

## **Distribution**

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**PA FISH AND BOAT COMMISSION  
COMMENTS AND RECOMMENDATIONS**

February 22, 2018

**WATER:** UNT To Penns Creek (RM 53.77) (306A) Centre County

**EXAMINED:** June 16, 2015

**BY:** J. Detar, Z. Salada, T. Blackman, S. Sbrolla

Bureau Director Action: \_\_\_\_\_ Date: \_\_\_\_\_

Division Chief Action: \_\_\_\_\_ Date: \_\_\_\_\_

CW Unit Leader Action: \_\_\_\_\_ Date: \_\_\_\_\_

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**AREA COMMENTS:** UNT to Penns Creek (RM 53.77) is a small stream which flows into Penns Creek in Centre County. The stream was found to support a dense population of wild Brown Trout. The estimated biomass for Brown Trout was 159.84 kg/ha and met the minimum biomass criteria for listing as a Class A wild Brown Trout stream. Seventeen percent of the perennial stream length was sampled.

**AREA RECOMMENDATIONS:**

1. Add UNT to Penns Creek (RM 53.77), Section 01, (headwaters to the mouth) to the Commission's Class A Wild Trout Streams list.
2. Manage UNT to Penns Creek (RM 53.77), Section 01, as a Class A Wild Trout Stream under Commonwealth Inland Waters regulations with no stocking.
3. Add UNT to Penns Creek (RM 53.77) from the headwaters downstream to the mouth on the PFBC's list of stream sections that support natural reproduction of trout.
4. Request the Department of Environmental Protection designate UNT to Penns Creek (RM 53.77) as High Quality-Cold Water Fishes and Migratory Fishes (HQ-CWF, MF) under 25 PA Code Chapter 93 based on the Class A qualifier found in 93.4b(2)(ii).

**This work made possible by funding from the Sport Fish Restoration Act Project F-57-R Fisheries Management.**

**PENNSYLVANIA FISH & BOAT COMMISSION  
BUREAU OF FISHERIES  
FISHERIES MANAGEMENT DIVISION**

UNT To Penns Creek (RM 53.77) (06A)  
Section 01  
Fisheries Management Report  
Unassessed Water

Prepared by  
David Kristine and Jason Detar

Fisheries Management Database Name: UNT To Penns Creek (RM 53.77)  
Lat/Lon: 40°51'12"/77°29'50"

Date Sampled: June 16, 2015                      Date Prepared: October 07, 2015

### **Introduction**

UNT To Penns Creek (RM 53.77) is a small stream located in Centre County and flows into Penns Creek at River Mile (RM) 53.77, 40°51'12" latitude and 77°29'50" longitude. The stream has a total length of 5.24 km (3.26 mi) and a drainage area of 8.99 km<sup>2</sup> (3.47 mi<sup>2</sup>). Of the total length, 0.77 km is depicted as perennial flow while the remaining 4.77 km is classified as intermittent. UNT To Penns Creek (RM 53.77) can be found on the Coburn, Madisonburg and Spring Mills PA United States Geological Survey 7.5 minute quadrangles (Figure 1).

UNT To Penns Creek (RM 53.77) was surveyed as part of the Unassessed Waters Program to gather baseline information on the resource for management purposes and to verify and document the presence of a reproducing population of trout. Knowledge of the presence of wild trout in streams is important in the proper permitting of land use activities and in the long-term restoration projects such as the Eastern Brook Trout Joint Venture. The riparian land along UNT To Penns Creek (RM 53.77) is privately owned. UNT To Penns Creek (RM 53.77) is managed as one section from the headwaters to the mouth.

### **Methods**

The examination of UNT To Penns Creek (RM 53.77) was conducted on June 16, 2015. All procedures were carried out according to those outlined by Weber et al. (2011). One sampling station was chosen to be representative of Section 01.

Physical characteristics, physical-chemical values, and fish communities were examined. Rapid bioassessment protocols (RBP) were used to assess the habitat in this stream (Barbour et al. 1999). The fish communities were sampled using an electrobackpack equipped with a variable voltage electrofisher set at 75 volts Pulsed-DC. Wild trout were measured and recorded in 25 mm (1.0 inch) length groups. Statewide average weights calculated for each length group were used to generate the biomass estimate. Wild trout densities were determined by using the number of trout captured in a single electrofishing pass. Scientific and common fish names reference the Integrated Taxonomic Information System (<http://www.itis.gov>).

## **Results**

### *Site River Mile: 0.01*

Sample site RM 0.01 was located approximately 20 m upstream of the mouth, 40°51'14" latitude and 77°29'53" longitude. The 135 m long station averaged 0.92 m in width and covered 18 percent of the perennial stream length (Table 1). This portion of the stream primarily flowed through a reverting field with riparian buffer. Bank erosion was light and the stream substrate consisted primarily of rubble and gravel. The RBP analysis yielded a final score of 145 (Table 2).

