

Distribution

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

February 22, 2018~~January 10, 2017~~~~December 3, 2015~~

WATER: Oliver Run (309C) Centre County

EXAMINED: August 10, 2015

BY: D. Kristine, J. Detar, Z. Salada

Bureau Director Action: _____ Date: _____

Division Chief Action: _____ Date: _____

CW Unit Leader Action: _____ Date: _____

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AREA COMMENTS: Oliver Run is a small coldwater stream located in Centre County near the town of Port Matilda. The stream was surveyed in 2015 to reinventory the wild trout population. The estimated biomass of wild Brown Trout was 72.92 kg/ha and met the minimum biomass criteria for listing as a Class A wild Brown Trout stream. Twelve percent of the stream length was sampled.

AREA RECOMMENDATIONS:

1. Add Oliver Run (09C), Section 01, (from the headwaters downstream to the mouth) to the Commission's Class A Wild Trout Streams program.
2. Manage Oliver Run (09C), Section 01, as a Class A Wild Trout Stream under Commonwealth Inland Waters regulations with no stocking.
3. Continue to list Oliver Run (09C), from 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 Oliver 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**

Oliver Run (09C)
Section 01
Fisheries Management Report

Prepared by
David Kristine and Jason Detar

Fisheries Management Database Name: Oliver Run
Lat/Lon: 40°48'29"/78°03'44"

Date Sampled: August 10, 2015 Date Prepared: November 13, 2015

Introduction

Oliver Run is a small, coldwater stream located in Centre County near Port Matilda (Figure 1). The stream flows through private woodlots into Laurel Run (port) at River Mile (RM) 1.04, 40°48'29" latitude and 78°03'44" longitude. Oliver Run has a total length of 5.15 km (3.2 mi) with a drainage area of 7.51 km² (2.9 mi²) and can be found on the Port Matilda, PA United States Geological Survey 7.5 minute quadrangle (Figure 1). The current 25 PA Code Chapter 93 designated Water Quality Standards for Oliver Run is Cold Water Fishes and Migratory Fishes (CWF, MF). A review of PFBC files found records of fingerling Brook, Brown, and Rainbow Trout stockings on 15 occasions between 1940 and 1959, a transportation project evaluation by Spotts (1995), and an Unassessed Water report by Kristine and Detar (2013).

Oliver Run was surveyed in 2015 to gather contemporary information on the wild trout population for management and protection purposes.

Methods

The examination of Oliver Run was conducted on August 10, 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 Electrobackpack equipped with an Aqua Shock Solutions variable voltage electrofisher set at 175 volts 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: 0.48

Sampling site RM 0.48 was located 500 m downstream of the SR 0322/I 99 overpass, 40°48'38" latitude and 78°04'01" longitude. The 600 m long station averaged 1.8 m in width (Table 1) and comprised 12 percent of the total section length. This portion of the stream primarily flowed through woodlots. Bank erosion was moderate and the stream substrate consisted primarily of boulder, rubble, and gravel. The RBP analysis yielded a final score of 156 (Table 2).

Physical-chemical parameters and their associated values measured under normal flow conditions were as follows: water temperature 18°C and specific conductance 90 umhos (Table 3).

Nine fish species were captured at the site, including Blacknose Dace *Rhinichthys atratulus*, Brook Trout *Salvelinus fontinalis*, Brown Trout *Salmo trutta*, Creek Chub *Semotilus atromaculatus*, Cutlips Minnow *Exoglossum maxillingua*, Longnose Dace *Rhinichthys cataractae*, Pumpkinseed *Lepomis gibbosus*, Sculpin species *Cottus*, and White Sucker *Catostomus commersonii* (Table 4).

Brown Trout

One hundred and six wild Brown Trout ranging from 50 mm to 374 mm in total length (TL) were captured during the survey. Thirty-eight (36 percent) were greater than or equal to the legal harvestable length (175 mm: 7 in). Total Brown Trout biomass was estimated to be 72.92 kg/ha. Brown Trout abundance was estimated at 175 trout/km (282 trout/mi) with 63 trout/km (101 trout/mi) being of legal length or longer (Table 5).

Brook Trout

Thirteen wild Brook Trout ranging from 50 mm to 224 mm in total length (TL) were captured during the survey. One (eight percent) was greater than or equal to the legal harvestable length (175

mm: 7 in). Total Brook Trout biomass was estimated to be 1.70 kg/ha. Brook Trout abundance was estimated at 22 trout/km (35 trout/mi) with two trout/km (three trout/mi) being of legal length or longer (Table 6).

