	Beth Clements, Jacob Fleckenstein, Mike Smith	
Lead Scientist's Initials	D18	
Resource Series Number	21	
Resource ID	S-D18-21	
Do you need to override the resource id?	No	

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

Stream Inventory

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

Stream Conditions

Water Flow Velocity	Fast (> 5 cfs)
Direction of Flow	SE
Channel condition	Marginal
In stream habitat	Optimal

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

OHWM Width (ft)	30	
Average Water Width (ft)	30	
Bank to Bank (ft)	35	
Bankfull Width (ft)	35	
Probed Stream Depth	12 to 24 inches	

Left Bank Height (feet)	3	
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]	100	
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	100	

Right Bank

Right Bank Height (feet)	3
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Moderate
8	

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100	
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	100	

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Strong
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	22

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

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Weak
Amphibians	Weak
Algae	Weak
Stream Biology Total	12
Regulatory Status	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 2

Ν

S-I	F1	8-	.27
J-1		U -	~ /

Created	2018-06-20 14:42:19 EDT by Alexi Weber
Updated	2018-07-05 12:59:19 EDT by Sam Edmonds
Location	36.6804277, -79.4898109
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/20
Date2	180620

Troy Savage, Sara Sanderlin
E18
27
S-E18-27
No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	47
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

Probed Stream Depth	6 to 12 inches	
Bankfull Width (ft)	11	
Bank to Bank (ft)	10	
Average Water Width (ft)	5	
OHWM Width (ft)	7	

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Left Bank Height (feet)	2.5
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Cobble-Gravel, Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100
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	100

Right Bank

Right Bank Height (feet)	2.5
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Cobble-Gravel, Sand, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Strong
Recent alluvial deposits	Weak
Headcuts	Moderate
Grade control	Strong
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	23.5

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

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Strong
Amphibians	Strong
Algae	Absent
Stream Biology Total	13.5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

NE



Across stream photo direction 2

SW

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Created	2018-06-23 11:41:08 EDT by Jen Feese
Updated	2018-07-05 12:33:17 EDT by Sam Edmonds
Location	36.6762478, -79.4912465
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/23
Date2	180623

Beth Clements, Jacob Fleckenstein, Stephen Bendele	
D18	
26	
S-D18-26	
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
Wildlife Observed	Fish
Observed Use	Natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

OHWM Width (ft)	6
Average Water Width (ft)	5
Bank to Bank (ft)	8
Bankfull Width (ft)	9
Probed Stream Depth	6 to 12 inches

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	20	
High suboptimal (1.2) [Left]	80	
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	100	

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]	80
High suboptimal (1.2) [Right]	20
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	100

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Strong
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	15

Presence of baseflow	Moderate
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	6.5

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Moderate
Crayfish	Moderate
Amphibians	Moderate
Algae	Absent
Stream Biology Total	10
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

Ε



Across stream photo direction 2

W

S-	D1	8-	-28

Created	2018-06-23 15:56:16 UTC by Jen Feese
Updated	2018-10-15 22:36:13 UTC by Jacob Fleckenstein
Location	36.6765455, -79.491024
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/23
Date2	180623

Beth Clements, Jacob Fleckenstein, Stephen Bendele
D18
28
S-D18-28
No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	28
Calculated Stream Type	Intermittent
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

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

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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]	100	
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	100	

Right Bank

Right Bank Height (feet)	0.5
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

<u> </u>		
Optimal (1.5) [Right]	100	
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	100	

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	Moderate
Depositional bars or benches	Absent
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	14.5

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

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Weak
Stream Biology Total	6
Regulatory Status	Corps Jurisdictional
Notes	Due to the presence of contiguous seepage wetlands, suggesting year-round hydrologic input, it is our opinion that the stream is perennial.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

W



Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

Ε



Across stream photo direction 2

NW

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5-	U	18	-2	2

Created	2018-06-20 16:14:57 EDT by Jen Feese
Updated	2018-07-05 17:10:17 EDT by Sam Edmonds
Location	36.6717393, -79.4996024
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/20
Date2	180620

Field Crew	Beth Clements, Mike Smith
Lead Scientist's Initials	D18
Resource Series Number	22
Resource ID	S-D18-22
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	35
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	natural

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SE
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	100
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	100

OHWM Width (ft)	4	
Average Water Width (ft)	4	
Bank to Bank (ft)	6	
Bankfull Width (ft)	7	
Probed Stream Depth	6 to 12 inches	

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Left Bank Height (feet)	3	
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]	100	
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	100	

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]	100
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	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	16

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	Strong
Crayfish	Weak
Amphibians	Absent
Algae	Absent
Stream Biology Total	11
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

S



Across stream photo direction 2

Ν

S-	F1	8-	61
J-		· O-	v

Created	2018-08-01 14:11:16 UTC by Beth Clements
Updated	2018-08-09 16:09:58 UTC by Beth Clements
Location	36.6719843, -79.4987788
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/01
Date2	180801

Alexi Weber, Jennifer Feese
F18
61
S-F18-61
No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	34
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	natural

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	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)	8
Average Water Width (ft)	5
Bank to Bank (ft)	8
Bankfull Width (ft)	8
Probed Stream Depth	6 to 12 inches

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	85	
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]	15	
Low poor (0.5) [Left]	0	
Left bank total	100	

Right Bank

Right Bank Height (feet)	6	
Right Bank Slope	25 to 35% (14 to 20 deg) Steep	
Right Erosion Potential	High	
Right Bank Substrate	Sand, Silt-Mud	

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	10	
Low suboptimal (1.1) [Right]	0	
High marginal (0.85) [Right]	0	
Low marginal (0.75) [Right]	0	
High poor (0.6) [Right]	90	
Low poor (0.5) [Right]	0	
Right bank total	100	

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	Weak
Recent alluvial deposits	Moderate
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	17
Stream Geomorphology Total	17

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

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Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Absent
Amphibians	Weak
Algae	Weak
Stream Biology Total	8.5
Regulatory Status	Corps Jurisdictional
Notes	Benthics found include Limnephilidae species, Lymnaeid snails, Ephemeroptera species, Hydropsychidae species

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

W



Downstream photo direction

Across Stream Photo 1

NE



Across stream photo direction 1

SW



Across stream photo direction 2

NE

ς_	F1	8-	47
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Created	2018-07-16 13:48:46 UTC by Troy Savage
Updated	2018-08-09 18:26:24 UTC by Beth Clements
Location	36.6682018, -79.5067726
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/16
Date2	180716

Field Crew	Troy Savage, Mike Smith, Janelle Bernosky
Lead Scientist's Initials	E18
GPS Surveyor	joe
Resource Series Number	47
Resource ID	S-E18-47
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	41.5
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	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

OHWM Width (ft)	6
Average Water Width (ft)	3
Bank to Bank (ft)	8
Bankfull Width (ft)	8

Probed Stream Depth	0 to 6 inches
Left Bank	
Left Bank Height (feet)	5
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	Cobble-Gravel, Sand, Vegetated
Left Bank Riparian Buffer Conditi	on
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	75
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]	25
Left bank total	100
Right Bank	
Right Bank Height (feet)	4
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Cobble-Gravel, Sand, Vegetated
Right Bank Riparian Buffer Condi	tion
Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	70
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	30
Right bank total	100
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	Strong
Recent alluvial deposits	Strong
Headcuts	Moderate
Grade control	Moderate
Natural valley	Moderate
Natural valley Second or greater order channel	Moderate Yes

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

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Weak
Crayfish	Weak
Amphibians	Weak
Algae	Weak
Wetland plants in streambed	OBL
Stream Biology Total	10.5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

W

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

Е



Across stream photo direction 1

Ν

Across Stream Photo 2



Across stream photo direction 2

Additional Stream Photos

S



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

Field Crew	Laura Giese, Simon King
Lead Scientist's Initials	A18
Resource Series Number	188
Resource ID	S-A18-188
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	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 Doub Dinarion Duffer Condition	
Left Bank Riparian Buffer Condition	
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
Dight Bank Dinarian Buffer Condition	
Right Bank Riparian Buffer Condition Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	16.5
. 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	Moderate
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	FACW
Stream Biology Total	9.75
Notes	Dammed upslope to create pond
Character Description	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

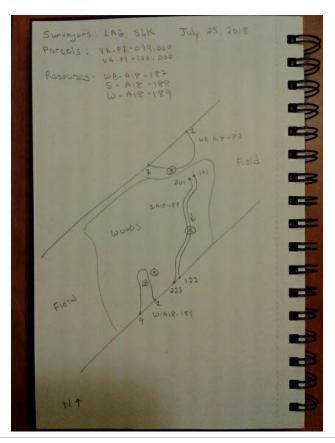
S



Across stream photo direction 1

Е

Sketch of Stream



WE	3-A1	8-1	87
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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	
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
Disht Bash Bissains Buffer 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	
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

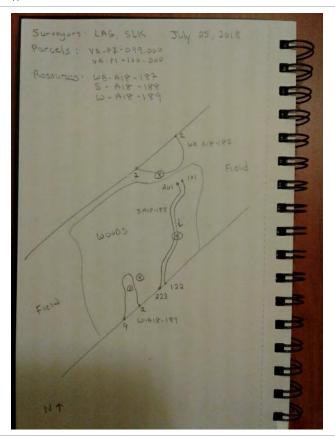
Across Stream Photo 1



Across stream photo direction 1

Sketch of Stream

W



S-	D ₁	Q.	-37
.)-	υı	Ο.	-2/

Created Updated Location	2018-07-16 17:47:44 UTC by Jen Feese
	2019 09 00 12:0F:2F LITC by Path Claments
Location	2018-08-09 13:05:35 UTC by Beth Clements
	36.6581053, -79.5158417
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/16
Date2	

Eileen Nakahata, Jennifer Feese, Stephen Bendele
D18
37
S-D18-37
No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	42.5
Calculated Stream Type	Perennial
Wildlife Observed	Invertebrates
Observed Use	natural

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	SW
Channel condition	Poor
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)	8
Average Water Width (ft)	6
Bank to Bank (ft)	25
Bankfull Width (ft)	10
Probed Stream Depth	12 to 24 inches

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L	C II			ıın

Left Bank Height (feet)	7
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	Cobble-Gravel, Sand, Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	20	
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]	80	
Low poor (0.5) [Left]	0	
Left bank total	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100	
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	100	

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	Strong
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	21

Stream Hydrology

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

Stream Biology

Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Strong
Aquatic mullusks	Weak
Fish	Weak
Crayfish	Weak
Amphibians	Strong
Algae	Weak
Stream Biology Total	11
Regulatory Status	Corps Jurisdictional
Notes	macroinvertabrates: hydropsychidae, limnephilidae, physidae, psephenidae, heptageniidae, chironomidae

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Ε

Across Stream Photo 2



Across stream photo direction 2

W

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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

0
0
0
0
0
0
0
0

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	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

Ε



Downstream photo direction

W

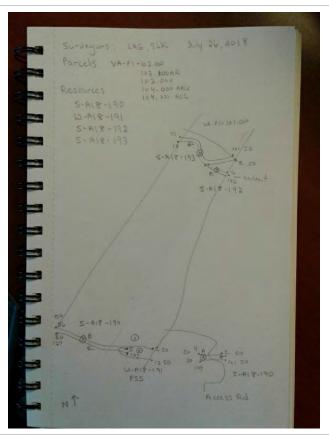
Across Stream Photo 1



Across stream photo direction 1

S

Sketch of Stream



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7-	D1	Α.	• າ	1

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

Laura Giese, Simon King
D18
193
S-D18-37
No

Resource ID = Resource Type - Scientist Initials - Resource 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	n	
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 Book Dinarian Buffor Condition		
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	
Light and (0.75) [Right]	0	
High poor (0.6) [Right]	0	
Low poor (0.5) [Right]	0	
Right bank total	1.5	
Stream Geomorphology		
Stream Geomorphology Continuity of channel bed and bank	Strong	
Continuity of channel bed and bank	Strong	
Continuity of channel bed and bank Sinuosity of channel along thalweg	Strong Strong	
Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure	Strong Strong Strong	
Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	Strong 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 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 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 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 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 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

