

Range-wide Assessment of Brook Trout at the Catchment Scale: A Summary of Findings



Eastern Brook Trout

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Brief Introduction

In response to a need for guidance in setting wild Brook Trout conservation priorities in the species historic eastern range, the EBTJV completed a range-wide assessment of wild Brook Trout distribution and status at the subwatershed-level (HUC 12) in 2006 ([Hudy et. al. 2008](#)). While this initial assessment provided Brook Trout resource managers, decision-makers, and the public with an essential understanding of the current “state” of wild Brook Trout in the eastern portion of its U.S. range, many EBTJV partners felt that an assessment at a finer scale would yield better guidance in establishing a more workable set of wild Brook Trout conservation priorities, objectives, and strategies. Therefore, the EBTJV conducted a second range-wide assessment of wild Brook Trout at the catchment scale, which was completed in 2015 ([Hudy et. al. 2013](#); [Coombs and Nislow 2015](#)).

This report summarizes the data generated from the EBTJV’s catchment scale assessment of eastern wild Brook Trout.

Range-Wide Results

Catchment Findings

There were 271,949 catchments assessed, totaling 628,530 km² in area, that are contained within 6,553 subwatersheds that occur within the [EBTJV geographic boundary](#) (Table 1; [Appendix Table I](#)). Each catchment was classified based on the presence/absence of wild trout (Brook Trout, Brown Trout, and Rainbow Trout). The number of catchments containing wild Brook Trout (classification codes 1.1, 1.2, 1.3, and 1.4) was 61,148, which is 22.5% of the catchments assessed. The area (km²) of these wild Brook Trout catchments was 29.5% of the total area assessed. The number of catchments that contained any species of wild trout (classification codes 1.1, 1.2, 1.3, 1.4, 0.2, 0.3, and 0.4) was 93,671 or, 34.4% of the total number of catchments, while the area (km²) of these catchments was 41.8% of the total area assessed.

There were 41,070 catchments classified as allopatric Brook Trout and the total area of these catchments was 128,834 km² (Table 1). The number of catchments classified as Brook Trout sympatric with Brown Trout was 13,099 and the total area of these catchments was 37,279 km². Catchments classified as Brook Trout sympatric with Rainbow Trout numbered 1,688, with a total area of 5,173 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 5,291, which totaled 14,350 km² in area. The number of catchments classified as wild Brown Trout was 21,155 and the total area of these catchments was 50,553 km². There were 5,440 catchments classified as wild Rainbow Trout, with a total area of 12,122 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 5,928, which totaled 14,288 km² in area.

Table 1. Catchment Assessment Metrics

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	41,070	128,834
Brook Trout Sympatric with Brown Trout (1.2)	13,099	37,279
Brook Trout Sympatric with Rainbow Trout (1.3)	1,688	5,173
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	5,291	14,350
Brown Trout (0.2)	21,155	50,553
Rainbow Trout (0.3)	5,440	12,122
Brown Trout & Rainbow Trout (0.4)	5,928	14,288
Stocked Brook Trout (0.5) & No Salmonids (0.0)	178,278	365,931
Totals	271,949	628,530

Subwatershed (HUC 12) Findings

There were 499 subwatersheds that had at least 50% of their area (km²) occupied by wild Brook Trout (catchment classification codes 1.1, 1.2, 1.3, and 1.4) and therefore the EBTJV would classify these subwatersheds as Intact (Table 2; [Appendix II](#)). This represents just 8% of the subwatersheds within the EBTJV geographic range. The number of subwatersheds classified as Reduced (>0 but < 50% of its area (km²) is occupied by wild Brook Trout) totaled 3,332, which is 51% of the subwatersheds, and the number of subwatersheds classified as Extirpated (wild Brook Trout are absent) was 2,722 or 41% of the subwatersheds.

Table 2. Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	Percent of Subwatersheds
Intact	499	8%
Reduced	3,332	51%
Extirpated	2,722	41%
Totals	6,553	100%

The five most Intact subwatersheds occurred in Pennsylvania, Virginia, New Hampshire, and Maine (Table 3; [Appendix II](#)). New York had the highest number of Intact subwatersheds (159), followed by Maine (123) and Pennsylvania (93) (Table 4; [Appendix III](#)). New York (786), Maine (712) and Pennsylvania (676) also had the highest number of Reduced subwatersheds (Table 5; [Appendix Table IV](#)), while New York (710), Pennsylvania (663), West Virginia (359) and Virginia (260) had the most Extirpated subwatersheds (Table 6; [Appendix Table V](#)).

Table 3. Top Five Intact Subwatersheds (HUC 12)

State	HUC 12 Name	HUC 12 Code	HUC 12 Area	% of HUC 12 Area w/Wild Brook Trout
VA	Little Piney River-Piney River	020802030505	95.8 km ²	87.4%
PA	Texas Creek	020502050502	84.7 km ²	85.4%
NH	Mohawk River	010801010402	109.7 km ²	72.9%
ME	Shields Branch Big Black River	010100010603	405.0 km ²	72.6%
NH	North Fork East Branch Pemigewasset River	010700010101	83.2 km ²	67.9%

Table 4. Number of Intact Subwatersheds (HUC 12) by State

State(s)	# of Intact Subwatersheds
CT	3
CT, NY	1
MA	5
MA, NY	3
MA, VT	2
MD	3
ME	114
ME, NH	9
NC	11
NH	11
NY	151
NY, PA	1
NY, VT	4
PA	92
RI	1
TN	1
VA	36
VA, WV	4
VT	32
WV	15
Total	499

Table 5. Number of Reduced Subwatersheds (HUC 12) by State

State(s)	# of Reduced Subwatersheds
CT	115
CT, MA	22
CT, MA, NY	1
CT, MA, RI	1
CT, NY	15
CT, RI	9
GA	14
GA, NC	6
GA, NC, SC	1
GA, TN	1
MA	120
MA, NH	14
MA, NH, VT	1
MA, NY	7
MA, NY, VT	2
MA, RI	8
MA, VT	6
MD	26
MD, PA	18
MD, PA, WV	1
MD, WV	12
ME	694
ME, NH	18
NC	141
NC, SC	6
NC, TN	15
NC, TN, VA	1
NC, VA	10
NH	170
NH, VT	34
NJ	30
NJ, NY	9
NJ, NY, PA	1
NJ, PA	6
NY	714
NY, PA	30
NY, VT	7
OH	2
PA	617
PA, WV	3
RI	23
SC	2
TN	27
TN, VA	6
VA	122
VA, WV	7
VT	125
WV	112
Total	3,332

Table 6. Number of Extirpated Subwatersheds (HUC 12) by State

State(s)	# of Extirpated Subwatersheds
CT	7
CT, MA	2
CT, NY	4
GA	71
GA, NC	5
GA, NC, TN	1
GA, SC	3
GA, TN	3
MA	40
MA, NH	7
MA, RI	3
MD	89
MD, PA	35
MD, PA, WV	2
MD, VA	9
MD, VA, WV	1
MD, WV	13
ME	139
ME, NH	1
NC	121
NC, SC	4
NC, TN	7
NC, VA	9
NH	67
NH, VT	3
NJ	63
NJ, NY	11
NJ, PA	5
NY	652
NY, PA	36
NY, VT	7
OH	52
OH, PA	21
PA	543
PA, WV	21
RI	8
SC	16
TN	57
VA	220
VA, WV	21
VT	42
WV	301
Total	2,722

Since the larger States within the EBTJV geographic boundaries have more subwatersheds within their respective jurisdictions it may be more beneficial to look at the percentage of each State's subwatersheds that are classified as Intact, Reduced, and Extirpated in an effort to gain more meaningful insights (Table 7). Vermont had the highest percentage (14.3%) of its subwatersheds classified as Intact followed by Maine (12.6%), New York (9.7%), and Virginia

(9.0%). Conversely, Ohio had the highest percentage (97.3%) of its wild Brook Trout subwatersheds classified as Extirpated followed by Georgia (79.0%), South Carolina (71.9%), Maryland (71.3%), and West Virginia (70.0%).

