Summary of Stream Habitat Characteristics in Slab Camp Creek and White Pine Creek, Daniel Boone National Forest, 2014

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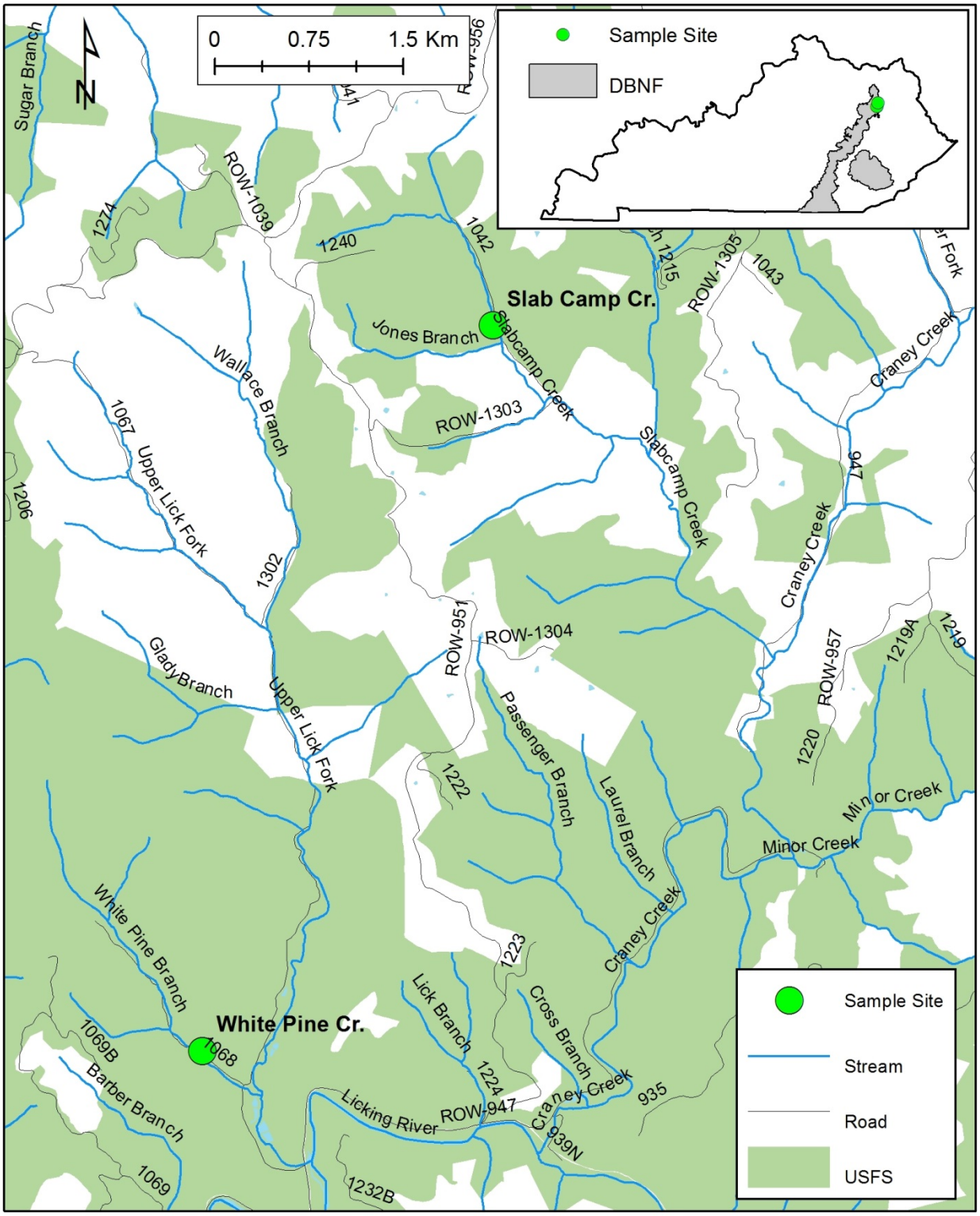

Figure 1. Sample site location on Slab Camp Creek (habitat improvements performed) and White Pine Creek (control), Cumberland District, Daniel Boone National Forest, Kentucky.

