

# California Soil and Land Evaluation Form #601CA-1

Team #			
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Last Name										First Name									
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B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
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X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z

Team Name / Additional Info	

<b>Surface Soil</b>	<b>1. COLOR (5 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<i>One answer per site!</i>
	1 Very Dark	Black, Very Dark Grey, Very Dark Brown, or Dusky Red	1	2	3	4	
	2 Medium or Bright	Brown, Yellowish or Reddish Brown, Brown Yellow, or Red	1	2	3	4	
	3 Very Light	White, Light Grey, Pale Brown, Pale Red	1	2	3	4	
	4 Drab or Mottled	Light Grey, Olive, Bluish Grey, Yellow Spotted, Pale Yellow	1	2	3	4	
	<b>2. TEXTURE (5 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
	1 Coarse	Course, Medium Fine or Loamy Sand	1	2	3	4	
	2 Medium	Sandy Loam, Loam, Silt Loam, or Silt	1	2	3	4	
	3 Fine	Sandy Clay Loam, Clay Loam, or Silty Clay Loam	1	2	3	4	
	4 Very Fine	Sandy Clay, Clay or Silty Clay	1	2	3	4	
	<b>3. GRAVEL AND ROCK (3 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
	1 None to Few	<15% by Volume	1	2	3	4	
	2 Moderate	Affects Farming Operation 15-35%	1	2	3	4	
	3 Severe	from 36-60%	1	2	3	4	
	4 Extreme	Prevents Farming Operation >60%	1	2	3	4	
	<b>4. THICKNESS (3 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
1 Very Thick	20 inches or more	1	2	3	4		
2 Thick	10-19 inches	1	2	3	4		
3 Thin	4-9 inches	1	2	3	4		
4 Very Thin	Less than 4 inches	1	2	3	4		

<b>Subsoil (If no subsoil is present, mark None for each pit)</b>	<b>5. COLOR (5 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<i>One answer per site!</i>
	1 None	No subsoil	1	2	3	4	
	2 Very Dark	Black, Very Dark Grey, Very Dark Brown, or Dusky Red	1	2	3	4	
	3 Medium or Bright	Brown, Yellowish or Reddish Brown, Brown Yellow, or Red	1	2	3	4	
	4 Very Light	White, Light Grey, Pale Brown, Pale Red	1	2	3	4	
	5 Drab or Mottled	Light Grey, Olive, Bluish Grey, Yellow Spotted, Pale Yellow	1	2	3	4	
	<b>6. TEXTURE (5 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
	None	No subsoil	1	2	3	4	
	Coarse	Course, Medium Fine or Loamy Sand	1	2	3	4	
	Medium	Sandy Loam, Loam, Silt Loam, or Silt	1	2	3	4	
	Fine	Sandy Clay Loam, Clay Loam, or Silty Clay Loam	1	2	3	4	
	Very Fine	Sandy Clay, Clay or Silty Clay	1	2	3	4	
	<b>7. THICKNESS (3 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
	None	No subsoil	1	2	3	4	
	Very Thick	20 inches or more	1	2	3	4	
	Thick	10-19 inches	1	2	3	4	
Thin	4-9 inches	1	2	3	4		
Very Thin	Less than 4 inches	1	2	3	4		

<b>Interpretation of Soil Features</b>	<b>8. TYPE OF MATERIAL THAT LIMITS DEPTH (5 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<i>One answer per site!</i>
	1 None	No Limiting Material	1	2	3	4	
	2 Bedrock	Soft or Hard	1	2	3	4	
	3 Hardpan	Cemented	1	2	3	4	
	4 Extremely Gravelly Material or High Water Table		1	2	3	4	
	<b>9. PARENT OR UNDERLYING MATERIAL (5 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
	1 Hard Bedrock		1	2	3	4	
	2 Soft Bedrock		1	2	3	4	
	3 Loose or Mixed Material		1	2	3	4	
	4 Organic Materials (Peat or Muck)		1	2	3	4	
	<b>10. DEPTH OF SOIL FAVORABLE FOR ROOTS/WATER PENETRATION (5 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
	1 Very Deep	60 inches or more	1	2	3	4	
	2 Deep	40 through 59 inches	1	2	3	4	
	3 Moderately Deep	20-39 inches	1	2	3	4	
	4 Shallow	Less than 20 inches	1	2	3	4	
	<b>11. AIR AND WATER MOVEMENT (5 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
1 Very Rapid	Sands, Coarse	1	2	3	4		
2 Rapid	Loam sands, coarse sandy loam, sandy loam	1	2	3	4		
3 Moderate	Fine sandy loam, loam, silt loam, silty clay loam, clay loam, silty clay loam	1	2	3	4		
4 Slow	Sandy clay, clay, silty clay	1	2	3	4		
<b>12. AVAILABLE WATER HOLDING CAPACITY TO 60 INCHES (5 PTS)</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>		
1 High	>7.5 inches	1	2	3	4		
2 Medium	5 to 7.5 inches	1	2	3	4		
3 Low	3.5 to less than 5 inches	1	2	3	4		
4 Very Low	Less than 3.5 inches	1	2	3	4		

13. AMOUNT OF EROSION OR EVIDENCE OF DEPOSITION (3 PTS)		1	2	3	4
1 None to Slight	Less than or equal to 10%	1	2	3	4
2 Moderate	Less than or equal to 25%	1	2	3	4
3 High or Severe	Greater than 25%	1	2	3	4
4 Evidence of Damaging Deposition		1	2	3	4

One answer per site!

14. KIND OF EROSION (3 PTS)		1	2	3	4
1 None		1	2	3	4
2 Evidence of Sheet or Rill Erosion		1	2	3	4
3 Active Gully of Streambank Erosion		1	2	3	4
4 Evidence of Wind Erosion		1	2	3	4

One answer per site!

