

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

**Station Summary**

Stream Name <i>Watercress Creek</i>	Waterbody ID Code <i>39000</i>	SWIMS Station ID <i>10008873</i>	FH Database ID <i>72789</i>
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Date (MMDDYYYY) <i>06292017</i>	Station Name <i>Watercress Rd.</i>
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Latitude - Longitude Determination Method Used <i>SWIMS</i>	Datum Used <i>1983</i>
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Start Latitude <i>43.7172</i>	Start Longitude <i>-88.1309</i>	End Latitude <i>_____</i>	End Longitude <i>_____</i>	County <i>Sheboygan</i>
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**Water Characteristics**

Time (24-hr clock) <i>1315</i>	Air Temperature (C) <i>_____</i>	Water Temperature (C) <i>16.75</i>	Conductivity (µs/cm) <i>712.1</i>	Transparency (cm) <i>85</i>
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Dissolved Oxygen (mg/l) <i>8.22 mg/L</i>	Dissolved Oxygen % Saturation <i>88.1%</i>	pH <i>7.34</i>
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Flow (m³/sec) (from Flow Data sheet) <i>0.039</i>	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 checked="" type="checkbox"/> Stained
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**Channel and Basin Characteristics**

Stream Widths (m) <i>2.5 3.6 5.0 2.8 3.0 2.4 2.8 2.5 2.8 2.5 3.0</i>
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Mean Stream Width (m) <i>3.0</i>	Transect Spacing (m) <i>8</i>	Station Length (m) <i>100</i>	<i>3.3</i>
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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
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Percent Channelization <i>0</i>	Sinuosity <i>1.36</i>	Gradient (m/km) <i>0.14</i>	Stream Order <i>2</i>	Basin Area (km²) <i>28.23</i>
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(from Map Data Sheet)

Mean Distance (m) Between:	Bends: <i>0</i>	Riffles: <i>0</i>	
Total (Sum) Length (m) of All:	Riffles: <i>0</i>	Pools: <i>0</i>	Runs: <i>100</i>
Mean Length (m) of Individual:	Riffles: <i>0</i>	Pools: <i>0</i>	Runs: <i>100</i>

Person(s) Who Collected Data (Full Names)