Table 7. Percentage of Intact, Reduced, and Extirpated Subwatersheds (HUC 12) by State

State	# of HUC 12s	% Intact	% Reduced	% Extirpated
CT	180	2.2%	90.6%	7.2%
GA	105	0.0%	21.0%	79.0%
MA	218	4.6%	72.5%	22.9%
MD	209	1.4%	27.3%	71.3%
ME	975	12.6%	73.0%	14.4%
NC	338	3.3%	53.3%	43.5%
NH	335	6.0%	70.7%	23.3%
NJ	125	0.0%	36.8%	63.2%
NY	1,656	9.7%	47.5%	42.9%
OH	75	0.0%	2.7%	97.3%
PA	1,432	6.5%	47.2%	46.3%
RI	53	1.9%	77.4%	20.8%
SC	32	0.0%	28.1%	71.9%
TN	119	0.8%	42.0%	57.1%
VA	446	9.0%	32.7%	58.3%
VT	265	14.3%	66.0%	19.6%
WV	513	3.7%	26.3%	70.0%

Allopatric Brook Trout

Three thousand two hundred sixty-two (3,262) subwatersheds had catchments containing allopatric Brook Trout populations ([Appendix Table VI](#)). Two hundred eighteen (218) subwatersheds had at least 50% of their area (km²) occupied by allopatric Brook Trout populations (i.e. Intact). In contrast, 3,291 subwatersheds (50.2%) did not contain any catchments classified as allopatric Brook trout. Maine had the largest number (122) of Intact allopatric Brook Trout subwatersheds (Table 8; [Appendix Table VII](#)). No other state had more than 28 subwatersheds with Intact allopatric Brook Trout populations.

Table 8. Number of Intact Allopatric Brook Trout Subwatersheds (HUC 12) by State

State(s)	# of HUC 12s
CT	1
MA	2
ME	114
ME, NH	8
NH	5
NY	24
PA	17
RI	1
VA	26
VA, WV	2
VT	11
WV	5

Brook Trout Sympatric with Brown Trout

One thousand four hundred seventy-two (1,472) subwatersheds had catchments containing Brook Trout sympatric with Brown Trout ([Appendix Table VIII](#)). Thirty-three (33) subwatersheds had at least 50% of their area (km²) occupied by Brook Trout sympatric with Brown Trout (i.e., Intact); these subwatersheds were located in five states, though 64% were located in New York (Table 9; [Appendix Table IX](#)).

Table 9. Number of Intact Brook Trout Sympatric with Brown Trout Subwatersheds (HUC 12) by State

State(s)	# of HUC 12s
MA, NY	1
NY	17
NY, VT	3
PA	9
VA	3

Brook Trout Sympatric with Rainbow Trout

Three hundred thirty-eight (338) subwatersheds had catchments containing Brook Trout sympatric with Rainbow Trout ([Appendix Table X](#)). Only 3 subwatersheds, located in two states (New Hampshire and Vermont), had at least 50% of their area (km²) occupied by Brook Trout sympatric with Rainbow Trout (i.e., Intact).

Brook Trout Sympatric with Brown Trout & Rainbow Trout

Six hundred four (604) subwatersheds had catchments containing Brook Trout sympatric with Brown Trout and Rainbow Trout ([Appendix Table XI](#)). Twenty-four (24) subwatersheds had at least 50% of their area (km²) occupied by Brook Trout sympatric with Brown Trout and Rainbow Trout (i.e., Intact); these subwatersheds were located in four states, though 79% were located in New York (Table 10; [Appendix Table XII](#)).

Table 10. Number of Intact Brook Trout Sympatric with Brown Trout and Rainbow Trout Subwatersheds (HUC 12) by State

State(s)	# of HUC 12s
NY	19
PA	1
VT	1
WV	3

Brown Trout

One thousand nine hundred twenty (1,920) subwatersheds had catchments containing populations of wild Brown Trout ([Appendix Table XIII](#)). One hundred three (103) subwatersheds had at least 50% of their area (km²) occupied by wild Brown Trout; sixty-four

percent (64%) of these subwatersheds occurred in Pennsylvania (Table 11; [Appendix Table XIV](#)).

Table 11. Number of Subwatersheds (HUC 12) with wild Brown Trout Occupying at least 50% of its Area (km²) by State

State(s)	# of HUC 12s
CT, NY	1
MD	2
NC	1
NJ	2
NY	24
NY, PA	1
NY, VT	1
OH, PA	1
PA	64
VA	1
WV	5

Rainbow Trout

Six hundred thirty-nine (639) subwatersheds had catchments containing populations of wild Rainbow Trout ([Appendix XV](#)). Eighteen (18) subwatersheds had at least 50% of their area (km²) occupied by wild Rainbow Trout; these subwatersheds were located in five states (Table 12; [Appendix Table XVI](#)).

Table 12. Number of Subwatersheds (HUC 12) with wild Rainbow Trout Occupying at least 50% of its Area (km²) by State

State(s)	# of HUC 12s
NC	4
NY	2
PA	7
TN	4
VA	1

Brown Trout & Rainbow Trout

Seven hundred four (704) subwatersheds had catchments containing populations of wild Brown Trout and Rainbow Trout ([Appendix Table XVII](#)). Twenty-six (26) subwatersheds had at least 50% of their area (km²) occupied by wild Brown Trout and Rainbow Trout; these subwatersheds were located in four states, though 81% were located in Pennsylvania (Table 13; [Appendix Table XVIII](#)).

Table 13. Number of Subwatersheds (HUC 12) with wild Brown Trout and Rainbow Trout Occupying at least 50% of its Area (km²) by State

State(s)	# of HUC 12s
GA	1
NY	3
PA	20
PA, WV	1
WV	1

Patch Metrics

The analysis of catchment data also entailed identifying wild trout patches and classifying them using the Catchment Classification protocol (allopatric Brook Trout; Brook Trout sympatric with Brown Trout; Brook Trout sympatric with Rainbow Trout; Brook Trout sympatric with Brown Trout and Rainbow Trout; Brown Trout; Rainbow Trout; and, Brown Trout and Rainbow Trout). A “patch” is defined as a group of contiguous catchments occupied by wild trout ([Hudy et. al. 2013](#)). Patches are not connected physically (i.e., they are separated by a dam, unoccupied warm water habitat, downstream invasive species, etc.) and are generally assumed to be genetically isolated.

