HSU River Institute

Stream Geomorphological Survey Progress Report

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Emily Cooper, Mason London, Dr. Alison O'Dowd, and Dr. Bill Trush

North Coast Region Year 1:

The HSU field crews have completed a total of 52 survey reaches using the Y1 protocol in the North Coast Region (Figure 1). North Coast Y1 data collection during July 18-19 took place in the upper mainstem Eel River near Lake Pillsbury where we completed five survey reaches. During July 23, we completed three survey reaches in the Mad River. We have met the goals for number of sites per bin type in all bin types excluding: Partly Confined-High Sediment sub-bin 4, Unconfined-High Sediment sub-bins 1-4, and Unconfined-Low Sediment sub-bins 2 and 4 (Figure 2). Overall, we have completed 52 out of a total of 60 desired survey reaches (87% complete) in the North Coast Region for Y1 protocols (Table 1). The incomplete bins are not able to be completed due to their inaccessibility, lack of geomorphic process and flow function, and extremely rare occurrence throughout the bin-classified stream network. As a result, we have completed survey efforts for Year 1 of the North Coast region. Access to North Coast sites was restricted to locations near Humboldt Bay, in private logging land, in National or State Parks, and in the Mendocino National Forest.

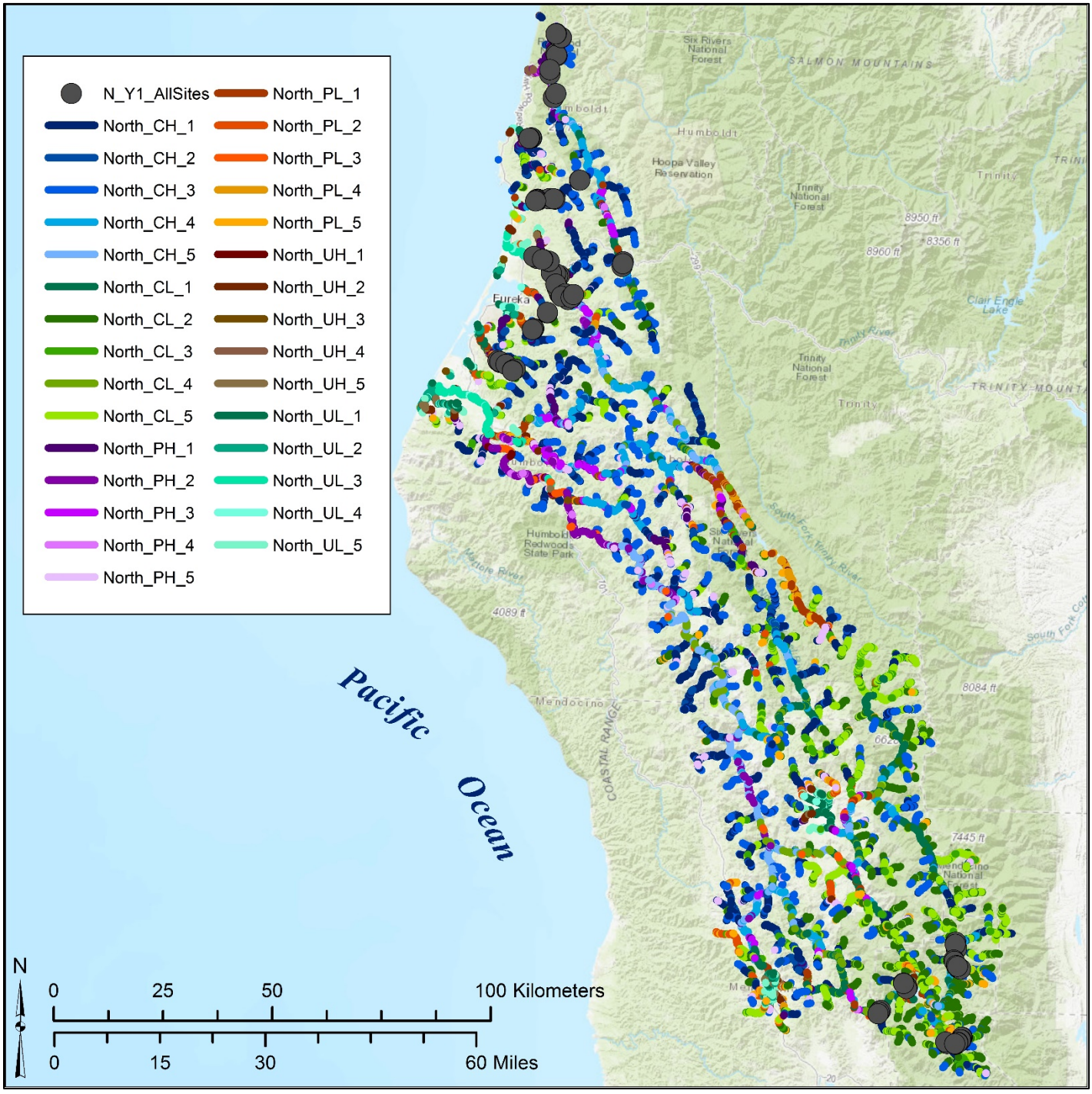

Figure 1. In the North Coast Region, completed survey sites are depicted by gray dots at start and end locations of survey reaches within the upper-lower level binning scheme.