Absent
Absent
Strong
Absent
Weak
Moderate
Moderate
Absent
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

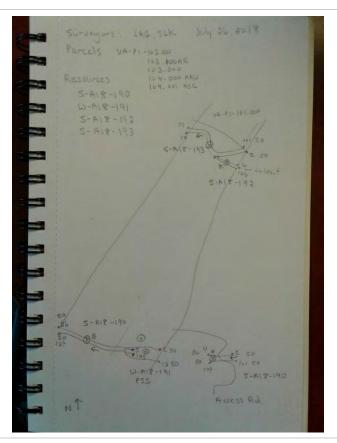
SW

Additional Stream Photos



in existing ROW, facing downstream

Sketch of Stream



S-A	1 Ձ_1	1 QN	Δ
3-M	10-	Iフひ	М

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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_		L	Du		г

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

Stream decimorphology	
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 Penort Photos	

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

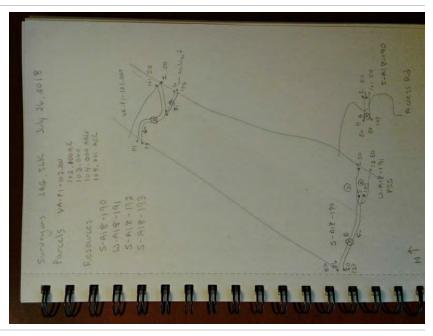
S

Additional Stream Photos



Headcut by flag 9 and 108

Sketch of Stream



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	2018-09-06 14:28:16 UTC by Joseph Roy
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	W
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

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

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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

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
Ciara Cara in Daniel Diagram	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

SE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

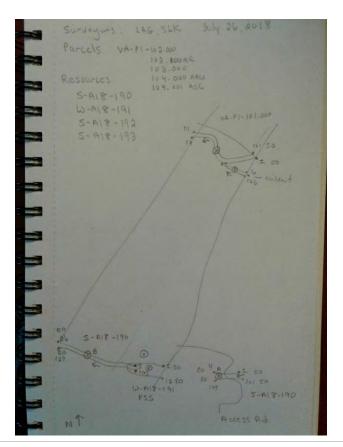
NW



Across stream photo direction 1

S

Sketch of Stream



S-	Δ	1	R-	.1	q	4
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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

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

Stream Measurements

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

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Vegetated
20120	Site mad, 186ctated
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
Dight Donk	
Right Bank	
Right Bank Height (feet)	4
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Moderate
Right Bank Substrate	Silt-Mud, Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	1.5
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.5
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	16
St. Calli Geomorphology Total	10

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

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

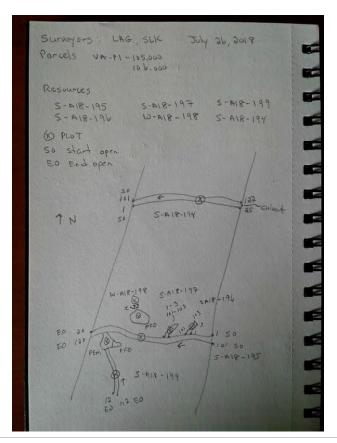
NW



Across stream photo direction 1

NE

Sketch of Stream



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

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Created	2018-07-28 16:20:01 UTC by Troy Savage
Updated	2018-08-09 16:02:06 UTC by Beth Clements
Location	36.6507039, -79.5222607
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/28
Date2	180728

Field Crew	Alexi Weber, Mike Smith
Lead Scientist's Initials	G18
Resource Series Number	10
Resource ID	S-G18-10
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	23.5
Calculated Stream Type	Intermittent
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

Stream Measurements

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

L	.ef	t I	За	n	k

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	0.6
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]	100	
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	100	

Stream Geomorphology

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

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

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Absent
Stream Biology Total	8.5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Downstream Stream Photo



Across Stream Photo 1



Across Stream Photo 2



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

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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	
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
Diabt Dank Diagram 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
High marginal (0.85) [Right] Low marginal (0.75) [Right]	0 0
High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [Right]	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]	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	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 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 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 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 1.5 Strong Strong 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	0 0 0 0 1.5 Strong Strong Strong 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 1.5 Strong Strong Strong Strong 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 1.5 Strong Strong Strong 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 1.5 Strong Strong Strong 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 1.5 Strong Strong Strong Strong Weak Moderate Weak Weak 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 Grade control	0 0 0 1.5 Strong Strong Strong Strong Weak Moderate Weak Weak Weak Weak

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

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

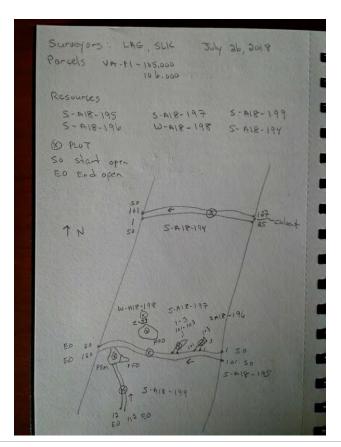
NW



Across stream photo direction 1

S

Sketch of Stream



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

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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
	Absent Absent
Depositional bars or benches	
Depositional bars or benches Recent alluvial deposits	Absent
Depositional bars or benches Recent alluvial deposits Headcuts Grade control Natural valley	Absent Absent
Depositional bars or benches Recent alluvial deposits Headcuts Grade control	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	Absent
Algae	Absent
Stream Biology Total	7
Notes	Seepage out of hillside

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

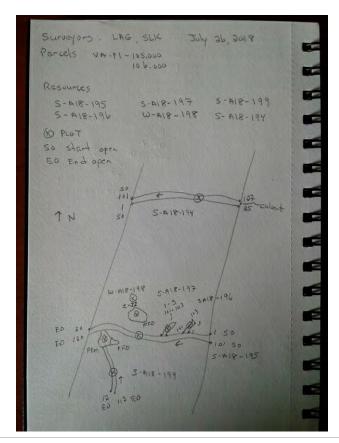
W



Across stream photo direction 1

S

Sketch of Stream



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

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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 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)	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 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	Ctrong
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg In-channel structure	Weak
Particle size of stream substrate	Weak
	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts Crade central	Absent
Grade control	Absent
Natural valley	Weak
	No
Second or greater order channel Stream Geomorphology Total	6.5

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 Description	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ε

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

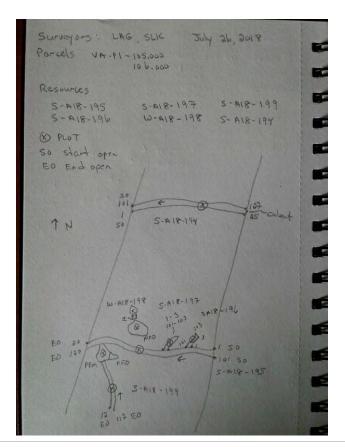
NW



Across stream photo direction 1

Ν

Sketch of Stream



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

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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

Laura Giese, Simon King
G18
10
S-G18-10
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 Slope 15 to 25% (9 to 14 deg) Steeply Sloping Left Erosion Potential Low Left Bank Riparian Buffer Condition Optimal (1.5) [Left] 1.5 High suboptimal (1.2) [Left] 0 Low suboptimal (1.1) [Left] 0 Liby suboptimal (1.1) [Left] 0 Liby suboptimal (0.25) [Left] 0 Low suboptimal (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 total 1.5 Right Bank Right Bank Height (feet) 3 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) [Right] 1.5 High suboptimal (1.2) [Right] 0 Low suboptimal (1.2) [Right] 0 Low suboptimal (1.1) [Right] 0 Low suboptimal (1.2) [Right] 0 Low suboptimal (0.75) [Right] 0 Low marginal (0.75) [Right] 0		
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Continuity of channel bed and bank Strong Sinuosity of channel along thalweg In-channel structure Moderate Particle size of stream substrate Active or relict floodplain Absent Depositional bars or benches Absent Recent alluvial deposits Absent Headcuts Grade control Weak Natural valley Second or greater order channel Strong Strong Strong Strong Strong Second or greater order channel	Stroom Goomorphology	
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Recent alluvial deposits Absent Headcuts Absent Grade control Weak Natural valley Second or greater order channel Yes		
Headcuts Absent Grade control Weak Natural valley Strong Second or greater order channel Yes	<u> </u>	
Grade control Weak Natural valley Strong Second or greater order channel Yes		
Natural valley Strong Second or greater order channel Yes		
Second or greater order channel Yes		
Stream Geomorphology Total 15		
	Stream Geomorphology Fotal	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	Weak
Amphibians	Weak
Algae	Absent
Stream Biology Total	8

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

S

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

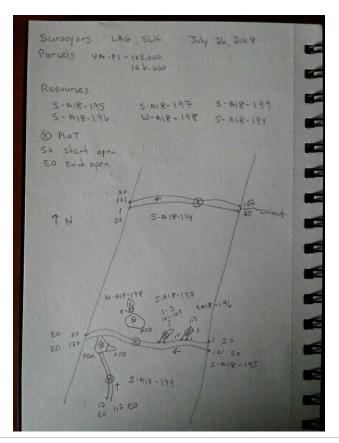
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Across stream photo direction 1

SW

Sketch of Stream



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

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D -	C I	0-	97	/

Created	2018-09-06 13:35:47 UTC by Sam Edmonds
Updated	2018-09-06 15:19:56 UTC by Joseph Roy
Location	36.6445506, -79.5265881
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/25
Date2	180625

Beth Clements, Jacob Fleckenstein, Stephen Bendele	
C18	
97	
S-C18-97	
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
Observed Use	Natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	100
High Minor (1.1) 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	100

Stream Measurements

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

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Left Bank Height (feet)	4
Left Bank Slope	25 to 35% (14 to 20 deg) Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Cobble-Gravel, Silt-Mud, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	20	
High suboptimal (1.2) [Left]	80	
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	100	

Right Bank

Right Bank Height (feet)	3.5
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Moderate
Right Bank Substrate	Cobble-Gravel, Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	20
High suboptimal (1.2) [Right]	80
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	100

Stream Geomorphology

Stream decinorphology	
Continuity of channel bed and bank	Moderate
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	Moderate
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Moderate
Natural valley	Weak
Second or greater order channel	No
Stream Geomorphology Total	13.5

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

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	4
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

NE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

NW

Across Stream Photo 2



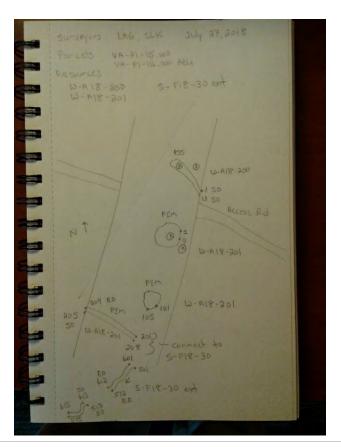
Across stream photo direction 2

Additional Stream Photos

SE



Sketch of Stream



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

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D -	C I	Ο-	.99

Created	2018-09-06 13:47:37 UTC by Sam Edmonds
Updated	2018-09-07 13:25:04 UTC by Katelyn Wheeler
Location	36.6444469, -79.5267241
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/25
Date2	180625

Field Crew	Jacob Fleckenstein, Eileen Nakahata, Jennifer Favela	
Lead Scientist's Initials	C18	
Resource Series Number	99	
Resource ID	S-C18-99	
Do you need to override the resource id?	No	

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

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	13.5
Calculated Stream Type	Ephemeral

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

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

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Left Bank Height (feet)	0.5
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply 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]	100
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	100