There were 10,654 wild trout patches identified within the EBTJV’s geographic boundaries, with a combined area of 265,177 km² ([Appendix Table XIX](#)). The mean patch size was 25 km² and the minimum size was 0.001 km² while the maximum was 4,082 km².

There were 9,860 Brook Trout patches with a combined area of 190,473 km² (Table 14). Six thousand twenty-two (6,022) of these patches were allopatric Brook Trout (1.1) with a combined area of 108,528 km². The mean allopatric Brook Trout patch was 18 km², the minimum patch size was 0.002 km² and the maximum size was 4,082 km². The number of Brook Trout sympatric with Brown Trout patches (1.2) was 2,210 and these patches had a combined area of 45,575 km². Their mean size was 20 km² and the minimum and maximum patch sizes were 0.001 km² and 458 km², respectively. Brook Trout sympatric with Rainbow Trout (1.3) patches numbered 370 and their combined area was 6,049 km². The mean size of these patches was 16 km², their minimum size was 0.02 km² and their maximum size was 349 km². There were 1,258 Brook Trout sympatric with Brown Trout and Rainbow Trout (1.4) patches that total 30,321 km² in their combined area. Their mean patch size was 24 km² and the minimum and maximum patch sizes were 0.001 km² and 631 km², respectively.

Table 14. Range-wide Brook Trout Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	6,022	108,528	18	0.002	4,082
1.2	2,210	45,575	20	0.001	458
1.3	370	6,049	16	0.02	349
1.4	1,258	30,321	24	0.001	631
Totals	9,860	190,473	NA	NA	NA

Allopatric Brook Trout patches (1.1) occurred in all seventeen states contained within the EBTJV's geographic range (Table 15). New York had the highest number (1,025) of allopatric Brook Trout patches, followed by Maine (994), though the combined area of allopatric Brook Trout patches in Maine was more than five times larger than their total area in New York (59,118 km² vs. 10,893 km²). Brook Trout sympatric with Brown Trout patches (1.2) occurred in fourteen states, with the highest number occurring in Pennsylvania (787) followed by New York (703) (Table 16). Brook Trout sympatric with Rainbow Trout patches (1.3) occurred in twelve states; North Carolina had the highest number (115) though Virginia had the greatest amount of combined patch area (1,325 km²) (Table 17). Brook Trout sympatric with Brown Trout and Rainbow Trout patches occurred in thirteen states, though New York had far and away the largest number (855) and highest combined area (15,586 km²) (Table 18).

Table 15. Allopatric Brook Trout Patch Metrics

State	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
CT	317	1,957	6	0.058	44
GA	53	239	5	1.036	18
ME	994	59,118	59	0.008	4,082
MD	103	820	8	0.006	45
MA	563	3,870	7	0.169	126
NH	439	5,567	13	0.201	167
NJ	65	394	6	0.098	23
NY	1,025	10,893	11	0.029	160
NC	643	2,615	4	0.002	38
OH	6	14	2	0.783	6
PA	786	8,318	11	0.127	170
RI	111	752	7	0.074	38
SC	18	80	4	1.517	14
TN	86	492	6	0.004	47
VT	244	4,182	17	0.004	286
VA	288	5,564	19	0.079	183
WV	281	3,653	13	0.007	118
Totals	6,022	108,528	18	0.002	4,082

Table 16. Brook Trout Sympatric with Brown Trout Patch Metrics

State	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
CT	228	4,663	11	0.023	110.1
GA	1	31	31	30.980	31.0
ME	1	6	6	6.329	6.3
MD	42	558	13	1.921	132.8
MA	139	1,886	14	0.015	82.2
NH	20	710	36	0.424	124.4
NJ	35	443	13	0.908	64.8
NY	703	12,980	18	0.001	293.5
NC	70	587	8	1.373	40.3
PA	787	16,797	21	0.049	245.7
TN	1	45	45	45.405	45.4
VT	120	4,843	40	0.005	448.1
VA	14	1,086	78	2.129	458.5
WV	49	940	19	0.661	90.8
Totals	2,210	45,575	20	0.001	458.5

Table 17. Brook Trout Sympatric with Rainbow Trout Patch Metrics

State	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
GA	7	21	3	1.79	6
ME	2	310	155	21.53	288
MD	2	4	2	0.25	4
MA	7	97	14	1.63	50
NH	29	834	29	1.23	124
NY	70	817	12	0.02	173
NC	115	966	8	0.85	64
PA	16	337	21	1.04	140
TN	30	380	13	0.15	52
VT	35	767	22	1.49	120
VA	46	1,325	29	0.98	349
WV	11	191	17	2.61	55
Totals	370	6,049	16	0.02	349

Table 18. Brook Trout Sympatric with Brown Trout & Rainbow Trout Patch Metrics

State	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
GA	7	21	3	2.08	5
ME	1	422	422	421.86	422
MD	2	21	10	9.41	11
MA	23	489	21	0.50	70
NH	7	522	75	18.74	209
NJ	7	115	16	6.27	33
NY	855	15,586	18	0.001	631
NC	74	1,313	18	0.58	242
PA	147	5,229	36	0.43	210
TN	2	36	18	17.28	19
VT	93	4,477	48	0.63	318
VA	23	908	39	0.08	175
WV	17	1,183	70	1.66	283
Totals	1,258	30,321	24	0.001	631

There were 2,466 Brown Trout and/or Rainbow Trout patches with a combined area of 36,566 km² (Table 19). One thousand three hundred sixty-nine (1,369) patches were Brown Trout (0.2) with a combined area of 19,468 km². The mean Brown Trout patch was 14 km², the minimum patch size was 0.02 km² and the maximum size was 202 km². The number of Rainbow Trout patches (0.3) was 695 and these patches had a combined area of 5,658 km². Their mean size was 8 km² and the minimum and maximum patch sizes were 0.002 km² and 125 km², respectively. Brown Trout & Rainbow Trout (0.4) patches numbered 402 and their combined area was 11,440 km². The mean size of these patches was 28 km², their minimum size was 0.01 km² and their maximum size was 264 km².

Table 19. Range-Wide Brown Trout and/or Rainbow Trout Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
0.2	1,369	19,468	14	0.02	202
0.3	695	5,658	8	0.002	125
0.4	402	11,440	28	0.01	264
Totals	2,466	36,566	NA	NA	NA

Brown Trout patches (0.2) occurred in thirteen states (Table 20). New York had the highest number (571) of these patches, followed by Pennsylvania (337), though the combined area of Brown Trout patches in Pennsylvania was larger than their total area in New York (7,687 km² vs. 7,591 km²). Rainbow Trout patches (0.3) also occurred in thirteen states, with the highest number occurring in New York (262) followed by North Carolina (234) (Table 21). Likewise, Brown Trout & Rainbow Trout patches (0.4) occurred in thirteen states; New York had the highest number (162) though Pennsylvania had the greatest amount of combined patch area (5,976 km²) (Table 22).

