

## **Distribution**

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

February 22, 2018

**WATER:** Hogback Run (308B) Clearfield County

**EXAMINED:** September 23, 2015

**BY:** D. Nihart, D. Kristine, J. Detar

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

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

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

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**AREA COMMENTS:** Hogback Run flows into West Branch Susquehanna River in Clearfield County. Hogback Run, Section 01, was surveyed in 2015 to reinventory the wild Brook Trout population. The estimated biomass of wild Brook Trout was 43.92 kg/ha and met the minimum biomass criteria for listing as a Class A wild Brook Trout stream. Eleven percent of the stream length was sampled.

**AREA RECOMMENDATIONS:**

1. Add Hogback Run (08B), Section 01, (from the headwaters to the mouth) to the Commission's Class A Wild Trout Streams program.
2. Manage Hogback Run (08B), Section 01, as a Class A Wild Trout Stream under Commonwealth Inland Waters regulations with no stocking.
3. Continue to list Hogback Run 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 Hogback Run 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**

Hogback Run (08B)  
Section 01  
Fisheries Management Report

Prepared by  
David Nihart and Jason Detar

Fisheries Management Database Name: Hogback Run  
Lat/Lon: 40°57'56"/78°29'26"

Date Sampled: September 23, 2015 Date Prepared: November 06, 2015

### **Introduction**

Hogback Run is located in Clearfield County and is a 3.95 km (2.45 mi) long tributary to the West Branch Susquehanna River at River Mile (RM) 180.08, 40°57'56" latitude and 78°29'26" longitude. This stream has a drainage area of 8.42 km<sup>2</sup> (3.25 mi<sup>2</sup>) and flows northeast to its confluence with the West Branch Susquehanna River. Hogback Run can be found on the Glen Richey, PA United States Geological Survey 7.5 minute quadrangle.

Hogback Run was initially examined in 2009 and was found to support a dense population of wild Brook Trout. Hogback Run was reexamined in 2015 to properly classify the wild Brook Trout population.

### **Methods**

The examination of Hogback Run was conducted on September 23 and 24, 2015. All procedures were carried out according to those outlined by Detar et al. (2011). One representative sampling station was sampled in 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 (Appalachian Aquatics battery backpack). 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 were given an identifying upper caudal fin clip during the initial electrofishing pass to facilitate a mark-recapture population estimate. Trout densities were determined using the Chapman modification of the

Petersen estimator or M+C-R when R was less than three. Scientific and common fish names reference the Integrated Taxonomic Information System (<http://www.itis.gov>).

## Results

*Site River Mile: 0.00*

Sampling site RM 0.00 was located at the mouth, 40°57'56" latitude and 78°29'26" longitude (Figure 1). The 435 m long station averaged 2.58 m in width (Table 1) and comprised 11 percent of the total stream length. This portion of the stream primarily flowed through a dense forestland, with a dirt and gravel road closely paralleling the stream. Bank erosion was light and the stream substrate consisted primarily of boulder, rubble, and gravel. The RBP analysis yielded a final score of 139 (Table 2).

Physical-chemical parameters and their associated values measured under normal flow conditions were as follows: water temperature 13.7°C and specific conductance 755 umhos (Table 3).

Five fish species were captured at the site, including wild and hatchery Brook Trout *Salvelinus fontinalis* and wild and hatchery Brown Trout *Salmo trutta*. The other species captured were Common Shiner *Luxilus cornutus*, Longnose Dace *Rhinichthys cataractae*, and Sculpin species *Cottus* (Table 4).

### **Brown Trout**

One wild Brown Trout in the 250 mm length group was captured during the survey. Total Brown Trout biomass was estimated to be 1.62 kg/ha. Brown Trout abundance was estimated at two trout/km (three trout/mi) (Table 5).

### **Hatchery Brown Trout**

One stocked Brown Trout in the 275 mm length group was captured during the survey.

### **Brook Trout**

Two hundred and five wild Brook Trout ranging from 50 mm to 249 mm in total length (TL) were captured during the survey with 16 (eight percent) being greater than or equal to the legal harvestable length (175 mm: 7 inches). Total Brook Trout biomass was estimated to be 43.92 kg/ha. Brook Trout abundance was estimated at 620 trout/km (998 trout/mi) with 39 trout/km (63 trout/mi) being of legal length or longer (Table 6).

