EXHIBIT E

Chappellet Vineyards
Soil Loss Analysis for New Vineyard Proposal
Explanatory Addendum to Excel Worksheets, Revised
December 2020

- Post-Project C: Non-Tilled Management, 70% cover (C=.046); 75% (C=.034); 80% cover (C=.022); 85% cover (C=.017), as indicated.
- R factor is consistent throughout the site (R=68).
- LS, K and T factors as indicated.
- Pre-project C factors:
  - Block A North Transect (2 Segments)
    - Segment 1: 75% High Brush; 80% Cover: 40G, 60W (C=.029)
    - Segment 2: 0 Canopy; 90% Cover: 50G, 50W (C=.014)
  - Block A Mid Transect (3 Segments)
    - Segment 1: 75% High Brush; 80% Cover: 20G, 80W (C=.034)
    - Segment 2: 75% High Brush; 80% Cover: 20G, 80W (C=.034)
    - Segment 3: 50% Low Brush; 80% Cover: 40G, 60W (C=.028)
  - Block A South Transect (2 Segments)
    - Segment 1: 75% High Brush; 90% Cover: 20G, 80W (C= .018)
    - Segment 2: (Existing Vineyard) 80%, non-tilled (C=.022)
  - Block B North Transect (4 Segments)
    - Segment 1: 75% Low Brush; 60% Cover: 0G, 100W (C=.068)
    - Segment 2: 75% Low Brush; 60% Cover: 0G, 100W (C=.068)
    - Segment 3: 75% High Brush; 90% Cover: 0G, 100W (C=.021)
    - Segment 4: 75% High Brush; 90% Cover: 0G, 100W (C=.021)
  - Block B South Transect (4 Segments)
    - Segment 1: 50% High Brush; 80% Cover: 20G, 80W (C=.035)
    - Segment 2: 50% Low Brush; 60% Cover: 0G, 100W (C=.076)
    - Segment 3: 50% Low Brush; 60% Cover: 0G, 100W (C=.076)
    - Segment 4: 50% High Brush; 80% Cover: 20G, 80W (C=.035)
  - Block C North Transect (2 Segments)
    - Segment 1: 0 Canopy; 85% Cover: 90G, 10W (C=.012)
    - Segment 2: 0 Canopy; 80% Cover: 50G, 50W (C=.028)
  - Block C South Transect (5 Segments)
    - Segment 1: 75% High Brush; 70% Cover: 50G, 50W (C=.042)
    - Segment 2: 75% High Brush; 70% Cover: 50G, 50W (C= .042)
    - Segment 3: 0 Canopy; 90% Cover: 60G, 40W (C=.012)
    - Segment 4: 0 Canopy; 90% Cover: 60G, 40W (C=.012)
    - Segment 5: 0 Canopy; 90% Cover: 60G, 40W (C=.012)

- Block D West Transect (2 Segments)
    - Segment 1: 75% Trees; 75% Cover: 0G, 100 W (C=.052)
    - Segment 2: 75% Trees; 75% Cover: 0G, 100 W (C=.052)

- Block D East Transect (Unsegmented)
    - 75% Trees; 75% Cover: 0G, 100 W (C=.052)

- Block E Northwest Transect (5 Segments)
    - Segment 1: 75% High Brush; 70% Cover: 0G, 100W (C=.059)
    - Segment 2: 75% Low Brush; 60% Cover: 0G, 100W (C= .068)
    - Segment 3: 75% Low Brush; 90% Cover: 0G, 100W (C=.020)
    - Segment 4: 75% Low Brush; 80% Cover: 0G, 100 W (C=.038)
    - Segment 5: 25% Low Brush; 85% Cover: 80G, 20W (C=.014)

- Block E Southeast Transect (5 Segments)
    - Segment 1: 50% Low Brush; 70% Cover: 70 G, 30 W (C=.034)
    - Segment 2: 75% Low Brush; 70% Cover: 60 G, 40 W (C=.034)
    - Segment 3: 50% Low Brush; 60% Cover: 80 G, 20 W (C=.043)
    - Segment 4: 75% Low Brush; 70% Cover: 50 G, 50 W (C=.038)
    - Segment 5: 25% Low Brush; 90% Cover: 80 G, 20 W (C=.009)

Chappellet
Pre-Project USLE, Revision 2
December 2020

Transect Identification		Chappellet Block A North, Pre-project					
Acres		1.1	acres				
Total Slope Length		320	feet				
Number of Segments		2	segments				
	1	2	3	4	5		
R	68	68					
Factor (F)	0.35	0.65	0.00	0.00	0.00		
Slope Length	320.00	320.00					
Slope %	8.1	12.5					
LS	1.80	3.30	0.00	0.00	0.00		
K	0.32	0.32					
C	0.029	0.014					
P	1.00	1.00	1.00	1.00	1.00		
T	2.00	2.00				2.00	
(F) (LS) (K) (C)	0.005851	0.0096	0.0000	0.0000	0.0000	0.0154	
(R) (F) (LS) (K) (C) (P)	0.40	0.65	0.00	0.00	0.00	1.05	tons/acre/year
						1.16	tons/year