Table 20. Brown Trout Patch Metrics

State	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
CT	88	566	6	0.07	42
GA	2	12	6	3.23	9
ME	7	26	4	0.38	8
MD	56	521	9	0.57	39
MA	76	499	7	0.04	47
NH	33	308	9	0.23	63
NJ	47	478	10	0.15	46
NY	571	7,591	13	0.03	167
NC	73	468	6	0.65	92
PA	337	7,687	23	0.02	202
VT	5	21	4	0.32	8
VA	13	244	19	1.81	81
WV	61	1,047	17	0.48	145
Totals	1,369	19,468	14	0.02	202

Table 21. Rainbow Trout Patch Metrics

State	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
GA	27	347	13	1.449	39
ME	3	18	6	0.483	13
MD	3	8	3	0.050	8
MA	15	62	4	0.466	16
NH	7	102	15	0.924	42
NJ	3	21	7	1.748	12
NY	262	1,887	7	0.002	61
NC	234	1,384	6	0.003	57
PA	26	490	19	1.078	125
TN	72	748	10	0.760	81
VT	1	6	6	6.224	6
VA	34	416	12	0.201	48
WV	8	168	21	1.901	82
Totals	695	5,658	8	0.002	125

Table 22. Brown Trout & Rainbow Trout Patch Metrics

State	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
GA	16	216	13	1.75	45.9
ME	2	11	5	3.10	7.9
MD	1	0.2	0.2	0.19	0.2
MA	9	83	9	0.01	35.6
NH	5	73	15	2.48	42.3
NJ	4	57	14	3.18	31.1
NY	162	3,645	23	0.03	264.0
NC	54	958	18	0.20	106.0
PA	119	5,976	50	0.35	254.9
TN	5	44	9	1.13	24.9
VT	11	67	6	0.65	26.1
VA	6	58	10	1.66	30.4
WV	8	250	31	3.49	71.1
Totals	402	11,440	28	0.01	264.0

State-Level Results

State of Maine

Maine had 974 subwatersheds included in the catchment assessment that had a combined area of 174,889 km² ([Appendix Table XX](#)). There were 17,698 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 58,210 km² (Table 23). The number of catchments containing Brook Trout sympatric with Brown Trout, Brook Trout sympatric with Rainbow Trout and sympatric with Brown Trout and Rainbow Trout totaled 30 and their combined area was 133 km². The number of catchments containing only wild Brown Trout or wild Rainbow Trout or both wild Brown Trout and Rainbow Trout totaled 46, with a combined catchment area that totaled 158 km².

Table 23. State of Maine Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	17,698	58,210
Brook Trout Sympatric with Brown Trout (1.2)	1	6
Brook Trout Sympatric with Rainbow Trout (1.3)	21	93
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	8	34
Brown Trout (0.2)	7	26
Rainbow Trout (0.3)	30	115
Brown Trout & Rainbow Trout (0.4)	9	17
Totals	17,774	58,501

There were 123 subwatersheds in Maine classified as Intact, 710 subwatersheds classified as Reduced and 141 classified as Extirpated (Table 24; [Appendix Table XXI](#)). The most Intact subwatershed in Maine was the Shields Branch Big Black River.

Table 24. State of Maine Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	123	13%
Reduced	710	73%
Extirpated	141	14%
Totals	974	100%

Maine has 1,010 wild trout patches, 994 are classified as allopatric Brook Trout (Table 25). Allopatric Brook Trout patches represent 98.7% of the State's total patch area. [Map of Maine's Wild Brook Trout Patches](#).

Table 25. State of Maine Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	994	59,118	59	0.01	4,082
1.2	1	6	6	6.3	6.3
1.3	2	310	155	21.5	288
1.4	1	422	422	421.9	422
0.2	7	26	4	0.4	8
0.3	3	18	6	0.5	13
0.4	2	11	5	3.1	7.9
Totals	1,010	59,911	NA	NA	NA

State of New Hampshire

New Hampshire had 334 subwatersheds included in the catchment assessment that had a combined area of 56,568 km² ([Appendix Table XXII](#)). There were 2,799 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 9,020 km² (Table 26). The number of catchments classified as Brook Trout sympatric with Brown Trout was 277 and the total area of these catchments 807 km². Catchments classified as Brook Trout sympatric with Rainbow Trout numbered 192, with a total area of 823 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 26, which totaled 210 km² in area. The number of catchments classified as wild Brown Trout was 271 and the total area of these catchments was 588 km². There were 98 catchments classified as wild Rainbow Trout, with a total area of 303 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 142, which totaled 370 km² in area.

Table 26. State of New Hampshire Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	2,799	9,020
Brook Trout Sympatric with Brown Trout (1.2)	277	807
Brook Trout Sympatric with Rainbow Trout (1.3)	192	823
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	26	210
Brown Trout (0.2)	271	588
Rainbow Trout (0.3)	98	303
Brown Trout & Rainbow Trout (0.4)	142	370
Totals	3,805	12,121

There were 20 subwatersheds in New Hampshire classified as Intact, 236 subwatersheds classified as Reduced and 78 classified as Extirpated (Table 27). The most Intact subwatershed in New Hampshire was the Mohawk River ([Appendix Table XXIII](#)).

Table 27. State of New Hampshire Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	20	6%
Reduced	236	71%
Extirpated	78	23%
Totals	334	100%

New Hampshire has 520 wild trout patches, 410 are classified as allopatric Brook Trout (Table 28). Allopatric Brook Trout patches represent 78.8% of the State's total patch area. [Map of New Hampshire's Wild Brook Trout Patches](#).

Table 28. State of New Hampshire Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	410	5,082	12.4	0.2	168
1.2	21	651	31	0.4	110
1.3	28	860	31	1.2	124
1.4	16	1,623	101	11.2	310
0.2	33	308	9	0.2	63
0.3	7	102	15	0.9	42
0.4	5	73	15	2.5	42
Totals	520	8,699	NA	NA	NA

State of Massachusetts

Massachusetts had 244 subwatersheds included in the catchment assessment that had a combined area of 45,022 km² ([Appendix Table XXIV](#)). There were 1,935 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 5,718 km² (Table 29). The number of catchments classified as Brook Trout sympatric with

Brown Trout was 625 and the total area of these catchments 2,014 km². Catchments classified as Brook Trout sympatric with Rainbow Trout numbered 25, with a total area of 92 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 57, which totaled 184 km² in area. The number of catchments classified as wild Brown Trout was 530 and the total area of these catchments was 1,168 km². There were 100 catchments classified as wild Rainbow Trout, with a total area of 193 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 65, which totaled 169 km² in area.

Table 29. State of Massachusetts Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	1,935	5,718
Brook Trout Sympatric with Brown Trout (1.2)	625	2,014
Brook Trout Sympatric with Rainbow Trout (1.3)	25	92
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	57	184
Brown Trout (0.2)	530	1,168
Rainbow Trout (0.3)	100	193
Brown Trout & Rainbow Trout (0.4)	65	169
Totals	3,337	9,538

There were 10 subwatersheds in Massachusetts classified as Intact, 182 subwatersheds classified as Reduced and 52 classified as Extirpated (Table 30; [Appendix Table XXV](#)).

Table 30. State of Massachusetts Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	10	4%
Reduced	182	75%
Extirpated	52	21%
Totals	244	100%

Massachusetts has 787 wild trout patches, 504 are classified as allopatric Brook Trout (Table 31). Allopatric Brook Trout patches represent 43.7% of the State's total patch area. [A Map of Massachusetts's Wild Brook Trout Patches](#).