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	Cobble-Gravel, Sand, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	100
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	100

Stream Geomorphology

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

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	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	Absent
Rooted upland plants in streambed	Moderate
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	4
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

S



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

W



Across stream photo direction 2

Ε

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

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

Second or greater order channel	Yes
Stream Geomorphology Total	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

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

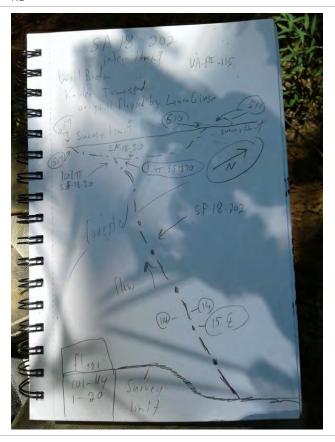
SW



Across stream photo direction 2

Sketch of Stream

NE



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

S-	F1	8-	47

Created	2018-07-16 17:02:48 UTC by Alexi Weber
Updated	2018-08-09 17:12:00 UTC by Beth Clements
Location	36.6385479, -79.5313016
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/16
Date2	180716

Field Crew	Alexi Weber, Sara Sanderlin
Lead Scientist's Initials	F18
Resource Series Number	47
Resource ID	S-F18-47
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials - Resource Series Number	

Stream Inventory

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

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	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

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

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Left Bank Height (feet)	2.5
Left Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Left Erosion Potential	High
Left Bank Substrate	Boulder/Slabs, Rubble, Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	80	
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]	20	
Low poor (0.5) [Left]	0	
Left bank total	100	

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	High
Right Bank Substrate	Boulder/Slabs, Rubble, Sand, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	80
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]	20
Right bank total	100

Stream Geomorphology

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

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
Regulatory Status	Corps Jurisdictional
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

Ν

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

C_	F1	8-5	1
.)-		0-1	

Created	2018-07-17 13:01:39 UTC by Troy Savage
Updated	2018-08-17 23:15:05 UTC by Alexi Weber
Location	36.6394526, -79.5342055
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/17
Date2	180717

Field Crew	Troy Savage, Mike Smith, Janelle Bernosky
Lead Scientist's Initials	E18
GPS Surveyor	joe
Resource Series Number	51
Resource ID	S-E18-51
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	33.5
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

OHWM Width (ft)	8
Average Water Width (ft)	5
Bank to Bank (ft)	16
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	Low
Left Bank Substrate	Bedrock, Boulder/Slabs, Sand, Vegetated
Left Bank Riparian Buffer Conditi	ion
Optimal (1.5) [Left]	100
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	100
Dight Dank	
Right Bank Right Bank Height (feet)	6
Dight Pank Clone	
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential Right Bank Substrate	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated
Right Erosion Potential	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated
Right Erosion Potential Right Bank Substrate Right Bank Riparian Buffer Condi	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition
Right Erosion Potential Right Bank Substrate Right Bank Riparian Buffer Condi Optimal (1.5) [Right]	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100
Right Erosion Potential Right Bank Substrate Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right]	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 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]	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 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 Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 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]	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 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 Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 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]	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated 100 0 0 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	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated 100 0 0 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	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated 100 0 0 0 0 0 0 0 100 100 100
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	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 0 0 0 0 0 0 100 Strong
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	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 0 0 0 0 0 0 100 Strong 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	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 0 0 0 0 0 0 0 0 100 Strong Moderate Strong
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	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 0 0 0 0 0 0 0 0 0 100 Strong Moderate Strong Moderate Strong 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] 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	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 0 0 0 0 0 0 0 0 0 100 Strong Moderate Strong Moderate 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	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 0 0 0 0 0 0 0 100 Strong Moderate Strong Moderate Absent 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	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 0 0 0 0 0 0 0 0 100 Strong Moderate Strong Moderate Absent 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 Headcuts	Low Bedrock, Boulder/Slabs, Cobble-Gravel, Sand, Vegetated ition 100 0 0 0 0 0 0 0 0 100 Strong Moderate Strong Moderate Absent Weak Absent Weak

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Stream Hydrology

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

Stream Biology

C 2		
Fibrous roots in streambed	Absent	
Rooted upland plants in streambed	Absent	
Macrobenthos	Strong	
Aquatic mullusks	Weak	
Fish	Moderate	
Crayfish	Weak	
Amphibians	Moderate	
Algae	Absent	
Stream Biology Total	12.5	
Regulatory Status	Corps Jurisdictional	
Notes	Bedrock channel in valley, riffle pool sequences numerous, low embeddeness	
Stream Overview Report Photos		

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Ε



Across stream photo direction 2

Additional Stream Photos

W



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

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Created	2018-06-28 14:56:06 EDT by Jenn Favela
Updated	2018-07-05 17:03:57 EDT by Sam Edmonds
Location	36.6388432, -79.5379232
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/28
Date2	180628

Field Crew	Troy Savage, Mike Smith
Lead Scientist's Initials	F18
GPS ID	NA
Resource Series Number	45
Resource ID	S-E18-45
Do you need to override the resource id?	Yes
Resource ID Override	S-E18-45
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

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

Stream Inventory

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

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0
Low Minor (1.3) Channel Alteration	0
High Minor (1.1) Channel Alteration	0
Low Moderate (0.9) Channel Alteration	100
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	100

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)	0.6
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	Low
Left Bank Substrate	Sand, Organic, Vegetated
Left Bank Riparian Buffer Condition	
Optimal (1.5) [Left]	90
High suboptimal (1.2) [Left]	10
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	100
Right Bank	
Right Bank Height (feet)	2
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Moderate Moderate
Right Bank Substrate	Sand, Organic, Vegetated
Right Bank Riparian Buffer Condition Optimal (1.5) [Right]	100
High suboptimal (1.2) [Right]	
riigii subopuiliai (1.4) [Nigiit]	0
Low suboptimal (1.1) [Right]	0
Low suboptimal (1.1) [Right]	
	0
Low 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 0 0
Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right] High poor (0.6) [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]	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	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	0 0 0 0 0 0 100 Moderate
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 0 100 Moderate 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 In-channel structure	0 0 0 0 0 0 100 Moderate 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 In-channel structure Particle size of stream substrate	0 0 0 0 0 100 Moderate 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 In-channel structure Particle size of stream substrate Active or relict floodplain	0 0 0 0 0 100 Moderate Weak 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 In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	0 0 0 0 0 100 Moderate Weak 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 0 100 Moderate Weak 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 In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches Recent alluvial deposits Headcuts	0 0 0 0 0 100 Moderate Weak Weak Weak Absent Absent Absent Weak

Stream Hydrology

Absent
Absent
Weak
Absent
Weak
No
1.5

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Moderate
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	1
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

Ε



Across stream photo direction 2

W

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

S-	F1	8-	48
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Created	2018-07-16 19:46:09 UTC by Troy Savage
Updated	2018-08-09 13:26:15 UTC by Beth Clements
Location	36.6362579, -79.5388755
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/16
Date2	180716

Field Crew	Troy Savage, Mike Smith, Janelle Bernosky
Lead Scientist's Initials	E18
GPS Surveyor	joe
Resource Series Number	48
Resource ID	S-E18-48
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials -	- Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	24.5
Calculated Stream Type	Intermittent
Wildlife Observed	Frogs
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

OHWM Width (ft)	4	
Average Water Width (ft)	1	
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	Sand, Vegetated
Left Bank Riparian Buffer Conditi	ion
Optimal (1.5) [Left]	100
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	100
Right Bank	
Right Bank Height (feet)	4
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Sand, Vegetated
Right Bank Riparian Buffer Condi	ition
Optimal (1.5) [Right]	100
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	100
Stroam Coomorphology	
Stream Geomorphology Continuity of channel bed and bank	
	Weak
	Weak
Sinuosity of channel along thalweg	Moderate
Sinuosity of channel along thalweg In-channel structure	Moderate Weak
Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate	Moderate Weak Moderate
Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain	Moderate Weak Moderate Absent
Sinuosity of channel along thalweg In-channel structure Particle size of stream substrate Active or relict floodplain Depositional bars or benches	Moderate Weak Moderate Absent 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	Moderate Weak Moderate Absent Absent Weak
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 Weak Moderate Absent Absent Weak Moderate
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	Moderate Weak Moderate Absent Absent Weak Weak Moderate Moderate
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 Weak Moderate Absent Absent Weak Moderate

Stream Hydrology

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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	Absent
Stream Biology Total	5.5
Regulatory Status	Corps Jurisdictional

Stream Overview Report Photos
Upstream Stream Photo



Upstream photo direction

NE



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Ε



Across stream photo direction 2

Additional Stream Photos

W



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

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Created	2018-07-16 21:04:50 UTC by Troy Savage
Updated	2018-08-17 23:15:14 UTC by Alexi Weber
Location	36.6369522, -79.5381353
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/16
Date2	180716

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-E18-50
No

Stream Inventory

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

Stream Conditions

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

Channel Alteration

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

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

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Left Bank Height (feet)	0.5
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]	100	
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	100	

Right Bank

Right Bank Height (feet)	0.5
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Sand

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100	
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	100	

Stream Geomorphology

Continuity of channel bed and bank	Absent
Sinuosity of channel along thalweg	Absent
In-channel structure	Absent
Particle size of stream substrate	Weak
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	2.5

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

Weak Absent
Absent
Absent
5
Corps Jurisdictional
Connects S-E18-49 and S-E18-48, while not heavily eroded the ephemeral channel contains sediment deposits from upstream farm areas.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

W



Across stream photo direction 2

Ε

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

S-	F1	8-	48

Created	2018-07-17 16:11:32 UTC by Troy Savage
Updated	2018-08-09 17:09:42 UTC by Beth Clements
Location	36.637462, -79.5376799
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/17
Date2	180717

Field Crew	Troy Savage, Mike Smith, Janelle Bernosky
Lead Scientist's Initials	F18
Resource Series Number	48
Resource ID	S-F18-48
Do you need to override the resource id?	No

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

Stream Inventory

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

Stream Conditions

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

Channel Alteration

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

OHWM Width (ft)	2
Average Water Width (ft)	2
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	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Sand

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	100
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	100

Right Bank

Right Bank Height (feet)	0.5
Right Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Right Erosion Potential	Low
Right Bank Substrate	Sand

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	100
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	100

Stream Geomorphology

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

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

Stream Biology

O 3	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Absent
Algae	Absent
Stream Biology Total	7
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction NE



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

SE



Across stream photo direction 2

NE

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

S-	F1	۸-	1	1
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Created	2018-06-28 11:55:47 EDT by Jenn Favela
Updated	2018-07-05 17:07:38 EDT by Sam Edmonds
Location	36.6354746, -79.5398912
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/28
Date2	180628

Troy Savage, Mike Smith
E18
44
S-E18-44
No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	47.5
Calculated Stream Type	Perennial
Observed Use	Natural

Stream Conditions

Water Flow Velocity	Fast (> 5 cfs)
Direction of Flow	NE
Channel condition	Optimal
In stream habitat	Optimal

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

Stream Measurements

OHWM Width (ft)	120
Average Water Width (ft)	120
Bank to Bank (ft)	150
Bankfull Width (ft)	150
Probed Stream Depth	> 36 inches

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Left Bank Height (feet)	10
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Low
Left Bank Substrate	Bedrock, Sand, Mud or muck, Silt-Mud, Organic, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	8
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	Low
Right Bank Substrate	Bedrock, Sand, Mud or muck, Silt-Mud, Organic, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Strong
Active or relict floodplain	Strong
Depositional bars or benches	Strong
Recent alluvial deposits	Strong
Headcuts	Absent
Grade control	Moderate
Natural valley	Strong
Second or greater order channel	Yes
Stream Geomorphology Total	25.5

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

Stream Biology

Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Moderate
Fish	Moderate
Crayfish	Moderate
Amphibians	Moderate
Algae	Moderate
Stream Biology Total	14
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

Ν



Across stream photo direction 1

NW



Across stream photo direction 2

SW

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

ς_	F1	8-4	42
.)-	СΙ	0-4	+2

Created	2018-06-28 12:42:16 UTC by Jenn Favela
Updated	2018-10-15 20:10:46 UTC by Jacob Fleckenstein
Location	36.6313858, -79.5433185
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/28
Date2	180628

Field Crew	Troy Savage, Mike Smith
Lead Scientist's Initials	E18
Resource Series Number	42
Resource ID	S-E18-42
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	30
Calculated Stream Type	Perennial
Observed Use	natural

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	100
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	100

Stream Measurements

OHWM Width (ft)	3	
Average Water Width (ft)	2	
Bank to Bank (ft)	4	
Bankfull Width (ft)	5	
Probed Stream Depth	0 to 6 inches	

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Left Bank Height (feet)	2.5
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]	100
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	100

Right Bank

Right Bank Height (feet)	2.5	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Moderate	
Right Bank Substrate	Silt-Mud, Vegetated	

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

Stream Geomorphology

1 03	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Strong
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	14

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

Stream Biology

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Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Weak
Stream Biology Total	5.5
Regulatory Status	Corps Jurisdictional
Notes	In our opinion, due to the presence of seepage wetlands contiguous to the stream found in the field, it is likely perennial.

