

Instructions: **Bold** fields must be completed. Record all measurements in metric units.

**Station Summary**

Stream Name <u>Mullet River</u>		Waterbody ID Code <u>53400</u>	SWIMS Station ID <u>10008194</u>	FH Database ID <u>63286</u>
Date (MMDDYYYY) <u>08232014</u>	Station Name <u>US of Cthy CJ</u>			
Latitude - Longitude Determination Method Used <u>SWIMS</u>				Datum Used <u>NAD83</u>
Start Latitude <u>43.792118</u>	Start Longitude <u>-88.01061</u>	End Latitude <u>_____</u>	End Longitude <u>_____</u>	County <u>Sheboygan</u>

**Water Characteristics**

Time (24-hr clock) <u>1030</u>	Air Temperature (C) <u>_____</u>	Water Temperature (C) <u>_____</u>	Conductivity (µs/cm) <u>_____</u>	Transparency (cm) <u>_____</u>
Dissolved Oxygen (mg/l) <u>_____</u>		Dissolved Oxygen % Saturation <u>_____</u>		pH <u>_____</u>
Flow (m³/sec) (from Flow Data sheet) <u>0.299</u>	Water Level (check one - measure distance if Above or Below Normal): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Below: _____ (m) <input type="checkbox"/> Above: _____ (m)			Water Clarity: <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Stained

**Channel and Basin Characteristics**

Stream Widths (m)	<u>7.5</u>	<u>11.5</u>	<u>8.8</u>	<u>9.2</u>	<u>6.8</u>	<u>8.1</u>	<u>8.7</u>	<u>8.5</u>	<u>9.2</u>	<u>8.6</u>	<u>9.3</u>	<u>14.9</u>
Mean Stream Width (m) <u>9m</u>	Transect Spacing (m) <u>27m</u>					Station Length (m) <u>315m</u>						
Channel Condition: (check one)	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> > 20-year-old Channelization <input type="checkbox"/> 10- to 20-year-old Channelization <input type="checkbox"/> < 10-year-old Channelization <input type="checkbox"/> Concrete Channel											
Percent Channelization <u>0</u>	Sinuosity <u>1.19</u>	Gradient (m/km) <u>12.6</u>		Stream Order <u>2</u>		Basin Area (km²) <u>102.79</u>						

(from Map Data Sheet)

Mean Distance (m) Between:	Bends: <u>_____</u>	Riffles: <u>27.69m</u>
Total (Sum) Length (m) of All:	Riffles: <u>104.9m</u>	Pools: <u>14.2m</u> Runs: <u>179.4m</u>
Mean Length (m) of Individual:	Riffles: <u>14.99m</u>	Pools: <u>7.1m</u> Runs: <u>22.43m</u>

Person(s) Who Collected Data (Full Names)

Erin Cox, Craig Helker, Dylan Olson

Comments / Notes



Transsect #1											
1	2	3	4	5	6	7	8	9	10	11	12
9	36	63	90	117	144	171	198	225	252	279	306

# Wadable Stream Quantitative Habitat Evaluation

Form 3600-228 (R 6/07)

## Map Data

Stream Name <u>Mullet River</u>	Waterbody ID Code <u>534100</u>	Date (MMDDYYYY) <u>0823 2007</u>
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Dist. from Start (m)	Stream Feature (Bend, Riffle, Pool, Run, Log Jam, etc.)
0	SOS
9	T1
18.5	Start riffle
34	End riffle / start run
36	T2
63	T3
70	End run / start riffle
79.5	End riffle / start run
84	End run / start pool
89.2	End pool / start riffle
90	T4
99	End riffle / start run
103	Bend (L)
108	End run / start pool
117	T5 End pool / start run
135	End run / start riffle
144	T6
154	End riffle / start run
171	T7
193	Start island / End run / start riffle
198	T8
210	End island
216	End riffle / start run
225	T9
231.6	End run / start riffle
238	End riffle / start run
252	T10
258.5	End island
274	Tripod (L)
276	End run / start riffle
279	T11
297.7	End riffle / start run
306	T12 start island
317	EOS end run / start riffle

