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DEP Stream Code: 10261

PA FISH AND BOAT COMMISSION
COMMENTS AND RECOMMENDATIONS
March 17, 2011

LeTort Spring Run

WATER: Letort Spring Run (7B) Cumberland County

EXAMINED: November 2005

BY: Miko, Frederick, Greene, Weber

Bureau Director Action: _____ Date: _____

Division Chief Action: _____ Date: _____

CW Unit Leader Action: _____ Date: _____

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AREA COMMENTS:

Letort Spring Run is a 15.0 km (9.32 mi) long stream located in sub-subbasin 7B, North Middleton and Middlesex townships, Cumberland County. Section 05 of Letort Spring Run was surveyed on November 2-3, 2005, to determine the wild brown trout abundance following the cessation of fingerling brown trout plantings. The Pennsylvania Fish and Boat Commission annually planted between 4,000 and 9,000 fingerling brown trout into Section 05 of Letort Spring Run from 1988 through 1999.

Section 05 of Letort Spring Run offers excellent angling opportunities for wild brown trout. Legal length trout ($\geq$ 175 mm TL; 7 in) were documented at densities of 1,201 trout/mi of stream with trout in excess of 575 mm (23 inches) available. Wild brown trout biomass estimates from individual stations located within Section 05 were 164.13 kg/ha and 267.17 kg/ha. The Section 05 mean biomass estimate was 215.67 kg/ha, which exceeded the Pennsylvania Fish and Boat Commission's minimum criteria of 40 kg/ha for classification as a Class A wild brown trout population. Documented Class A wild trout populations qualify for protection under the Pennsylvania Department of Environmental Protection Chapter 93 Water Quality Standards High Quality - Cold Water Fishes classification.

Letort Spring Run is a limestone stream that receives sediment and additional nutrient loading from agricultural activities and stormwater runoff throughout its length. Section 05 is threatened by continued urban sprawl from the City of Carlisle, Pennsylvania. Proper erosion and sedimentation controls should be strictly adhered to during construction activities in the basin. Additionally, landowner education with respect to the proper use of lawn fertilizers and control of run-off from residential activities would be beneficial. Any future development plans along Section 05 of Letort Spring Run should make every effort to allow for angler and other pedestrian access along the stream.

AREA RECOMMENDATIONS:

1. The Pennsylvania Fish and Boat Commission should continue to manage Section 05 of Letort Spring Run under conventional statewide angling regulations with no fingerling stocking.

2. The Pennsylvania Department of Environmental Protection should consider an upgrade to the Chapter 93 Water Quality Standards for Section 05 of Letort Spring Run from Cold Water Fishes to High Quality - Cold Water Fishes based upon the presence of a Class A wild brown trout population within this section.

3. The Cumberland County Conservation District should educate the landowners along Letort Spring Run about the proper use of lawn chemicals and the potential effects of run-off from residential sources.

4. North Middleton and Middlesex townships should make every effort to include public easements along Letort Spring Run in future development planning to assure access to this resource.

CWU COMMENTS:

Letort Spring Run (707B), Section 05, was examined in November 2005 to document the status of the wild brown trout population.

Section 05 can be characterized as a fertile, limestone stream. The 2005 examination (conducted at two sample sites) recorded the presence of seven fish species including, a Class A wild brown trout population estimated at 215.67 kg/ha.

The estimated abundance of legal size ($\geq$ 7 inches) was 746/km. Based on a section length of 4.8 km (2.98 mi) this translated into an estimated total of 3,581 legal size wild brown trout ranging from seven to twenty-three inches in length in Letort Spring Run, Section 05.

CWU RECOMMENDATIONS:

1. Letort Spring Run (707B), Section 05, should be managed as a Class A wild brown trout water. Statewide regulations should apply with no stocking.