*Sabre, Helker, Cox, Olson*

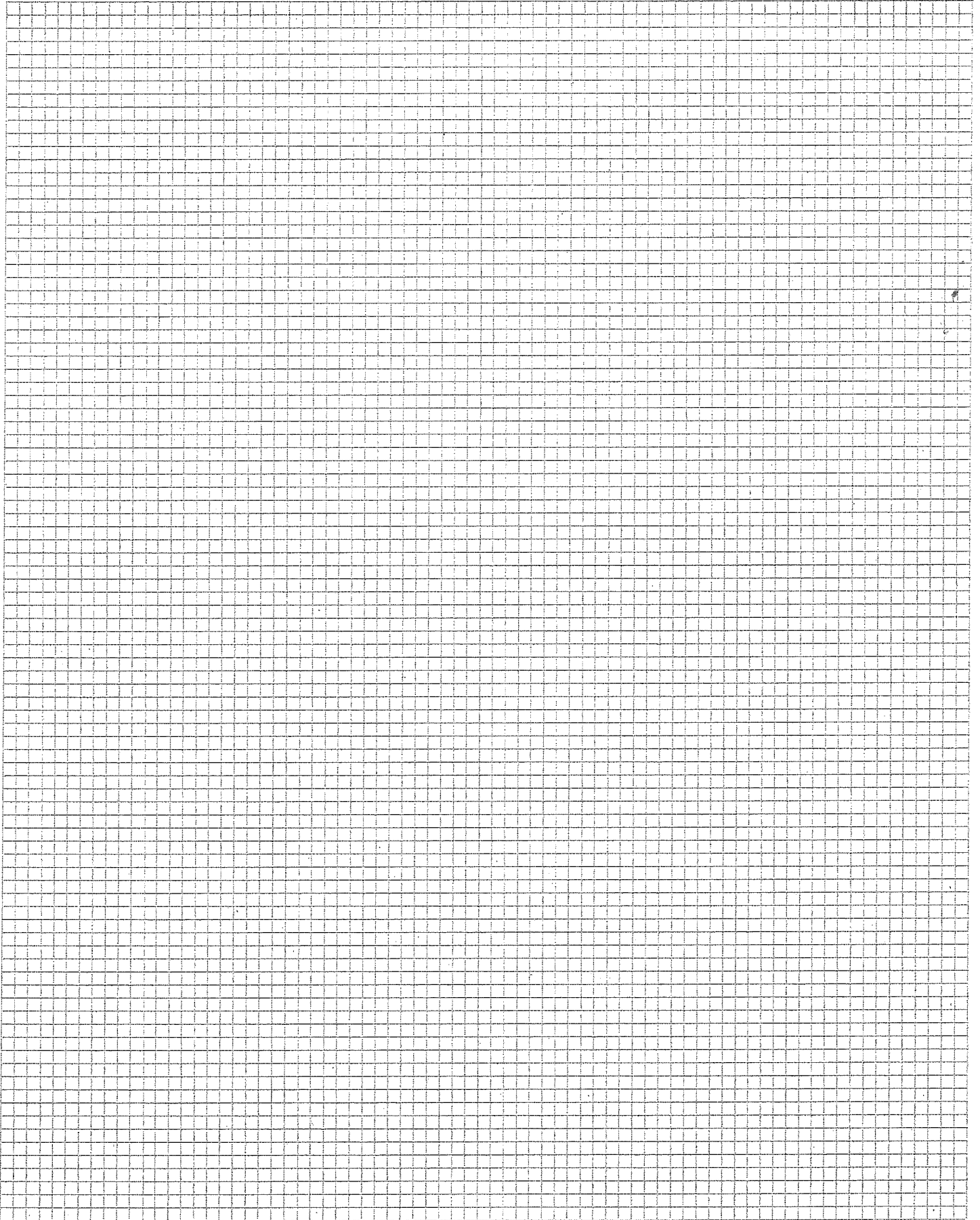
Comments / Notes

	depth	Flow	depth	Flow	
<i>0</i>	<i>.45</i>	<i>.30</i>	<i>4.4</i>	<i>1.3</i>	<i>.31</i>
<i>.4</i>	<i>.5</i>	<i>.29</i>	<i>4.8</i>	<i>1.3</i>	<i>.30</i>
<i>.8</i>	<i>1.1</i>	<i>.34</i>	<i>5.2</i>	<i>1.35</i>	<i>.34</i>
<i>1.2</i>	<i>1.05</i>	<i>.30</i>	<i>5.6</i>	<i>1.3</i>	<i>.31</i>
<i>1.6</i>	<i>1.15</i>	<i>.33</i>	<i>6.0</i>	<i>1.0</i>	<i>.24</i>
<i>2.0</i>	<i>1.2</i>	<i>.41</i>	<i>6.4</i>	<i>1.0</i>	<i>.25</i>
<i>2.4</i>	<i>1.2</i>	<i>.41</i>	<i>6.8</i>	<i>.7</i>	<i>.26</i>
<i>2.8</i>	<i>1.25</i>	<i>.44</i>	<i>7.2</i>	<i>.7</i>	<i>.05</i>
<i>3.2</i>	<i>1.3</i>	<i>.41</i>	<i>7.6</i>	<i>.4</i>	<i>.0</i>
<i>3.6</i>	<i>1.3</i>	<i>.40</i>	<i>8.0</i>	<i>.2</i>	<i>.00</i>
<i>4.0</i>	<i>1.3</i>	<i>.37</i>	<del><i>8.4</i></del>		

