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

February 22, 2018

WATER: North Run (308B) Clearfield County

EXAMINED: August 26, 2015

BY: D. Kristine, J. Detar, S. Sbrolla, J. Tibbott (landowner), D. Goodwin (angler)

Bureau Director Action: _____ Date: _____

Division Chief Action: _____ Date: _____

CW Unit Leader Action: _____ Date: _____

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AREA COMMENTS: North Run flows into the West Branch Susquehanna River in Clearfield County. North Run, Section 01, was reinventoried in 2015 following an unassessed water survey in 2013 that documented the presence of a robust wild Brook Trout population. The estimated biomass of wild Brook Trout was 39.28 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 North Run (08B), Section 01, (from the headwaters to the mouth) to the Commission's Class A Wild Trout Streams program.
2. Manage North Run (08B), Section 01, as a Class A Wild Trout Stream under Commonwealth Inland Waters regulations with no stocking.
3. Continue to list North 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 North 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**

North Run (08B)
Section 01
Fisheries Management Report

Prepared by
David Kristine and Jason Detar

Fisheries Management Database Name: North Run
Lat/Lon: 40°52'07"/78°45'30"

Date Sampled: August 26, 2015 Date Prepared: November 12, 2015

Introduction

North Run is located in Clearfield County and is a 2.57 km (1.6 mi) long tributary to the West Branch Susquehanna River at River Mile (RM) 208.15, 40°52'07" latitude and 78°45'30" longitude (Figure 1). This stream has a drainage area of 2.31 km² (0.89 mi²) and can be found on the Burnside, PA United States Geological Survey 7.5 minute quadrangle. All of the riparian lands along the stream are privately owned.

North Run was initially examined in 2013 and was found to support a dense population of wild Brook Trout. North Run was re-examined in 2015 to properly classify the wild Brook Trout population.

Methods

The examination of North Run was conducted on August 26, 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 a Appalachian Aquatics electrobackpack set at 100 volts DC-Direct Current. 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 for wild trout and their densities were determined by using the number of fish 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: 0.15

Sampling site RM 0.15 was located 241 m upstream of the mouth, 40°52'00" latitude and 78°45'32" longitude. The 270 m long station averaged 1.1 m in width and comprised 11 percent of the total section length (Table 1). This portion of the stream primarily flowed through a recently logged hardwood forest. Bank erosion was light and the stream substrate consisted primarily of rubble, gravel, and silt). The RBP analysis yielded a final score of 147 (Table 2).

Physical-chemical parameters and their associated values measured under low flow conditions were as follows: water temperature 15.3°C, specific conductance 382 umhos, pH 7.0 standard units, and total alkalinity 61 mg/l (Table 3).

Four fish species were captured at the site, including Blacknose Dace *Rhinichthys atratulus*, Brook Trout *Salvelinus fontinalis*, Creek Chub *Semotilus atromaculatus*, and Slimy Sculpin *Cottus cognatus* (Table 4).

Brook Trout

One hundred and sixty-one wild Brook Trout ranging from 50 mm to 249 mm in total length (TL) were captured during the survey. Four (two percent) were greater than or equal to the legal harvestable length (175 mm: 7 in). Total Brook Trout biomass was estimated to be 39.28 kg/ha. Brook Trout abundance was estimated at 597 trout/km (961 trout/mi) with 15 trout/km (24 trout/mi) being of legal length or longer (Table 5).

Discussion

North 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 North 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, North 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 North Run (08B), Section 01, (from the headwaters to the mouth) to the Commission's Class A Wild Trout Streams program.
2. Manage North Run (08B), Section 01, as a Class A Wild Trout Stream under Commonwealth Inland Waters regulations with no stocking.
3. Continue to list North 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 North 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. North 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)
08/26/15	0.15	241 m upstream of the mouth	270	1.13	0.03

Table 2. High Gradient Rapid Bioassessment Protocol ratings for North Run (08B), Clearfield County, conducted at RM 0.15 on August 26, 2015.

Habitat Parameter Reported	Score	Habitat Parameter Reported	Score
1. Epifaunal Substrate / Available Cover:	14	8. (LB) Left Bank Stability (LB):	7
2. Embeddedness:	13	8. (RB) Right Bank Stability (RB):	7
3. Velocity / Depth Regime:	13	9. (LB) Left Bank Vegetative Protection:	9
4. Sediment Deposition:	12	9. (RB) Right Bank Vegetative Protection:	9
5. Channel Flow Status:	11	10. (LB) Left Bank Riparian Vegetative Width:	10
6. Channel Alteration:	15	10. (RB) Right Bank Riparian Vegetative Width:	10
7. Frequency of Riffles (or bends):	17		
Total Score: 147			

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

Parameter	Site 1
Site RM	0.15
Sample Date	08/26/2015
Time (24 hour)	1445
pH Field Colorimetric (SU)	7.0
Specific Conductance (umhos)	382
Total Alkalinity Field Mixed Indicator (mg/l)	61
Water Temperature (C)	15.3

Table 4. Fish species occurrence from North Run (08B), Clearfield County, at sample site RM 0.15 on August 26, 2015.