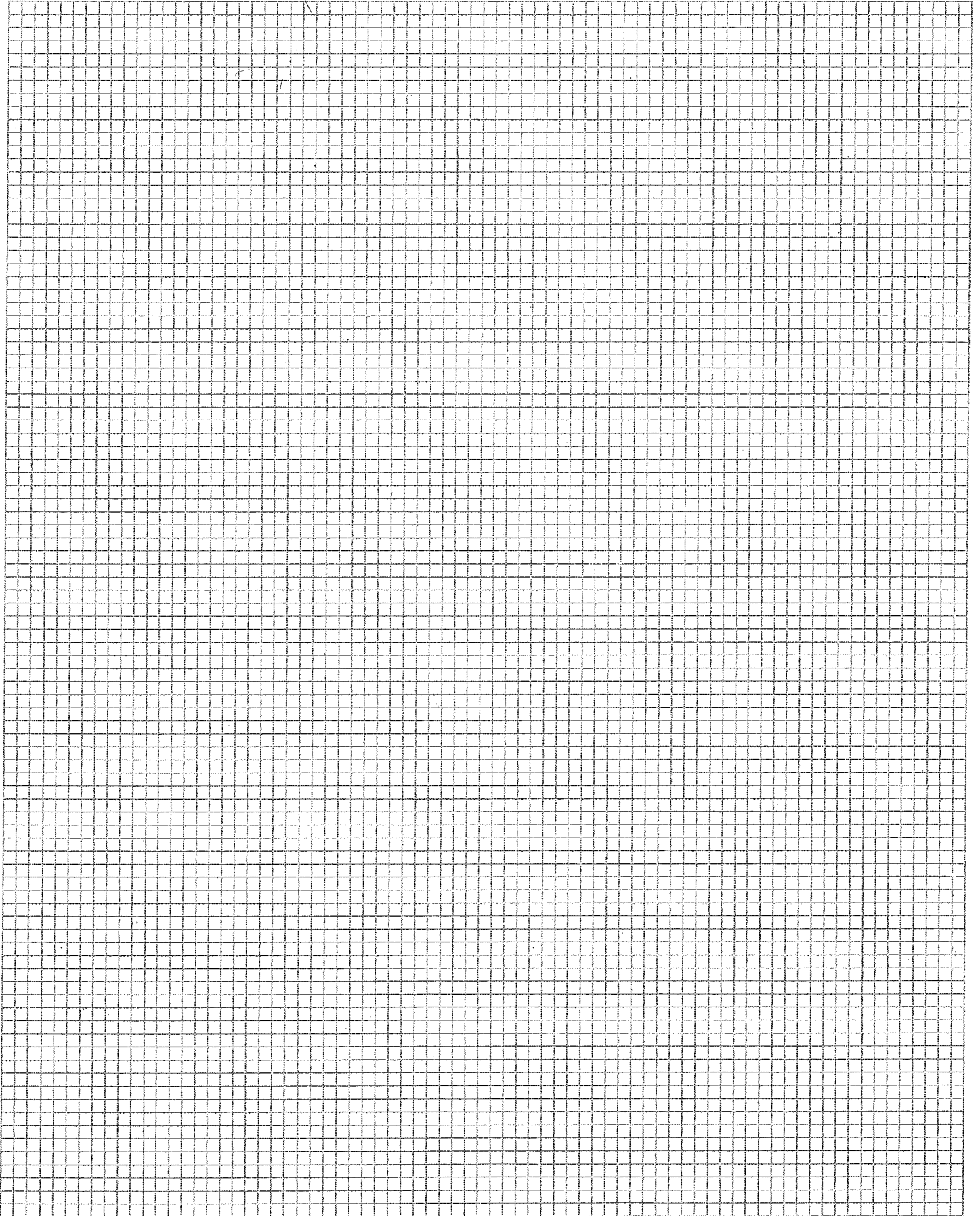
### Distance Summary

Distance Between Riffles (m) Measurements from the Upstream end of one Riffle to the Downstream end of the next Riffle Upstream	
Downstream - 1st: _____	Downstream - 1st: <u>70 - 34.5 = 35.5</u>
1st - 2nd: _____	1st - 2nd: <u>89.2 - 79.5 = 9.7</u>
2nd - 3rd: _____	2nd - 3rd: <u>135 - 99 = 36</u>
3rd - 4th: _____	3rd - 4th: <u>198 - 171 = 27</u>
4th - 5th: _____	4th - 5th: <u>231.6 - 216 = 15.6</u>
5th - 6th: _____	5th - 6th: <u>276 - 258.5 = 17.5</u>
6th - 7th: _____	6th - 7th: <u>317 - 297 = 20</u>
7th - 8th: _____	7th - 8th: _____
8th - 9th: _____	8th - 9th: _____
9th - 10th: _____	9th - 10th: _____
10th - 11th: _____	10th - 11th: _____
11th - Upstream: _____	11th - Upstream: _____
Sum: _____	Sum: <u>193.8</u>
Mean: _____	Mean: <u>27.169</u>