Table 31. State of Massachusetts Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	504	3,310	7	0.17	126
1.2	144	2,186	15	0.02	135
1.3	10	144	14	1.63	38
1.4	29	1,294	45	0.50	220
0.2	76	499	7	0.04	47
0.3	15	62	4	0.47	16
0.4	9	83	9	0.01	36
Totals	787	7,578	NA	NA	NA

State of Vermont

Vermont had 265 subwatersheds included in the catchment assessment that had a combined area of 52,915 km² ([Appendix Table XXVI](#)). There were 1,564 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 7,638 km² (Table 32). The number of catchments classified as Brook Trout sympatric with Brown Trout was 565 and the total area of these catchments 3,372 km². Catchments classified as Brook Trout sympatric with Rainbow Trout numbered 407, with a total area of 1,567 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 423, which totaled 2,354 km² in area. The number of catchments classified as wild Brown Trout was 107 and the total area of these catchments was 434 km². There were 64 catchments classified as wild Rainbow Trout, with a total area of 128 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 189, which totaled 873 km² in area.

Table 32. State of Vermont Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	1,564	7,638
Brook Trout Sympatric with Brown Trout (1.2)	565	3,372
Brook Trout Sympatric with Rainbow Trout (1.3)	407	1,567
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	423	2,354
Brown Trout (0.2)	107	434
Rainbow Trout (0.3)	64	128
Brown Trout & Rainbow Trout (0.4)	189	873
Totals	3,319	16,366

There were 38 subwatersheds in Vermont classified as Intact, 175 subwatersheds classified as Reduced and 52 classified as Extirpated (Table 33; [Appendix Table XXVII](#)).

Table 33. State of Vermont Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	38	14%
Reduced	175	66%
Extirpated	52	20%
Totals	265	100%

Vermont has 441 wild trout patches, 221 are classified as allopatric Brook Trout (Table 34). Allopatric Brook Trout patches represent 26.5% of the State's total patch area. [A Map of Vermont's Wild Brook Trout Patches](#).

Table 34. State of Vermont Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	221	3,933	18	0.04	286
1.2	105	4,817	46	0.01	448
1.3	22	487	22	1.49	121
1.4	76	6,076	80	0.63	883
0.2	5	21	4	0.32	8
0.3	1	6	6	6.22	6
0.4	11	67	6	0.65	26
Totals	441	15,407	NA	NA	NA

State of Connecticut

Connecticut had 177 subwatersheds included in the catchment assessment that had a combined area of 25,905 km² ([Appendix XXVIII](#)). There were 1,280 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 3,705 km² (Table 35). The number of catchments classified as Brook Trout sympatric with Brown Trout was 1,014 and the total area of these catchments 2,239 km². Connecticut didn't have any catchments classified as Brook Trout sympatric with Rainbow Trout or Brook Trout sympatric with Brown Trout & Rainbow Trout. The number of catchments classified as wild Brown Trout was 1,101 and the total area of these catchments was 2,226 km². There were no catchments classified as wild Rainbow Trout or wild Brown Trout & Rainbow Trout.

Table 35. State of Connecticut Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	1,280	3,705
Brook Trout Sympatric with Brown Trout (1.2)	1,014	2,239
Brook Trout Sympatric with Rainbow Trout (1.3)	0	0
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	0	0
Brown Trout (0.2)	1,101	2,226
Rainbow Trout (0.3)	0	0
Brown Trout & Rainbow Trout (0.4)	0	0
Totals	3,476	8,279

There were 4 subwatersheds in Connecticut classified as Intact, 162 subwatersheds classified as Reduced and 13 classified as Extirpated (Table 36; [Appendix Table XXIX](#)).

Table 36. State of Connecticut Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	4	2%
Reduced	162	91%
Extirpated	13	7%
Totals	179	100%

Connecticut has 633 wild trout patches, 317 are classified as allopatric Brook Trout (Table 37). Allopatric Brook Trout patches represent 27.2% of the State's total patch area. [Map of Connecticut's Wild Brook Trout Patches](#).

Table 37. State of Connecticut Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	317	1,957	6	0.06	29
1.2	228	4,663	20	0.02	220
1.3	0	0	0	0.00	0
1.4	0	0	0	0.00	0
0.2	88	566	6	0.07	45
0.3	0	0	0	0.00	0
0.4	0	0	0	0.00	0
Totals	633	7,186	NA	NA	NA

State of Rhode Island

Rhode Island had 52 subwatersheds included in the catchment assessment that had a combined area of 7,453 km² ([Appendix Table XXX](#)). There were 404 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 1,019 km² (Table 38). The number of catchments classified as Brook Trout sympatric with Brown Trout was 23 and the total area of these catchments 54 km². Rhode Island didn't have any catchments classified as Brook Trout sympatric with Rainbow, whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 2, which totaled 4 km² in area. The number of catchments classified as wild Brown Trout was 60 and the total area of these catchments was 83 km². There was 1 catchment classified as wild Rainbow Trout, with a total area of 9 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 5, which totaled 14 km² in area.

Table 38. State of Rhode Island Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	404	1,019
Brook Trout Sympatric with Brown Trout (1.2)	23	54
Brook Trout Sympatric with Rainbow Trout (1.3)	0	0
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	2	4
Brown Trout (0.2)	60	83
Rainbow Trout (0.3)	1	9
Brown Trout & Rainbow Trout (0.4)	5	14
Totals	495	1,183

There was only 1 subwatershed in Rhode Island classified as Intact, 40 subwatersheds classified as Reduced and 11 classified as Extirpated (Table 39; [Appendix Table XXXI](#)).

Table 39. State of Rhode Island Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	1	2%
Reduced	40	77%
Extirpated	11	21%
Totals	52	100%

Rhode Island has 109 wild trout patches, 108 are classified as allopatric Brook Trout (Table 40). Allopatric Brook Trout patches represent 90.8% of the State's total patch area. [A Map of Rhode Island's Wild Brook Trout Patches](#).

Table 40. State of Rhode Island Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	108	690	6	0.6	30
1.2	1	70	70	0.1	70
1.3	0	0	0	0.0	0
1.4	0	0	0	0.0	0
0.2	0	0	0	0.0	0
0.3	0	0	0	0.0	0
0.4	0	0	0	0.0	0
Totals	109	760	NA	NA	NA

State of New York

New York had 1,656 subwatersheds included in the catchment assessment that had a combined area of 248,371 km² ([Appendix XXXII](#)). There were 6,116 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 18,120 km² (Table 41). The number of catchments classified as Brook Trout sympatric with Brown Trout was 4,386 and the total area of these catchments 13,744 km². Catchments

classified as Brook Trout sympatric with Rainbow Trout numbered 313, with a total area of 774 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 3,526, which totaled 8,565 km² in area. The number of catchments classified as wild Brown Trout was 7,136 and the total area of these catchments was 19,174 km², which are higher than the allopatric Brook Trout catchment metrics. There were 1,522 catchments classified as wild Rainbow Trout, with a total area of 3,609 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 1,594, which totaled 4,358 km² in area.