2. Due to the presence of a Class A wild brown trout population the DEP Chapter 93 Water Quality Standards should be upgraded to HQ-CWF. The upgraded special protected use classification should apply to the Letort Spring Run basin from the T-710 Bridge (Post Road Bridge) downstream to the mouth.

DIVISION CHIEF COMMENTS:

I agree with the recommendations of the Area Fisheries Manager and the Coldwater Unit Leader. Section 05 of Letort Spring Run should be added to the official Class A wild trout stream list by way of formal Commission action. In addition, this report should be submitted to DEP by way of DES with a recommendation for a reclassification from CWF to HQ-CWF in 25 PA Code Chapter 93. The Letort Spring Run watershed should be considered for future efforts to lessen agricultural impacts in the drainage, and this report should be provided to the Fish Passage and Habitat Management Section for consideration of collaborative efforts with the Cumberland County Conservation District and other appropriate organizations and groups to address these problems.

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

Pennsylvania Fish and Boat Commission
Bureau of Fisheries
Fisheries Management Division

LeTort Spring Run (707B), Section 05
Fisheries Management Report

Prepared by
D. Miko and J. Frederick

Fisheries Management Database Name: Letort Spring Rn
Lat/Lon: 40°14'07" / 77°08'33"

Date Sampled: November 2005 **Date Prepared:** December 2005

Introduction

Letort Spring Run is a 15.0 km (9.32 mi) long stream located in sub-subbasin 7B, North Middleton and Middlesex townships, Cumberland County. Letort Spring Run originates 1.07 km (0.67 mi) upstream from the bridge on State Route (SR) 0034 in South Middleton Township, approximately 2.22 km (1.38 mi) south of Carlisle, Pennsylvania, and flows in a northeasterly direction to its confluence with Conodoguinet Creek at Middlesex, Pennsylvania, at River Mile (RM) 31.88 40°14'07" Latitude and 77°08'33" Longitude. Limestone springs entering from watercress bogs at 0.61 km (0.38 mi) and 1.22 km (0.76 mi) downstream from SR 0034 near Bonny Brook give the stream its cold calcium rich water (Jackson and Chikotas 1994). Map coverage is provided by the Carlisle, Pennsylvania, United States Geological Survey 7.5 minute Quadrangle (Fig. 1).

Letort Spring Run has a 56.00 km^2 (21.62 mi^2) drainage basin. Land use throughout the basin includes a mix of agriculture and rural residences in the headwaters, urban influences in the middle reaches of the stream, and rural and suburban residences and agriculture in the lower stream reaches. Additionally, an active quarry is present along the stream near River Mile 7.0. A search of the United States Environmental Protection Agency's Water Discharge Permit site based on the World Wide Web documented nine permitted discharges directly into Letort Spring

Run and one permitted discharge into an Unnamed Tributary to Letort Spring Run.

The underlying geology of this drainage basin is somewhat complex containing numerous formations from the Ordovician and Cambrian periods. Included in the geology are the following formations: Zullinger, Shady Grove, Rockdale Run, and Stonehenge formations and the St. Paul Group. Limestone is a major component of the geology and is present in each formation. Additionally, beds of dolomite, sandstone, and chert are also present (Socolow 1980).

The Department of Environmental Protection (DEP) Chapter 93 Water Quality Standards lists Letort Spring Run as High Quality-Coldwater Fishes (HQ-CWF) from the source downstream to the SR 0034 bridge; Exceptional Value (EV) from the SR 0034 bridge downstream to the railroad bridge in Letort Park; HQ-CWF from the railroad bridge in Letort Park downstream to Township Road 710 (Post Road Bridge); and as Coldwater Fishes (CWF) from the Post Road Bridge downstream to the confluence with Conodoguinet Creek.