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



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

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D -	D1	o.	-5	С

Created	2018-07-17 15:38:08 UTC by Jen Feese
Updated	2018-08-09 13:11:00 UTC by Beth Clements
Location	36.6174146, -79.5598548
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/17
Date2	180717

Field Crew	Eileen Nakahata, Jennifer Feese, Stephen Bendele
Lead Scientist's Initials	D18
Resource Series Number	38
Resource ID	S-D18-38
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	14.5
Calculated Stream Type	Ephemeral
Wildlife Observed	none
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

Stream Measurements

OHWM Width (ft)	2
Bank to Bank (ft)	7
Bankfull Width (ft)	7

Left Bank

Left Bank Height (feet)	3
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	High
Left Bank Substrate	Sand, Silt-Mud
Left Bank Riparian Buffer Conditio	nn
Optimal (1.5) [Left]	95
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	5
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100
LEIT DAIN LOTAI	100
Right Bank	
Right Bank Height (feet)	3
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Riparian Buffer Conditi	
Right Bank Riparian Buffer Conditi Optimal (1.5) [Right] High suboptimal (1.2) [Right]	on 95
Right Bank Riparian Buffer Conditi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	95 0 0
Right Bank Riparian Buffer Conditi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	95 0 0 5
Right Bank Riparian Buffer Conditi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right]	95 0 0 5
Right Bank Riparian Buffer Conditi 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]	95 0 0 5 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]	95 0 0 5 0 0 0
Right Bank Riparian Buffer Conditi 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]	95 0 0 5 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]	95 0 0 5 0 0 0
Right Bank Riparian Buffer Conditi 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	95 0 0 5 0 0 0
Right Bank Riparian Buffer Conditi 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	95 0 0 5 0 0 100
Right Bank Riparian Buffer Conditi 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	95 0 0 5 0 0 100 Moderate
Right Bank Riparian Buffer Conditi 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	95 0 0 0 5 0 0 100 Moderate Weak
Right Bank Riparian Buffer Conditi 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	95 0 0 5 0 0 100 Moderate Weak Weak
Right Bank Riparian Buffer Conditi 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	95 0 0 0 5 0 0 0 100 Moderate Weak Weak Weak Weak
Right Bank Riparian Buffer Conditi 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	95 0 0 0 5 0 0 0 0 100 Moderate Weak Weak Weak Weak Absent
Right Bank Riparian Buffer Conditi 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	95 0 0 0 5 0 0 0 0 100 Moderate Weak Weak Weak Weak Absent Absent
Right Bank Riparian Buffer Conditi 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	95 0 0 0 5 0 0 0 100 Moderate Weak Weak Weak Weak Weak Absent Absent Absent
Right Bank Riparian Buffer Conditi 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	95 0 0 0 5 0 0 0 0 0 100 0 Moderate Weak Weak Weak Weak Weak Absent Absent Absent Absent Weak
Right Bank Riparian Buffer Conditi 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	95 0 0 0 5 0 0 0 0 100 0 100 Moderate Weak Weak Weak Weak Weak Absent Absent Absent Absent Weak Moderate Weak

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

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	4
Regulatory Status	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 direction 2

S

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

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Created	2018-07-17 14:32:26 UTC by Alexi Weber
Updated	2018-08-09 17:06:43 UTC by Beth Clements
Location	36.6138359, -79.5625782
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/17
Date2	180717

Field Crew	Alexi Weber, Sara Sanderlin
Lead Scientist's Initials	F18
Resource Series Number	50
Resource ID	S-F18-50
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	35.5
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	Natural

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	E
Channel condition	Suboptimal
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	1.1
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.1

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	7
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

ı	ρft	Ban	k

Left Bank Height (feet)	1.5	
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Left Erosion Potential	Low	
Left Bank Substrate	Cobble-Gravel, Sand, Silt-Mud, Vegetated	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	80
High suboptimal (1.2) [Left]	17
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	3
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100

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, Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

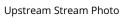
Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	16.5

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

Stream Biology

Stream Biology	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Strong
Algae	Absent
Stream Biology Total	10.5
Regulatory Status	Corps Jurisdictional
Notes	Macrobenthos has moderate diversity
Stream Overview Report Photos	





Upstream photo direction W



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

S



Across stream photo direction 2

Additional Stream Photos

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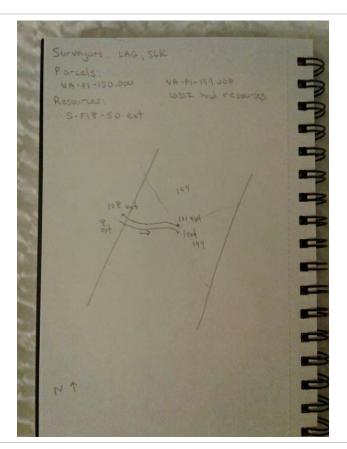


50 ext tract 150.000, downstream



50 ext, upstream

Sketch of Stream



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

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Created	2018-07-17 14:32:26 UTC by Alexi Weber
Updated	2018-08-09 17:06:43 UTC by Beth Clements
Location	36.6138359, -79.5625782
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/17
Date2	180717

Field Crew	Alexi Weber, Sara Sanderlin
Lead Scientist's Initials	F18
Resource Series Number	50
Resource ID	S-F18-50
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	35.5
Calculated Stream Type	Perennial
Wildlife Observed	Frogs
Observed Use	Natural

Stream Conditions

Water Flow Velocity	Moderate (1 - 5 cfs)
Direction of Flow	E
Channel condition	Suboptimal
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	1.1
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	1.1

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	2
Bank to Bank (ft)	7
Bankfull Width (ft)	4
Probed Stream Depth	0 to 6 inches

ı	ρft	Ban	k

Left Bank Height (feet)	1.5	
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping	
Left Erosion Potential	Low	
Left Bank Substrate	Cobble-Gravel, Sand, Silt-Mud, Vegetated	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	80
High suboptimal (1.2) [Left]	17
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	3
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100

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, Silt-Mud, Vegetated

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

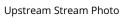
Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	16.5

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

Stream Biology

Stream Biology	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Moderate
Amphibians	Strong
Algae	Absent
Stream Biology Total	10.5
Regulatory Status	Corps Jurisdictional
Notes	Macrobenthos has moderate diversity
Stream Overview Report Photos	





Upstream photo direction W



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

S



Across stream photo direction 2

Additional Stream Photos

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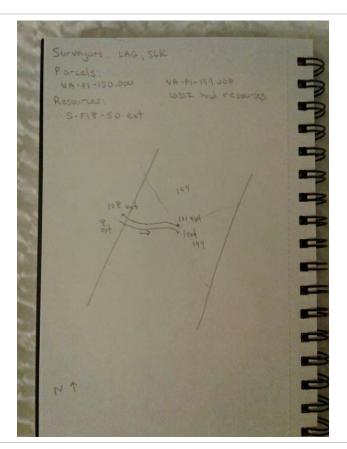


50 ext tract 150.000, downstream



50 ext, upstream

Sketch of Stream



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

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Created	2018-07-17 19:32:42 UTC by Troy Savage
Updated	2018-08-17 23:15:35 UTC by Alexi Weber
Location	36.6058332, -79.5679674
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/17
Date2	180717

Field Crew	Troy Savage, Mike Smith, Janelle Bernosky
Lead Scientist's Initials	E18
GPS Surveyor	joe
Resource Series Number	52
Resource ID	S-E18-52
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	33.5
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

Stream Measurements

OHWM Width (ft)	4	
Average Water Width (ft)	3	
Bank to Bank (ft)	7	
Bankfull Width (ft)	8	

Left Deal.	0 to 6 inches
Left Bank	
Left Bank Height (feet)	2
Left Bank Slope	15 to 25% (9 to 14 deg) Steeply Sloping
Left Erosion Potential	High
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]	100
Left bank total	100
Right Bank	
Right Bank Height (feet)	3
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	High
Right Bank Substrate	Sand, Vegetated
Right Bank Riparian Buffer Condition	an an
Optimal (1.5) [Right]	0
Optimal (1.5) [Right] High suboptimal (1.2) [Right]	0
Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	0 0 0
Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	0 0 0 0
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
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
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 0
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
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 0
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 0
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 0 100
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 0 0 100 100
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 0 0 100 100 Moderate Strong
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 0 100 100 Moderate Strong Moderate
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 0 100 100 Moderate Strong Moderate Weak
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 0 100 100 100 Moderate Strong Moderate Weak Absent
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 0 0 100 100 100 Moderate Strong Moderate Weak Absent Weak
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 0 100 100 100 Moderate Strong Moderate Weak Absent Weak Weak Weak
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 0 100 100 100 Moderate Strong Moderate Weak Absent Weak Weak Weak Weak

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

Stream Biology

Stream Biology		
Fibrous roots in streambed	Absent	
Rooted upland plants in streambed	Absent	
Macrobenthos	Moderate	
Aquatic mullusks	Absent	
Fish	Moderate	
Crayfish	Moderate	
Amphibians	Weak	
Algae	Weak	
Wetland plants in streambed	OBL	
Stream Biology Total	12.5	
Regulatory Status	Corps Jurisdictional	
Notes	Recently clear cut buffer area, clearing has not heavily impacted stream yet but will likely degrade conditions over time. Caddisfly present in abundance. Wetland benches present. Riffle pool sequences present. Road crossing present	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

W



Across stream photo direction 2

Ε

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

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Created	2018-07-18 17:11:13 UTC by Troy Savage
Updated	2018-08-09 17:41:21 UTC by Beth Clements
Location	36.6032601, -79.570325
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/18
Date2	180718

Field Crew	Troy Savage, Mike Smith, Janelle Bernosky
Lead Scientist's Initials	E18
GPS Surveyor	joe
Resource Series Number	54
Resource ID	S-E18-54
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	34
Calculated Stream Type	Perennial
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

Stream Measurements

OHWM Width (ft)	5
Average Water Width (ft)	5
Bank to Bank (ft)	8
Bankfull Width (ft)	10
Probed Stream Depth	6 to 12 inches

Left Bank Height (feet)	3
Left Bank Fleight (feet)	
Left Erosion Potential	8 to 15% (5 to 9 deg) Moderately Sloping
	High
Left Bank Substrate	Cobble-Gravel, Sand, Vegetated
Left Bank Riparian Buffer Conditio	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]	100
Left bank total	100
Right Bank	
Right Bank Height (feet)	3
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	High
Right Bank Substrate	Cobble-Gravel, Sand, Vegetated
Right Bank Riparian Buffer Conditi	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]	100
Right bank total	100
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Moderate

