



Profile K - Cross Section at Station E19
January 7, 2009 Bear Trail Debris Flow
Maggie Valley, Haywood County, NC

Bearing = 265 degrees
View looking upslope

EXPLANATION	
	D1 - Debris from January 7, 2009 Debris Flow
	F1 - Excavation Waste/Fill
	CV3 - Colluvium, medium to dark brown ML/SM with clay and g, organics
	CV7 - Colluvium, yellow brown SM
	CV8 - Colluvium, yellow brown GM/SM
	R - Bedrock
	Dominant Foliation
	Fracture Planes
	Bedrock Surface
	Estimated pre-failure ground surface
	Estimated pre-failure base of fill
	Post-failure ground surface
	Cross section station
	Soil Sample location
Survey: Cloth tape, Brunton, Clinometer	
Report Date: 12/9/2009	

0-2.5 ft: CV3 colluvium, matrix supported, loose, moist, medium-dark brown, organic sandy ML with little mica, g, and c of subangular, STS-PDS clasts, and roots in upper part. Lower contact contains yellow brown mottles.

0-2ft: F1 Excavation waste/fill medium brown

2-2.5ft: CV3, original ground surface colluvium, dark brown organic SM with mica, plyable roots and rock clasts.

>2.5ft: CV7 colluvium, matrix supported, yellow brown silty SM

2.5-5.5ft CV7 colluvium, matrix supported, loose, yellow brown, slightly plastic, mica-ceous silty SM with g and c subround-subang, STS clasts <0.5 ft. Lower contact contains mottles of dark brown soil.

5.5-<7ft CV8 colluvium, clast supported, yellow brown and gray, loose to compact, silty SM with mica, g, and c of subround-subang, PDS-CDS schist and metagraywacke; micas not well aligned in matrix

F1 Excavation waste/Fill, SM

K3-large pile of woody/mud debris; top of possible secondary scarp on western side of slide; fill material

K1-Corner of housepad, 6 feet from northeast corner of house

K2-Large tree and black drainpipe; fill piled behind tree

K4-Secondary scarp

K5-Western edge of left lateral scarp

K7-Just upslope from spring and in debris

Debris and woody debris on eastern edge of right lateral scarp/deep scour area

K16-Eastern edge of subsidiary scarp

K17-OGS

Loose F1 excavation material/fill of medium brown silty SM with g and vegetative material downslope of hummocky ground

K14 - 0.4 ft of D1 debris over CV7, colluvium brown silty SM with mica and roots.

K13 - 0.5 ft of D1 debris over thin CV7 yellow-brown colluvium over bedrock

K12 - >1ft of D1 medium brown silty SM/ML with g, c, and b of STS-PDS, subangular-angular schist clasts up to 3 ft long over bedrock.

K10-(3' east) 0.2-0.3ft thick D1 medium to dark brown SM/ML debris over R of STS, CQ metagraywacke with quartz veins and sub-parallel Fol/CL: 51/68
K10-(4' west) R - STS CQ schist/metagraywacke Fol/CL: 68/75; Frac: 340/68; Bedrock surface: 288/60

K9 & K10- 0.3 ft thick D1 medium to dark brown SM/ML debris over 0.7ft CV8 yellow brown silty sandy GM with c of STS-PDS schist and metagraywacke

K7 - 1ft thick D1 medium brown debris over 0.4ft thick interlayered CV7 colluvium, yellow brown SM and dark brown organic SM over CV8 yellow brown and gray, clast supported colluvium. Small groundwater seep at contact between CV7 and CV8

K8 - 0.3 ft thick D1 medium brown debris over >1.7 ft thick CV7 colluvial yellow brown silty SM with mica, g, and c of STS-PDS subang-ang schist.

3570ft
3560ft
3550ft
3540ft
3530ft
3520ft
3510ft
3500ft
3490ft

1 in = 10 ft

0ft 20ft 40ft 60ft 80ft 100ft 120ft 140ft Appendix A 160ft

ABBREVIATIONS

ang - angular
b - boulders
c - cobbles
CDS - Completely Decomposed State from the Unified Rock Classification System (Williamson, 1984)
CQ - Crater Quality from the Unified Rock Classification System (Williamson, 1984)
Fol/CL - Foliation/Compositional Layering
Frac - Fracture
ft - feet
g - gravel
OGS - Original (pre-2005) Ground Surface
PDS - Partially Decomposed State from the Unified Rock Classification System (Williamson, 1984)
STS - Stained State from the Unified Rock Classification System (Williamson, 1984)
Subang - subangular

Reference:
Williamson, D.A., 1984, Unified rock classification system: Bulletin of the Association of Engineering Geologists, vol. XXI, no. 3, p. 345-354.