Transect Identification		Chappellet Block A Mid, Pre-project					
Acres		5.2	acres				
Total Slope Length		426	feet				
Number of Segments		3	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.19	0.35	0.46	0.00	0.00		
Slope Length	426	426	426				
Slope %	19	9.2	10.6				
LS	6.70	2.49	3.03				
K	0.32	0.32	0.32				
C	0.034	0.034	0.028				
P	1.00	1.00	1.00				
T	2.00	2.00	2.00			2.00	
(F) (LS) (K) (C)	0.014022	0.0096	0.0125	0.0000	0.0000	0.0361	
(R) (F) (LS) (K) (C) (P)	0.95	0.65	0.85	0.00	0.00	2.46	tons/acre/year
						12.77	tons/year

Chappellet
Post-Project USLE, Revised
May 2020

Transect Identification		Chappellet Block A North, Post-project					
Acres		1.1	acres				
Total Slope Length		320	feet				
Number of Segments		2	segments				
	1	2	3	4	5		
R	68	68					
Factor (F)	0.35	0.65	0.00	0.00	0.00		
Slope Length	320.00	320.00					
Slope %	8.1	12.5					
LS	1.80	3.30	0.00	0.00	0.00		
K	0.32	0.32					
C	0.022	0.022					
P	0.45	0.60	1.00	1.00	1.00		
T	2.00	2.00				2.00	
(F) (LS) (K) (C)	0.004439	0.0151	0.0000	0.0000	0.0000	0.0195	
(R) (F) (LS) (K) (C) (P)	0.14	0.62	0.00	0.00	0.00	0.75	tons/acre/year
						0.83	tons/year

Transect Identification		Chappellet Block A Mid, Post-project					
Acres		5.2	acres				
Total Slope Length		426	feet				
Number of Segments		3	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.19	0.35	0.46	0.00	0.00		
Slope Length	426.00	426.00	426.00				
Slope %	19	9.2	10.6				
LS	6.70	2.49	3.03	0.00	0.00		
K	0.32	0.32	0.32				
C	0.022	0.022	0.022				
P	1.00	1.00	1.00				
T	2.00	2.00	2.00	2.00	2.00	2.00	
(F) (LS) (K) (C)	0.008968	0.0061	0.0098	0.0000	0.0000	0.0249	
(R) (F) (LS) (K) (C) (P)	0.61	0.42	0.67	0.00	0.00	1.69	tons/acre/year
						8.81	tons/year

Transect Identification		Chappellet Block A South, Pre-project					
Acres		0.9	acres				
Total Slope Length		220	feet				
Number of Segments		2	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.35	0.65	0.00	0.00	0.00		
Slope Length	220	220					
Slope %	23.6	9.1					
LS	6.41	1.76	0.00				
K	0.10	0.32					
C	0.018	0.022					
P	1.00	0.45					
T	2.00	2.00				2.00	
(F) (LS) (K) (C)	0.004039	0.0081	0.0000	0.0000	0.0000	0.0121	
(R) (F) (LS) (K) (C) (P)	0.27	0.25	0.00	0.00	0.00	0.52	tons/acre/year
						0.47	tons/year

Transect Identification		Chappellet Block A South, Post-project					
Acres		0.9	acres				
Total Slope Length		220	feet				
Number of Segments		2	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.35	0.65	0.00	0.00	0.00		
Slope Length	220.00	220.00					
Slope %	23.6	9.1					
LS	6.41	1.76	0.00	0.00	0.00		
K	0.10	0.32					
C	0.022	0.022					
P	0.45	0.45					
T	2.00	2.00				2.00	
(F) (LS) (K) (C)	0.004937	0.0081	0.0000	0.0000	0.0000	0.0130	
(R) (F) (LS) (K) (C) (P)	0.15	0.25	0.00	0.00	0.00	0.40	tons/acre/year
						0.36	tons/year

Transect Identification		Chappellet Block B North, Pre-project					
Acres		3.5	acres				
Total Slope Length		400	feet				
Number of Segments		4	segments				
	1	2	3	4	5		
R	68	68	68	68			
Factor (F)	0.12	0.23	0.30	0.35	0.00		
Slope Length	400.00	400.00	400.00	400.00			
Slope %	5.0	11.0	10.0	16.0			
LS	1.07	3.09	2.71	5.16	0.00		
K	0.32	0.10	0.10	0.10			
C	0.068	0.068	0.021	0.021			
P	1.00	1.00	1.00	1.00	1.00		
T	2.00	1.00	1.00	1.00		1.12	
(F) (LS) (K) (C)	0.002792	0.0048	0.0017	0.0038	0.0000	0.0131	
A = (R) (F) (LS) (K) (C) (P)	0.19	0.33	0.12	0.26	0.00	0.89	tons/acre/year
						3.12	tons/year

