GRANT TITLE: **PROMOTING STRATEGIC FISH HABITAT CONSERVATION THROUGH REGIONAL AND COLLABORATIVE SCIENCE AND PRIORITY SETTING**

REPORT NUMBER: **JUNE 1, 2016 – DECEMBER 31, 2016 FINAL REPORT**

The objective of this portion of the 2016 Multistate Conservation Grant Program grant was to increase coordination and collaboration for addressing whitewater to bluewater fish habitat connectivity needs by the Atlantic Coastal Fish Habitat Partnership (ACFHP), Southeast Aquatic Resources Partnership (SARP), and Eastern Brook Trout Joint Venture (EBTJV) through the development of a process that identifies and prioritizes fish habitat conservation focus areas in drainages that cross the geographic boundaries of these three eastern Fish Habitat Partnerships.

The specific milestones outlined to address the objectives included:

1. Identification of drainages that cross ACFHP, SARP, and EBTJV geographic boundaries.

   SARP's Habitat Analyst used GIS to overlay the regional boundaries of the three partnerships and highlighted potential HUC8 drainages that overlapped in some capacity. A map illustrating the overlap was created along with a corresponding list of HUC8 names (Appendix 1).

   The EBTJV reviewed the list of twenty-seven overlapping HUC8 drainages identified by SARP's Habitat Analyst and determined that Brook Trout are currently present, or occurred historically, in all but three (South Yadkin, Tyger, and Enoree) of these drainages. As a result, the EBTJV is in agreement that twenty-four of the drainages identified in Appendix 1 overlap within the partnership's geographic area of focus.

2. Development of a process that prioritizes a collaborative focus on areas affected by fish habitat connectivity problems common among all three FHPs.

   As part of its Southeast Aquatic Connectivity Program, SARP has been working in select HUC8 drainages to inventory and prioritize barriers (dams and culverts) at a finer scale by working with partners from different sectors. This effort includes the creation of a workgroup consisting of different stakeholders within these HUCs, facilitating communication among members on conference calls and sustaining continued communication and collaboration through emails to accomplish three goals:

   i. Identify additional barriers and existing prioritization efforts on a web platform.
   ii. Prioritize those barriers for both passability assessments and remediation
   iii. Implement barrier removal and remediation projects through the development of a grass roots collaboration where project managers are on deck to take results and equate them to on the ground restoration. Other partners within the smaller working groups are able to contribute resources such as sampling, field assessments, and policy expertise.

Currently SARP is participating in five small-scale connectivity working groups (Appendix 2):

i. Etowah and Conasauga basins (covers both SARP and EBTJV)
ii. Stevens and Lower Catawaba basins (covers both SARP and ACFHP)
iii. North and South Fork Shenandoah basins (covers SARP, ACFHP, and EBTJV)