### **Hatchery Brook Trout**

One stocked Brook Trout in the 275 mm length group was captured during the survey.

### **Discussion**

Hogback Run, Section 01, supported a robust wild Brook Trout population. The Brook Trout biomass determined from the survey met the Pennsylvania Fish and Boat Commission's minimum biomass criteria for a Class A population, 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 the Hogback Run 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, Hogback Run should be upgraded to the 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 Hogback Run (08B), Section 01, (from the headwaters to the mouth) to the Commission's Class A Wild Trout Streams program.
2. Manage Hogback Run (08B), Section 01, as a Class A Wild Trout Stream under Commonwealth Inland Waters regulations with no stocking.
3. Continue to list Hogback Run 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 Hogback Run 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. SEPA. Report 814-99-002 Washington, DC.
- Detar, J., R. Wnuk, R.T. Greene, and M. Kaufmann. 2011. Standard electrofishing protocols for sampling Pennsylvania wadeable streams. Pages 5-24 in D. Miko, editor. Sampling protocols for Pennsylvania's wadeable streams. Pennsylvania Fish and Boat Commission. Harrisburg, PA.

Table 1. Hogback Run (08B), Clearfield 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)
09/23/15	0.00	Site starts at the mouth	435	2.58	0.11

Table 2. High Gradient Rapid Bioassessment Protocol ratings for Hogback Run (08B), Clearfield County, conducted at RM 0.00 on September 23, 2015.

Habitat Parameter Reported	Score	Habitat Parameter Reported	Score
1. Epifaunal Substrate / Available Cover:	14	8. (LB) Left Bank Stability (LB):	7
2. Embeddedness:	16	8. (RB) Right Bank Stability (RB):	8
3. Velocity / Depth Regime:	13	9. (LB) Left Bank Vegetative Protection:	8
4. Sediment Deposition:	11	9. (RB) Right Bank Vegetative Protection:	8
5. Channel Flow Status:	14	10. (LB) Left Bank Riparian Vegetative Width:	7
6. Channel Alteration:	14	10. (RB) Right Bank Riparian Vegetative Width:	5
7. Frequency of Riffles (or bends):	14		
Total Score: 139			

Table 3. Chemistries collected in Hogback Run (08B), Clearfield County. Sample site(s) are within Section 01 in 2015 sample year.

Parameter	Site 1
Site RM	0.00
Sample Date	09/23/2015
Time (24 hour)	1330
Specific Conductance	755
Water Temperature	13.7

Table 4. Fish species occurrence from Hogback Run (08B), Clearfield County, at sample site RM 0.00 on September 23, 2015.

Common Name	Scientific Name
Brook Trout	<i>Salvelinus fontinalis</i>
Brook Trout - Hatchery	<i>Salvelinus fontinalis</i>
Brown Trout	<i>Salmo trutta</i>
Brown Trout - Hatchery	<i>Salmo trutta</i>
Common Shiner	<i>Luxilus cornutus</i>
Longnose Dace	<i>Rhinichthys cataractae</i>
Sculpin species	<i>Cottus</i>

Table 5. Wild Brown Trout Petersen abundance and biomass estimates at sample site RM 0.00 on Hogback Run (08B), Clearfield County, on September 23, 2015.

Length group (mm)	Population Estimate	Estimated Number/Ha	Estimated Kg/Ha	Estimated Number/Km
250	1	9	1.62	2
Totals	1	9	1.62	2



Table 6. Wild Brook Trout Petersen abundance and biomass estimates at sample site RM 0.00 on Hogback Run (08B), Clearfield County, on September 23, 2015.