Transect Identification		Chappellet Block B North, Post-project					
Acres		3.5	acres				
Total Slope Length		400	feet				
Number of Segments		4	segments				
	1	2	3	4	5		
R	68	68	68	68			
Factor (F)	0.12	0.23	0.30	0.35	0.00		
Slope Length	400.00	400.00	400.00	400.00			
Slope %	5.0	11.0	10.0	16.0			
LS	1.07	3.09	2.71	5.16	0.00		
K	0.32	0.10	0.10	0.10			
C	0.022	0.022	0.022	0.022			
P	1.00	1.00	1.00	1.00	1.00		
T	2.00	1.00	1.00	1.00		1.12	
(F) (LS) (K) (C)	0.000903	0.0016	0.0018	0.0040	0.0000	0.0082	
A = (R) (F) (LS) (K) (C) (P)	0.06	0.11	0.12	0.27	0.00	0.56	tons/acre/year
						1.96	tons/year

Transect Identification		Chappellet Block B South, Pre-project					
Acres		3	acres				
Total Slope Length		480	feet				
Number of Segments		4	segments				
	1	2	3	4	5		
R	68	68	68	68			
Factor (F)	0.12	0.23	0.30	0.35	0.00		
Slope Length	480.00	480.00	480.00	480.00			
Slope %	2.5	10.8	15.8	17.5			
LS	0.39	3.30	5.55	6.37	0.00		
K	0.32	0.10	0.10	0.10			
C	0.035	0.076	0.076	0.035			
P	1.00	1.00	1.00	1.00	1.00		
T	2.00	1.00	1.00	1.00		1.12	
(F) (LS) (K) (C)	0.000524	0.0058	0.0127	0.0078	0.0000	0.0268	
A = (R) (F) (LS) (K) (C) (P)	0.04	0.39	0.86	0.53	0.00	1.82	tons/acre/year
						5.46	tons/year

Transect Identification		Chappellet Block B South, Post-project					
Acres		3	acres				
Total Slope Length		480	feet				
Number of Segments		4	segments				
	1	2	3	4	5		
R	68	68	68	68			
Factor (F)	0.12	0.23	0.30	0.35	0.00		
Slope Length	480.00	480.00	480.00	480.00			
Slope %	2.5	10.8	15.8	17.5			
LS	0.39	3.30	5.55	6.37	0.00		
K	0.32	0.10	0.10	0.10			
C	0.022	0.022	0.022	0.022			
P	1.00	1.00	1.00	1.00	1.00		
T	2.00	1.00	1.00	1.00		1.12	
(F) (LS) (K) (C)	0.000327	0.0017	0.0037	0.0049	0.0000	0.0106	
A = (R) (F) (LS) (K) (C) (P)	0.02	0.11	0.25	0.33	0.00	0.72	tons/acre/year
						2.16	tons/year

Transect Identification		Chappellet Block C North, Pre-project					
Acres		6.6	acres				
Total Slope Length		640	feet				
Number of Segments		2	segments				
	1	2	3	4	5		
R	68	68	68	68			
Factor (F)	0.35	0.65	0.00	0.00	0.00		
Slope Length	640.00	640.00					
Slope %	14.1	10.9					
LS	5.49	3.86	0.00	0.00	0.00		
K	0.37	0.10					
C	0.012	0.028					
P	1.00	1.00					
T	2.00	1.00				1.35	
(F) (LS) (K) (C)	0.008538	0.0070	0.0000	0.0000	0.0000	0.0156	
(R) (F) (LS) (K) (C) (P)	0.58	0.48	0.00	0.00	0.00	1.06	tons/acre/year
						6.98	tons/year

Transect Identification		Chappellet Block C North, Post-project					
Acres		6.6	acres				
Total Slope Length		640	feet				
Number of Segments		2	segments				
	1	2	3	4	5		
R	68	68	68	68			
Factor (F)	0.35	0.65	0.00	0.00	0.00		
Slope Length	640.00	640.00					
Slope %	14.1	10.9					
LS	5.49	3.86	0.00	0.00	0.00		
K	0.37	0.10					
C	0.017	0.017					
P	1.00	0.45					
T	2.00	1.00				1.35	
(F) (LS) (K) (C)	0.012095	0.0043	0.0000	0.0000	0.0000	0.0164	
(R) (F) (LS) (K) (C) (P)	0.82	0.13	0.00	0.00	0.00	0.95	tons/acre/year
						6.29	tons/year

Transect Identification		Chappellet Block C South, Pre-project					
Acres		6.6	acres				
Total Slope Length		840	feet				
Number of Segments		5	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.09	0.16	0.21	0.25	0.28		
Slope Length	840.00	840.00	840.00	840.00	840.00		
Slope %	19.0	12.5	13.1	10.7	16.1		
LS	9.41	5.34	5.69	4.31	7.54		
K	0.10	0.37	0.37	0.10	0.10		
C	0.042	0.042	0.012	0.012	0.012		
P	1.00	1.00	1.00	1.00	1.00		
T	1.00	2.00	2.00	1.00	1.00	1.36	
(F) (LS) (K) (C)	0.003559	0.0133	0.0053	0.0013	0.0025	0.0260	
(R) (F) (LS) (K) (C) (P)	0.24	0.90	0.36	0.09	0.17	1.77	tons/acre/year
						11.65	tons/year

