

MOSAIC

WINGATE PERMITTING

Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>107F</u>	ECT Reach: <u>107F</u>	Photo No:	Width See Note
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input type="checkbox"/> 511 <input checked="" type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input type="checkbox"/> None <input checked="" type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input checked="" type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input checked="" type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input checked="" type="checkbox"/> Disturbed		
Left Bank Land Cover: <input checked="" type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input checked="" type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input checked="" type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m R Bank: <input checked="" type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m				Overbank Vegetation: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input checked="" type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input checked="" type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			Large Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			Leaf Litter: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High			
Notes:						
This is a small length of the canal running through eastern pasture between the 511 reaches: 107G and 107E, where the three join. Bankful indicators and uniform channel characteristics not present.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 107F

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
4				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
16	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Primary Score:	36	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	9	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	9	10 9	8 7 6	5 4
Left Bank:	9			3 2 1
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	1	10 9	8 7 6	5 4
Left Bank:	1			3 2 1
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	1	10 9	8 7 6	5 4
Left Bank:	1			3 2 1
Secondary Score:	31	10 9	8 7 6	5 4

67 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC

WINGATE PERMITTING

Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>107D</u>	ECT Reach: <u>107D</u>	Photo 06 No:	Width See Note
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input type="checkbox"/> 511 <input checked="" type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input checked="" type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input type="checkbox"/> Normal <input type="checkbox"/> High <input checked="" type="checkbox"/> Very High				
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe		Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf				
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input checked="" type="checkbox"/> Plane Bed <input type="checkbox"/> R-P		Stability: <input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
No banks; Reach between pasture and natural channel in woods to the west - being used by cattle for shade; What's left of channel is obscure. Also bypassed by 514 channel to east.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 107D

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>1</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>1</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>1</u> Primary Score: <u>4</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>6</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability: Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>9</u> Left Bank: <u>9</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>1</u> Left Bank: <u>1</u> Secondary Score: <u>46</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

50 TOTAL SCORE

Date:	Analyst:	Signature:
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MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/5/2009	Crew: MJB	BCI Reach ID: <u>100A</u>	ECT Reach: <u>100A</u>	Photo 55/56 No:	Width 20'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input type="checkbox"/> None <input type="checkbox"/> Stagnant <input checked="" type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input checked="" type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High				Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input type="checkbox"/> 0-25% Bkf <input checked="" type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High			
Notes:						
Although less incised than 100B, erosional and somewhat incised - widening in places and migrating downstream half (Dus Rd. crossing) more open in corridor with more cattle.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/5/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 100A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 15	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: 20	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: 3	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering ----- Primary Score: 54	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 20	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: 6 Left Bank: 6	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 10	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: 8 Left Bank: 8 ----- Secondary Score: 68	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

122 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/5/2009	Crew: MJB	BCI Reach ID: <u>100B</u>	ECT Reach: <u>100B</u>	Photo 52/53/54 No:	Width 15'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <u>See</u> <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input type="checkbox"/> None <input checked="" type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input checked="" type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input checked="" type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input checked="" type="checkbox"/> Severe		Bank Heights: <input type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input checked="" type="checkbox"/> >50% Bkf				
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant		Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				
Undercut Banks: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
Water present and continuous but not flowing - incision of channel appears to lake caused contact with ground water. Channel deeply incised - dredged or unstable?						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/5/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 100B

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 15	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: 20	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: 1	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering ----- Primary Score: 53	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 16	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: 7 Left Bank: 7	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 8	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: 10 Left Bank: 10 ----- Secondary Score: 68	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

121 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/5/2009	Crew: MJB	BCI Reach ID: <u>100C</u>	ECT Reach: <u>100C</u>	Photo 46/47 No:	Width See notes
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
				<input type="checkbox"/> 511 <input checked="" type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny		
				<input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75%		
<input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				<input type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe				Bank Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe		
<input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				<input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie		
<input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				<input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input checked="" type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High		
R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				<input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars		
<input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion				<input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour		
<input checked="" type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				<input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input checked="" type="checkbox"/> Severe				Bank Heights: <input type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input checked="" type="checkbox"/> >50% Bkf		
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High		
Notes:						
Spoils and historical channel observed; can't locate reliable bankful indicators - most likely a "G" type stream; some standing water in isolated pools; Could historical channel just be abandoned? Check historical aerials for alteration.						
Photos 50/51 of historical channel						
Photos 48/49 of historical channel						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/5/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 100C

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
15				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
20	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
16	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Primary Score:	52			
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	14	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	4	10 9	8 7 6	5 4
Left Bank:	4			3 2 1
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10	10 9	8 7 6	5 4
Left Bank:	8			3 2 1
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Secondary Score:	60			