Length group (mm)	Population Estimate	Low 95% CI	High 95% CI	Estimated Number/Ha	Estimated Kg/Ha	Estimated Number/Km
50	6			53	0.13	14
75	115	77	181	1,025	6.10	264
100	70	45	114	624	8.54	161
125	31	18	61	276	6.75	71
150	31	17	59	276	11.35	71
175	13	7	27	116	7.40	30
200	3			27	2.48	7
225	1			9	1.17	2
Totals	270			2,406	43.92	620

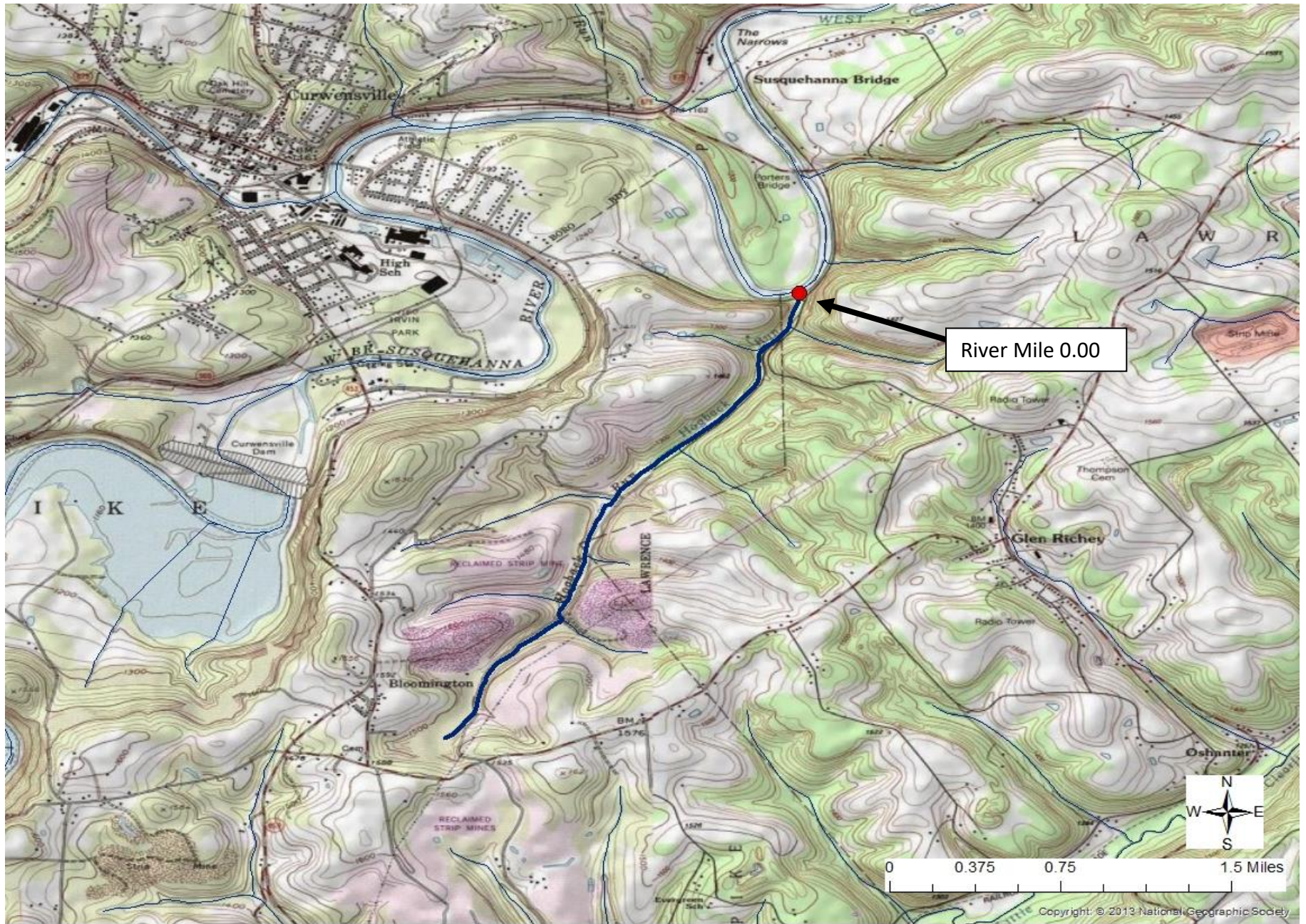


Figure 1. Location map for sample site river mile 0.00 on Hogback Run (08B), Clearfield County.