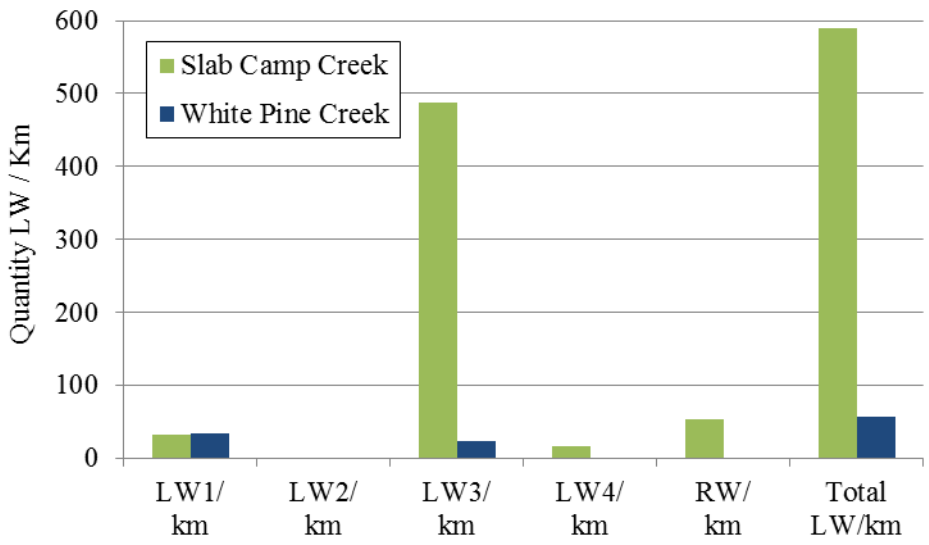

Figure 2. Quantity of large wood (LW; dead and down, any part within bankfull channel) per kilometer in Slab Camp Creek and White Pine Creek. LW size classes: LW1 = 1-5 m length, 10-55 cm diameter; LW2 = 1-5 m length, >55 cm diameter; LW3 = >5 m length, 10-55 cm diameter; LW4 = >5 m length, >55 cm diameter; RW = rootwad.

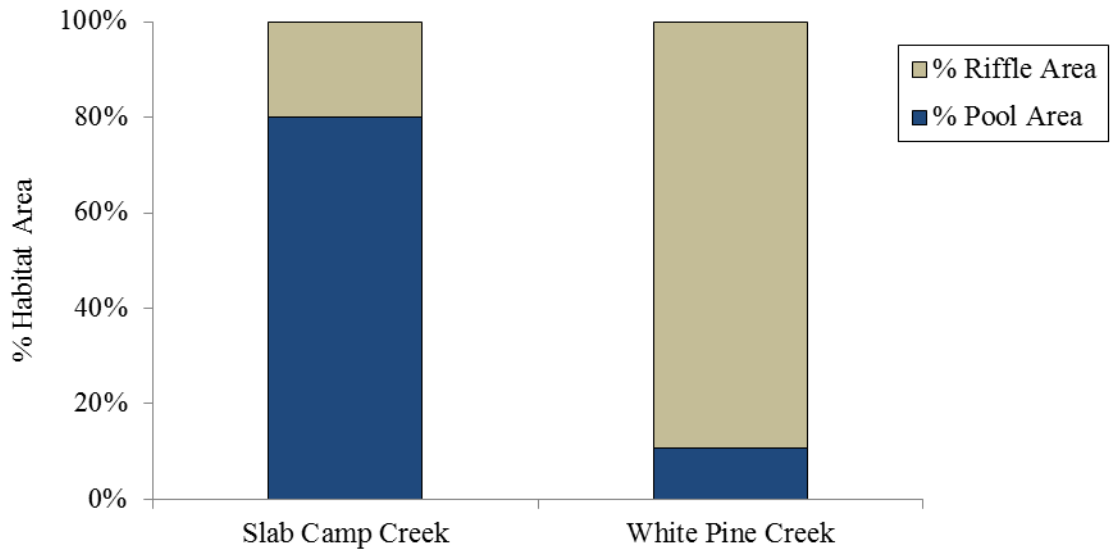

Figure 3. Percent pool (includes glides) and riffle (includes runs) habitat area in Slab Camp Creek and White Pine Creek.