112 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/5/2009	Crew: MJB	BCI Reach ID: <u>100D</u>	ECT Reach: <u>100D</u>	Photo 44/45 No:	Width 10'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input checked="" type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input type="checkbox"/> 0-25% Bkf <input checked="" type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High			
Notes: Upstream of ditched tributary entering from north between 100C and 100B; Not as incised as 100C and 100B.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/5/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 100D

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
15				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
Substrate Availability:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
18				
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
Water Velocity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
1				
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
Habitat Smothering:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
19				
Primary Score:	53			
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
17				
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	10 9	8 7 6	5 4	3 2 1
Left Bank:	9			
9				
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10 9	8 7 6	5 4	3 2 1
Left Bank:	10			
10				
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10 9	8 7 6	5 4	3 2 1
Left Bank:	9 7			
9				
7				
Secondary Score:	71			

124 TOTAL SCORE

Date:	Analyst:	Signature:
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MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/12/2009	Crew: MJB	BCI Reach ID: <u>101A</u>	ECT Reach: <u>101A</u>	Photo 539 No:	Width 3'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input type="checkbox"/> None <input checked="" type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input checked="" type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>65</u> °F		
Flow Conditions: <input type="checkbox"/> None <input type="checkbox"/> Stagnant <input checked="" type="checkbox"/> Baseflow <input checked="" type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
Starts as a defined channel flowing out of a seepage swamp located west of the property boundary. Enters a forested wetland within approx. 100' and then flows over forested floodplain floor - splits into multiple channels near fence (n-s) property boundary. Would call this a flow-through wetland ended stream sand stopped and prod. Bed material was jeep minuk.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/12/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 101A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>15</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>20</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>5</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>7</u> Primary Score: <u>47</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>16</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability: Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>10</u> Left Bank: <u>10</u> Secondary Score: <u>76</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

123 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>103A</u>	ECT Reach: <u>103A</u>	Photo 535/536 No:	Width 6'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input type="checkbox"/> None <input type="checkbox"/> Trace <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input checked="" type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>75</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input checked="" type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input checked="" type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input type="checkbox"/> 0-25% Bkf <input checked="" type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High		
Notes:						
Upstream improved drainage and downstream incision wake caused some instability and channel erosion.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 103A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>15</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability: <u>20</u>	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering: <u>17</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
Primary Score: <u>53</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>19</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability: Right Bank: <u>9</u> Left Bank: <u>9</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>8</u> Left Bank: <u>8</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Secondary Score: <u>73</u>	10 9	8 7 6	5 4	3 2 1

126 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>103B</u>	ECT Reach: <u>103B</u>	Photo 533/534 No:	Width 5'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input checked="" type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>75</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input checked="" type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input checked="" type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input checked="" type="checkbox"/> Disturbed		
Left Bank Land Cover: <input checked="" type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input checked="" type="checkbox"/> Palmetto Prairie <input checked="" type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input checked="" type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input checked="" type="checkbox"/> Palmetto Prairie <input checked="" type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input checked="" type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m R Bank: <input checked="" type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input checked="" type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input type="checkbox"/> 0-25% Bkf <input checked="" type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes: Veg. clearing for pastures.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 103B

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity: <u>7</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability: <u>10</u>	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
Habitat Smothering: <u>7</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
Primary Score: <u>25</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization: <u>8</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank: <u>8</u> Left Bank: <u>8</u>	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank: <u>2</u> Left Bank: <u>2</u>	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank: <u>5</u> Left Bank: <u>5</u>	10 9	8 7 6	5 4	3 2 1
Secondary Score: <u>38</u>				

63 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>103C</u>	ECT Reach: <u>103C</u>	Photo 537/538 No:	Width 6'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input type="checkbox"/> None <input type="checkbox"/> Trace <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input checked="" type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>75</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input checked="" type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High				Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High		
Notes: Veg. alteration - clearing and cattle grazing.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 103C

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
15				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
20	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
20	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Primary Score:	56			
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
20				
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	10	8 7 6	5 4	3 2 1
Left Bank:	10			
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10	8 7 6	5 4	3 2 1
Left Bank:	10			
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	4	8 7 6	5 4	3 2 1
Left Bank:	4			
Secondary Score:	68			

124 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC
WINGATE PERMITTING
Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>104A</u>	ECT Reach: <u>104A</u>	Photo 542/543 No:	Width 6'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input type="checkbox"/> None <input type="checkbox"/> Trace <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input checked="" type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input type="checkbox"/> 0-25% Bkf <input checked="" type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High			
Notes:						

DEP-SOP-001/01: Form FFD 9000-5
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 104A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (parially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats preseent. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
10				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
20	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Primary Score:	46			
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	18	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	10	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	With of vegeation >12 to 18 m.	With of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	5	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	With of vegeation >12 to 18 m.	With of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Secondary Score:	73			