*8.43m = width*







**Transect Data**

Stream Name <i>Warrior creek</i>		Waterbody ID Code <i>39000</i>	Date (MMDDYYYY) <i>06292017</i>	Transect No. <i>1</i>
Distance from Start (m) <i>3m</i>	Stream Width (m) <i>2.5</i>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <i>.26</i>	Bankfull Width (m) (optional) <i>3.2</i>

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		<i>0.5</i> 1/5	<i>1.0</i> 2/5	<i>1.5</i> 3/5	<i>2.0</i> 4/5
Water Depth (m)	<i>.54</i>	<i>.26</i>	<i>.34</i>	<i>.80</i>	<i>.57</i>
Depth of Fines and Water (m)		<i>.27</i>	<i>.34</i>	<i>.55</i>	<i>.52</i>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<i>10</i>	<i>10</i>	<i>40</i>	<i>90</i>

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

Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)		<i>60</i>	<i>20</i>	<i>10</i>
Rubble / Cobble (65 - 260 mm)	<i>30</i>		<i>30</i>	<i>10</i>
Gravel (2 - 64 mm)		<i>30</i>		<i>10</i>
Sand (0.062 - 1.9 mm)		<i>5</i>	<i>20</i>	<i>20</i>
Silt (0.004 - 0.061 mm)	<i>70</i>	<i>5</i>	<i>20</i>	<i>10</i>
Clay			<i>10</i>	<i>4</i>
Detritus				<i>40</i>
Other - Specify: _____				

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

Algae (attached & fila.)	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
Macrophytes	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
Canopy / Shading (circle one)	<i>80</i>	<i>70</i>	<i>30</i>	<i>20</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>70</i>			

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

Left: <i>34</i> (m)	Right: <i>.5</i> (m)	% of Eroded Bank to the crest or within 5 m of stream edge
		Left: <i>0</i> (%) Right: <i>80</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>50</i>		<i>50</i>		

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

Left: <i>710</i> (m)	Right: <i>710</i> (m)
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## Transect Data

Stream Name <u>WATERCRESS</u>		Waterbody ID Code <u>39000</u>	Date (MMDDYYYY) <u>06292012</u>	Transect No. <u>7.2</u>
Distance from Start (m) <u>11</u>	Stream Width (m) <u>3.6</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <u>.17</u>	Bankfull Width (m) (optional) <u>4.1</u>

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5	2/5	3/5	4/5
Water Depth (m)	<u>.31</u>	<u>.31</u>	<u>.28</u>	<u>.28</u>	<u>.25</u>
Depth of Fines and Water (m)		<u>.34</u>	<u>.30</u>	<u>.28</u>	<u>.28</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>50</u>	<u>50</u>	<u>40</u>	<u>90</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>30</u>		<u>20</u>
Rubble / Cobble (65 - 260 mm)	<u>20</u>		<u>20</u>	
Gravel (2 - 64 mm)	<u>20</u>	<u>40</u>	<u>30</u>	
Sand (0.062 - 1.9 mm)	<u>40</u>	<u>20</u>	<u>50</u>	<u>50</u>
Silt (0.004 - 0.061 mm)	<u>20</u>	<u>10</u>		<u>30</u>
Clay				
Detritus				
Other - Specify: _____				

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

	1/5	2/5	3/5	4/5
Algae (attached & fila.)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Macrophytes	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Canopy / Shading (circle one)	<u>-</u>	<u>10</u>	<u>20</u>	<u>20</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>.65</u>			