Transect Identification		Chappellet Block C South, Post-project					
Acres		6.6	acres				
Total Slope Length		840	feet				
Number of Segments		5	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.09	0.16	0.21	0.25	0.28		
Slope Length	840.00	840.00	840.00	840.00	840.00		
Slope %	19.0	12.5	13.1	10.7	16.1		
LS	9.41	5.34	5.69	4.31	7.54		
K	0.10	0.37	0.37	0.10	0.10		
C	0.017	0.017	0.017	0.017	0.017		
P	1.00	1.00	1.00	1.00	1.00		
T	1.00	2.00	2.00	1.00	1.00	1.36	
(F) (LS) (K) (C)	0.00144	0.0054	0.0075	0.0018	0.0036	0.0198	
(R) (F) (LS) (K) (C) (P)	0.10	0.37	0.51	0.12	0.24	1.34	tons/acre/year
						8.86	tons/year

Transect Identification		Chappellet Block D West, Pre-project					
Acres		3.5	acres				
Total Slope Length		350	feet				
Number of Segments		2	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.35	0.65	0.00	0.00	0.00		
Slope Length	350.00	350.00					
Slope %	8.6	11.4					
LS	2.05	3.04	0.00	0.00	0.00		
K	0.10	0.10					
C	0.052	0.052					
P	1.00	1.00	1.00	1.00	1.00		
T	1.00	1.00				1.00	
(F) (LS) (K) (C)	0.003733	0.0103	0.0000	0.0000	0.0000	0.0140	
A = (R) (F) (LS) (K) (C) (P)	0.25	0.70	0.00	0.00	0.00	0.95	tons/acre/year
						3.33	tons/year

Transect Identification		Chappellet Block D West, Post-project					
Acres		3.5	acres				
Total Slope Length		350	feet				
Number of Segments		2	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.35	0.65	0.00	0.00	0.00		
Slope Length	350.00	350.00					
Slope %	8.6	11.4					
LS	2.05	3.04	0.00	0.00	0.00		
K	0.10	0.10					
C	0.046	0.046					
P	1.00	1.00	1.00	1.00	1.00		
T	1.00	1.00				1.00	
(F) (LS) (K) (C)	0.003302	0.0091	0.0000	0.0000	0.0000	0.0124	
A = (R) (F) (LS) (K) (C) (P)	0.22	0.62	0.00	0.00	0.00	0.84	tons/acre/year
						2.95	tons/year

Transect Identification		Chappellet Block D East, Pre-project					
Acres		2	acres				
Total Slope Length		240	feet				
Number of Segments		1	segment				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	1.00	0.00	0.00	0.00	0.00		
Slope Length	240.00						
Slope %	12.5						
LS	2.85	0.00	0.00	0.00	0.00		
K	0.10						
C	0.052						
P	1.00	1.00	1.00	1.00	1.00		
T	1.00					1.00	
(F) (LS) (K) (C)	0.014839	0.0000	0.0000	0.0000	0.0000	0.0148	
A = (R) (F) (LS) (K) (C) (P)	1.01	0.00	0.00	0.00	0.00	1.01	tons/acre/year
						2.02	tons/year

Transect Identification		Chappellet Block D East, Post-project					
Acres		2	acres				
Total Slope Length		240	feet				
Number of Segments		1	segment				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	1.00	0.00	0.00	0.00	0.00		
Slope Length	240.00						
Slope %	12.5						
LS	2.85	0.00	0.00	0.00	0.00		
K	0.10						
C	0.046						
P	1.00	1.00	1.00	1.00	1.00		
T	1.00					1.00	
(F) (LS) (K) (C)	0.013127	0.0000	0.0000	0.0000	0.0000	0.0131	
A = (R) (F) (LS) (K) (C) (P)	0.89	0.00	0.00	0.00	0.00	0.89	tons/acre/year
						1.79	tons/year

Transect Identification		Chappellet Block E Northwest, Pre-project					
Acres		4.5	acres				
Total Slope Length		600	feet				
Number of Segments		5	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.09	0.16	0.21	0.25	0.28		
Slope Length	600.00	600.00	600.00	600.00	600.00		
Slope %	21.7	19.7	13.3	22.5	18.3		
LS	9.49	8.35	4.91	9.95	7.57		
K	0.10	0.10	0.10	0.10	0.10		
C	0.059	0.068	0.020	0.038	0.014		
P	1.00	1.00	1.00	1.00	1.00		
T	1.00	1.00	1.00	1.00	1.00	0.99	
(F) (LS) (K) (C)	0.005038	0.0091	0.0021	0.0095	0.0029	0.0286	
A = (R) (F) (LS) (K) (C) (P)	0.34	0.62	0.14	0.64	0.20	1.94	tons/acre/year
						8.75	tons/year