119 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

**MOSAIC
WINGATE PERMITTING
Stream Reach-Level Assessment Forms**

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>104B</u>	ECT Reach: <u>104B</u>	Photo 498/499 No:	Width 5'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input type="checkbox"/> None <input type="checkbox"/> Trace <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input checked="" type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes:						
Mapped too far up into wetland - need GPS point at beginning point; ups of road is in open woods with pines; downs of road is in hardwoods with palmettos before entering down wetland						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 104B

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 15	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability: 16	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity: 1	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering: ----- Primary Score: 48	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 18	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability: Right Bank: 10 Left Bank: 10	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 10	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality: Right Bank: 9 Left Bank: 9 ----- Secondary Score: 76	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
	10 9	8 7 6	5 4	3 2 1

124 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>105C</u>	ECT Reach: <u>105C</u>	Photo 544/545 No:	Width 6'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input type="checkbox"/> None <input type="checkbox"/> Trace <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input checked="" type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Large Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes: Bed highly disturbed by pigs						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 105C

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>13</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>15</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>4</u> Primary Score: <u>33</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>16</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability: Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>8</u> Left Bank: <u>8</u> Secondary Score: <u>72</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

105 TOTAL SCORE

Date:	Analyst:	Signature:
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MOSAIC

WINGATE PERMITTING

Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/12/2009	Crew: MJB/LH	BCI Reach ID: <u>105D</u>	ECT Reach: <u>105D</u>	Photo 546/547 No:	Width 5'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>70</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input checked="" type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes:						
ups 1/3 is in open, remainder in forest; road along left side reduces corridor width; new channel by extending previously mapped 513 upstream to wetland - shows in 1940 aerial.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/12/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 105D

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 13	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: 15	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: 1	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering 15 Primary Score: 44	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 17	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: 10 Left Bank: 10	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 8	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: 8 Left Bank: 7 Secondary Score: 70	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

114 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>105G</u>	ECT Reach: <u>105G</u>	Photo 23/24 No:	Width 6'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High			
Notes:						
Check surveyed starting point at dns side of wetland - it takes awhile for the stream to get organized; looks good for start point						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 105G

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity: <u>11</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability: <u>19</u>	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering: <u>16</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
Primary Score: <u>47</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Secondary Habitat Components Artificial Channelization: <u>20</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability: Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Secondary Score: <u>80</u>	10 9	8 7 6	5 4	3 2 1

127 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>105H</u>	ECT Reach: <u>105H</u>	Photo 21/22 No:	Width 7'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input checked="" type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes:						
Need to check mapping at ups and to see where stream starts - map ups end as needed check hist. aerial to see if existing where starting.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 105H

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 13	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: 18	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: 1	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering 17 Primary Score: 49	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 18	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: 10 Left Bank: 10	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 10	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: 9 Left Bank: 9 Secondary Score: 76	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

125 TOTAL SCORE

Date:	Analyst:	Signature:
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MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/5/2009	Crew: MJB	BCI Reach ID: <u>106A</u>	ECT Reach: <u>106A</u>	Photo 40/41 No:	Width 6'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe		Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf				
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High				
Notes: Upstream channelization and diversions have affected.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/5/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 106A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
14				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
16	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
18	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Primary Score:	49			
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
19				
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	10 9	8 7 6	5 4	3 2 1
Left Bank:	9			
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10 9	8 7 6	5 4	3 2 1
Left Bank:	10			
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10 9	8 7 6	5 4	3 2 1
Left Bank:	9			
Secondary Score:	75			

124 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/5/2009	Crew: MJB	BCI Reach ID: <u>106B</u>	ECT Reach: <u>106B</u>	Photo 38/39 No:	Width 6'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input checked="" type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input checked="" type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High			
Notes:						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/5/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 106B

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
13				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
15	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Primary Score:	44			
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	18	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	10	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	8	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	8	10 9	8 7 6	5 4
Left Bank:	8			3 2 1
Secondary Score:	72			

116 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/5/2009	Crew: MJB	BCI Reach ID: <u>106C</u>	ECT Reach: <u>106C</u>	Photo 36/37 No:	Width N/A
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input type="checkbox"/> None <input checked="" type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input checked="" type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input checked="" type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input checked="" type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input checked="" type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m R Bank: <input checked="" type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m				Overbank Vegetation: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input checked="" type="checkbox"/> Channelized <input checked="" type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input checked="" type="checkbox"/> Severe		Bank Heights: <input type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input checked="" type="checkbox"/> >50% Bkf				
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input checked="" type="checkbox"/> Organic <input checked="" type="checkbox"/> Silt/Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
This is the enclosure at the powerline crossing; land cover is utility corridor with herbaceous vegetation; large plunge pool dns side						

DEP-SOP-001/01: Form FFD 9000-5
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/5/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 106C

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>5</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>10</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>14</u> Primary Score: <u>30</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>5</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: <u>6</u> Left Bank: <u>6</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>1</u> Left Bank: <u>1</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: <u>1</u> Left Bank: <u>1</u> Secondary Score: <u>21</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

