

# Fish Survey for Unnamed Tributary to Moravian Run Clearfield County

## Technical Report Provided Through the Trout Unlimited AMD Technical Assistance Program

June 2010

### Background

A fish survey was conducted on the unnamed tributary to Moravian Run (Table 1) in the Moravian Run watershed as part of a Technical Assistance Grant (TAG) requested by the Clearfield County Senior Environment Corp (CCSEC). Moravian Run is designated by the Pennsylvania Department of Environmental Protection (DEP) as a Cold Water Fishery and several of its tributaries are recognized by the Pennsylvania Fish and Boat Commission as natural reproduction trout waters (Figure 2). CCSEC requested this assessment because brook trout have been observed in the unnamed tributary, but the stream is not recognized as a natural reproduction trout water. CCSEC wishes to document all wild trout waters in Moravian Run and its tributaries to support the need for current and future abandoned mine drainage treatment projects in the watershed.

*Table 1. Site Location*

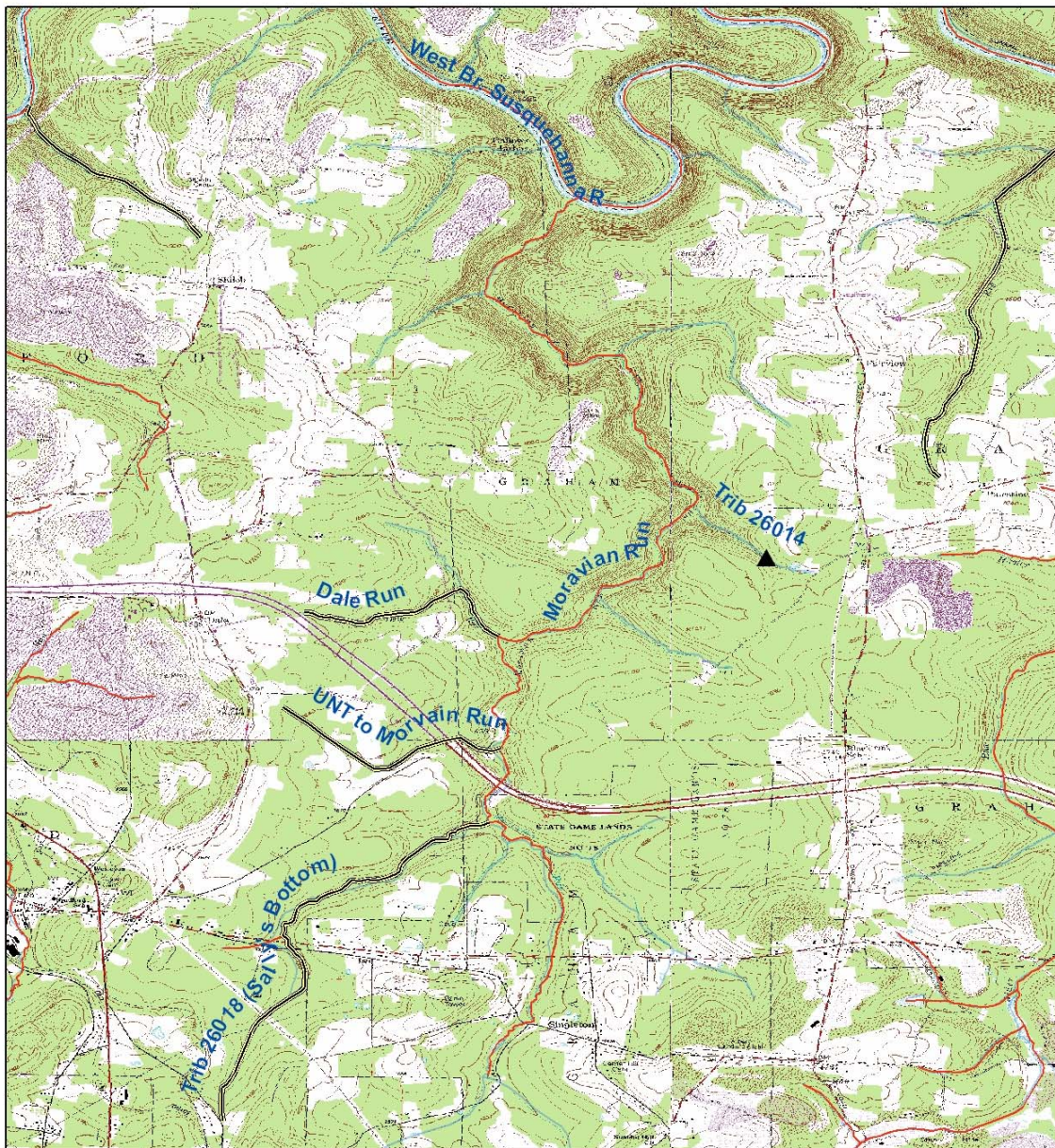
Site	Latitude	Longitude
UNT to Moravian Run	41.01662	-78.2413

Sampling occurred on June 3, 2010 and included TU staff, Clearfield County Conservation District staff, and a volunteer. The 300-m sample site was closed to immigration and emigration with block nets and electrofishing was carried out with an *Appalachian Aquatics Model AA-24 Backpack Aquatic Sampling Device*. A moderate to low voltage (200 to 300) was used with direct current (DC) as the conductivity was measured to be 143.8  $\mu\text{S}$ . A two-pass effort was conducted to provide an index of relative abundance.

*Figure 1. UNT to Moravian Run Sampling*

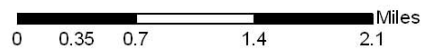


Figure 2. UNT to Moravian Run Sampling Location



- ▲ Sampling Location
- Trout\_NaturalReproduction201006
- Acid Mine Drainage Impaired

### UNT to Moravian Run Sampling Location



**UNT to Moravian Run**

The unnamed tributary to Moravian Run assessed for this TAG is located approximately 2.7 miles from the mouth of Moravian Run and can be accessed from Grahamton Road. Water quality (Table 2) and habitat at the sampling location was suitable for brook trout, but with notable sedimentation. It should be noted that brook trout habitat appeared better upstream of the sampling location, but site access was not granted for this portion of the stream.

*Table 2. UNT to Moravian Run Field Data*

Field Parameters	
Conductivity (uS)	143.8
pH (standard units)	6.63

Fish data collected for this project (Table 3) indicate a brook trout fishery worthy of a Class C designation. This brook trout population could provide a means of natural repopulation to Moravian Run once Moravian’s in-stream AMD pollution is abated.

*Table 3. UNT to Moravian Run Brook Trout Relative Abundance*

	<i>Station length (m)</i>	<i>Station width (m)</i>	<i>Site area (ha)</i>	
	300	2.48	0.0744	
<b>Species</b>	<b>Number</b>	<b>Mean wt (g)</b>	<b>Weight (kg)</b>	<b>kg/ha</b>
Brook Trout - <i>Salvelinus fontinalis</i>				
(<49mm)	2	0	0	0.00000000
(50-74mm)	1	10.432616	0.01043262	0.23183591
(75-99mm)	4	7.484268	0.00748427	0.66526827
(100-124mm)	16	13.5	0.01346601	4.78791556
(125-149mm)	4	23.586784	0.02358678	2.09660302
(150-174mm)	3	40.5208853	0.04052089	2.70139236
(175-199mm)	1	55.338224	0.05533822	1.22973831
(200-224mm)				
YOY				
<b>Total</b>	<b>31</b>			<b>10.81564924</b>

*Figures 4 & 5. UNT to Moravian Run Brook Trout*