**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>100</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)

**Transect Data**

Stream Name <u>Waters Creek</u>	Waterbody ID Code <u>3900</u>	Date (MMDDYYYY) <u>06292017</u>	Transect No. <u>T3</u>
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Distance from Start (m) <u>19m</u>	Stream Width (m) <u>5.0</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <u>1.22</u>	Bankfull Width (m) (optional) <u>5.4</u>
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Deepest Point	Channel Position (Fifths of Current Stream Width)			
	1 1/5	2 2/5	3 3/5	4 4/5
Water Depth (m)	<u>0.18</u>	<u>0.23</u>	<u>0.27</u>	<u>0.24</u>
Depth of Fines and Water (m)	<u>0.22</u>	<u>0.24</u>	<u>0.27</u>	<u>0.24</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble	<u>70</u>	<u>20</u>	<u>60</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>	<u>80</u>	<u>60</u>	<u>10</u>
Rubble / Cobble (65 - 260 mm)			<u>10</u>	<u>10</u>
Gravel (2 - 64 mm)	<u>30</u>	<u>10</u>	<u>20</u>	<u>50</u>
Sand (0.062 - 1.9 mm)	<u>25</u>	<u>5</u>	<u>10</u>	<u>30</u>
Silt (0.004 - 0.061 mm)	<u>25</u>	<u>5</u>		
Clay				
Detritus	<u>10</u>			
Other - Specify: _____				

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

Algae (attached & fila.)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Macrophytes	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Canopy / Shading (circle one)	<u>30</u>	<u>50</u>	<u>10</u>	<u>30</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>1.83</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 (m) Right: 0.3 (m) Left: 0 (%) Right: 70 (%)

**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>100</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)

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## Transect Data

Stream Name <u>Little River</u>		Waterbody ID Code <u>39000</u>	Date (MMDDYYYY) <u>06292014</u>	Transect No. <u>74</u>
Distance from Start (m) <u>27</u>	Stream Width (m) <u>2.8</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <u>.21</u>	Bankfull Width (m) (optional) <u>2.8 m</u>

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		0.5 1/5	1.1 2/5	1.65 3/5	2.2 4/5
Water Depth (m)	<u>.25</u>	<u>.25</u>	<u>.24</u>	<u>.22</u>	<u>.18</u>
Depth of Fines and Water (m)		<u>.30</u>	<u>.25</u>	<u>.22</u>	<u>.18</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>80</u>	<u>80</u>	<u>40</u>	<u>30</u>

Percent (nearest 5%) of Stream Bottom Covered					Section Total Must = 100%
Bedrock (solid slab)					
Boulder (261 mm - 4.1 m)					
Rubble / Cobble (65 - 260 mm)			<u>30</u>	<u>10</u>	
Gravel (2 - 64 mm)		<u>40</u>	<u>15</u>	<u>50</u>	<u>50</u>
Sand (0.062 - 1.9 mm)		<u>30</u>	<u>25</u>	<u>40</u>	<u>50</u>
Silt (0.004 - 0.061 mm)		<u>20</u>	<u>30</u>		
Clay					
Detritus		<u>10</u>	<u>10</u>		
Other - Specify: _____					

Percent (nearest 10%) of Stream Bottom Covered				
Algae (attached & fila.)		<u>—</u>	<u>—</u>	<u>—</u>
Macrophytes		<u>—</u>	<u>—</u>	<u>—</u>
Canopy / Shading (circle one)		<u>10</u>	<u>10</u>	<u>10</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: .3 (m)

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

Left: 0 (%)      Right: 30 (%)

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>100</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>Watercross Creek</u>		Waterbody ID Code <u>39000</u>	Date (MMDDYYYY) <u>06292007</u>	Transect No. <u>T5</u>
Distance from Start (m) <u>35m</u>	Stream Width (m) <u>3.0</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run		Bankfull Depth (m) (optional) <u>.19</u>
		Bankfull Width (m) (optional) <u>3.4</u>		

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		<u>.6</u> 1/5	<u>1.2</u> 2/5	<u>1.8</u> 3/5	<u>2.4</u> 4/5
Water Depth (m)	<u>.36</u>	<u>.16</u>	<u>.28</u>	<u>.36</u>	<u>.32</u>
Depth of Fines and Water (m)		<u>.23</u>	<u>.39</u>	<u>.39</u>	<u>.41</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble				<u>100</u>	