51 TOTAL SCORE

Date:	Analyst:	Signature:
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MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>106D</u>	ECT Reach: <u>106D</u>	Photo 14/15 No:	Width 5'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input checked="" type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High			
Notes: Shallower, narrower, less incised than section upstream - is this related to flatter, broader floodplain/topo and/or wetland?						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 106D

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
16				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
16				
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
1				
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
10				
Primary Score:	43			
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
18				
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	10 9	8 7 6	5 4	3 2 1
Left Bank:	10			
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10 9	8 7 6	5 4	3 2 1
Left Bank:	10			
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	9 9	8 7 6	5 4	3 2 1
Left Bank:	9			
Secondary Score:	76			

119 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC

WINGATE PERMITTING

Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>106E</u>	ECT Reach: <u>106E</u>	Photo 17/18 No:	Width 8'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input checked="" type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input checked="" type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input checked="" type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input checked="" type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High		Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Severe		Bank Heights: <input type="checkbox"/> 0-25% Bkf <input checked="" type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf				
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
<p>Pastured forest; incised, somewhat erosional</p> <p>Photo 16 of stump with suspended roots out over channel</p>						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Mantee	Location: Wingate East		Field ID/Name: 106E

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>17</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>16</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>18</u> ----- Primary Score: <u>52</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>20</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability: Right Bank: <u>6</u> Left Bank: <u>6</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>6</u> Left Bank: <u>6</u> ----- Secondary Score: <u>64</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

116 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>106G</u>	ECT Reach: <u>106G</u>	Photo 19/20 No:	Width 12'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input checked="" type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input checked="" type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes:						
Grazed forest; widened and entrenched						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 106G

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>14</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>16</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>19</u> ----- Primary Score: <u>50</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>20</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability: Right Bank: <u>6</u> Left Bank: <u>6</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>9</u> Left Bank: <u>9</u> ----- Secondary Score: <u>70</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

120 TOTAL SCORE

Date:	Analyst:	Signature:
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MOSAIC

WINGATE PERMITTING

Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/5/2009	Crew: MJB	BCI Reach ID: <u>106H</u>	ECT Reach: <u>106H</u>	Photo 32/33 No:	Width 12'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>75</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input checked="" type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input checked="" type="checkbox"/> Sorting <input checked="" type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input checked="" type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input type="checkbox"/> 0-25% Bkf <input checked="" type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes:						
Corniferous forest with some understory vegetation channel is redeveloping meanders and pools within the dredged channel, but is incised and may now be disconnected from its floodplain.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/5/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 106H

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>10</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>12</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>16</u> ----- Primary Score: <u>39</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>13</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: <u>8</u> Left Bank: <u>8</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>9</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: <u>7</u> Left Bank: <u>7</u> ----- Secondary Score: <u>62</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

101 TOTAL SCORE

Date:	Analyst:	Signature:
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MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>1061</u>	ECT Reach: <u>1061</u>	Photo 513/514 No:	Width 10'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input type="checkbox"/> None <input checked="" type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>70</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input checked="" type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input checked="" type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input checked="" type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe		Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf				
Bed Form: <input type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
Mixed vegetation community - palmettos, grasses, wax myrtle; perhaps old pasture lands, but appears natural previously mapped as 513, but can be seen in 1940 aerial; only appear 2/3 in 513 unless it shows in wetland - only 3-4 deeper than adjacent grades so berm is difficult to discern but is observable with brighter sands and less organic soil at top of profile.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 106I

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>9</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>10</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>7</u> ----- Primary Score: <u>27</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>16</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: <u>8</u> Left Bank: <u>8</u> ----- Secondary Score: <u>72</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

99 TOTAL SCORE

Date:	Analyst:	Signature:
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MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/5/2009	Crew: MJB	BCI Reach ID: <u>107A</u>	ECT Reach: <u>107A</u>	Photo 42/43 No:	Width 8'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny		
				Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High				Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High		
Notes:						
Canopy and corridor broken in some locations						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/5/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 107A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 15	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: 20	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: 1	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering 20 Primary Score: 56	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 20	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: 10 Left Bank: 10	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 10	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: 9 Left Bank: 9 Secondary Score: 78	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

134 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2099	Crew: MJB	BCI Reach ID: <u>107B</u>	ECT Reach: <u>107B</u>	Photo 12/13 No:	Width 12'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input checked="" type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High			
Notes:						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2099	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 107B

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 18	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: 18	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: 1	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering 10 Primary Score: 47	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 18	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: 10 Left Bank: 10	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 10	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: 9 Left Bank: 9 Secondary Score: 76	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

123 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>107C</u>	ECT Reach: <u>107C</u>	Photo No:	Width 12'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input checked="" type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input checked="" type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High			
Notes:						
Widening and lack of bank definition due to vegetation alterations; dry - diverted; Runs through hardwoods with disturbed understory and being pastured by cattle.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 107C