Transect Identification		Chappellet Block E Northwest, Post-project					
Acres		4.5	acres				
Total Slope Length		600	feet				
Number of Segments		5	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.09	0.16	0.21	0.25	0.28		
Slope Length	600.00	600.00	600.00	600.00	600.00		
Slope %	21.7	19.7	13.3	22.5	18.3		
LS	9.49	8.35	4.91	9.95	7.57		
K	0.10	0.10	0.10	0.10	0.10		
C	0.017	0.017	0.017	0.017	0.017		
P	1.00	1.00	1.00	1.00	1.00		
T	1.00	1.00	1.00	1.00	1.00	0.99	
(F) (LS) (K) (C)	0.001452	0.0023	0.0018	0.0042	0.0036	0.0133	
A = (R) (F) (LS) (K) (C) (P)	0.10	0.15	0.12	0.29	0.24	0.90	tons/acre/year
						4.07	tons/year

Transect Identification		Chappellet Block E Southeast, Pre-project					
Acres		5	acres				
Total Slope Length		670	feet				
Number of Segments		5	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.09	0.16	0.21	0.25	0.28		
Slope Length	670.00	670.00	670.00	670.00	670.00		
Slope %	18.7	19.4	14.2	16.4	20.9		
LS	8.23	8.64	5.68	6.90	9.54		
K	0.10	0.10	0.10	0.10	0.10		
C	0.034	0.034	0.043	0.038	0.009		
P	1.00	1.00	1.00	1.00	1.00		
T	1.00	1.00	1.00	1.00	1.00	0.99	
(F) (LS) (K) (C)	0.002533	0.0048	0.0051	0.0065	0.0024	0.0213	
A = (R) (F) (LS) (K) (C) (P)	0.17	0.32	0.35	0.44	0.16	1.45	tons/acre/year
						7.25	tons/year

Transect Identification		Chappellet Block E Southeast, Post-project					
Acres		4.5	acres				
Total Slope Length		600	feet				
Number of Segments		5	segments				
	1	2	3	4	5		
R	68	68	68	68	68		
Factor (F)	0.09	0.16	0.21	0.25	0.28		
Slope Length	670.00	670.00	670.00	670.00	670.00		
Slope %	18.7	19.4	14.2	16.4	20.9		
LS	8.23	8.64	5.68	6.90	9.54		
K	0.10	0.10	0.10	0.10	0.10		
C	0.017	0.017	0.017	0.017	0.017		
P	1.00	1.00	1.00	1.00	1.00		
T	1.00	1.00	1.00	1.00	1.00	0.99	
(F) (LS) (K) (C)	0.001259	0.0024	0.0020	0.0029	0.0045	0.0131	
A = (R) (F) (LS) (K) (C) (P)	0.09	0.16	0.14	0.20	0.31	0.89	tons/acre/year
						4.01	tons/year

Chappellet

NOAA's National Weather Service
Hydrometeorological Design Studies Center
Precipitation Frequency Data Server (PFDS)

www.nws.noaa.gov

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NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES: CA

Data description

Data type: Precipitation depth | Units: English | Time series type: Partial duration

Select location

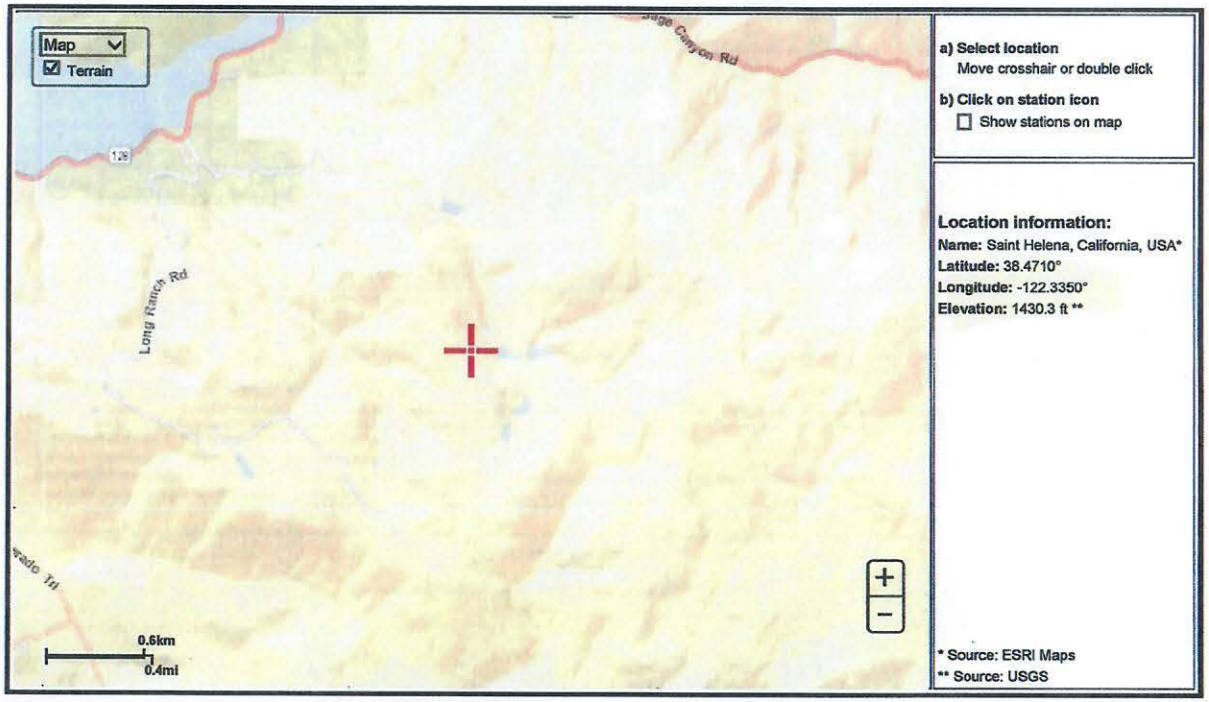
1) Manually:

a) By location (decimal degrees, use "-" for S and W): Latitude: 38.471 Longitude: -122.335 Submit

b) By station (list of CA stations): Select station

c) By address Search

2) Use map (if ESRI interactive map is not loading, try adding the host: https://js.arcgis.com/ to the firewall, or contact us at hdsc.questions@noaa.gov):



a) Select location
Move crosshair or double click

b) Click on station icon
Show stations on map

Location information:
Name: Saint Helena, California, USA*
Latitude: 38.4710°
Longitude: -122.3350°
Elevation: 1430.3 ft **

* Source: ESRI Maps
** Source: USGS

POINT PRECIPITATION FREQUENCY (PF) ESTIMATES

WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
NOAA Atlas 14, Volume 6, Version 2

PF tabular PF graphical Supplementary information

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.144 (0.128-0.163)	0.175 (0.156-0.199)	0.217 (0.193-0.248)	0.252 (0.222-0.290)	0.301 (0.255-0.360)	0.340 (0.281-0.417)	0.381 (0.306-0.480)	0.424 (0.330-0.552)	0.486 (0.360-0.662)	0.536 (0.382-0.759)
10-min	0.206 (0.183-0.233)	0.251 (0.223-0.285)	0.312 (0.276-0.355)	0.362 (0.318-0.416)	0.432 (0.365-0.517)	0.488 (0.402-0.597)	0.546 (0.438-0.688)	0.608 (0.472-0.791)	0.696 (0.516-0.949)	0.768 (0.547-1.09)
15-min	0.249 (0.221-0.282)	0.304 (0.270-0.345)	0.377 (0.334-0.429)	0.438 (0.384-0.504)	0.522 (0.441-0.625)	0.590 (0.486-0.722)	0.660 (0.530-0.832)	0.735 (0.571-0.956)	0.842 (0.624-1.15)	0.928 (0.662-1.32)
30-min	0.361 (0.321-0.409)	0.440 (0.391-0.500)	0.546 (0.484-0.623)	0.634 (0.557-0.730)	0.758 (0.640-0.906)	0.855 (0.705-1.05)	0.957 (0.768-1.21)	1.07 (0.828-1.39)	1.22 (0.905-1.66)	1.35 (0.960-1.91)
60-min	0.530 (0.472-0.602)	0.647 (0.575-0.735)	0.803 (0.711-0.915)	0.932 (0.818-1.07)	1.11 (0.940-1.33)	1.26 (1.04-1.54)	1.41 (1.13-1.77)	1.57 (1.22-2.04)	1.79 (1.33-2.44)	1.98 (1.41-2.80)
2-hr	0.806 (0.717-0.915)	0.985 (0.876-1.12)	1.22 (1.08-1.39)	1.41 (1.24-1.62)	1.67 (1.41-2.00)	1.87 (1.54-2.29)	2.08 (1.67-2.62)	2.29 (1.78-2.98)	2.58 (1.91-3.52)	2.81 (2.00-3.98)
3-hr	1.04 (0.923-1.18)	1.27 (1.13-1.44)	1.57 (1.39-1.79)	1.81 (1.59-2.08)	2.14 (1.81-2.56)	2.39 (1.97-2.93)	2.64 (2.12-3.33)	2.90 (2.25-3.77)	3.25 (2.41-4.43)	3.52 (2.51-4.98)