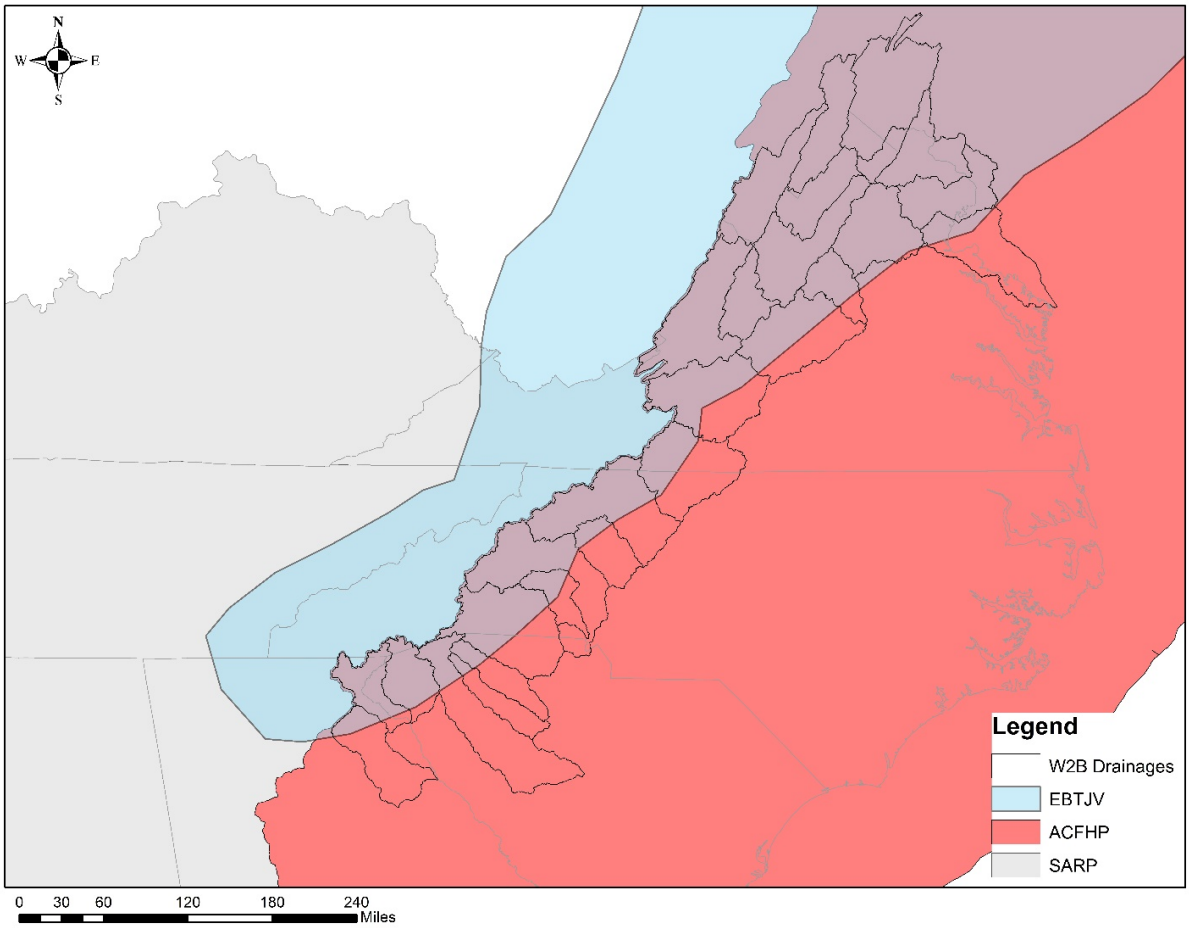
In response to a need for guidance in setting wild Brook Trout conservation priorities in the species historic eastern range, the EBTJV completed a range-wide assessment of wild Brook Trout distribution and status at the subwatershed-level (HUC12) in 2006 (Hudy et. al. 2008). While this initial assessment 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).

One of the outcomes of the EBTJV's catchment scale assessment was the identification of HUC12 subwatersheds that the partnership classifies as "Intact" because ≥50% of the catchments within these subwatersheds contained wild Brook Trout. The EBTJV considers these Intact subwatersheds a priority because they represent wild Brook Trout strongholds and the EBTJV feels that key conservation actions should focus on expanding wild Brook Trout occurrence around these core areas of strength (e.g., by improving habitat connectivity). There are nine HUC8 drainages that are contained within the SARP, ACFHP, and EBTJV overlapping boundaries that contain a combined total of thirty-five Intact HUC12 subwatersheds (Appendix 3).

3. Compilation of a tiered listing of prioritized fish habitat connectivity focus areas (Appendix 3):

Building from the process described in #2, a combination of both a science driven and capacity driven approaches should be used in order to determine a tiered list of drainages to prioritize. For example, the drainages that have both a high biodiversity score and are SARP CFAs could be one method used to select a tiered list (see map). In an effort to realize whitewater to bluewater connectivity objectives, continued collaboration needs to occur to determine where capacity exists to jointly address prioritized connectivity focal areas..