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 13	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: 18	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: 1	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: ----- Primary Score: 47	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 19	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability: Right Bank: 10 Left Bank: 10	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 10	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality: Right Bank: 6 Left Bank: 6 ----- Secondary Score: 71	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

118 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC
WINGATE PERMITTING
Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>107E</u>	ECT Reach: <u>107E</u>	Photo 410/409 No:	Width 10'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>75</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input checked="" type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input checked="" type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input checked="" type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input checked="" type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m R Bank: <input checked="" type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m				Overbank Vegetation: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input checked="" type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High			
Notes:						
Check hist. aerials to see if ditched and to soil probing next week to see if spoils present no fluvial processes; dry; very low sinosity - could have been straightened but also may be due to ag activities; vegetated channel						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 107E

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>5</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>16</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>5</u> Primary Score: <u>27</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>8</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability: Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>1</u> Left Bank: <u>1</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>1</u> Left Bank: <u>1</u> Secondary Score: <u>32</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

59 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/4/2009	Crew: MJB	BCI Reach ID: <u>107G</u>	ECT Reach: <u>107G</u>	Photo 407/408 No:	Width 10'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input checked="" type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input checked="" type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input checked="" type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input checked="" type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input checked="" type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
Dry - no flow; This is the old historical channel adjacent to the large ditch; This needs to be mapped with GPS; Vegetation channel; runs through pastured flatwoods; looks similar to 105d through cleared pasture; No fluvial processes.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/4/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 107G

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
5				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
16	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
10				
Primary Score:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
32				
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
16				
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	10	8 7 6	5 4	3 2 1
Left Bank:	10	10 9		
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10	8 7 6	5 4	3 2 1
Left Bank:	10			
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	3	8 7 6	5 4	3 2 1
Left Bank:	3			
Secondary Score:	10 9	8 7 6	5 4	3 2 1
62				

94 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC
WINGATE PERMITTING
Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/13/2009	Crew: MJB/LH	BCI Reach ID: <u>200A</u>	ECT Reach: <u>200A</u>	Photo No:	Width 20'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>70</u> °F		
Flow Conditions: <input type="checkbox"/> None <input checked="" type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input checked="" type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High			
Notes:						
No fluvial processes other than variation in depth very little _____ transport observed; no classification cross-section due to mucky bottom - unconsolidated sediments in excess of one foot.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/13/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 200A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity: <u>20</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability: <u>19</u>	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering: <u>16</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
Primary Score: <u>56</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Secondary Habitat Components Artificial Channelization: <u>16</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability: Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Secondary Score: <u>76</u>	10 9	8 7 6	5 4	3 2 1

132 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>201A</u>	ECT Reach: <u>201A</u>	Photo 5518/5519 No:	Width 6'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>60</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input checked="" type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe		Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf				
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
Disturbance at one stream crossing						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 201A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>15</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability: <u>20</u>	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering: <u>10</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
Primary Score: <u>46</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>16</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability: Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Secondary Score: <u>76</u>	10 9	8 7 6	5 4	3 2 1

122 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC

WINGATE PERMITTING

Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>201B</u>	ECT Reach: <u>201B</u>	Photo 551/552 No:	Width 3'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS ECT FLUCCS		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>70</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input checked="" type="checkbox"/> Sorting <input checked="" type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input checked="" type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes:						
Only disturbance is 2 track crossing						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 201B

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>15</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>18</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>16</u> ----- Primary Score: <u>50</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>16</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability: Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>10</u> Left Bank: <u>10</u> ----- Secondary Score: <u>76</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

126 TOTAL SCORE

Date:	Analyst:	Signature:
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MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 11/11/2009	Crew: MJB	BCI Reach ID: <u>201C/201D</u> ECT Reach: <u>201C/</u> Assessment Reach:	Photo No:	Width 8'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514 ECT FLUCCS	
Recent Rain: <input type="checkbox"/> None <input type="checkbox"/> Trace <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy			Weather Conditions: <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf			Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting			Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed			Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m			Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage			Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:					
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High			Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe			Bank Heights: <input type="checkbox"/> 0-25% Bkf <input checked="" type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P			Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:					
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes: Needs GPS points for wetland interruption					

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 11/11/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 201C/201D

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 15	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: 20	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: 1	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering ----- Primary Score: 54	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 17	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: 10 Left Bank: 10	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 10	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: 9 Left Bank: 9 ----- Secondary Score: 75	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