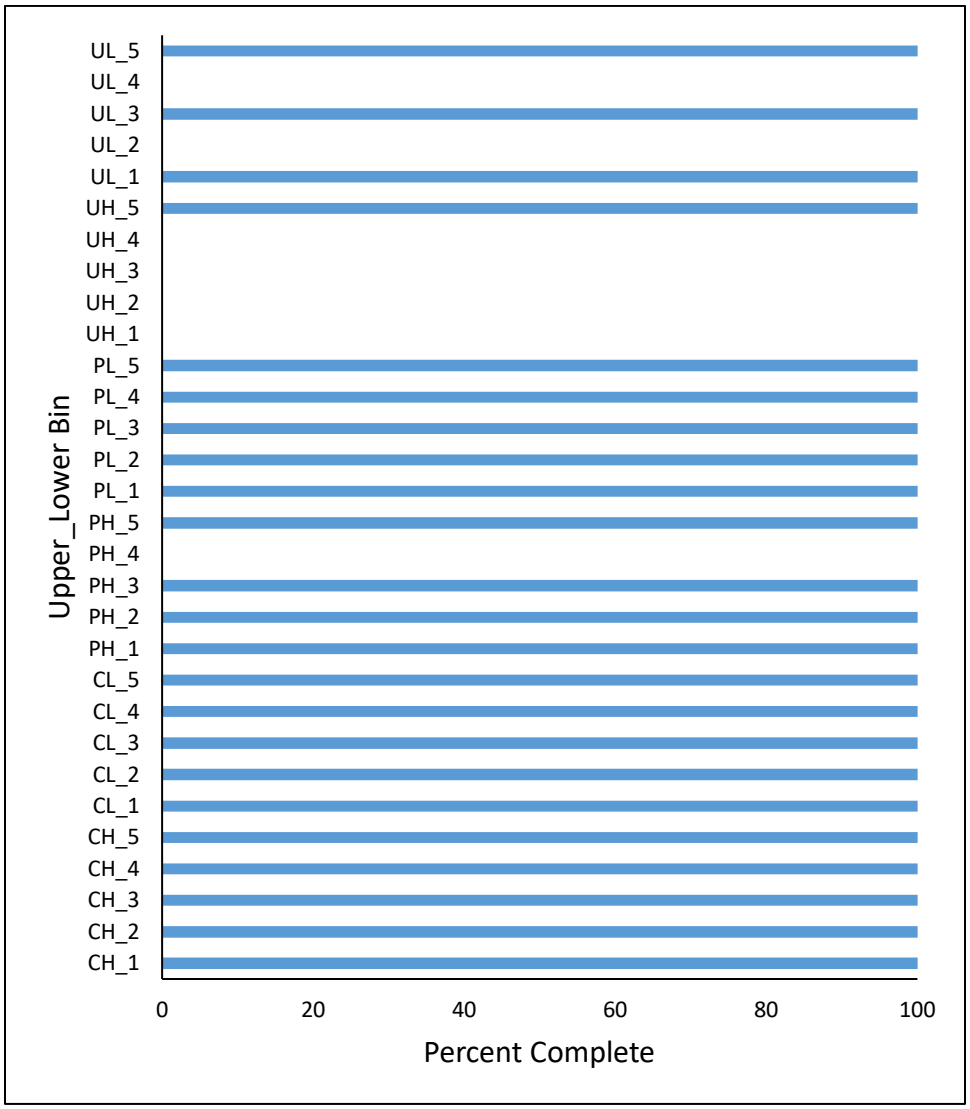

Figure 2. North Coast Region survey sites depicted by percent complete within each upper-lower level bin type.

Table 1. Upper_Lower Bin ID's, their respective desired number of sites for Y1 survey goals, number of evaluated and remaining sites, and proportion of completed sites.