### Length (m) of Individual Riffles, Pools and Runs

1st Riffle: <u>34 - 18.5 (15.5)</u>	1st Pool: <u>89.2 - 84 (5.2)</u>	1st Run: <u>70 - 34 (36)</u>
2nd Riffle: <u>79.5 - 70 (9.5)</u>	2nd Pool: <u>117 - 108 (9)</u>	2nd Run: <u>81 - 79.5 (1.5)</u>
3rd Riffle: <u>99 - 89.2 (9.8)</u>	3rd Pool: _____	3rd Run: <u>108 - 99 (9)</u>
4th Riffle: <u>135 - 117 (18)</u>	4th Pool: _____	4th Run: <u>135 - 117 (18)</u>
5th Riffle: <u>216 - 198 (18)</u>	5th Pool: _____	5th Run: <u>193 - 171 (22)</u>
6th Riffle: <u>276 - 258.5 (17.5)</u>	6th Pool: _____	6th Run: <u>231.6 - 216 (15.6)</u>
7th Riffle: <u>297.7 - 276 (21.7)</u>	7th Pool: _____	7th Run: <u>276 - 258 (18)</u>
8th Riffle: _____	8th Pool: _____	8th Run: <u>317 - 297 (20)</u>
9th Riffle: _____	9th Pool: _____	9th Run: _____
10th Riffle: _____	10th Pool: _____	10th Run: _____
11th Riffle: _____	11th Pool: _____	11th Run: _____
Sum: <u>104.9</u>	Sum: <u>14.7</u>	Sum: <u>179.4</u>
Mean: <u>14.99</u>	Mean: <u>7.1</u>	Mean: <u>22.93</u>

Draw map of station on back of this sheet (optional)



# Wadable Stream Quantitative Habitat Evaluation

Form 3600-228 (R 6/07)

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## Transect Data

Stream Name <i>Mullet River</i>	Waterbody ID Code <i>53100</i>	Date (MMDDYYYY) <i>08 23 2014</i>	Transect No. <i>1</i>
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Distance from Start (m) <i>9</i>	Stream Width (m) <i>7.5</i>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <i>.38</i>	Bankfull Width (m) (optional) <i>12.2</i>
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	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1.5 1/5	3 2/5	4.5 3/5	6 4/5
Water Depth (m)		<i>.21</i>	<i>.28</i>	<i>.32</i>	<i>.26</i>
Depth of Fines and Water (m)		<i>.24</i>	<i>.28</i>	<i>.32</i>	<i>.26</i>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<i>50</i>	<i>60</i>	<i>50</i>	<i>10</i>

## Percent (nearest 5%) of Stream Bottom Covered Section Total Must = 100%

	1.5 1/5	3 2/5	4.5 3/5	6 4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)				
Rubble / Cobble (65 - 260 mm)	<i>40</i>	<i>50</i>	<i>70</i>	<i>60</i>
Gravel (2 - 64 mm)	<i>10</i>	<i>10</i>		<i>30</i>
Sand (0.062 - 1.9 mm)	<i>50</i>	<i>40</i>	<i>30</i>	<i>10</i>
Silt (0.004 - 0.061 mm)				
Clay				
Detritus				
Other - Specify:				

## Percent (nearest 10%) of Stream Bottom Covered

	1.5 1/5	3 2/5	4.5 3/5	6 4/5
Algae (attached & fila.)	<i>0</i>	<i>10</i>	<i>10</i>	<i>10</i>
Macrophytes	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Canopy / Shading (circle one)	<i>0</i>	<i>10</i>	<i>30</i>	<i>60</i>

## Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:
		<i>.4</i>		<i>.7</i>			

## Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream % of Eroded Bank to the crest or within 5 m of stream edge

Left: <i>0</i> (m) Right: <i>1.0</i> (m)	Left: <i>0</i> (%) Right: <i>0</i> (%)
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## Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect Section Total Must = 100%

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
					<i>10</i>	<i>40</i>	<i>50</i>		

## Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: *10* (m) Right: *10* (m)

# Wadable Stream Quantitative Habitat Evaluation

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## Transect Data

Stream Name: <u>Mullet River</u>		Waterbody ID Code: <u>53400</u>	Date (MMDDYYYY): <u>082317</u>	Transect No.: <u>2</u>
Distance from Start (m): <u>36</u>	Stream Width (m): <u>11.5</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional): <u>.58</u>	Bankfull Width (m) (optional): <u>12</u>

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5 <u>2.3</u>	2/5 <u>4.6</u>	3/5 <u>6.9</u>	4/5 <u>9.2</u>
Water Depth (m)		<u>.15</u>	<u>.16</u>	<u>.25</u>	<u>.14</u>
Depth of Fines and Water (m)		<u>.15</u>	<u>.16</u>	<u>.25</u>	<u>.14</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>20</u>	<u>40</u>	<u>0</u>	<u>0</u>