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

Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)				
Rubble / Cobble (65 - 260 mm)				
Gravel (2 - 64 mm)			<u>5</u>	
Sand (0.062 - 1.9 mm)	<u>10</u>	<u>10</u>	<u>75</u>	<u>60</u>
Silt (0.004 - 0.061 mm)	<u>30</u>	<u>40</u>	<u>20</u>	<u>20</u>
Clay				
Detritus	<u>20</u>	<u>50</u>		<u>20</u>
Other - Specify: <u>40% wood</u>				

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

Algae (attached & fila.)	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Macrophytes	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Canopy / Shading (circle one)	<u>100</u>	<u>100</u>	<u>80</u>	<u>70</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>100</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)

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## Transect Data

Stream Name <i>Waters Cross Creek</i>		Waterbody ID Code <i>39000</i>	Date (MMDDYYYY) <i>06292013</i>	Transect No. <i>76</i>
Distance from Start (m) <i>43</i>	Stream Width (m) <i>2.4</i>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <i>1.7</i>	Bankfull Width (m) (optional) <i>2.6</i>

	Deepest Point	Channel Position (Fifths of Current Stream Width) -			
		<i>418</i> 1/5	<i>296</i> 2/5	<i>1,114</i> 3/5	<i>1,924</i> 4/5
Water Depth (m)	<i>.41</i>	<i>.36</i>	<i>.41</i>	<i>.39</i>	<i>.37</i>
Depth of Fines and Water (m)		<i>.41</i>	<i>.44</i>	<i>.40</i>	<i>.40</i>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<i>40</i>	<i>60</i>	<i>30</i>	<i>90</i>

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

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

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

Algae (attached & fila.)	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
Macrophytes	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
Canopy / Shading (circle one)	<i>10</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: 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:
							<i>100</i>		

## 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)

**Transect Data**

Stream Name <u>Wabens Creek</u>	Waterbody ID Code <u>39000</u>	Date (MMDDYYYY) <u>06292007</u>	Transect No. <u>77</u>
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Distance from Start (m) <u>51m</u>	Stream Width (m) <u>2.8</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <u>20</u>	Bankfull Width (m) (optional) <u>2.8m</u>
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	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		.55 1/5	1.1 2/5	1.65 3/5	2.2 4/5
Water Depth (m)	<u>.18</u>	<u>.16</u>	<u>.17</u>	<u>.18</u>	<u>.17</u>
Depth of Fines and Water (m)		<u>.20</u>	<u>.17</u>	<u>.18</u>	<u>.18</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>50</u>	<u>20</u>	<u>10</u>	<u>40</u>

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

Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)		<u>10</u>	<u>10</u>	<u>20</u>
Rubble / Cobble (65 - 260 mm)	<u>30</u>	<del>20</del> <u>50</u>	<del>30</del>	
Gravel (2 - 64 mm)		<del>10</del>	<u>40</u>	<u>40</u>
Sand (0.062 - 1.9 mm)	<u>20</u>	<del>10</del> <u>15</u>	<u>30</u>	<u>30</u>
Silt (0.004 - 0.061 mm)	<u>20</u>	<u>10</u>		
Clay				
Detritus				
Other - Specify: _____	<u>wood 30</u>	<u>10 wood</u>	<u>wood 20</u>	<u>10 wood</u>

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

Algae (attached & fila.)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Macrophytes	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Canopy / Shading (circle one)	<u>100</u>	<u>100</u>	<u>90</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>100</u>		

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

Left: 70 (m) Right: 70 (m)

# Wadable Stream Quantitative Habitat Evaluation

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## Transect Data

Stream Name <i>Woods Run</i>	Waterbody ID Code <i>39000</i>	Date (MMDDYYYY) <i>06 29 2017</i>	Transect No. <i>T.8</i>
Distance from Start (m) <i>59m</i>	Stream Width (m) <i>2.5</i>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <i>-18</i>
		Bankfull Width (m) (optional) <i>2.8</i>	