Upper-Lower Bin ID	Desired *n* Sites	Evaluated *n* Sites	Remaining *n* sites	% *n* Sites Complete
CH_1	4	4	0	100
CH_2	4	4	0	100
CH_3	4	4	0	100
CH_4	4	4	0	100
CH_5	4	4	0	100
CL_1	3	3	0	100
CL_2	3	3	0	100
CL_3	3	3	0	100
CL_4	3	3	0	100
CL_5	3	3	0	100
PH_1	2	2	0	100
PH_2	2	2	0	100
PH_3	2	2	0	100
PH_4	2	0	2	0
PH_5	2	2	0	100
PL_1	1	1	0	100
PL_2	1	1	0	100
PL_3	1	1	0	100
PL_4	1	1	0	100
PL_5	1	1	0	100
UH_1	1	0	1	0
UH_2	1	0	1	0
UH_3	1	0	1	0
UH_4	1	0	1	0
UH_5	1	1	0	100
UL_1	1	1	0	100
UL_2	1	0	1	0
UL_3	1	1	0	100
UL_4	1	0	1	0
UL_5	1	1	0	100
	60	52	8	87

South Fork Eel River Year 2:

During July 19-20 and July 23-25, we collected South Fork Eel River Year 2 (SFE Y2) data in Tenmile Creek, Hollow Tree Creek, Indian Creek, and Redwood Creek watersheds where we completed 15 total survey reaches (Figure 3). We have completed a total of 44 individual survey reaches, 19 of which were surveyed using the revised Year 1 Data Gap protocol and 25 of which were surveyed using the Eco/Bio Y2 protocol. We fulfilled bin representation with the revised Year 1 protocol (5 PH sites, 2 CL sites, 2 PL sites, 2 UH sites, and 2 UL sites). Many of this season's South Fork Eel River survey reaches fall under all or more than one type of Year 2 protocol requirements (i.e. some Eco/Bio sites may also be counted as 1st order spatial gap sites as well as bin fulfillment data gap sites) (Table 2). Counting those survey reaches as multiple types of Year 2 data requirements, we have completed up to 56 SFE Y2 sites.