## Percent (nearest 5%) of Stream Bottom Covered Section Total Must = 100%

	1/5	2/5	3/5	4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)			<u>20</u>	<u>30</u>
Rubble / Cobble (65 - 260 mm)	<u>60</u>	<u>60</u>	<u>70</u>	
Gravel (2 - 64 mm)	<u>20</u>	<u>10</u>	<u>10</u>	<u>50</u>
Sand (0.062 - 1.9 mm)	<u>10</u>	<u>30</u>		
Silt (0.004 - 0.061 mm)				<u>10</u>
Clay				
Detritus				<u>10</u>
Other - Specify: <u>wood</u>	<u>10</u>			

## Percent (nearest 10%) of Stream Bottom Covered

	1/5	2/5	3/5	4/5
Algae (attached & fila.)	<u>0</u>	<u>10</u>	<u>20</u>	<u>0</u>
Macrophytes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>60</u>	<u>10</u>	<u>30</u>	<u>40</u>

## Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:

Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream

Left: 32 (m)   Right: 0 (m)

% of Eroded Bank to the crest or within 5 m of stream edge

Left: 30 (%)   Right: 80 (%)

## Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect Section Total Must = 100%

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
					<u>40</u>	<u>40</u>	<u>20</u>		

Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 110 (m)   Right: 10 (m)

# Wadable Stream Quantitative Habitat Evaluation

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**Transect Data**

Stream Name: Mullet River      Waterbody ID Code: 53450      Date (MMDDYYYY): 082317      Transect No.: 3

Distance from Start (m): 63      Stream Width (m): 8.8      Habitat Type:  Riffle    Pool    Run      Bankfull Depth (m) (optional): 0.52      Bankfull Width (m) (optional): 10.9

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5	2/5	3/5	4/5
Water Depth (m)		<u>0.17</u>	<u>0.22</u>	<u>0.23</u>	<u>0.2</u>
Depth of Fines and Water (m)		<u>0.17</u>	<u>0.22</u>	<u>0.23</u>	<u>0.2</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>20</u>	<u>20</u>	<u>10</u>	<u>20</u>

**Percent (nearest 5%) of Stream Bottom Covered**      **Section Total Must = 100%**

	1/5	2/5	3/5	4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)		<u>10</u>		
Rubble / Cobble (65 - 260 mm)	<u>40</u>	<u>50</u>	<u>40</u>	<u>30</u>
Gravel (2 - 64 mm)	<u>10</u>	<u>10</u>	<u>40</u>	<u>40</u>
Sand (0.062 - 1.9 mm)	<u>50</u>	<u>30</u>	<u>20</u>	<u>30</u>
Silt (0.004 - 0.061 mm)				
Clay				
Detritus				
Other - Specify: _____				

**Percent (nearest 10%) of Stream Bottom Covered**

	1/5	2/5	3/5	4/5
Algae (attached & fila.)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Macrophytes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>70</u>	<u>80</u>	<u>90</u>	<u>100</u>

**Cover for Adult Gamefish:** Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:
				<u>1.8</u>			

**Bank Erosion:** Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream      % of Eroded Bank to the crest or within 5 m of stream edge

Left: 0.35 (m)      Right: 0 (m)      Left: 40 (%)      Right: 0 (%)

**Riparian Land Use:** Percent (nearest 10%) of Bank within 5 m of stream edge, along transect      **Section Total Must = 100%**

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
					<u>20</u>	<u>80</u>			

**Riparian Buffer Width:** Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 110 (m)      Right: 110 (m)

# Wadable Stream Quantitative Habitat Evaluation

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## Transect Data

Stream Name: <u>Mullet River</u>	Waterbody ID Code: <u>53400</u>	Date (MMDDYYYY): <u>08 23 2017</u>	Transect No.: <u>4</u>
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Distance from Start (m): <u>90</u>	Stream Width (m): <u>9.2</u>	Habitat Type: <input checked="" type="checkbox"/> Riffle <input type="checkbox"/> Pool <input type="checkbox"/> Run	Bankfull Depth (m) (optional): <u>0.55</u>	Bankfull Width (m) (optional): <u>13.0</u>
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	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5 1.8	2/5 3.6	3/5 5.4	4/5 7.2
Water Depth (m)		<u>.14</u>	<del>.20</del> <u>.20</u>	<u>.30</u>	<u>.11</u>
Depth of Fines and Water (m)		<u>.14</u>	<del>.20</del> <u>.20</u>	<u>.30</u>	<u>.11</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>20</u>	<u>50</u>	<u>0</u>	<u>0</u>