Letort Spring Run is divided into five sections for fisheries management purposes. These sections are defined as follows: Section 01 is 4.1 km (2.55 mi) long and runs from the headwaters to the Letort Springs. Section 02 is 2.75 km (1.71 mi) long and runs from the Letort Springs downstream to the Reading Railroad Bridge. Section 03 is 0.50 km (0.31 mi) long and runs from the Reading Railroad Bridge downstream to the East Pomfret Street Bridge. Section 04 is 2.4 km (1.49 mi) long and runs from the East Pomfret Street Bridge downstream to the Post Road Bridge. Section 05 is 4.80 km (2.98 mi) long and runs from the Post Road Bridge downstream to the mouth at the confluence with Conodoguinet Creek.

Following the 1981 relocation of a sewage treatment plant discharge from Letort Spring Run into Conodoguinet Creek, Section 05 of Letort Spring Run was managed with plantings of 2,000 and 3,000 fingerling brown trout *Salmo trutta* in 1982 and 1983, respectively. A 1984 survey of Section 05 by Jackson and Roscinski (1985) documented a low-density (18.89 kg/ha) wild brown trout population. It was determined that the low density wild brown trout population was not capable of sustaining a significant trout fishery in the absence of fingerling plants. As a result, between 4,000 and 9,000 fingerling brown trout were planted into the Letort Spring Run annually to support the fishery (Table 1). The Pennsylvania Fish and Boat Commission (PFBC) closely monitored the fingerling brown trout program in Letort Spring Run conducting biological surveys in nine of the

thirteen years fingerling brown trout were planted in Section 05. By the late 1990's it was felt that the Letort Spring Run water quality and habitat had recovered to the point where brown trout reproduction was sufficient to support the population. As a result brown trout fingerling plantings ceased after the 1999 plant in favor of wild brown trout management. A survey of two historic Section 05 stations was attempted in 2003. The survey was abandoned following the completion of only one station as high water and debris made the second station unworkable.

Methods

The examination of Letort Spring Run was conducted from November 2 through November 3, 2005 to quantify the wild brown trout population within Section 05 of Letort Spring Run following the cessation of the Pennsylvania Fish and Boat Commission's annual fingerling brown trout plantings in 1999. Although some potential existed to recover large brown trout remaining from the 1999 fingerling plant, no attempt was made to separate wild brown trout from holdover hatchery brown trout remaining from the 1999 fingerling plant as their contribution to the overall wild trout population would have been minimal. All procedures were carried out according to those outlined by Marcinko et al. (1986). Two representative sampling stations totaling 11.0% of the section length were sampled in Section 05. Physical characteristics, physicochemical values, and fish communities were examined at both of the stations surveyed. The fish communities were sampled using a towed boat electrofishing unit operated to deliver 125 volts of straight direct current into the water. All fish captured were identified, recorded for species occurrence and released at the site of capture. Trout were measured and recorded in 25 mm (1.0 in) length groups with ten weights (g) per 25 mm length group recorded. All 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 by the Chapman modification of the Petersen estimator or M+C-R when R was less than three.

Results

Station 0501

Station 0501 was located 258 m downstream of the Post Road (T-710) Bridge at River Mile (RM) 2.80 40°12'50" Latitude and 77°10'00" Longitude (Table 2; Fig. 1) (the lat and longs of this site and 0502 should be placed in the text and/or appear on Table 2). The 258 m long station averaged 9.4 m wide and was

located in a woodlot, which provided dense shade to the stream. Much of the stream bank consisted of the remnants of an old stone wall and as a result stream bank erosion was light. The substrate consisted primarily of gravel and sand. Rubble, primarily the result of the deterioration of the stone wall and some silt, was also present in the substrate mix. The station was comprised of a few short 0.40 m deep riffles separating medium to long pools up to 1.25 m deep and runs up to 1.0 m deep. Overall habitat for adult fish was good and included the water depth in the pools, riffles, and runs, overhanging trees, large woody debris, and crevices in the stone wall.