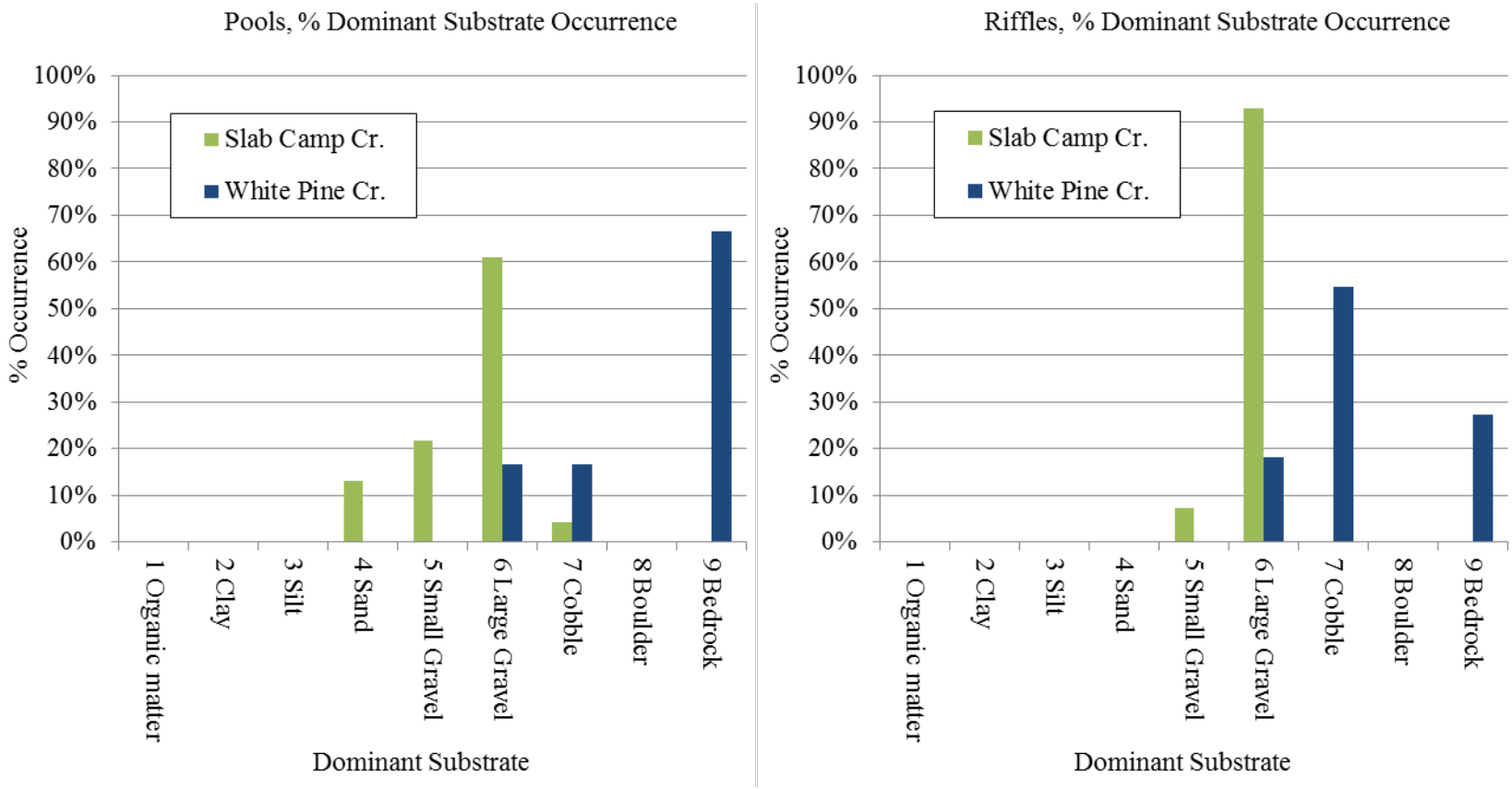

Figure 4. Percent occurrence of dominant substrate size categories in pools (left graph) and riffles (right graph) in Slab Camp Creek and White Pine Creek. Substrate size categories: Organic Matter = dead leaves, detritus, etc.; Clay = sticky, holds form; Silt = slippery, doesn't hold form; Sand = silt-2 mm; Small Gravel = 3-16 mm; Large Gravel = 17-64 mm; Cobble = 65-256 mm; Boulder = >256 mm; Bedrock = solid rock.