Appendix 1



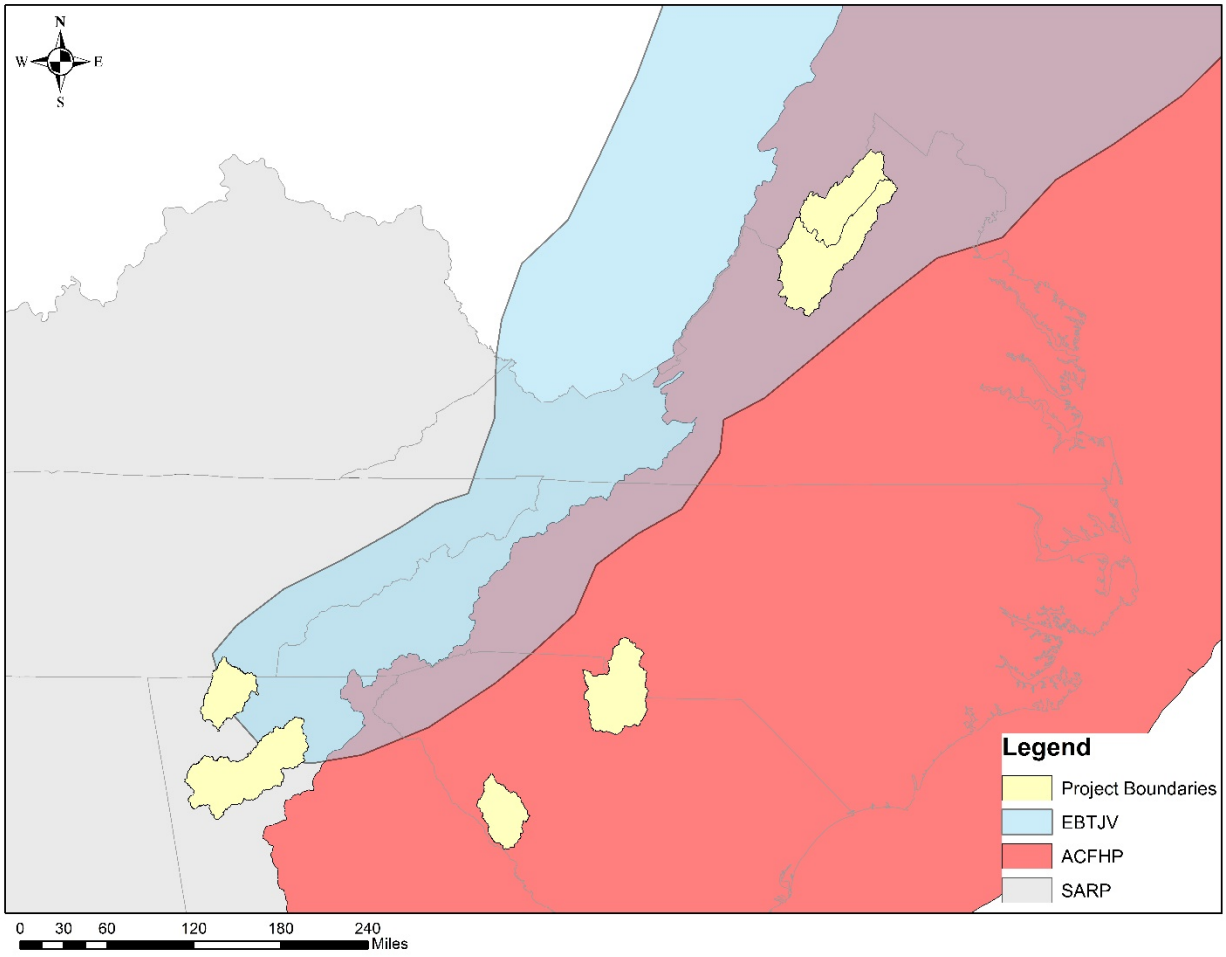
Map illustrating the HUC 8 drainages that cross ACFHP, SARP, and EBTJV geographic boundaries.

List of HUC8 drainages that overlap the three partnership boundaries.