Absent

Weak

Weak

Weak

Strong

No

14.5

Moderate

Active or relict floodplain

Recent alluvial deposits

Headcuts

Grade control

Natural valley

Depositional bars or benches

Second or greater order channel

Stream Geomorphology Total

Stream Hydrology

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

Stream Biology

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Upstream Stream Photo



Upstream photo direction N

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

W

Across Stream Photo 2



Across stream photo direction 2

Additional Stream Photos

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

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Created	2018-06-27 15:45:24 UTC by Jacob Fleckenstein
Updated	2018-08-13 15:53:45 UTC by Jacob Fleckenstein
Location	36.5985622, -79.5739818
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/27
Date2	180627

Resource Crew Info

Field Crew	Beth Clements, Jacob Fleckenstein, Eileen Nakahata
Lead Scientist's Initials	D18
Resource Series Number	34
Resource ID	S-D18-34
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	45
Calculated Stream Type	Perennial
Wildlife Observed	Salamanders
Observed Use	Natural

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	100
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	100

Stream Measurements

OHWM Width (ft)	6
Average Water Width (ft)	5
Bank to Bank (ft)	15
Bankfull Width (ft)	20
Probed Stream Depth	6 to 12 inches

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	2
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]	100
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	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Strong
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Strong
Recent alluvial deposits	Strong
Headcuts	Absent
Grade control	Strong
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	25.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Moderate
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	9.5

Stream Biology

0,5	
Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Moderate
Amphibians	Moderate
Algae	Weak
Stream Biology Total	10
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction NW

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

SW

Across Stream Photo 2



Across stream photo direction 2

NE

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

_		0	24	
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Created	2018-06-27 15:45:24 UTC by Jacob Fleckenstein
Updated	2018-08-13 15:53:45 UTC by Jacob Fleckenstein
Location	36.5985622, -79.5739818
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/27
Date2	180627

Resource Crew Info

Field Crew	Beth Clements, Jacob Fleckenstein, Eileen Nakahata
Lead Scientist's Initials	D18
Resource Series Number	34
Resource ID	S-D18-34
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	45
Calculated Stream Type	Perennial
Wildlife Observed	Salamanders
Observed Use	Natural

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	100
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	100

Stream Measurements

OHWM Width (ft)	6
Average Water Width (ft)	5
Bank to Bank (ft)	15
Bankfull Width (ft)	20
Probed Stream Depth	6 to 12 inches

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	2
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]	100
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	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Strong
Particle size of stream substrate	Strong
Active or relict floodplain	Moderate
Depositional bars or benches	Strong
Recent alluvial deposits	Strong
Headcuts	Absent
Grade control	Strong
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	25.5

Stream Hydrology

Presence of baseflow	Strong
Iron oxidizing bacteria	Moderate
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	9.5

Stream Biology

0,5	
Fibrous roots in streambed	Moderate
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Moderate
Amphibians	Moderate
Algae	Weak
Stream Biology Total	10
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction NW

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

SW

Across Stream Photo 2



Across stream photo direction 2

NE

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

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Created	2018-07-19 16:55:51 UTC by Alexi Weber
Updated	2018-08-15 18:06:08 UTC by Jen Feese
Location	36.5955303, -79.5766608
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/19
Date2	180719

Resource Crew Info

Field Crew	Jacob Fleckenstein, Sara Sanderlin, Jennifer Feese
Lead Scientist's Initials	D18
Resource Series Number	40
Resource ID	S-D18-40
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	34
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	Natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	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)	10	
Bank to Bank (ft)	10	
Average Water Width (ft)	6	
OHWM Width (ft)	8	

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Strong
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	21

Stream Hydrology

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

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Weak
Fish	Moderate
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	OBL
Stream Biology Total	10.5
Regulatory Status	Corps Jurisdictional
Notes	Newt and crayfish
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

W

Across Stream Photo 2



Across stream photo direction 2
Additional Stream Photos

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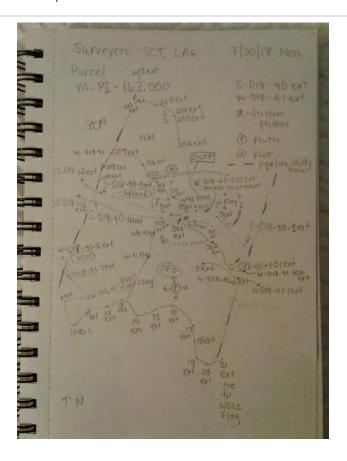


41-ext dn



41-ext up

Sketch of Stream





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

S-	D_1	ΙQ	1	n
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Created	2018-07-19 16:55:51 UTC by Alexi Weber
Updated	2018-08-15 18:06:08 UTC by Jen Feese
Location	36.5955303, -79.5766608
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/07/19
Date2	180719

Resource Crew Info

Field Crew	Jacob Fleckenstein, Sara Sanderlin, Jennifer Feese
Lead Scientist's Initials	D18
Resource Series Number	40
Resource ID	S-D18-40
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	34
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	Natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	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)	10	
Bank to Bank (ft)	10	
Average Water Width (ft)	6	
OHWM Width (ft)	8	

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Weak
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Strong
Depositional bars or benches	Strong
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	21

Stream Hydrology

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

Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Weak
Aquatic mullusks	Weak
Fish	Moderate
Crayfish	Weak
Amphibians	Weak
Algae	Absent
Wetland plants in streambed	OBL
Stream Biology Total	10.5
Regulatory Status	Corps Jurisdictional
Notes	Newt and crayfish
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

W

Across Stream Photo 2



Across stream photo direction 2
Additional Stream Photos

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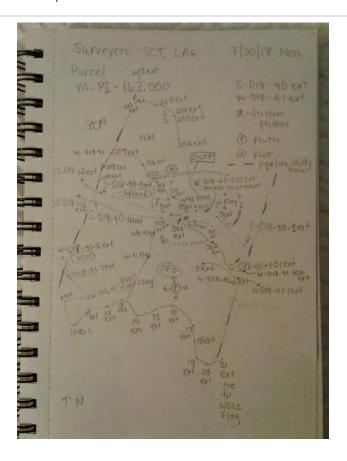


41-ext dn



41-ext up

Sketch of Stream





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

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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

Resource Crew Info

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

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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

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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	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NE

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

S

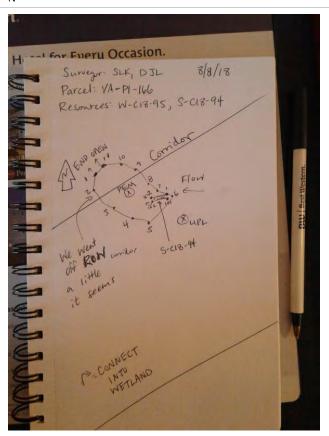
Across Stream Photo 2



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

WB-C18	-93
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Created	2018-08-08 14:10:19 UTC by Don Lockwood
Updated	2018-09-06 15:25:53 UTC by Joseph Roy
Location	36.5884117, -79.5849261
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/08/08
Date2	180808

Resource Crew Info

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
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 Optimal (1.5) [Right]	on 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	
	U .	
High poor (0.6) [Right]	0	
High poor (0.6) [Right] 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	0 0 1.5	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Stream Geomorphology Total	0 0 1.5	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Stream Geomorphology Total Stream Hydrology	0 0 1.5	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Stream Geomorphology Total Stream Hydrology Presence of baseflow	0 0 1.5 0 Absent	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Stream Geomorphology Total Stream Hydrology Presence of baseflow Iron oxidizing bacteria	0 0 1.5 0 Absent Absent	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Stream Geomorphology Total Stream Hydrology Presence of baseflow Iron oxidizing bacteria Sediment on plants or debris	0 0 1.5 0 Absent Absent Absent	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Stream Geomorphology Total Stream Hydrology Presence of baseflow Iron oxidizing bacteria Sediment on plants or debris Organic debris lines or piles	0 0 1.5 0 Absent Absent Absent Absent	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Stream Geomorphology Total Stream Hydrology Presence of baseflow Iron oxidizing bacteria Sediment on plants or debris Organic debris lines or piles Soil-based evidence of high water table?	0 0 1.5 0 Absent Absent Absent Absent Absent Yes	

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	

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Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Across Stream Photo 1



Across stream photo direction 1

W

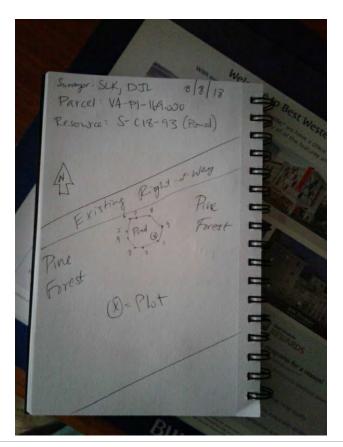
Across Stream Photo 2



Across stream photo direction 2

Ν

Sketch of Stream



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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

Lot Deal Head (Co.)	
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]	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 Dool	
Right Bank	
Right Bank Height (feet)	1
Right Bank Slope	8 to 15% (5 to 9 deg) Moderately Sloping
Right Erosion Potential	Low
Right Bank Substrate	Vegetated
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	0.75
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	0.35
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	1.1
Stream Geomorphology	
Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Moderate
Natural valley	Moderate
Second or greater order channel	Yes
Stream Geomorphology Total	13

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

Stream Biology

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

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

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Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

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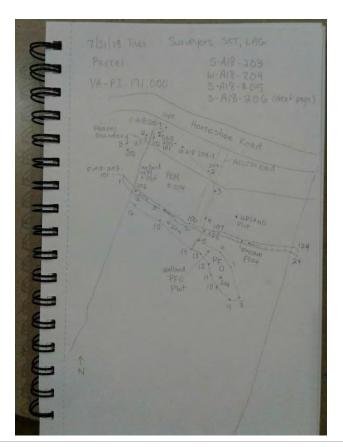
Additional Stream Photos



Upper end, UP



mid reach DN



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Created	2018-07-31 12:12:49 UTC by Laura Giese
Updated	2018-09-06 15:28:55 UTC by Joseph Roy
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
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	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

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

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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

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

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Downstream Stream Photo



Downstream photo direction

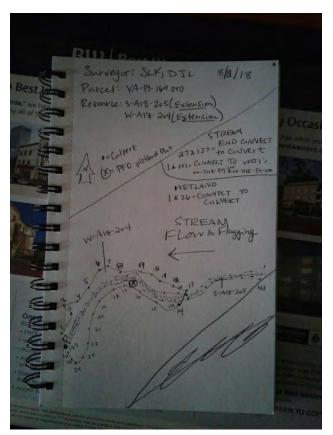
Across Stream Photo 1

W

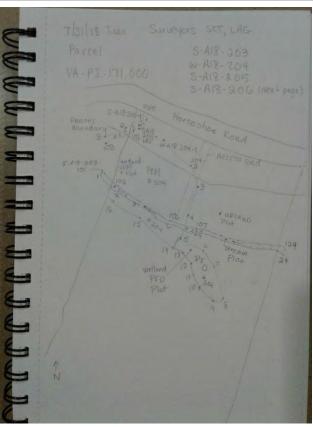


Across stream photo direction 1

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Sketch of Stream



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Created	2018-07-31 14:45:45 UTC by Laura Giese
Updated	2018-09-06 15:29:34 UTC by Joseph Roy
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
Passures ID = Passures Type. Scientist Initials	

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	N
Channel condition	Marginal
In stream habitat	Marginal

Channel Alteration

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

Stream Measurements

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

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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

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	
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Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

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Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