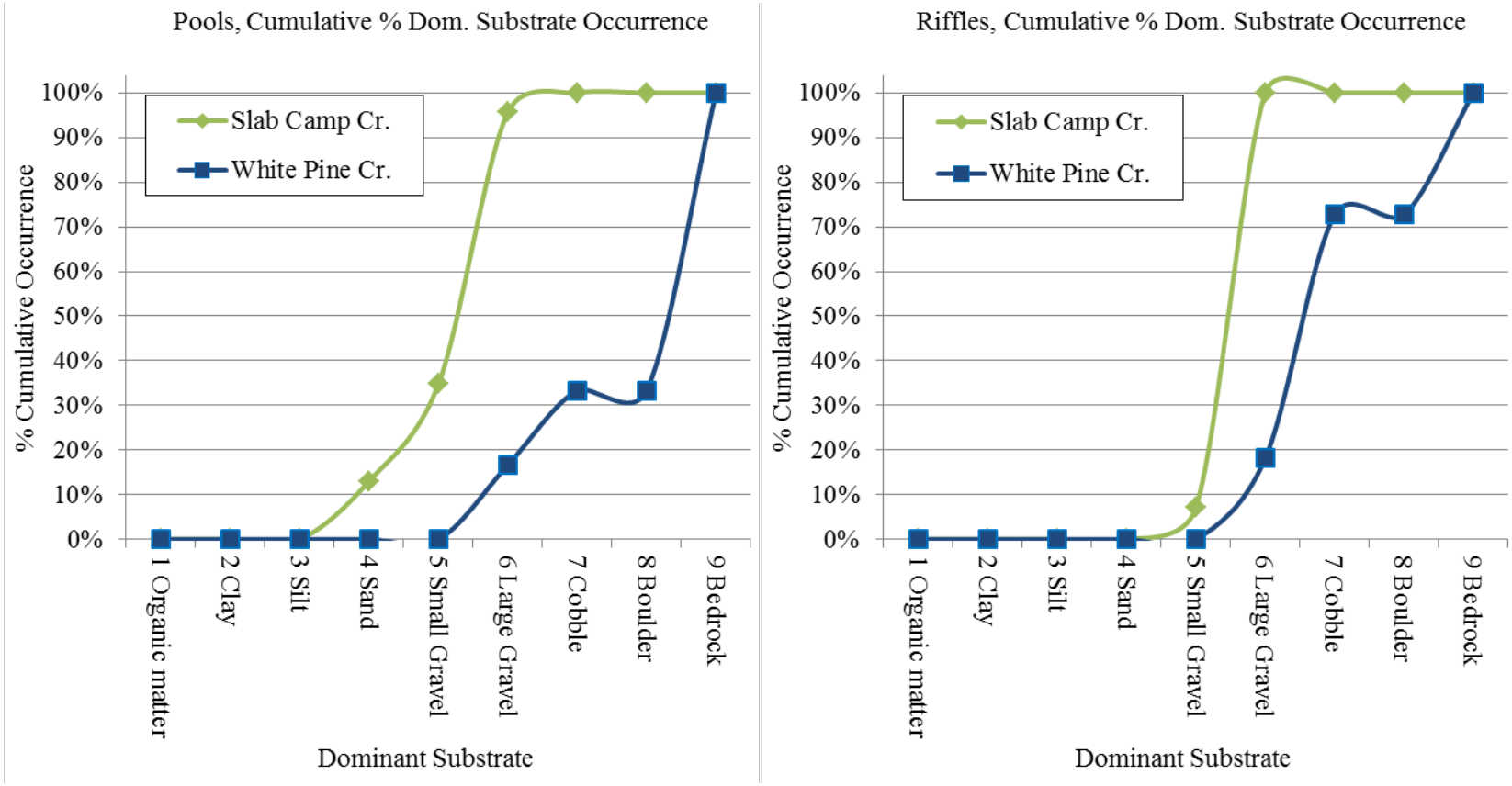

Figure 5. Cumulative percent occurrence of dominant substrate size categories in pools (left graph) and riffles (right graph) in Slab Camp Creek and White Pine Creek. Substrate size categories: Organic Matter = dead leaves, detritus, etc.; Clay = sticky, holds form; Silt = slippery, doesn't hold form; Sand = silt-2 mm; Small Gravel = 3-16 mm; Large Gravel = 17-64 mm; Cobble = 65-256 mm; Boulder = >256 mm; Bedrock = solid rock.