Physical-chemical parameters and their associated values measured under normal flow conditions were as follows: water temperature 19°C and specific conductance 519 umhos (Table 3).

Three fish species were captured at the site, including wild Brown Trout *Salmo trutta*. The other species captured were Blacknose Dace *Rhinichthys atratulus* and White Sucker *Catostomus commersonii* (Table 4).

### **Brown Trout**

Thirty-six wild Brown Trout ranging from 25 mm to 299 mm in total length (TL) were captured during the survey with thirteen (36 percent) being greater than or equal to the legal harvestable length (175 mm: 7 in). Total Brown Trout biomass was estimated to be 159.84 kg/ha. Brown Trout abundance was estimated at 265 trout/km (426 trout/mi) with 95 trout/km (153 trout/mi) being of legal length or longer (Table 5).

## **Discussion**

Section 01 of UNT To Penns Creek (RM 53.77) supported natural reproduction of Brown Trout and qualified for listing of Wild Trout Streams as outlined in 58 PA Code §57.11. In addition, the wild Brown Trout biomass qualified the stream to be listed as a

Class A wild Brown Trout water, as outlined in 58 PA Code §57.8a., Class A Wild Trout Streams. The current 25 PA Code Chapter 93 Water Quality Standards listing of Cold Water Fishes and Migratory Fishes (CWF, MF) for UNT To Penns Creek (RM 53.77) basin does not adequately protect the existing flora and fauna present within the basin. Due to the significant wild trout resource which meets Class A criteria, UNT to Penns Creek (RM 53.77) Run should be upgraded to High Quality-Cold Water Fishes and Migratory Fishes (HQ-CWF, MF) designation by the PA Department of Environmental Protection (DEP) upon listing by the Commission as a Class A wild trout stream.

#### **Management Recommendations**

1. Add UNT to Penns Creek (RM 53.77), Section 01, (headwaters to the mouth) to the Commission's Class A Wild Trout Streams list.
2. Manage UNT to Penns Creek (RM 53.77), Section 01, as a Class A Wild Trout Stream under Commonwealth Inland Waters regulations with no stocking.
3. Add UNT to Penns Creek (RM 53.77) from the headwaters downstream to the mouth on the PFBC's list of stream sections that support natural reproduction of trout.
4. Request the Department of Environmental Protection designate UNT to Penns Creek (RM 53.77) as High Quality-Cold Water Fishes and Migratory Fishes (HQ-CWF, MF) under 25 PA Code Chapter 93 based on the Class A qualifier found in 93.4b(2)(ii).

## Literature Cited

- Barbour, M.T., J. Gerritsen, B.D. Snyder, and J.B. Stribling. 1999. Rapid bioassessment protocols for use in wadeable streams and Rivers. USEPA. Report 814-99-002 Washington, DC.
- Weber, R., R. T. Greene, and D. Miko. 2011. Protocols for conducting biological assessments of unassessed trout waters. Pages 95-101 in D. Miko, editor. Sampling protocols for Pennsylvania's wadeable streams. Pennsylvania Fish and Boat Commission. Harrisburg, PA.

Table 1. UNT To Penns Creek (RM 53.77) (06A), Centre County. Site sampling location, length surveyed, average site width and site area.

Site Date	Rivermile	Downstream limit description	Length (m)	Ave. Width (m)	Site Area (ha)
06/16/15	0.01	Approximately 20 m upstream of the mouth at Penns Ck Road crossing	135	0.92	0.01

Table 2. High Gradient Rapid Bioassessment Protocol ratings for UNT To Penns Creek (RM 53.77) (06A), Centre County, conducted at RM 0.01 on June 16, 2015.

Habitat Parameter Reported	Score	Habitat Parameter Reported	Score
1. Epifaunal Substrate / Available Cover:	14	8. (LB) Left Bank Stability (LB):	8
2. Embeddedness:	16	8. (RB) Right Bank Stability (RB):	8
3. Velocity / Depth Regime:	13	9. (LB) Left Bank Vegetative Protection:	7
4. Sediment Deposition:	14	9. (RB) Right Bank Vegetative Protection:	7
5. Channel Flow Status:	18	10. (LB) Left Bank Riparian Vegetative Width:	7
6. Channel Alteration:	12	10. (RB) Right Bank Riparian Vegetative Width:	6
7. Frequency of Riffles (or bends):	15		

Total Score

145

Table 3. Chemistries collected in UNT To Penns Creek (RM 53.77) (06A), Centre County. Sample site(s) are within Section 1 in 2015 sample year.

Parameter	Site 1
Site RM	0.01
Sample Date	06/16/2015
Time (24 hour)	1420
Specific Conductance	519
Water Temperature	19.0

Table 4. Fish species occurrence from UNT To Penns Creek (RM 53.77) (06A), Centre County at sample site RM 0.01 on June 16, 2015.