129 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC

WINGATE PERMITTING

Stream Reach-Level Assessment Forms

Site: Wingat	Date: 12/14/2009	Crew: MJB/LH	BCI Reach ID: <u>300A</u>	ECT Reach: <u>300A</u>	Photo 39-52 No:	Width 8'-10'
Basin: Peace River		Receiving Stream: Lt. Charlie Ck.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input checked="" type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input checked="" type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input checked="" type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input checked="" type="checkbox"/> Sorting <input checked="" type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input checked="" type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe		Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf				
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant		Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
Reach dns of road crossing; downstream of ditched section; goes from straight ditch into a sinuous stream at a tight bend (see photo set); upstream ditching may be a disturbance but channel morphology/stability not impacted; Could this have been created by ups ditching?						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 12/14/2009	Receiving Body of Water: Lt. Charlie Ck.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 300A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity: 20	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability: 20	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
Water Velocity: 20	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
Habitat Smothering: 20	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
Primary Score: 80	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization: 20	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank: Left Bank: 10 10	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank: Left Bank: 10 10	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank: Left Bank: 10 10	10 9	8 7 6	5 4	3 2 1
Secondary Score: 80	10 9	8 7 6	5 4	3 2 1

160 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 12/14/2009	Crew: MJB/LH	BCI Reach ID: <u>300B</u>	ECT Reach: <u>300B</u>	Photo 53-58 No:	Width 12'-16'
Basin: Peace River		Receiving Stream: Horse Ck.		BCI FLUCCS <input type="checkbox"/> 511 <input checked="" type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny		
				Temperature: <u>80</u> °F		
Flow Conditions: <input type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input checked="" type="checkbox"/> 50%-75%		
				<input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe		
				<input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie		
				<input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		
				<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe				Fluvial Processes: <input checked="" type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input checked="" type="checkbox"/> Lateral Bars		
				<input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion		
				<input type="checkbox"/> Pool-Riffle <input checked="" type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour		
				<input checked="" type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage		
				<input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
LWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant		
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel		
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		
Notes:						
Reach ups of road crossing; Little Charlie Creek tributary; Through forested wetland for majority up to Mosiac prop boundary; spoils obvious both sides, very straight - drf at least a 512, but not evidence of history channel and a lot of spoils present - check hist aerials to see if a 513 stream; this is upstream section where straight with spoils.						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 12/14/2009	Receiving Body of Water: Horse Ck.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 300B

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity: <u>18</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability: <u>16</u>	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity: <u>14</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering: <u>18</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
Primary Score: 66	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Secondary Habitat Components Artificial Channelization: <u>14</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability: Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Secondary Score: 74	10 9	8 7 6	5 4	3 2 1

140 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 12/15/2009	Crew: MJB/LH	BCI Reach ID: <u>105B</u>	ECT Reach: <u>105B</u>	Photo 20-22 No:	Width 10'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input type="checkbox"/> 511 <input checked="" type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>80</u> °F		
Flow Conditions: <input type="checkbox"/> None <input type="checkbox"/> Stagnant <input checked="" type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input checked="" type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input checked="" type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input checked="" type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input checked="" type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input checked="" type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input checked="" type="checkbox"/> Sorting <input checked="" type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input checked="" type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe		Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf				
Bed Form: <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				
Notes:						
Previously channelized; starting to meander and develop riffle/pool again; collected GPS at ups end						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 12/15/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 105B

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>12</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>8</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>9</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>10</u> Primary Score: <u>39</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>12</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability: Right Bank: <u>8</u> Left Bank: <u>8</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality: Right Bank: <u>8</u> Left Bank: <u>8</u> Secondary Score: <u>64</u>	Width of vegetation greater than 18 m. 10 9	Width of vegetation >12 to 18 m. 8 7 6	Width of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

103 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

**MOSAIC
WINGATE PERMITTING
Stream Reach-Level Assessment Forms**

Site: Wingat	Date: 12/15/2009	Crew: MJB/LH	BCI Reach ID: <u>105A</u>	ECT Reach: <u>105A</u>	Photo 17/18 No:	Width 10'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input checked="" type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>85</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input checked="" type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input checked="" type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe		Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf				
Bed Form: <input type="checkbox"/> Stable <input type="checkbox"/> Unstable <input checked="" type="checkbox"/> Plane Bed <input type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High				
Notes: Part has a cattle pond dug in it						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 12/15/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 105A

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: 10	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: 13	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: 1	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering ----- Primary Score: 32	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: 17	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: 10 Left Bank: 10	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: 10 Left Bank: 10	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: 9 Left Bank: 9 ----- Secondary Score: 75	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

107 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC
WINGATE PERMITTING
Stream Reach-Level Assessment Forms

Site: Wingat	Date: 12/15/2009	Crew: MJB/LH	BCI Reach ID: <u>105E</u>	ECT Reach: <u>105E</u>	Photo 12/13 No:	Width 6'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>0</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input checked="" type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			
Undercut Banks: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High			
Notes: This has been bypassed by canal						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 12/15/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 105E

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
15				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
18	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
17	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Primary Score:	51			
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	16	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	10	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	10	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Secondary Score:	76			