Table 1. Summary of GPS coordinates for BVET stream inventory start and end locations in Slab Camp Creek and White Pine Creek, June 2014.

	GPS (NAD83)	
Stream Name	Downstream Inventory Start	Upstream Inventory End
Slab Camp Creek	17 S 293692 4222208 (N38.12416 W83.35363)	17 S 293645 4222396 (N38.12585 W83.35422)
White Pine Creek	17 S 291089 4216569 (N38.07278 W83.38166)	17 S 290868 4216739 (N38.07426 W83.38423)

Table 2. Summary of BVET stream habitat attributes collected in Slab Camp Creek and White Pine Creek, June 2014.

	Mean Avg. Depth (cm)		Mean Max. Depth (cm)		Mean Residual Pool Depth	Avg. Wetted Width (m)**		Avg. Bankfull Channel Width	Avg. % Fines		Avg. Gradient	Avg. Water	
Stream Name	Pools	Riffles	Pools	Riffles	(cm)*	Pools	Riffles	(m)	Pools	Riffles	(%)	Temp.	Rosgen
Slab Camp Creek	18	4	32	8	16	1.7	1.3	3.7	18	6	2.5	21	C
White Pine Creek	13	5	22	13	8	3.0	3.7	5.5	7	7	2.5	18	B,C,F

**Residual pool depth = average pool depth – riffle crest depth*
***Average wetted width values are calculated from visually estimated widths; a correction factor was not applied because too few paired units were measured.*

Table 3. Stream area in pools (includes glides) and riffles (includes runs) as observed during BVET habitat inventories in Slab Camp Creek and White Pine Creek, June 2014.

Stream Name	Inventory Distance (m)	Pool Unit Count	Riffle Unit Count	Pool Area (m^2)*	Riffle Area (m^2)*	Total Area (m^2)*	% Pool Area	% Riffle Area
Slab Camp Creek	246	23	14	297	74	370	80%	20%
White Pine Creek	299	6	11	121	997	1,118	11%	89%

**Area values are calculated from visually estimated widths and measured lengths; a correction factor was not applied to the widths because too few paired units were measured.*

Table 4. Large wood per kilometer observed during BVET habitat inventories in Slab Camp Creek and White Pine Creek, June 2014 (see Figure 2 caption for large wood size classes).

Stream Name	Large Wood per Km						Large Wood Count in Sample Reach						Inventory
	LW1/ km	LW2/ km	LW3/ km	LW4/ km	RW/ km	Total LW/km	LW1 n	LW2 n	LW3 n	LW4 n	RW n	Total LW n	Distance (km)
Slab Camp Creek	33	0	488	16	53	589	8	0	120	4	13	145	0.25
White Pine Creek	33	0	23	0	0	57	10	0	7	0	0	17	0.30

Table 5. Dominant and subdominant substrate types observed in pools (includes glides) and riffles (includes runs) during BVET habitat inventories in Slab Camp Creek and White Pine Creek, June 2014 (see Figure 4 caption for substrate class descriptions). The first number in each pair is for dominant substrate, the second for subdominant substrate. For example, for Slab Camp Creek pools, there were 5 pools with dominate substrate of small gravel, and 14 pools with subdominant substrate of small gravel.

		Substrate Size Class								
		Organic Matter	Clay	Silt	Sand	Small Gravel	Large Gravel	Cobble	Boulder	Bedrock
Slab Camp Creek	Pools	0,0	0,0	**0,2**	**3,5**	**5,14**	**14,1**	**1,0**	0,0	0,0
	Riffles	0,0	0,0	0,0	**0,1**	**1,13**	**13,0**	0,0	0,0	0,0
White Pine Creek	Pools	0,0	0,0	0,0	0,0	**0,3**	**1,1**	**1,2**	0,0	**4,0**
	Riffles	0,0	0,0	0,0	**0,1**	**0,1**	**2,5**	**6,3**	0,0	**3,1**