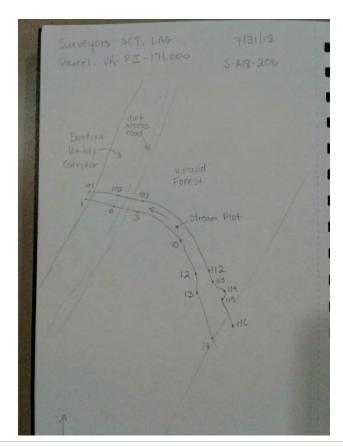
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Across stream photo direction 1

NE

Sketch of Stream



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Created	2018-06-27 13:39:54 UTC by Jenn Favela
Updated	2018-10-15 21:43:53 UTC by Jacob Fleckenstein
Location	36.5851958, -79.5984939
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/27
Date2	180627

8-38

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	7.5
Calculated Stream Type	Ephemeral
Observed Use	Drainage

Stream Conditions

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

Channel Alteration

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

Stream Measurements

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

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	Sand, Vegetated
Left Bank Riparian Buffer Conditi	ion
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]	30
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	70
Left bank total	100
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	Sand, Vegetated
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]	20
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	80
Right bank total	100
Stream Geomorphology	
Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Absent
In-channel structure	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Absent
Recent alluvial deposits	Absent
Headcuts	Absent
Grade control	Absent
Natural valley	Moderate
Second or greater order channel	No

2

Stream Geomorphology Total

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

Stream Biology

Fibrous roots in streambed	Strong
Rooted upland plants in streambed	Moderate
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Weak
Amphibians	Absent
Algae	Absent
Stream Biology Total	1.5
Regulatory Status	Corps Jurisdictional
Notes	In our opinion, stream is intermittent because of soil based evidence of a high water table.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

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Downstream Stream Photo



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

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Created	2018-06-27 14:12:49 UTC by Jenn Favela
Updated	2018-10-12 18:34:55 UTC by Beth Clements
Location	36.5847201, -79.598816
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/27
Date2	180627

Troy Savage, Mike Smith
E18
39
S-E18-39
No
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Resource ID = Resource Type - Scientist Initials - Resource Series Number

Stream Inventory

Stream / Waterbody Type	Perennial
Calculated Stream Score	36
Calculated Stream Type	Perennial
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	0	
Low Minor (1.3) Channel Alteration	90	
High Minor (1.1) Channel Alteration	0	
Low Moderate (0.9) Channel Alteration	0	
High Moderate (0.7) Channel Alteration	0	
Severe (0.5) Channel Alteration	10	
Channel Alteration Total	100	

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	

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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	Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	90	
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]	10	
Left bank total	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	90
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]	10
Right bank total	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
In-channel structure	Moderate
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	15.5

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

Stream Biology

- s s	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Strong
Amphibians	Moderate
Algae	Absent
Wetland plants in streambed	OBL
Stream Biology Total	12
Regulatory Status	Corps Jurisdictional
Character Description	

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

NW

Across Stream Photo 2



Across stream photo direction 2

SE

S-	F1	8-	40

Created	2018-06-27 11:32:21 EDT by Jenn Favela
Updated	2018-07-05 10:55:38 EDT by Sam Edmonds
Location	36.5839645, -79.5994966
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/27
Date2	180627

Field Crew	Troy Savage, Mike Smith
Lead Scientist's Initials	E18
Resource Series Number	40
Resource ID	S-E18-40
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	24
Calculated Stream Type	Intermittent
Wildlife Observed	Invertebrates
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	60
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	40
Channel Alteration Total	100

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)	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]	100	
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	100	

Right Bank

Right Bank Height (feet)	4.5
Right Bank Slope	> 35% (> 20 deg) Very Steep
Right Erosion Potential	High
Right Bank Substrate	Silt-Mud

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

Stream Geomorphology

Continuity of channel bed and bank	Strong
Sinuosity of channel along thalweg	Strong
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	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	11.5

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

Stream Biology

-	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Moderate
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	8
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction SW

Downstream Stream Photo



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

S-	F1	8-41	ı
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Created	2018-06-27 12:16:51 EDT by Jenn Favela
Updated	2018-07-05 10:44:44 EDT by Sam Edmonds
Location	36.5830688, -79.6002549
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/27
Date2	180627

Troy Savage, Mike Smith
E18
41
S-E18-41
No

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	NE
Channel condition	Marginal
In stream habitat	Poor

Channel Alteration

Negligible (1.5) Channel Alteration	40
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	60
Channel Alteration Total	100

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)	2
Left Bank Slope	> 35% (> 20 deg) Very Steep
Left Erosion Potential	Moderate
Left Bank Substrate	Silt-Mud, Artificial

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	50
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	50
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100

Right Bank

Right Bank Height (feet)	2	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Moderate	
Right Bank Substrate	Silt-Mud, Artificial	

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	50
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	50
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	100

Stream Geomorphology

Continuity of channel bed and bank	Weak
Sinuosity of channel along thalweg	Moderate
In-channel structure	Absent
Particle size of stream substrate	Absent
Active or relict floodplain	Absent
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Absent
Natural valley	Strong
Second or greater order channel	No
Stream Geomorphology Total	6.5

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	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	6
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

SE



Downstream photo direction

Across Stream Photo 1

NW



Across stream photo direction 1

Ε



Across stream photo direction 2

W

S-	F1	8-	4	n

Created	2018-06-27 16:23:03 EDT by Janelle Bernosky	
Updated	2018-07-05 10:19:44 EDT by Sam Edmonds	
Location	36.5737582, -79.5994846	
Status	Finalized & Approved	
Client	NextEra	
Project	MVP Southgate	
Date	18/06/27	
Date2	180627	

Field Crew	Sara Sanderlin, Jennifer Favela, Janelle Bernosky
Lead Scientist's Initials	F18
GPS ID	NA
Resource Series Number	40
Resource ID	S-F18-40
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

Stream Inventory

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

Stream Conditions

Water Flow Velocity	Fast (> 5 cfs)
Direction of Flow	S
Channel condition	Suboptimal
In stream habitat	Optimal

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

Stream Measurements

OHWM Width (ft)	15	
Average Water Width (ft)	12	
Bank to Bank (ft)	15	
Bankfull Width (ft)	17	

Probed Stream Depth	6 to 12 inches	
Left Bank		
Left Bank Height (feet)	7	
Left Bank Slope	25 to 35% (14 to 20 deg) Steep	
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]	100	
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	100	
Right Bank		
Right Bank Height (feet)	6	
Right Bank Slope	25 to 35% (14 to 20 deg) Steep	
Right Erosion Potential	Moderate	
Right Bank Substrate	Cobble-Gravel, Sand, Silt-Mud, Vegetated	
Dight Doub Divoring Duffer Condit		
Right Bank Riparian Buffer Condit Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	100	
Low suboptimal (1.1) [Right]	0	
High marginal (0.85) [Right]	0	
Low marginal (0.75) [Right]	0	
migri poor (U.b) [Kignt]	0	
High poor (0.6) [Right] Low poor (0.5) [Right]	0	
Low poor (0.5) [Right] Right bank total		
Low poor (0.5) [Right] Right bank total	0	
Low poor (0.5) [Right] Right bank total Stream Geomorphology	100	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Continuity of channel bed and bank	0 100 Strong	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg	100	
Low poor (0.5) [Right] Right bank total Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure	0 100 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	0 100 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	0 100 Strong Moderate 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	0 100 Strong Moderate Moderate 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	0 100 Strong Moderate Moderate Moderate Weak	
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	0 100 Strong Moderate Moderate Moderate Weak 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	0 100 Strong Moderate Moderate Weak 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 Recent alluvial deposits Headcuts	0 100 Strong Moderate Moderate Weak Strong Moderate Weak Strong Moderate Moderate 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 Recent alluvial deposits Headcuts Grade control	0 100 Strong Moderate Moderate Weak Strong Moderate Weak Strong Moderate Woderate Weak Strong	

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

Stream Biology

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

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Ε



Across stream photo direction 2

W

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Created	2018-06-28 10:37:23 EDT by Jenn Favela	
Updated	2018-07-03 14:43:22 EDT by Sam Edmonds	
Location	36.5740329, -79.5993629	
Status	Finalized & Approved	
Client	NextEra	
Project	MVP Southgate	
Date	18/06/28	
Date2	180628	

Sara Sanderlin, Jennifer Favela, Janelle Bernosky
F18
42
S-F18-42
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
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

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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	Rubble, Sand, Vegetated

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	100
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	100

Right Bank

Right Bank Height (feet)	1.5	
Right Bank Slope	> 35% (> 20 deg) Very Steep	
Right Erosion Potential	Moderate	
Right Bank Substrate	Rubble, Sand, Vegetated	

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0
High suboptimal (1.2) [Right]	100
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	100

Stream Geomorphology

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

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

Stream Biology

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

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

SW



Across stream photo direction 1

SE



Across stream photo direction 2

NW

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Created	2018-06-27 15:03:34 EDT by Janelle Bernosky
Updated	2018-07-03 14:40:20 EDT by Sam Edmonds
Location	36.5718768, -79.600404
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/27
Date2	180627

Field Crew	Sara Sanderlin, Jennifer Favela, Janelle Bernosky
Lead Scientist's Initials	F18
Resource Series Number	39
Resource ID	S-F18-39
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

Stream Inventory

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

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE
Channel condition	Suboptimal
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)	0
Average Water Width (ft)	0
Bank to Bank (ft)	2
Bankfull Width (ft)	3
Probed Stream Depth	0 to 6 inches

Left Bank

deg) Moderately Sloping
Sand, Vegetated
deg) Moderately Sloping
d

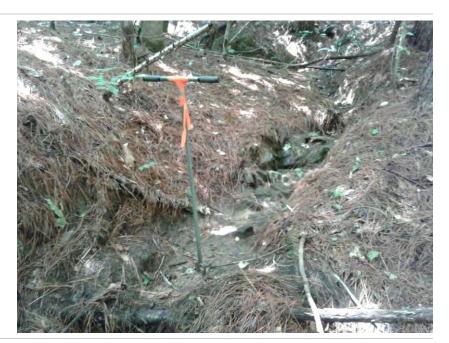
Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Weak
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	5

Stream Biology

Weak
Absent
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

Ε



Across stream photo direction 2

W

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Created	2018-06-27 10:53:20 EDT by Janelle Bernosky
Updated	2018-07-03 14:34:04 EDT by Sam Edmonds
Location	36.5663, -79.6006582
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/27
Date2	180627

Sara Sanderlin, Jennifer Favela, Janelle Bernosky	
E18	
38	
S-F18-38	
Yes	
S-F18-38	

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	20.5
Calculated Stream Type	Intermittent
Wildlife Observed	Salamanders
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

Stream Measurements

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

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, Silt-Mud, Vegetated
Ecre Barin Sabstrate	cobble Gravel, Sile Illian, Vegetated
Left Bank Riparian Buffer Conditi	on
Optimal (1.5) [Left]	95
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	0
Low marginal (0.75) [Left]	5
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100
Right Bank	
Right Bank Height (feet)	4
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Low
Right Bank Substrate	Cobble-Gravel, Silt-Mud, Vegetated
Right Bank Riparian Buffer Condi	tion
Optimal (1.5) [Right]	95
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	0
Low marginal (0.75) [Right]	5
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	100
Stream Geomorphology	
Continuity of channel bed and bank	Moderate
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	Absent
Headcuts	
reddeats	Moderate
Grade control	Moderate Weak
Grade control	Weak

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	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	4.5
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

Ν



Downstream photo direction

Across Stream Photo 1

S



Across stream photo direction 1

Ε



Across stream photo direction 2

W

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Created	2018-06-26 19:02:32 UTC by Jenn Favela
Updated	2018-10-15 20:13:40 UTC by Jacob Fleckenstein
Location	36.5671881, -79.6060106
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/26
Date2	180626

Field Crew	Eileen Nakahata, Jennifer Favela
Lead Scientist's Initials	F18
Resource Series Number	35
Resource ID	S-F18-35
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	23
Calculated Stream Type	Intermittent
Observed Use	natural