127 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 12/15/2009	Crew: MJB/LH	BCI Reach ID: <u>106F</u>	ECT Reach: <u>106F</u>	Photo 8 No:	Width 15'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input checked="" type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input checked="" type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>85</u> °F		
Flow Conditions: <input type="checkbox"/> None <input checked="" type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input checked="" type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input checked="" type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input type="checkbox"/> Diversion <input checked="" type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High				Width:Depth: <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High <input type="checkbox"/> Very High		
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe				Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf		
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input checked="" type="checkbox"/> Plane Bed <input type="checkbox"/> R-P				Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Excellent		
In-Stream Habitats:						
Pools: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Large Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
LWD: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Fine Roots: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
CWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Overhanging Veg: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			
Undercut Banks: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant			Substrates: <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravel			
Macrophytes: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant			Leaf Litter: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High			
Notes:						
Photo looking dns from forested wetland; land cover partly forested wetland and partly marsh; channelization downstream						

DEP-SOP-001/01: Form FFD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 12/15/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 106F

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i> Substrate Diversity: <u>5</u>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]. 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability: <u>18</u>	Greater than 30% productive habitat present at site. 20 19 18 17 16	16% to 30% productive habitat, by aerial extent. 15 14 13 12 11	6% to 15% productive habitat. 10 9 8 7 6	Less than 5% productive habitat. 5 4 3 2 1
Water Velocity: <u>1</u>	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec. 20 19 18 17 16	Maximum observed at typical transect >0.1 to 0.25 m/sec. 15 14 13 12 11	Maximum observed at typical transect: 0.05 to 0.1 mg/sec. 10 9 8 7 6	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec. 5 4 3 2 1
Habitat Smothering: <u>10</u> ----- Primary Score: <u>34</u>	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation. 20 19 18 17 16	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation. 15 14 13 12 11	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth). 10 9 8 7 6	Pools are absent. Most habitats affected by sand or silt accumulation. 5 4 3 2 1
<i>Secondary Habitat Components</i> Artificial Channelization: <u>16</u>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths. 20 19 18 17 16	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered. 15 14 13 12 11	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present. 10 9 8 7 6	Straightened with spoil banks. Box-cut, monotypic depth with no pools. 5 4 3 2 1
Bank Stability Right Bank: <u>10</u> Left Bank: <u>10</u>	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width: Right Bank: <u>10</u> Left Bank: <u>10</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1
Riparian Zone Vegetation Quality Right Bank: <u>8</u> Left Bank: <u>8</u> ----- Secondary Score: <u>72</u>	Width of vegetation greater than 18 m. 10 9	With of vegetation >12 to 18 m. 8 7 6	With of vegetation 6 to 12 m. Human activities still close to system. 5 4	Less than 6 m of buffer zone due to intensive human activities. 3 2 1

106 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)