Table 41. State of New York Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	6,116	18,120
Brook Trout Sympatric with Brown Trout (1.2)	4,386	13,744
Brook Trout Sympatric with Rainbow Trout (1.3)	313	774
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	3,526	8,565
Brown Trout (0.2)	7,136	19,174
Rainbow Trout (0.3)	1,522	3,609
Brown Trout & Rainbow Trout (0.4)	1,594	4,358
Totals	24,593	68,344

There were 160 subwatersheds in New York classified as Intact, 786 subwatersheds classified as Reduced and 710 classified as Extirpated (Table 42; [Appendix XXXIII](#)).

Table 42. State of New York Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	160	10%
Reduced	786	47%
Extirpated	710	43%
Totals	1,656	100%

New York has 3,153 wild trout patches, 785 are classified as allopatric Brook Trout (Table 43). Allopatric Brook Trout patches represent 12.4% of the State's total patch area. [A Map of New York's Wild Brook Trout Patches](#).

Table 43. State of New York Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	785	8,270	11	0.03	160
1.2	551	17,526	32	0.01	334
1.3	50	581	12	0.02	55
1.4	772	26,884	35	0.001	1,689
0.2	571	7,591	13	0.03	168
0.3	262	1,887	17	0.002	61
0.4	162	3,645	23	0.03	264

Totals	3,153	66,504	NA	NA	NA
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State of New Jersey

New Jersey had 125 subwatersheds included in the catchment assessment that had a combined area of 18,215 km² ([Appendix Table XXXIV](#)). There were 183 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 545 km² (Table 44). The number of catchments classified as Brook Trout sympatric with Brown Trout was 113 and the total area of these catchments 470 km². There was only 1 catchment classified as Brook Trout sympatric with Rainbow Trout, with a total area of 6 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 11, which totaled 65 km² in area. The number of catchments classified as wild Brown Trout was 391 and the total area of these catchments was 994 km², which are higher than the allopatric Brook Trout metrics. There were 46 catchments classified as wild Rainbow Trout, with a total area of 92 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 27, which totaled 79 km² in area.

Table 44. State of New Jersey Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km²) of the Catchments
Allopatric Brook Trout (1.1)	183	545
Brook Trout Sympatric with Brown Trout (1.2)	113	470
Brook Trout Sympatric with Rainbow Trout (1.3)	1	6
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	11	65
Brown Trout (0.2)	391	994
Rainbow Trout (0.3)	46	92
Brown Trout & Rainbow Trout (0.4)	27	79
Totals	772	2,251

There were no subwatersheds in New Jersey classified as Intact, 46 subwatersheds classified as Reduced and 79 classified as Extirpated (Table 45; [Appendix Table XXXV](#)).

Table 45. State of New Jersey Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	0	0%
Reduced	46	37%
Extirpated	79	63%
Totals	125	100%

New Jersey has 160 wild trout patches, 63 are classified as allopatric Brook Trout (Table 46). Allopatric Brook Trout patches represent 22.5% of the State's total patch area. [A Map of New Jersey's Wild Brook Trout Patches](#).

Table 46. State of New Jersey Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	63	379	6	0.1	23
1.2	36	627	17	0.9	88
1.3	0	0	0	0.0	0
1.4	7	117	17	6.3	33
0.2	47	478	10	0.2	46
0.3	3	22	7	1.8	12
0.4	4	57	14	3.2	31
Totals	160	1,681	NA	NA	NA

State of Pennsylvania

Pennsylvania had 1,429 subwatersheds included in the catchment assessment that had a combined area of 217,098 km² ([Appendix Table XXXVI](#)). There were 5,134 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 14,105 km² (Table 47). The number of catchments classified as Brook Trout sympatric with Brown Trout was 6,082 and the total area of these catchments 15,068 km², which are higher than the allopatric Brook Trout catchment metrics. Catchments classified as Brook Trout sympatric with Rainbow Trout numbered 94, with a total area of 238 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 910, which totaled 2,089 km² in area. The number of catchments classified as wild Brown Trout was 10,905 and the total area of these catchments was 24,298 km², which are also higher than the allopatric Brook Trout catchment metrics. There were 951 catchments classified as wild Rainbow Trout, with a total area of 1,963 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 2,836, which totaled 6,472 km² in area.

Table 47. State of Pennsylvania Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	5,134	14,105
Brook Trout Sympatric with Brown Trout (1.2)	6,082	15,068
Brook Trout Sympatric with Rainbow Trout (1.3)	94	238
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	910	2,089
Brown Trout (0.2)	10,905	24,298
Rainbow Trout (0.3)	951	1,963
Brown Trout & Rainbow Trout (0.4)	2,836	6,472
Totals	26,912	64,233

There were 93 subwatersheds in Pennsylvania classified as Intact, 675 subwatersheds classified as Reduced and 661 classified as Extirpated (Table 48; [Appendix Table XXXVII](#)).

Table 48. State of Pennsylvania Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	93	7%
Reduced	675	47%
Extirpated	661	46%
Totals	1,429	100%

Pennsylvania has 1,658 wild trout patches, 513 are classified as allopatric Brook Trout (Table 49). Allopatric Brook Trout patches represent 8.6% of the State's total patch area. [A Map of Pennsylvania's Wild Brook Trout Patches](#).

Table 49. State of Pennsylvania Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	513	5,431	11	0.13	170
1.2	454	17,581	39	0.15	433
1.3	12	114	10	1.04	28
1.4	197	25,593	130	0.56	912
0.2	337	7,687	23	0.02	202
0.3	26	490	19	1.08	125
0.4	119	5,976	50	0.35	255
Totals	1,658	62,873	NA	NA	NA

State of Maryland

Maryland had 208 subwatersheds included in the catchment assessment that had a combined area of 31,006 km² ([Appendix Table XXXVIII](#)). There were 376 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 1,470 km² (Table 50). The number of catchments classified as Brook Trout sympatric with Brown Trout was 125 and the total area of these catchments 420 km². Catchments classified as Brook Trout sympatric with Rainbow Trout numbered 5, with a total area of 10 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 35, which totaled 65 km² in area. The number of catchments classified as wild Brown Trout was 440 and the total area of these catchments was 1,239 km². There were 32 catchments classified as wild Rainbow Trout, with a total area of 74 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 35, which totaled 99 km² in area.

Table 50. State of Maryland Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	376	1,470
Brook Trout Sympatric with Brown Trout (1.2)	125	420
Brook Trout Sympatric with Rainbow Trout (1.3)	5	10
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	35	65
Brown Trout (0.2)	440	1,239
Rainbow Trout (0.3)	32	74
Brown Trout & Rainbow Trout (0.4)	35	99
Totals	1,048	3,377

There were 3 subwatersheds in Maryland classified as Intact, 57 subwatersheds classified as Reduced and 148 classified as Extirpated (Table 51; [Appendix Table XXXIX](#)).

Table 51. State of Maryland Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	3	1%
Reduced	57	27%
Extirpated	148	72%
Totals	208	100%

Maryland has 187 wild trout patches, 100 are classified as allopatric Brook Trout (Table 52). Allopatric Brook Trout patches represent 35.2% of the State's total patch area. [A Map of Maryland's Wild Brook Trout Patches](#).