Discussion

Oliver Run, Section 01, supported a robust wild Brown Trout population. The Brown 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 instream habitat benefited substantially from the habitat improvement project that occurred as mitigation for Interstate 99 development.

The current 25 PA Code Chapter 93 Water Quality Standards listing of Cold Water Fishes and Migratory Fishes (CWF, MF) for the Oliver 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, Oliver 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 Oliver Run (09C), Section 01, (from the headwaters downstream to the mouth) to the Commission's Class A Wild Trout Streams program.
2. Manage Oliver Run (09C), Section 01, as a Class A Wild Trout Stream under Commonwealth Inland Waters regulations with no stocking.
3. Continue to list Oliver Run (09C), from 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 Oliver 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.
- Kristine, D., and J. Detar. 2013. Oliver run unassessed water report. Pennsylvania Fish and Boat Commission. PFBC files, 450 Robinson Lane, Bellefonte, PA.
- Spotts, D. 1995. Route 220 transportation project Oliver Run crossing memo. Pennsylvania Fish and Boat Commission. PFBC files, 450 Robinson Lane, Bellefonte, PA.

Table 1. Oliver Run (09C), Centre County. Site sampling location, length surveyed, average site width and site area.

Site Date	Rivermile	Downstream limit description	Length (m)	Average Width (m)	Site Area (ha)
08/10/15	0.48	500 m downstream SR 0322/I99 overpass	600	1.8	0.11

Table 2. High Gradient Rapid Bioassessment Protocol ratings for Oliver Run (09C), Centre County, conducted at RM 0.48 on August 10, 2015.

Habitat Parameter Reported	Score	Habitat Parameter Reported	Score
1. Epifaunal Substrate / Available Cover:	16	8. (LB) Left Bank Stability (LB):	7
2. Embeddedness:	17	8. (RB) Right Bank Stability (RB):	8
3. Velocity / Depth Regime:	15	9. (LB) Left Bank Vegetative Protection:	10
4. Sediment Deposition:	14	9. (RB) Right Bank Vegetative Protection:	10
5. Channel Flow Status:	14	10. (LB) Left Bank Riparian Vegetative Width:	8
6. Channel Alteration:	15	10. (RB) Right Bank Riparian Vegetative Width:	7
7. Frequency of Riffles (or bends):	15		
Total Score: 156			

Table 3. Chemistries collected in Oliver Run (09C), Centre County. Sample site(s) are within Section 01 in 2015 sample year.

Parameter	Site 1
Site RM	0.48
Sample Date	08/10/2015
Time (24 hour)	1215
Specific Conductance (umhos)	90
Water Temperature (C)	18.0

Table 4. Fish species occurrence at Oliver Run (09C), Centre County, at sample site RM 0.48 on August 10, 2015.

Common Name	Scientific Name
Blacknose Dace	<i>Rhinichthys atratulus</i>
Brook Trout	<i>Salvelinus fontinalis</i>
Brown Trout	<i>Salmo trutta</i>
Creek Chub	<i>Semotilus atromaculatus</i>
Cutlips Minnow	<i>Exoglossum maxilllingua</i>
Longnose Dace	<i>Rhinichthys cataractae</i>
Pumpkinseed	<i>Lepomis gibbosus</i>
Sculpin species	<i>Cottus</i>
White Sucker	<i>Catostomus commersonii</i>

Table 5. Wild Brown Trout catch and biomass estimates at sample site RM 0.48 on Oliver Run (09C), Centre County, on August 10, 2015.

Length group (mm)	Catch	Estimated Number/ha	Estimated kg/ha	Estimated Number/km
50	11	100	0.25	18
75	26	236	1.50	43
125	11	100	2.62	18
150	20	181	7.95	33
175	13	118	7.91	22
200	6	54	5.28	10
225	2	18	2.44	3
250	6	54	9.91	10
275	2	18	4.29	3
300	4	36	10.99	7
325	2	18	6.92	3
350	3	27	12.86	5
Totals	106	960	72.92	175

Table 6. Wild Brook Trout catch and biomass estimates at sample site RM 0.48 on Oliver Run (09C), Centre County, on August 10, 2015.