## Percent (nearest 5%) of Stream Bottom Covered Section Total Must = 100%

	1/5 1.8	2/5 3.6	3/5 5.4	4/5 7.2
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)	<u>80</u>	<u>10</u>		
Rubble / Cobble (65 - 260 mm)		<del>10</del> <u>10</u>	<u>100</u>	<u>70</u>
Gravel (2 - 64 mm)		<del>30</del> <u>30</u>		<u>30</u>
Sand (0.062 - 1.9 mm)	<u>20</u>	<u>50</u>		
Silt (0.004 - 0.061 mm)				
Clay				
Detritus				
Other - Specify: _____				

## Percent (nearest 10%) of Stream Bottom Covered

	1/5 1.8	2/5 3.6	3/5 5.4	4/5 7.2
Algae (attached & fila.)	<u>20</u>	<del>0</del> <u>0</u>	<u>30</u>	<u>20</u>
Macrophytes	<u>0</u>	<del>0</del> <u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>30</u>	<del>100</del> <u>80</u>	<u>100</u>	<u>100</u>

## Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:

Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream

Left: 0 (m)      Right: ~~1.0~~ 1.0 (m)

% of Eroded Bank to the crest or within 5 m of stream edge

Left: 0 (%)      Right: 50 (%)

## Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect Section Total Must = 100%

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
					<u>20</u>	<u>50</u>	<u>30</u>		

Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 710 (m)      Right: 710 (m)



# Wadable Stream Quantitative Habitat Evaluation

Form 3600-228 (R 6/07)

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**Transect Data**

Stream Name: Mullet River      Waterbody ID Code: 53400      Date (MMDDYYYY): 08 23 2014      Transect No.: 5

Distance from Start (m): 117      Stream Width (m): 6.8      Habitat Type:  Riffle  Pool  Run      Bankfull Depth (m) (optional): .37      Bankfull Width (m) (optional): 8.4

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5	2/5	3/5	4/5
Water Depth (m)		<u>.51</u>	<u>.42</u>	<u>.12</u>	<u>.06</u>
Depth of Fines and Water (m)		<u>.51</u>	<u>.42</u>	<u>.16</u>	<u>.06</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>10</u>	<u>10</u>	<u>30</u>	<u>40</u>

**Percent (nearest 5%) of Stream Bottom Covered**      Section Total Must = 100%

	1/5	2/5	3/5	4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)				
Rubble / Cobble (65 - 260 mm)	<u>80</u>	<u>80</u>	<u>70</u>	<u>10</u>
Gravel (2 - 64 mm)	<u>10</u>	<u>10</u>		<u>50</u>
Sand (0.062 - 1.9 mm)	<u>10</u>	<u>10</u>	<u>30</u>	<u>40</u>
Silt (0.004 - 0.061 mm)				
Clay				
Detritus				
Other - Specify: _____				

**Percent (nearest 10%) of Stream Bottom Covered**

	1/5	2/5	3/5	4/5
Algae (attached & fila.)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Macrophytes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>80</u>	<u>90</u>	<u>70</u>	<u>60</u>

**Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth**

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:

**Bank Erosion:** Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream      % of Eroded Bank to the crest or within 5 m of stream edge

Left: 0 (m)      Right: 0 (m)      Left: 0 (%)      Right: 0 (%)

**Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect**      Section Total Must = 100%

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
					<u>20</u>	<u>50</u>	<u>30</u>		

**Riparian Buffer Width:** Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 710 (m)      Right: 710 (m)

# Wadable Stream Quantitative Habitat Evaluation

Form 3600-228 (R 6/07)

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## Transect Data

Stream Name: <u>Wadley River</u>	Waterbody ID Code: <u>53400</u>	Date (MMDDYYYY): <u>08232013</u>	Transect No.: <u>6</u>
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Distance from Start (m): <u>144</u>	Stream Width (m): <u>8.1</u>	Habitat Type: <input checked="" type="checkbox"/> Riffle <input type="checkbox"/> Pool <input type="checkbox"/> Run	Bankfull Depth (m) (optional): <u>.6</u>	Bankfull Width (m) (optional): <u>9.9</u>
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	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5	2/5	3/5	4/5
Water Depth (m)		<u>.13</u>	<u>.27</u>	<u>.7</u>	<u>.12</u>
Depth of Fines and Water (m)		<u>.13</u>	<u>.27</u>	<u>.7</u>	<u>.12</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>30</u>	<u>50</u>	<u>10</u>	<u>0</u>

## Percent (nearest 5%) of Stream Bottom Covered Section Total Must = 100%

	1/5	2/5	3/5	4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)				
Rubble / Cobble (65 - 260 mm)	<u>60</u>	<u>50</u>	<u>90</u>	<u>20</u>
Gravel (2 - 64 mm)	<u>10</u>	<u>10</u>		<u>80</u>
Sand (0.062 - 1.9 mm)	<u>30</u>	<u>40</u>	<u>10</u>	
Silt (0.004 - 0.061 mm)				
Clay				
Detritus				
Other - Specify: _____				