Common Name	Scientific Name
Blacknose Dace	<i>Rhinichthys atratulus</i>
Brook Trout	<i>Salvelinus fontinalis</i>
Creek Chub	<i>Semotilus atromaculatus</i>
Slimy Sculpin	<i>Cottus cognatus</i>

Table 5. Wild Brook Trout catch and biomass estimates at sample site RM 0.15 on North Run (08B), Clearfield County, on August 26, 2015.

Length group (mm)	Catch	Estimated Number/ha	Estimated kg/ha	Estimated Number/km
50	114	3,738	9.19	422
75	22	721	4.29	81
100	15	492	6.73	56
125	5	164	4.01	19
150	1	33	1.35	4
175	1	33	2.09	4
200	1	33	3.04	4
225	2	66	8.58	7
Totals	161	5,280	39.28	597

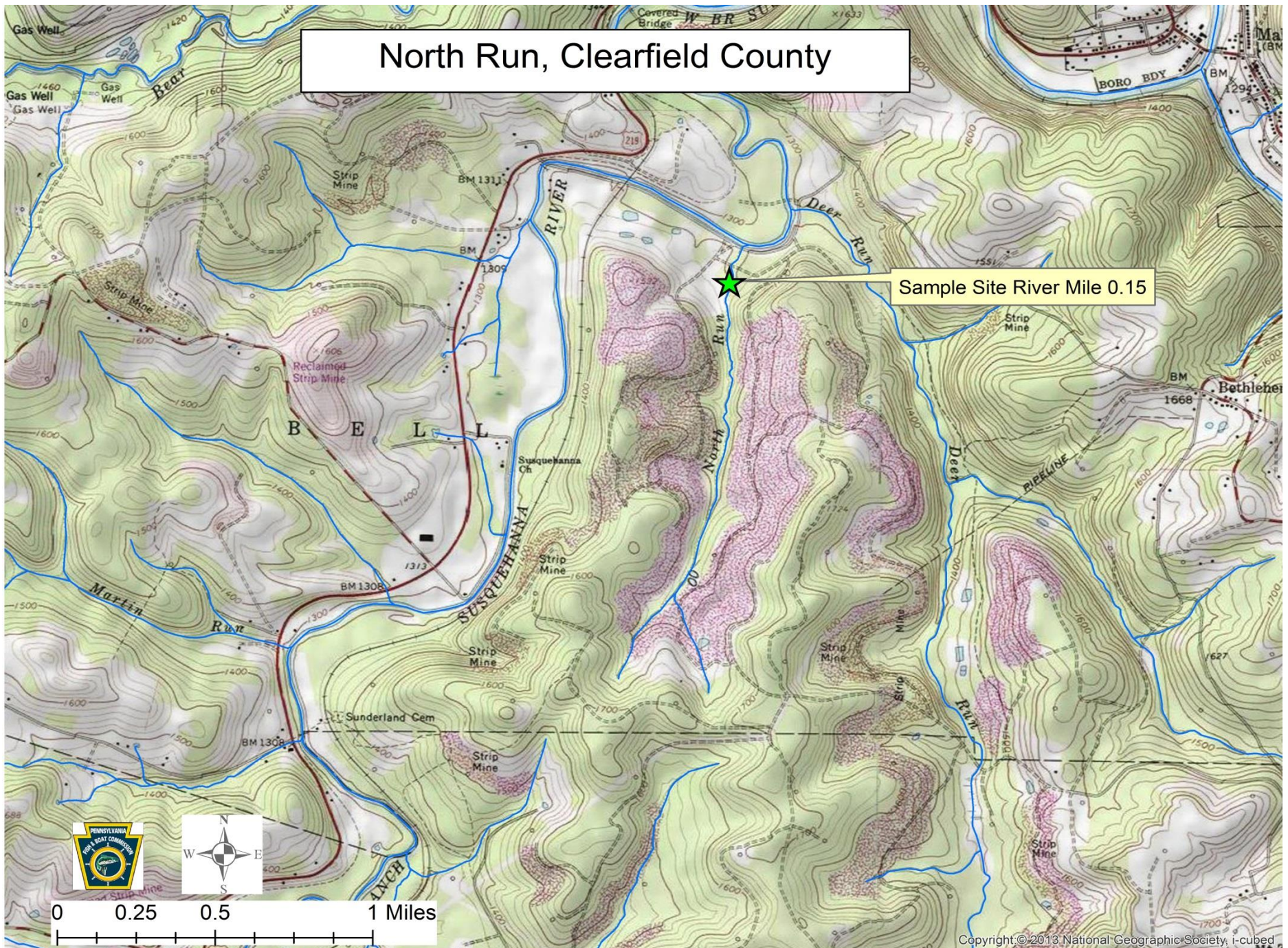


Figure 1. Location map for sample site river mile 0.15 on North Run (08B), Clearfield County.