Physicochemical parameters and their associated values measured on November 03, 2005, under normal flow conditions were as follows: water temperature 11.4°C, specific conductance 299 umhos, total alkalinity 230 mg/l, and total hardness 320 mg/l. Dissolved oxygen concentration was 11.0 mg/l (Table 3). A pH measurement was not conducted due to a malfunctioning pH meter. A total of six fish species were captured at Station 0501 (Table 4). Fish common in a coldwater environment to fish common in an environment transitional between coldwater and warmwater were collected and included brown trout, blacknose dace *Rhinichthys atratulus*, creek chub *Semotilus atromaculatus*, white sucker *Catostomus commersoni*, mottled sculpin *Cottus bairdi*, and pearl dace *Margariscus margarita*.

A total of 425 wild brown trout were captured during two electrofishing passes in this 258 m long station. Wild brown trout biomass and number of trout/ha were 267.17 kg/ha and 3,233 trout/ha, respectively (Table 5). Wild brown trout ranged in lengths from 75 mm to 574 mm total length (TL) with 184 (43.3%) being of legal length (175 mm TL; 7 in) or greater and 49 (11.5%) being 300 mm TL (12 in) or greater. Wild brown trout $\leq$ 124 mm TL (4 in) comprised 41.4% (n=176) of the brown trout collected. The estimated number of legal length trout/mi was 1,384 with 380 trout/mi being $\geq$ 300 mm TL, and 167 trout/mi being $\geq$ 375 mm TL (15 in).

Station 0502

Station 0502 was located at the first private road bridge crossing upstream of the Pennsylvania Turnpike at RM 0.91 40°13'40" Latitude and 77°08'28" Longitude (Table 2; Fig. 1)(See note above re lat and longs of station). The 270 m long station averaged 10.4 m wide and was bordered on one side by open fallow fields and on the other by a manicured lawn. Brush and small sparsely located trees located in the fallow field provided minimal shading to the stream at this station. Stream bank

erosion was light and the substrate consisted of rubble, gravel, and sand. Silt was present primarily along the inside edges of the stream bends. The station was comprised primarily of short riffles up to 0.40 m deep and medium to runs up to 1.0 m deep. The water depth in the riffles and runs along with overhanging brush provided good habitat for adult fish.

Physicochemical parameters and their associated values measured on November 3, 2005 under normal flow conditions were as follows: Water temperature 11.3°C, specific conductance 486 umhos, total alkalinity 218 mg/l, and total hardness 296 mg/l (Table 3). Dissolved oxygen concentration was 10.8 mg/l. A pH measurement was not conducted due to a malfunctioning pH meter.

The fish community at Station 0502 consisted of six species (Table 4). All of the fish species collected were either common to a coldwater environment or common to an environment transitional between coldwater and warmwater. The fish community included brown trout, white sucker, blacknose dace, creek chub, tessellated darter *Etheostoma olmstedi*, and mottled sculpin. A survey of the same station in 1984 documented 11 fish species (Table 4). The fish species assemblage in 1984 consisted of a greater variety of warm and coolwater fish species including bluegill *Lepomis macrochirus*, pumpkinseed *Lepomis gibbosus*, common carp *Cyprinus carpio*, and goldfish *Carassius auratus*.

A total of 252 wild brown trout were captured during two electrofishing passes in this 270 m long station. Wild brown trout biomass and number of trout/ha were 164.13 kg/ha and 1,133 trout/ha, respectively (Table 6). Wild brown trout ranged in lengths from 100 mm to 599 mm TL with 149 (59.1%) being of legal length or greater and 33 (13.1%) being 300 mm or greater. Wild brown trout $\leq$ 124 mm TL comprised 4.8% (n=12) of the wild brown trout collected. The estimated number of legal length trout/mi was 1,012 with 221 trout/mi being $\geq$ 300 mm TL and 66 trout/mi being $\geq$ 375 mm TL.