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	SE
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)	5	
Bank to Bank (ft)	5	
Average Water Width (ft)	4	
OHWM Width (ft)	1	

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Left Bank Height (feet)	3.5
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]	90
High suboptimal (1.2) [Left]	0
Low suboptimal (1.1) [Left]	0
High marginal (0.85) [Left]	10
Low marginal (0.75) [Left]	0
High poor (0.6) [Left]	0
Low poor (0.5) [Left]	0
Left bank total	100

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	90
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	10
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	100

Stream Geomorphology

Strong
Moderate
Weak
Strong
Weak
Weak
Absent
Moderate
Weak
Moderate
No
14.5

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

24. 24 2.2.26)	
Fibrous roots in streambed	Absent
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Moderate
Algae	Absent
Stream Biology Total	7
Regulatory Status	Corps Jurisdictional
Notes	No hydric soils present.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction

NW



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

W



Across stream photo direction 2

Ε

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Created	2018-06-26 17:37:15 UTC by Jen Feese
Updated	2018-08-17 23:14:54 UTC by Alexi Weber
Location	36.5656691, -79.6071598
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/26
Date2	180626

Field Crew	Troy Savage, Jacob Fleckenstein, Eileen Nakahata, Janelle Bernosky
Lead Scientist's Initials	E18
GPS Surveyor	joe
Resource Series Number	34
Resource ID	S-E18-34
Do you need to override the resource id?	No
Resource ID = Resource Type - Scientist Initials	- Resource Series Number

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	19.5
Calculated Stream Type	Intermittent
Observed Use	Natural

Stream Conditions

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

Channel Alteration

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

Stream Measurements

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

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Left Bank Height (feet)	1	
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]	0	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	100	
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	100	

Right Bank

Right Bank Height (feet)	2
Right Bank Slope	25 to 35% (14 to 20 deg) Steep
Right Erosion Potential	Moderate
Right Bank Substrate	

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	0	
Low suboptimal (1.1) [Right]	100	
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	100	

Stream Geomorphology

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

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

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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
Regulatory Status	Corps Jurisdictional
Notes	Tree canopy cover not entire within riparian buffer.

Stream Overview Report Photos

Upstream Stream Photo



Upstream photo direction



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

Ν



Across stream photo direction 2

S

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Created	2018-10-15 21:55:32 UTC by Jen Feese
Updated	2018-10-15 21:55:32 UTC by Jen Feese
Location	36.565663, -79.607158
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/10/15
Date2	181015

Field Crew Troy Savage, Jacob Fleckenstein, Eileen Nakahata	
Lead Scientist's Initials	E18
Resource Series Number	35
Resource ID	S-E18-35
Do you need to override the resource id?	No

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

Stream Inventory

Stream / Waterbody Type	Intermittent
Calculated Stream Score	20
Calculated Stream Type	Intermittent
Observed Use	Natural

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	N
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)	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	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate Cobble-Gravel	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

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	Cobble-Gravel

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100
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	100

Stream Geomorphology

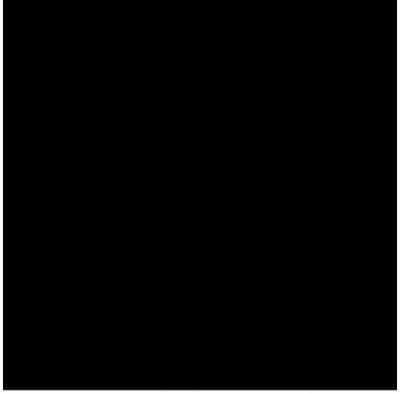
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Weak
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
Depositional bars or benches	Weak
Recent alluvial deposits	Weak
Headcuts	Absent
Grade control	Weak
Natural valley	Weak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

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

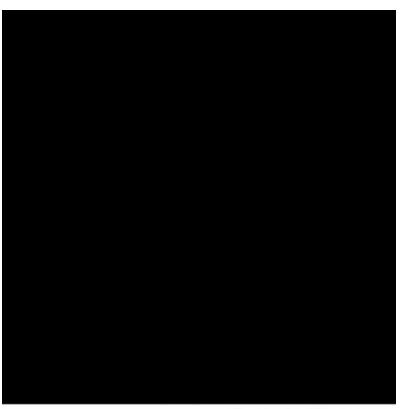
Stream Biology

Fibrous roots in streambed	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	5
Regulatory Status	Corps Jurisdictional
Notes	Electronic field data lost, but reentered with handwritten field notes.
Stream Overview Report Photos	

Upstream Stream Photo



ComputerHope.com

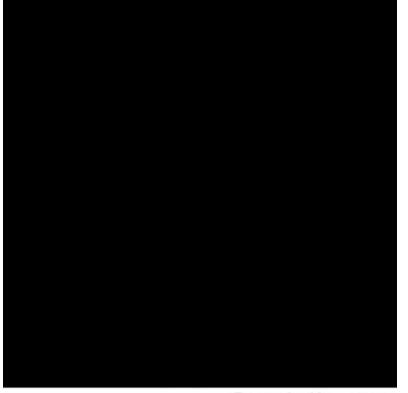


ComputerHope.com

Downstream photo direction

Ν

Across Stream Photo 1



ComputerHope.com

Across Stream Photo 2



ComputerHope.com

Across stream photo direction 2

Ε

S-	F1	8-	43

Created	2018-06-28 13:14:03 EDT by Janelle Bernosky
Updated	2018-07-05 10:30:20 EDT by Sam Edmonds
Location	36.5764893, -79.597265
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/28
Date2	180628

Sara Sanderlin, Jennifer Favela, Janelle Bernosky
F18
43
S-F18-43
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	natural

Stream Conditions

Water Flow Velocity	Dry or Minimal
Direction of Flow	S
Channel condition	Suboptimal
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	100
Low Moderate (0.9) Channel Alteration	0
High Moderate (0.7) Channel Alteration	0
Severe (0.5) Channel Alteration	0
Channel Alteration Total	100

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	

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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	Cobble-Gravel, Sand

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	90	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	10	
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	100	

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	90
High suboptimal (1.2) [Right]	0
Low suboptimal (1.1) [Right]	0
High marginal (0.85) [Right]	10
Low marginal (0.75) [Right]	0
High poor (0.6) [Right]	0
Low poor (0.5) [Right]	0
Right bank total	100

Stream Geomorphology

1 03	
Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Moderate
In-channel structure	Weak
Particle size of stream substrate	Weak
Active or relict floodplain	Weak
Depositional bars or benches	Moderate
Recent alluvial deposits	Moderate
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	13.5

Stream Hydrology

Presence of baseflow	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Moderate
Sediment on plants or debris	Moderate
Organic debris lines or piles	Weak
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	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
Regulatory Status	Corps Jurisdictional
Ctroom Oversion Depart Photos	

Stream Overview Report Photos

Upstream Stream Photo



Downstream Stream Photo



Across Stream Photo 1



Across stream photo direction 1

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Across Stream Photo 2



Across stream photo direction 2

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Created	2018-06-26 14:25:26 UTC by Janelle Bernosky
Updated	2018-08-17 23:14:47 UTC by Alexi Weber
Location	36.5616881, -79.602589
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/26
Date2	180626

Field Crew	Troy Savage, Sara Sanderlin
Lead Scientist's Initials	E18
GPS Surveyor	joe
Resource Series Number	32
Resource ID	S-E18-32
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
Observed Use	natural

Stream Conditions

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

Channel Alteration

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

Stream Measurements

OHWM Width (ft)	7
Average Water Width (ft)	4
Bank to Bank (ft)	10
Bankfull Width (ft)	12
Probed Stream Depth	0 to 6 inches

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

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	0	
High suboptimal (1.2) [Left]	0	
Low suboptimal (1.1) [Left]	0	
High marginal (0.85) [Left]	0	
Low marginal (0.75) [Left]	100	
High poor (0.6) [Left]	0	
Low poor (0.5) [Left]	0	
Left bank total	100	

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	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]	100	
Low poor (0.5) [Right]	0	
Right bank total	100	

Stream Geomorphology

Continuity of channel bed and bank	Moderate
Sinuosity of channel along thalweg	Weak
In-channel structure	Absent
Particle size of stream substrate	Moderate
Active or relict floodplain	Weak
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	Absent
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	Moderate
Soil-based evidence of high water table?	Yes
Stream Hydrology Total	5.5

Stream Biology

Moderate
Absent
FACW
4.75
Corps Jurisdictional
Culvert and road crossing present

Upstream Stream Photo



Upstream photo direction NW

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

W

Across Stream Photo 2



Across stream photo direction 2 Additional Stream Photos

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Created	2018-06-26 16:20:41 UTC by Jenn Favela
Updated	2018-08-09 17:19:33 UTC by Beth Clements
Location	36.5607811, -79.612762
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/26
Date2	180626

Eileen Nakahata, Jennifer Favela
F18
34
S-F18-34
No

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

Stream Inventory

Stream / Waterbody Type	Ephemeral
Calculated Stream Score	17
Calculated Stream Type	Ephemeral
Observed Use	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	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)	2	
Probed Stream Depth	0 to 6 inches	

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Left Bank Height (feet)	2.5
Left Bank Slope	0 to 8% (0 to 5 deg) Nearly Level to Gently Sloping
Left Erosion Potential	Low
Left Bank Substrate	Silt-Mud

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100	
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	100	

Stream Geomorphology

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

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	Weak
Rooted upland plants in streambed	Weak
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Absent
Algae	Absent
Stream Biology Total	4
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction

NW

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

W

Across Stream Photo 2



Across stream photo direction 2

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2018-06-26 13:47:21 UTC by Alexi Weber
2018-09-05 11:46:39 UTC by Phil Jacques
36.5571118, -79.616543
Finalized & Approved
NextEra
MVP Southgate
18/06/26
-

Troy Savage, Sara Sanderlin
E18
32
S-F18-32

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	natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100	
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	100	

Stream Measurements

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

Left Bank

Left Bank Height (feet)	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 Conditio	on.
Optimal (1.5) [Left]	0
High suboptimal (1.2) [Left]	100
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	100
Left ballk total	100
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 Right Bank Riparian Buffer Conditi	
Right Bank Riparian Buffer Conditi Optimal (1.5) [Right] High suboptimal (1.2) [Right]	ion 0 100
Right Bank Riparian Buffer Conditi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right]	ion 0 100 0
Right Bank Riparian Buffer Conditi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	ion 0 100 0 0
Right Bank Riparian Buffer Conditi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right] Low marginal (0.75) [Right]	ion 0 100 0
Right Bank Riparian Buffer Conditi Optimal (1.5) [Right] High suboptimal (1.2) [Right] Low suboptimal (1.1) [Right] High marginal (0.85) [Right]	ion 0 100 0 0
Right Bank Riparian Buffer Conditi 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]	ion 0 100 0 0 0 0 0
Right Bank Riparian Buffer Conditi 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]	ion 0 100 0 0 0 0 0 0 0
Right Bank Riparian Buffer Conditi 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]	ion 0 100 0 0 0 0 0 0 0 0 0 0
Right Bank Riparian Buffer Conditi 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]	ion 0 100 0 0 0 0 0 0 0 0 0 0
Right Bank Riparian Buffer Conditi 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	ion 0 100 0 0 0 0 0 0 0 0 100 100 100
Right Bank Riparian Buffer Conditi 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	ion 0 100 0 0 0 0 0 0 100 100
Right Bank Riparian Buffer Conditi 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	ion 0 100 0 0 0 0 0 0 0 0 0 100 0 Moderate Weak
Right Bank Riparian Buffer Conditi 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	ion 0 100 0 0 0 0 0 0 0 0 100 Moderate Weak Moderate
Right Bank Riparian Buffer Conditi 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	ion 0 100 0 0 0 0 0 0 0 0 0 0 100 Moderate Weak Moderate Moderate Moderate Moderate
Right Bank Riparian Buffer Conditi 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	ion 0 100 0 0 0 0 0 0 0 0 0 0 100 Moderate Weak Moderate Moderate Moderate Absent
Right Bank Riparian Buffer Conditi 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	O
Right Bank Riparian Buffer Conditi 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	O
Right Bank Riparian Buffer Conditi 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 Conditi 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	O