6-hr	1.57 (1.40-1.78)	1.93 (1.72-2.19)	2.39 (2.12-2.72)	2.76 (2.42-3.17)	3.24 (2.74-3.88)	3.61 (2.98-4.42)	3.98 (3.19-5.01)	4.35 (3.38-5.65)	4.84 (3.59-6.60)	5.21 (3.72-7.39)
12-hr	2.24 (1.99-2.54)	2.79 (2.48-3.17)	3.49 (3.09-3.97)	4.04 (3.55-4.65)	4.77 (4.03-5.70)	5.32 (4.38-6.51)	5.86 (4.70-7.37)	6.40 (4.97-8.32)	7.11 (5.27-9.69)	7.65 (5.46-10.8)
24-hr	3.15 (2.83-3.57)	3.99 (3.58-4.53)	5.06 (4.53-5.75)	5.90 (5.25-6.76)	7.01 (6.07-8.25)	7.84 (6.67-9.39)	8.65 (7.22-10.6)	9.47 (7.73-11.9)	10.6 (8.31-13.7)	11.4 (8.70-15.2)
2-day	4.14 (3.72-4.70)	5.28 (4.75-6.00)	6.74 (6.04-7.67)	7.90 (7.04-9.05)	9.43 (8.17-11.1)	10.6 (9.00-12.7)	11.7 (9.77-14.3)	12.9 (10.5-16.1)	14.4 (11.3-18.6)	15.5 (11.9-20.7)
3-day	4.83 (4.34-5.48)	6.18 (5.56-7.02)	7.91 (7.09-9.01)	9.29 (8.27-10.6)	11.1 (9.63-13.1)	12.5 (10.6-15.0)	13.8 (11.6-16.9)	15.2 (12.4-19.0)	17.0 (13.4-22.1)	18.4 (14.1-24.6)
4-day	5.37 (4.83-6.09)	6.88 (6.19-7.82)	8.82 (7.91-10.0)	10.4 (9.22-11.9)	12.4 (10.7-14.6)	13.9 (11.9-16.7)	15.4 (12.9-18.9)	17.0 (13.8-21.2)	19.0 (14.9-24.6)	20.5 (15.7-27.4)
7-day	6.62 (5.95-7.51)	8.50 (7.63-9.65)	10.9 (9.74-12.4)	12.7 (11.3-14.6)	15.2 (13.2-17.9)	17.0 (14.5-20.4)	18.8 (15.7-23.0)	20.6 (16.8-25.8)	23.0 (18.1-29.7)	24.7 (18.9-33.0)
10-day	7.46 (6.71-8.47)	9.58 (8.61-10.9)	12.2 (11.0-13.9)	14.3 (12.7-16.4)	17.0 (14.7-20.0)	19.0 (16.2-22.8)	21.0 (17.5-25.6)	22.9 (18.7-28.7)	25.4 (20.0-32.9)	27.3 (20.9-36.4)
20-day	9.77 (8.79-11.1)	12.6 (11.3-14.3)	16.0 (14.3-18.2)	18.6 (16.6-21.4)	22.0 (19.1-25.9)	24.5 (20.8-29.3)	26.8 (22.4-32.8)	29.1 (23.7-36.4)	32.1 (25.3-41.5)	34.2 (26.2-45.6)
30-day	11.8 (10.6-13.4)	15.2 (13.6-17.2)	19.2 (17.3-21.9)	22.3 (19.9-25.6)	26.3 (22.7-30.9)	29.0 (24.7-34.8)	31.7 (26.5-38.8)	34.3 (28.0-42.9)	37.6 (29.6-48.7)	39.9 (30.6-53.3)
45-day	14.4 (13.0-16.3)	18.3 (16.5-20.8)	23.1 (20.7-26.3)	26.7 (23.8-30.6)	31.1 (27.0-36.7)	34.3 (29.2-41.1)	37.3 (31.1-45.6)	40.1 (32.7-50.2)	43.7 (34.4-56.6)	46.3 (35.4-61.7)
60-day	17.2 (15.5-19.5)	21.7 (19.5-24.7)	27.1 (24.3-30.9)	31.2 (27.7-35.7)	36.2 (31.3-42.6)	39.7 (33.8-47.5)	42.9 (35.8-52.5)	46.1 (37.6-57.6)	49.9 (39.3-64.7)	52.7 (40.3-70.3)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Estimates from the table in CSV format: Precipitation frequency estimates Submit