Discussion

The physicochemical values collected within Section 05 were indicative of the limestone geology of this basin. Although stream bank erosion was considered light throughout Letort Spring Run, silt was noted in the substrate mix and was concentrated along the inside bends of the stream channel and the downstream end of pools. Agricultural activities located within the drainage basin and concentrated in the upper reaches

of the stream along with urban run-off from Carlisle, Pennsylvania, were contributing factors to the silt load.

Fish species assemblage in Section 05 ranged from fish common in a coldwater environment to fish common in an environment transitional between coldwater and warmwater and was similar between stations. Pearl dace were collected at Station 0501 and not at Station 0502 while tessellated darters were collected at Station 0502 and not Station 0501.

Dense wild brown trout populations were documented at both survey stations during the 2005 survey. The mean Section 05 wild brown trout biomass estimate was 215.67 kg/ha, which exceeded the Pennsylvania Fish and Boat Commission's minimum criteria of 40 kg/ha for Class A consideration (Table 7). A portion of the brown trout biomass may have been comprised of larger fish remaining from PFBC fingerling brown trout stockings, which ended following the 1999 plant. In an effort to eliminate any potential influence from trout that may have originated from the final 1999 PFBC plantings the brown trout biomass estimate was determined using only fish $\leq$ 250 mm TL ($\leq$ 10 inches) (basis?). Brown trout in southcentral Pennsylvania reach 250 mm by age 3. Basing the biomass estimate on brown trout age 3 and younger was an extremely conservative approach to insure that only wild fish were included in the biomass estimate. Under these circumstances the Section 05 mean biomass estimate was 64.94 kg/ha, which also exceeded the 40 kg/ha requirement for Class A consideration. The wild brown trout population documented in Section 05 of Letort Spring Run during the 2005 survey met or exceeded population values for the top 10% of wild brown trout streams located throughout Pennsylvania and in some instances exceeded values for the top 5% of wild brown trout streams located throughout Pennsylvania (Table 8).

Based upon a mean biomass estimate of 215.67 kg/ha the November 2005 survey of Section 05 of Letort Spring Run clearly documented the presence of a Class A wild brown trout population. The current Pennsylvania Department of Environmental Protection Chapter 93 water quality designation of Cold Water Fishes, which extends from Post Road (T-710) downstream to the mouth does not adequately protect the Class A wild brown trout population. The Chapter 93 High Quality Cold Water Fishes designation would more adequately protect the Class A wild brown trout population present in Section 05. The Pennsylvania Department of Environmental Protection should consider a Chapter 93 upgrade to High-Quality Coldwater Fishes to provide adequate protection to this resource.

Management Recommendations

1. The Pennsylvania Fish and Boat Commission should continue to manage Section 05 of Letort Spring Run under conventional statewide angling regulations with no fingerling stocking.

2. The Pennsylvania Department of Environmental Protection should consider an upgrade to the Chapter 93 Water Quality Standards for Section 05 of Letort Spring Run from Cold Water Fishes to High Quality - Cold Water Fishes based upon the presence of a Class A wild brown trout population within this section.

3. The Cumberland County Conservation District should educate the landowners along Letort Spring Run about the proper use of lawn chemicals and the potential effects of run-off from residential sources.

4. North Middleton and Middlesex townships should make every effort to include public easements along Letort Spring Run in future development planning to assure access to this resource.

Stream Resource Classification

Biomass Class:	A
Total biomass:	215.67 kg/ha
Biomass <150 mm:	20.19 kg/ha

Recreational use potential:	Good
Human Population Density:	Suburban
Width Class:	3

Jackson L.L. and R.J. Roscinski. 1985. Letort Spring Run (707B) Management Report Section 04. Pennsylvania Fish and Boat Commission files. Big Spring, Pennsylvania.

Jackson, L.L. and B.A. Chikotas. 1994. Letort Spring Run (707B). Management Report, Section 03-Abstract. Pennsylvania Fish and Boat Commission files. Big Sprig, Pennsylvania

Marcinko, M., R. Lorson and R. Hoopes. 1986. Procedures for stream and river inventory information input. Pennsylvania Fish and Boat Commission publication, Bellefonte, Pennsylvania.