Table 52. State of Maryland Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	100	805	8	0.02	45
1.2	21	773	37	4.25	170
1.3	3	28	9	0.25	24
1.4	3	151	50	9.41	130
0.2	56	521	9	0.57	39
0.3	3	8	3	0.05	8
0.4	1	0.2	0.2	0.19	0.2
Totals	187	2,285	NA	NA	NA

State of West Virginia

West Virginia had 514 subwatersheds included in the catchment assessment that had a combined area of 80,250 km² ([Appendix Table XL](#)). There were 1,611 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 4,912 km² (Table 53). The number of catchments classified as Brook Trout sympatric with Brown Trout was 320 and the total area of these catchments 849 km². Catchments classified as

Brook Trout sympatric with Rainbow Trout numbered 72, with a total area of 198 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 178, which totaled 668 km² in area. The number of catchments classified as wild Brown Trout was 707 and the total area of these catchments was 1,625 km². There were 102 catchments classified as wild Rainbow Trout, with a total area of 276 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 316, which totaled 649 km² in area.

Table 53. State of West Virginia Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	1,611	4,912
Brook Trout Sympatric with Brown Trout (1.2)	320	849
Brook Trout Sympatric with Rainbow Trout (1.3)	72	198
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	178	668
Brown Trout (0.2)	707	1,625
Rainbow Trout (0.3)	102	276
Brown Trout & Rainbow Trout (0.4)	316	649
Totals	3,306	9,177

There were 19 subwatersheds in West Virginia classified as Intact, 136 subwatersheds classified as Reduced and 360 classified as Extirpated (Table 54; [Appendix Table XLI](#)).

Table 54. State of West Virginia Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	19	4%
Reduced	136	26%
Extirpated	359	70%
Totals	514	100%

West Virginia has 397 wild trout patches, 248 are classified as allopatric Brook Trout (Table 55). Allopatric Brook Trout patches represent 38.9% of the State's total patch area. [A Map of West Virginia's Wild Brook Trout Patches](#).

Table 55. State of West Virginia Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	248	3,238	13	0.01	118
1.2	39	1,209	31	0.66	189
1.3	11	307	28	9.85	84
1.4	22	2,099	95	1.66	284
0.2	61	1,047	17	0.48	145
0.3	8	168	21	1.90	82
0.4	8	251	31	3.49	71
Totals	397	8,319	NA	NA	NA

State of Virginia

Virginia had 447 subwatersheds included in the catchment assessment that had a combined area of 67,630 km² ([Appendix Table XLII](#)). There were 2,103 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 7,529 km² (Table 56). The number of catchments classified as Brook Trout sympatric with Brown Trout was 249 and the total area of these catchments 842 km². Catchments classified as Brook Trout sympatric with Rainbow Trout numbered 271, with a total area of 697 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 129, which totaled 363 km² in area. The number of catchments classified as wild Brown Trout was 184 and the total area of these catchments was 337 km². There were 370 catchments classified as wild Rainbow Trout, with a total area of 809 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 56, which totaled 144 km² in area.

Table 56. State of Virginia Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	2,103	7,529
Brook Trout Sympatric with Brown Trout (1.2)	249	842
Brook Trout Sympatric with Rainbow Trout (1.3)	271	697
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	129	363
Brown Trout (0.2)	184	337
Rainbow Trout (0.3)	370	809
Brown Trout & Rainbow Trout (0.4)	56	144
Totals	3,362	10,721

There were 40 subwatersheds in Virginia classified as Intact, 146 subwatersheds classified as Reduced and 261 classified as Extirpated (Table 57; [Appendix Table XLIII](#)).

Table 57. State of Virginia Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	40	9%
Reduced	146	33%
Extirpated	261	58%
Totals	447	100%

Virginia has 380 wild trout patches, 248 are classified as allopatric Brook Trout (Table 58). Allopatric Brook Trout patches represent 54.4% of the State's total patch area. [A Map of Virginia's Wild Brook Trout Patches](#).

Table 58. State of Virginia Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	254	5,388	21	0.1	183
1.2	12	1,045	87	3.9	465
1.3	38	1,462	39	1.1	349
1.4	23	1,291	56	1.0	175
0.2	13	244	19	1.8	81
0.3	34	416	12	0.2	48
0.4	6	58	10	1.7	30
Totals	380	9,904	NA	NA	NA

State of North Carolina

North Carolina had 338 subwatersheds included in the catchment assessment that had a combined area of 42,808 km² ([Appendix Table XLIV](#)). There were 1,863 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 4,102 km² (Table 59). The number of catchments classified as Brook Trout sympatric with Brown Trout was 162 and the total area of these catchments 601 km². Catchments classified as Brook Trout sympatric with Rainbow Trout numbered 306, with a total area of 846 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 171, which totaled 419 km² in area. The number of catchments classified as wild Brown Trout was 729 and the total area of these catchments was 1,517 km². There were 1,632 catchments classified as wild Rainbow Trout, with a total area of 3,822 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 726, which totaled 1,440 km² in area.

Table 59. State of North Carolina Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	1,863	4,102
Brook Trout Sympatric with Brown Trout (1.2)	162	601
Brook Trout Sympatric with Rainbow Trout (1.3)	306	846
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	171	419
Brown Trout (0.2)	729	1,517
Rainbow Trout (0.3)	1,632	3,822
Brown Trout & Rainbow Trout (0.4)	726	1,440
Totals	5,589	12,747

There were 11 subwatersheds in North Carolina classified as Intact, 179 subwatersheds classified as Reduced and 148 classified as Extirpated (Table 60; [Appendix Table XLV](#)).

Table 60. State of North Carolina Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	11	3%
Reduced	179	53%
Extirpated	148	44%
Totals	338	100%

North Carolina has 933 wild trout patches, 330 are classified as allopatric Brook Trout (Table 61). Allopatric Brook Trout patches represent 9.9% of the State's total patch area. [A Map of North Carolina's Wild Brook Trout Patches](#).

Table 61. State of North Carolina Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	330	1,177	4	0.002	33
1.2	43	660	15	2.35	46
1.3	86	1,245	14	0.85	85
1.4	113	6,053	54	0.58	388
0.2	73	468	6	0.65	92
0.3	234	1,384	6	0.003	57
0.4	54	958	18	0.20	106
Totals	933	11,945	NA	NA	NA

State of South Carolina

South Carolina had 32 subwatersheds included in the catchment assessment that had a combined area of 4,365 km² ([Appendix Table XLVI](#)). There were 65 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 158 km² (Table 62). The number of catchments classified as Brook Trout sympatric with Brown Trout was 6 and the total area of these catchments 23 km². There was only 1 catchment classified as Brook Trout sympatric with Rainbow Trout, with an area of 4 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 2, which totaled 8 km² in area. The number of catchments classified as wild Brown Trout was 45 and the total area of these catchments was 73 km². There were 22 catchments classified as wild Rainbow Trout, with a total area of 37 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 21, which totaled 37 km² in area.

Table 62. State of South Carolina Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	65	158
Brook Trout Sympatric with Brown Trout (1.2)	6	23
Brook Trout Sympatric with Rainbow Trout (1.3)	1	4
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	2	8
Brown Trout (0.2)	45	73
Rainbow Trout (0.3)	22	37
Brown Trout & Rainbow Trout (0.4)	21	37
Totals	162	340

There were no subwatersheds in South Carolina classified as Intact, 9 subwatersheds classified as Reduced and 148 classified as Extirpated (Table 63; [Appendix Table XLVII](#)).