MOSAIC WINGATE PERMITTING Stream Reach-Level Assessment Forms

Site: Wingat	Date: 12/15/2009	Crew: MJB/LH	BCI Reach ID: <u>105F</u>	ECT Reach: <u>105F</u>	Photo 9-11 No:	Width 8'
Basin: Myakka R.		Receiving Stream: Myakka R.		BCI FLUCCS <input checked="" type="checkbox"/> 511 <input type="checkbox"/> 512 <input type="checkbox"/> 513 <input type="checkbox"/> 514		
Recent Rain: <input type="checkbox"/> None <input type="checkbox"/> Trace <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy				Weather Conditions: <input checked="" type="checkbox"/> Overcast <input type="checkbox"/> Partly Sunny <input type="checkbox"/> Mostly Sunny <input type="checkbox"/> Windy <input type="checkbox"/> Calm Temperature: <u>85</u> °F		
Flow Conditions: <input checked="" type="checkbox"/> None <input type="checkbox"/> Stagnant <input type="checkbox"/> Baseflow <input type="checkbox"/> 25% Bkf <input type="checkbox"/> 50% Bkf <input type="checkbox"/> 75% Bkf <input type="checkbox"/> 100% Bkf				Canopy Cover: <input type="checkbox"/> <25% <input type="checkbox"/> 25%-50% <input checked="" type="checkbox"/> 50%-75% <input type="checkbox"/> 75%-100%		
Bed Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed <input type="checkbox"/> Headcutting				Bank Erosion: <input checked="" type="checkbox"/> None <input type="checkbox"/> Minor <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Common <input type="checkbox"/> Disturbed		
Left Bank Land Cover: <input type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input checked="" type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed				Right Bank Land Cover: <input type="checkbox"/> Pasture <input type="checkbox"/> Forest <input type="checkbox"/> Crops/Grove <input type="checkbox"/> Prairie <input type="checkbox"/> Palmetto Prairie <input type="checkbox"/> Flatwoods <input type="checkbox"/> Mixed		
Buffer Width: L Bank: <input type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input checked="" type="checkbox"/> >18 m R Bank: <input checked="" type="checkbox"/> <6 m <input type="checkbox"/> 6-12 m <input type="checkbox"/> 12-18 m <input type="checkbox"/> >18 m				Overbank Vegetation: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Interrupted		
Disturbance/Alteration: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Severe <input type="checkbox"/> Cattle <input type="checkbox"/> Sedimentation <input checked="" type="checkbox"/> Diversion <input type="checkbox"/> Channelized <input type="checkbox"/> Manmade <input type="checkbox"/> Storm Damage				Fluvial Processes: <input type="checkbox"/> Sorting <input type="checkbox"/> Point Bars <input type="checkbox"/> Lateral Bars <input checked="" type="checkbox"/> Pool-Riffle <input type="checkbox"/> Dunes <input checked="" type="checkbox"/> Bed Scour <input type="checkbox"/> Widening <input type="checkbox"/> Aggrading <input checked="" type="checkbox"/> Bank Scour		
Morphology:						
Sinuosity: <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High		Width:Depth: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Very High				
Entrenchment: <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> Severe		Bank Heights: <input checked="" type="checkbox"/> 0-25% Bkf <input type="checkbox"/> 25-50% Bkf <input type="checkbox"/> >50% Bkf				
Bed Form: <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Unstable <input type="checkbox"/> Plane Bed <input checked="" type="checkbox"/> R-P		Stability: <input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Excellent				
In-Stream Habitats:						
Pools: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Large Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
LWD: <input type="checkbox"/> None <input checked="" type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Fine Roots: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant				
CWD: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Overhanging Veg: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input checked="" type="checkbox"/> Abundant				
Undercut Banks: <input type="checkbox"/> None <input type="checkbox"/> Low <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Substrates: <input type="checkbox"/> Organic <input type="checkbox"/> Silt/Clay <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Gravel				
Macrophytes: <input checked="" type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input type="checkbox"/> Abundant		Leaf Litter: <input type="checkbox"/> None <input type="checkbox"/> Low <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> High				
Notes:						
Historical channel bypassed by canal, west of power line and north of canal; power line corridor immediately east of channel; flatwoods west of channel; channel filled with road crossing and power line corridor only 60% length left.						

DEP-SOP-001/01: Form FFD 9000-5
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Submitting Agency Code: _____		Storet Station Number: _____	Date: 12/15/2009	Receiving Body of Water: Myakka R.
Submitting Agency Name: _____				
Remarks:	County: Manatee	Location: Wingate East		Field ID/Name: 105F

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
<i>Primary Habitat Components</i>	Four or more productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock].	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags).	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed.	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered.
Substrate Diversity:	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
15				
Substrate Availability:	Greater than 30% productive habitat present at site.	16% to 30% productive habitat, by aerial extent.	6% to 15% productive habitat.	Less than 5% productive habitat.
18	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Water Velocity:	Maximum observed at typical transect: >0.25 m/sec but <1 mg/sec.	Maximum observed at typical transect >0.1 to 0.25 m/sec.	Maximum observed at typical transect: 0.05 to 0.1 mg/sec.	Maximum observed at typical transect: <0.05 m/sec; or spate occurring: >1 mg/sec.
1	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Habitat Smothering:	Adequate number of pools (1-2 per 12 times width) and <25% of habitats affected by sand or silt accumulation.	Adequate number of pools (1-2 per 12 times width) and >25% of habitats affected by sand or silt accumulation.	Does not have required number of pools (1-2 per 12 times width) and/or has shallow pools (<2 times prevailing depth).	Pools are absent. Most habitats affected by sand or silt accumulation.
17	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Primary Score:	51			
<i>Secondary Habitat Components</i>	Good sinuosity. No evidence of dredging or artificial straightening. No spoil banks. Diversity of depths.	Good sinuosity within old channelized area and a diversity of depths. Evidence of dredging in the past (>10 years) but mostly recovered.	Some sinuosity developed within channelized area. Some diversity of depth, but no pools (>2 times prevailing depth) present.	Straightened with spoil banks. Box-cut, monotypic depth with no pools.
Artificial Channelization:	17	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6
Bank Stability	Bankfull >60% of bank height. Slope of bank ≤60°. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull <50% of bank height. Slope of bank >60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank:	10	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Riparian Buffer Zone Width:	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	2	10 9	8 7 6	5 4
Left Bank:	10			3 2 1
Riparian Zone Vegetation Quality	Width of vegetation greater than 18 m.	Width of vegetation >12 to 18 m.	Width of vegetation 6 to 12 m. Human activities still close to system.	Less than 6 m of buffer zone due to intensive human activities.
Right Bank:	2	10 9	8 7 6	5 4
Left Bank:	9			3 2 1
Secondary Score:	60			

111 TOTAL SCORE

Date:	Analyst:	Signature:
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Form FD 9000-5

Revision Date: March 31, 2008 (Effective 12/3/08)