Socolow, A.A. 1980. Geologic Map of Pennsylvania. Commonwealth of Pennsylvania, Department of Environmental Resources, Bureau of Topographic and Geologic Survey 1980.

Table 1. Number of brown trout fingerlings stocked into Section 05 of Letort Spring Run (707B) by the Pennsylvania Fish and Boat Commission from 1988 to 1999.

Year	Date	Number Stocked
1988	October 6	9,000
1989	October 6	9,000
1990	None Stocked	9,000
1991	June 4	9,000
1992	June 10	9,000
1993	May 23	9,000
1994	May 25	9,000
1995	May 26	9,000
1996	July 10	9,000
1997	June 3	9,000
1998	May 21	5,000
1999	May 4	4,000

Table 2. Letort Spring Run (707B), Cumberland County. Station location, length electrofished, and average width in November 2005. (Place lat and longs of the stations in this table)

Station	Downstream limit description	Length (m)	Ave. Width (m)	Latitude	Longitude
0501	258 m downstream of Post Road (T-710)	258	9.4	40°12′50″	77°10′00″
0502	First bridge upstream of PA Turnpike	270	10.4	40°13′40″	77°08′28″

Table 3. Physicochemical parameters and their associated values measured in Letort Spring Run (707B) in November 2005.

	Station	
Parameter	**0501**	**0502**
Date	11/03/05	11/03/05
Time (24 hour)	14:00	12:00
Air temperature (°C)	ND	ND
Water temperature (°C)	11.4	11.3
pH (standard units)	ND	ND
Specific conductance (umhos)	299	486
Total alkalinity (mg/l)	230	218
Total hardness (mg/l)	320	296
Dissolved oxygen (mg/l	11.0	10.8

Table 4. Fish species occurrence in Letort Spring Run (707B) determined by towed boat electrofishing in November 2005 and August 1984.

		Station Location			
		RM 2.24	RM 2.80	RM 0.91	
Scientific name	**Common name**	**1984**	**2005**	**1984**	**2005**
Salmo trutta	Brown trout	X	X	X	X
Oncorhynchus mykiss	Rainbow trout	X		X	
Carassius auratus	Goldfish			X	
Cyprinus carpio	Common carp	X		X	
Rhinichthys atratulus	Blacknose dace	X	X	X	X
Rhinichthys cataractae	Longnose dace	X		X	
Semotilus atromaculatus	Creek chub		X		X
Catostomus commersoni	White sucker	X	X	X	X
Cottus bairdi	Mottled sculpin		X		X
Cottus cognatus	Slimy sculpin	X		X	
Etheostoma olmstedi	Tesselated darter				X
Margariscus margarita	Pearl dace	X	X	X	
Lepomis gibbosus	Pumpkinseed sunfish			X	
Lepomis macrochirus	Bluegill			X	
Total species		**8**	**6**	**11**	**6**

Table 5. Estimated Abundance and Biomass of brown trout from LETORT SPRING RUN (707B), using a Petersen estimator. Station located at River Mile 2.80 (Station 0501) with a station Lat/Lon of 401250/771000. Station currently located within section 5. Survey Date: 11/3/2005.