HUC 8 Number	Name	HUC 8 Number	Name
03040101	Upper Yadkin	02070004	Conococheague-Opequon
03040102	South Yadkin	02070005	South Fork Shenandoah
03050101	Upper Catawba	02070006	North Fork Shenandoah
03050102	South Fork Catawba	02070007	Shenandoah
03050105	Upper Broad	02070008	Middle Potomac-Catoctin
03050107	Tyger	02070010	Middle Potomac-Anacostia-Occoquan
03050108	Enoree	02070011	Lower Potomac
03050109	Saluda	02080103	Rapidan-Upper Rappahannock
03060101	Seneca	02080201	Upper James
03060102	Tugaloo	02080202	Maury
03060104	Broad	02080203	Middle James-Buffalo
02070001	South Branch Potomac	02080204	Rivanna
02070003	Cacapon-Town	03010101	Upper Roanoke
		03010103	Upper Dan

Appendix 2

Map illustrating the five small scale connectivity working groups taking places.



Appendix 3

A listing of EBTJV classified "Intact" HUC12 subwatersheds contained in HUC8 drainages that are within the overlapping boundaries of SARP, ACFHP, and EBTJV.

HUC8 Code	HUC8 Name	HUC12 Code	HUC12 Name	HUC12 Area (km2)	% HUC 12 Area (km2) w/Wild Brook Trout
02070001	South Branch Potomac	020700010101	Laurel Fork-North Fork South Branch Potomac River	268.8	50.9%
		020700010102	Big Run	124.2	60.8%
		020700010103	Red Lick Run-North Fork South Branch Potomac River	137.0	60.2%
		020700010104	Headwaters Seneca Creek	167.1	60.7%
		020700010105	Outlet Seneca Creek	124.2	60.5%
		020700010302	Strait Creek	113.8	61.2%
		020700010304	Whitehorn Creek-Thorn Creek	217.3	60.9%
02070005	South Fork Shenandoah	020700050402	Little River	107.2	61.3%
		020700050501	Skidmore Fork-Dry River	165.1	60.9%
		020700050502	Black Run-Dry River	144.7	61.2%
		020700050902	Pitt Spring Run-Cub Run	65.1	61.1%
		020700051003	Gooney Run	116.7	60.6%
02070006	North Fork Shenandoah	020700060101	German River	132.6	60.8%
		020700060402	Yellow Spring Run-Stoney Creek	74.0	53.9%
02070007	Shenandoah	020700070105	Spout Run	92.2	60.2%
02080103	Rapidan-Upper Rappahannock	020801030302	Covington River	178.6	60.4%
		020801030901	Rose River-Robinson River	139.4	56.7%
02080201	Upper James	020802010101	Dry Branch-Jackson River	204.1	61.3%
		020802010102	Bolar Run-Jackson River	234.0	63.4%
		020802010203	Little Back Creek	114.3	61.6%
		020802010501	Hot Springs Run-Cedar Creek	149.1	58.5%
		020802010505	Karnes Creek-White Rock Creek	66.2	60.9%

Appendix 3 (cont.)

		020802010604	Davis Run-Bullpasture River	263.7	61.3%
		020802010605	Crab Run-Bullpasture River	201.7	56.1%
		020802010702	Dry Run	113.1	61.7%
		020802011202	Barbours Creek	153.4	62.8%
02080202	Maury	020802020101	Chair Draft-Calfpasture River	94.6	61.4%
		020802020102	Ramseys Draft	90.5	61.4%
		020802020103	Holloway Draft-Calfpasture River	160.5	51.1%
		020802020105	Fridley Branch-Calfpasture River	166.8	50.5%
		020802020401	Saint Marys River	65.7	62.1%
		020802020403	Irish Creek	109.1	56.9%
02080203	Middle James-Buffalo	020802030501	South Fork Tye River-North Fork Tye River	130.0	62.2%
		020802030505	Little Piney River-Piney River	95.8	87.4%
03010103	Upper Dan	030101030101	Ivy Creek-Dan River	135.1	64.2%

Appendix 4

Preliminary compilation of tiered listing of prioritized fish habitat connectivity focus areas.