Common Name	Scientific Name	Coarse Abundance
Blacknose Dace	<i>Rhinichthys atratulus</i>	
Brown Trout	<i>Salmo trutta</i>	
White Sucker	<i>Catostomus commersonii</i>	

Table 5. Wild Brown Trout catch and biomass estimates at sample site RM 0.01 on UNT To Penns Creek (RM 53.77) (06A), Centre County, on June 16, 2015.

Length group (mm)	Catch	Estimated Number/ha	Estimated kg/ha	Estimated Number/km
25	3	242	0.25	22
50	11	887	2.25	81
125	2	161	4.24	15
150	7	565	24.76	52
175	6	484	32.51	44
225	3	242	32.64	22
250	3	242	44.10	22
275	1	81	19.09	7
Totals	36	2,904	159.84	265



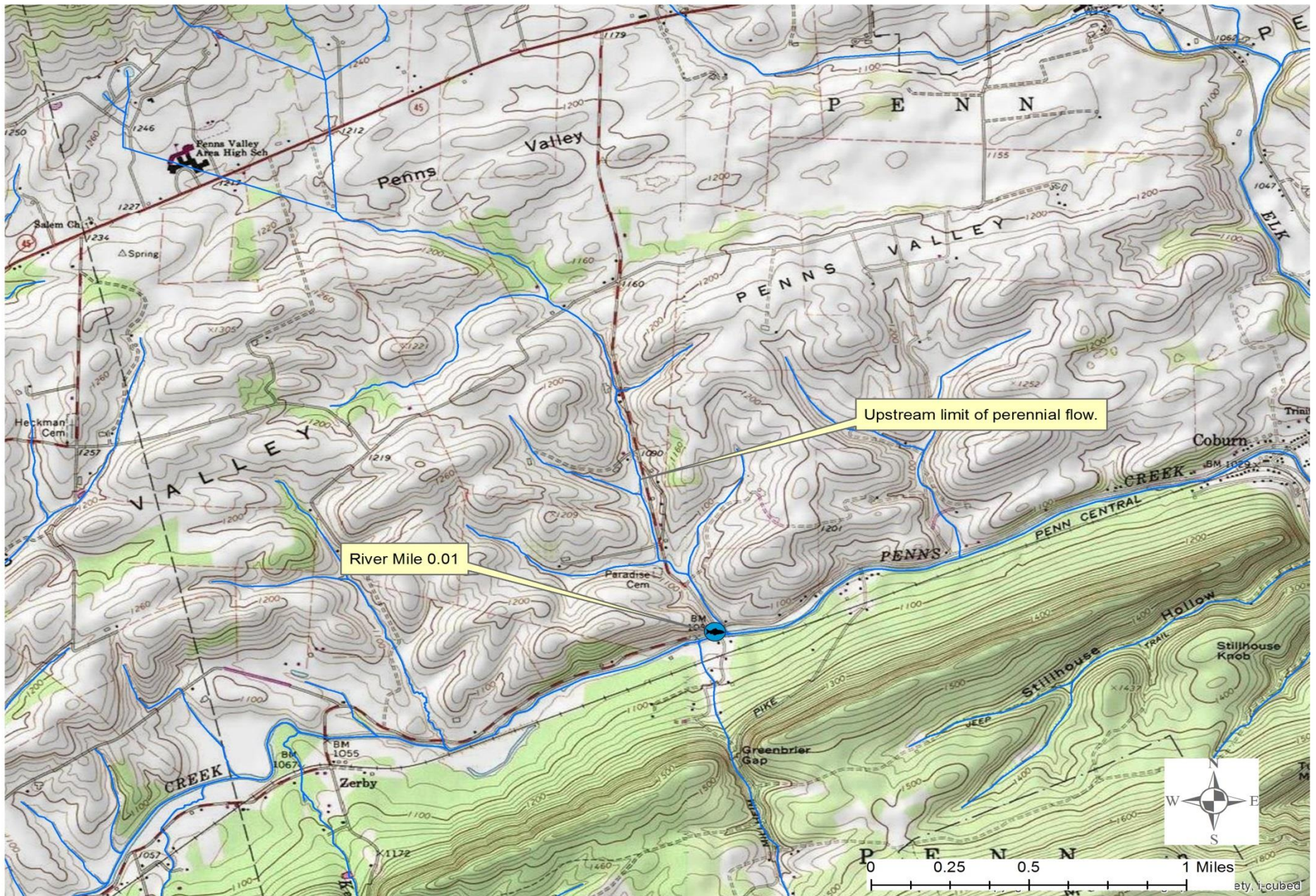


Figure 1. Location map for sample site river mile 0.01 on UNT To Penns Creek (RM 53.77) (06A), Centre County.