15. LANDSCAPE POSITION (3 PTS)		1	2	3	4
1 Upland	Soil Developed From Underlying Bedrock	1	2	3	4
2 Terrace, Foot Slope, Dune Land, Old Alluvial Fans	Soil from Transported Materials	1	2	3	4
3 Bottomland	Recent Alluvial Fans, Flood Plains	1	2	3	4
4 Basin	Flat, Ponded or Lake Bed Deposits, Playas	1	2	3	4

One answer per site!

16. STEEPNESS OF SLOPE (5 PTS)		1	2	3	4
1 Nearly Level	Less than or equal to 2%	1	2	3	4
2 Gently Sloping	Less than or equal to 5%	1	2	3	4
3 Moderately Sloping	Less than or equal to 15%	1	2	3	4
4 Strongly Sloping	Less than or equal to 25%	1	2	3	4
5 Steep	Greater than 25%	1	2	3	4

One answer per site!

17. LAND CAPABILITY CLASS (8 PTS)		1	2	3	4
<b>SUITABLE FOR CULTIVATED CROPS</b>					
1 Class I	No Special Problems - Very Good Land	I	I	I	I
2 Class II	Some Limitations or Problems - Good Land	II	II	II	II
3 Class III	Many Limitations or Complex Problems	III	III	III	III
4 Class IV	Very Limited in Crop Use or Very Complex Problems	IV	IV	IV	IV
<b>SUITABLE FOR PERMANENT VEGETATION</b>					
5 Class V	Nearly Level Grazing Land, Few Grazing Limitations	V	V	V	V
6 Class VI	Grazing or Woodland - Some Restrictions	VI	VI	VI	VI
7 Class VII	Range or Woodland - Severe Limitations	VII	VII	VII	VII
8 Class VIII	Wildlife, Recreation, or Watershed	VIII	VIII	VIII	VIII

One answer per site!

18. LAND USE (1 PT EA)		1	2	3	4
1 Irrigated Crops		Y N	Y N	Y N	Y N
2 Building Sites		Y N	Y N	Y N	Y N
3 Non-Irrigated Crops		Y N	Y N	Y N	Y N
4 Range		Y N	Y N	Y N	Y N
5 Woodland		Y N	Y N	Y N	Y N
6 Wildlife, Recreation, Watershed		Y N	Y N	Y N	Y N

Answer all factors all sites 5 marks per site!

19. MAJOR PROBLEMS IN USE (1 PT EA)		1	2	3	4
1 None		Y N	Y N	Y N	Y N
2 Erosion		Y N	Y N	Y N	Y N
3 Slope		Y N	Y N	Y N	Y N
4 Shallow Soil Problems		Y N	Y N	Y N	Y N
5 Fineness or Compaction		Y N	Y N	Y N	Y N
6 Dense or Hard Pan		Y N	Y N	Y N	Y N
7 Coarseness or Dryness		Y N	Y N	Y N	Y N
8 Wetness or Flooding		Y N	Y N	Y N	Y N

Answer all factors all sites 5 marks per site!

20. AGRICULTURAL MANAGEMENT PRACTICES (1 PT EA)		1	2	3	4
1 None		Y N	Y N	Y N	Y N
2 Irrigation Management or Drainage		Y N	Y N	Y N	Y N
3 Erosion Control		Y N	Y N	Y N	Y N
4 Fertility Improvement Practices		Y N	Y N	Y N	Y N
5 Chiseling or Ripping		Y N	Y N	Y N	Y N
6 Grazing Management		Y N	Y N	Y N	Y N
7 Woodland Management		Y N	Y N	Y N	Y N

Answer all factors all sites 7 marks per site!

21. EROSION CONTROL PRACTICES (1 PT EA)		1	2	3	4
1 None		Y N	Y N	Y N	Y N
2 Vegetative Cover and Mulches		Y N	Y N	Y N	Y N
3 Contour Farming and/or Terraces and Waterways		Y N	Y N	Y N	Y N
4 Gully or Streambank Stabilization		Y N	Y N	Y N	Y N

Answer all factors all sites 4 marks per site!

22. IRRIGATION METHODS (1 PT EA)		1	2	3	4
1 None		Y N	Y N	Y N	Y N
2 Flood		Y N	Y N	Y N	Y N
3 Furrow		Y N	Y N	Y N	Y N
4 Sprinkler		Y N	Y N	Y N	Y N
5 Drip		Y N	Y N	Y N	Y N

Answer all factors all sites 5 marks per site!

23. LIMITATIONS FOR SEPTIC TANK FILTER FIELDS (1 PT)		1	2	3	4
1 Slight		1	2	3	4
2 Moderate		1	2	3	4
3 Severe		1	2	3	4

One answer per site!

24. LIMITATIONS FOR SHRINK-SWELL (1 PT)		1	2	3	4
1 Slight		1	2	3	4
2 Moderate		1	2	3	4
3 Severe		1	2	3	4

One answer per site!

25. LIMITATIONS FOR FOUNDATIONS WITHOUT BASEMENT (1 PT)		1	2	3	4
1 Slight		1	2	3	4
2 Moderate		1	2	3	4
3 Severe		1	2	3	4

One answer per site!

26. LIMITATIONS FOR LOCAL ROADS AND STREETS (1 PT)		1	2	3	4
1 Slight		1	2	3	4
2 Moderate		1	2	3	4
3 Severe		1	2	3	4

One answer per site!

27. LIMITATIONS FOR TOP SOIL (1 PT)		1	2	3	4
1 Slight		1	2	3	4
2 Moderate		1	2	3	4
3 Severe		1	2	3	4

One answer per site!