	Deepest Point	Channel Position (Fifths of Current Stream Width) -			
		<i>0.5</i> 1/5	<i>1.0</i> 2/5	<i>1.5</i> 3/5	<i>2.0</i> 4/5
Water Depth (m)	<i>.22</i>	<i>.20</i>	<i>.11</i>	<i>.22</i>	<i>.20</i>
Depth of Fines and Water (m)		<i>.32</i>	<i>.24</i>	<i>.23</i>	<i>.20</i>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<i>-</i>		<i>30</i>	<i>40</i>

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

	<i>0.5</i> 1/5	<i>1.0</i> 2/5	<i>1.5</i> 3/5	<i>2.0</i> 4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)				
Rubble / Cobble (65 - 260 mm)			<i>30</i>	<i>-</i>
Gravel (2 - 64 mm)			<i>30</i>	<i>50</i>
Sand (0.062 - 1.9 mm)	<i>30</i>	<i>10</i>	<i>10</i>	<i>40</i>
Silt (0.004 - 0.061 mm)	<i>50</i>	<i>50</i>	<i>-</i>	<i>10</i>
Clay				
Detritus	<i>30</i>	<i>40</i>	<i>30</i>	
Other - Specify: _____				

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

	<i>0.5</i> 1/5	<i>1.0</i> 2/5	<i>1.5</i> 3/5	<i>2.0</i> 4/5
Algae (attached & fila.)	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
Macrophytes	<i>-</i>	<i>-</i>	<i>70 roots</i>	<i>-</i>
Canopy / Shading (circle one)	<i>80</i>	<i>20</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

Left: *0* (m)      Right: *10* (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:
							<i>100</i>		

## 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)

**Transect Data**

Stream Name <u>Watershed Creek</u>	Waterbody ID Code <u>39000</u>	Date (MMDDYYYY) <u>06292017</u>	Transect No. <u>T9</u>
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Distance from Start (m) <u>67m</u>	Stream Width (m) <u>2.8</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <u>.17</u>	Bankfull Width (m) (optional) <u>2.9</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>.16</u>	<u>.16</u>	<u>.14</u>	<u>.16</u>	<u>.14</u>
Depth of Fines and Water (m)		<u>.20</u>	<u>.14</u>	<u>.17</u>	<u>.15</u>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<u>50</u>	<u>20</u>	<u>40</u>	<u>30</u>

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

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

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

Algae (attached & fila.)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Macrophytes	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Canopy / Shading (circle one)	<u>50</u>	<u>10</u>	<u>10</u>	<u>10</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>100</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)

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**Transect Data**

Stream Name <i>Wasserman Creek</i>		Waterbody ID Code <i>39000</i>	Date (MMDDYYYY) <i>06292017</i>	Transect No. <i>T10</i>
Distance from Start (m) <i>67</i>	Stream Width (m) <i>2.5</i>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <i>.19</i>	Bankfull Width (m) (optional) <i>2.8m</i>

	Deepest Point	Channel Position (Fifths of Current Stream Width) -			
		.5 1/5	1 2/5	1.5 3/5	2 4/5
Water Depth (m)	<i>.31</i>	<i>.29</i>	<i>.29</i>	<i>.31</i>	<i>.29</i>
Depth of Fines and Water (m)		<i>.40</i>	<i>.37</i>	<i>.35</i>	<i>.33</i>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<i>100</i>	<i>50</i>	<i>100</i>	<i>—</i>

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

	.5 1/5	1 2/5	1.5 3/5	2 4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)				
Rubble / Cobble (65 - 260 mm)				
Gravel (2 - 64 mm)	<i>10</i>	<i>30</i>	<i>5</i>	
Sand (0.062 - 1.9 mm)	<i>30</i>	<i>30</i>	<i>25</i>	<i>30</i>
Silt (0.004 - 0.061 mm)	<i>30</i>	<i>10</i>	<i>30</i>	<i>40</i>
Clay				
Detritus	<i>20</i>	<i>30</i>	<i>10</i>	<i>20</i>
Other - Specify:	<i>10 woody</i>		<i>30 woody</i>	<i>10 woody</i>