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	Weak
Rooted upland plants in streambed	Absent
Macrobenthos	Absent
Aquatic mullusks	Absent
Fish	Absent
Crayfish	Absent
Amphibians	Weak
Algae	Absent
Stream Biology Total	5.5
Regulatory Status	Corps Jurisdictional
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

Across Stream Photo 2



Across stream photo direction 2

W

S-	F1	8-	.3	3
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Created	2018-06-26 14:46:20 UTC by Jenn Favela
Updated	2018-08-09 18:02:49 UTC by Don Lockwood
Location	36.5562772, -79.6174493
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/26
Date2	180626

Field Crew	Eileen Nakahata, Jennifer Favela
Lead Scientist's Initials	F18
Resource Series Number	33
Resource ID	S-F18-33
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	32.5
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	Natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	5
Bankfull Width (ft)	6
Probed Stream Depth	6 to 12 inches

Left Bank Height (feet)	3.5	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	Low	
Left Bank Substrate	Silt-Mud	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100	
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	100	

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	Weak
Depositional bars or benches	Strong
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	16.5

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	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	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Stream Biology Total	10
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction NW

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

W

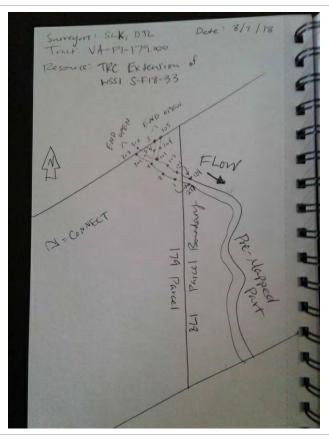
Across Stream Photo 2



Across stream photo direction 2

Ε

Sketch of Stream



S-	F1	8-	.3	3
		0		_

Created	2018-06-26 14:46:20 UTC by Jenn Favela
Updated	2018-08-09 18:02:49 UTC by Don Lockwood
Location	36.5562772, -79.6174493
Status	Finalized & Approved
Client	NextEra
Project	MVP Southgate
Date	18/06/26
Date2	180626

Field Crew	Eileen Nakahata, Jennifer Favela
Lead Scientist's Initials	F18
Resource Series Number	33
Resource ID	S-F18-33
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	32.5
Calculated Stream Type	Perennial
Wildlife Observed	Fish
Observed Use	Natural

Stream Conditions

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

Channel Alteration

Negligible (1.5) Channel Alteration	100
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	100

Stream Measurements

OHWM Width (ft)	3
Average Water Width (ft)	3
Bank to Bank (ft)	5
Bankfull Width (ft)	6
Probed Stream Depth	6 to 12 inches

Left Bank Height (feet)	3.5	
Left Bank Slope	> 35% (> 20 deg) Very Steep	
Left Erosion Potential	Low	
Left Bank Substrate	Silt-Mud	

Left Bank Riparian Buffer Condition

Optimal (1.5) [Left]	100	
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	100	

Right Bank

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

Right Bank Riparian Buffer Condition

Optimal (1.5) [Right]	100	
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	100	

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	Weak
Depositional bars or benches	Strong
Recent alluvial deposits	Weak
Headcuts	Weak
Grade control	Weak
Natural valley	Moderate
Second or greater order channel	No
Stream Geomorphology Total	16.5

Stream Hydrology

Presence of baseflow	Weak
Iron oxidizing bacteria	Absent
Leaf litter	Absent
Sediment on plants or debris	Absent
Organic debris lines or piles	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	Absent
Macrobenthos	Weak
Aquatic mullusks	Absent
Fish	Strong
Crayfish	Weak
Amphibians	Moderate
Algae	Absent
Stream Biology Total	10
Regulatory Status	Corps Jurisdictional
Stream Overview Report Photos	

Upstream Stream Photo



Upstream photo direction NW

Downstream Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

W

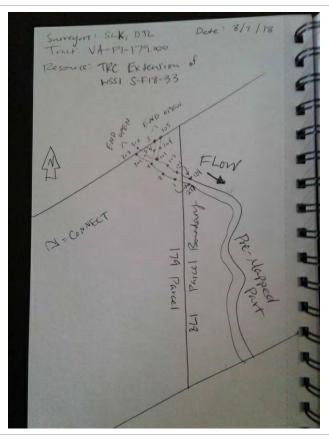
Across Stream Photo 2



Across stream photo direction 2

Ε

Sketch of Stream



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

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	

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

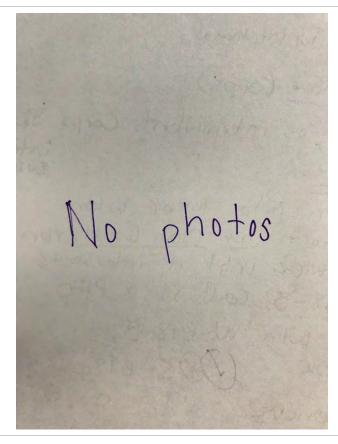
Stream Hydrology

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

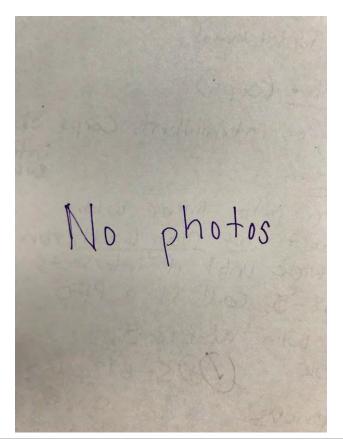
Stream Biology

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	

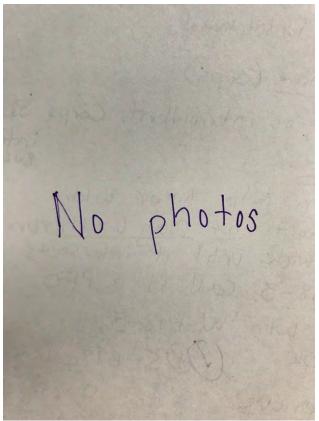
Upstream Stream Photo



Downstream Stream Photo



Across Stream Photo 1



C	C1	O	റ
D -	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
Dight Dank	
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 substrate	Cobble-Graver, Sariu
Right Bank Riparian Buffer Condition	
Optimal (1.5) [Right]	1.2
	1.2
High suboptimal (1.2) [Right]	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]	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 1.35 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	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

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

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 Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

S

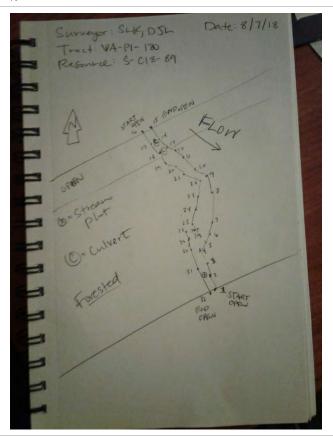
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

Ν



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

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

Resource Crew Info

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	
Ect Built Substitute	Sulla, Vegetated	
Left Bank Riparian Buffer Conditi	on	
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	1.10999999999999	
Dialet David		
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 Condi	tion	
Optimal (1.5) [Right]	0	
High suboptimal (1.2) [Right]	0.96	
Low suboptimal (1.1) [Right]	0	
High marginal (0.85) [Right]		
	0	
Low marginal (0.75) [Right]	0 0.15	
High poor (0.6) [Right] Low poor (0.5) [Right]	0.15	
High poor (0.6) [Right]	0.15 0	
High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total	0.15 0 0	
High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total Stream Geomorphology	0.15 0 0 1.109999999999999999999999999999999	
High poor (0.6) [Right] Low poor (0.5) [Right] Right bank total Stream Geomorphology Continuity of channel bed and bank	0.15 0 0 1.1099999999999999999999999999999999999	
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	0.15 0 0 1.109999999999999999999999999999999	
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	0.15 0 0 1.109999999999999999 Strong Moderate Moderate	
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	0.15 0 1.10999999999999999999999999999999999	
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	0.15 0 1.10999999999999999999999999999999999	
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	0.15 0 1.10999999999999999999999999999999999	
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	0.15 0 1.10999999999999999999999999999999999	
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	0.15 0 1.10999999999999999999999999999999999	
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	0.15 0 1.10999999999999999999999999999999999	
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	0.15 0 1.10999999999999999999999999999999999	

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 Stream Photo



Downstream photo direction

Across Stream Photo 1

SE



Across stream photo direction 1

Ε

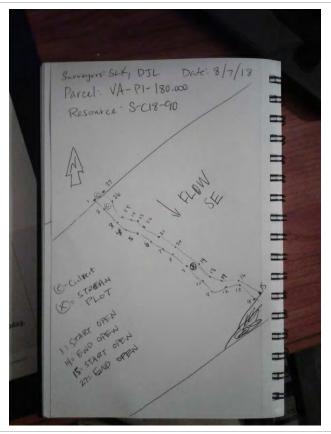
Across Stream Photo 2



Across stream photo direction 2

W

Sketch of Stream



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

C	C1	Q_{-}	92
D -	C I	Ŏ-	92

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

Resource Crew Info

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	on	
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 Erosion Potential Right Bank Substrate Right Bank Riparian Buffer Condi Optimal (1.5) [Right]	Moderate Mud or muck, Vegetated tion 0	
Right Erosion Potential Right Bank Substrate Right Bank Riparian Buffer Condi Optimal (1.5) [Right] High suboptimal (1.2) [Right]	Moderate Mud or muck, Vegetated tion 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]	Moderate Mud or muck, Vegetated tion 0 0 0 0.88	
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 Mud or muck, Vegetated tion 0 0 0.88 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 Mud or muck, Vegetated tion 0 0 0 0.88 0 0.15	
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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15	
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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15 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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15	
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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15 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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15 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] High poor (0.5) [Right] Stream Geomorphology	Moderate Mud or muck, Vegetated tion 0 0 0.88 0 0.15 0 0 1.03	
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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15 0 0 1.03 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 Mud or muck, Vegetated tion 0 0 0 0.88 0 0.15 0 0 1.03 Moderate 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] Low poor (0.5) [Right] Stream Geomorphology Continuity of channel bed and bank Sinuosity of channel along thalweg In-channel structure	Moderate Mud or muck, Vegetated tion 0 0 0.88 0 0.15 0 0 1.03 Moderate 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 Particle size of stream substrate	Moderate Mud or muck, Vegetated tion 0 0 0.88 0 0.15 0 0 1.03 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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15 0 0 1.03 Moderate Weak 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] 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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15 0 0.15 0 1.03 Moderate Moderate Weak Weak 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] 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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15 0 0 1.03 Moderate Moderate Weak 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] 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 Mud or muck, Vegetated tion 0 0 0.88 0 0.15 0 0 1.03 Moderate Moderate Weak Weak Weak Weak Moderate Absent	

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 Stream Photo



Downstream photo direction

Across Stream Photo 1

Ε



Across stream photo direction 1

Ν

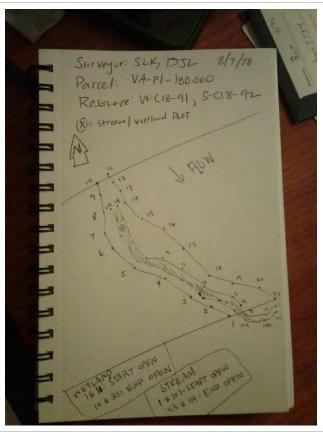
Across Stream Photo 2



Across stream photo direction 2

Sketch of Stream

S



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