Size Group	Population Estimate	Low 95% CI	High 95% CI	Estimated Number/Ha	Estimated Kg/Ha	Estimated Number/Km
75	96	52	197	396	3.18	372
100	342	205	606	1,410	22.56	1,326
125	76	38	165	313	8.16	295
150	48	22	110	198	8.49	186
175	54	33	92	223	15.13	209
200	32	19	58	132	13.32	124
225	26	15	46	107	13.81	101
250	31	18	60	128	22.10	120
275	18			74	17.90	70
300	22	11	49	91	28.29	85
325	1			4	1.65	4
350	11	4	26	45	21.86	43
375	13	6	32	54	30.97	50
400	5	2	13	21	14.43	19
425	1			4	3.18	4
450	5			21	22.10	19
475	1			4	4.49	4
500	1			4	5.32	4
550	1			4	10.23	4
Totals:	784			3,233	267.17	3,039

Table 6. Estimated Abundance and Biomass of brown trout from LETORT SPRING RUN (707B), using a Petersen estimator. Station located at River Mile 0.91 (Station 0502) with a station Lat/Lon of 401340/770828. Station currently located within Section 5. Survey Date: 11/3/2005.

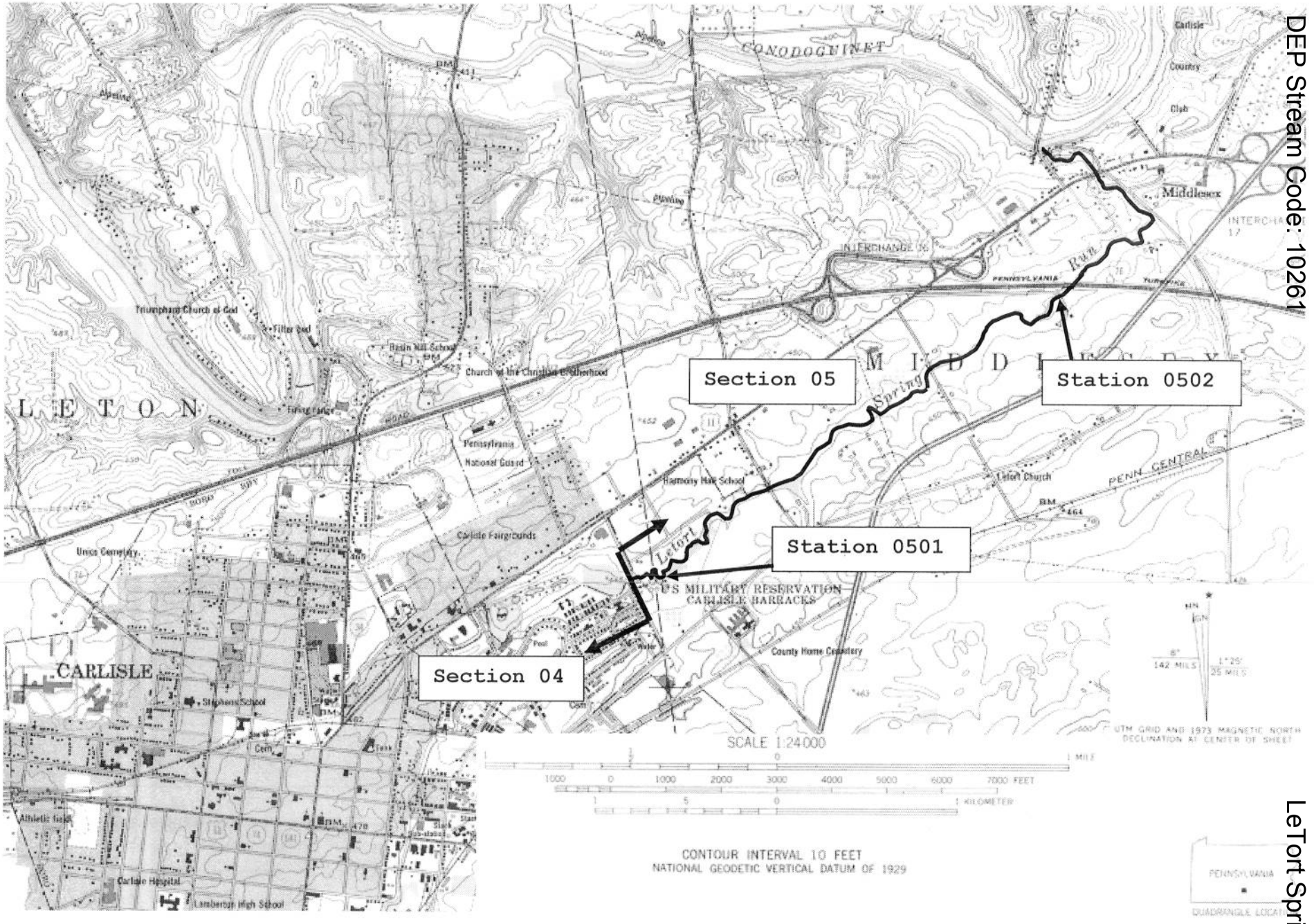
Size Group	Population Estimate	Low 95% CI	High 95% CI	Estimated Number/Ha	Estimated Kg/Ha	Estimated Number/Km
100	15	7	34	53	0.85	56
125	61	38	106	217	5.63	226
150	72	39	147	256	11.11	267
175	6			21	1.46	22
200	9	4	23	32	3.24	33
225	50	29	90	178	22.90	185
250	47	32	73	167	28.95	174
275	21	12	40	75	18.02	78
300	12	6	25	43	13.32	44
325	11	5	25	39	15.74	41
350	3			11	5.16	11
375	3			11	6.16	11
400	2			7	4.99	7
425	1			4	2.74	4
450	2			7	7.62	7
475	1			4	3.88	4
500	1			4	7.09	4
575	1			4	5.27	4
	318			1,133	164.13	1,178