Table 63. State of South Carolina Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	0	0%
Reduced	9	28%
Extirpated	23	72%
Totals	32	100%

South Carolina has 18 wild trout patches, 17 are classified as allopatric Brook Trout (Table 64). Allopatric Brook Trout patches represent 88.1% of the State's total patch area. [A Map of South Carolina's Wild Brook Trout Patches](#) .

Table 64. State of South Carolina Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	17	74	4	2	14
1.2	0	0	0	0	0
1.3	0	0	0	0	0
1.4	1	10	10	10	10
0.2	0	0	0	0	0
0.3	0	0	0	0	0
0.4	0	0	0	0	0
Totals	18	84	NA	NA	NA

State of Georgia

Georgia had 102 subwatersheds included in the catchment assessment that had a combined area of 10,848 km² ([Appendix Table XLVIII](#)). There were 139 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 302 km² (Table 65). The number of catchments classified as Brook Trout sympatric with Brown Trout was 3 and the total area of these catchments 8 km². Catchments classified as Brook Trout

sympatric with Rainbow Trout numbered 6, with a total area of 11 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 6, which totaled 14 km² in area. The number of catchments classified as wild Brown Trout was 15 and the total area of these catchments was 21 km². There were 228 catchments classified as wild Rainbow Trout, with a total area of 478 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 140, which totaled 282 km² in area.

Table 65. State of Georgia Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	139	302
Brook Trout Sympatric with Brown Trout (1.2)	3	8
Brook Trout Sympatric with Rainbow Trout (1.3)	6	11
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	6	14
Brown Trout (0.2)	15	21
Rainbow Trout (0.3)	228	478
Brown Trout & Rainbow Trout (0.4)	140	282
Totals	537	1,116

There were no subwatersheds in Georgia classified as Intact, 19 subwatersheds classified as Reduced and 83 classified as Extirpated (Table 66; [Appendix Table XLIX](#)).

Table 66. State of Georgia Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	0	0%
Reduced	18	18%
Extirpated	84	82%
Totals	102	100%

Georgia has 104 wild trout patches, 37 are classified as allopatric Brook Trout (Table 67). Allopatric Brook Trout patches represent 16.7% of the State's total patch area. [A Map of Georgia's Wild Brook Trout Patches](#).

Table 67. State of Georgia Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	37	168	5	1	18
1.2	0	0	0	0	0
1.3	12	177	15	2	84
1.4	9	57	6	2	19
0.2	2	12	6	3	9
0.3	28	378	13	1	39
0.4	16	216	13	2	46
Totals	104	1,008	NA	NA	NA

State of Tennessee

Tennessee had 118 subwatersheds included in the catchment assessment that had a combined area of 17,169 km² ([Appendix Table L](#)). There were 468 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 941 km² (Table 68). The number of catchments classified as Brook Trout sympatric with Brown Trout was 16 and the total area of these catchments 42 km². Catchments classified as Brook Trout sympatric with Rainbow Trout numbered 158, with a total area of 302 km², whereas the number of catchments classified as Brook Trout sympatric with Brown Trout & Rainbow Trout was 31, which totaled 75 km² in area. The number of catchments classified as wild Brown Trout was 56 and the total area of these catchments was 100 km². There were 803 catchments classified as wild Rainbow Trout, with a total area of 1,419 km², while catchments classified as wild Brown Trout & Rainbow Trout numbered 209, which totaled 376 km² in area.

Table 68. State of Tennessee Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	468	941
Brook Trout Sympatric with Brown Trout (1.2)	16	42
Brook Trout Sympatric with Rainbow Trout (1.3)	158	302
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	31	75
Brown Trout (0.2)	56	100
Rainbow Trout (0.3)	803	1,419
Brown Trout & Rainbow Trout (0.4)	209	376
Totals	1,741	3,255

There was 1 subwatershed in Tennessee classified as Intact, 50 subwatersheds classified as Reduced and 67 classified as Extirpated (Table 69; [Appendix Table LI](#)).

Table 69. State of Tennessee Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	1	1%
Reduced	50	42%
Extirpated	67	57%
Totals	118	100%

Tennessee has 161 wild trout patches, 45 are classified as allopatric Brook Trout (Table 70). Allopatric Brook Trout patches represent 8.3% of the State's total patch area. [A Map of Tennessee's Wild Brook Trout Patches](#).

Table 70. State of Tennessee Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km ²)	Mean Patch Size (km ²)	Minimum Patch Size (km ²)	Maximum Patch Size (km ²)
1.1	45	205	5	0.004	23
1.2	1	45	45	45.4	45
1.3	26	700	27	0.8	111
1.4	12	717	60	33.2	122
0.2	0	0	0	0.0	0
0.3	72	748	10	0.8	81
0.4	5	44	9	1.1	25
Totals	161	2,459	NA	NA	NA

State of Ohio

Ohio had 75 subwatersheds included in the catchment assessment that had a combined area of 10,906 km² ([Appendix Table LII](#)). There were 6 catchments within these subwatersheds with allopatric Brook Trout populations that had a combined catchment area of 12 km² (Table 71). There were no catchments classified as Brook Trout sympatric with Brown Trout, Brook Trout sympatric with Rainbow Trout or Brook Trout sympatric with Brown Trout & Rainbow Trout. The number of catchments classified as wild Brown Trout was 50 and the total area of these catchments was 96 km². There were no catchments classified as wild Rainbow Trout, while catchments classified as wild Brown Trout & Rainbow Trout numbered 48, which totaled 132 km² in area.

Table 71. State of Ohio Catchment Assessment Summary

Catchment Classification (Code)	# of Catchments	Area (km ²) of the Catchments
Allopatric Brook Trout (1.1)	6	12
Brook Trout Sympatric with Brown Trout (1.2)	0	0
Brook Trout Sympatric with Rainbow Trout (1.3)	0	0
Brook Trout Sympatric with Brown Trout & Rainbow Trout (1.4)	0	0
Brown Trout (0.2)	50	96
Rainbow Trout (0.3)	0	0
Brown Trout & Rainbow Trout (0.4)	48	132
Totals	104	240

There were no subwatershed in Ohio classified as Intact, 2 subwatersheds classified as Reduced and 73 classified as Extirpated (Table 72; [Appendix Table LIII](#)).

Table 72. State of Ohio Subwatershed (HUC 12) Classification

Subwatershed Classification	# of Subwatersheds	% of Subwatersheds
Intact	0	0%
Reduced	2	3%
Extirpated	73	97%
Totals	75	100%

Ohio has 6 wild trout patches, all of them are classified as allopatric Brook Trout (Table 73). Allopatric Brook Trout patches represent 100% of the State's total patch area. [A Map of Ohio's Wild Brook Trout Patches.](#)

Table 73. State of Ohio Patch Metrics

Patch Classification Code	Number of Patches	Total Patch Area (km²)	Mean Patch Size (km²)	Minimum Patch Size (km²)	Maximum Patch Size (km²)
1.1	6	14	2	0.8	6
1.2	0	0	0	0.0	0
1.3	0	0	0	0.0	0
1.4	0	0	0	0.0	0
0.2	0	0	0	0.0	0
0.3	0	0	0	0.0	0
0.4	0	0	0	0.0	0
Totals	6	14	NA	NA	NA