## Percent (nearest 10%) of Stream Bottom Covered

	1/5	2/5	3/5	4/5
Algae (attached & fila.)	<u>0</u>	<u>30</u>	<u>80</u>	<u>50</u>
Macrophytes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>90</u>	<u>10</u>	<u>0</u>	<u>0</u>

## Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:

Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream

Left: 0 (m) Right: 0 (m)      % of Eroded Bank to the crest or within 5 m of stream edge

Left: 0 (%) Right: 0 (%)

## Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect Section Total Must = 100%

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
						<u>90</u>	<u>10</u>		

Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 110 (m) Right: 110 (m)

# Wadable Stream Quantitative Habitat Evaluation

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## Transect Data

Stream Name <i>Mullet River</i>	Waterbody ID Code <i>53400</i>	Date (MMDDYYYY) <i>08/23/2013</i>	Transect No. <i>7</i>
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Distance from Start (m) <i>171</i>	Stream Width (m) <i>8.7</i>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <i>0.31</i>	Bankfull Width (m) (optional) <i>10.3</i>
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	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5	2/5	3/5	4/5
Water Depth (m)		<i>0.22</i>	<i>.11</i>	<i>.20</i>	<i>.24</i>
Depth of Fines and Water (m)		<i>.22</i>	<i>.18</i>	<i>.20</i>	<i>.24</i>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<i>50</i>	<i>70</i>	<i>10</i>	<i>10</i>

## Percent (nearest 5%) of Stream Bottom Covered

	Section Total Must = 100%			
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)	<i>10</i>		<i>40</i>	
Rubble / Cobble (65 - 260 mm)	<i>50</i>	<i>30</i>	<i>50</i>	<i>80</i>
Gravel (2 - 64 mm)	<i>25</i>	<i>20</i>		<i>10</i>
Sand (0.062 - 1.9 mm)	<i>15</i>	<i>50</i>	<i>10</i>	<i>10</i>
Silt (0.004 - 0.061 mm)				
Clay				
Detritus				
Other - Specify:				

## Percent (nearest 10%) of Stream Bottom Covered

Algae (attached & fila.)	<i>10</i>	<i>0</i>	<i>60</i>	<i>80</i>
Macrophytes	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Canopy / Shading (circle one)	<i>30</i>	<i>0</i>	<i>0</i>	<i>10</i>

## Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:

Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream	% of Eroded Bank to the crest or within 5 m of stream edge
Left: <i>0</i> (m) Right: <i>0</i> (m)	Left: <i>0</i> (%) Right: <i>0</i> (%)

## Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect

Section Total Must = 100%									
Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
					<i>20</i>	<i>60</i>	<i>20</i>		

## Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: *10* (m) Right: *10* (m)

# Wadable Stream Quantitative Habitat Evaluation

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## Transect Data

Stream Name: <u>Mullet River</u>	Waterbody ID Code: <u>53400</u>	Date (MMDDYYYY): <u>08 23 2017</u>	Transect No.: <u>8</u>
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Distance from Start (m): <u>198</u>	Stream Width (m): <u>8.5</u>	Habitat Type: <input checked="" type="checkbox"/> Riffle <input type="checkbox"/> Pool <input type="checkbox"/> Run	Bankfull Depth (m) (optional): <u>0.53</u>	Bankfull Width (m) (optional): <u>12.7</u>
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	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5	2/5	3/5	4/5
Water Depth (m)		<u>0.21</u>	<u>0.15</u>	<u>0.27</u>	<u>0.23</u>
Depth of Fines and Water (m)		<u>0.22</u>	<u>0.15</u>	<u>0.27</u>	<u>0.23</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>0</u>	<u>10</u>	<u>10</u>	<u>0</u>

4.8  
2.6  
2.8  
11.3

## Percent (nearest 5%) of Stream Bottom Covered Section Total Must = 100%

	1/5	2/5	3/5	4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)				
Rubble / Cobble (65 - 260 mm)	<u>75</u>	<u>80</u>	<u>50</u>	<u>80</u>
Gravel (2 - 64 mm)	<u>10</u>	<u>10</u>	<u>30</u>	<u>20</u>
Sand (0.062 - 1.9 mm)	<u>5</u>	<u>10</u>	<u>20</u>	
Silt (0.004 - 0.061 mm)				
Clay				
Detritus				
Other - Specify: <u>wood</u>	<u>10</u>			

## Percent (nearest 10%) of Stream Bottom Covered

	1/5	2/5	3/5	4/5
Algae (attached & fila.)	<u>0</u>	<u>0</u>	<u>50</u>	<u>60</u>
Macrophytes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>80</u>	<u>90</u>	<u>0</u>	<u>80</u>

## Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:

Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream

Left: 0 (m) Right: 0 (m)      % of Eroded Bank to the crest or within 5 m of stream edge

Left: 0 (%) Right: 0 (%)

## Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect Section Total Must = 100%

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
						<u>70</u>	<u>30</u>		

## Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 710 (m) Right: 710 (m)

Island

# Wadable Stream Quantitative Habitat Evaluation

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## Transect Data

Stream Name: <u>Mullet River</u>	Waterbody ID Code: <u>53400</u>	Date (MMDDYYYY): <u>08 23 2014</u>	Transect No.: <u>9</u>
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Distance from Start (m): <u>225</u>	Stream Width (m): <u>11.8</u> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">(9.2)</span>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional): <u>.47</u>	Bankfull Width (m) (optional): <u>18.9</u>
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Deepest Point	Channel Position (Fifths of Current Stream Width)			
	1/5 1.25	2/5 2.5	3/5 4.25	4/5 10.5
Water Depth (m)	<u>.25</u>	<u>.25</u>	<del>.19</del> <u>.19</u>	<u>.18</u>
Depth of Fines and Water (m)	<u>.25</u>	<u>.26</u>	<u>.25</u>	<u>.23</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble	<u>30</u>	<u>50</u>	<u>20</u>	<u>80</u>

## Percent (nearest 5%) of Stream Bottom Covered

	Section Total Must = 100%			
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)	<u>10</u>			
Rubble / Cobble (65 - 260 mm)	<u>70</u>	<u>70</u>	<u>50</u>	
Gravel (2 - 64 mm)			<u>20</u>	<u>20</u>
Sand (0.062 - 1.9 mm)	<u>20</u>	<u>20</u>	<u>30</u>	<u>70</u>
Silt (0.004 - 0.061 mm)				<u>10</u>
Clay				
Detritus				
Other - Specify: <u>wood</u>		<u>10</u>		

15  
12.4  
2.6  
island  
width

## Percent (nearest 10%) of Stream Bottom Covered

Algae (attached & fila.)	<u>10</u>	<u>0</u>	<u>30</u>	<u>0</u>
Macrophytes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>20</u>	<u>0</u>	<u>10</u>	<u>90</u>

## Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:

Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream	% of Eroded Bank to the crest or within 5 m of stream edge
Left: <u>0</u> (m) Right: <u>0</u> (m)	Left: <u>0</u> (%) Right: <u>0</u> (%)

## Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect

Section Total Must = 100%									
Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
						<u>40</u>	<u>60</u>		

## Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 10 (m) Right: 10 (m)

# Wadable Stream Quantitative Habitat Evaluation

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## Transect Data

Stream Name: <u>Mullet River</u>	Waterbody ID Code: <u>53400</u>	Date (MMDDYYYY): <u>08 23 2017</u>	Transect No.: <u>10</u>
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Distance from Start (m): <u>252</u>	Stream Width (m): <u>8.6</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional): <u>3.6</u>	Bankfull Width (m) (optional): <u>10.7</u>
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	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5 <u>1.7</u>	2/5 <u>3.4</u>	3/5 <u>5.1</u>	4/5 <u>6.8</u>
Water Depth (m)		<u>.27</u>	<u>.36</u>	<u>.22</u>	<u>.31</u>
Depth of Fines and Water (m)		<u>.27</u>	<u>.36</u>	<u>.22</u>	<u>.31</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>50</u>	<u>70</u>	<u>50</u>	<u>70</u>

## Percent (nearest 5%) of Stream Bottom Covered Section Total Must = 100%

	1/5	2/5	3/5	4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)		<u>10</u>		
Rubble / Cobble (65 - 260 mm)	<u>80</u>	<u>60</u>		<u>70</u>
Gravel (2 - 64 mm)		<u>10</u>	<u>50</u>	
Sand (0.062 - 1.9 mm)	<u>70</u>	<u>70</u>	<u>40</u>	<u>50</u>
Silt (0.004 - 0.061 mm)				
Clay				
Detritus				
Other - Specify: _____				

## Percent (nearest 10%) of Stream Bottom Covered

	1/5	2/5	3/5	4/5
Algae (attached & fila.)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Macrophytes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>100</u>	<u>90</u>	<u>80</u>	<u>80</u>

## Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:
				<u>5</u>			

Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 in) within 1 m of stream

Left: 0 (m)   Right: 0 (m)

% of Eroded Bank to the crest or within 5 m of stream edge

Left: 0 (%)   Right: 0 (%)

## Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect Section Total Must = 100%

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
						<u>50</u>	<u>50</u>		

Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 10 (m)   Right: 40 (m)

# Wadable Stream Quantitative Habitat Evaluation

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**Transect Data**

Stream Name: Mullet River      Waterbody ID Code: 53100      Date (MMDDYYYY): 08232017      Transect No.: 11