Length group (mm)	Catch	Estimated Number/ha	Estimated kg/ha	Estimated Number/km
50	3	27	0.07	5
75	6	54	0.32	10
100	2	18	0.25	3
125	1	9	0.22	2
200	1	9	0.84	2
Totals	13	117	1.70	22

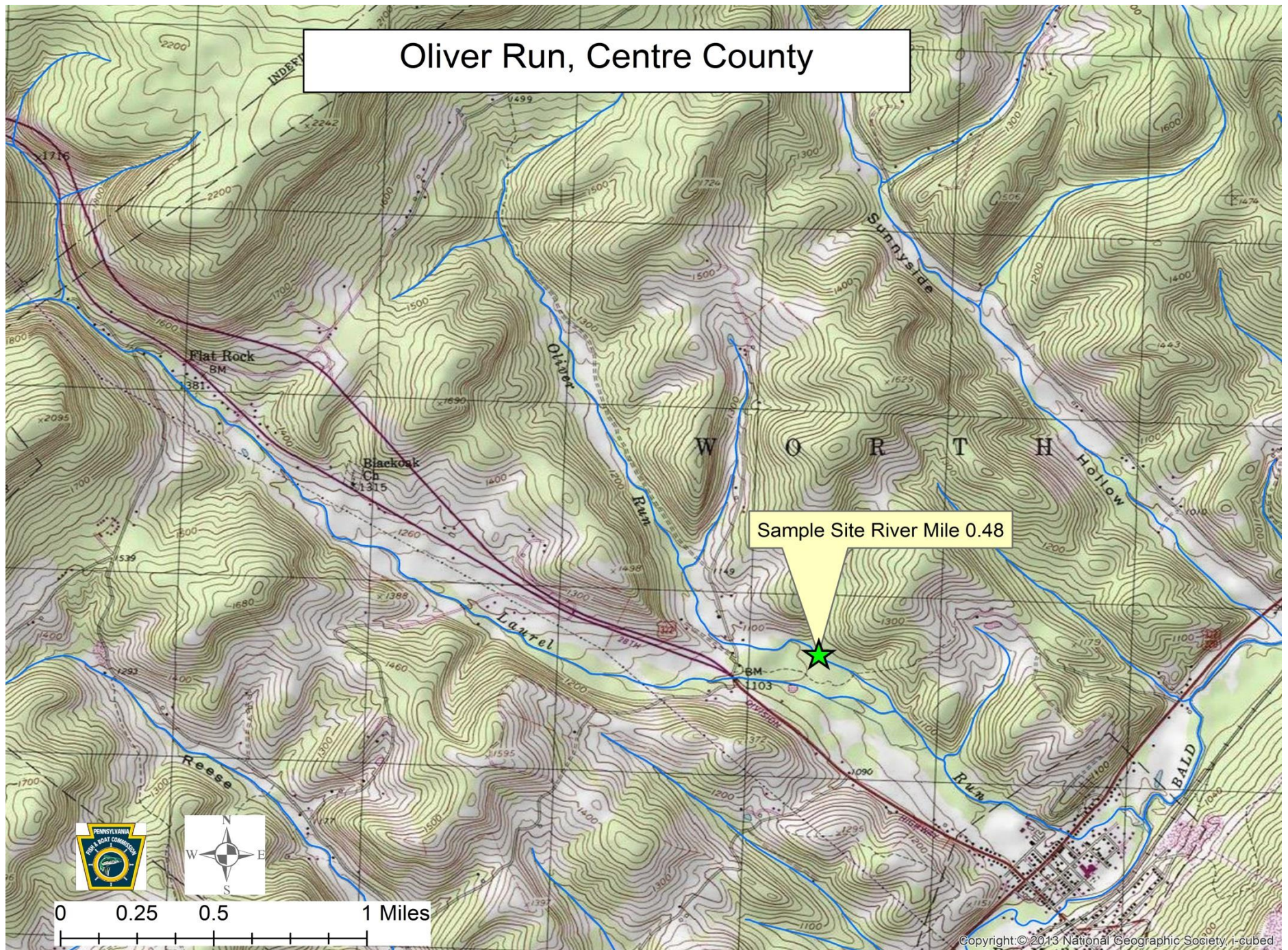


Figure 1. Location map for sample site river mile 0.48 on Oliver Run (09C), Centre County.