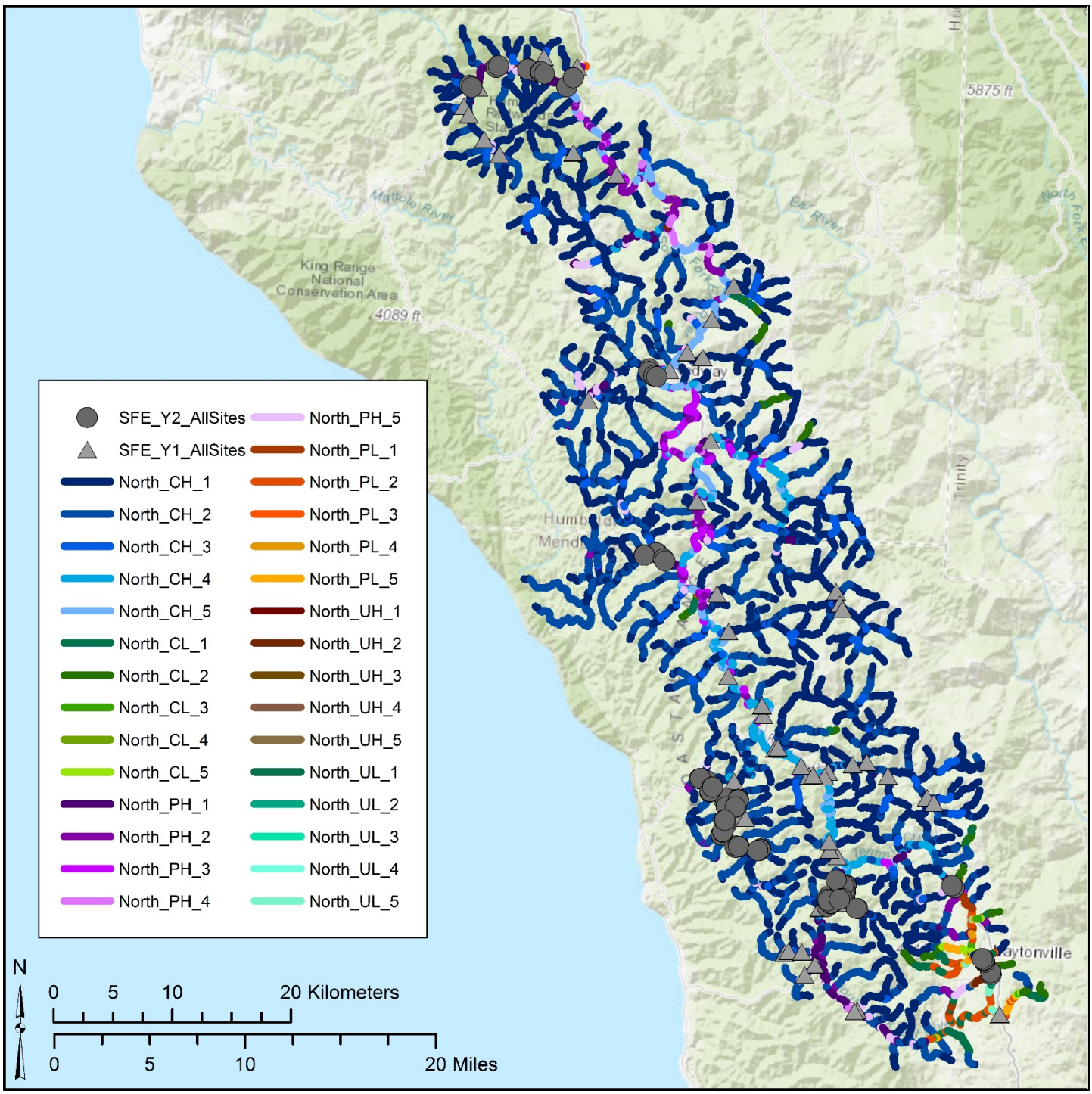

Figure 3. Stream geomorphological survey locations in the South Fork Eel River watershed. Gray triangles represent survey locations from Year 1 (2017) data collection and gray circles represent survey locations from Year 2 (2018) data collection. Stream network is symbolized by upper and lower level bin types which used GIS to characterize valley confinement, sediment load, drainage area, and streambed slope.

Table 2. Completed surveys using Year 2 protocols in the South Fork Eel Watershed. Many sites may be counted as more than one type (i.e. Bin Fulfillment, 1st order stream, or Eco/Bio).

Bin	FID	Stream Name	Watershed/Location	Data Gap Bin Fulfillment	Data Gap 1st Order Streams	EcoBio
CH_1	1277	Mule Creek	Hollow Tree Creek			x
PH_2	2070	SF Mule Creek	Hollow Tree Creek			x
CH_1	1398	Hollow Tree Creek d/s of Islam John Creek	Hollow Tree Creek			x
CH_2	1394	Hollow Tree Creek d/s of Islam John Creek	Hollow Tree Creek			x
CH_2	2099	Islam John Creek	Hollow Tree Creek		x	x
CH_2	2114	Lost Man Cr	Hollow Tree Creek		x	x
PH_1	2180	Bear Creek u/s of mouth	Hollow Tree Creek	x	x	x
PH_1	1419	Hollow Tree Creek u/s of Bear Creek	Hollow Tree Creek	x		x
PH_5	1322	Redwood Creek	Hollow Tree Creek	x		x
CH_3	1324	Redwood Creek	Hollow Tree Creek	x		x
PH_2	2214	Bond Creek near mouth	Hollow Tree Creek	x	x	x
PH_5	1425	Hollow Tree Creek d/s Bond Creek	Hollow Tree Creek	x		x
CH_1	293	South Fork Eel River	Angelo Reserve			x
CH_2	296	South Fork Eel River	Angelo Reserve			x
CH_4	283	South Fork Eel River	Angelo Reserve			x
CH_2	277	South Fork Eel River	Angelo Reserve			x
PH_1	289	South Fork Eel River	Angelo Reserve		x	
CH_1	313	Elder Creek	Angelo Reserve			x
PH_5	316	Elder Creek	Angelo Reserve			x
CH_1	322	Elder Creek	Angelo Reserve			x
CH_2	272	South Fork Eel River	Angelo Reserve			x
CH_4	200	South Fork Eel River	Angelo Reserve			x
CH_1	521	Fox Creek	Angelo Reserve		x	
CH_2	2136	Middle Creek	Hollow Tree Creek		x	x
CH_2	2132	Middle Creek	Hollow Tree Creek		x	x
CH_1	1325	Michael's Creek	Hollow Tree Creek		x	x
CH_2	2248	Michael's Creek	Hollow Tree Creek		x	x
UL_1	82	Tenmile Creek nr Cahto Cr	Tenmile Creek	x		
UL_5	83	Tenmile Creek nr Cahto Cr	Tenmile Creek	x		
UH_5	61	Tenmile Creek	Tenmile Creek	x		
UH_5	62	Tenmile Creek	Tenmile Creek	x		
PL_4	217	Tenmile Creek nr Streeter Cr	Tenmile Creek	x		
CL_5	2079	Redwood Creek	Redway	x		
CL_3	2080	Redwood Creek	Redway	x		
CH_2	1603	Jones Creek	Indian Creek		x	
PH_1	1640	Indian Creek	Indian Creek		x	
PL_1	2088	Redwood Creek	Redway	x		
PH_5	2707	Cuneo Creek	Bull Creek	x		
PH_2	3034	South Fork Eel River	South Fork Eel River	x		
PH_1	2687	Bull Creek	Bull Creek	x		
UH_2	4523	Calf Creek	Bull Creek	x		

Bin	FID	Stream Name	Watershed/Location	Data Gap Bin Fulfillment	Data Gap 1st Order Streams	EcoBio
PH_3	2797	Bull Creek	Bull Creek	x		
PH_4	2812	Bull Creek	Bull Creek	x		
CH_1	2663	Parker Creek	Indian Creek		x	
				20	*13*	*25*
					Total	*56*