Distance from Start (m): 279      Stream Width (m): 9.3      Habitat Type:  Riffle     Pool     Run      Bankfull Depth (m) (optional): .37      Bankfull Width (m) (optional): 11.7

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5	2/5	3/5	4/5
Water Depth (m)		<u>.17</u>	<u>.18</u>	<u>.24</u>	<u>.05</u>
Depth of Fines and Water (m)		<u>.17</u>	<u>.18</u>	<u>.24</u>	<u>.10</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>20</u>	<u>10</u>	<u>0</u>	<u>#</u>

**Percent (nearest 5%) of Stream Bottom Covered** **Section Total Must = 100%**

	1/5	2/5	3/5	4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)				
Rubble / Cobble (65 - 260 mm)	<u>80</u>	<u>80</u>	<u>80</u>	
Gravel (2 - 64 mm)		<u>10</u>	<u>20</u>	
Sand (0.062 - 1.9 mm)	<u>20</u>	<u>10</u>		
Silt (0.004 - 0.061 mm)				<u>100</u>
Clay				
Detritus				
Other - Specify: _____				

**Percent (nearest 10%) of Stream Bottom Covered**

	1/5	2/5	3/5	4/5
Algae (attached & fila.)	<u>30</u>	<u>20</u>	<u>30</u>	<u>0</u>
Macrophytes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

**Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth**

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:

Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream      % of Eroded Bank to the crest or within 5 m of stream edge

Left: 0 (m)      Right: 0 (m)      Left: 0 (%)      Right: 0 (%)

**Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect** **Section Total Must = 100%**

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
						<u>50</u>	<u>50</u>		

Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 110 (m)      Right: 110 (m)

# Wadable Stream Quantitative Habitat Evaluation

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## Transect Data

Stream Name: <u>Mullet River</u>	Waterbody ID Code: <u>53400</u>	Date (MMDDYYYY): <u>08 23 2017</u>	Transect No.: <u>12</u>
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Distance from Start (m): <u>306</u>	Stream Width (m): <u>14.4</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional): <u>.52</u>	Bankfull Width (m) (optional): <u>17.2</u>
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	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		2/5	3/5	4/5	5/5
Water Depth (m)		<u>.10</u>	<u>.04</u>	<u>.2</u>	<u>.36</u>
Depth of Fines and Water (m)		<u>.10</u>	<u>.12</u>	<u>.24</u>	<u>.36</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>90</u>	<u>80</u>	<u>80</u>	<u>20</u>

## Percent (nearest 5%) of Stream Bottom Covered Section Total Must = 100%

	2/5	3/5	4/5	5/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)				<u>40</u>
Rubble / Cobble (65 - 260 mm)	<u>10</u>		<u>10</u>	<u>30</u>
Gravel (2 - 64 mm)		<u>20</u>	<u>40</u>	<u>20</u>
Sand (0.062 - 1.9 mm)	<u>4</u>	<u>60</u>	<u>50</u>	<u>10</u>
Silt (0.004 - 0.061 mm)	<u>60</u>	<u>10</u>		
Clay				
Detritus				
Other - Specify: <u>wood</u>	<u>30</u>	<u>10</u>		

## Percent (nearest 10%) of Stream Bottom Covered

	2/5	3/5	4/5	5/5
Algae (attached & fila.)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Macrophytes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Canopy / Shading (circle one)	<u>20</u>	<u>20</u>	<u>0</u>	<u>0</u>

## Cover for Adult Gamefish: Length (nearest 0.01 m) of transect within 0.15 m upstream or downstream in water at least 0.20 m in depth

Undercut Banks	Overhanging Vegetation at least 0.20 m overhang	Woody Debris	Other Debris	Boulder	Submerged Macrophytes	Emergent Macrophytes at least 0.20 m deep	Other - Specify:
		<u>.5</u>		<u>.25</u>			

## Bank Erosion: Length of Continuous Bare Soil (nearest 0.01 m) within 1 m of stream

% of Eroded Bank to the crest or within 5 m of stream edge Left: <u>0</u> (m)    Right: <u>0</u> (m)	Left: <u>0</u> (%)    Right: <u>0</u> (%)
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## Riparian Land Use: Percent (nearest 10%) of Bank within 5 m of stream edge, along transect Section Total Must = 100%

Cropland	Pasture	Barnyard	Developed	Meadow	Shrubs	Woodland	Wetland	Exposed Rock	Other - Specify:
						<u>50</u>	<u>50</u>		

## Riparian Buffer Width: Length (nearest 1.0 m) of Undisturbed Land Uses along transect, within 10 m of stream

Left: 110 (m)    Right: 110 (m)