Table 7. Mean abundance statistics for brown trout from Electrotowedboat in LETORT SPRING RUN Section 5, section located within Pennsylvania drainage sub-subbasin - 7B. A total of 2 stations (n) used in this report with station collection dates between 11/2/2005 and 11/3/2005.

EstYear	25mm Size Group	CPUE	Population Estimate	Est Num/Ha	Est Kg/Ha	Est Num/Km	n Sites
2005	75	22.50	48	198	1.59	186	2
2005	100	53.62	179	732	11.71	691	2
2005	125	51.96	69	265	6.89	260	2
2005	150	45.17	60	227	9.82	226	2
2005	175	30.15	30	122	8.29	116	2
2005	200	22.73	21	82	8.28	79	2
2005	225	46.90	38	143	18.36	143	2
2005	250	45.17	39	148	25.53	147	2
2005	275	24.68	20	75	17.95	74	2
2005	300	16.06	17	67	20.81	65	2
2005	325	6.04	6	22	8.71	22	2
2005	350	6.75	7	28	13.50	27	2
2005	375	6.73	8	32	18.59	31	2
2005	400	5.06	4	14	9.70	13	2
2005	425	1.70	1	4	2.96	4	2
2005	450	3.34	4	14	14.85	13	2
2005	475	1.70	1	4	4.18	4	2
2005	500	1.70	1	4	6.21	4	2
2005	550	0.84	1	2	5.11	2	2
2005	575	0.86	1	2	2.63	2	2
Totals:		393.66		2,185	215.67	2,109	

Table 8. Comparison of Letort Spring Run Section 05 selected wild brown trout values to the top 10% and top 5% of wild brown trout streams throughout Pennsylvania.

Brown Trout Values	LeTort Spring Run Section 05	Top 10% of PA Brown Trout Streams	Top 5% of PA Brown Trout Streams
Mean number/Station	232	215	296
Mean number ≥ 175 mm/Station	130	130	197
Mean number ≥ 225 mm/Station	98	86	137
Mean number ≥ 300 mm/Station	30	50	48
Number/Mile ≥ 175 mm	1,201	382	559
Number/Mile ≥ 225 mm	887	194	333
Number/Mile ≥ 300 mm	301	50	92



DEP Stream Code: 10261

LeTort Spring Run

Figure 1. Location map for Section 05 of Letort Spring Run (707B), Cumberland County.