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National Weather Service
Office of Water Prediction (OWP)
1325 East West Highway
Silver Spring, MD 20910
Page Author: HDSC webmaster
Page last modified: April 21, 2017

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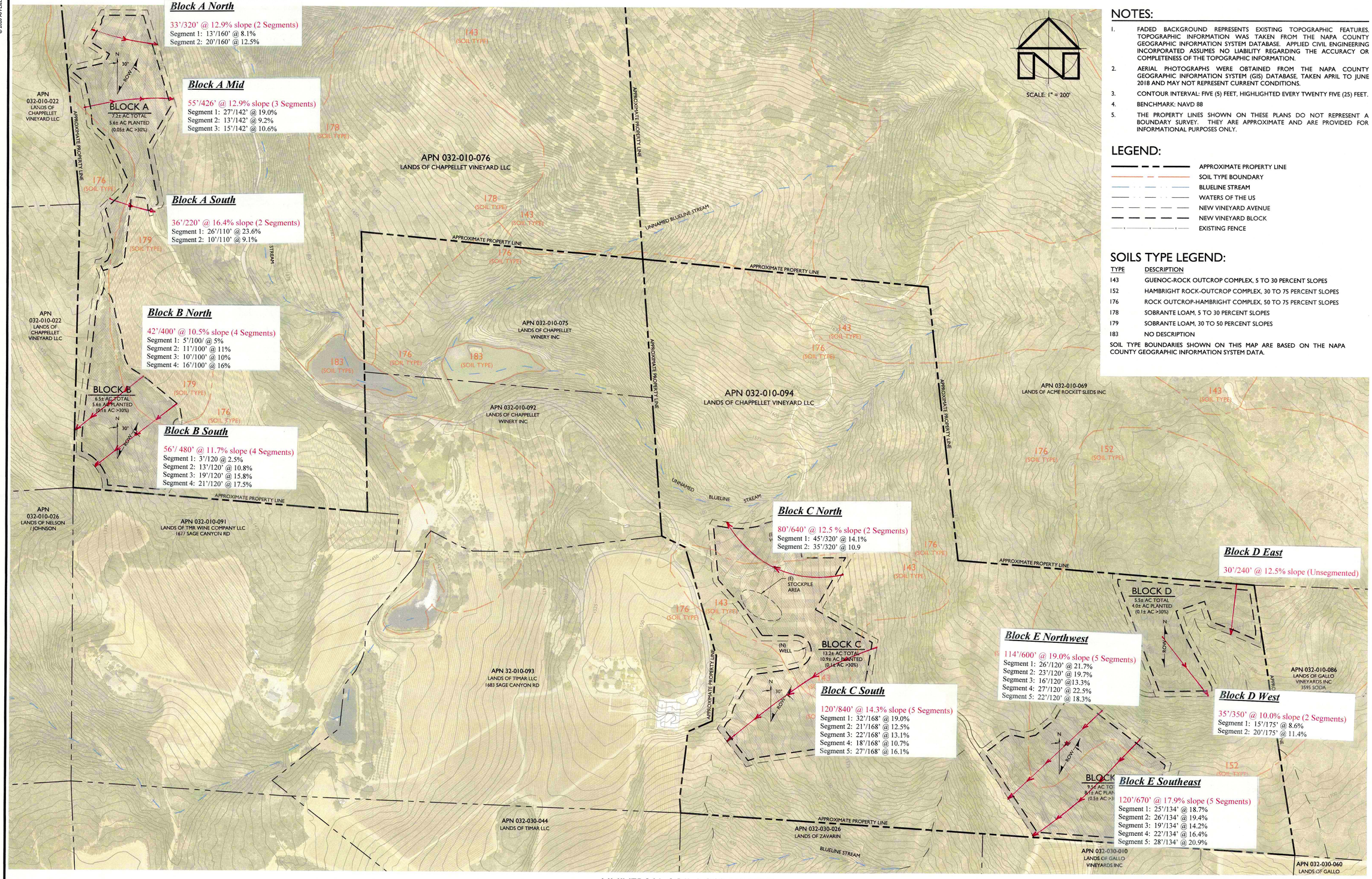
UNIVERSAL SOIL LOSS EXHIBIT



NOTES:

1. FADED BACKGROUND REPRESENTS EXISTING TOPOGRAPHIC FEATURES. TOPOGRAPHIC INFORMATION WAS TAKEN FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATABASE. APPLIED CIVIL ENGINEERING INCORPORATED ASSUMES NO LIABILITY REGARDING THE ACCURACY OR COMPLETENESS OF THE TOPOGRAPHIC INFORMATION.
2. AERIAL PHOTOGRAPHS WERE OBTAINED FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM (GIS) DATABASE, TAKEN APRIL TO JUNE 2018 AND MAY NOT REPRESENT CURRENT CONDITIONS.
3. CONTOUR INTERVAL: FIVE (5) FEET, HIGHLIGHTED EVERY TWENTY FIVE (25) FEET.
4. BENCHMARK: NAVD 88
5. THE PROPERTY LINES SHOWN ON THESE PLANS DO NOT REPRESENT A BOUNDARY SURVEY. THEY ARE APPROXIMATE AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

LEGEND:

- APPROXIMATE PROPERTY LINE
- SOIL TYPE BOUNDARY
- BLUELINE STREAM
- WATERS OF THE US
- NEW VINEYARD AVENUE
- NEW VINEYARD BLOCK
- EXISTING FENCE

SOILS TYPE LEGEND:

TYPE	DESCRIPTION
143	GUENOC-ROCK OUTCROP COMPLEX, 5 TO 30 PERCENT SLOPES
152	HAMBRIGHT ROCK-OUTCROP COMPLEX, 30 TO 75 PERCENT SLOPES
176	ROCK OUTCROP-HAMBRIGHT COMPLEX, 50 TO 75 PERCENT SLOPES
178	SOBRANTE LOAM, 5 TO 30 PERCENT SLOPES
179	SOBRANTE LOAM, 30 TO 50 PERCENT SLOPES
183	NO DESCRIPTION

SOIL TYPE BOUNDARIES SHOWN ON THIS MAP ARE BASED ON THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATA.

APPLIED CIVIL ENGINEERING INCORPORATED
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CHAPPELLET VINEYARD LLC

UNIVERSAL SOIL LOSS EXHIBIT

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER MICHAEL R. MIDELFORT NO. 67435 Exp. 12/31/2020 CIVIL STATE OF CALIFORNIA
PRELIMINARY NOT FOR CONSTRUCTION

DRAWN BY:	PowerCAD
CHECKED BY:	MRM
DATE:	MAY 2020
REVISIONS:	BY:
JOB NUMBER:	17-141
FILE:	17-141EXH-USLE.DWG
ORIGINAL SIZE:	24" X 36"
SHEET NUMBER:	C1 OF 1

UNIVERSAL SOIL LOSS EXHIBIT

SCALE: 1" = 200'