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

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

Left: *0* (m) Right: *3* (m) % of Eroded Bank to the crest or within 5 m of stream edge

Left: *0* (%) Right: *70* (%)

**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>100</i>		

**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)

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## Transect Data

Stream Name <u>Worcester Creek</u>		Waterbody ID Code <u>39000</u>	Date (MMDDYYYY) <u>0629 2017</u>	Transect No. <u>T11</u>
Distance from Start (m) <u>83m</u>	Stream Width (m) <u>3</u>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run		Bankfull Depth (m) (optional) <u>0.14</u>
			Bankfull Width (m) (optional) <u>3.3</u>	

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		1/5	2/5	3/5	4/5
Water Depth (m)	<u>0.25</u>	<u>0.18</u>	<u>0.22</u>	<u>0.25</u>	<u>0.17</u>
Depth of Fines and Water (m)	<u>0.25</u>	<u>0.34</u>	<u>0.26</u>	<u>0.22</u>	
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble	<u>—</u>	<u>—</u>	<u>—</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)				
Gravel (2 - 64 mm)				
Sand (0.062 - 1.9 mm)	<u>10</u>	<u>10</u>	<u>70 sand</u>	<u>50</u>
Silt (0.004 - 0.061 mm)	<u>100</u>	<u>40</u>	<u>10</u>	<u>20</u>
Clay				
Detritus	<u>30</u>	<u>30</u>	<u>10</u>	<u>20</u>
Other - Specify: _____		<u>20 wood</u>	<u>10 wood</u>	<u>10 wood</u>

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

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

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## Transect Data

Stream Name <i>Waters Cross Creek</i>		Waterbody ID Code <i>39000</i>	Date (MMDDYYYY) <i>06292014</i>	Transect No. <i>T12</i>
Distance from Start (m) <i>91m</i>	Stream Width (m) <i>3.3</i>	Habitat Type: <input type="checkbox"/> Riffle <input type="checkbox"/> Pool <input checked="" type="checkbox"/> Run	Bankfull Depth (m) (optional) <i>.14</i>	Bankfull Width (m) (optional) <i>3.7</i>

	Deepest Point	Channel Position (Fifths of Current Stream Width)			
		<i>.660</i> 1/5	<i>1.32</i> 2/5	<i>1.98</i> 3/5	<i>2.64</i> 4/5
Water Depth (m)	<i>.27</i>	<i>.27</i>	<i>.23</i>	<i>.24</i>	<i>.24</i>
Depth of Fines and Water (m)		<i>.29</i>	<i>.28</i>	<i>.28</i>	<i>.26</i>
Embeddedness (nearest 10%) of Course Gravel and Rubble/Cobble		<i>100</i>	<i>100</i>	<i>—</i>	<i>—</i>

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

	<i>.660</i> 1/5	<i>1.32</i> 2/5	<i>1.98</i> 3/5	<i>2.64</i> 4/5
Bedrock (solid slab)				
Boulder (261 mm - 4.1 m)		<i>10</i>	<i>30</i>	<i>10</i>
Rubble / Cobble (65 - 260 mm)	<i>10</i>			
Gravel (2 - 64 mm)	<i>20</i>	<i>10</i>		
Sand (0.062 - 1.9 mm)	<i>40</i>	<i>80</i>	<i>20</i>	<i>50</i>
Silt (0.004 - 0.061 mm)	<i>20</i>	<i>20</i>	<i>30</i>	<i>20</i>
Clay				
Detritus	<i>10</i>	<i>10</i>	<i>20</i>	<i>10</i>
Other - Specify: _____		<i>10 woody</i>		<i>10 woody</i>

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

Algae (attached & fila.)	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>
Macrophytes	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>
Canopy / Shading (circle one)	<i>80</i>	<i>80</i>	<i>100</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>.35</i>			

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:
							<i>100</i>		

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

Left: *70* (m) Right: *70* (m)